IMPORTANT PLANT AREAS OF BOLIVIA

Endemic, threatened and useful plants and priority habitats in the centre of South America

Maira T. Martinez-Ugarteche & Bente B. Klitgaard - Editors

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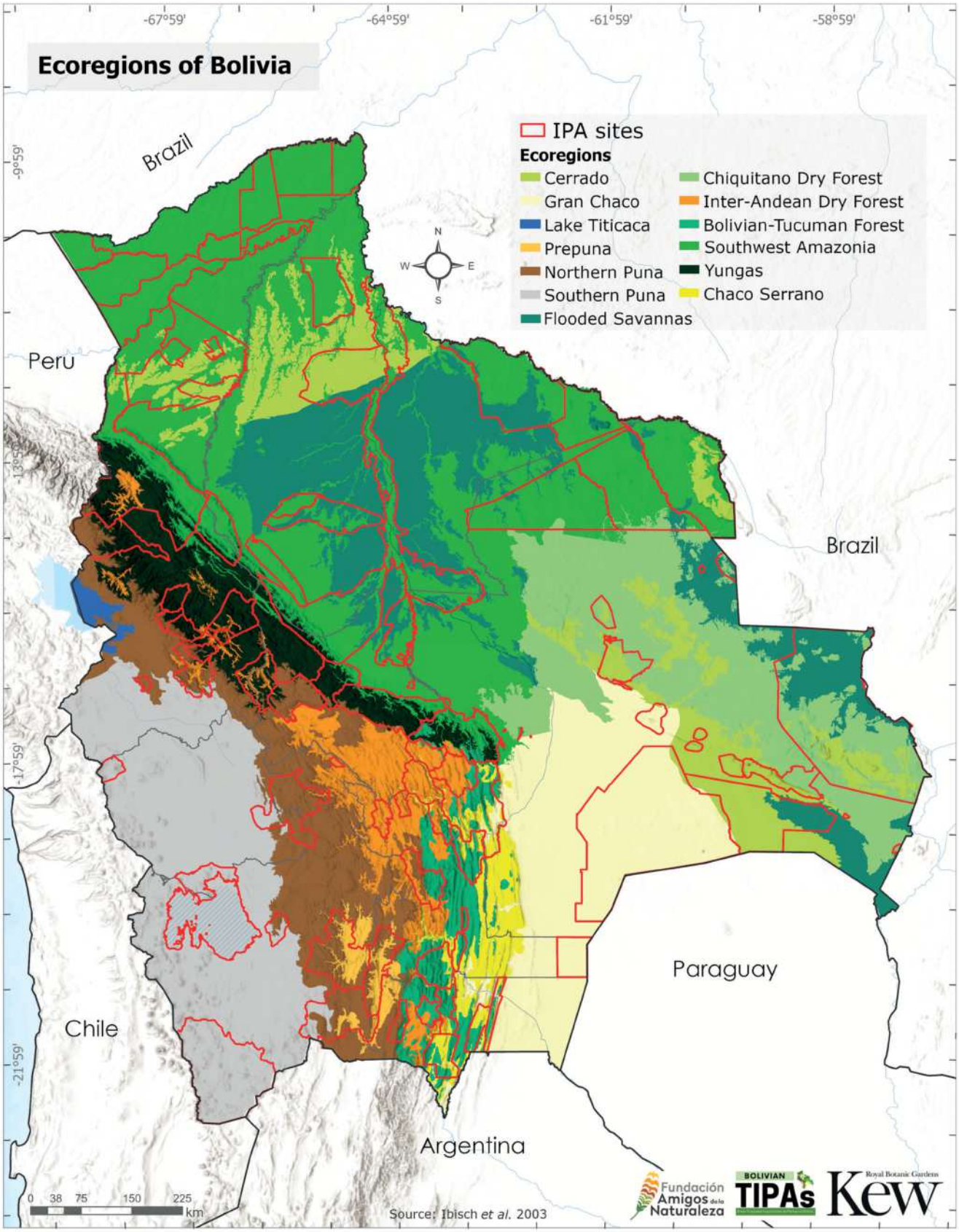
Ecoregions of Bolivia
-67°59'
-64°59'
-61°59'
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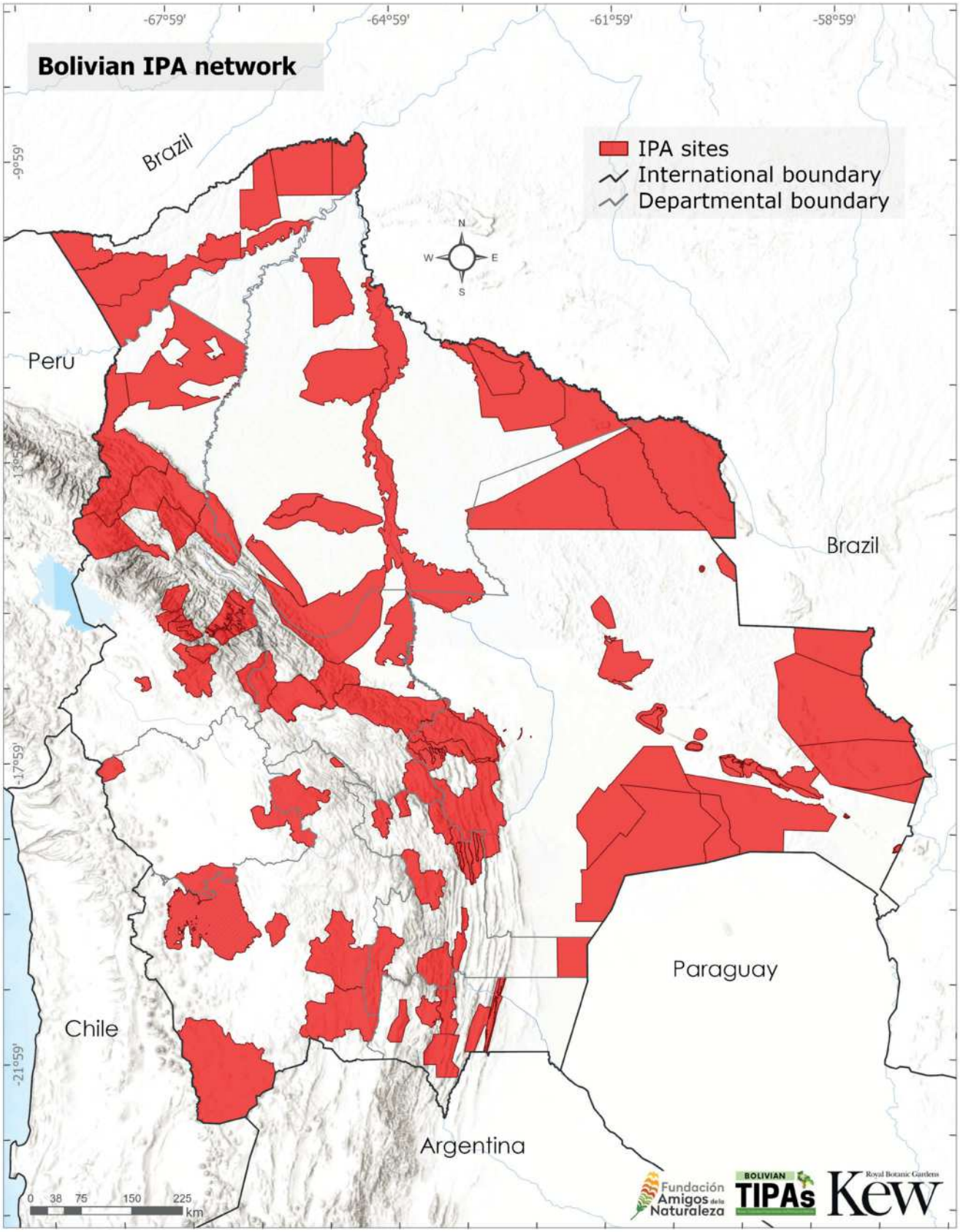
-9°59'
-13°59'
-17°59'
-21°59'
IPA sites
Ecoregions
Cerrado
Gran Chaco
Lake Titicaca
Prepuna
Northern Puna
Southern Puna
Flooded Savannas
Chiquitano Dry Forest
Inter-Andean Dry Forest
Bolivian-Tucuman Forest
Southwest Amazonia
Yungas
Chaco Serrano
N
W
E
S
Brazil
Peru
Brazil
Paraguay
Chile
Argentina
0 38 75 150 225 km
Source: Ibisch et al. 2003
Fundación Amigos de la Naturaleza
BOLIVIAN TIPAs
Royal Botanic Gardens Kew


Bolivian IPA network
-67°59'
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-17°59'
-21°59'
IPA sites
International boundary
Departmental boundary
N
W
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S
Brazil
Peru
Brazil
Paraguay
Chile
Argentina
0 38 75 150 225 km
Fundación Amigos de la Naturaleza
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Maira T. Martinez-Ugarteche & Bente B. Klitgaard, editors

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A publication of the Tropical Important Plant Areas Programme

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FOREWORDS

I am extremely proud to be authoring the foreword to this book as it represents a huge contribution of world-class scientific scholarship into one of the world's most botanically important countries – Bolivia. Bolivia is home to more than 16,000 species, about 16% of which are endemic.

Ten years ago, scientists at Kew, along with partners in Bolivia, started working together to document and support the conservation of this incredible botanical diversity. Effective conservation requires an accurate understanding of floristic diversity: what plants grow where; which species are rare or endemic, and which might be endangered? Without this knowledge it is not possible to prioritise the resources required to ensure effective protection.

Today, as a result of this research, 87 areas have been designated as Tropically Important Plant Areas across Bolivia, making it the first Latin American country to have an official network of TIPA sites. These sites represent more than one third of the total land area of Bolivia which is a remarkable achievement. May I thank and congratulate the Bolivian Government for recognising the importance of conserving these Important Plant Areas.

To me, this project, and this book, represent the best in global plant conservation. It draws upon extraordinary taxonomic expertise, and it is an exemplar of collaborative working between institutions and nations. It also represents a long-term commitment which I very much hope will endure. It has produced invaluable knowledge along with applied conservation outcomes, many of which are now being successfully implemented.

I am confident, as a result of this project, the floral diversity of Bolivia is far better placed to be protected for future generations. And, as we say at Kew, all life depends on plants.

Richard Deverell
Director
Royal Botanic Gardens Kew

This volume represents a fundamental milestone that both celebrates and, more importantly, seeks to safeguard Bolivia's immeasurable botanical richness. As a megadiverse nation, we are home to a heterogeneous and complex vegetative cover and flora that form the very pillar of our ecosystems. Yet, historically, this flora has been underrepresented in conservation planning. Such invisibility has allowed mounting anthropogenic pressures, such as deforestation and wildfires, to place our natural botanical heritage at significant risk.

In response to this urgent challenge, we are proud to highlight that Bolivia is the first country in Latin America to establish a network of Important Plant Areas (IPAs). This pioneering effort adopted the standardized IPA methodology, providing us with a systematic and verifiable framework for prioritization. By identifying critical zones that harbor endemic flora, rare species, useful plants, and wild crop relatives, we now possess the necessary tools to focus our efforts where conservation impact is most profound.

For the Fundación Amigos de la Naturaleza this collaborative journey began between 2019 and 2022, concentrating initial research on the Chiquitania region, a pilot phase that successfully consolidated the foundation of 18 IPA sites. The project subsequently scaled to a national level (2022–2025), allowing us to apply this rigorous scientific identification across the entirety of the Bolivian territory.

Today, that commitment materialized in the first comprehensive IPA assessment conducted in Latin America, identifying 87 sites throughout the country. These 87 enclaves of life range from existing protected areas to new sites without previous designation. Collectively, they protect more than 1,900 endemic species and 3,200 useful species.

This book stands as evidence of four years of rigorous impact and serves as an essential call to action. We urge policymakers, civil society, and the scientific community to utilize this assessment as a fundamental tool to drive and reinforce the protection and management of Bolivia's unparalleled plant diversity.

Natalia Calderón Angeleri
Executive Director
Fundación Amigos de la Naturaleza

At Plantlife International, our mission is to secure a world rich in wild plants and fungi, where nature and people thrive together. Plants and fungi are vital to life on Earth—they support biodiversity, provide essential ecosystem services, and sustain communities. Yet, they are often overlooked in conservation, even as many species face alarming declines.

To address this, the Important Plant Areas (IPA) initiative was developed to identify and prioritise the most significant sites for plant and fungal diversity using robust scientific criteria. Plantlife International coordinates the Global IPA Network, connecting and supporting national and regional programmes to drive conservation action.

The global IPA programme contributes directly to the Kunming-Montreal Global Biodiversity Framework and the Global Strategy for Plant Conservation, aligning with targets on spatial planning, protected areas, species recovery, sustainable use and inclusive governance. In Bolivia, the IPA programme is turning international commitments into practical, on-the-ground action—raising awareness and building support from local communities to national authorities.

Bolivia's commitment to establishing a national IPA network — led by the Bolivian botanical community and supported by national and international partners, is a major step forward for plant conservation in Latin America. With its rich ecosystems, dramatic altitudinal range, and high endemism, Bolivia is well-positioned to lead regional efforts and inspire neighbouring countries.

This book reflects the dedication of Bolivian botanists, conservationists, and international collaborators, including the Royal Botanic Gardens, Kew. It highlights Bolivia's botanical richness, the challenges it faces, and the opportunities for lasting conservation. We hope it inspires further action and cross-border collaboration. Plantlife International is delighted to stand alongside Bolivia in this vital work to ensure a future where plants, fungi, and communities flourish together.

Nicola Hutchinson
Chief Executive Officer
Plantlife

Situated at the geographic centre of South America, Bolivia represents an exceptionally diverse territory. Its vast altitudinal gradients, spanning from the Amazonian lowlands to the summits of the Andes, exceeding 6,500 meters and have fostered an expansive array of ecosystems. This environmental heterogeneity has earned the nation recognition as a megadiverse state, harboring more than 15,300 species of vascular plants and exhibiting a high level of endemism.

In recent decades, however, anthropogenic pressures have intensified at an accelerated pace. The expansion of the agricultural frontier, deforestation, wildfires, mining, and urban encroachment have resulted in significant reductions in vegetative cover and the degradation of essential ecosystem services, including hydrological regulation, soil fertility, food security, and climatic stability. This context presents a critical challenge to the strategic prioritisation of the Bolivian flora for protection within a territory of such vast biological complexity.

A rigorous response to this challenge is found in the Important Plant Areas (IPA) methodology. This scientific framework utilizes internationally validated criteria to identify sites of paramount conservation significance, evaluating parameters such as the degree of threat, endemism, rarity, socioeconomic value, and habitat integrity.

This volume is the culmination of more than a decade of sustained scholarly labor, integrating: a comprehensive review of botanical collections; extensive field expeditions and taxonomic evaluations; advanced geospatial analyses and data digitalization; and collaborative workshops involving leading specialists. Through these efforts, a national network of 87 IPA sites has been established, distinguished by their biological relevance and their foundational role within Bolivian ecosystems.

The significance of this initiative extends beyond being purely scientific. It facilitates the fulfilment of international commitments, such as the Kunming-Montreal Global Biodiversity Framework, the 30x30 Target, and various Sustainable Development Goals (SDGs). Furthermore, it strengthens institutional capacity for territorial planning, protected area management, climate change adaptation, and ecological restoration.

This work also recognizes the vital contributions of researchers, herbaria, academic institutions, and indigenous communities who have generated essential knowledge regarding the national flora. It highlights the profound cultural and socio-economic dimensions of plants, which remain central to traditional practices, local production systems, and cultural heritage.

Methodologically, this work incorporates IUCN Red List criteria and spatial distribution data, serving as an indispensable resource for policymakers, researchers, and students. The resulting maps and data provide a clear diagnostic of richness patterns, conservation gaps, and critically threatened habitats.

Ultimately, this publication constitutes an invitation to collective action in safeguarding Bolivia's botanical heritage. It is intended not merely as a technical reference but as a catalyst for reflection, representing a decisive step toward a nation that recognizes, values, and protects its natural capital for both present and future generations.

Luzmila Arroyo Padilla
Executive Director
Noel Kempff Mercado Natural History Museum

In 2015, the Tropical Important Plant Areas (TIPA) project was initiated in the Chiquitania region of the Santa Cruz Department, Bolivia. This endeavor was spearheaded by the Royal Botanic Gardens, Kew (United Kingdom) in formal collaboration with the USZ Herbarium of the Noel Kempff Mercado Natural History Museum, an institution constituent to the Universidad Autónoma Gabriel René Moreno in Santa Cruz. The initiative has since expanded to include a broad network of contributors, notably the National Herbarium of Bolivia (LPB) in La Paz, the Cochabamba Herbarium (BOLV), and independent researchers nationwide, who participated in the designation and documentation of these sites.

Bolivia is distinguished as one of only 48 nations worldwide selected to compile and analyze data regarding its regions harboring endemic, rare, or endangered plant species, as well as plants of significant socioeconomic value.

Following a decade of field exploration, expert workshops, and rigorous analysis, the results are presented in a comprehensive volume exceeding 700 pages, documenting 87 Important Plant Areas (IPAs) across Bolivia. These IPAs encompass regions currently identified as conservation gaps, while also highlighting established national, departmental, and municipal protected areas. Given the unique assemblages of species found within these selected sites, there is a compelling case for considering their elevation to permanent protection status.

The loss of natural and semi-natural vegetative cover is accelerating throughout the country. An emerging threat is increasingly evident in peri-urban zones, driven by infrastructure development, road construction, and the expansion of industrial, residential, and communal building complexes.

A poignant example, observed in the southern districts of La Paz, is the significant reduction of native species habitats at the access points to the iconic Muela del Diablo—a site esteemed and studied by numerous naturalists and domestic and international hikers alike. Comparable environmental pressures are observable in major urban centers across all nine departments.

At the national level, the outlook is increasingly precarious. The environmental impact of forest fires, affecting forests, shrublands, and grasslands, is pervasive across Bolivia. Deforestation and the conversion of land for agricultural expansion continue to persist, often at the expense of sustainable land-management practices.

The demarcation and establishment of nature conservation areas constitute a fundamental obligation of the State. Fortunately, Bolivia possesses an extensive framework of protected areas established under national legislation.

Within this context: “Important Plant Areas (IPAs) constitute a network of key sites, at both international and national levels, for the conservation of native plants and threatened terrestrial habitats, identified through the application of available and scientifically verified data.”

Stephan G. Beck
Co-founder and Researcher
National Herbarium of Bolivia
collaborative agreement: Universidad Mayor de San Andrés (La Paz) & Georg August University (Göttingen)

EDITORS' EXECUTIVE SUMMARY

Bolivia is one of the world's botanically megadiverse countries, home to ca. 16,000 native wild species of vascular plants, of which 2,661 are restricted to the country. Moreover, Bolivia is considered the centre of origin of many food crops such as bell peppers, chilli peppers, beans, potatoes, tomatoes, peanuts, quinoa and yucca; and it is home to over 200 wild relatives of these important crops, in addition to nearly 3,300 useful native plant species.

This publication is based on a three-decade long collaboration between the Royal Botanic Gardens, Kew, and its Bolivian partners. Within that timeframe, the current project is ten years long (2016-2025). The work has encompassed botanical research, extensive field studies, the development of research capacity within the country, and active engagement with conservation professionals and a range of international, national, and local policymakers.

The overarching objectives of the programme have been to: a) document and promote the conservation and sustainable use of Important Plant Areas (IPA) in Bolivia, b) assist the country in developing its strategy for the protection and sustainable use of its plant diversity, and c) support Bolivia in meeting its commitments under the United Nations Convention on Biological Diversity (CBD) by providing practical, readily accessible tools and resources for policymakers at the local, national, and international levels.

With the publication of the present study, Bolivia will be the first Latin American country to possess a network of Important Plant Areas (IPA). The Bolivian network comprises 87 IPA sites with a total area of 406,071 km^2, equivalent to 37% of the country's total area (1,098,581 km^2).

We applied the Important Plant Areas (IPA) criteria, which are internationally recognised standards for identifying sites of national and global importance for the protection and sustainable use of plants, as well as the ecosystem services they provide.

Of the 87 IPA sites, 17 exactly match recognised national protected areas, such as the Madidi and Noel Kempff National Parks. Additionally, eight sites overlap with departmental protected areas, 10 with municipal protected areas, and one with the Ñembi Guasu Indigenous Protected Area. Furthermore, 16 sites overlap between 10% and 75% with already established protected areas.

In addition to being part of protected areas at different administrative levels, 42 of the IPA sites overlap between 10% and 100% with Bolivia's Key Biodiversity Area (KBA) network, recently revised and designated under the IUCN. It is important to note that on a global-scale most KBA sites are evaluated solely based on the presence of their fauna, which means that the IPA site designations presented here provide more comprehensive assessments of the biodiversity present within Bolivia's KBA sites.

Finally, 13 IPA sites overlap between 10% and 100% with Bolivia's network of wetlands, recognized under the international convention on wetland sites (RAMSAR).

However, despite the several well-protected IPA sites, 13 lack any form of legal protection. Therefore, it is our hope that the new knowledge and assessment tools provided in this publication will help Bolivia achieve clearer prioritisation of its important areas for plants, and their associated sustainable use.

The IPA site assessment process is supported by a review of the IUCN Red List of globally threatened species in Bolivia. During this project, the extinction risk was assessed for 732 unique (endemic) Bolivian species, and their Red List status was submitted for publication on the IUCN Global Red List. These 732 assessments are included within the 3,079 Bolivian plants assessed under IUCN criteria to-date.

Currently, 33% (899 species) of Bolivia's total of 2,661 unique species have an IUCN red list status. Of these, 571 species are considered threatened: 191 species (VU) Vulnerable, 283 species (EN) Endangered, and 97 species (CR) Critically Endangered. On the positive side, however, this project has documented that the 87 IPA sites collectively contain 1,909 (79%) of the 2,661 plant species here listed as unique to Bolivia.

Furthermore, we have documented that 3,255 (90%) of Bolivia's useful native plants occur within this new Important Plant Areas network. We predict these numbers and percentages will increase with future botanical research and floristic surveys.

While this publication was edited and co-authored by Maira T. Martinez-Ugarteche and Bente B. Klitgaard, it represents a community effort with contributions by 36 botanical experts, representing 19 botanical institutions, the large majority of which are Bolivian. Throughout the project, in-country capacity development for the IUCN (International Union for Conservation of Nature) and IPA (Important Plant Areas) methodology has been prioritised, resulting in: a) 22 Bolivian professionals certified as Red List conservation assessors and one certified as a trainer under the IUCN; b) The training of 45 undergraduate and Master's Biology students in the IUCN and IPA methodology; c) The provision of one-year scholarships and supervision for six undergraduates in Biology, Environmental Sciences and Environmental Engineering thesis projects; and d) The organisation and delivery of numerous training sessions and workshops for stakeholders

RESUMEN EJECUTIVO DE LAS EDITORAS

Bolivia es uno de los países botánicamente megadiversos del mundo, albergando aproximadamente 16.000 especies silvestres nativas de plantas vasculares, de las cuales 2.661 son endémicas (únicas) del país. Además, Bolivia es considerada el centro de origen de muchos cultivos alimentarios como pimientos morrones, ajíes, frijoles, patatas (papas), tomates, cacahuetes (maníes), quinua y yuca; y es el hogar de más de 200 parientes silvestres de estos importantes cultivos, sumando a ello cerca de 3.300 especies de plantas nativas útiles.

Esta publicación se fundamenta en una colaboración de tres décadas entre el Real Jardín Botánico de Kew y sus socios bolivianos. Dentro de ese marco temporal, el proyecto actual tiene diez años (2016-2025). El trabajo ha abarcado investigación botánica, extensos estudios de campo, el desarrollo de capacidad de investigación en el país, y una participación con profesionales de la conservación y una gama de responsables de políticas internacionales, nacionales y locales.

Los objetivos generales del programa han sido 1) documentar y promover la conservación y el uso sostenible de las Áreas Importantes para las Plantas (IPA) en Bolivia; 2) asistir al país en el desarrollo de su estrategia para la protección y el uso sostenible de su biodiversidad; y 3) apoyar a Bolivia a cumplir con sus compromisos bajo el Convenio sobre la Diversidad Biológica (CDB) de las Naciones Unidas, proporcionando herramientas y recursos prácticos de fácil acceso para los responsables de políticas a nivel local, nacional e internacional.

Con la publicación del presente estudio, Bolivia será el primer país latinoamericano en poseer una red de Áreas Importantes para las Plantas (IPA). La red boliviana comprende 87 sitios IPA con una superficie total de 406.071 km^2, lo que equivale al 37% de la superficie total del país (1.097 millones de km^2).

Aplicamos los criterios Áreas Importantes para las Plantas (IPA) que son estándares internacionalmente reconocidos para la identificación de sitios de importancia nacional y global para la protección y el uso sostenible de las plantas, así como los servicios ecosistémicos que estas proporcionan.

De los 87 sitios IPA, 17 coinciden exactamente con áreas protegidas nacionales reconocidas, como el Parque Nacional Madidi y el Parque Nacional Noel Kempff. Además, ocho coinciden con áreas protegidas departamentales, 10 con áreas protegidas municipales, y uno con el área indígena protegida Ñembi Guasu. Adicionalmente, 16 sitios se superponen entre un 10% y un 75% con áreas protegidas ya establecidas.

Además de formar parte de áreas protegidas a diferentes niveles administrativos, 42 de los sitios IPA se superponen entre un 10% y un 100% con la red de Áreas Clave para la Biodiversidad (KBA) de Bolivia, recientemente revisada y designada

bajo la UICN. Es importante señalar que, a nivel global, la mayoría de los sitios KBA son evaluados únicamente en función de la presencia de especies animales, que significa que las designaciones de sitios IPA presentadas aquí proporcionan evaluaciones más completas de la biodiversidad presente en los sitios KBA de Bolivia.

Finalmente, 13 sitios IPA se superponen entre un 10% y un 100% con la red boliviana de humedales, reconocida bajo el convenio internacional sobre sitios de humedales (RAMSAR). No obstante, a pesar de la existencia actual de varios sitios IPA bien protegidos, 13 IPA carecen de cualquier forma de protección legal. Por lo tanto, es nuestra esperanza que los nuevos conocimientos y las herramientas de evaluación proporcionadas en esta publicación ayuden a Bolivia a lograr una priorización más clara de sus áreas importantes para las plantas, y el uso sostenible asociado a ellas.

El proceso de evaluación de los sitios IPA está respaldado por una revisión de la Lista Roja de la UICN de especies globalmente amenazadas en Bolivia. A lo largo del proyecto, se evaluó el riesgo de extinción de 732 especies bolivianas únicas (endémicas), mismas que fueron presentadas para su publicación en la Lista Roja global de la UICN. Estas 732 evaluaciones están incluidas dentro de las 3.079 plantas bolivianas evaluadas bajo UICN hasta el momento, y que fueron consideradas durante el proceso de identificación de los sitios IPA.

Hasta la fecha, el 33% (899 especies) del total de 2.661 especies únicas de Bolivia tienen una evaluación en la UICN. De estas, 571 especies se consideran en peligro bajo los criterios de la UICN: 191 especies Vulnerables (VU), 283 especies En Peligro (EN) y 97 especies En Peligro Crítico (CR). Sin embargo, en el lado positivo, este proyecto ha documentado que los 87 sitios IPA contienen en conjunto 1.909 (79%) de las 2.661 especies de plantas documentadas aquí como únicas de Bolivia. Además, hemos documentado que 3.255 (90%) de las plantas nativas útiles de Bolivia se encuentran dentro de esta nueva red de Áreas Importantes para las Plantas. Predecimos que estos números y porcentajes aumentarán con futuras investigaciones botánicas y estudios florísticos.

Si bien esta publicación fue conceptualizada, editada y coescrita por Maira T. Martinez Ugarteche y Bente B. Klitgaard, representa un esfuerzo comunitario con el aporte de 36 expertos botánicos, en representación de 19 instituciones botánicas, siendo la gran mayoría bolivianas. A lo largo del proyecto se ha priorizado el desarrollo de capacidades en el país para la metodología de la UICN (Unión Internacional para la Conservación de la Naturaleza) y las IPA (Áreas Importantes para las Plantas), lo que ha resultado en: a) 22 profesionales bolivianos certificados como asesores globales para la Lista Roja y uno certificado como entrenador bajo la UICN, b) La capacitación de 45 estudiantes de Licenciatura en Biología y Maestría en la metodología de la UICN y las IPA; c) La provisión de becas de un año y la supervisión de seis proyectos de tesis de Licenciatura en Biología, Ciencias Ambientales e Ingeniería Ambiental y d) La organización y realización de numerosas sesiones de formación y talleres para partes interesadas.

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LIST OF ACRONYMS AND ABBREVIATIONS

General Acronyms and Abbreviations

ACEAA	Asociación Boliviana para la Investigación y Conservación de Ecosistemas Andino-Amazónicos
ACIE	Área de Conservación e Importancia Ecológica
AICOMs	Áreas de Importancia para la Conservación de los Murciélagos
AMCM-BM	Área Municipal de Conservación y Manejo del Bajo Madidi
ANMI	Área Natural de Manejo Integrado
ANMIN	Área Natural de Manejo Integrado Nacional
AOO	Área de ocupación
AP	Área Protegida
BGCI	Botanic Gardens Conservation International
CCVA	Corredor de Conservación Vilcabamba-Amboró
CDB	Convenio sobre la Diversidad Biológica

CEDIB	Centro de Documentación e Información Bolivia
CITES	The Convention on International Trade in Endangered Species
COP	Conference Of the Parties
CRTM	Consejo Regional Tsimán-Mosetén
DICOPAN	Dirección de Conservación del Patrimonio Natural
EBB	Estación Biológica del Beni
En prep.	In preparation
EOO	Extent of Occurrence
EVA	Ecosistemas Verticales Andinos
FAN	Fundación Amigos de la Naturaleza
FCBC	Fundación para la Conservación del Bosque Chiquitano
FOBOMADE	Foro Boliviano sobre Medio Ambiente y Desarrollo
GADSC	Gobierno Autónomo Departamental de Santa Cruz
GAMC	Gobierno Autónomo Municipal de Comanche
GAMC	Gobierno Autónomo Municipal de Colomi
GAMCH	Gobierno Autónomo Municipal de Chimoré
GAMH	Gobierno Autónomo Municipal de Huacareta
GAMI	Gobierno Autónomo Municipal de Inquisivi
GAMI	Gobierno Autónomo Municipal de Irupana
GAMLP	Gobierno Autonomo Municipal de La Paz
GAMM	Gobierno Autónomo Municipal de Macharetí
GAMP	Gobierno Autónomo Municipal de Potosí
GAMPR	Gobierno Autonomo Municipal de Puerto Rico
GAMS	Gobierno Autónomo Municipal de Sucre
GAMSGM	Gobierno Autónomo Municipal de Salinas de Garci Mendoza
GAMSIV	Gobierno Autónomo Municipal de San Ignacio de Velasco
GAMVT	Gobierno Autónomo Municipal de Villa Tunari
GAMY	Gobierno Autónomo Municipal de Yapacaní
GBF	Global Biodiversity Framework
GBIF	Global Biodiversity Information Facility
GIZ-UCB	Deutsche Gesellschaft für Internationale Zusammenarbeit-Universidad Católica Boliviana
GSPC	The Global Strategy for Plant Conservation
Hotspot (global)	An area with a high concentration of biodiversity
IASA-USFX	Instituto de Agroecología y Seguridad Alimentaria-Universidad Mayor, Real y Pontificia San Francisco Xavier
INBOE	Instituto de Botánica y Ecología
INE	Instituto Nacional de Estadística
IPA	Important Plant Area
IWGIA	International Work Group for Indigenous Affairs
JBMSC	Jardín Botánico Municipal de Santa Cruz
KBA	Key Biodiversity Area
MBG	Missouri Botanical Garden
MDRyT	Ministerio de Desarrollo Rural y Tierras
MDSyP	Ministerio de Desarrollo Sostenible y Planificación
MNHN	Museo Nacional de Historia Natural de Bolivia
MHNNKM	Museo de Historia Natural Noel Kempff Mercado
MMAyA	Ministerio de Medio Ambiente y Agua
MUAFB	Mancomunidad Unión Amazónica Filadelfia-Bolpebra
NGO	Non Governmental Organisation
OPS/OMS	Organización Panamericana de la Salud/Organización Mundial de la Salud

PD	Parque Departamental
PFNM	Productos Forestales No Maderables
PN	Parque Nacional
POWO	Plants of the World Online
RACEM	Reserva de Agua y Conservación de Ecosistemas Montanos
RAISG	Red Amazónica de Información Socioambiental Georreferenciada
RBG Kew	Royal Botanic Gardens, Kew
RB-TCO	Reserva de la Biosfera y Tierra Comunitaria de Origen
SERNAP	Servicio Nacional de Áreas Protegidas
TCOs	Tierras Comunitarias de Origen
TIM	Territorio Indígena Multiétnico
TIOC	Territorio Indígena Originario Campesino
TIPA	Tropical Important Plant Area
UCPN	Unidad de Conservación de Patrimonio Natural
IUCN	The International Union for Conservation of Nature
UNODC	Oficina de las Naciones Unidas contra la Droga y el Delito
VMABCCyGDF	Viceministerio de Medio Ambiente, Biodiversidad, Cambios Climáticos y Gestión y Desarrollo Forestal
WCS	Wildlife Conservation Society
ZONISIG	Zonificación Agroecológica y Establecimiento de una Base de Datos y Red de Sistema de Información Geográfica en Bolivia

IUCN Red List Categories

Abbreviation	Meaning	Category color
EX	Extinct	
EW	Extinct in the Wild	
CR	Critically Endangered	
EN	Endangered	
VU	Vulnerable	
NT	Near Threatened	
LC	Least Concern	
DD	Data Deficient	
NE	Not Evaluated	

IUCN assessments in the threat categories (Vulnerable, Endangered, Critically Endangered) are highlighted according to their level of extinction risk (Figure 3, page 34). However, another group of species that fall into one of these three categories are not highlighted, as their preliminary global threat categories are either in press or under review for the global IUCN Red List. They can be distinguished by the symbol # in the category abbreviation, for example, #EN.

INTRODUCTION

Geography and plant diversity of Bolivia

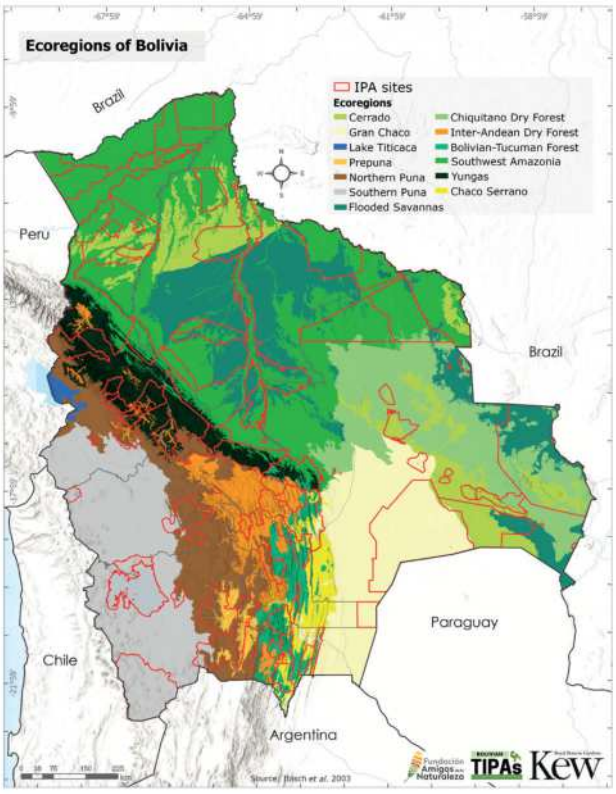
Bolivia covers an area of 1,098,581 km^2 and is situated in the centre of South America. This strategic geographical position explains the presence of four biogeographical provinces: the Andes, the Amazon, the Chaco, and the Cerrado.

The country exhibits a marked altitudinal range from 130 to 6,542 m. a.s.l., which generates strong climatic differences between the tropical lowlands and the Altiplano. Similarly, the rainfall varies significantly by region: in the Yungas it may exceed 7,000 mm annually, while in the Humid Puna it fluctuates between 500 and 1,000 mm, but in the Dry Puna it decreases to 300–400 mm; and in the Desert Puna of the southern part of the country it falls to below 100 mm (Rafiqpoor *et al.* 2003, Ibisch & Araujo 2010). These conditions, combined with geological, biogeographical, and ecological factors, explain the remarkable high biological diversity in Bolivia.

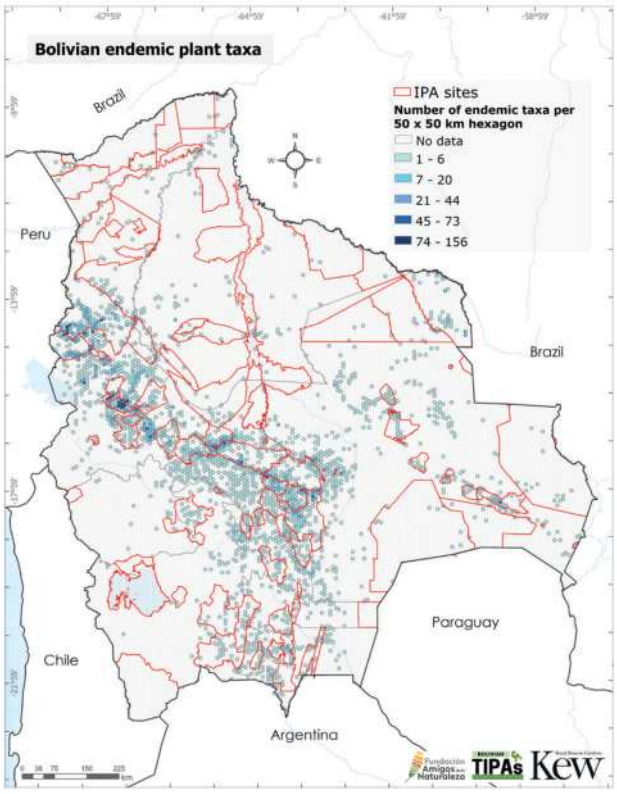
The Catalogue of Vascular Plants of Bolivia records 15,345 native species, of which 2,343 were registered as endemic to the country (Jørgensen *et al.* 2014, onwards). This diversity is distributed across the three major regions (Altiplano, Andes, and Lowlands) and in more than 15 vegetation zones (Beck 2014).

Bolivian vegetation is complex, challenging its description and delimitation into discrete units. Therefore, diverse classifications and vegetation zones have been proposed based on different approaches and the application of different criteria (Navarro 2002, 2011). According to Beck (2014), one of the least complex approaches is the enumeration and description by Ibisch *et al.* (2003), which recognises three regions and 12 ecoregions (Map 1). In terms of endemism, species richness, and botanical collection effort, the Andean region shows the highest values. The Yungas contains around 40% of the total Flora of Bolivia, followed by the Humid Forests with 37% and the Dry Valleys with 21% (Jørgensen *et al.* 2014).

These results reflect the fact that the Yungas constitute one of the best-studied ecoregions



Map 1. Bolivian ecoregions



Map 2. Distribution of the Bolivian endemic species: in a grid of 50 x 50 km hexagons

of the country, which is evidenced by many botanical collections (Lino-Villalba *et al.* in prep.). This information confirms the close relationship between sampling effort and the discovery of new endemic species; a trend reflected in the current distribution of endemic plant diversity and priority conservation areas (Maps 2, 3, 4).

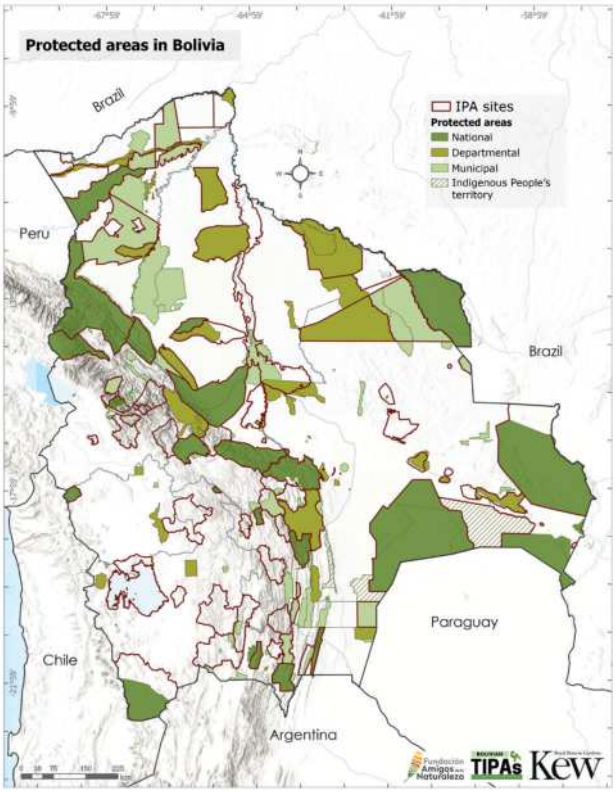
Protection and challenges for Bolivia's plant diversity

Bolivia has a network of 23 National Protected Areas (PAs) administered by the National Service for Protected Areas ('Servicio Nacional de Áreas Protegidas' – SERNAP), 142 Municipal Protected Areas, and three Indigenous Protected Areas, all legally recognised (SERNAP 2024, Map 3). Additional to these legally established PAs, Bolivia has conservation designations such as RAMSAR sites, Key Biodiversity Areas (KBAs), and the Natural Heritage Conservation Units (Unidad de Conservación del Patrimonio Natural – UCPN) in the autonomous department of Santa Cruz, and now also a network of 87 Important Plant Areas (IPAs) (Map 4).

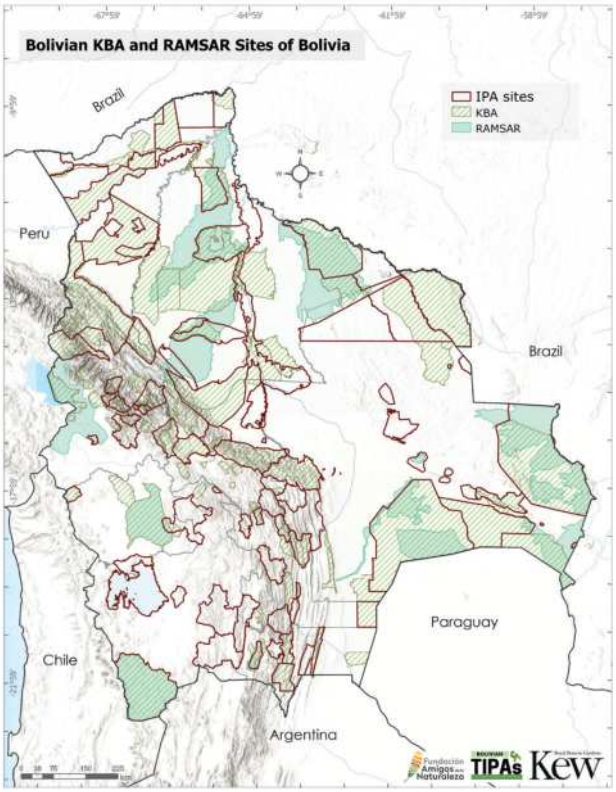
Within the Protected Areas (PAs) a wide range of ecosystems and species are safeguarded. They represent areas of importance for the sustainable development of local communities, as they provide essential ecosystem services (Chumacero 2025). There is already a significant proportion of land under protection within the PAs and, with the new IPA network, also considerable scope for the consolidation of new PAs throughout the country. This is especially important for Bolivia's international commitments under the 2030 CBD (Convention on Biological Diversity) framework, in which an important target is to strengthen ecosystem and protected area conservation through the 30 x 30 target, seeking to protect 30% of terrestrial and marine areas by 2030 (Global Biodiversity Framework 2022).

The IPA network is a relevant and timely aspect to aid the integration of different conservation areas, resulting in a national strategy to prioritise sites that reflect geographical and ecological heterogeneity, by habitat diversity and availability and, especially, the concentration of endemic, threatened, and socioeconomically important plants.

Many Bolivian IPAs cover zones with current conservation gaps. Simultaneously, they consolidate protected areas, RAMSAR sites, and KBAs with botanical knowledge and documentation, as justification and support for the designation of PAs, something which was often ignored in the past.



Map 3. Protected Areas in Bolivia 2025



Map 4. Bolivian Key Biodiversity Area (KBA), RAMSAR and Important Plant Area (IPA) networks.

Current challenges and threats

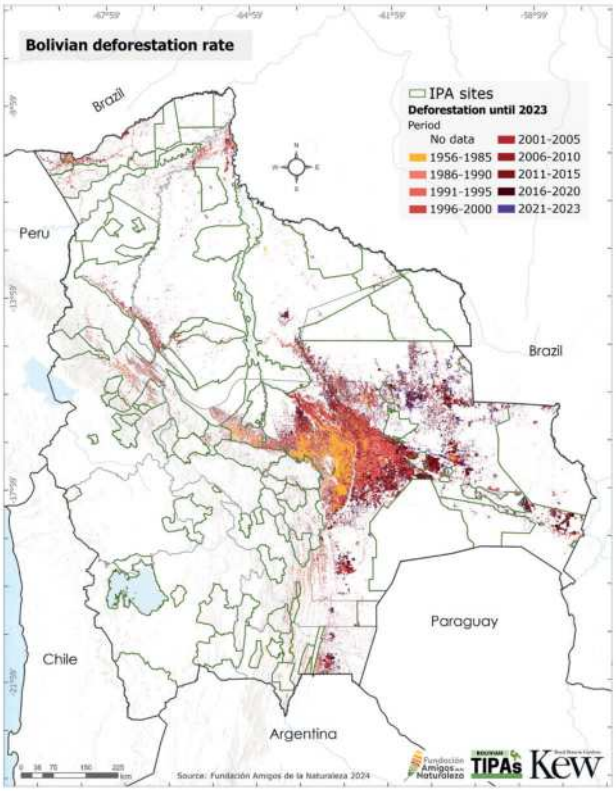
Despite its rich plant diversity, Bolivia faces significant knowledge gaps in the documentation of its native flora. This in turn complicates the understanding of the current state of protection of its flora and ecosystems. Although a future increase in the number of known native species is projected, threats to Bolivia's biodiversity are also increasing, mainly due to the expansion of agricultural frontiers, accelerated deforestation, large-scale wildfires, new human settlements, and forestry and mining activities (Vos *et al.* 2020).

Deforestation rates in Bolivia have varied over time, influenced by different forms of land use. Until 1991, mechanised farming and settlers were the main causes of forest loss, particularly in areas near the city of Santa Cruz, the Yungas of La Paz, and colonisation regions such as Alto Beni (La Paz), Chapare (Cochabamba), and Yapacaní (Santa Cruz) (Killeen *et al.* 2008) (Map 5). Between 2000 and 2010, deforestation was mainly caused by the expansion of cattle ranches, especially in the Chiquitania (Santa Cruz) and northern Amazonia, south of Guayaramerín (Beni), followed by mechanised agriculture and small-scale farming, the latter mainly north of Santa Cruz (Müller *et al.* 2014) (Map 5).

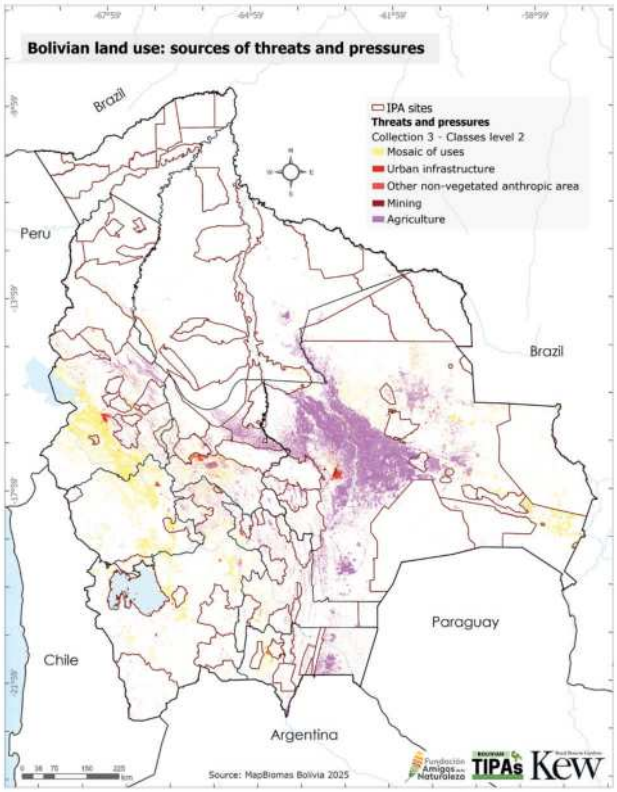
Projection models indicate that the greatest future expansion will be concentrated in the Amazonian forests of Cobija (Pando) and Riberalta (Beni), and the Chaco forests south of The Cordillera Oriental and the southeastern region between Pailón and San José de Chiquitos (Santa Cruz). The Chapare and the area along the road between Yucumo and Rurrenabaque are also affected but primarily by small-scale agriculture (Müller *et al.* 2014) (Map 5).

Currently, the various regions affected by the expansion of agro-industrial production are facing a worrying future, a threat projected to intensify. These activities, combined with high rates of deforestation, increased forest fires, and other anthropogenic pressures (new settlements and timber extraction), are accelerating the general degradation of the ecosystems.

Regions such as the Amazon, the Chaco, and the Chiquitania face particularly critical threats driven by the advance of agro-industrial and livestock farming. Until 2023, three ecoregions were identified to be under the greatest deforestation pressure: Chiquitano dry forest, with 24% of its original forest cover lost; the Chaco, 23% loss; the southwestern Amazonia, 9% loss. Although the Yungas have not shown the same accumulated levels of deforestation, the rate has exhibited a worrying trend between 2019 and 2023 (FAN 2023) (Map 5).



Map 5. Rate of deforestation in Bolivia 1956-2023



Map 6. Bolivian land use 2025: sources of threats and pressures

Furthermore, in the Andean region the native grasslands and shrublands decreased by approximately 6% between 1985 and 2024 (MapBiomas Bolivia 2025). These reductions are associated with activities such as subsistence farming, sheep and cattle ranching, urban expansion, and mining, resulting in degradation, overgrazing, logging, burning, and soil loss (Ibisch *et al.* 2003, Navarro 2005, Beck *et al.* 2015, Domic *et al.* 2019).

In summary, the pressures affecting the Bolivian ecosystems are caused primarily by agricultural expansion, which is the major threat to most IPA sites and protected areas. This is followed by changes in land-use, the growth of urban infrastructure, and a rapidly increasing mining sector, especially in the Yungas, where mining has increased by 59% over the last decade (MapBiomas Bolivia 2024, MapBiomas Bolivia 2025 Map 6).

Commitment of Bolivia to the protection and sustainable use of the nation's plant diversity

In Bolivia, biodiversity is a strategic component of the country's comprehensive development, for example, through the Plurinational Policy and Strategy for the Comprehensive and Sustainable Management of Biodiversity (Política y Estrategia Plurinacional para la Gestión Integral y Sustentable de la Biodiversidad). Bolivia's 2019–2030 Action Plan aims to promote and guide the Integrated and Sustainable Management of Biodiversity through action supporting and consolidating conservation, sustainable use, and the development of interdisciplinary knowledge (MMAyA 2018).

These planning instruments, through the Strategy and Action Plan, establish a clear framework that aligns with the Sustainable Development Goals (SDGs) and the Aichi and Kunming-Montreal Targets of the Convention on Biological Diversity (CBD). The country is also a signatory to multilateral environmental agreements, notably participating in important conventions for the integrated management, conservation, and sustainable use of biodiversity, such as the RAMSAR Convention, CITES, CMS, the Convention on Biological Diversity and the Global Treaty on Climate Change (adopted in 2015 during COP21 in Paris), among others (MMAyA 2018). These alignments are particularly relevant to spheres 3 (Use, conservation, and sustainable utilisation of biodiversity), 4 (Integrated environmental management for biodiversity conservation), and 5 (Knowledge management) of the Strategy and Action Plan, which include significant and multiple contributions to the Aichi Targets and the Sustainable Development Goals (SDGs) (MMAyA 2018) and the Kunming-Montreal framework (approved in 2022).

The deployment of the Strategy is in two phases: the first (2019–2020) dedicated to implementation, and the second (2020–2030) focused on executing strategic actions. Currently, and since 2024, an update with enforcement of a goal matrix projected to continue until 2030 is underway with intermediate milestones for 2025 to 2027. Within this planning framework, goals and actions aimed at strengthening the regulatory framework and institutional capacity stress the comprehensive management of the Plurinational System of Protected Areas and Strategic Ecosystems. Institutional consolidation and its effective linkage with protected areas, both at national and subnational levels, requires the agreement of specific legislation to facilitate the incorporation of other aspects of conservation into the system and promote subnational protected areas, contributing to the 30 x 30 Target.

Additionally, Bolivia has a robust body of legislation that includes 12 laws related to the environment and forests and 12 rules on the use, conservation, and sustainable utilisation of biodiversity. This is complemented by specific regulations on agrobiodiversity, genetic resources, and protected areas and ecosystems (MMAyA 2018).

Important Plant Areas (IPAs) in a global context

Globally approximately 40% of all plant species and 38% of tree species are endangered (Nic Lughadha *et al.* 2020, BGCI 2025). Most of these plants and trees are distributed in the tropics, where plant extinction rates are higher due to the expansion of intensive productive systems such as agroindustry, livestock farming and mining, causing elevated threat levels to native species and ecosystems. Paradoxically, available data and information regarding these often highly diverse ecosystems are still scarce. Therefore, considering the rapid loss of natural habitats, there is an urgent need to accelerate the identification, management and protection of those tropical areas, which are the most important for plant diversity worldwide, as they provide all categories of ecosystem services (provisioning, regulating, controlling, and supporting).

As a global initiative Important Plant Areas form a network of key national and international sites for the protection of native, endemic and threatened plant species and habitats, based on all available scientifically verified data. The NGO Plantlife International derived the concept of Important Plant Areas (IPA) (Anderson 2002, Plantlife International 2004) from the concept of Important Bird Areas, which was established in the 1980s (IBAs) (Grimmett & Jones 1989, BirdLife International 2004, 2006). The value of IPAs is increased by recognising that plants are often underrepresented in global, national, or regional conservation planning programs. This lack highlights the need for identifying and prioritising plant conservation in a systematic and global manner (Anderson 2002, Deltoro & Pérez-Rovira 2005, Radford & Ode 2009, Byfield *et al.* 2010, Willis 2017). Exclusive reliance on animals in conservation planning carries the risk of overlooking key sites for the conservation and sustainable use of plants, which is evident in numerous cases where high diversity of plants and animals coexist, yet sites are identified only by their animal species, plant diversity being rarely incorporated into management plans (Darbyshire *et al.* 2017).

In 2015, the Royal Botanic Gardens Kew, in collaboration with partners from seven tropical countries and the NGO Plantlife International, launched the programme to identify TIPAs (Tropical Important Plant Areas). This was a timely opportunity to combine and share collective knowledge and experiences from the preceding decade to refine the criteria to be used in a new phase of IPA identification in tropical countries (Darbyshire *et al.* 2017). The program initially focused on seven countries, four of which have completed site assessments and have established national networks of Important Plant Areas: Guinea in West Africa (Couch *et al.* 2019), British Overseas Territories in the Caribbean (Sánchez *et al.* 2019), Cameroon (Murphy *et al.* 2023), and Mozambique (Darbyshire *et al.* 2023).

Contributions of IPA sites to global biodiversity targets

Although Important Plant Areas (IPA) are not designations with legal backing, they can be used to enhance the impact of environmental decision-making at national, regional, and international levels, promoting and strengthening the protection and management of identified areas. To date, over 48 countries worldwide have a national network of IPAs - totalling 2,947 identified IPA sites globally, with 70 countries currently in the process of identification (Kew TIPAs portal 2025 onwards, IPA portal Plantlife 2025 onwards) (Figure 1).

In addition to the mapping of IPAs, the inclusion of the IPA process and methodology in various multilateral agreements is noteworthy, as they contribute to the identification and quantification of biodiversity, threatened species and habitats. The Global Strategy for Plant Conservation (GSPC) was adopted as a program under the Convention on Biological Diversity (CBD) in 2002. Following the CBD 2020 framework, the Montreal-Kunming

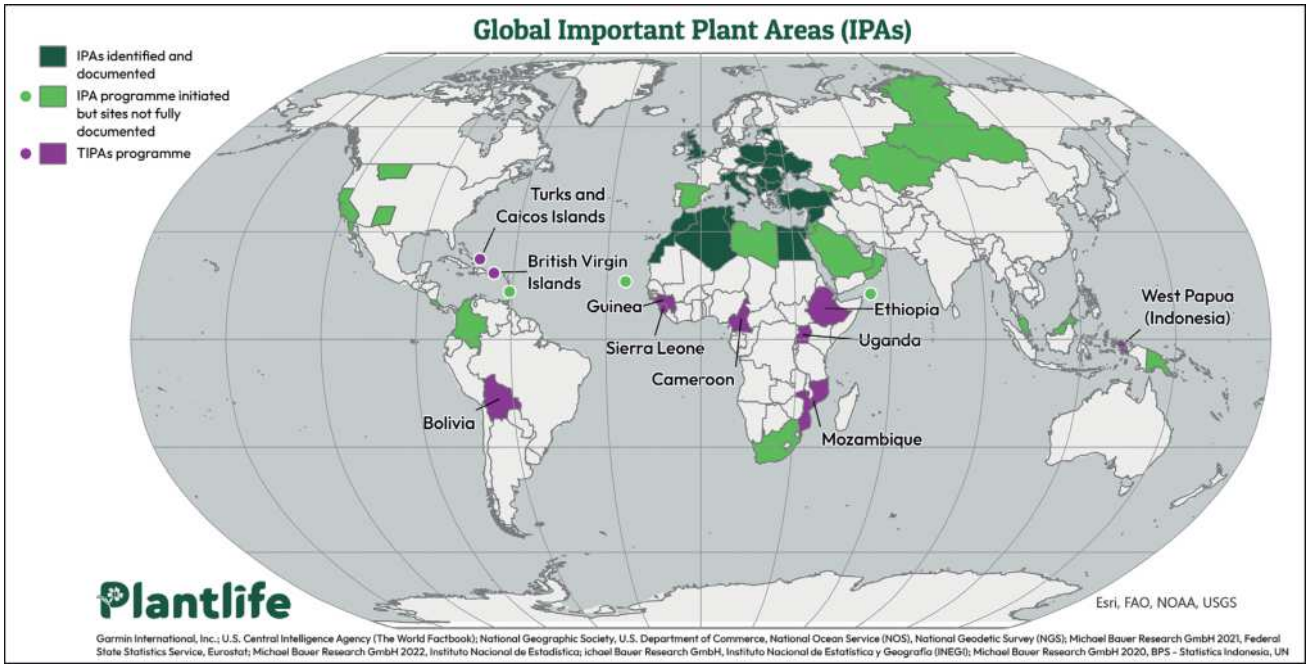


Figure 1. The Important Plant Area (IPA) and Tropical Important Plant Area (TIPA) programmes.

Global Biodiversity Framework was adopted in 2022 during the 15th Conference of the Parties (COP 15). Currently, IPAs and TIPAs are being debated alongside Key Biodiversity Areas (KBAs) as metrics for this global framework, a highly positive development and a testament to the efforts of Plantlife International, RBG Kew, and the IUCN, and their in-country partners. IPAs are closely aligned with the targets established by the CBD Kunming-Montreal Global Biodiversity Framework, as well as with its 2030 goals and associated targets, particularly Targets 1, 2, 3, 4, 5, 9, 10, 11, 21, 22, and 23.

Local Benefits of IPA Networks

The benefits of recognising a national network of IPA sites are manifold and significant, summarised here into six main benefits:

- ✓ Ecosystem services: including regulation (maintaining stable humidity and temperature); support (biodiversity conservation ensures the functioning of cycles such as primary productivity and carbon sequestration, among others); cultural services (preserving plants considered important for people's livelihoods, for example, those used in rituals); and provisioning (fodder plants, medicinal plants, etc.).
- ✓ Soil health: Soils remain healthy with their systems of microorganisms intact, functioning at an optimal level.
- ✓ Water and food security: The provision of water and food security is maintained for humans, animals, and plants alike.
- ✓ Climate resilience: Natural ecosystems provide greater resilience to climate changes, such as drought and rising temperatures.
- ✓ Fire resistance: Resistance to wildfires is maintained, as intact natural vegetation acts as a firewall.
- ✓ Improvement of local livelihoods: In the buffer zones around IPA sites, sources of income are diversified and increased, resulting in the sustainable use of plants and contributing to improved livelihoods and community benefits. Plants, including wild native useful species, as well as natural habitats, are protected against the most serious threats, including deforestation.

IPAs can serve as a strategic tool to support mitigation processes between local communities and commercial development sectors, particularly during the offsetting phase. IPA networks are valuable tools for conducting social and environmental impact assessments during the planning phases of large-scale development projects, as they offer evidence-based data on the importance of biodiversity in specific locations.

Concepts, Criteria, and their Application

The fundamental purpose of the TIPA programme is to complete the delimitation, mapping, and description of the most important plant sites or areas in the Tropics. The results from the projects are shared and directly incorporated in plans to achieve conservation priorities by national partners, such as Bolivia, the first country in Latin America to form its own network of Important Plant Areas.

- ✓ The TIPA programme is based on three IPA criteria – A, B, and C, which can be applied globally (Darbyshire *et al.* 2017, Klitgaard *et al.* 2023; Table 1). Inputs to implement each of the IPA criteria result from various activities, such as the compilation of lists of key habitats and species, the digitisation and identification of herbarium specimens, the georeferencing of the localities of these herbarium samples, and gap-filling botanical expeditions to less explored areas (Table 1, Figure 2).

The first step involves one of the essential activities in the identification of IPAs. Under Criterion A (Threatened Species), this entails assessments of rare, endemic, and/or threatened plant species for the Red List of Bolivia (IUCN 2025, onwards). This is conducted following the IUCN Categories and Criteria (IUCN 2019, Figure 3). The process involves the peer review of assessments by experts and specialists in different plant groups or global regions prior to their publication on the IUCN website (2025 onwards).

The second step relates to Criterion B (Botanical Richness) (Table 1, Figure 2). Here activities include field inventories, and the mapping and modelling of species richness. It also involves identification and mapping of occurrences of useful or socio-economically important plants, such as crop wild relatives, medicinal plants, and timber species, among others.

The third step focuses on Criterion C (Threatened Habitats), which addresses the mapping of different vegetation types and/or habitats, their classification, and the identification of major threats and risk of collapse following the IUCN Red List of Ecosystems (Bland *et al.* 2016, IUCN Red List of Ecosystems 2023 onwards) (Table 1, Figure 4).

Table 1. Summary of IPA criteria and subcriteria, from Darbyshire *et al*. (2017).

Subcriteria	Threshold
(A) Threatened species	
A(i) Site contains one or more globally threatened species	Site known, thought or inferred to contain ≥ 1% of the global population AND/OR ≥ 5% of the national population OR the 5 "best sites" for that species nationally, whichever is most appropriate.
A(ii) Site contains one or more regionally threatened species	Site known, thought or inferred to contain ≥ 5% of the national population, OR the 5 "best sites" for that species nationally, whichever is most appropriate.
A(iii) Site contains one or more highly restricted endemic species that are potentially threatened	Site known, thought or inferred to contain ≥ 1% of the global population AND/OR ≥ 5% of the national population, OR the 5 "best sites" for that species nationally, whichever is most appropriate.
A(iv) Site contains one or more range restricted endemic species that are potentially threatened	Site known, thought or inferred to contain ≥ 1% of the global population AND/OR ≥ 5% of the national population, OR the 5 "best sites" for that species nationally, whichever is most appropriate.
(B) Botanical richness	
B(i) Site contains a high number of species within defined habitat or vegetation types	For each habitat or vegetation type: up to 10% of the national resource can be selected within the whole national IPA network OR the 5 "best sites" nationally, whichever is the most appropriate.
B(ii) Site contains an exceptional number of species of high conservation importance	Site known to contain ≥ 3% of the selected national list of species of conservation importance OR the 15 richest sites nationally, whichever is most appropriate.
B(iii) Site contains an exceptional number of socially, economically or culturally valuable species	Site known to contain ≥ 3% of the selected national list of socially, economically or culturally valuable species OR the 15 richest sites nationally, whichever is most appropriate.
(C) Threatened habitat	
C(i) Site contains globally threatened or restricted habitat/ vegetation type	Site known, thought or inferred to contain ≥ 5% of the national resource (area) of the threatened habitat type OR site is among the best quality examples required to collectively prioritise 20–60% of the national resource OR the 5 "best sites" for that habitat nationally, whichever is the most appropriate.
C(ii) Site contains regionally threatened or restricted habitat/vegetation type	Site known, thought or inferred to contain ≥ 5% of the national resource (area) of the threatened habitat type OR site is among the best quality examples required to collectively prioritise 20–60% of the national resource OR the 5 "best sites" for that habitat nationally, whichever is the most appropriate.
C(iii) Site contains nationally threatened or restricted habitat/vegetation type, AND/OR habitats that have severely declined in extent nationally	Site known, thought or inferred to contain ≥ 10% of the national resource (area) of the threatened habitat type OR site is among the best quality examples required to collectively prioritise up to 20% of the national resource OR the 5 "best sites" for that habitat nationally, whichever is most appropriate.

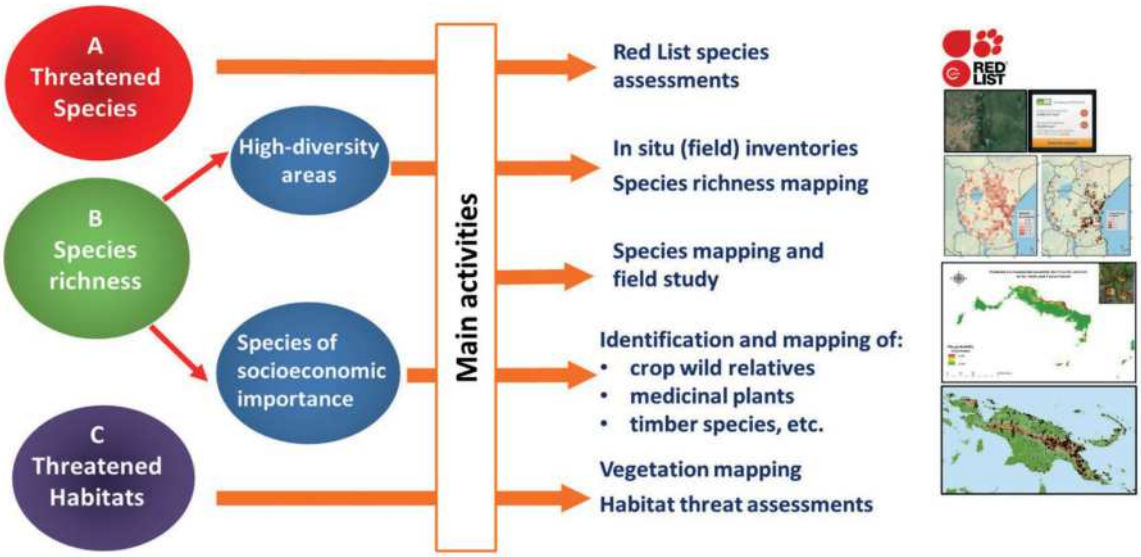


Figure 2. TIPA site evaluation: Workflows and main activities

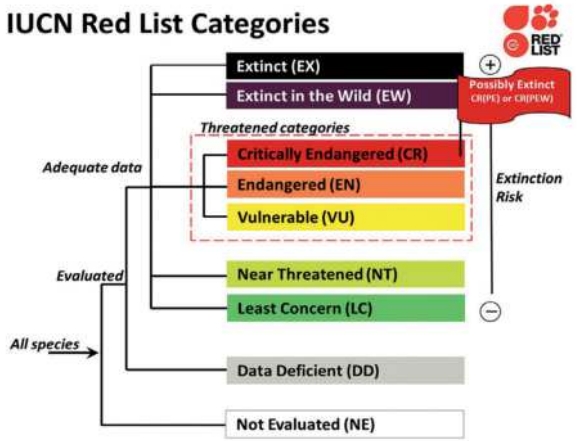


Figure 3. Structure of the IUCN system of categories for species evaluation. Source https://www.iucnredlist.org/es/resources/categories-and-criteria

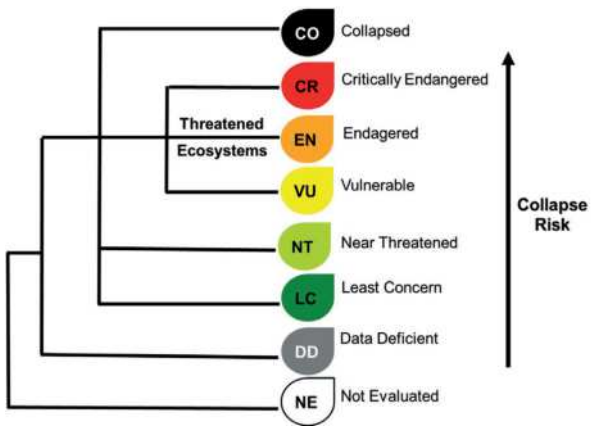


Figure 4. Structure of the categories for the IUCN Red list of ecosystems (Bland *et al.* 2016).

These activities are complemented by literature reviews, field surveys and assessments of the various sites identified as potential IPA sites due to their high concentration of endemic, rare, threatened, and/or useful species and/or threatened habitats. Assessments are conducted at these sites taking into account existing or previously identified species, their populations, conservation status, threats, and the delimitation of the area.

Identifying Important Plant Areas in Bolivia – Why Bolivia?

Botanical explorations in Bolivia date back to the colonial era, with herbarium collections dating back to 1747. However, even today Bolivia is one of the least explored countries in South America (Beck & Lara 2014). Nevertheless, numerous botanical studies have been conducted across the country adding to our current knowledge of the flora of Bolivia.

Among the most notable works are Flora Medicinal Boliviana (Lucca & Zalles 1962), Manual de Plantas Económicas de Bolivia (Cárdenas 1969), the edited Guía de Árboles de Bolivia (Killeen *et al.* 1993), specialised works on palms (Moraes 2004, 2007, 2014, 2020; Moreno & Moreno 2006), and publications on vegetation (Cárdenas 1949; Beck *et al.* 1993, Navarro & Maldonado 2002, 2005, Navarro 2011) up to the most recent by S.G. Beck (2014).

Specific botanical works focusing on regions include:

- **Lowlands:** La Flora Cruceña (Peña 1944), Las Plantas útiles de Lomerío (Ruiz de Centurion & Kraljevic 1996), the Guía Darwin de las Plantas de los Cerrados de la Chiquitania (Wood *et al.* 2011), Guía de Frutos silvestres Comestibles de la Chiquitania (Coimbra 2014, 2025), Frutos silvestres y promisorios de Pando (Araujo-Murakami *et al.* 2016), and the Libro Rojo de Plantas Amenazadas de las Tierras Bajas de Bolivia (MMAyA 2020);
- **Southern Zone and Valleys:** A Rapid Assessment of the Humid Forests of South Central Chuquisaca, Bolivia (Schulenberg & Awbrey 1997), Pueblos y plantas de Chuquisaca: Estado del conocimiento de los pueblos, la flora, uso y conservación (Carretero *et al.* 2011), Enfermedades, males y plantas medicinales de Chuquisaca (Gutiérrez 2014), Guía Darwin de los Valles Secos (Wood 2005), El Jardín de las Cactáceas de Bolivia: Vegetación y plantas de Pulquina (Araujo-Murakami *et al.* 2019);
- **Andean Region:** Etnobotánica en los Andes de Bolivia (Vidarurre *et al.* 2006), El Parque Nacional Sajama y sus Plantas (Beck *et al.* 2010), Libro Rojo de la Flora amenazada de Bolivia. Zona Andina (MMAyA 2012), and Flora de la Cordillera Real (Meneses *et al.* 2015).

In addition to these studies, others led by researchers from RBG Kew who, over the last three decades, have collaborated on joint botanical projects in Bolivia, focusing their research on aspects of the country's botanical diversity. An example of this is the book Gramíneas de Bolivia by Steve Renvoize (1998). Furthermore, 12 researchers or associates of RBG Kew contributed to the Catálogo de Plantas Vasculares de Bolivia (Jørgensen *et al.* 2014). These researchers contributed, sometimes in collaboration with Bolivian scientists, a total of 10 plant family treatments, including some of the most species-rich families: Acanthaceae (John R.I. Wood), Caryocaraceae (Ghillean Prance), Chrysobalanaceae (Ghillean Prance), Dichapetalaceae (Ghillean Prance), Convolvulaceae

(John R.I. Wood), Cyperaceae (Ana Claudia Araujo), Lamiaceae (Raymond Harley and John Wood), Fabaceae (Joan Barham, Bente Klitgaard, Gwilym Lewis, Lourdes Rico), Poaceae (Steve Renvoize), and Rhizophoraceae (Ghillean Prance). Moreover, the RBG Kew specialist in Neotropical Asteraceae, D.J. Nicholas Hind, maintains his online checklist of native Bolivian Asteraceae species (Checklist of Bolivian Compositae).

Furthermore, a fundamental pillar, constant support, and inspiration for RBG Kew projects in Bolivia is the associate researcher John R.I. Wood, who began his botanical research in Bolivia in 1993. Over the years, John Wood has led research in the Cerrado of the Chiquitania and in the Inter-Andean Dry Valleys, publishing several works, including the Libro Rojo de las Plantas de los Cerrados del Oriente Boliviano (Mamani *et al*. 2010), and Guía DARWIN de las Plantas de los Cerrados de la Chiquitania (Wood *et al*. 2011), in addition to describing 80 Bolivian plant species new to science.

With all the botanical background and the positive relationships with RBG Kew, the Bolivian Tropical Important Plant Area project began by combining botanical data from scientific herbarium collections with those of more recent field expeditions. The project also sought to strengthen local research capacity and promote the protection and sustainable use of Bolivian plant diversity. For the Royal Botanic Gardens, Kew (RBG Kew), this book builds on a 10-year fomalised collaboration with Bolivian research institutes, particularly the Natural History Museum, Noel Kempff Mercado, in Santa Cruz de la Sierra.

The objectives of the Tropical Important Plant Area project in Bolivia

In this book, we present the first Important Plant Area (IPA) country assessment conducted in Latin America. The objectives of the study were as follows:

- ✓ To identify, map, and document Important Plant Area (IPA) sites in Bolivia and disseminate this information in accessible resources that allow local, national, and international stakeholder conservation actions and the application of scientifically valid criteria and methodologies for Important Plant Areas.
- ✓ To assist Bolivia in fulfilling its commitments under the Convention on Biological Diversity (CBD), particularly considering the Kunming-Montreal Framework, specifically targets 1, 2, 3, 4, 5, 9, 10, 11, 21, 22, and 23.
- ✓ Similarly, to support Bolivia in applying the United Nations Sustainable Development Goals (SDGs), especially goals 2, 13, 15, and 17.
- ✓ To highlight Bolivia's globally unique plant diversity, including endemic, threatened, and useful species, providing accessible data on their habitats and conservation status to national and international policymakers, as well as the scientific community.
- ✓ To promote national pride in Bolivia's natural heritage, particularly its plant species and habitats of global importance, supporting their protection and sustainable use for future generations.
- ✓ To contribute to the continued development of livelihood benefits for communities in IPA site buffer zones through improved awareness and management of key plant resources for materials, food, medicine, ecosystem services, spiritual and religious values, and/or sustainable ecotourism.
- ✓ To identify global and national gaps in plant protection within Bolivia's existing Protected Areas framework.
- ✓ To determine which Bolivian plant species face the highest risk of extinction by contributing to Bolivia's Red List of Threatened Species and the IUCN Red List of Threatened Ecosystems.

Ten Years of the Tropical Important Plant Area project in Bolivia

In 2025, the Important Plant Areas in Bolivia project celebrated its tenth anniversary. The project began in 2015 with great enthusiasm but very limited funding. However, two workshops were organised in October 2015: one with Kew staff interested in Bolivian botany and another in Bolivia, during the 3rd Bolivian Botanical Congress in Sucre, with Bolivian botanists interested in plant conservation (Figure 5).

The main objective of these workshops was to gather specialist opinions on which areas of Bolivia were considered most important for plants and to assess interest in a broader project. Aware from the outset that working at a national level in Bolivia would be ideal, but would imply a considerable financial investment, it was decided to focus the project initially on a specific ecoregion of the country. The Chiquitana ecoregion was selected for the following reasons:

- ✓ Previous botanical studies in the region (e.g., Wood *et al*. 2011, 2015).
- ✓ Its mosaic of vegetation types, some of which are globally threatened.

- ✓ Presence of 2,500 - 3,000 native plant species, and a high degree of endemism.
- ✓ Extensive threats resulting from land-use change.
- ✓ The opportunity to contribute to the continued development of livelihood benefits for communities in buffer zones of IPA sites through raised awareness and management of key plant resources such as for building materials, food, and medicine, ecosystem services, support of spiritual and religious values, and/or sustainable ecotourism.

Between 2016 and 2019, thanks to the support of Kew's Americas team and funding from various philanthropic funds to the RBG Kew, botanical expeditions in the Chiquitania region were made possible, with the Noel Kempff Mercado National Park visited in 2018 and the extreme south of the Chiquitania in 2019. Furthermore, funds allowed the team to employ a project assistant at Kew, responsible for coordinating the eight volunteers, who worked tirelessly transcribing data from herbarium specimen labels and georeferencing occurrence data for IUCN extinction risk assessments of endemic and rare species growing in the Chiquitania. In 2017, the Kew project team hosted a two-day workshop in Santa Cruz de la Sierra, with the participation of professionals from all the country's botanical centres (including the USZ, LPB, BOLV, HSB Herbaria) (Figure 5). The main objective of this workshop was to engage the understanding of the Bolivian botanical research and plant conservation community, identify perceived plant conservation priorities, and encourage their participation in the project.

Between 2019 and 2022, the project was financed through a significant grant awarded by the UK's Darwin Initiative (project Klitgaard 26-024) under the title "Improving the livelihoods of the Chiquitano indigenous peoples of Bolivia, through sustainable forest management." in addition there was funding for RBG Kew and Fundación Amigos de la Naturaleza (FAN) from philanthropic funds. The three main partners in this project were FAN, the Noel Kempff Mercado Natural History Museum of the Gabriel René Moreno University, and RBG Kew. Additionally, various stakeholders across Bolivia participated in most aspect of the work.

Despite the challenges arising from two years of the COVID-19 pandemic, the expected project outcomes were achieved, which include:

- ✓ The documentation, mapping, and consolidation of a network of 18 IPA priority sites for conservation in the Chiquitana region. This network was adopted by the Autonomous Departmental Government of Santa Cruz (GADSC) as a tool for conservation prioritization, incorporated into the revised Master Plan of Protected Areas of Santa Cruz and into the Comprehensive Natural Resources Plan of the Department of Santa Cruz, in addition to contributing to the delimitation of three protected areas (Figure 6a).
- ✓ Identification of six centres of useful plants for the Chiquitana ecoregion. The overlay of the geographic distribution of useful plant species with that of the IPA network and the protected areas network of the Santa Cruz department showed that more than 90% of these species are found within the IPA sites.
- ✓ Contributing 250 global species assessments to the Bolivian Red List, published on the IUCN website (https://www.iucnredlist.org/es).
- ✓ Publication of the book "Plantas Amenazadas de las Zonas Bajas de Bolivia" (MMAyA 2020),

Figure 5a. Workshop with Kew staff and taxonomic experts in 2015 © Trustees RBG Kew/Bente Klitgaard

Figure 5b. Workshop with Bolivian experts in 2015 during the III Bolivian Botanical Congress in Sucre © Trustees RBG Kew/Bente Klitgaard

Figure 5c. Workshop with experts in Bolivian botany and ecology in 2017, Santa Cruz de la Sierra © The Bolivia TIPA Project

which presents the biology, habitats, uses, and regional conservation assessments of 285 threatened plant species, primarily native trees of the Bolivian lowlands. This work provides valuable data on priority species and the general habitats of ecoregions such as the Chiquitania, Chaco, and parts of Amazonia in Pando and Beni. The book was adopted by the Ministry of Environment and Water (MMAyA) as the official Red List of threatened plants for the lowlands of Bolivia. Its publication was carried out jointly with the MMAyA and the British Embassy in La Paz and made available freely online (Figure 6b).

- ✓ Publication of a special issue of the Bolivian journal Kempffiana (volume 19(2), 2023, https://kempffiana.museonoelkempff.org/revista-kempffiana/volumen-19-n2-2023/), which contains 20 scientific papers, and includes one describing the application of the IPA methodology, one focused on priority at-risk-habitats of the Chiquitano Dry Forest ecoregion, and 18 papers on the description, botanical characteristics, species presence, and other aspects of the Chiquitania IPA sites.
- ✓ Training 15 Bolivian botanical and conservation professionals as global IUCN Red List assessors, following IUCN methodology and requirements (https://www.iucnredlist.org/es/resources/online).
- ✓ Training 45 undergraduate students of biology and related fields in IUCN and IPA methodology through three theoretical and -practical courses lasting 3–5 days (Figure 6c).
- ✓ Funding annual scholarships for six Bolivian undergraduate students of Biology and related fields in their dissertation projects. Projects were completed on topics relating to the Darwin-funded project (e.g., Modelo de distribución espacial de la almendra chiquitana (*Dipteryx alata* Vogel, Fabaceae) en Bolivia (Pérez-Cruz & Villarroel 2020); and Plantas nativas con valor socioeconómico de la nación Monkoxi de Lomerío, Santa Cruz, Bolivia (Lino-Villalba *et al*. 2022)).
- ✓ Certification of Maira T. Martinez-Ugarteche as the first Bolivian trainer of IUCN Red List assessors.

Between 2022 and the project's completion in 2026, the project in Bolivia was financed primarily by a major philanthropic donation to RBG Kew, originating from the UK's Peoples' Postcode Lottery Fund. During these four years, the project has implemented lessons learnt from the pilot project in the Chiquitania and scaled up the project up the national level. The results and impact of these four years constitute the core of the present book.

Application of Important Plant Area criteria in Bolivia

As Bolivia is a large country with a wide range of ecosystems, harbouring a rich diversity of plants, yet with unexplored regions and extensive knowledge gaps for ecoregions such as the Chaco, the Chiquitano Dry Forests, and the northern Seasonally Flooded Savannas (Fernández *et al*. 2015), implementing a methodology based on solid and reliable data has meant the construction, updating, and exhaustive cleaning of existing data, leaving some gaps still to be filled.

Compilation of plant data

The identification of IPAs at national level is based on endemic plant taxa (species, subspecies, varieties), rare or near-endemic species, plant species of socioeconomic importance, and globally and nationally threatened species.

For endemic taxa, a list of taxa was initially obtained from the electronic version of the Catálogo de las Plantas Vasculares de Bolivia (Jørgensen *et al*. 2015 onwards). A review of synonyms was then conducted in RStudio (R Core Team 2023) using the WorldFlora package, with the WFO.match function, which standardises plant names according to the taxonomic structure of World Flora Online (Kindt 2020). To determine valid taxa and endemism, names taken from Plants of the World Online (POWO 2025) and the Catálogo de las Plantas Vasculares de Bolivia, and reviewed where possible by botanical experts including: Acanthaceae and Lamiaceae (John R.I. Wood), Amaryllidaceae (Raúl Lara, Margoth Atahuachi), Araliaceae (Moisés Mendoza), Asteraceae (D.J. Nicholas Hind Checklist of Bolivian Compositae), Apocynaceae (David Goyder), Bromeliaceae (Anna Haig, Alfredo Fuentes), Cunoniaceae (Alfredo Fuentes) Convolvulaceae (John R.I. Wood) (Wood *et al*. 2015, 2020, Wood & Clegg 2021), Fabaceae (Gwilym Lewis, Bente Klitgaard, Margoth Atahuachi), Malvaceae (Bente Klitgaard, Maira Martinez), Myrtaceae (Daniel Villarroel), Nyctaginaceae (Michael Nee, Romel Nina, Daniel Villarroel), Solanaceae (Sandy Knapp, Michael Nee, Solanaceae Source | A global taxonomic resource for the nightshade family), Poaceae (Steve Renvoize, Maira Martinez, Rosa Isela Meneses, Lynn Clark, Elizabeth McMurchie).

Figure 6a. Presentation and handover of findings from the project: Chiquitania Important Plant Areas (IPA) Network to the Ministry of the Environment of the Departmental Government of Santa Cruz, Bolivia © The Bolivia TIPA project

Figure 6b. Project closure ceremony and awarding of certificates to Chiquitania TIPA sites, November 2022 © The Bolivia TIPA project

Figure 6c. IPA methodology and IUCN certification training courses, 2020–2023 © the Bolivia TIPA project

Regarding the species of socioeconomic importance, a checklist of useful plants for the country was compiled from a review of primary and secondary literature, including books, scientific documents, undergraduate and postgraduate theses, guides, catalogues, and a database by national specialists (Arroyo-Herbas *et al*. in prep.). Use categories were designated following the simplified version of the Economic Botany Data Collection standard proposed by Cook (1995) and applied in the World Checklist of Useful Plants (Diazgranados *et al*. 2020). The endemic and native species follow the "Catálogo de las Plantas Vasculares de Bolivia" (Jørgensen *et al*. 2015 onwards). However, further data cleaning aligned the names of species and their synonyms with World Flora Online (Kindt 2020; https://wfoplantlist.org/ 2025 onwards). For the checklist of useful plants, the validation of uses, common names, identity, and selection of species vouchers was reviewed by more than 20 botanical, ecological, and ethnobotanical experts. This review was conducted by geographical or biogeographical areas, use categories, or taxonomic group (Arroyo-Herbas *et al*. in prep.).

With the completed list of endemic species and the useful plant checklist, a database was constructed using downloads of occurrence data from the Global Biodiversity Information Facility (GBIF) (https://www.gbif.org/occurrence/search), specimen data from Tropicos (https://www.tropicos.org/home), speciesLink (https://specieslink.net/search/), IUCN occurrence data, from ParseGBIF (a workflow that allows obtaining unique collection records (De Melo *et al*. 2024)). Furthermore, the team undertook an exhaustive review of the Bolivian plant collections at the Herbario del Oriente Boliviano (USZ), Herbario Nacional de Bolivia (LPB), Herbario Nacional Forestal Martín Cárdenas (BOLV), and the Herbario del Sur de Bolivia (HSB), as well as the Herbario Corrientes "Dra. Carmen L. Cristóbal, Corrientes (CTES)", Herbario Fanerogámico Miguel Lillo (Lillo), Tucumán in Argentina, Universidad Federal de Mato Grosso, Herbario UFMT, Cuiabá, Brazil, Missouri Botanical Garden (MO), U.S.A, and the Royal Botanic Gardens Kew (K), United Kingdom.

Study of Threatened Habitats

In the network of 18 Chiquitania IPA sites, an assessment of the collapse of the habitats in the Chiquitano Dry Forest ecoregion was conducted. This study followed the methodology developed by the IUCN for the IUCN Red List of Ecosystems (Bland *et al*. 2016). For this, work focused on the delimitation of the main habitats, quantification of cover loss, loss through fire, quantification of endemic species, and other aspects, thereby defining habitat formations, their characteristics, and their risk of collapse (Martinez-Ugarteche *et al*. 2023).

As stated by Beck (2014), the delimitation and classification of Bolivian vegetation types is complicated, making it very challenging to replicate the IUCN assessment of risk of habitat collapse at a national scale. However, to produce a reconciled terminology and classification, the Ecological Systems Map of Bolivia (Navarro & Ferreira 2011) and the Classification of Bolivian Vegetation (Navarro 2011) were used to define the vegetation types recorded for the Bolivian IPA sites. Additionally, to facilitate the dissemination of the Bolivian vegetation classification (Navarro 2011, Navarro & Ferreira 2011), we reconciled this terminology with the one applied in the international reference portal (https://tipas.kew.org/). Furthermore, the identified vegetation types were grouped according to the IUCN Habitat Classification Scheme (version 3.1) (IUCN 2012) (https://www.iucnredlist.org/es/resources/habitat-classification-scheme) (Appendix 2).

Nationally, the designation of IPA sites was primarily achieved through IPA criteria A and B. Nevertheless, it was possible to apply criterion C (Threatened Habitats) for the definition of three sites and the confirmation of another three. The threat categories were based on the preliminary categorization of threatened habitats for the Lowland ecosystems (MMAyA 2020).

Gap-filling Field Studies

The desk-based work was complemented by field studies to fill information gaps on endemic species, species at-risk-of-extinction, potentially threatened habitats and their conservation status, and to identify the main threats to species and habitats.

Expeditions were made to the northern side of the Noel Kempff Mercado National Park, unvisited botanically for more than 15 years; the Inter-Andean Dry Valleys, including those of Santa Cruz, Chuquisaca, Cochabamba, Potosí, and La Paz; Kaa-Iya del Gran Chaco National Park, documenting plants after a gap of 10 years; the Abayoy (a particular ecosystem with limited botanical information) with collections from the two visits deposited in the country's main herbaria; and a final expedition in 2025, to the north of the country: Rurrenabaque, Beni, and part of the Alto Beni, La Paz (Figure 7, Table 2).

Figure 7a. Field work in the Noel Kempff Mercado National Park, June 2018 © The Bolivia TIPA project

Figure 7b. Fieldwork June 2018: Crossing the seasonally inundated pampas, El Refugio © Trustees RBG Kew/ Rosemary Clegg

Figure 7c. Field work June 2025: Rurrenabaque, Beni © Trustees RBG Kew/Maira Martinez

Figure 7d. Fieldwork in the Dry Valleys of Bolivia: Specimen drying, Luribay, March 2023 © Trustees RBG Kew/Bente Klitgaard

Figure 7e. Kew – Bolivian teams joint expedition, Bolivian Dry Valleys (La Paz–Cochabamba border), March 2023 © The Bolivia TIPA project

Figure 7f. Fieldwork in the Kaa-Iya del Gran Chaco National Park and ANMI Cerro San Miguel, January 2025 © Trustees RBG Kew/ Maira Martinez

Figure 7g. Project team alongside park rangers from the Cordillera de Sama Biological Reserve, March 2025 © The Bolivia TIPA project

Figure 7h. Field work in the southern puna region, Verde Pampa-Salar de Uyuni, March 2025 © The Bolivia TIPA project

Table 2. Summary of the field expeditions undertaken during the 10-year TIPA Bolivia Project

Field expeditions undertaken by TIPA project staff with collaborators			
Year	**Date**	**Botanical collections**	**Department(s) and localities visited**
2018	June/July	322	Santa Cruz (Noel Kempff Mercado National Park)
2019	March	250	Santa Cruz (Southern Chiquitania)
2019	July	121	Santa Cruz (Lomerío)
2019	August	126	Santa Cruz (Santiago de Chiquitos)
2019	October	227	Santa Cruz (ANMI San Matías)
2020	September	325	Santa Cruz (Arubai)
2020	November		Santa Cruz (Arubai, Ipías)
2020	December		Santa Cruz (Concepción, San Miguelito, El Carmen)
2021	February	202	Santa Cruz (San José de Chiquitos-Mutún)
2021	February		Santa Cruz Botanical Garden
2021	April		Santa Cruz (El Encanto, Concepción)
2022	March	230	Santa Cruz (Concepción-San José de Chiquitos)
2022	December	222	Santa Cruz, Chuquisaca, Cochabamba (Dry Interandean Valleys)
2023	February	143	Tarija, Potosí (Dry Interandean Valleys)
2023	March	548	La Paz, Cochabamba, Potosí (Dry Interandean Valleys)
2023	November	77	Santa Cruz (Abayoy - Ñembi Guasu)
2024	January	135	Santa Cruz (Chaco (Charagua, Villamontes, Aguarague))
2025	January	232	Santa Cruz (Chaco-Abayoy (Ñembi Guasu, Kaa-Iya del Gran Chaco))
2025	February	282	Tarija, Potosí, Oruro (Puna, Prepuna (Cordillera de Sama, Tupiza, Camargo, Avaroa, Uyuni))
2025	June	260	Beni (Rurrenabaque, San Borja), La Paz (Ixiamas, Pilón Lajas, Alto Beni)

The Important Plant Area criteria applied in Bolivia

The identification of IPA sites through the criteria and guidelines published by Darbyshire *et al*. (2017) (Table 1) enables the prioritisation and highlighting of sites with botanical importance and high diversity using reliable data. Although the development of this scheme aims to be systematic and sites must meet one or more of the subcriteria, information and data are often scarce. Using Bolivian data, we were able to customise and apply these criteria most appropriately for Bolivia, especially given the high pressure on some ecosystems.

All subcriteria of **criterion A** were implemented in the IPA identification process in Bolivia. However, only **subcriteria B(ii)** and **B(iii)** were implemented, since **B(i)** (Table 1) can only be applied to defined habitats when there is a sufficient level of information on species composition to determine habitat quality (as indicated in Darbyshire *et al*. 2017). All the subcriteria under **criterion C** were implemented in the Chiquitania region (Martinez-Ugarteche *et al*. 2023). However, nationally, it was possible to implement **subcriterion C(iii)** for sites with scarce botanical data, but with high conservation importance due to connectivity, natural vegetation coverage, and/or potential for further botanical research (Table 3).

To identify potential IPA sites, the occurrence of endemic taxa (including threatened and restricted species) was mapped, and enumerated within a grid of 50 x 50 km hexagons. A network of candidate IPA sites was identified by a process of prioritisation based on a list of selected features and on habitat availability (Figure 8). The candidate network formed the basis for in-person workshops with experts in La Paz and Santa Cruz, and virtual meetings with experts from Chuquisaca and Cochabamba, to review the methodological process, confirm preliminary results, review boundaries, validate sites, and identify additional candidate IPA sites (Figure 9).

Among the characteristics used to prioritise potential sites, the occurrence data of the useful plants of Bolivia was included (Arroyo-Herbas *et al*. in prep.). The diversity of useful plants was calculated in a grid of 50 x 50 km hexagons, applying a similar method to the one applied for the distribution of the Bolivian endemic plant species (Lino-Villalba *et al*. in prep.).

Table 3. Criteria and subcriteria used for the identification and designation of Bolivian Important Plant Area sites and the main resources applied. * These are either Not Evaluated (NE) or Data Deficient (DD) species

IPA criterion and subcriterion	Main data source
(A) Threatened species	
A(i) Site contains one or more globally threatened species	IUCN Red List of Threatened Species (https://www.iucnredlist.org/)
A(ii) Site contains one or more regionally threatened species	MMAyA 2012. Red Data Mook of Bolivia's Threatened Plants. Andean zone. MMAyA 2020. Red Data book of the Threatened Plants of the Bolivian Lowland.
A(iii) Site contains one or more highly restricted endemic species that are potentially threatened	Endemic species with an extent of occurrence (EOO) ≤ 100 km^2 *(NE, DD)
A(iv) Site contains one or more range restricted endemic species that are potentially threatened	Endemic species with an extent of occurrence (EOO) ≤ 5,000 km^2 *(NE, DD)
(B) Botanical richness	
B(ii) Site contains an exceptional number of species of high conservation importance	Number of endemic species following the Catalogue of Vascular Plants of Bolivia (https://legacy.tropicos.org/ProjectAdvSearch.aspx?projectid=13&langid=66), and Endemic plants of Bolivia numbers, distribution and threats Lino-Villalba *et al.* in prep., Appendix 2
B(iii) Site contains an exceptional number of socially, economically or culturally valuable species	Useful plants following the checklist of useful plants of Bolivia Arroyo-Herbas *et al.* in prep., Appendix 3
(C) Threatened habitat	
C(iii) Site contains nationally threatened or restricted habitat/ vegetation type, AND/OR habitats that have severely declined in extent nationally	Preliminary categorisation of threatened habitats for the Lowland ecosystems (MMAyA 2020)

Workflows applied in the assessment of Important Plant Areas in Bolivia

In part 3 of this book, the 87 IPA sites are described. The IPA sites have an international code following the acronym and numbering from BOLTIPA001 to BOLTIPA087 and are ordered by department with their respective details and list of priority species.

The structure of the portal "Tropical Important Plant Areas Explorar" (https://tipas.kew.org/) is followed for the description of each recognised IPA site. Each site contains a set of sections as detailed in the bullet points opposite:

- ✓ General Information: Political and administrative location, a location map, highlighted boundaries, showing overlap with protected areas and other conservation initiatives, and key administrative features.
- ✓ Botanical Significance: Describes and highlights the species within the site, with a particular focus on threatened species and/or useful plants.
- ✓ Habitat and Geology: Describes the physiography and the types of habitats present.
- ✓ Conservation Challenges: Mentions the threats and conservation opportunities.

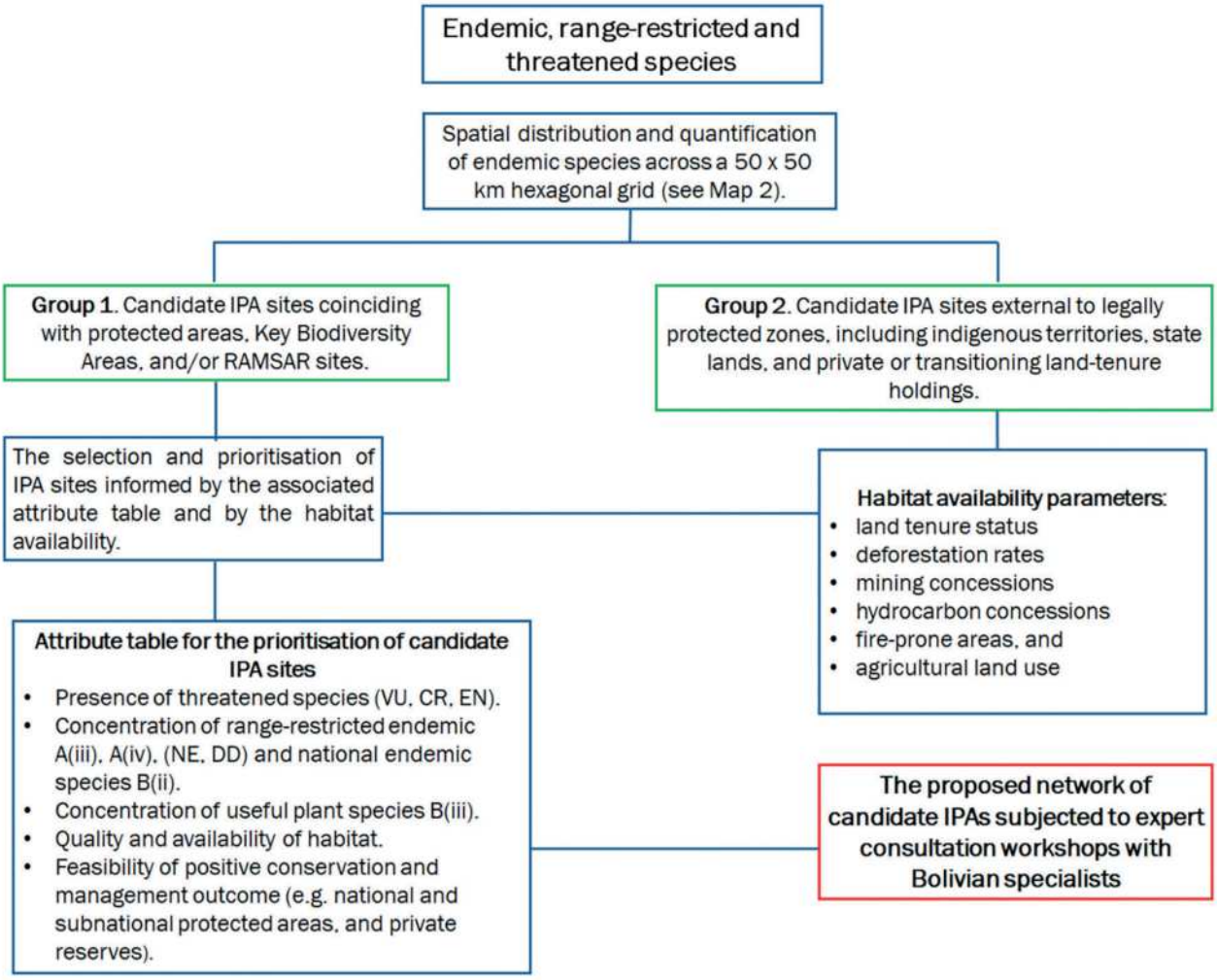


Figure 8. The methodological framework and analytical workflows utilised for the delimitation of candidate Important Plant Areas (IPAs) in Bolivia, integrated through the assessment of endemic and useful plants and strategic prioritisation attributes.

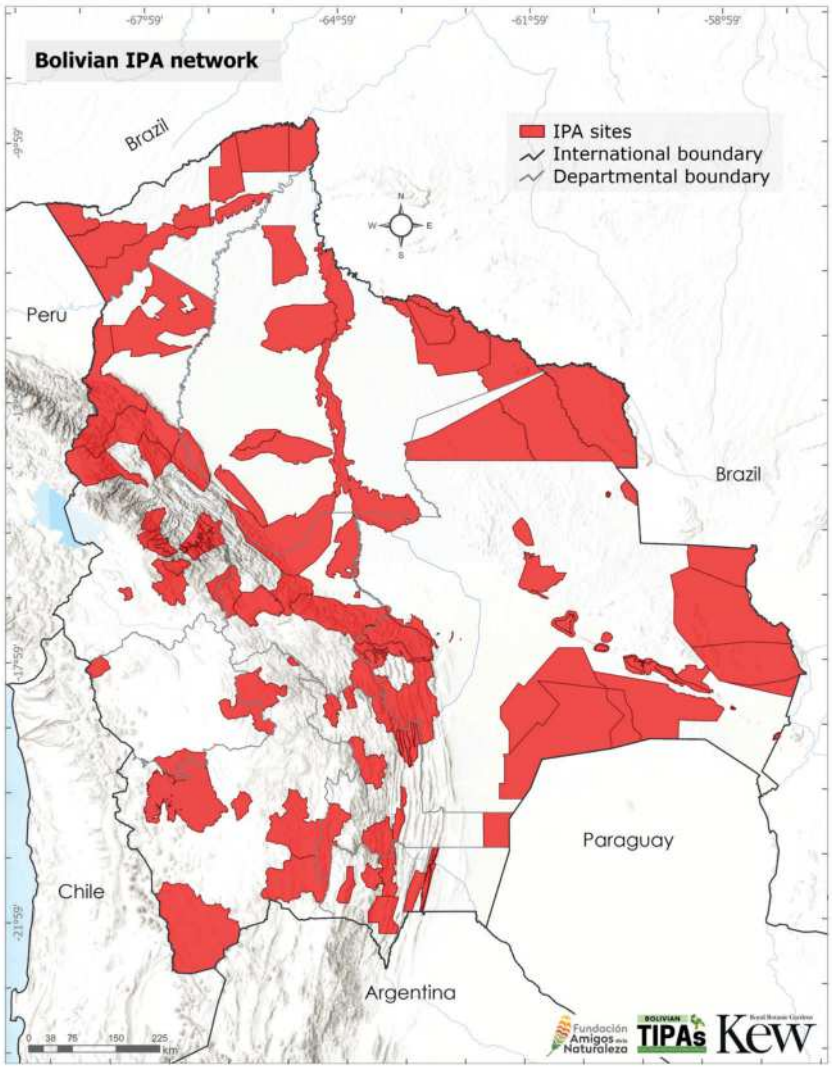
In addition to the text, the description is complemented by five informative tables that include: habitats, threats, land use (in some cases following Collection 2, year 2023 of MapBiomas Bolivia (2024)), threatened habitats (if applicable), protected areas and other conservation designations (which specify the respective degree of overlap, either with the conservation area in the IPA site or vice versa), and a list of priority species according to criterion A.

IPA sites vary widely ranging from protected areas, conservation areas (RAMSAR, KBA), indigenous territories, private properties, communities, municipal protected areas and others (Maps 3, 4, 7). Of the 87 IPA sites designated in Bolivia, 17

Figure 9. The network of candidate IPAs subjected to expert consultation workshops with Bolivian specialists © Trustees RBG Kew/ Maira Martinez

coincide with national protected areas, 10 with municipal protected areas, recognised by the National Protected Areas Service (SERNAP 2024), and another eight sites coincide with departmental protected areas (Map 7). In addition to being part of different types of protected areas, many sites coincide with RAMSAR and KBA sites to varying degrees (Map 4).

The recognised IPA sites also vary in their botanical characteristics and which IPA subcriteria they met to qualify as an IPA. Eleven sites met all the criteria and subcriteria applied in Bolivia (Table 4). Four of these are situated in the department of La Paz (Cotapata and Río Negro sites, Zongo Valley, ANMI Apolobamba, and The National Park - ANMI Madidi). Santa Cruz hosts three of these sites (Dry



Map 7. The network of 87 Bolivian Important Plant Areas (IPAs).

Valleys of Comarapa and Saipina, the National Park and ANMI Amboró, and UCPN Río Grande Valles Cruceños). The last four sites are in Cochabamba (Corani Pampa, Carrasco National PArk, Tunari National Park, and the Cotacajes Basin).

It is important to note that the boundaries of the IPA sites should be considered relative to the sources and map layers used. In some cases the site delimitations have adopted exisiting municipal boundaries and protected areas, in addition to habitat availability (Map 6). However, the coincidence between boundaries is not always 100% due to the diverse map sources used. Adjustments were made to resolve the differences found. In addition to correcting these administrative discrepancies, adjustments were made to some boundaries of existing conservation areas, for example to include concentrations of endemic or useful plant taxa. Consequently, it is crucial to highlight that users of this book may find that maps limits differ from those detailed in the factsheets and Tables of the individual IPA site, if they apply different set of map layers to the ones applied here (see SOURCES OF SHAPES AND MAPS), that boundaries differ or overlap with those detailed in the tables of the IPA site factsheets.

Global IUCN Red List assessments

The beginning of the TIPAs project in Bolivia coincided with a period in Bolivia with low numbers of species assessed for IUCN extinction risk status. Therefore, raising awareness of the extinction risk of endemic and/or rare species became a primary objective in the process of of IPA identification, by as strengthening technical capacity in the country in the application of the IUCN methodology. A list of endemic taxa and rare species was prepared and reviewed by botanical experts and associated occurrence data was also considered. Based on this, a list of priority species was developed for phased assessment. The first phase considered endemic and rare species distributed within the Chiquitania, together with the 50 most common useful plants, while the subsequent phases focused on endemic, rare, and threatened species shared with neighbouring countries (Figure 10).

To complete the IUCN extinction risk assessments, a strategy was developed to increase technical capacity in the use of the IUCN Red List. Global assessors were trained in IUCN methodology training workshops aimed at students and professionals. Assessments were conducted by assessors from the RBG Kew conservation unit team, Bolivian assessors who were certified through the workshops, and expert collaborators of specific botanical families. In the first phase of the project, the review and validation of these assessments were conducted through a workshop with botanical, ecological, and conservation experts from the Chiquitania region. Subsequent assessments were reviewed by various Bolivian botanists and experts in their specialist families with extensive experience of the flora of the country.

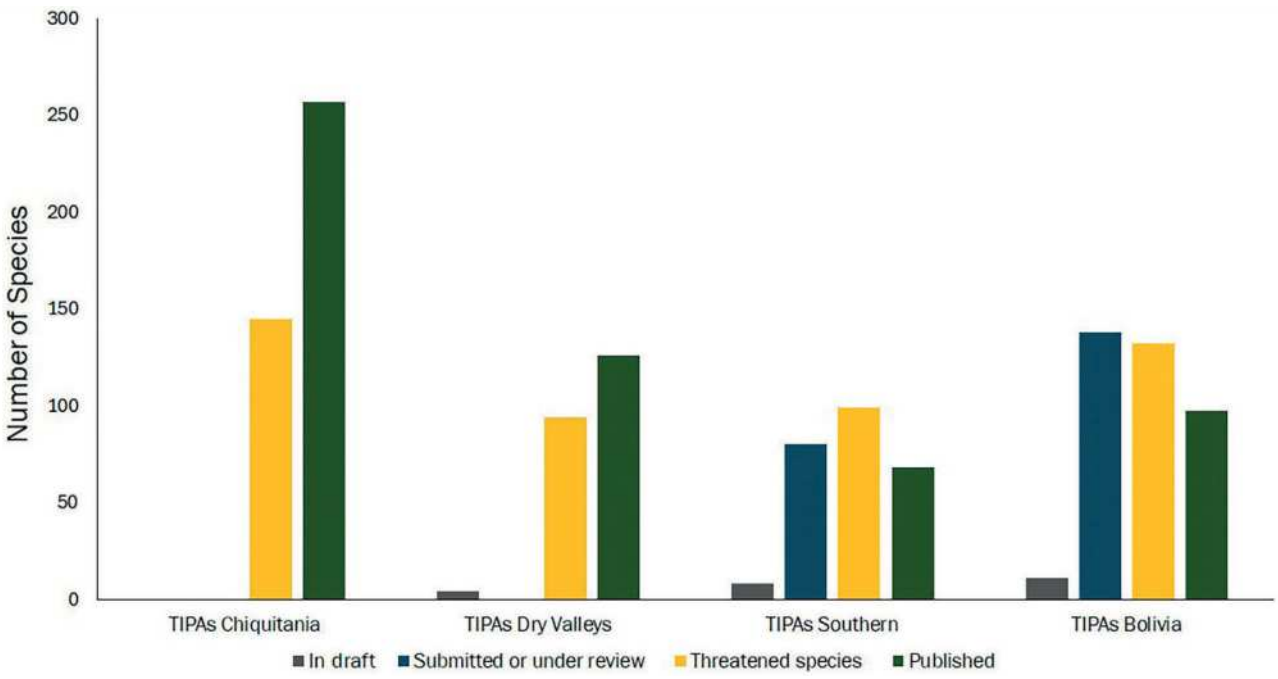


Figure 10. Global IUCN evaluations produced in the 10-year Bolivia TIPA project period.

In addition to the assessments carried out by the TIPAs Bolivia project staff, all assessments of Bolivian species published on the IUCN Red List portal (https://www.iucnredlist.org/es), from 2006 to the present, originating from different groups or initiatives, were considered. The identification of IPA sites was also based on the lists of endemic and native species threatened at the national level published in the Libro Rojo de las Flora Andina (MMAyA 2012) and Libro Rojo de las Plantas de las Tierras Bajas (MMAyA 2020).

Species at risk of extinction

During the IPA site identification process, we focused on the evaluation of endemic and/or rare species and the most useful species. A total of 732 species were evaluated, of which 65% are already published on the IUCN Red List, and the remainder are going through review by Bolivian experts or have been already submitted for publication. In addition to the evaluations conducted by the IPAs project, the remaining Bolivian assessments were also incorporated into the IPA identification process and applied under subcriterion A(i). With a total of 899 endemic species assessed for the country, 63% of these are at risk of extinction: 21% (VU), 31% (EN), and 11% (CR) (Figure 11a). However, these 899 assessments represent only 33% of the total endemic species documented for Bolivia, leaving a substantial number still to be assessed.

The native Bolivian species, which are recorded on the IUCN Red List and accepted in the Catálogo de las Plantas Vasculares de Bolivia (Jørgensen *et al*. 2015 onwards), total 3,079. Over 90% of these are categorised as Least Concern (LC) and 5% as Vulnerable or Endangered (Figure 11b).

The difference between the three groups of plants (endemic, rare and native) may be due partly to their geographic range and partly to restricted endemism being concentrated regionally in Bolivia. Endemic species are often restricted to a specific ecoregion or habitat, for example species of the Cerrado are restricted to one of its sub-physiognomies, which possess a rare flora with a high level of endemism (Myers *et al*. 2000, Villarroel *et al*. 2016). Conversely, the Inter-Andean Dry Valleys harbour almost 25% endemism due to their wide elevational range, arid climate conditions and diverse soil types (Lino-Villalba *et al*. in prep.). It is worth highlighting that 78 of the recognised IPA sites qualified under subcriterion A(i). Of the sites that concentrate the highest number of globally threatened or at-risk-of-extinction species, the National Park and ANMI Madidi site stands out with 143 endemic species, the Cotapata and Río Negro site with 104 species, the ANMIN Apolobamba site with 99 species, and the ANMI Amboró site with 76 species (Table 4, Appendices 1 and 2).

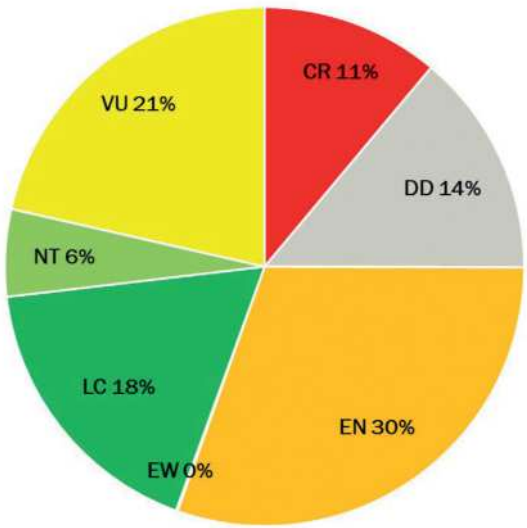


Figure 11a. IUCN categories of the evaluated Bolivian endemic plant species

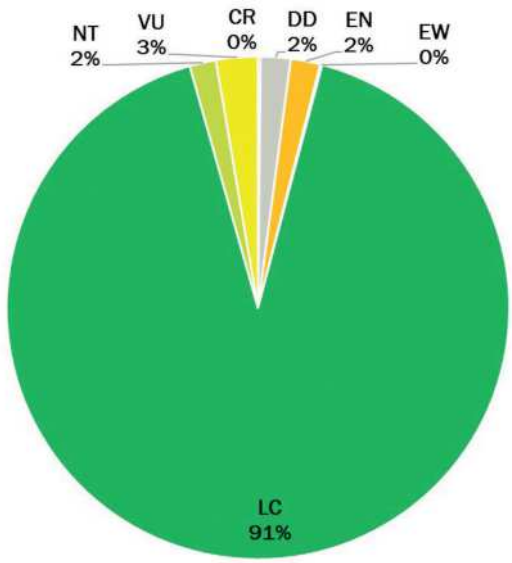


Figure 11b. IUCN categories of the evaluated native Bolivian plants

Study of endemic plants in Bolivia

The identification of IPA sites is based on numbers and names of endemic species which are in constant flux due to ongoing botanical activity worldwide, such as taxonomic revisions - changes of accepted names and their associated synonymy, which constantly modify species lists. Moreover, new endemic species are continuously discovered in different regions of Bolivia, while at the same time endemic taxa are lost, causing the numbers to vary constantly. To ensure maximum precision, the list of endemic taxa was reviewed and validated by cross-referencing data from global platforms such as POWO (Plants of the

Table 4. Bolivian Important Plant Area (IPA): Compliance with the IPA subcriteria, and number of species per subcriterium

IPA site	IPA criteria	A(i)	A(ii)	A(iii)	A(iv)	B(ii)	B(iii)	B(ii) %	B(iii) %
		Number of taxa							
BOLTIPA001	A(i), A(ii), A(iii), A(iv), B(iii), C(ii), C(iii)	18	1	5	1	27	434	1	13,3
BOLTIPA002	A(i), A(ii), A(iii), A(iv), B(iii), C(ii), C(iii)	45	1	6	2	54	342	2	10,5
BOLTIPA003	A(i), A(iii), A(iv)	8	–	1	1	14	80	0,5	2,5
BOLTIPA004	A(i), A(ii), A(iii), B(iii), C(iii)	8	–	–	–	10	139	0,4	4,3
BOLTIPA005	A(i), A(ii), A(iii), B(iii), C(ii), C(iii)	13	–	2	–	11	305	0,4	9,4
BOLTIPA006	A(i), A(iii)	6	–	1	–	5	11	0,2	0,3
BOLTIPA007	A(i), C(ii)	1	–	–	–	1	3	0	0,1
BOLTIPA008	A(i), C(ii)	3	–	–	–	2	70	0,1	2,1
BOLTIPA009	A(i), A(ii), A(iv), B(iii)	6	1	–	1	12	244	0,5	7,5
BOLTIPA010	A(i)	17	–	–	–	13	34	0,5	1
BOLTIPA011	A(i), A(ii), A(iii), A(iv), B(iii), C(ii), C(iii)	46	2	8	2	57	983	2,1	30,2
BOLTIPA012	A(i), A(ii), A(iii), B(iii), C(ii), C(iii)	19	3	2	–	21	582	0,8	17,9
BOLTIPA013	A(i), A(ii), A(iii), B(iii)	4	1	3	–	5	302	0,2	9,3
BOLTIPA014	A(i), A(iii), B(iii), C(ii)	14	–	1	–	17	107	0,6	3,3
BOLTIPA015	A(i), A(ii), A(iii)	7	1	3	–	13	84	0,5	2,6
BOLTIPA016	A(i), C(ii)	8	–	–	–	8	3	0,3	0,1
BOLTIPA017	A(i), C(ii)	7	–	–	–	8	39	0,3	1,2
BOLTIPA018	A(i), A(ii), A(iii), B(iii), C(ii), C(iii)	11	1	1	–	17	391	0,6	12
BOLTIPA019	A(i), B(iii)	6	–	–	–	16	196	0,6	6

Cont. Table 4.

IPA site	IPA criteria	A(i)	A(ii)	A(iii)	A(iv)	B(ii)	B(iii)	B(ii) %	B(iii) %
		Number of taxa							
BOLTIPA020	A(i), A(iv)	12	–	–	1	11	59	0,4	1,8
BOLTIPA021	A(i), A(ii)	4	2	–	–	2	83	0,1	2,5
BOLTIPA022	A(i), A(ii), A(iii), B(iii)	14	1	2	–	16	220	0,6	6,8
BOLTIPA023	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)	48	6	25	13	153	407	5,8	12,5
BOLTIPA024	A(i), A(iii), A(iv), B(iii)	14	–	7	1	31	124	1,2	3,8
BOLTIPA025	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)	76	12	57	39	293	879	11	27
BOLTIPA026	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)	76	7	33	20	249	873	9,4	26,8
BOLTIPA027	A(i), A(ii), A(iii), A(iv), B(iii)	23	3	6	2	56	203	2,1	6,2
BOLTIPA028	A(i), A(iii), A(iv)	10	–	6	1	34	75	1,3	2,3
BOLTIPA029	A(i), A(ii), A(iii), A(iv)	14	1	2	1	29	38	1,1	1,2
BOLTIPA030	A(i), A(iii), A(iv), B(iii)	13	–	7	1	39	166	1,5	5,1
BOLTIPA031	A(i), A(ii), A(iii), A(iv), B(iii)	10	3	2	6	41	331	1,6	10,2
BOLTIPA032	A(i), A(ii), A(iii), A(iv), B(iii)	7	1	1	2	25	163	0,9	5
BOLTIPA033	A(i), C(ii)	1	–	–	–	–	25	0	0,8
BOLTIPA034	A(i), A(ii), A(iii), A(iv), B(iii)	10	1	1	1	23	292	0,9	9
BOLTIPA035	A(i), A(ii), A(iii), A(iv), B(iii)	12	1	3	2	18	145	0,7	4,5
BOLTIPA036	A(i), A(ii), A(iii)	8	2	2	–	9	52	0,3	1,6
BOLTIPA037	A(i), A(iii), A(iv), B(iii)	17	–	4	3	37	284	1,4	8,7
BOLTIPA038	A(i), A(iii), A(iv)	8	–	1	1	19	60	0,7	1,8
BOLTIPA039	A(i), A(ii), A(iii), A(iv), B(iii)	3	1	2	1	10	217	0,4	6,7
BOLTIPA040	A(i), A(ii), A(iii), A(iv)	7	1	6	2	22	86	0,8	2,6
BOLTIPA041	A(i), A(ii), A(iii), A(iv)	7	3	9	1	19	46	0,7	1,4
BOLTIPA042	A(i), A(iii), A(iv)	11	–	3	1	20	45	0,8	1,4
BOLTIPA043	A(i), A(iii), A(iv)	8	–	1	1	13	37	0,5	1,1
BOLTIPA044	A(i), A(ii)	1	1	–	–	–	10	0	0,3
BOLTIPA045	A(ii), A(iii)	–	1	1	–	1	5	0	0,2
BOLTIPA046	A(i), A(ii), A(iii)	1	6	1	–	1	42	0	1,3
BOLTIPA047	A(ii)	–	5	–	–	–	18	0	0,6
BOLTIPA048	A(i), A(iii)	8	–	1	–	13	51	0,5	1,6
BOLTIPA049	A(i), A(iii)	9	–	1	–	18	18	0,7	0,6
BOLTIPA050	A(i), A(ii)	4	4	–	–	–	22	0	0,7
BOLTIPA051	A(i), A(iv)	2	–	–	1	3	53	0,1	1,6
BOLTIPA052	A(i), A(ii), A(iii), A(iv), B(iii)	9	1	7	8	38	164	1,4	5
BOLTIPA053	A(i), A(iii), A(iv), B(ii), B(iii)	20	–	8	6	77	132	2,9	4,1
BOLTIPA054	A(i), A(ii), A(iii), A(iv), B(iii)	23	3	9	4	73	111	2,7	3,4
BOLTIPA055	A(i), A(ii), A(iii), A(iv), B(iii)	14	2	13	1	45	102	1,7	3,1
BOLTIPA056	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)	104	10	161	55	462	549	17,4	16,9
BOLTIPA057	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)	38	6	35	21	169	373	6,4	11,5
BOLTIPA058	A(i), A(ii), A(iii), A(iv), B(iii)	17	3	14	5	57	204	2,1	6,3
BOLTIPA059	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)	99	15	61	36	320	786	12	24,1
BOLTIPA060	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)	143	18	65	50	416	1431	15,6	43,9
BOLTIPA061	A(i), A(iii), A(iv), B(iii)	13	–	6	2	33	217	1,2	6,7

Cont. Table 4.

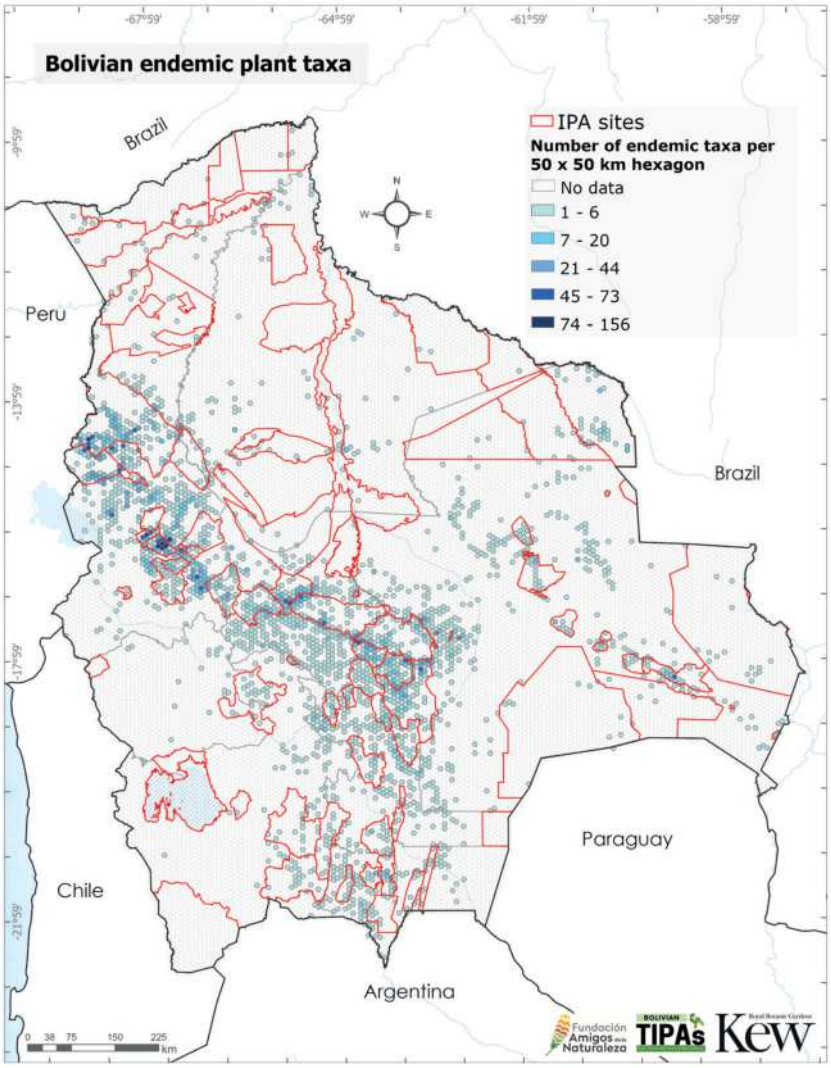
IPA site	IPA criteria	A(i)	A(ii)	A(iii)	A(iv)	B(ii)	B(iii)	B(ii) %	B(iii) %
		Number of taxa							
BOLTIPA062	A(i), B(iii)	5	–	–	–	7	174	0,3	5,3
BOLTIPA063	A(i), A(iii), B(iii)	5	–	1	–	4	253	0,2	7,8
BOLTIPA064	A(i), A(iii), B(iii)	6	–	1	–	8	376	0,3	11,5
BOLTIPA065	A(i), B(iii)	2	–	–	–	1	109	0	3,3
BOLTIPA066	A(iii), C(iii)	–	–	2	–	4	71	0,2	2,2
BOLTIPA067	A(i), B(iii)	2	–	–	–	3	91	0,1	2,8
BOLTIPA068	A(i)	2	–	–	–	3	57	0,1	1,8
BOLTIPA069	C(iii)	–	–	–	–	1	34	0	1
BOLTIPA070	A(i), A(iii), B(iii)	3	–	2	–	5	154	0,2	4,7
BOLTIPA071	C(iii)	–	–	–	–	–	13	0	0,4
BOLTIPA072	A(i), B(iii)	2	–	–	–	1	238	0	7,3
BOLTIPA073	A(i), A(iii), B(iii)	6	–	2	–	10	102	0,4	3,1
BOLTIPA074	A(i)	4	–	–	–	5	62	0,2	1,9
BOLTIPA075	A(ii)	–	9	–	–	–	65	0	2
BOLTIPA076	A(i), A(iii), B(iii)	8		2	–	14	231	0,5	7,1
BOLTIPA077	A(i), B(iii)	2	–	–	–	3	132	0,1	4,1
BOLTIPA078	C(iii)	–	–	–	–	4	38	0,2	1,2
BOLTIPA079	A(i), A(iii), B(iii)	14	–	4	–	40	329	1,5	10,1
BOLTIPA080	A(i)	1	–	–	–	2	27	0,1	0,8
BOLTIPA081	C(iii)	–	–		–	–	4	0	0,1
BOLTIPA082	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)	38	11	85	30	230	352	8,6	10,8
BOLTIPA083	A(ii), A(iii), B(iii)	–	5	1	–	5	112	0,2	3,4
BOLTIPA084	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)	53	15	98	40	316	594	11,9	18,2
BOLTIPA085	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)	29	2	21	9	101	209	3,8	6,4
BOLTIPA086	A(i), A(ii), A(iii), A(iv), B(iii)	19	1	5	4	49	150	1,9	4,6
BOLTIPA087	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)	29	2	22	12	125	232	4,7	7,1

World Online) and Tropicos, complemented by the experience of Bolivian and foreign botanists. This process is crucial, as the number of endemic taxa in Bolivia is being constantly updated, albeit slowly, thanks to these new findings.

Regarding the main findings about endemic taxa (Map 2), the IPA sites with the highest concentrations are linked to regions with steep elevational gradients (such as the Yungas and the Dry Valleys), where climatic and geographical conditions have driven the evolution of species found nowhere else. This pattern of high species richness coincides with studies by López (2003) and Moraes *et al*. (2019).

Most of the Bolivian territory exhibits a low to moderate concentration of endemism (1 to 20 species per 50 x 50 km hexagon) (Map 2). The large Amazonian plains (northern Pando and Beni) and the Chaco generally show the lowest concentration of endemic species. Areas with low density are not necessarily less diverse but are the least explored areas. This information deficit represents a key challenge and reflects the lack of investment in botanical inventories and exploration in these poorly explored zones.

Calculating the distribution of the richness is based on the 2,662 endemic species identified by this project and their associated cleaned set of occurrence data (Lino-Villalba *et al*. in prep). Among the sites meeting subcriterion B(ii) (exceptional richness of endemic species), are the Cotapata and Río Negro IPA with 17.4% and the Madidi National Park and ANMI with 15.6% (both in the department of La Paz), the Carrasco National Park with 12% (in the department of Cochabamba), and



Map 2. Distribution of the Bolivian endemic species: in a grid of 50 x 50 km hexagons

the Amboró National Park and ANMI with 11% (in the department of Santa Cruz) (Map 2).

The five IPA sites encompassing the highest richness of endemic taxa are nationally protected areas, except the Río Negro IPA. However, its proximity and connection with the Cotapata National Park and ANMI enables it to occupy the top spot in the endemism ranking (Table 5).

Study of useful plants in Bolivia

The checklist of useful plant species of Bolivia was compiled from a review of publications on ethnobotany, bioeconomy, socioeconomic species, crop wild relatives, and useful species at a national, regional, and local level. Useful species were identified using the 11 use categories applied in the World Checklist of Useful Plants by Diazgranados *et al.* (2020). After review by national botanical experts, we finalised a checklist of approximately 3,500 native and endemic species according to the Catálogo de Plantas Vasculares de Bolivia (Jørgensen *et al.* 2015, onwards) and Plants of the World Online (POWO). Due to the taxonomic complexity of some native species, it was only possible to compile 50,972 occurrence data points of 3,257 species. To prevent data bias, specimens from urban areas, cultivars, and experimental plots were excluded. Nevertheless, 30% of the remaining records still contained location errors, primarily because of poor labelling on historical specimens.

The total used to calculate criterion B(iii) (the site contains an exceptional number of species with social, economic, or cultural value) is 3,257 species obtained using Bolivian occurrence data. Overall results show that 49 IPA sites meet subcriterion B(iii), and 17 of the 87 IPA sites concentrate between 10% and 40% of the useful species documented nationally (Map 8). Among the sites with the highest concentration of species are the Madidi National Park with 43%, the Noel Kempff Mercado National Park with 30%, and the Carrasco National Park with 18% (Maps 3, 7, 8). To avoid underestimating the actual number of useful species within the IPA sites, the information has been complemented with literature references, which confirm the use of the species in specific sites. The list of useful species documented at the national level (Arroyo-Herbas *et al.* in prep.) has enhanced the importance of the 87 identified IPA sites in Bolivia, in addition to supplementing the botanical value of each site.

New species for science and new records for Bolivia

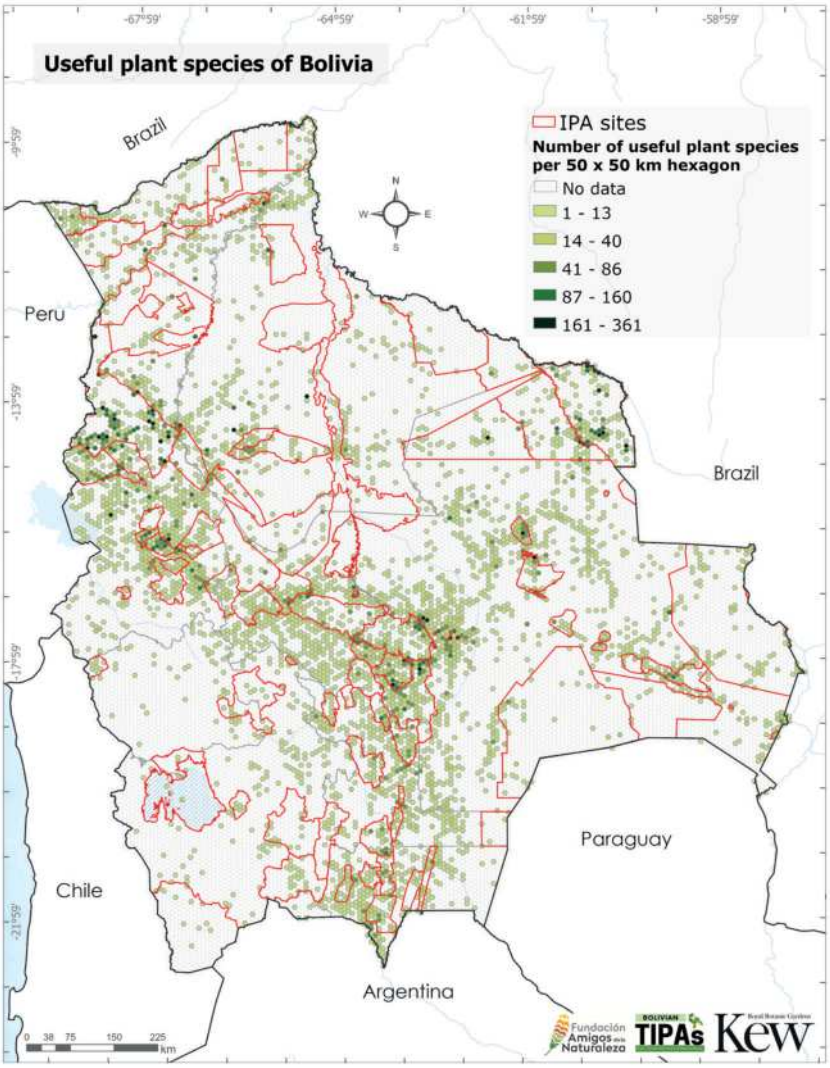
In addition to enhancing knowledge of endemic and at-risk-of-extinction species, joint expeditions with botanical experts expanded our data on endemic and threatened species. These efforts have led to the discovery of potential new species and the first official records of several plants within Bolivia, specifically within families, including Araceae, Convolvulaceae, Fabaceae and Myrtaceae.

Table 5. Top 10 TIPA sites by richness of Bolivian endemic plant species

IPA code	IPA site name	Number of endemic species
BOLTIPA056	Department of La Paz: Cotapata y Río Negro	462
BOLTIPA060	Department of La Paz: Madidi National Park and ANMI	416
BOLTIPA059	Department of La Paz: Apolobamba ANMIN	320
BOLTIPA084	Department of Cochabamba: Carrasco National Park	316
BOLTIPA025	Department of Santa Cruz: Amboró National Park and ANMI	293
BOLTIPA026	Department of Santa Cruz: Río Grande Valles Cruceños UCPN	249
BOLTIPA082	Department of Cochabamba: Corani Pampa	230
BOLTIPA057	Department of La Paz: Valle de Zongo	169
BOLTIPA023	Department of Santa Cruz: Valles Secos de Comarapa y Saipina	155
BOLTIPA087	Department of Cochabamba: Cuenca Cotacajes	125

Already published is *Astronium woodii* (Anacardiaceae) (Figure 12), an endemic and restricted tree of the Chiquitana region, categorised as Endangered and whose entire population is concentrated in two IPA sites: the UCPN Tucabaca (Serranía de Chiquitos) site and the Serranía de Ipias-Abayoy site. The new species *Handroanthus abayoy* (Bignoniaceae) (Figure 13) is a characteristic tree of the Abayoy vegetation, which at the time of description was considered endemic but has recently been recorded in Paraguay.

It is categorised as Vulnerable due to the severe pressure on itshabitat in Bolivia and Paraguay but is found in the Ñembi Guasu IPA site. *Myrciaria coimbrarum* (Myrtaceae) (Figure 14), locally known as zaraza or azaraza, is endemic to the Serranía Chiquitana and the Abayoy area in the department of Santa Cruz. Along with these new species, there is also a new record for the flora of Bolivia: *Myrcianthes minimifolia*, which grows in the Tucumano-Boliviano Forest, a humid and cloudy forest in the south of the country (Villarroel *et al*. 2025).



Map 8. Distribution of the native Bolivian useful species: in a grid of 50 x 50 km hexagons

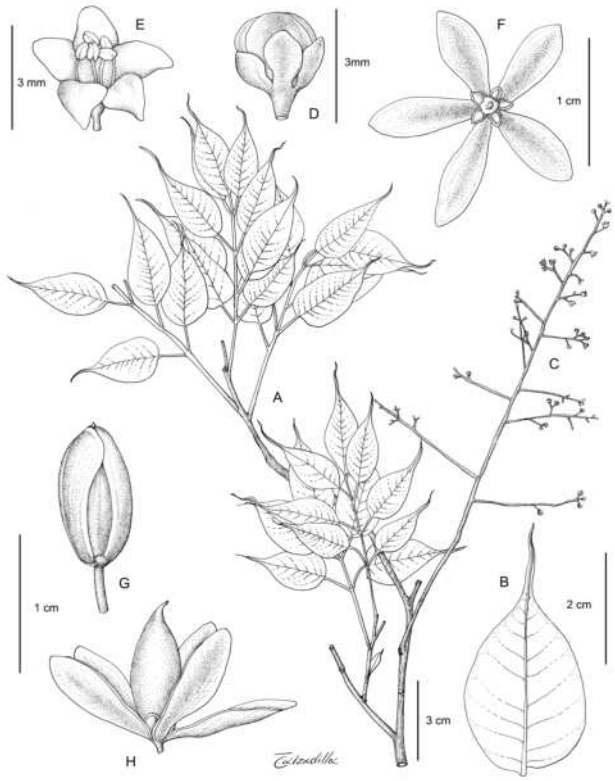


Figura 12. *Astronium woodii.* A branch and leaves; B lateral leaflet; C inflorescence; D floral bud; E staminate flower; F persistent calyx and petals; G immature fruit; H mature fruit (Villarroel *et al.* 2021). DRAWN BY ELIANA CALZADILLA.

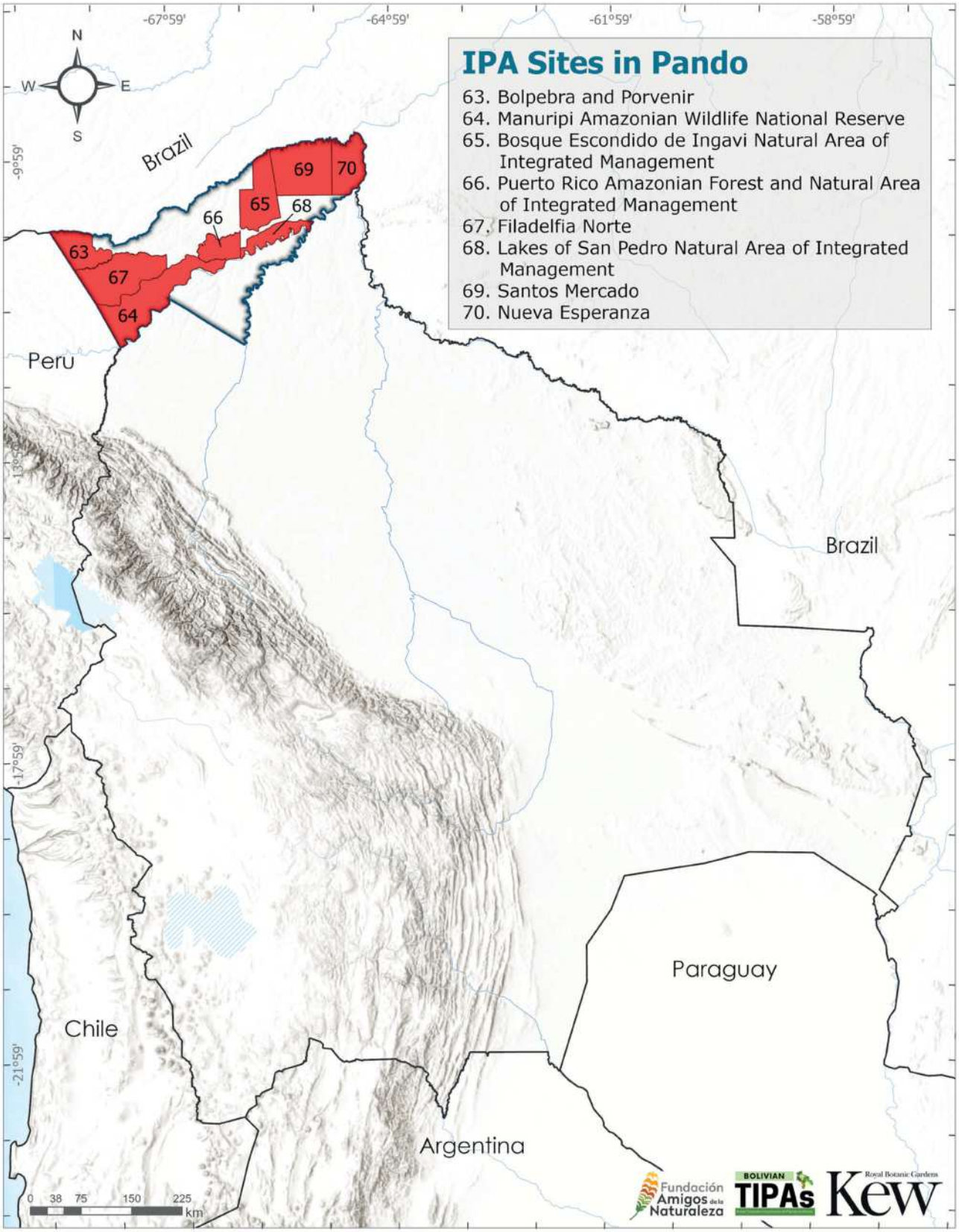
Additionally, there are several potential new species for science and new records for Bolivia, which have been collected during fieldwork; including, two new species of *Ipomoea*, one of *Cnidoscolus*, and one from the family Rubiaceae.

Figure 13. *Handroanthus abayoy*, growing in Abayoy vegetation © Daniel Villarroel

Figure 14. *Myrciaria coimbrarum*, growing in sandy soil in Abayoy vegetation © Daniel Villarroel

PANDO

Madre de Dios River and surrounding vegetation © FAN/Marcelo Char


IPA Sites in Pando
63. Bolpebra and Porvenir
64. Manuripi Amazonian Wildlife National Reserve
65. Bosque Escondido de Ingavi Natural Area of Integrated Management
66. Puerto Rico Amazonian Forest and Natural Area of Integrated Management
67. Filadelfia Norte
68. Lakes of San Pedro Natural Area of Integrated Management
69. Santos Mercado
70. Nueva Esperanza
-67°59'
-64°59'
-61°59'
-58°59'
-9°59'
-13°59'
-17°59'
-21°59'
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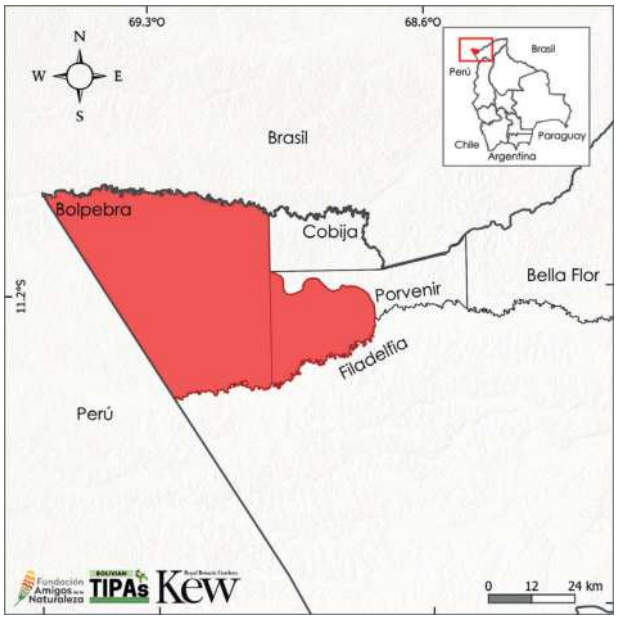
Fundación Amigos de la Naturaleza
BOLIVIAN TIPAs
Royal Botanic Gardens Kew

BOLPEBRA AND PORVENIR

Authors: Oriana A. Lino-Villalba, Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas & Bente B. Klitgaard

International code	BOLTIPA063	Department/ Province	Pando: Nicolás Suárez
Latitude	-11.19222	Longitude	-69.16012
Minimum altitude (m.a.s.l.)	198	Maximum altitude (m.a.s.l.)	363
Area (km^2)	3,062	Qualifying IPA criteria	A(i), A(iii), B(iii)



IPA Assessment – Rationale

Bolpebra and Porvenir qualify as an Important Plant Area (IPA) owing to their exceptional natural heritage value. The conservation of this Amazonian forest is fundamental, as it acts as a vital refuge for endemic and useful plant species. The presence of four endemic species, one of which exhibits a restricted distribution, underscores the site's importance. Similarly, its diversity includes 253 useful species, or 8% of the national list of useful plants. Its value is further increased by its function as a biological corridor, connecting to the south with the Filadelfia Norte IPA site.

Site Description

The IPA site is located in the extreme northwest of the Pando department and was delimited following the boundaries of the Bolpebra and the western portion of the Porvenir municipality. This area is a border zone, between Brazil to the north, the municipality of Filadelfia to the south, Peru to the west, and the municipality of Cobija to the east. The communities San Pedro de Bolpebra, Mukden, and Porvenir occupy the area and are characterised by their knowledge and utilisation of natural resources (MUAFB 2006).

Botanical Significance

The botanical significance of the area lies in its high concentration of plant species diversity, including globally threatened endemic plants and useful plants. Among the endemic species are *Mollinedia boliviensis* (LC) and *Peritassa glabra* (NE), the latter being a species with a restricted distribution. Additionally, globally threatened native species such as *Handroanthus serratifolius* (EN), *Mezilaurus ita-uba* (VU), *Nectandra dasystyla* (VU), *Rhodostemonodaphne dioica* (VU), and *Swietenia macrophylla* (EN) are found here.

This number is supplemented by 253 useful plant species (Appendix 3), and include both native and endemic taxa, notably *Euterpe precatoria* (LC), *Mauritia flexuosa* (LC), *Oenocarpus bataua* (LC), *Theobroma speciosum* (NE), and large extensions of *Bertholletia excelsa* (NE). The protection of

these resources, from Brazil nuts to açaí palms, is crucial for the regional economic livelihoods.

Habitat and Geology

The IPA site is situated within the Amazonian peneplain and the Amazonian alluvial flood plain, featuring high and low plateaus. This geographical configuration places it within the Southeast Amazonian Ecoregion (Ibisch *et al.* 2003). It is characterised by communities or associations of Amazonian forest on sandy hills of northwestern Pando, Amazonian Brazil Nut (*Bertholletia excelsa*) forest of central-western Pando on oligotrophic soils, among others (Navarro & Ferreira 2011, Navarro 2011, Appendix 2). According to the IUCN habitat classification scheme (IUCN 2012) (Appendix 2), these vegetation types are grouped as Subtropical/Tropical Moist Lowland Forest, Subtropical/Tropical Swamp Forest, and Subtropical/Tropical Seasonally Wet/Flooded Lowland Grasslands.

Conservation Challenges

The region sustains an economy based on forest extraction (timber, Brazil nut, or açaí), extensive livestock farming, and agricultural production. In 2023 the site still presents a notable 72% terra firme forest, from which resources are extracted, 17% flooded forest, and 10% grasslands. The burning of this type of vegetation during the dry season drastically increases the risk of forest fires (MUAFB 2006, MapBiomas Bolivia 2024), threatening the integrity of these ecosystems. The expansion of the agricultural frontier has replaced forested areas with introduced pasture crops (MMAyA 2020, Google Earth 2025). However, large forest extensions remain, which overlap with sub-national protected areas and other conservation measures such as KBAs.

Amazon rainforest © Marcelo Char

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	82	Major
Subtropical/Tropical Swamp Forest	9	Major
Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	—	Minor

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Low	Ongoing - stable
Small-holder farming	High	Ongoing - stable
Livestock farming & ranching	High	Ongoing - stable
Gathering terrestrial plants	Low	Ongoing - stable
Fire & fire suppression	Medium	Ongoing - trend unknown
Invasive non-native/alien species/diseases	Medium	Ongoing - trend unknown

Land use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	7	Major
Agriculture (pastoral)	—	Major
Harvesting of wild resources	—	Major

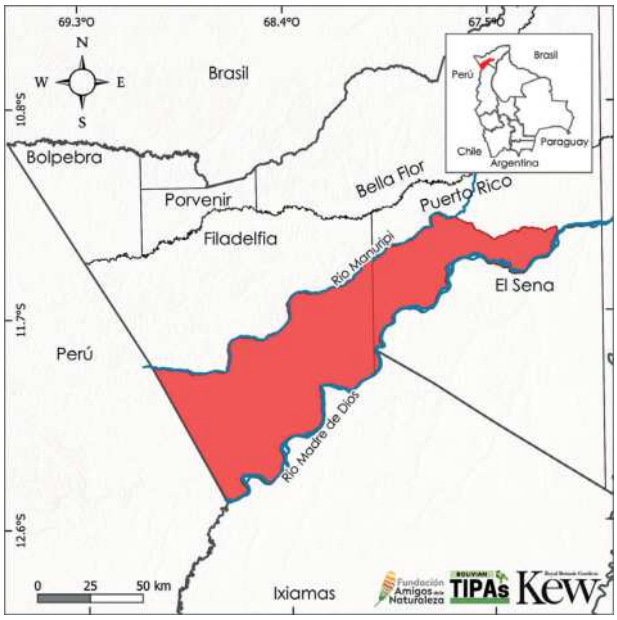
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Key Biodiversity Area	Tahuamanu-Orthon KBA	IPA overlaps with the protected/conservation area (7%)	214
Local / Regional Nature Reserve	Pando Tahuamanu Orthon Natural Heritage Promotion and Conservation Area	IPA overlaps with the protected/conservation area (7%)	133
Local / Regional Nature Reserve	Wildlife Reserve of the Rivers Tahuamanu and Orthon	IPA overlaps with the protected/conservation area (8%)	40

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Bignoniaceae	*Handroanthus serratifolius*	A(i)	EN	✓					occasional
Celastraceae	*Peritassa glabra*	A(iii)	NE	✓	✓		✓		rare
Lauraceae	*Mezilaurus ita-uba*	A(i)	VU	✓					occasional
Lauraceae	*Nectandra dasystyla*	A(i)	VU	✓					rare
Lauraceae	*Rhodostemonodaphne dioica*	A(i)	VU	✓					rare
Meliaceae	*Swietenia macrophylla*	A(i)	EN	✓					unknown

MANURIPI AMAZONIAN NATIONAL WILDLIFE RESERVE

Authors: Oriana A. Lino-Villalba, Alejandro Araujo-Murakami, Marisol Toledo, Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas & Bente B. Klitgaard

International code	BOLTIPA064	Department/ Province	Pando: Manuripi
Latitude	-11.85363	Longitude	-68.22023
Minimum altitude (m.a.s.l.)	132	Maximum altitude (m.a.s.l.)	288
Area (km^2)	7,407	Qualifying IPA criteria	A(i), A(iii), B(iii)



IPA Assessment – Rationale

The Manuripi Amazonian Wildlife National Reserve qualifies as an Important Plant Area (IPA) owing to its extensive cover of lowland Amazonian ecosystems and vegetation (MMAyA 2020). It harbours a significant diversity of native plants, many with great socioeconomic value, and globally threatened endemic plant species. Of the five globally threatened plant species, four are endemic. Additionally, this site is home to 376 useful species, further highlighting its importance. This figure underscores the profound connection between the Manuripi Reserve's biodiversity and the livelihoods of its connected communities, solidifying its role not only as a refuge for threatened species but as a fundamental pillar for sustainable development in northern Bolivian Amazonia.

Site Description

The IPA site, delimited according to the boundaries of the Manuripi Amazonian Wildlife National Reserve, is found in the southwest of the Pando department. This area overlaps with the municipalities of Puerto Rico and Filadelfia. It is notable for having large areas of terra firme and flooded forest (MapBiomas Bolivia 2024). The communities of the area include Curichón, San Antonio, Chivé, Villa Florida, and Sacrificio, among others (SERNAP 2012a).

Botanical Significance

The botanical significance of the area lies in the concentration of endemic and socioeconomically important species, along with globally threatened species. Specifically, among the endemic and globally threatened species are *Coccoloba steinbachii* (VU), *Henriettea boliviensis* (VU), *Lonchocarpus sericophyllus* (VU), and *Triplaris efistulifera* (EN).

Added to these are 376 useful plants, representing 12% of the useful species documented for Bolivia (Appendix 3). Noteworthy is *Bertholletia excelsa* (NE) (Brazil nut), a species of high socioeconomic importance in Amazonia, with large stands in the Manuripi Reserve (Licona-Vasquez *et al.* 2010),

Aerial view of lowland Amazon rainforest © FAN/Marcelo Char

Hevea brasiliensis (LC) (rubber), *Oenocarpus bataua* (LC) (majo palm), *Sterculia apetala* (LC), and *Zanthoxylum sprucei* (LC). Fifteen of the useful plant species are palms, including *Euterpe precatoria* (LC) (açaí), one of the most important non-timber forest products in South America, and with various uses such as in juice and ice cream production, palm heart extraction, ornamental, and cosmetic purposes, among others (Paniagua-Zambrana *et al.* 2020).

Euterpe precatoria palm © FAN/Andrés Unterladstaetter

Habitat and Geology

The IPA site is situated within the Amazonian peneplain and the Amazonian alluvial flood plain, featuring high and low plateaus. It entirely encompasses the Southwest Amazonian Ecoregion (Ibisch *et al.* 2003). The main rivers are the Manuripi to the north and the Madre de Dios to the south. The forests are divided into terra firme, várzea, igapó, and permanent and semi-permanent swamp palm groves (Navarro & Ferreira 2011, Navarro 2011, Appendix 2). According to the IUCN habitat classification scheme (IUCN 2012) (Appendix 2), the vegetation types of this IPA site are categorised as Subtropical/Tropical Moist Lowland Forest, Subtropical/Tropical Swamp Forest, and Subtropical/Tropical Seasonally Wet/ Flooded Lowland Grasslands.

Conservation Challenges

The communities in the area undetake agriculture, extensive livestock farming, subsistence hunting, and utilise non-timber resources. As of 2023, the IPA site was covered by 66% terra firme and 32% flooded forests (MapBiomas Bolivia 2024).

A threat that could gradually increase is forest fires, although in 2019 and 2020 the burnt area was low (0.02% and 0.03%, respectively). Simultaneously, it presented an accumulated deforestation rate of 0.09% for both years (ACEAA 2021). It is important to note that the National Amazonian Manuripi Wildlife Reserve and conservation area is lacking in management and governance (MMAyA 2020). However, the designated IPA site and the overlapping KBA are expected to serve as an additional mechanism for the protection of genetic resources and endemic species, as well as the sustainable utilisation of Brazil nuts.

Theobroma speciosum fruits © Daniela Sasaki

Bertholletia excelsa tree © FAN/Lucía Aramayo

Lowland Amazon rainforest © FAN/Marcelo Char

Habitats (following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	64	Major
Subtropical/Tropical Swamp Forest	33	Major
Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	1	Minor

Threat

Threat	Severity	Situation
Housing & urban areas	Low	Ongoing - stable
Small-holder grazing, ranching or farming	Medium	Ongoing - stable
Gathering terrestrial plants	Low	Ongoing - stable
Logging & wood harvesting	Low	Ongoing - trend unknown
Fire & fire suppression	Low	Ongoing - stable

Land use

Land use type	Percent coverage	Importance
Nature conservation	100	Major
Agriculture (arable)	—	Minor
Agriculture (pastoral)	—	Minor
Harvesting of wild resources	—	Major

Protected areas and other conservation designations

Protected area type	Names (s) of protected area (s)	Relationship between the site and the protected area (% of overlap)	Area of overlap (km^2)
National Nature Reserve	Manuripi Amazonian Wildlife National Reserve	Protected/conservation area matches IPA (100%)	7,407
Key Biodiversity Area	KBA Manuripi	IPA overlaps with the protected/conservation area (99%)	7,407

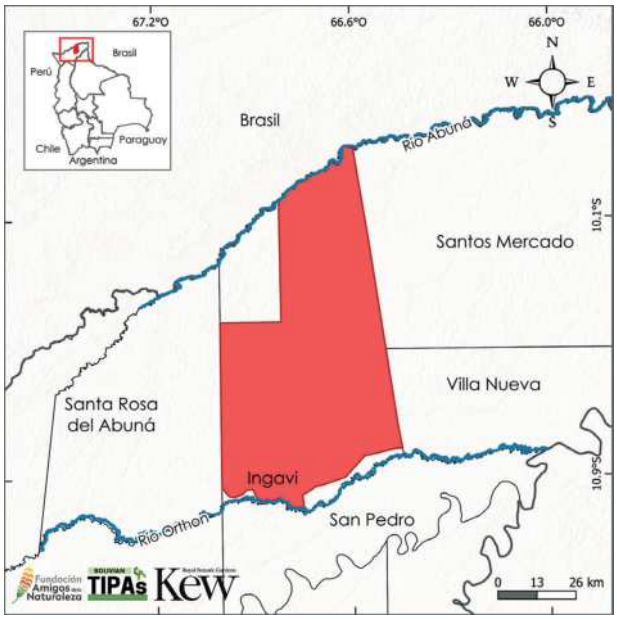
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Fabaceae	*Lonchocarpus sericophyllus*	A(i)	VU	✓	✓				occasional
Lauraceae	*Mezilaurus ita-uba*	A(i)	VU	✓					occasional
Malpighiaceae	*Mezia beckii*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Melastomataceae	*Henriettea boliviensis*	A(i)	VU	✓	✓	✓	✓		occasional
Polygonaceae	*Coccoloba steinbachii*	A(i)	VU	✓	✓	✓	✓		occasional
Polygonaceae	*Triplaris efistulifera*	A(i)	EN	✓	✓		✓		occasional

BOSQUE ESCONDIDO DE INGAVI NATURAL AREA OF INTEGRATED MANAGEMENT

Authors: Oriana A. Lino-Villalba, Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas & Bente B. Klitgaard

International code	BOLTIPA065	Department/ Province	Pando: Abuná
Latitude	-10.51804	Longitude	-66.72863
Minimum altitude (m.a.s.l.)	104	Maximum altitude (m.a.s.l.)	207
Area (km^2)	4,574	Qualifying IPA criteria	A(i), B(iii)



IPA Assessment – Rationale

The Natural Area of Integrated Management Bosque Escondido de Ingavi qualifies as an IPA site owing to its large extensions of forest, which harbour an important diversity of native plants, many with great socioeconomic value, in addition to globally threatened species. It presents one threatened endemic species and 109 species with socioeconomic value, of which 82 are categorised as LC (Least Concern) according to IUCN categories. It is a connectivity site between the Natural Area of Integrated Management Bosque Lagos de San Pedro IPA to the north and the Santos Mercado IPA to the east.

Site Description

The Natural Area of Integrated Management Bosque Escondido de Ingavi IPA site is in north-central Pando and was delimited following the boundaries of the protected area of the same name. Although it is an understudied zone, it still harbours significant biodiversity and maintains considerable natural forest cover, presenting 74% lowland Amazonian and 25% flooded forest (MapBiomas Bolivia 2024). The Ingavi KBA and Tahuamanu-Orthon KBA overlap with its boundaries; and importantly it contains important rivers such as the Orthon, Manu, Abuná, and Río Negro (ACEAA 2024a).

Botanical Significance

The botanical significance of the area is based on the concentration of plants with socioeconomic importance, alongside globally threatened species. It presents one threatened endemic species, *Suessenguthia koessleri* (VU), and 109 species with socioeconomic value, or 3% of the species recorded in the national checklist of useful plants (Appendix 3).

Species include *Handroanthus serratifolius* (EN), a plant listed on CITES Appendix II, *Astrocaryum aculeatum* (LC), *Ocotea pauciflora* (LC), *Trichilia micrantha* (LC), and *Zanthoxylum rhoifolium* (LC), in addition to *Bertholletia excelsa* (NE), *Euterpe precatoria* (LC), and *Oenocarpus bataua* (LC), the latter being of great importance to local communities.

View of the Ingavi Hidden Forest © Margoth Atahuachi

Astrocaryum aculeatum palm © Daniela Sasaki

Oenocarpus bataua palm © Daniela Sasaki

Habitat and Geology

The IPA site is situated within the Amazonian peneplain and the Amazonian alluvial flood plain with high and low plains, in the Southwestern Amazonia ecoregion (Ibisch *et al.* 2003).

The vegetation is characterised by lowland Amazonian forest, palm groves, alluvial plain forest, among others (Navarro & Ferreira 2011, Navarro 2011, Appendix 2). These vegetation types are classified as Subtropical/Tropical Lowland Humid Forest, Subtropical/Tropical Swamp Forest, Humid Savanna, and Subtropical/Tropical Seasonally Humid/Flooded Lowland Grasslands according to the IUCN classification scheme (IUCN 2012) (Appendix 2).

Conservation Challenges

The Ingavi IPA site is crucial for local communities, as it contains valuable Non-Timber Forest Products (NTFPs) such as Brazil nut (*Bertholletia excelsa* (NE)), açaí (*Euterpe precatoria* (LC)), and majo (*Oenocarpus bataua* (LC)). However, the integrity of the site is at risk due to the loss of 4,770 hectares of forest between 2000 and 2020, compounded by the recurrence of fires (ACEAA 2021, ACEAA 2024a), which demonstrates the ecosystem's vulnerability to anthropogenic pressures.

Habitats (following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	65	Major
Subtropical/Tropical Swamp Forest	30	Major
Moist Savanna	—	Minor
Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	—	Minor

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Low	Ongoing - stable
Gathering terrestrial plants	Low	Ongoing - stable
Logging & wood harvesting	High	Ongoing - stable
Fire & fire suppression	Low	Ongoing - trend unknown

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	100	Major
Harvesting of wild resources	—	Major

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	Ingavi Hidden Forest Integrated Management Natural Area	Protected/conservation area matches IPA (100%)	4,574
Key Biodiversity Area	KBA Ingavi	IPA overlaps with the protected/conservation area (87%)	4,545
Key Biodiversity Area	KBA Tahuamanu-Orthon	The IPA overlaps with the protected/ conservation area (21%)	21

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Suessenguthia koessleri*	A(i)	VU	✓	✓		✓		occasional
Bignoniaceae	*Handroanthus serratifolius*	A(i)	EN	✓					occasional

PUERTO RICO AMAZONIAN FOREST AND NATURAL AREA OF INTEGRATED MANAGEMENT

Authors: Liliana Arroyo-Herbas, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA066	Department/ Province	Pando: Manuripi
Latitude	-11.19870	Longitude	-67.27338
Minimum altitude (m.a.s.l.)	112	Maximum altitude (m.a.s.l.)	288
Area (km^2)	2,078	Qualifying IPA criteria	A(iii), C(iii)

Site Description

The site is in the Manuripi province, covering an area of 2,078 km^2 and occupies 40% of the Puerto Rico municipality. The site is home to 19 smallholder communities and one indigenous community, the Tacana people (VMABCCyGDF 2022). It is also a Natural Area of Integrated Management, created with the objective to conserve the natural heritage within its boundaries, whilst being compatible with the sustainable development of the local human population (ACEEA & GAMPR 2022).

Botanical Significance

The site is characterised by housing 71 useful species, among which 51 are LC (Least Concern) under IUCN criteria. The species *Euterpe precatoria* (LC), *Hevea brasiliensis* (LC), *Bertholletia excelsa* (NE), and *Mauritia flexuosa* (LC) are representative of the region and are species with high potential for use by the local communities in the area (ACEEA & GAMPR 2022). Furthermore, the site contains four endemic Bolivian species, including *Caperonia amarumayu* (NE) and *Hibiscus manuripiensis* (DD), two potentially threatened species restricted in their distribution.

IPA Assessment – Rationale

The Amazonian Integrated Management Forest of Puerto Rico connects the Amazonian Forest conservation corridor between the protected areas Manuripi and Santa Rosa de Abuná. The site is home to 71 useful plant species, of which 51 are LC (Least Concern). It also contains four endemic Bolivian plant species, two of which are restricted in their distribution. The importance of this site also results from the large expanse of lowland Amazonian forest it safeguards, as this ecosystem is essential for the subsistence livelihoods of local communities, whose economy and culture are intertwined with the sustainable use of the forest (ACEEA); and these ecosystems are considered nationally threatened according to the Libro Rojo de Tierras Bajas (MMAyA 2020).

Habitat and Geology

The site belongs within the Amazonian peneplain and the Amazonian alluvial flood plain (Ibisch *et al.* 2003). From a hydrographic perspective, the

Aerial view of the Amazonian forest canopy © FAN/Marcelo Char

site contains the Madre de Dios River, the Orthon River, and the Manuripi River, which all belong to the Amazon River basin.

The vegetation of the site consists of humid lowland Amazonian alluvial and terra firme forests belonging to the Southwestern Amazonia ecoregion (ACEEA & GAMPR 2022). These vegetation types are categorized as Subtropical/Tropical Lowland Humid Forest, Subtropical/Tropical Swamp Forest, and Subtropical/Tropical Seasonally Humid/Flooded Lowland Grasslands following the IUCN habitat classification scheme (IUCN 2012) (Appendix 2).

Conservation Challenges

The Puerto Rico Forest is part of the subsistence livelihoods of local communities, who undertake activities such as the collection and sustainable harvesting of species such as the Brazil nut (*Bertholletia excelsa*) and açaí (*Euterpe precatoria*). This represents 23% of economic income in the area. Among other subsistence farming, both livestock and agriculture, account for 14% of the income.

Additional conservation initiatives for the site, include a Key Biodiversity Area (KBA) that protects mammal species in a Vulnerable (VU) state, such as *Cebus unicolor*, *Leopardus tigrinus*, and *Priodontes maximus* (KBA 2025a). The geographical location of this site, between the Manuripi Wildlife Reserve and the Santa Rosa de Abuná protected area results in it also being an Amazonian Forest conservation corridor as it connects both areas (VMABCCyGDF 2022). These characteristics, combined with the area's botanical attributes featuring species with high use potential for local communities, and its consolidation as a priority site for plants, contribute to the conservation of its species.

Harvesting of *Euterpe precatoria* © FAN/Andrés Unterladstaetter

Habitats (following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	56	Major
Subtropical/Tropical Swamp Forest	36	Major
Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	2	Unknown

Threatened Habitats – IPA Criterion C					
Habitat Type	IPA Subcriterion C	≥ 5% of national resource	≥ 10% of national resource	1 of the 5 highest-ranking sites at a national level	Estimated site area (km^2)
Subtropical/Tropical Swamp Forest					
Clearwater stream forests of the south-western and south-central Amazon	C(iii)				218
Stagnant blackwater alluvial forests of the southern Amazon	C(iii)				188
South-western and south-central Amazonian white-water floodplain forests	C(iii)				80
Southern Amazonian floodplain palm swamp forest	C(iii)				31
South-western and south-central Amazonian blackwater floodplain forests and riparian vegetation	C(iii)				13
Subtropical/Tropical Moist Lowland Forest					
Amazonian mixed-water floodplain forests and riparian vegetation	C(iii)				14

Threat		
Threat	Severity	Situation
Small-holder farming	Medium	Ongoing - stable
Housing & urban areas	Medium	Ongoing - stable
Roads & railroads	High	Past - likely to return

Land Use		
Land use type	Percent coverage	Importance
Nature conservation	93	Major
Harvesting of wild resources	—	Major
Residential/urban development	—	Minor
Agriculture (arable)	—	Minor

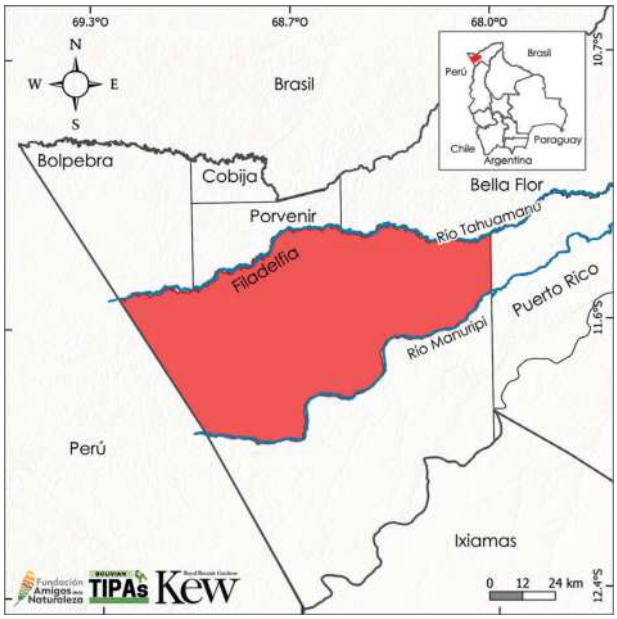
Protected areas and other conservation designations			
Protected area type	Names (s) of protected area (s)	Relationship between the site and the protected area (% of overlap)	Area of overlap (km^2)
Local/Regional Nature Reserve	Puerto Rico Integrated Management Amazonian Forest	Protected/conservation area matches IPA (100%)	2,078
Local/Regional Nature Reserve	Tahuamanu and Orthon Rivers Wildlife Reserve	IPA overlaps with the protected/conservation area (55%)	529
Key Biodiversity Area	KBA Santa Rosa – Puerto Rico	Protected/conservation area matches IPA (100%)	2,078

IPA priority species Criterion A									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Euphorbiaceae	*Caperonia amarumayu*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Malvaceae	*Hibiscus manuripiensis*	A(iii)	DD	✓	✓	✓	✓		rare

FILADELFIA NORTE

Authors: Oriana A. Lino-Villalba, Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas & Bente B. Klitgaard

International code	BOLTIPA067	Department/ Province	Pando: Manuripi
Latitude	-11.55400	Longitude	-68.62571
Minimum altitude (m.a.s.l.)	171	Maximum altitude (m.a.s.l.)	343
Area (km^2)	6,321	Qualifying IPA criteria	A(i), B(iii)



IPA Assessment – Rationale

Filadelfia Norte qualifies as an IPA site because it possesses large extensions of forest, which harbour an important diversity of native plants, many with important socioeconomic value and globally threatened endemic plant species. This botanical value is highlighted by the presence of two globally threatened endemic species. Additionally, the site has 91 useful plant species, further emphasising its importance, besides being a crucial biological corridor between two IPA sites.

Site Description

The IPA site is found in northeastern Bolivia and was delimited following the northern limit of the Filadelfia municipality. The Tahuamanu River to the north and the Manuripi River to the south serve as natural boundaries. Some of the most important communities include Purisima, Nueva Alianza, San Francisco, Villa Bella, and Vista Hermosa (MUAFB 2006).

Botanical Significance

The botanical importance of this IPA site is attributed to the number of globally threatened species and useful species. The globally threatened endemic species are *Porcelia steinbachii* (VU) and *Ruellia dolichosiphon* (CR), both affected by deforestation (Verspagen & Erkens 2021, Google Earth 2025). Furthermore, the site contains 91 useful plant species, representing 3% of the useful plants recorded nationwide (Appendix 3). Some of these species include *Bertholletia excelsa* (NE), *Esenbeckia almawillia* (LC), *Garcinia madruno* (LC), *Inga punctata* (LC), and *Zanthoxylum sprucei* (LC).

Habitat and Geology

In a topographic sense, this IPA site is in the Amazonian peneplain and on the Amazonian alluvial flood plain with high and low plains. It belongs to the Southwestern Amazonia ecoregion (Ibisch *et al.* 2003).

In terms of vegetation, it is composed of humid lowland Amazonian forest: alluvial plain forest and swamp forest, among others (Navarro &

Aerial view of the Amazon forest canopy © FAN/Marcelo Char

Garcinia madruno fruits © Trustees RBG Kew/William Milliken

Ferreira 2011, Navarro 2011, Appendix 2). These vegetation types are categorized as Subtropical/Tropical Lowland Humid Forest, Subtropical/Tropical Swamp Forest, and Subtropical/Tropical Seasonally Humid/Flooded Lowland Grasslands following the IUCN habitat classification scheme (IUCN 2012) (Appendix 2).

Conservation Challenges

The municipality of Filadelfia, where this IPA site is located, has suffered deforestation, with 28,076 ha of burnt surface (between 2001–2020) and 27,500 ha deforested (between 2000–2020) (ACEAA 2021). Although in 2023 the Filadelfia Norte IPA site still had a notable 67% lowland humid forest and 28% flooded forest (MapBiomas Bolivia 2024), these threats potentially affect the survival of restricted endemic species and those with socioeconomic value. The extraction of forest resources, both timber and non-timber, is an important economic activity in the region (MUAFB 2006), which intensifies the pressure on these ecosystems. However, it should be noted that four conservation areas overlap within the site's boundaries, and this site is also relevant for its connectivity between the Bolpebra and Porvenir IPA sites to the north and the Reserva Nacional de Vida Silvestre Amazónica Manuripi IPA site to the south.

Lowland terra firme Amazonian forest © Trustees RBG Kew/Bente Klitgaard

Habitats (following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	70	Major
Subtropical/Tropical Swamp Forest	27	Major
Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	—	Minor

Threat

Threat	Severity	Situation
Housing & urban areas	Low	Ongoing - stable
Gathering terrestrial plants	Low	Ongoing - stable
Fire & fire suppression	Medium	Ongoing - trend unknown

Land Use

Land use type	Percent coverage	Importance
Nature conservation	11	Major
Harvesting of wild resources	—	Major

Protected areas and other conservation designations

Protected area type	Names (s) of protected area (s)	Relationship between the site and the protected area (% of overlap)	Area of overlap (km^2)
Local/Regional Nature Reserve	Pando Tahuamanu Orthon Natural Heritage Promotion and Conservation Area	IPA overlaps with the protected/conservation area (40%)	746
Key Biodiversity Area	KBA Tahuamanu-Orthon	IPA overlaps with the protected/conservation area (24%)	718
Local/Regional Nature Reserve	Tahuamanu and Orthon Rivers Wildlife Reserve	IPA overlaps with the protected/conservation area (13%)	66
Local/Regional Nature Reserve	Tahuamanu Biological Station	IPA overlaps with the protected/conservation area (53%)	16

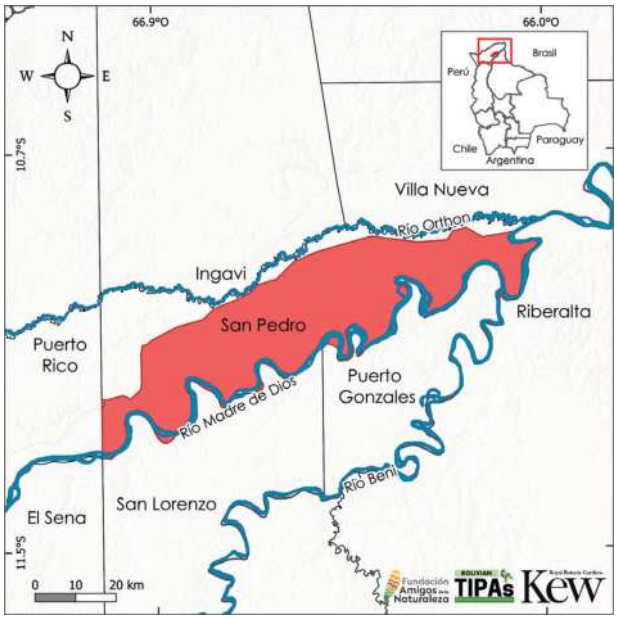
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Acanthaceae	*Ruellia dolichosiphon*	A(i)	CR	✓	✓	✓	✓	✓	unknown
Annonaceae	*Porcelia steinbachii*	A(i)	VU	✓	✓				occasional

LAKES OF SAN PEDRO NATURAL AREA OF INTEGRATED MANAGEMENT

Authors: Oriana A. Lino-Villalba, Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas & Bente B. Klitgaard

International code	BOLTIPA068	Department/ Province	Pando: Manuripi
Latitude	-11.03530	Longitude	-66.54412
Minimum altitude (m.a.s.l.)	105	Maximum altitude (m.a.s.l.)	192
Area (km^2)	2.025	Qualifying IPA criteria	A(i)



IPA Assessment – Rationale

The Forests of the Lakes of San Pedro Natural Area of Integrated Management qualifies as an IPA site owing to the hydrological and forest ecosystem services that it provides. It protects three endemic species, two of which are at risk of extinction. Additionally, 57 useful species grow on the site. This IPA site is a significant pillar of the local economy, contributing to the conservation of the habitat and the hydrological ecosystems.

Site Description

The delimitation of the IPA site is based on the boundary of the Forests of the Lakes of San Pedro Natural Area of Integrated Management, which is a conservation corridor in the far south of Pando, harbouring important natural resources and hydrological ecosystems. Some communities living in the site are Candelaria La Vieja, La Candelaria, Santa Ana, and Tres Estrellas (ACEAA 2024b).

Botanical Significance

The botanical significance of the area results from the presence of threatened endemic and useful species, alongside globally threatened species. Noteworthy among the endemic and globally threatened species are *Neea dimorphophylla* (EN) and *Suessenguthia koessleri* (VU). Furthermore, the site safeguards useful plants (Appendix 3), including *Annona hypoglauca* (LC), *Bertholletia excelsa* (NE), *Euterpe precatoria* (LC), *Mauritia flexuosa* (LC), *Ruellia brevifolia* (NE), *Tabernaemontana cymosa* (LC), and *Tessaria integrifolia* (LC).

Habitat and Geology

The IPA site is situated on the Amazonian peneplain and the Amazonian alluvial flood plain. It is situated in the Southwestern Amazonia ecoregion (Ibisch *et al.* 2003).

The vegetation is predominantly composed of 25% Amazonian lowland forest on sandy hills in northwestern Pando, 23% flooded forests of flowing white waters, and 17% mature várzea forest of stagnant waters of central-western Pando (Navarro & Ferreira 2011, Navarro 2011, Appendix 2). These vegetation types are

The Madre de Díos River and surrounding vegetation © FAN/Marcelo Char

Euterpe precatoria palms © FAN/Andrés Unterladstaetter

Mauritia flexuosa palms © FAN/Andrés Unterladstaetter

categorized as Subtropical/Tropical Swamp Forest, Subtropical/Tropical Lowland Humid Forest, and Subtropical/Tropical Seasonally Humid/Flooded Lowland Grasslands following the IUCN habitat classification scheme (IUCN 2012) (Appendix 2).

Conservation Challenges

In the municipality of San Pedro, where the IPA site is located, there has been documented loss of forest cover: 8,860 ha deforested between 2000 and 2020, and 10,879 ha burnt between 2001 and 2020 (ACEAA 2021). Yet, despite these pressures, the site is of great importance for the conservation of non-timber forest products for indigenous and smallholder communities. Furthermore, the area is crucial from a hydrographic point of view owing to the confluence of important rivers such as the Orthon, the Madre de Dios, and the Beni (ACEAA 2024b); and it is a corridor allowing connectivity to the west with the IPA site Puerto Rico Amazonian Forest and Natural Area of Integrated Management.

Floodplain vegetation © Margoth Atahuachi

Habitats (following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Swamp Forest	61	Major
Subtropical/Tropical Moist Lowland Forest	26	Major
Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	10	Minor

Threat		
Threat	**Severity**	**Situation**
Gathering terrestrial plants	Low	Ongoing - stable
Logging & wood harvesting	Medium	Ongoing - stable
Fire & fire suppression	Medium	Ongoing - trend unknown

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	100	Major
Harvesting of wild resources	—	Major

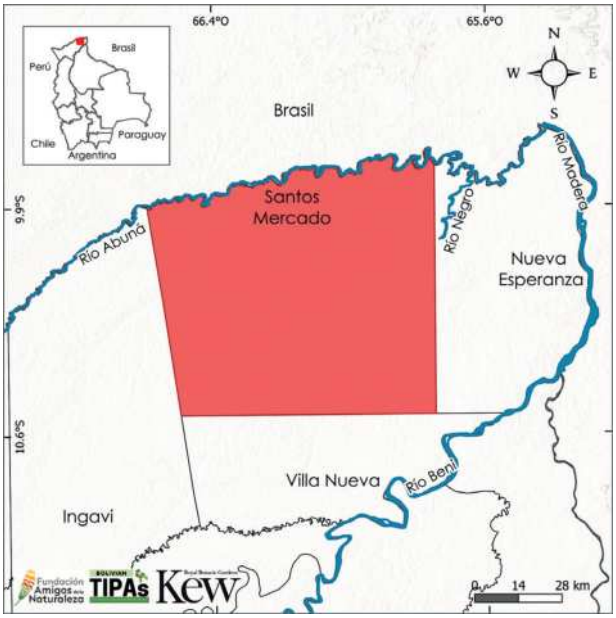
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	Bosque Lagos de San Pedro Integrated Management Natural Area	IPA overlaps with the protected/conservation area (100%)	2,025

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Suessenguthia koessleri*	A(i)	VU	✓	✓		✓		unknown
Nyctaginaceae	*Neea dimorphophylla*	A(i)	EN	✓	✓		✓		occasional

SANTOS MERCADO

Authors: Oriana A. Lino-Villalba, Margoth Atahuachi, Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas & Bente B. Klitgaard

International code	BOLTIPA069	Department/ Province	Pando: Federico Román
Latitude	-10.15398	Longitude	-66.13658
Minimum altitude (m.a.s.l.)	84	Maximum altitude (m.a.s.l.)	210
Area (km^2)	6,609	Qualifying IPA criteria	C(iii)



IPA Assessment – Rationale

Santos Mercado, with its extensive and underexplored forests, represents a crucial element for conservation and resource management. It owes its value to the presence of flooded and terra firme forests, which were preliminarily categorised as threatened (MMAyA 2020), and serve as vital refuges for regional biodiversity. It safeguards 34 native useful plant species, of which 24 are in the Least Concern (LC) category according to the IUCN, in addition to one endemic species. Its strategic location makes it a key point of connectiviy, acting as a biological corridor between the Nueva Esperanza IPA site to the east and the IPA site Bosque Escondido de Ingavi Natural Area of Integrated Management to the west.

Site Description

The Santos Mercado IPA site is an area of great relevance for conservation, strategically located in the Bolivian Amazon. Delimited to the north by the Abuná River, bordering Brazil, the municipality is distinguished by its extensive areas of flooded forest (MapBiomas Bolivia 2024, Google Earth 2025). It is a sparsely populated rural municipality, with its capital being Villa Victoria. Despite its invaluable, little-explored richness, protection is insufficient, as only one protected area overlaps with the site.

Botanical Significance

The IPA site houses extensions of flooded forests that have been preliminarily categorised as threatened due to timber extraction, fires, or other threats affecting the habitat (MMAyA 2020). This site houses several useful species, including: *Licania micrantha* (LC), *Oenocarpus mapora* (LC), *Pouteria cuspidata* (LC), and *Pterodon emarginatus* (LC). The presence of the endemic species *Maxillaria gorbatschowii* (NE) is also notable.

Habitat and Geology

The Santos Mercado IPA site is entirely comprised of the Southwestern Amazonia ecoregion (Ibisch *et al.* 2003). Geologically it belongs to the Pando hills region, a Quaternary unit of Bolivia, geomorphologically defined by gentle hills and

The Abuná River and surrounding vegetation © Andrea Soliz

Maxillaria gorbatschowii © Margoth Atahuachi

slopes. In this context, three physiographic units are differentiated: Highlands, flooded alluvial plains of white waters, and alluvial plains of black waters (Navarro & Maldonado 2002).

The vegetation is characterised by the presence of Amazonian forest of eastern Pando with *Attalea speciosa* and *Peltogyne heterophylla*, alluvial plain forest of stagnant black waters of eastern Pando, low white sand forest of central-southern Amazonia, among others (Navarro & Ferreira 2011, Navarro 2011, Appendix 2). It is classified as Subtropical/Tropical Swamp Forest and Subtropical/Tropical Lowland Humid Forest according to the IUCN habitat classification scheme (IUCN 2012) (Appendix 2).

Conservation Challenges

According to data from MapBiomas Bolivia (2024), the IPA site in 2023 presented significant forest cover: 48% forest and 51% flooded forest. However, this area is under increasing threat from deforestation. Between 2000 and 2020, the loss of 2,110 ha to deforestation was documented, indicating a negative impact. The situation is aggravated by the expansion of deforestation in the border area with Brazil (Google Earth 2025). Additionally, fires are recorded, although of low intensity, which contribute to the environmental impact (ACEAA 2021).

Tall forest of *Attalea speciosa* and *Peltogyne heterophylla* in the background © Fernando Miranda

Blackwater floodplain forest © Margoth Atahuachi

Despite these pressures, the region exhibits a good state of conservation (FAN 2016) and is an important reservoir of non-timber forest resources. Potential species distribution models confirm the presence of populations of *Bertholletia excelsa* (NE; Brazil nut), *Euterpe precatoria* (LC; açaí), *Mauritia flexuosa* (LC; royal palm), and *Oenocarpus bataua* (LC; majo) (ACEAA 2024). The persistence of these populations is crucial, given the ecological and economic value these resources represent. The combination of accelerated deforestation, fires, and pressure on the border with Brazil underscores the urgency of implementing conservation measures.

Threatened Habitats – IPA Criterion C					
Habitat Type	IPA Subcriterion C	≥ 5% of national resource	≥ 10% of national resource	1 of the 5 highest-ranking sites at a national level	Estimated site area (km^2)
Subtropical/Tropical Swamp Forest					
Stagnant blackwater alluvial forests of the southern Amazon	C(iii)	✓	✓	✓	2,257
Low-stature white-sand forests of the south-central Amazon	C(iii)			✓	911
Depressed terra firme forests of the southern Amazon	C(iii)			✓	911
South-western and south-central Amazonian clearwater stream forests	C(iii)	✓		✓	508
South-western and south-central Amazonian blackwater floodplain and riparian vegetation	C(iii)			✓	169
Subtropical/Tropical Moist Lowland Forest					
Amazonian mixed-water floodplain and riparian vegetation	C(iii)			✓	119

Habitats (following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Swamp Forest	58	Major
Subtropical/Tropical Moist Montane Forest	41	Major

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Low	Ongoing - stable
Gathering terrestrial plants	Low	Ongoing - stable
Logging & wood harvesting	High	Ongoing - stable
Fire & fire suppression	Medium	Ongoing - trend unknown

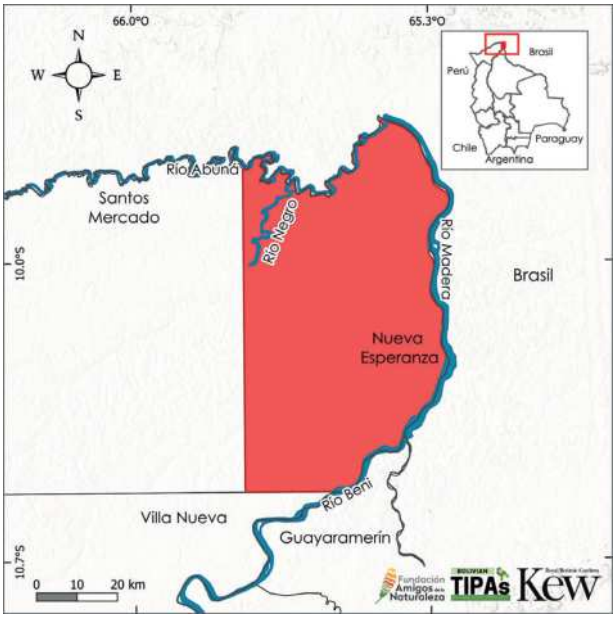
Land Use		
Land use type	**Percent coverage**	**Importance**
Harvesting of wild resources	—	Major

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Key Biodiversity Area	KBA Federico Román	IPA overlaps with the protected/conservation area (3%)	58

NUEVA ESPERANZA

Authors: Oriana A. Lino-Villalba, Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas & Bente B. Klitgaard

International code	BOLTIPA070	Department/ Province	Pando: Federico Román
Latitude	-10.11179	Longitude	-65.53786
Minimum altitude (m.a.s.l.)	86	Maximum altitude (m.a.s.l.)	236
Area (km^2)	3,647	Qualifying IPA criteria	A(i), A(iii), B(iii)



IPA Assessment – Rationale

Nueva Esperanza qualifies as an IPA site owing to its extensive area of flooded forest and lowland Amazonian forest in the northeast of Pando. Five endemic species grow here, two of which are globally threatened and two with restricted distribution. Additionally, this site protects 151 useful species, of which 109 are categorised as Least Concern (LC), according to IUCN categories.

Site Description

The Nueva Esperanza IPA site is a border locality in the northeast of the country, delimited following the municipal boundaries of Nueva Esperanza, and is characterised by the presence of large extensions of lowland Amazonian forest (Google Earth 2025). Its connection to the west with the IPA site Santos Mercado establishes it as a crucial zone of connectivity for conservation in the region. This interconnection is essential, guaranteeing the long-term viability and resilience of this ecosystem.

Botanical Significance

The botanical significance is underpinned by the concentration of globally threatened and restricted endemic species, and of useful plants. *Desmoncus latisectus* (VU) and *Suessenguthia koessleri* (VU) are both globally threatened, endemic species, and *Apinagia fluitans* (DD) and *Catasetum interhomesianum* (NE) have restricted geographic ranges. To this can be added 151 useful plants (native and endemic) (Appendix 3), representing 5% of the useful species documented in Bolivia. Some of these include *Mauritia flexuosa* (LC), characteristic flooded palm groves of clear-water streams of central-western Pando (Navarro 2011), *Bertholletia excelsa* (NE), *Euterpe precatoria* (LC), *Cordia alliodora* (LC), *Piper consanguineum* (NE), *Tabernaemontana cuspidata* (LC), and *Virola peruviana* (LC).

Habitat and Geology

This IPA site sits on the Precambrian Shield geological formation (MDSyP 2002) and in the Amazonian peneplain, belonging to the Southwestern Amazonia ecoregion (Ibisch *et al.* 2003).

Harvesting *Euterpe precatoria* fruits © FAN/Andrés Unterladstaetter

The characteristic vegetation includes lowland Amazonian forest of eastern Pando with *Attalea speciosa* and *Peltogyne heterophylla*, alluvial plain forest of stagnant black waters of eastern Pando, low white sand forest of central-southern Amazonia, among others (Navarro & Ferreira 2011, Navarro 2011, Appendix 2). These forest types are grouped as Subtropical/Tropical Lowland Humid Forest, Subtropical/Tropical Swamp Forest, and Subtropical/Tropical Seasonally Humid/Flooded Lowland Grasslands according to the IUCN habitat classification scheme (IUCN 2012) (Appendix 2).

Aerial view of Amazonian forest canopy © FAN/Marcelo Char

Conservation Challenges

The site possesses considerable extensions of forest. In 2023 it had 68% flooded forests and 30% lowland humid forest (MapBiomas Bolivia 2024). Deforestation has eliminated 6,620 ha between 2000 and 2020 (ACEEA 2021). This loss is aggravated by the extraction of species restricted to the northeast of Pando, such as the timber tree *Peltogyne heterophylla* (NE), which is often harvested unsustainably (Fernández 2008). Strong pressure is also observed in the northeast of Pando, bordering Brazil, owing to deforestation (Google Earth 2025) on the Brazilian side; and to forest fires, albeit relatively uncommon (ACEEA 2021). The site overlaps with two conservation areas and presents an opportunity to protect valuable useful species such as the Brazil nut (*Bertholletia excelsa*) (ACEAA 2024), in addition to being a connectivity area to the west with the Santos Mercado IPA.

Fruit of *Bertholletia excelsa* © FAN/Lucía Aramayo

Habitats (following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Swamp Forest	52	Major
Subtropical/Tropical Moist Lowland Forest	46	Major
Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	–	Minor

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Low	Ongoing - stable
Gathering terrestrial plants	Low	Ongoing - stable
Logging & wood harvesting	High	Ongoing - stable
Fire & fire suppression	Medium	Ongoing - trend unknown

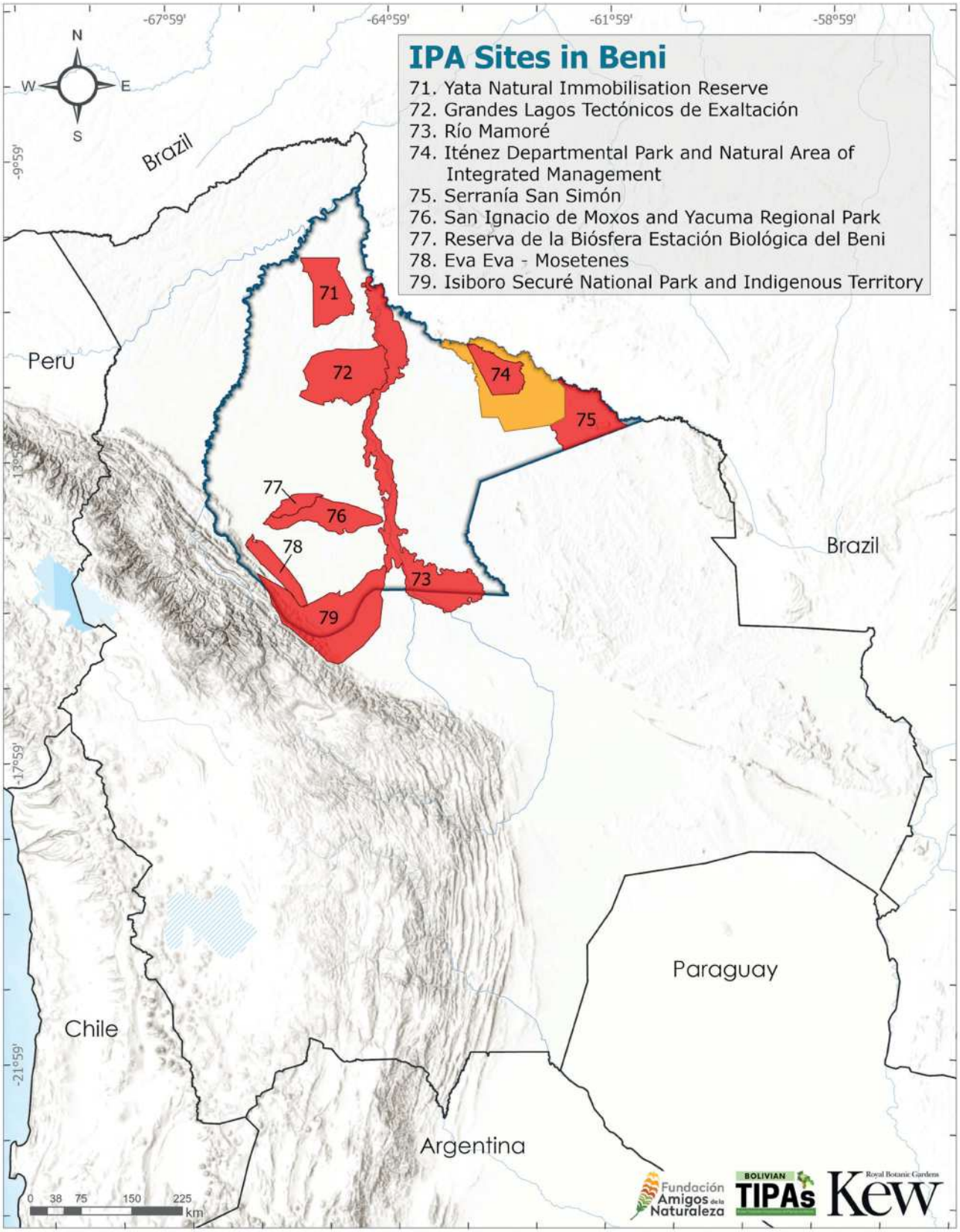
Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	44	Major
Harvesting of wild resources	—	Minor

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Key Biodiversity Area	KBA Federico Román	IPA overlaps with the protected/conservation area (93%)	1,605
Local/Regional Nature Reserve	Bruno Racua Wildlife Reserve	IPA overlaps with the protected/conservation area (97%)	715

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Suessenguthia koessleri*	A(i)	VU	✓	✓		✓		unknown
Arecaceae	*Desmoncus latisectus*	A(i)	VU	✓	✓	✓	✓		unknown
Fabaceae	*Swartzia costata*	A(i)	VU	✓					unknown
Orchidaceae	*Catasetum interhomesianum*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Podostemaceae	*Apinagia fluitans*	A(iii)	DD	✓	✓		✓	✓	rare

BENI

Mamore River, Beni © Daniel Aguilar


IPA Sites in Beni
71. Yata Natural Immobilisation Reserve
72. Grandes Lagos Tectónicos de Exaltación
73. Río Mamoré
74. Iténez Departmental Park and Natural Area of Integrated Management
75. Serranía San Simón
76. San Ignacio de Moxos and Yacuma Regional Park
77. Reserva de la Biósfera Estación Biológica del Beni
78. Eva Eva - Mosetenes
79. Isiboro Securé National Park and Indigenous Territory
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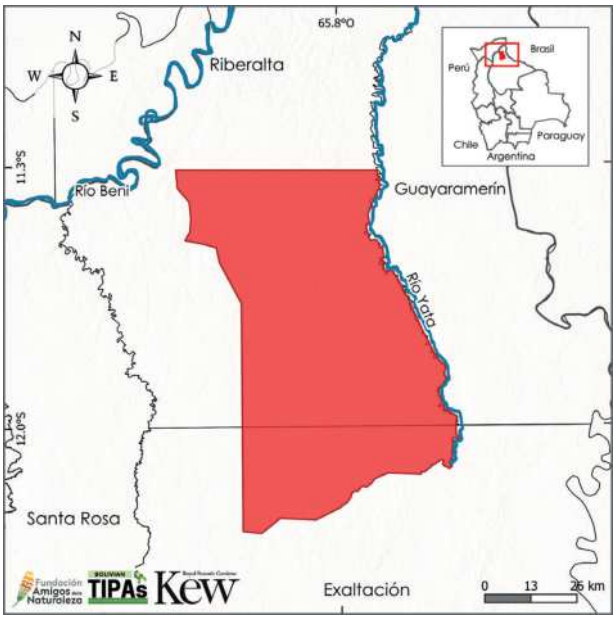
BOLIVIAN TIPAs
Royal Botanic Gardens Kew

YATA NATURAL IMMOBILISATION RESERVE

Authors: Liliana Arroyo-Herbas, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA071	Department/ Province	Beni: Vaca Diez, Yacuma
Latitude	-11.78147	Longitude	-65.82514
Minimum altitude (m.a.s.l.)	94	Maximum altitude (m.a.s.l.)	193
Area (km^2)	4,986	Qualifying IPA criteria	C(iii)



Site Description

The IPA site is in the department of Beni, covering 4,986 km^2, extending across the Vaca Diez and Yacuma provinces. The delimitation follows the boundaries of the Yata Natural Immobilisation Reserve, a reserve of importance for the protection of hydrobiological resources and the alluvial plains of the Beni department (VMABCCyGDF 2022).

In relation to conservation areas, the IPA site overlaps 65% with the Río Yata RAMSAR site (>28,076 km^2) and borders the Lagos de Rogaguado Natural Immobilisation Reserve to the south.

Botanical Significance

The site is botanically significant owing to the threatened habitats protected within its boundaries, such as the forests of clear-water streams of the southwestern and central-southern Amazonia. According to the Libro Rojo de las Tierras Bajas (MMAyA 2020), this ecosystem is considered Endangered (EN) because of anthropomorphic activities leading to environmental degradation of this restricted ecosystem. Furthermore, the site hosts 13 useful plant species, all considered globally as Least Concern (LC) species by the IUCN.

IPA Assessment – Rationale

The Yata Natural Immobilisation Reserve covers large extensions of evergreen flooded forests on the Southwestern Amazonian peneplain, as well as forests along clear-water streams in the southwest and central-south of Bolivian Amazonia. This is an ecosystem which by IUCN criteria is considered Endangered (EN) within the Beniana Plain region. Furthermore, the site contains 13 species of useful plants considered globally as Least Concern (LC). The importance of the site is also reflected in its biological diversity, and it is part of a RAMSAR site. According to Ibisch *et al.* (2003) the Southwestern Amazonia and Flooded Savannas ecoregions have unique characteristics, and are zones of ecotones undergoing ecosystem formation and vegetational succession processes, because of active hydrological dynamics (RAMSAR 2013).

Habitat and Geology

The site is characterised by a landscape of lowland plains, belonging to the physiographic regions comprising the Beniana Plain and the Mojeño-Chiquitana Plateau. Hydrographically, the Benicito River flows within the basins of the River Mamoré and the River Yata (RAMSAR 2013). The site belongs to two large ecoregions: Southwestern Amazonia and Flooded Savannas (Ibisch *et al.* 2003).

The vegetation is characterised by evergreen forests of the Southwestern Amazonian peneplain, and the flooded forests and aquatic and palustrine vegetation of Amazonia (Navarro & Ferreira 2011, Navarro 2011). All these vegetation types are categorized as Subtropical/Tropical Lowland Humid Forest, Dry Savanna, and Subtropical/Tropical Seasonally Humid/Flooded Lowland Grasslands following the IUCN habitat classification scheme (IUCN 2012) (Appendix 2).

Conservation Challenges

Due to its hydrological characteristics the site is part of a RAMSAR site which protects globally threatened mammal species.

However, its botanical characteristics including floristic composition, are still poorly known. It is a zone of ecotones and visible processes of ecosystem formation and plant succession, due to the hydrological dynamics (Ibisch *et al.* 2003).

On the other hand, one of its major conservation challenges is the management of the area, which must ensure that these threatened habitats and associated species found only in the Beniana Plain are safeguarded within this IPA site.

The Yata River © Google Earth

Threatened Habitats – IPA Criterion C					
Habitat Type	IPA Subcriterion C	≥ 5% of national resource	≥ 10% of national resource	1 of the 5 highest-ranking sites at a national level	Estimated site area (km^2)
Subtropical/Tropical Swamp Forest					
Low-stature white-sand forests of the south-central Amazon	C(iii)	✓	✓	✓	999
South-western and south-central Amazonian clearwater stream forests	C(iii)				109
Southern Amazonian stagnant blackwater floodplain forests	C(iii)				19
Southern Amazonian alluvial palm swamp forests	C(iii)				
Subtropical/Tropical Moist Lowland Forest					
Amazonian mixed-water floodplain forests and riparian vegetation	C(iii)	✓	✓	✓	738

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	63	Major
Subtropical/Tropical Swamp Forest	24	Major
Dry savanna	11	Major
Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	1	Major

Threat		
Threat	Severity	Situation
Livestock farming & ranching	Low	Ongoing - stable
Housing & urban areas	Low	Ongoing - stable

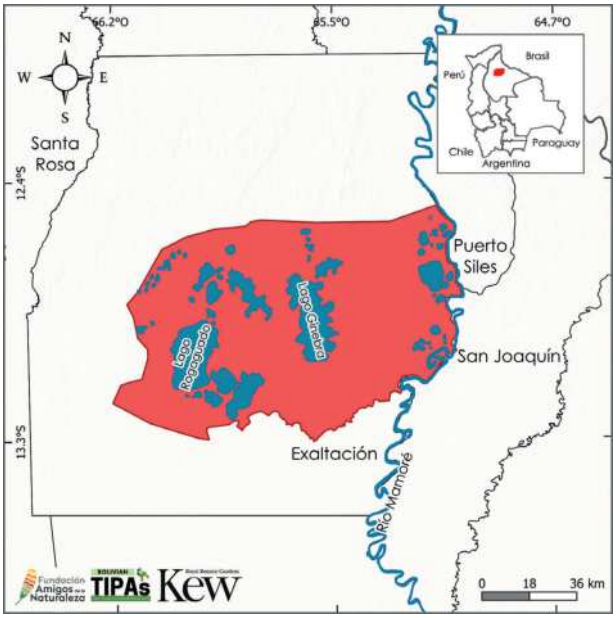
Land Use		
Land use type	Percent coverage	Importance
Nature conservation	84	Minor
Residential/urban development	—	Minor

Protected areas and other conservation designations			
Protected area type	Names (s) of protected area (s)	Relationship between the site and the protected area (% of overlap)	Area of overlap (km^2)
Local/Regional Nature Reserve	Yata Natural Immobilisation Reserve	Protected/conservation area matches IPA (100%)	4,986
Key Biodiversity Area	KBA Yata	Protected/conservation area matches IPA (100%)	4,986
Ramsar site	Yata River	Protected/conservation area overlaps with the IPA (65%)	3,249

GRANDES LAGOS TECTÓNICOS DE EXALTACIÓN

Authors: Oriana A. Lino-Villalba, Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas & Bente B. Klitgaard

International code	BOLTIPA072	Department/ Province	Beni: Yacuma
Latitude	-12.91704	Longitude	-65.60084
Minimum altitude (m.a.s.l.)	120	Maximum altitude (m.a.s.l.)	193
Area (km^2)	8,511	Qualifying IPA criteria	A(i), B(iii)



IPA Assessment – Rationale

Grandes Lagos Tectónicos de Exaltación (in English Great Tectonic Lakes in the Municipality of Exaltación) qualifies as an IPA site, owing to its status as a key refuge for biodiversity and as a hydrological regulator for the region. The combination of flooded forests, savannas, and aquatic vegetation create an important mosaic of ecosystems. It harbours one endemic useful species, categorised as Data Deficient (DD) following IUCN criteria, and 238 plant species with socioeconomic value. This site overlaps 98% with the Key Biodiversity Area site of the same name.

Site Description

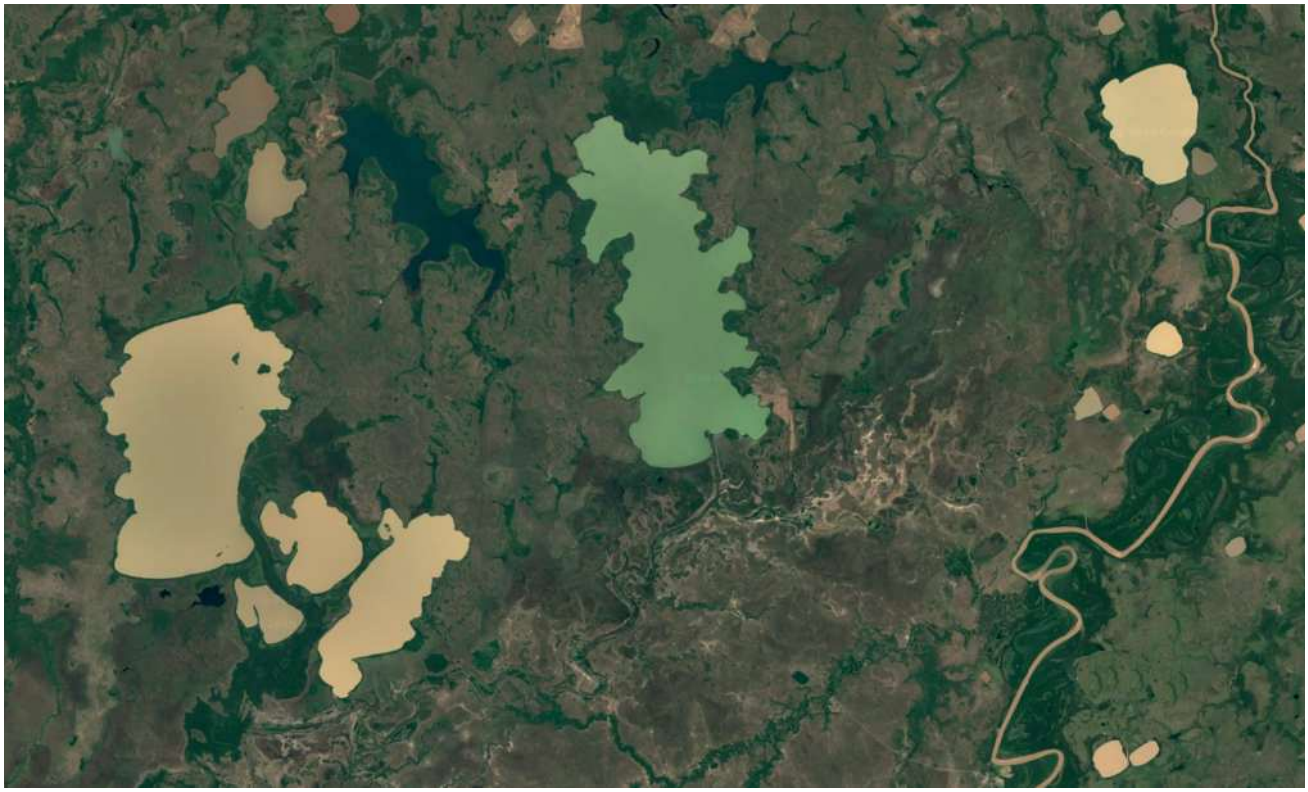
The delimitation of the IPA site coincides with the boundaries of the Lagos de Rogaguado Natural Immobilisation Reserve in the municipality of Exaltación. The region is characterised by large surface water bodies. The largest is lake Ginebra and the second largest lake Rogaguado (Grupo de Trabajo para los Llanos de Moxos & WCS 2022).

Botanical Significance

The botanical significance of the site is a combination of its endemic and useful plants, alongside globally threatened species. One endemic species is *Axonopus boliviensis* (DD), which inhabits humid and dry zones of Bolivia, where its main threat is livestock farming and agriculture (Martinez-Ugarteche 2021). Among the native species at risk of extinction are *Handroanthus serratifolius* (EN), an up to 30 m tall tree, valued for its high-quality wood (MMAyA 2020), and *Dipteryx alata* (VU), a slow-growing tree that can reach 50 m, and is used for construction, as a food source, and medicinally (Requena-Suárez 2021). Furthermore, the IPA site safeguards 7% of the species documented as useful nationwide (Appendix 3), notable species include *Aspidosperma macrocarpon* (LC), *Attalea phalerata* (LC), *Tabebuia aurea* (LC), and *Machaerium acutifolium* (LC).

Habitat and Geology

The formation of lake Rogaguado, and possibly also lake Ginebra, is the result of a combination of tilting and tectonic faults dating from the Holocene, approximately 6,000 years ago (Grupo de Trabajo para los Llanos de Moxos & WCS 2022). Its physiography is framed within the Chaco-



Aerial view of the Grandes Lagos Tectónicos de Exaltación © Google Earth

Beniana Plains (MDSyP 2002), and its ecoregion is composed of a mosaic of Cerrado, Flooded Savannas, and Southwestern Amazonia (Ibisch *et al.* 2003).

The vegetation types are characterised by Cerrado of northeastern Beni, curichis and yomomales, geocomplex of the oligotrophic savannas of Beni, vegetation of openwater systems, among others (Navarro & Ferreira 2011, Navarro 2011, Appendix 2). These are classified as Subtropical/Tropical Seasonally Humid/Flooded Lowland Grasslands, Dry Savanna, Subtropical/Tropical Swamp Forest, Subtropical/Tropical Lowland Humid Forest, Humid Savanna, and Subtropical/Tropical Dry Forest following the IUCN habitat classification scheme (IUCN 2012) (Appendix 2).

Conservation Challenges

Despite being one of the least studied areas in Bolivia, the Llanos de Moxos, the region where the Grandes Lagos de Exaltación are located, have great hydrological and ecological importance. Nonetheless, the IPA faces conservation challenges, largely due to historical and current human activities.

Periodic fires have caused significant changes in the physio-chemical characteristics of the soil and water. Added to this are other factors that exert negative pressure on the ecosystem: the indiscriminate use of gallery forests, the clearing of areas for crops and livestock farming, and the consequent habitat fragmentation (Grupo de Trabajo para los Llanos de Moxos & WCS 2022).

This situation is exacerbated by the lack of effective management of conservation areas, exemplified by the Lake Rogaguado Natural Immobilisation Reserve (RAMSAR 2009a), which jeopardises its valuable natural heritage.

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	46	Major
Dry savanna	32	Major
Subtropical/Tropical Swamp Forest	14	Major
Subtropical/Tropical Moist Lowland Forest	4	Minor
Wet savanna	3	Minor

Threat		
Threat	**Severity**	**Situation**
Livestock farming & ranching	High	Ongoing - stable
Gathering terrestrial plants	High	Ongoing - stable
Fire & fire suppression	High	Ongoing - increasing

Land Use		
Land use type	**Percent coverage**	**Importance**
Agriculture (arable)	—	Major
Agriculture (pastoral)	—	Major
Harvesting of wild resources	—	Major

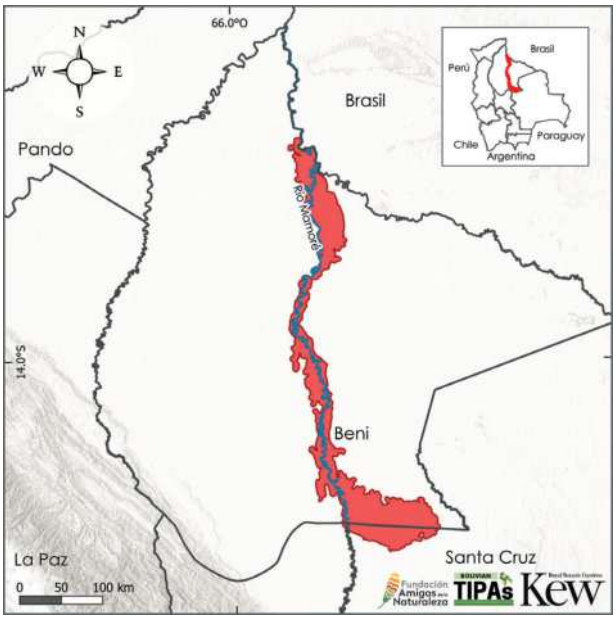
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	Lagos de Rogaguado Natural Immobilisation Reserve	Protected/conservation area matches IPA (100%)	8,511
Ramsar site	Yata River	IPA overlpas with the protected/conservation area (23%)	6,413
Key Biodiversity Area	KBA Lakes of Exaltación	IPA overlaps with the protected/conservation area (98%)	4,691

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Bignoniaceae	*Handroanthus serratifolius*	A(i)	EN	✓					occasional
Fabaceae	*Dipteryx alata*	A(i)	VU	✓					occasional

RÍO MAMORÉ

Authors: Oriana A. Lino-Villalba, Beatriz Nieto-Ariza, Huber Villca-Corani, Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas & Bente B. Klitgaard

International code	BOLTIPA073	Department/ Province	Beni: Cercado, Marbán, Moxos, Mamoré, Yacuma, Vaca Díez Santa Cruz: Guarayos
Latitude	-15.73630	Longitude	-64.55590
Minimum altitude (m.a.s.l.)	95	Maximum altitude (m.a.s.l.)	217
Area (km^2)	16,444	Qualifying IPA criteria	A(i), A(iii), B(iii)



IPA Assessment – Rationale

The Río Mamoré qualifies as an IPA site by the presence of flooded forest and a variety of other habitats (MapBiomas Bolivia 2024), in addition to a notable variety of climatic conditions. To the south, in the Gran Moxos Municipal Protected Area, the climate is characterised by low seasonality and high precipitation, whereas to the north, at its confluence with the Iténez River, seasonality is much higher and precipitation decreases (Hijmans *et al.* 2005). This climatic diversity makes the IPA site an area of great contrast, which supports an exceptional variety of ecosystems and high biodiversity (Navarro 2011). As a result the IPA has high botanical value, with four globally threatened endemic species and two restricted species. Additionally, this site is home to 102 useful species. It is worth noting that the riparian forest is a crucial habitat for the region, due to the multiple ecosystem services that it provides.

Site Description

The IPA site was delimited following the course of the Mamoré River, which belongs to the Amazon Basin, excluding the northern extreme of the Guayaremerím municipality. The waterway has a course of over 600 kilometres. Exaltación, Camiaco, Puerto Barador, and Trinidad are some of the municipalities located in the vicinity of the Mamoré IPA site, which also features a large number of overlapping conservation areas.

Botanical Significance

The site is botanically significant for its threatened endemic plants and species of socioeconomic value. Among the threatened endemic species are: *Victoria boliviana* (EN), *Arachis benensis* (EN), and *Solanum moxosense* (EN). The latter is known to inhabit seasonally flooded savannas (Baldaszti 2024). Also present is *Coccoloba steinbachii* (VU), a species that grows in high-value ecosystems such as humid lowland forests, forest islands, and várzea forests (Martinez-Ugarteche 2021). Furthermore, two restricted endemic species, *Mascagnia boliviana* (NE) and *Pteris buchtienii* (NE) are present, in addition to *Bougainvillea modesta* (LC), *Calliandra haematocephala* (LC), and *Trichilia multifoliola* (LC). In addition there are 102 useful

The Mamoré River and lagoon in the background, Ibarecito River in the foreground, Gran Moxos Municipal Protected Area © Beatriz Nieto Ariza

Calliandra haematocephala inflorescence © Alejandro Angulo

plants, representing 3% of the useful plant species documented in Bolivia (Appendix 3).

Within this group, *Handroanthus serratifolius* (EN) stands out, as species of durable and resistant wood (Hills 2021). Moreover, 57 of these species are in the Least Concern (LC) category, underscoring the site's importance for the conservation of flora with socioeconomic value.

Habitat and Geology

The Mamoré River basin is located within the Chaco-Beniana alluvial plains, with low-relief, flat or slightly undulating plains, a landscape transformed by the meandering of the rivers. Geomorphologically, the site is characterised by extensive polycyclic floodplains composed of Quaternary fluvial deposits, primarily consisting of clays, silts, and fine-grained sands (Navarro & Maldonado 2002).

Floristically, the site comprises the Cerrado, Flooded Savannas, and Southwestern Amazonia ecoregions (Ibisch *et al.* 2003). The Mamoré alluvial plain supports a great diversity of ecosystems, with the highest levels of diversity in forests, while swamps or lentic bodies with aquatic vegetation dominate in the more depressed zones (Pouilly *et al.* 2004). Predominantly, vegetation consists of a mosaic of savanna forests, palm groves, and savannas on sodic-mesotrophic soil in the higher areas of the alluvial plains, with strips of várzea forests, riparian vegetation, and mesotrophic flooded savannas in the lowlands occupying the depressed parts of the alluvial plains. Higher lying area are very scarce, occupied by small areas of semi-deciduous forests (Navarro & Maldonado 2002, Navarro & Ferreira 2011, Navarro 2011, Appendix 2). These vegetation types are categorised as Subtropical/Tropical

Lowland Humid Forest, Subtropical/Tropical Swamp Forest, Subtropical/Tropical Dry Forest, Dry Savanna, Humid Savanna, and Subtropical/Tropical Seasonally Humid/Flooded Lowland Grasslands according to the IUCN habitat classification scheme (IUCN 2012) (Appendix 2).

Conservation Challenges

According to data from MapBiomas Bolivia (2024), in 2023 the IPA site was characterised by 48% flooded forest, 24% scrub or herbaceous formation, 8% non-forested natural flooded formation, and 8% river or lake. Regarding anthropogenic activities, it presents 0.017% urban infrastructure and 0.082% agriculture. The main threats to the conservation of the Mamoré IPA site are pressures from livestock farming and recurrent fires associated with this activity.

These especially affect the savannas, palm groves, and forest islands. This, coupled with the effects of climate change, with more severe and recurrent droughts, increases the risk of converting the forests into savannas, particularly in the areas of the IPA site with high seasonality and low precipitation (Nobre & Borma 2009). Likewise, illegal timber logging can develop with some intensity in the várzea forests in certain sections of the Mamoré River.

Flower of *Victoria boliviana* © Dario Melgar

Panoramic view of várzea forest adjacent to the Mamoré River, Gran Moxos Municipal Protected Area © Beatriz Nieto Ariza

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	44	Major
Subtropical/Tropical Swamp Forest	25	Major
Wet savanna	13	Major
Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	9	Major
Dry savanna	8	Minor
Subtropical/Tropical Dry Forest	—	Minor

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Medium	Ongoing - stable
Livestock farming & ranching	High	Ongoing - stable
Small-holder grazing, ranching or farming	Medium	Ongoing - stable
Logging & wood harvesting	Medium	Ongoing - stable
Fire & fire suppression	High	Ongoing - stable
Soil erosion, sedimentation	Unknown	Ongoing - trend unknown

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	22	Major
Agriculture (arable)	—	Major
Agriculture (pastoral)	—	Major

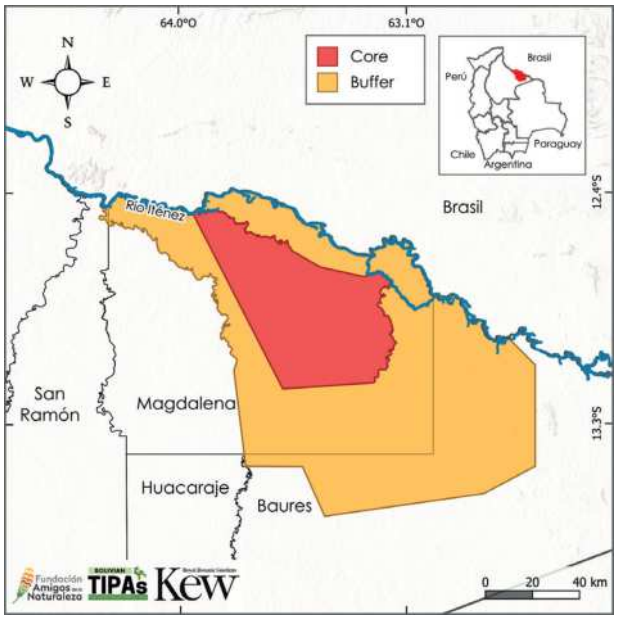
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Key Biodiversity Area	KBA Gran Moxos - Ibare Mamoré	IPA overlaps with the protected/conservation area (58%)	3,537
Local/Regional Nature Reserve	Gran Mojos Municipal Protected Area	IPA overlaps with the protected/conservation area (56%)	3,122
Local/Regional Nature Reserve	Humedales del Norte Departmental Integrated Management Natural Unit	IPA overlaps with the protected/conservation area (40%)	1,977
Key Biodiversity Area	KBA Este del Rio Mamoré	IPA overlaps with the protected/conservation area (11%)	870
Key Biodiversity Area	KBA Loreto	IPA overlaps with the protected/conservation area (22%)	811
Key Biodiversity Area	KBA Oeste del Rio Mamoré	IPA overlaps with the protected/conservation area (3%)	447
Ramsar site	Matos River	IPA overlaps with the protected/conservation area (2%)	279
Local/Regional Nature Reserve	Ibare-Mamoré Municipal Protected Area	IPA overlaps with the protected/conservation area (100%)	252
Private nature reserve	Estancias Elsner San Rafael Wildlife Reserve	IPA overlaps with the protected/conservation area (63%)	146
Local/Regional Nature Reserve	Great Tectonic Lakes of Exaltación	Protected/conservation area overlaps with the IPA (65%)	63
Key Biodiversity Area	KBA Lakes of Exaltación	Protected/conservation area overlaps with the IPA (1%)	63
Local/Regional Nature Reserve	Humedales del Norte Departmental Park	IPA overlaps with the protected/conservation area (6%)	15
Private nature reserve	Chuchini Ecological and Archaeological Sanctuary	IPA overlaps with the protected/conservation area (100%)	3

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Bignoniaceae	*Handroanthus serratifolius*	A(i)	EN	✓					occasional
Fabaceae	*Arachis benensis*	A(i)	EN	✓	✓		✓		occasional
Malpighiaceae	*Mascagnia boliviana*	A(iii)	NE	✓	✓		✓	✓	rare
Nymphaeales	*Victoria boliviana*	A(i)	EN	✓	✓	✓	✓		occasional
Polygonaceae	*Coccoloba steinbachii*	A(i)	VU	✓	✓		✓	✓	occasional
Pteridaceae	*Pteris buchtienii*	A(iii)	NE	✓	✓		✓		rare
Solanaceae	*Solanum arachnidanthum*	A(i)	VU	✓					occasional
Solanaceae	*Solanum moxosense*	A(i)	EN	✓	✓		✓		occasional

ITÉNEZ DEPARTMENTAL PARK AND NATURAL AREA OF INTEGRATED MANAGEMENT

Authors: Oriana A. Lino-Villalba, Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas & Bente B. Klitgaard

International code	BOLTIPA074	Department/ Province	Beni: Iténez, Baures
Latitude	-12.89100	Longitude	-63.51037
Minimum altitude (m.a.s.l.)	106	Maximum altitude (m.a.s.l.)	396
Area (km^2)	13,689	Qualifying IPA criteria	A(i)



IPA Assessment – Rationale

The Iténez Departmental Park and Natural Area of Integrated Management qualifies as an IPA site by its crucial role in protecting a complex and diverse mosaic of ecosystems. The area safeguards lowland humid forest, flooded forest, savannas, and grasslands, which act as essential hydrological regulators for the region.

The botanical value is evidenced by the presence of four endemic species that are either threatened or at risk of global extinction.

Additionally, the site harbours 62 species of useful plants, demonstrating the vital connection between the area's biodiversity and the livelihoods of local communities.

Site Description

The IPA site is a border locality situated in the northeast of Bolivian Amazonia, and its delimitation coincides completely with the boundaries of the Departmental Park (core zone) and the Natural Area of Integrated Management Iténez (buffer zone). It is notable for having areas of open water bodies. It is home to some indigenous communities such as Bella Vista, El Escondido, Nueva Brema, and Versalles (Van Damme *et al.* 2013).

Botanical Significance

The site's botanical significance is defined by its diverse vegetation types, which support a range of endemic, native, and globally threatened species, as well as plants of high socioeconimic value. Among the threatened endemic species, *Arachis williamsii* (EN), *Casimirella beckii* (EN), *Mitracarpus bicrucis* (VU), and *Pachira rurrenabaqueana* (VU) stand out. Added to these are useful plants such as *Mauritia flexuosa* (LC) and *Andropogon virgatus* (NE), characteristic of lowland pampas; *Bertholletia excelsa* (NE) and *Qualea paraensis* (LC), present in the Amazonian forest of the Lower Iténez; and *Erisma uncinatum* (LC), found in the evergreen Amazonian forest zones (Navarro 2011).

Habitat and Geology

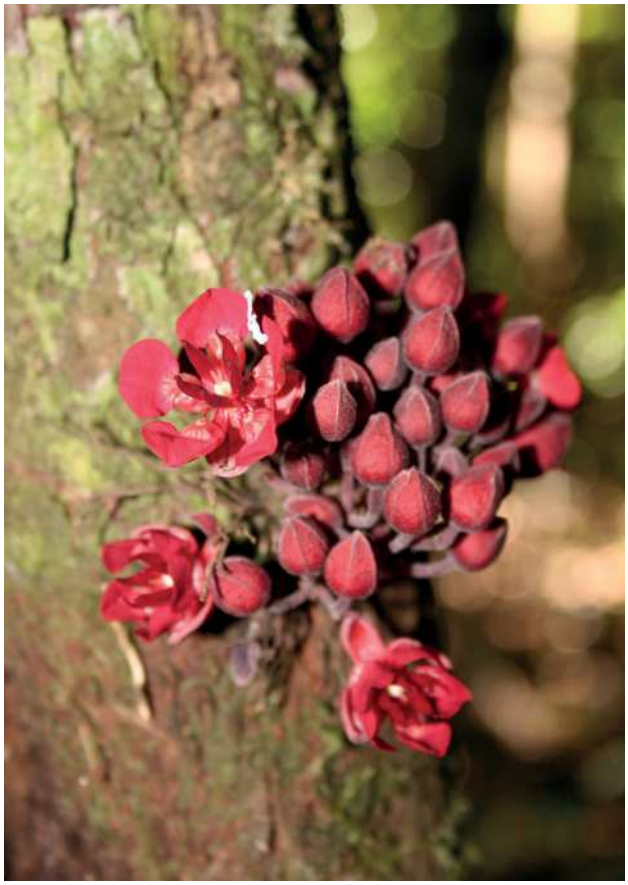
Physiographically, the IPA site is mainly located on the Chaco-Beniana Plain and partly on the Precambrian Shield (MDSyP 2002), belonging

Harvesting of *Bertholletia excelsa* seeds © FAN/Lucía Aramayo

to the Southwestern Amazonia and Flooded Savannas ecoregions (Ibisch et al. 2003). It is part of the Iténez basin, which in turn belongs to the Amazonian macro-basin (Van Damme *et al.* 2013). The characteristic vegetation includes humid Amazonian lowland forest with Brazil nuts of the Lower Iténez, Amazonian swamp grassland of Iténez-Lower Paraguá, which is a complex of Amazonian aquatic and wetland vegetation associated with whitewater and blackwater systems, among others (Navarro & Ferreira 2011, Navarro 2011, Appendix 2). These are classified as Subtropical/Tropical Lowland Humid Forest, Subtropical/Tropical Seasonally Humid/Flooded Lowland Grasslands, Subtropical/Tropical Swamp Forest, Humid Savanna, and Dry Savanna according to the IUCN habitat classification scheme (IUCN 2012) (Appendix 2).

Conservation Challenges

The IPA site conserves 45% flooded forests and 23% lowland forest (MapBiomas Bolivia 2024), and it faces multiple conservation challenges derived from human activities. The local economy is based on the extraction of timber and non-timber forest products, such as the Brazil nut (*Bertholletia excelsa* (NE)), subsistence agriculture and livestock farming, as well as hunting (Van Damme *et al.* 2013). These activities, combined with seasonal fires and clearing (RAMSAR 2009a), exert constant pressure on the ecosystem. Additionally, the area faces border deforestation from the north, in Brazil (Google Earth 2025). Despite these threats, the site possesses great ecological and hydrological value.



Flowers of *Theobroma speciosum* © Trustees RBG Kew/ William Milliken

The region is known by its rivers, with meandering courses associated with important gallery forests (RAMSAR 2009a). The conservation of this fluvial ecosystem is vital for maintaining the health and biodiversity it harbours, making its protection a priority.

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	65	Major
Subtropical/Tropical Seasonally Wet/Flooded Lowland Grass-land	22	Major
Subtropical/Tropical Swamp Forest	6	Minor
Wet savanna	6	Minor
Dry savanna	—	Minor

Threat		
Threat	**Severity**	**Situation**
Hunting & collecting terrestrial animals	Medium	Ongoing - trend unknown
Gathering terrestrial plants	Low	Ongoing - stable
Logging & wood harvesting	Medium	Ongoing - stable
Fire & fire suppression	Low	Ongoing - trend unknown

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	100	Major
Harvesting of wild resources	—	Major

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Key Biodiversity Area	KBA Itenez - Kenneth Lee	IPA overlaps with the protect-ed/ conservation area (75%)	13,598
Ramsar site	Río Blanco	IPA overlaps with the protect-ed/ conservation area (43%)	10,247
Local/Regional Nature Reserve	ANMI Iténez	Protected/conservation area matches IPA (100%)	10,203
Local/Regional Nature Reserve	Iténez Depart-mental Park	Protected/conservation area matches IPA (100%)	3,487

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Fabaceae	*Arachis williamsii*	A(i)	EN	✓	✓				unknown
Icacinaceae	*Casimirella beckii*	A(i)	EN	✓	✓	✓	✓		rare
Malvaceae	*Pachira rurrenabaqueana*	A(i)	VU	✓	✓				occasional
Rubiaceae	*Mitracarpus bicrucis*	A(i)	VU	✓	✓				occasional

SERRANÍA DE SAN SIMÓN

Authors: Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA075	Department/ Province	Beni: Itenéz
Latitude	-13.50339	Longitude	-62.33570
Minimum altitude (m.a.s.l.)	138	Maximum altitude (m.a.s.l.)	666
Area (km^2)	5,925	Qualifying IPA criteria	A(ii)

IPA Assessment – Rationale

The Serranía San Simón is an IPA with a key role in connecting the Noel Kempff Mercado National Park and the Iténez Departmental Park and Natural Area of Integrated Management. Within its extent, it harbours important habitats such as the flooded savannas and the serranía itself, which is covered in different Cerrado vegetation types, which are of significance due to their conservation status and high level of botanical endemism.

This site contains nine nationally threatened species, which are represented in other areas of the Chiquitania yet under pressure. It also features 65 useful plants and one endemic species restricted to the granitic rocky outcrops in the Velasco and Ñuflo de Chávez provinces, making this site an isolated locality for this species.

Site Description

The IPA site named Serranía de San Simón is in southeastern Beni, on the border with the Santa Cruz department. San Simón is part of a corridor between the IPA site of Iténez Departmental Park and Natural Area of Integrated Management and the Noel Kempff Mercado National Park. Among its stand-out features are extensive plains and the serranía mountain range or Cerro San Simón, which is situated on the Precambrian Shield and supports Cerrado vegetation types.

Mining consessions are scattered throughout Cerro San Simón, and there is evidence of illegal gold and magnesium mining.

Botanical Significance

The importance of this site lies in its extensions of natural cover: forests, savannas, and hills that harbour a still unknown flora. This area has a mosaic of vegetation types that is related with those of the Noel Kempff Mercado Park, the Serranía de Chiquitos, and certainly with the Brazilian Cerrado. Currently 65 species of socioeconomic importance and one endemic species are known from the site: *Praxelis cleggiae*, a plant found on

Panoramic view of the Serranía de San Simón © Alejandro de los Ríos

the granitic rocky outcrops of the Ñuflo de Chávez and Velasco provinces in Santa Cruz and isolated in the Serranía San Simón (Hind & Edwards 2024).

It also protects five native nationally threatened species. Most of the ranges of these species are found in other areas of the Chiquitania and in this site, where they are threatened mainly by habitat loss as a result of mining (MMAyA 2020). Among these species, *Vellozia variabilis* (EN) stands out, distributed exclusively and very locally on rocky outcrops, flagstones (lajas), and serranías of the Chiquitano Precambrian Shield and in Brazil (Antezana & Guillen 2020).

Habitat and Geology

Scenically, this site is characterised by a slightly to moderately undulating terrain, with undulating plain between its ravines and the serranía, which belong to the Precambrian Shield and the Beniana Plain (MDSyP 2002).

According to Ibisch *et al.* (2003), the Southwestern Amazonia ecoregion, with the lowland forests of Beni and Santa Cruz, and flooded Savannas of the Llanos de Moxos (also called Southern Beniana Savannas) (Beck 2014), converge within the boundaries of this IPA site. In the Serranía San Simón itself, the vegetation is very special, of the Precambrian Shield. It has habitats very similar to those of the Noel Kempff Mercado Park and the Serranía de Chiquitos, which feature rocky outcrops and the different Cerrado vegetation types, notably Rupestrian Cerrados, campos or Cerrados *sensu stricto*.

According to Navarro (2011), the site contains vegetation associations of evergreen Amazonian forest of the Chiquitano Precambrian Shield: *Qualea paraensis-Erisma uncinatum* series, lowland sartenejal forest of depressed terra firme of the lower Paraguá: *Qualea albiflora-Euterpe precatoria* series, Amazonian swamp grassland of Iténez-Lower Paraguá, and rupestrian campo on arenaceous serranías of Iténez-Lower Paraguá: *Vellozia variabilis* community (Appendix 2). These vegetation types are classified into Subtropical/Tropical Lowland Humid Forest, Subtropical/Tropical Swamp Forest, Subtropical/Tropical Seasonally Humid/Flooded Lowland Grasslands, and Rocky Areas according to the IUCN habitat classification scheme (IUCN 2012) (Appendix 2).

Conservation Challenges

The location of this site is important for the connectivity and protection of the Noel Kempff Mercado National Park; both have similar landscapes and habitats, including Cerrado vegetation. It also connects to the Iténez Departmental Park and Natural Area of Integrated Management, creating a corridor for the humid and flooded forests found in the region.

San Simón is a site of botanical interest that has attracted attention, but given its limited access, comprehensive expeditions have not been possible.

Campo limpo vegetation in San Simón mountain range © Alejandro de los Ríos

Botanical knowledge from this site is close to zero, but the IPA has immense potential due to the special nature of its habitats. However, the area faces intense pressures from mining, while in the flat areas covered by flooded savannas and forests, livestock farming is the main activity exerting pressure on the natural vegetation cover. Gaining knowledge of the flora of the serranía and surrounding areas is a priority for better understanding its ecological significance for the region.

Cerrado vegetation at the base of the Serranía de San Simón © Alejandro de los Ríos

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	77	Major
Subtropical/Tropical Swamp Forest	10	Major
Subtropical/Tropical Seasonally Wet/Flooded Lowland Grass-land	6	Major
Rocky Areas- Rocky Areas (e.g. inland cliffs, mountain peaks)	3	Major
Dry savanna	3	Major
Wet savanna	1	Major

Threat		
Threat	**Severity**	**Situation**
Livestock farming & ranching	High	Ongoing - trend unknown
Energy production & mining	High	Ongoing - increasing
Logging & wood harvesting	High	Ongoing - trend unknown

Land Use		
Land use type	**Percent coverage**	**Importance**
Agriculture (arable)	—	Minor
Extractive industry	—	Major
Residential/urban development	—	MInor

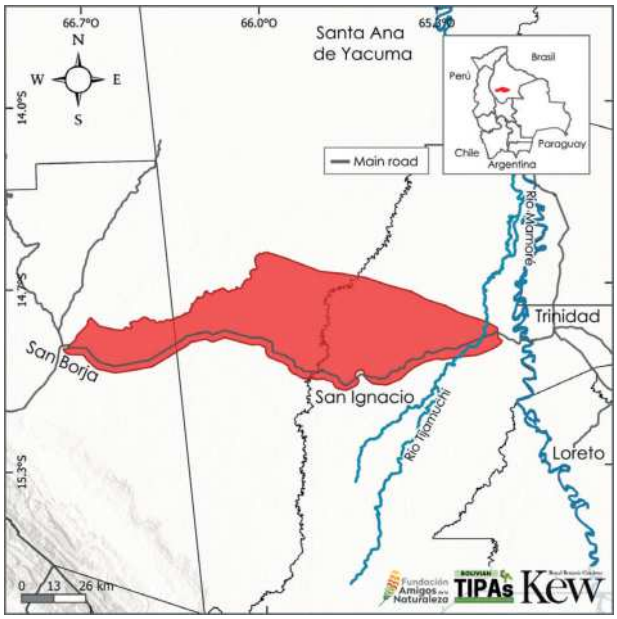
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Ramsar site	Río Blanco	IPA overlaps with the protect-ed/conservation area (2%)	510

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Bignoniaceae	*Handroanthus impetiginosus*	A(ii)	EN						unknown
Bignoniaceae	*Tabebuia insignis*	A(ii)	EN						unknown
Calophyllaceae	*Calophyllum brasiliense*	A(ii)	VU						unknown
Calophyllaceae	*Kielmeyera coriacea*	A(ii)	VU						unknown
Calophyllaceae	*Kielmeyera rubriflora*	A(ii)	VU						unknown
Chrysobalanaceae	*Licania sclerophylla*	A(ii)	EN						unknown
Loganiaceae	*Antonia ovata*	A(ii)	EN						unknown
Loganiaceae	*Bonyunia antoniifolia*	A(ii)	EN						unknown
Velloziaceae	*Vellozia variabilis*	A(ii)	EN						occasional

SAN IGNACIO DE MOXOS AND YACUMA REGIONAL PARK

Authors: Maira T. Martinez-Ugarteche, Freddy S. Zenteno-Ruiz, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA076	Department/ Province	Beni: Yacuma, Moxos, José Ballivián
Latitude	-14.81660	Longitude	-65.84950
Minimum altitude (m.a.s.l.)	125	Maximum altitude (m.a.s.l.)	217
Area (km^2)	4,662	Qualifying IPA criteria	A(i), A(iii), B(iii)



IPA Assessment – Rationale

The IPA site San Ignacio de Moxos and Yacuma Regional Park is considered one of the best sites for protecting *Victoria boliviana*, an emblematic endemic and globally threatened Bolivian species. It is also home to other highly restricted and potentially threatened endemic species. Furthermore, this IPA concentrates an exceptional richness of 232 useful plant species.

Site Description

This IPA site is found in the Beni department, west of Trinidad, and extends to San Borja. It borders the Estación Biológica del Beni Protected Area to the northwest and the San Ignacio de Moxos Multiethnic Indigenous Territory to the south.

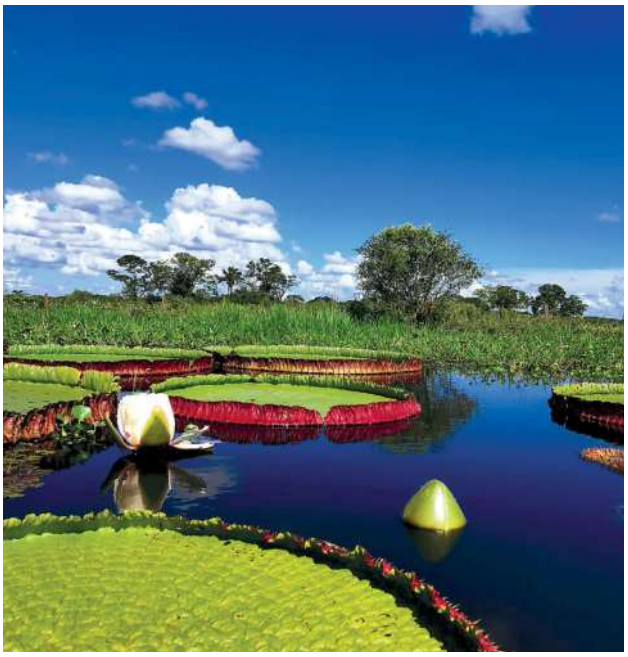
The site encompasses conservation areas, such as the Yacuma Regional Park, which is entirely within the IPA, and the Río Matos RAMSAR site, which has 17% of its area within the boundaries of this IPA site, and it overlaps with the Estación Biológica del Beni – Yacuma Key Biodiversity Area (KBA) by 63% of its surface area. Part of this IPA site is within the Llanos de Moxos and San Ignacio de Moxos landscape, which consists of Amazonian savannas and wetlands (Vogl *et al.* 2022).

Botanical Significance

The main botanical significance for the IPA site is the presence of *Victoria boliviana* (EN), one of the eight species globally at risk of extinction protected within this IPA. *Victoria boliviana*, an endemic species restricted to the alluvial plains of the Llanos de Moxos (Smith *et al.* 2022), has a significant part of its wild population in the Tijamuchi River which runs through the eastern extreme of the IPA site. In addition to this species, the site contains notable species such as *Hibiscus benensis* (EN), *Jacquemontia acuminata* (VU), and *Ipomoea opulifolia* (VU) (Appendix 1).

Another important group of plants growing in the site is the 232 species with socioeconomic importance, accounting for 7.1% of Bolivia's richness of useful plants. Notable within this

Overflow zone of the Tijamuchi River with *Victoria boliviana* © Trustees RBG Kew/Maira Martinez



Victoria boliviana © Dario Melgar

Ipomoea opulifolia © Maira Martinez

group are forage plant species belonging to the Cyperaceae and Poaceae (Beck & Sanjinés 2006, Arroyo-Herbas *et al.* in prep.). Additionally, it has seven species considered crop wild relatives and a total of 14 endemic useful species (Appendix 3).

Habitat and Geology

The IPA site is situated on the Chaco-Beniana Plains where two ecoregions converge: the flooded Savannas and Southwestern Amazonia (MDSyP 2002, Ibisch *et al.* 2003). Its landscape is a complex mosaic of savannas, aquatic vegetation, forests, and wetlands, under threat from extensive livestock farming activities (Vogl *et al.* 2022).

According to the classification of vegetation and Ecological Systems of Bolivia (Navarro & Ferreira 2011, Navarro 2011) and the IUCN habitat classification scheme (IUCN 2012), the site is composed of four main habitats, with Subtropical/Tropical Lowland Moist Forest being the most extensive, followed by Subtropical/Tropical Seasonally Humid/Flooded Lowland Grasslands. Please see further details on vegetation types following Navarro (2011) in Appendix 2.

Conservation Challenges

The San Ignacio de Moxos landscape is changing quickly and drastically, owing to land-use change, new economic activities, and climate change (Vogl *et al.* 2022).

Achieving effective conservation and management of the site's ecosystems presents a major challenge.

Cañuelares, taropales, grasslands, and in the background, gallery forest and forest islands, between the Tijamuchi River and San Borja © Trustees RBG Kew/Maira Martinez

San Ignacio de Moxos © Daniel Aguilar

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	37	Major
Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	29	Major
Wet savanna	27	Major
Subtropical/Tropical Swamp Forest	7	Major
Other	—	Unknown
Subtropical/Tropical Dry Forest	—	Unknown

Threat		
Threat	**Severity**	**Situation**
Agro-industry grazing, ranching or farming	High	Ongoing - stable
Climate change & severe weather	Medium	Ongoing - trend unknown
Fishing & harvesting aquatic resources	Medium	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Agriculture (arable)	—	Major
Agriculture (pastoral)	—	Major
Tourism/recreation	—	Major
Forestry	—	Minor

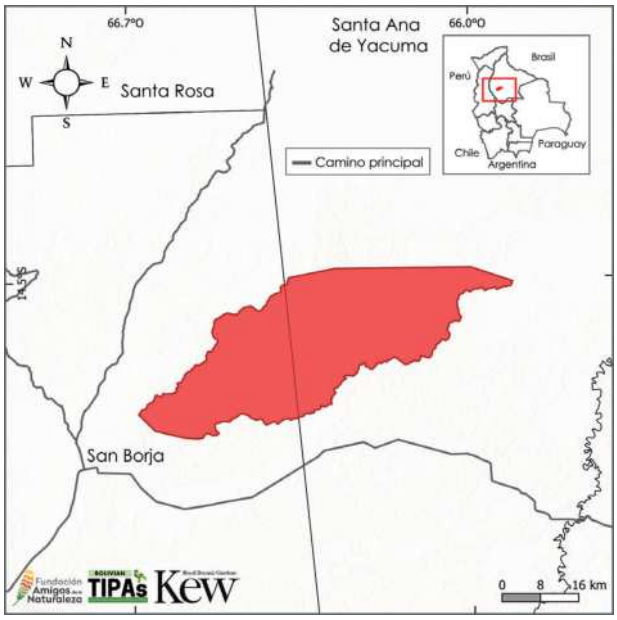
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	Yacuma Regional Park	Protected/conservation area matches IPA (100%)	2,211
Key Biodiversity Area	KBA Estación Bio-lógica del Beni – Yacuma	Protected/conservation area over-laps with the IPA (63%)	2,211
Ramsar site	Río Matos	Protected/conservation area over-laps with the IPA (17%)	2,911

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Araceae	*Anthurium atropurpureum* var. *thomasii*	A(iii)	NE	✓	✓		✓	✓	unknown
Bignoniaceae	*Handroanthus serratifolius*	A(i)	EN	✓		✓			frequent
Convolvulaceae	*Ipomoea opulifolia*	A(i)	VU	✓	✓				occasional
Convolvulaceae	*Jacquemontia acuminata*	A(i)	VU	✓	✓	✓	✓		occasional
Fabaceae	*Senna coimbrae*	A(i)	EN	✓	✓	✓	✓		occasional
Malvaceae	*Hibiscus benensis*	A(i)	EN	✓	✓	✓			occasional
Nyctaginaceae	*Neea dimorphophylla*	A(i)	EN	✓	✓		✓		occasional
Nymphaeales	*Victoria boliviana*	A(i)	EN	✓	✓	✓	✓		localized
Piperaceae	*Piper steinbachii*	A(iii)	NE	✓	✓	✓	✓		occasional
Solanaceae	*Solanum moxosense*	A(i)	EN	✓	✓	✓	✓		frequent

RESERVA DE LA BIOSFERA ESTACIÓN BIOLÓGICA DEL BENI

Authors: Maira T. Martinez-Ugarteche, Alejandro Araujo-Murakami, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA077	Department/ Province	Beni: Yacuma, José Ballivián
Latitude	-14.64157	Longitude	-66.30461
Minimum altitude (m.a.s.l.)	155	Maximum altitude (m.a.s.l.)	217
Area (km^2)	1,348	Qualifying IPA criteria	A(i), B(iii)



IPA Assessment – Rationale

The IPA site Estación Biológica del Beni (EBB) registers three endemic species, two of which are globally threatened. In addition to these species, the site contains 133 species of socioeconomic importance, representing 4.1% of the country's documented useful plants.

In addition to these IPA attributes or criteria, this site is considered an IPA owing to it's Beni savannas and humid lowland forests, which are considered nationally threatened (MMAyA 2020).

Site Description

The Estación Biológica del Beni (EBB) IPA site is in the southwestern Beni department, between the municipalities of San Borja and Santa Ana de Yacuma. The boundary of the IPA site is based on the official limits of the EBB protected area, managed by the National Service for Protected Areas (SERNAP). Part of the EBB is recognised as belonging to the Tsimane Indigenous Territory (Lizarro *et al.* 2020). Climatically, the EBB is influenced by the Flooded Savannas of the Llanos de Moxos.

Botanical Significance

The EBB contains three endemic species. Two of these are categorised by the IUCN as Vulnerable (VU) and the third as Data Deficient (DD). The threatened species, *Ipomoea opulifolia* and *Jacquemontia acuminata*, both belonging to the Convolvulaceae, are largely confined to northern and northwestern Bolivia: *Ipomoea opulifolia*, a species of humid forests, and *Jacquemontia acuminata* in thickets derived from seasonally dry forests (Wood *et al.* 2020, Wood & Clegg 2021). This IPA site also stands out for being a site with 133 useful species. Furthermore, the EBB contains two special ecosystems or vegetation types: the Beniana hygrophilous forests of the alluvial plain of white-water rivers and the stagnant white-water flooded forests of Southwestern Amazonia, which was categorised as Endangered (EN) nationally (MMAyA 2020).

Habitat and Geology

Physiographically, the Estación Biológica del Beni is located on the Chaco-Beniana Plains, dominated

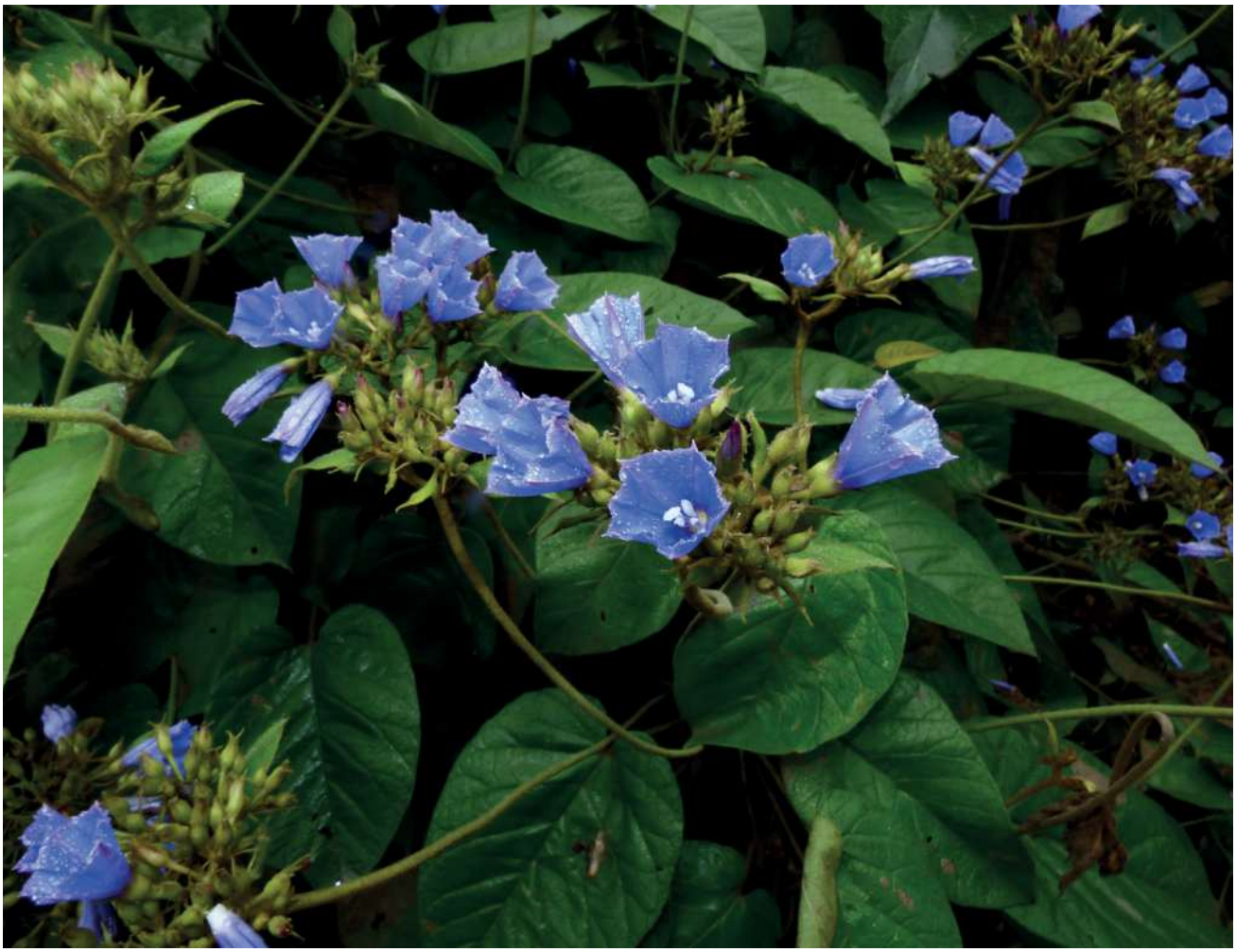
by plains and open water bodies, comprised of the Southwestern Amazonia and Flooded Savannas ecoregions (Ibisch *et al.* 2003).

According to the classification of vegetation and Ecological Systems of Bolivia (Navarro & Ferreira 2011, Navarro 2011) and the IUCN habitat classification system (IUCN 2012), this site is mostly covered by Subtropical/Tropical Lowland Moist Forest and Subtropical/Tropical Swamp Forest, which together cover 75% of the site surface. A third habitat present is Moist Savanna (Appendix 2).

Conservation Challenges

To date, the Reserva de la Biosfera Estación Biológica del Beni has several designations, including an Area of Importance for Bat Conservation (AICOM), part of a Key Biodiversity Area (KBA), and part of a RAMSAR site. Combined with the IPA botanical attributes, the EBB is an important protected area assisting to strenghten the governance, promote research and sustainable tourism, and safeguarding its different ecosystems.

Ipomoea opulifolia © Maira Martinez



Jacquemontia acuminata © Trustees RBG Kew/Maira Martinez

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	85	Major
Subtropical/Tropical Swamp Forest	4	Major
Wet savanna	8	Major
Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	2	Major

Threat

Threat	Severity	Situation
Hunting & collecting terrestrial animals	Low	Ongoing - trend unknown
Gathering terrestrial plants	Low	Ongoing - trend unknown
Logging & wood harvesting	Low	Ongoing - trend unknown
Fishing & harvesting aquatic re-sources	Low	Past - likely to return
Climate change & severe weather	Unknown	Ongoing - trend unknown

Land Use

Land use type	Percent coverage	Importance
Nature conservation	100	Major
Agriculture (arable)	—	Major
Agriculture (pastoral)	—	Major
Forestry	—	Minor
Harvesting of wild resources	—	Major
Tourism/recreation	—	Major

Protected areas and other conservation designations

Protected area type	Names (s) of protected area (s)	Relationship between the site and the protected area (% of overlap)	Area of overlap (km^2)
National Nature Reserve	Reserva de la Biosfera Estación Biológica del Beni	Protected/conservation area matches IPA (100%)	1,348
Key Biodiversity Area	KBA EBB- Yacuma	Protected/conservation area overlaps with IPA (37%)	1,321
Ramsar site	Río Matos	IPA overlaps with the protect-ed/ conservation area (3%)	1
AICOMs: Areas of Im-portance for the Con-servation of Bats	Reserva de la Biosfera Estación Biológica del Beni	Protected/conservation area matches IPA (100%)	1,348

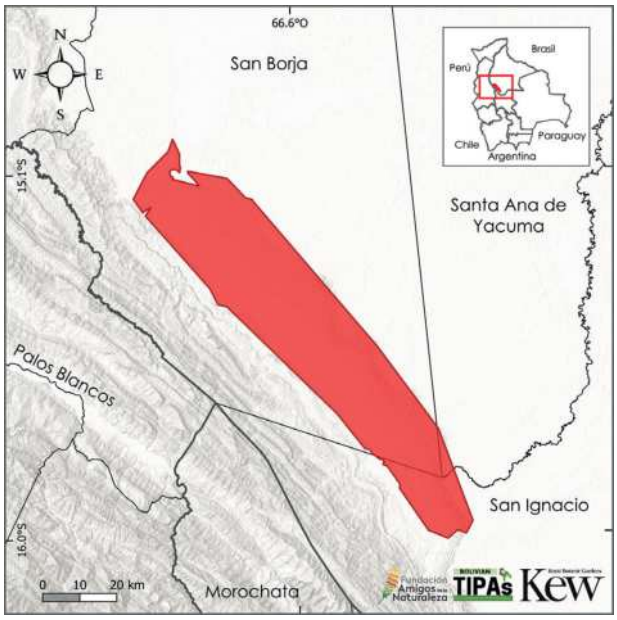
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Convolvulaceae	*Ipomoea opulifolia*	A(i)	VU	✓	✓				occasional
Convolvulaceae	*Jacquemontia acuminata*	A(i)	VU	✓	✓	✓	✓		occasional

EVA EVA - MOSETENES

Authors: Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA078	Department/ Province	Beni: Moxos, José Ballivián
Latitude	-15.50115	Longitude	-66.57458
Minimum altitude (m.a.s.l.)	201	Maximum altitude (m.a.s.l.)	704
Area (km^2)	2,544	Qualifying IPA criteria	C(iii)



Site Description

The IPA site Eva Eva-Mosetenes equates to the Eva Eva-Mosetenes Watershed Protection Zone, which overlaps with the Tsimane and Multiethnic Indigenous Territory. It is a departmental protected area, close to the departmental limits with La Paz and Cochabamba.

Local livelihoods revolve around extraction of forest products, livestock farming and agriculture within this petroleum-rich zone, though the area has historically suffered from a lack of oversight (Calvo, 2003). The landscape is also a crucial water source; the Rapulo River serves as the central hydrographic feature of the serranía, gathering waters from the Pachene stream and the Inamare, Dunay, and Acuna rivers.

IPA Assessment – Rationale

The Eva Eva-Mosetenes IPA site is home to important habitats such as the forests of the Andean foothills and Sub-Andean evergreen forests of southwestern Amazonia, both ecosystems considered nationally threatened (MMAyA 2020).

This site contains 40 useful plant species, of which four are endemic and categorised as Least Concern (LC) or Near Threatened (NT).

On the eastern side of the site we find Loma Santa, a protected area established by the Autonomous Indigenous Government of the Multiethnic Indigenous Territory (TIM). It also encompasses a portion of the Río Matos RAMSAR site.

Botanical Significance

The importance of this site is based on its forest cover, with Andean foothill forests, flooded forests, and sub-Andean evergreen forests, and its important transition from the plains to the sub-Andean region.

Currently, 40 species of socioeconomic importance are known, mostly woody species such as *Clarisia biflor*, *Duguetia spixiana*, *Protium glabrescens*, *P. stevensonii*, *Sterculia apetala*, *Terminalia amazonia*, and *Unonopsis guatterioides*. It also features four endemic species which are also useful plants:

Cosincho Community, Rapulo River, and Cosincho River © Google Earth

Aphelandra rusbyi, *Inga expansa*, and *Passiflora nigradenia*, categorised as Least Concern (LC), and *Drypetes brevipedicellata*, Near Threatened (NT) (Appendix 3).

Another relevant aspect of this IPA site is its habitats which are considered nationally threatened. The site's forests cover 23% of southwestern Amazonia's Andean foothill forest and 65% of its sub-Andean forests. Both ecosystems are nationally categorised as Critically Endangered (CR) (MMAyA 2020).

Habitat and Geology

Eva Eva-Mosetenes is a mountain range with lowland plains at its base. It belongs to the Sub-Andean region and to a lesser extent the Chaco-Beniana Plains (MDSyP 2002). According to Ibisch *et al.* (2003), southwestern Amazonia and the flooded Savanna ecoregion converge within this IPA site. The site has an almost homogeneous forest cover, dominated by associations of seasonally humid Amazonian forest of the northern Sub-Andean region: *Pentaplaris davidsmithii-Tetragastris altissima* series and Amazonian forest of the "northern pre-Andean glacis": *Quararibea wittii-Dipteryx odorata* series, which together constitute 88% of the site's vegetation cover (Navarro & Ferreira 2011, Navarro 2011). Both vegetation types are classified as Subtropical/Tropical Lowland Humid Forest following the IUCN habitat classification scheme (IUCN 2012) (Appendix 2).

Conservation Challenges

Located in the Andean foothills, the site is in a region of botanical importance; and it is one of few places where this representative vegetation is still intact. Although Eva Eva-Mosetenes is a departmental protected area, it currently lacks management and administration, and suffers from extractive activities such as hydrocarbon prospecting, forest exploitation, and agricultural activities (Gallardo 2005).

Eva Eva-Mosetenes is also a protected area with a high probability of forest fires (Anderson 2020), as well as deforestation (Andersen 2023).

Threatened Habitats – IPA Criterion C					
Habitat Type Subtropical/Tropical Moist Lowland Forest	IPA Subcriterion C	≥ 5% of national resource	≥ 10% of national resource	1 of the 5 highest-ranking sites at a national level	Estimated site area (km^2)
Sub-Andean Forests of the South-western Amazon	C(iii)	✓		✓	1,659
Andean Piedmont Forests of the South-western Amazon	C(iii)	✓		✓	573

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	88	Major
Subtropical/Tropical Swamp Forest	11	Major
Other	1	Unknown

Threat		
Threat	Severity	Situation
Livestock farming & ranching	Medium	Ongoing - trend unknown
Energy production & mining - Oil & gas drill-ing	High	Past - likely to return
Logging & wood harvesting	High	Ongoing - trend unknown

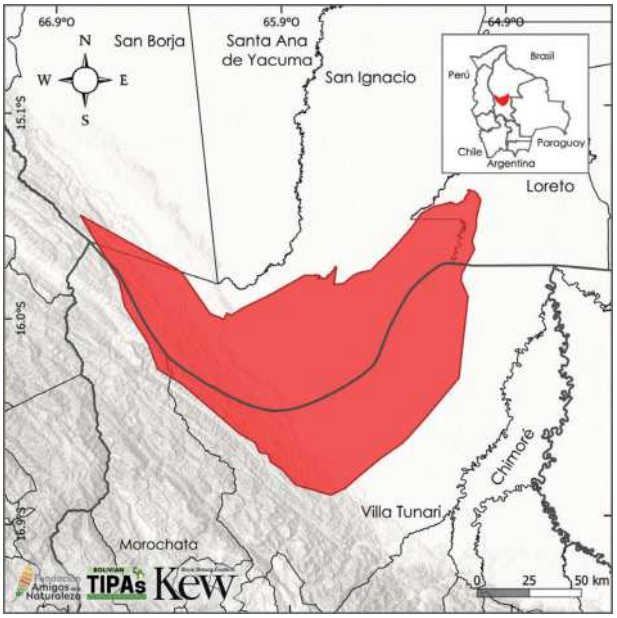
Land Use		
Land use type	Percent coverage	Importance
Nature conservation	—	Major
Agriculture (arable)	—	Major
Agriculture (pastoral)	—	Minor
Forestry	—	Major

Protected areas and other conservation designations			
Protected area type	Names (s) of protected area (s)	Relationship between the site and the protected area (% of overlap)	Area of overlap (km^2)
Local/Regional Nature Reserve	Eva Eva-Mosetenes Watershed Protection Area (ANMI)	Protected/conservation area matches IPA (100%)	2,399
Ramsar site	Río Matos	IPA overlaps with the protect-ed/ conservation area (8%)	1,425

ISIBORO SÉCURE NATIONAL PARK AND INDIGENOUS TERRITORY

Authors: Liliana Arroyo-Herbas, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA079	Department/ Province	Beni: Moxos, General José Ballivián, Marbán Cochabamba: Chapare, Ayopaya
Latitude	-16.14810	Longitude	-65.79479
Minimum altitude (m.a.s.l.)	123	Maximum altitude (m.a.s.l.)	2,169
Area (km^2)	13,009	Qualifying IPA criteria	A(i), A(iii), B(iii)



Site Description

The Isiboro Sécure National Park and Indigenous Territory covers 13,009 km^2, with 77% in the department of Beni and 23% in the department of Cochabamba. The site is a national conservation area, created with the objective to protect water resources and the cultural traditions of the T'simane, Mojeño, and Yuracaré indigenous nations (MDRyT 2018a).

Botanical Significance

The botanical significance of the site is underpinned by the existence of 40 endemic plant species, 14 of them globally threatened. Among the species prioritised for conservation is *Hippeastrum divijulianum* (CR), with its entire population restricted to this IPA site; and *Asplenium mosetenense* (NE), *Rudgea viburnifolia* (NE), *Thalictrum cincinnatum* (NE), and *Ruagea beckii* (NE), which, although not in an official threat category, have restricted geographic ranges and are potentially threatened.

The site also safeguards 330 useful species, five of which are globally threatened, including *Bactris faucium* (EN), which is also endemic to Bolivia. The palm family (Araceae) stands out, as most of the indigenous Yuracaré communities inhabiting the site use palm species as food and for construction (Montoya & Moraes 2014).

IPA Assessment – Rationale

The geographical location of the site makes it the only protected area located in the transitional zone between the Sub-Andean region and the Amazonian Plain, within which 40 species of endemic plant taxa grow, 14 of which are globally threatened, and four with highly restricted geographic ranges.

Furthermore, the site safeguards 327 species of useful plants, representing approximately 10% of the nationally known useful species.

Habitat and Geology

The site is found in the transitional zone between the Andes and Amazonian Bolivia, between the physiographic region of the Chaco-Beniana Plain and the Sub-Andean region (Montes de Oca 1989, Altamirano 1992). Regarding the site's hydrography,

San Juan Community, on the Ichoa River – Isiboro Sécure Indigenous Territory © Ángel Torrico

the main tributaries are the Sécure River to the north, the Ichoa River in the central zone, and the Isiboro River to the east and south in the Amazonian basin and the Mamoré sub-basin (SERNAP-CETEFOR-PRAEDAC 2004).

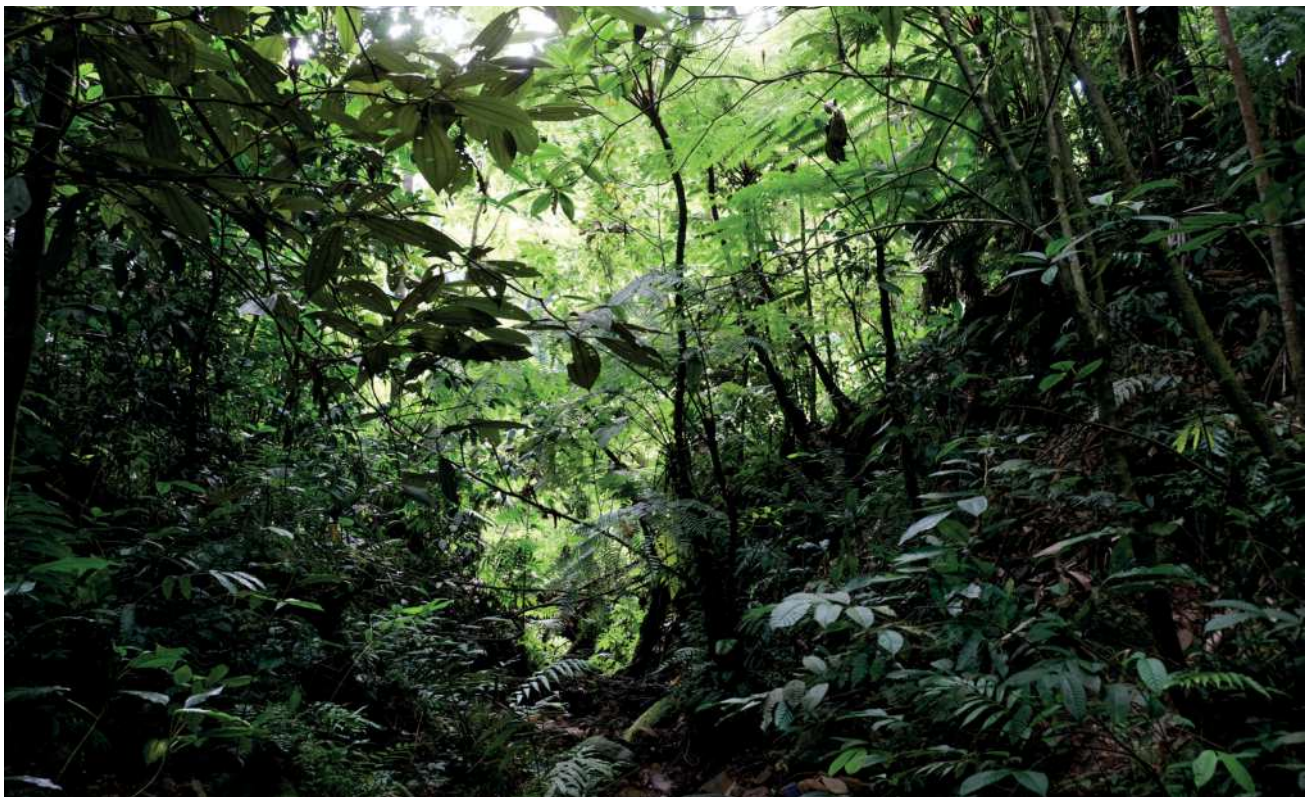
Scenically, the site is characterised by plains, foothills, and serranías covered in Flooded Savannas, Southwestern Amazonia, and part of the Yungas ecoregions (Ibisch *et al.* 2003). The most characteristic vegetation is the humid forests of the alluvial plain and pluvial to humid foothill forests. These vegetation types are classified as Subtropical/Tropical Moist Lowland Forest, Subtropical/Tropical Swamp Forest, Subtropical/Tropical Moist Montane Forest, and Subtropical/Tropical Seasonally Humid/Flooded Lowland Grasslands following the IUCN habitat classification scheme (IUCN 2012) (Appendix 2).

Conservation Challenges

Thanks to its physiographic characteristics and cultural component, it is the only protected area that holds the category of both Indigenous Territory and National Park (SERNAP-CETEFOR-PRAEDAC 2004).

The site also became a Key Biodiversity Area (KBA) by safeguarding endangered bird species such as *Pauxi unicornis* (CR) (KBA 2025b). However, the advancing agricultural frontier with the cultivation of the coca leaf, representing 6% of the hectares planted nationally (UNODC 2021), is one of the most direct threats within the site.

Adding to this are hydrocarbon exploitation, timber extraction (Ribera 2010), and the construction of a highway to connect the Cochabamba and Beni departments (Gil 2023). Constant pressures and threats have thus been identified for the site. However, the botanical attributes, especially the concentration of useful plant species existing within the area, reinforce the importance of protecting this IPA site.



Humid Forest Vegetation © Ángel Torrico

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	84	Major
Wet savanna	16	Major
Subtropical/Tropical Swamp Forest	9	Unknown
Subtropical/Tropical Moist Montane Forest	4	Unknown
Pastizales de tierras bajas estacionalmente húmedos/inundados subtropicales/ tropicales	1	Unknown

Threat		
Threat	**Severity**	**Situation**
Annual & perennial non-timber crops	High	Ongoing - stable
Logging & wood harvesting	High	Ongoing - trend unknown
Small-scale, extensive livestock farming	Medium	Unknown

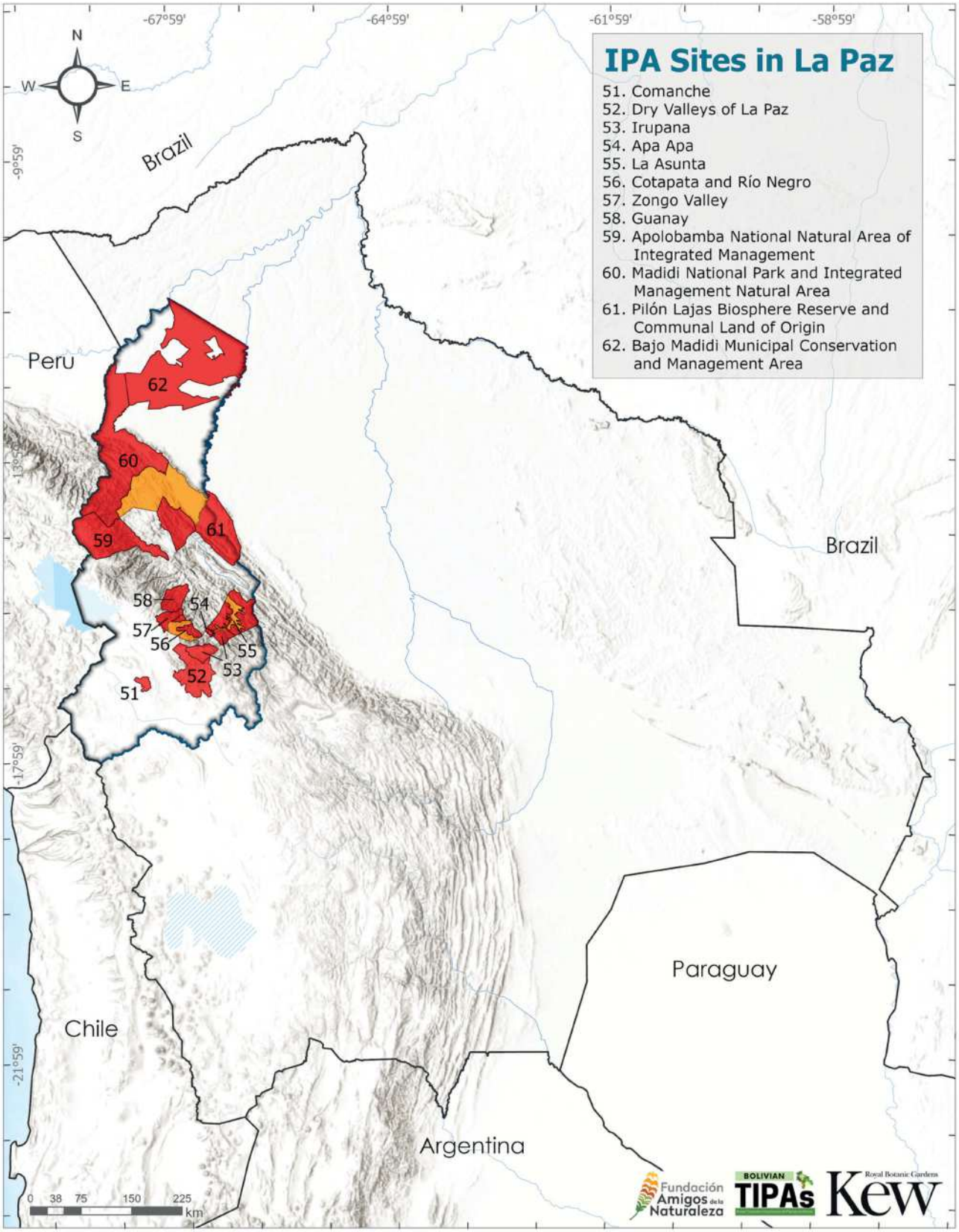
Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	—	Major
Harvesting of wild resources	—	Major
Residential/urban development	—	Unknown
Agriculture (arable)	—	Minor
Utility & service lines	—	Major

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
National Park	Indigenous territory and Isiboro Sécure PN	Protected/conservation area matches IPA (100%)	13,009
Key Biodiversity Area	KBA Isiboro - Sécure	Protected/conservation area matches IPA (100%)	13,009

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Stenostephanus krukoffii*	A(i)	EN	✓	✓		✓		unknown
Amaryllidaceae	*Hippeastrum divijulianum*	A(i)	CR	✓	✓	✓	✓	✓	rare
Arecaceae	*Bactris faucium*	A(i)	EN	✓	✓	✓	✓		frequent
Aspleniaceae	*Asplenium mosetenense*	A(iii)	NE	✓	✓		✓	✓	rare
Chloranthaceae	*Hedyosmum maximum*	A(i)	VU	✓	✓		✓		unknown
Convolvulaceae	*Ipomoea opulifolia*	A(i)	VU	✓	✓				unknown
Fabaceae	*Inga yungasensis*	A(i)	EN	✓	✓		✓		unknown
Gentianaceae	*Macrocarpaea bangiana*	A(i)	VU	✓	✓				unknown
Lamiaceae	*Aegiphila buchtienii*	A(i)	VU	✓	✓				unknown
Lauraceae	*Persea buchtienii*	A(i)	VU	✓	✓				unknown
Magnoliaceae	*Magnolia boliviana*	A(i)	EN	✓	✓				unknown
Malvaceae	*Hibiscus benensis*	A(i)	EN	✓	✓		✓		rare
Meliaceae	*Ruagea beckii*	A(iii)	NE	✓	✓		✓		occasional
Ranunculaceae	*Thalictrum cincinnatum*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Rubiaceae	*Macrocnemum tortuosum*	A(i)	VU	✓	✓				unknown
Rubiaceae	*Rudgea viburnifolia*	A(iii)	NE	✓	✓		✓		scarce

LA PAZ

Waterfall at Rincón del Tigre, Caranavi © Daniel Aguilar


IPA Sites in La Paz
51. Comanche
52. Dry Valleys of La Paz
53. Irupana
54. Apa Apa
55. La Asunta
56. Cotapata and Río Negro
57. Zongo Valley
58. Guanay
59. Apolobamba National Natural Area of Integrated Management
60. Madidi National Park and Integrated Management Natural Area
61. Pilón Lajas Biosphere Reserve and Communal Land of Origin
62. Bajo Madidi Municipal Conservation and Management Area
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BOLIVIAN TIPAs
Royal Botanic Gardens Kew

COMANCHE

Authors: Oriana A. Lino-Villalba, Alfredo F. Fuentes, Elmer Cuba-Orozco, Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas & Bente B. Klitgaard

International code	BOLTIPA051	Department/ Province	La Paz: Pacajes
Latitude	-16.98879	Longitude	-68.44163
Minimum altitude (m.a.s.l.)	3,987	Maximum altitude (m.a.s.l.)	4,803
Area (km^2)	301	Qualifying IPA criteria	A(i), A(iv)

IPA Assessment – Rationale

Comanche meets the criteria for an IPA site thanks to its unique plant life and high appeal for tourism. It is home to the majestic *Puya raimondii* (EN), a globally threatened species that grows on a hill subjected to rock extraction. This combination of an emblematic species in a pressured environment underscores the urgency of protecting the site. Evidence of this is its botanical value: it presents three endemic species, one of which is globally threatened or at risk of extinction. Furthermore, it is home to 53 useful plant species.

Site Description

The Comanche IPA site was delimited in the southern extreme of the Comanche municipality and is located 78 km southeast of the city of La Paz. The main characteristic of the area is the Comanche hill, situated next to the town of the same name, from which diorite rock is extracted to manufacture paving stones, grinding stones (*batanes*), and other products. This is the habitat of the emblematic species *Puya raimondii* (EN) (Quispe-Vila 2022).

This IPA site overlaps with three conservation areas: the Mirikiri National Park, the Flavio Machicado Viscarra Wildlife Sanctuary, and the Lago Titicaca RAMSAR site.

Botanical Significance

The IPA site is an important refuge for *Puya raimondii* (EN), a globally threatened species. This giant bromeliad grows to above 12 metres in height. It is endemic to the high Andes of Bolivia and Peru (Jabaily & Sytsma 2013).

Furthermore, the site harbours three endemic species: *Galinsoga boliviensis* (EN), *Lupinus altimontanus* (NE), and *Lupinus altiplani* (DD), the latter being of particular interest owing to its highly restricted distribution. Additionally, it is worth highlighting useful species such as *Baccharis latifolia* (LC), *Parastrephia quadrangularis* (LC), *Cumulopuntia boliviana* (LC), *Trifolium amabile* (LC), among others (Appendix 3).

Chersodoma candida © MBG-Bolivia/Alfredo Fuentes

Lupinus altimontanus © MBG-Bolivia/Alfredo Fuentes

Habitat and Geology

The Comanche IPA site is characterised by its Altiplano landscape, which includes hills, plains, and serranías. Geologically, it is composed of a complex of sedimentary substrates such as sandstones, conglomerates, and gypsum masses. Additionally, there are volcanic diorite intrusions, such as that of the Comanche hill, all of Tertiary origin. These are interspersed with fluviolacustrine sediments, stones, and gravels of fluvioglacial Quaternary origin.

Lepechinia meyenii © MBG-Bolivia/Alfredo Fuentes

The site is shared by two ecoregions: the Northern Puna and the Southern Puna (Ibisch *et al.* 2003). It is characterised by different communities of well-drained grasslands and scrublands, halophytic grasslands-scrublands, hygrophytic grasslands, and High Andean saxicolous cactus communities in the Humid Puna (Fuentes 2025, Navarro & Ferreira 2011, Navarro 2011, Appendix 2). According to the IUCN habitat classification scheme (IUCN 2012) (Appendix 2), the vegetation is comprised of Subtropical/Tropical High-Altitude Grasslands and Subtropical/Tropical High-Altitude Shrubland.

Conservation Challenges

The Comanche IPA site, while supporting small-scale, temporary agricultural production (quinoa, potato, barley, oats) and livestock activities such as raising cattle and camelids (GAMC 2015), it also faces critical conservation challenges. In 2023, the mosaic of land use occupied 50% of the IPA site (MapBiomas Boliva 2024), indicating an intense transformation of the landscape. The area has high touristic potential, thanks to the Comanche Wildlife Sanctuary, which is home to *Puya raimondii* (EN), known locally as *t'ika tanka* (GAMC 2015). For over 100 years, granite quarrying has threatened this hill's unique ecosystem and the endangered *Puya* species. Despite this industrial pressure, the site's value lies in its unique botanical richness. Maintaining its dedicated conservation areas is thus crucial for effective site management.

Wet to flooded grassland © MBG-Bolivia/Alfredo Fuentes

Well-drained grassland, Mount Mirikiri in the background © MBG-Bolivia/ Alfredo Fuentes

Cactaceae and *Puya raimondii* on the western face of Mount Comanche at 4,150 m.a.s.l. © Elmer Cuba

Puya raimondii © MBG-Bolivia/Alfredo Fuentes

Inflorescence of *Puya raimondii* © Elmer Cuba

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical High Altitude Grassland	100	Major
Subtropical/Tropical High Altitude Shrubland	–	Minor

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Medium	Ongoing - stable
Tourism & recreation areas	Low	Ongoing - stable
Small-holder farming	High	Ongoing - stable
Small-holder grazing, ranching or farming	Medium	Ongoing - stable
Mining & quarrying	High	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Agriculture (arable)	–	Major
Agriculture (pastoral)	–	Major
Tourism/recreation	–	Minor
Extractive industry	–	Major

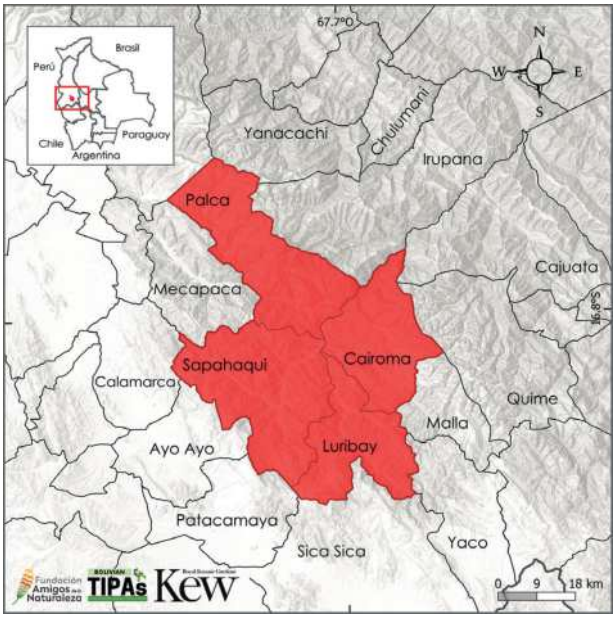
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Ramsar site	Lago Titicaca	Protected/conservation area overlaps with the IPA (2%)	231
Local/Regional Nature Reserve	Mirikiri NP	IPA overlaps with the protected/conservation area (100%)	8
Local/Regional Nature Reserve	Flavio Machicado Viscarra Wildlife Sanctuary	IPA overlaps with the protected/conservation area (100%)	1

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Asteraceae	*Galinsoga boliviensis*	A(i)	EN	✓	✓		✓		rare
Bromeliaceae	*Puya raimondii*	A(i)	EN	✓	✓	✓			abundant
Fabaceae	*Lupinus altiplani*	A(iv)	DD	✓	✓		✓		rare

VALLES SECOS DE LA PAZ

Authors: Oriana A. Lino-Villalba, Elmer-Cuba Orozco, Stephan G. Beck, Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas & Bente B. Klitgaard

International code	BOLTIPA052	Department/ Province	La Paz: Murillo, Loayza
Latitude	-16.87541	Longitude	-67.74312
Minimum altitude (m.a.s.l.)	1,377	Maximum altitude (m.a.s.l.)	6,427
Area (km^2)	2,629	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(iii)



Site Description

The IPA site was delimited to follow the municipal boundaries of Cairoma, Luribay, Palca, and Sapahaqui and to protect a representative sample of the Dry Valleys and up to the high mountains, including the presence of snow-capped peaks. This delimitation not only encompasses a unique ecological gradient but also ensures more robust protection, as the site overlaps with seven conservation areas, three of which have been designated as Key Biodiversity Areas (KBA).

Botanical Significance

The IPA site Valles Secos de La Paz has high botanical importance due to its globally threatened endemic species, such as: *Clinopodium pallidum* (VU), used medicinally; *Baccharis glomerata* (EN); *Festuca copei* (VU); *Festuca scabrifolia* (EN); *Pyrolirion boliviense* (EN); *Setaria barbinodis* (VU); and *Polylepis pacensis* (EN), used as construction material and medicinally. Additionally, this botanical value is complemented by 164 useful plant species, equivalent to 5% of the useful plant species documented nationally (Appendix 3). Notable examples include: *Baccharis latifolia* (LC), *Baccharis papillosa* (LC), *Ephedra americana* (LC), *Lupinus microphyllus* (LC), and *Senna aymara* (LC).

IPA Assessment – Rationale

Valles secos de La Paz qualifies as an IPA site as a transitional ecosystem with contrasting landscapes between snow-capped peaks, mountains, and serranías. The vegetation is dominated by thorny scrublands and grasslands (pajonales). The site harbours 38 endemic species, of which seven are globally threatened or at risk of extinction. It also protects 15 endemic taxa with a restricted and potentially threatened distribution. Additionally, this site contains 164 useful plant species, further highlighting its importance.

Habitat and Geology

Physiographically, the site presents Altiplano, Eastern Cordillera, and Snow-capped Peaks, encompassing plains, mountains, foothills, serranías, and snow-capped peaks. Ecoregionally the IPA comprises Inter-Andean Dry Forests, Northern Puna, Southern Puna, and Yungas. The soils covering the summits and slopes are naturally

Mountains and glaciated peaks, road between Mecapaca and Uncura © Trustees RBG Kew/Anna Haigh

Baccharis latifolia © Rosember Hurtado

Senna aymara © Rosember Hurtado

Polylepis pacensis © MBG-Bolivia/Alfredo Fuentes

eroded, owing to the advances and retreats of glaciers, pluvial and fluvial erosion. The latter also affects the valleys of the region (Forno & Baudoin 1991, Ibisch *et al.* 2003, Espinoza 2017).

The vegetation is characterised by shrublands, semi-deciduous basal montane forest, grasslands and scrublands (Navarro & Ferreira 2011, Navarro 2011, Appendix 2). These vegetation types are classified as Subtropical/Tropical High-Altitude Shrubland, Subtropical/Tropical High-Altitude Grasslands, Subtropical/Tropical Montane Humid Forest, and Subtropical/Tropical Dry Forest following the IUCN habitat classification system (IUCN 2012) (Appendix 2).

Conservation Challenges

The intensification of land use leads to deforestation and cleared areas for cultivation. An example is the damage to the Polylepis forest (*Polylepis pacensis* (EN)), which is used for firewood, posts, and for numerous medicinal purposes (Domic *et al.* 2017). Another activity is mining in the mountains of the cordillera, and overgrazing in different areas, thereby reducing natural regeneration and promoting the spread of non-native species and weeds. Another anthropogenic activity is burning to promote sprouting (Anthelme *et al.* 2017, Villavicencio *et al.* 2017). Considering the presence of endemic species, some with

Habitats present at the site © Trustees RBG Kew/Gwilym Lewis

Dry valleys and Cactaceae © Trustees RBG Kew/Gwilym Lewis

restricted distribution, this situation is concerning. As detailed previously, the habitats of the Valles Secos de La Paz IPA site shelter species with a high degree of threat, in addition to their importance for containing useful species, making conservation measures necessary.

Panoramic view of the Luribay River, road towards Anquioma © Trustees RBG Kew/Anna Haigh

Extensive livestock farming or grazing © Trustees RBG Kew/Gwilym Lewis

Vegetable agriculture © Trustees RBG Kew/Bente Klitgaard

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical High Altitude Shrubland	55	Major
Subtropical/Tropical High Altitude Grassland	19	Major
Subtropical/Tropical Moist Montane Forest	12	Major
Subtropical/Tropical Dry Forest	3	Minor

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Medium	Ongoing - stable
Small-holder farming	High	Ongoing - stable
Nomadic grazing	High	Ongoing - stable
Mining & quarrying	Medium	Ongoing - stable
Gathering terrestrial plants	High	Ongoing - stable
Fire & fire suppression	High	Ongoing - trend unknown
Invasive non-native/alien species/diseases	Unknown	Ongoing - trend unknown
Soil erosion, sedimentation	High	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Agriculture (arable)	—	Major
Residential/urban development	—	Major
Harvesting of wild resources	—	Major

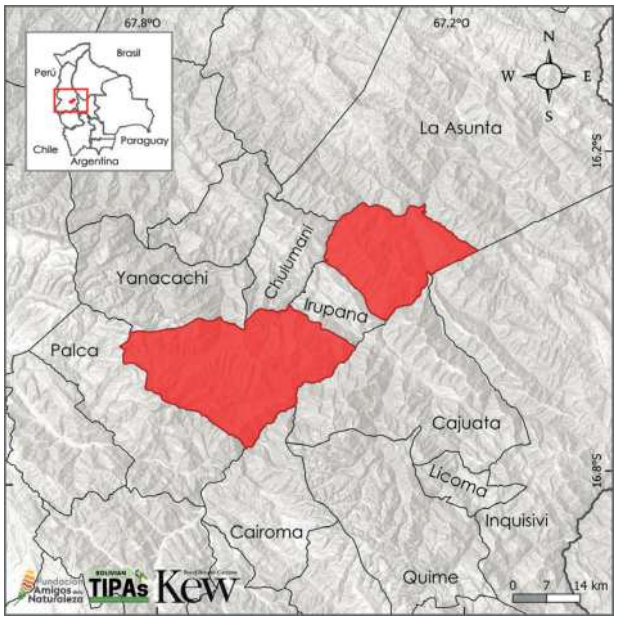
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Key Biodiversity Area	KBA Illimani Sur	IPA overlaps with the protected/conservation area (99%)	191
Local/Regional Nature Reserve	Serranía de Ticoma Wildlife Reserve	IPA overlaps with the protected/conservation area (100%)	74
Key Biodiversity Area	KBA Mallasa-Taypichullo	IPA overlaps with the protected/conservation area (3%)	11
Local/Regional Nature Reserve	Municipal Area of Monumental and Landscape Value Valle de las Animas	IPA overlaps with the protected/conservation area (22%)	6
Local/Regional Nature Reserve	Chuwaqueri Canton Natural Tourist Monument	IPA overlaps with the protected/conservation area (100%)	3
Key Biodiversity Area	KBA Río Caballuni	IPA overlaps with the protected/conservation area (1%)	2
Local/Regional Nature Reserve	Water Reserve and Mountain Forests of the Mururata Mountains	IPA overlaps with the protected/conservation area (1%)	1

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Amaranthaceae	*Atriplex rusbyi*	A(iv)	NE	✓	✓		✓		unknown
Amaryllidaceae	*Pyrolirion boliviense*	A(i)	EN	✓	✓				occasional
Asteraceae	*Baccharis densiflora* subsp. *densiflora*	A(iv)	NE	✓	✓	✓	✓		rare
Asteraceae	*Baccharis glomerata*	A(i)	EN	✓	✓		✓		occasional
Asteraceae	*Mniodes argentea*	A(iv)	NE	✓	✓	✓	✓		unknown
Asteraceae	*Senecio loayzanus*	A(iii)	NE	✓	✓	✓	✓		rare
Asteraceae	*Senecio potosianus*	A(iv)	NE	✓	✓		✓		occasional
Asteraceae	*Stevia stuebelii*	A(iii)	NE	✓	✓	✓	✓		rare
Asteraceae	*Verbesina boliviana*	A(iv)	NE	✓	✓		✓		occasional
Asteraceae	*Verbesina pflanzii*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Cactaceae	*Lobivia maximiliana* subsp. *caespitosa*	A(iii)	NE	✓	✓	✓	✓		rare
Euphorbiaceae	*Argythamnia illimaniensis*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Euphorbiaceae	*Croton bangii*	A(iv)	NE	✓	✓	✓	✓		occasional
Fabaceae	*Erythrostemon coulterioides*	A(i)	EN	✓	✓	✓	✓		occasional
Gentianaceae	*Gentianella armerioides*	A(i)	EN	✓					unknown
Gunneraceae	*Gunnera boliviana*	A(iii)	NE	✓	✓		✓		occasional
Lamiaceae	*Clinopodium pallidum*	A(i)	VU	✓	✓				occasional
Loasaceae	*Caiophora rusbyana*	A(iv)	NE	✓	✓	✓	✓		unknown
Orchidaceae	*Habenaria vasquezii*	A(iii)	NE	✓	✓	✓	✓		unknown
Poaceae	*Festuca copei*	A(i)	VU	✓	✓				unknown
Poaceae	*Festuca scabrifolia*	A(i)	EN	✓	✓	✓	✓		unknown
Poaceae	*Setaria barbinodis*	A(i)	VU	✓	✓		✓		rare
Rosaceae	*Polylepis pacensis*	A(i)	EN	✓	✓	✓	✓		occasional
Solanaceae	*Capsicum cardenasii*	A(ii)	EN	✓	✓	✓	✓		rare

IRUPANA

Authors: Maira T. Martinez-Ugarteche, Elmer Cuba-Orozco, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA053	Department/ Province	La Paz: Sud Yungas
Latitude	-16.51637	Longitude	-67.52286
Minimum altitude (m.a.s.l.)	807	Maximum altitude (m.a.s.l.)	6,305
Area (km^2)	1,209	Qualifying IPA criteria	A(i), A(iii), A(iv), B(ii), B(iii)



Site Description

The Irupana IPA site was delimited based on municipal boundaries. Two blocks or nucleo were considered, excluding the central axis of the municipality due to the high anthropogenic impact in that zone. Irupana is situated in the Sud Yungas province, 140 km from the city of La Paz and centrally between three IPA sites, one of which is also a national protected area (Cotapata). Irupana and Cotapata form part of an important corridor and concentration of endemic plants in Sud and Nor Yungas. The Irupana site includes part of three Key Biodiversity Areas (KBA): La Asunta, Río Caballuni, and Illimani Sur. These KBAs were designated based largely on the presence of two plant species, *Syagrus yungasensis* and *Polylepis pacensis*, both endemic and under threat (KBA 2025c).

IPA Assessment – Rationale

Irupana is designated as an IPA based on its globally threatened and restricted plant species, and for the exceptionally high number of useful plants. Within its boundaries there are 20 globally threatened species, seven highly restricted endemics, and five range-restricted and potentially threatened endemics. In total the site harbours 79 endemic and 132 useful plant species, representing 4% of the useful plant species documented for Bolivia.

Botanical Significance

The botanical significance is focussed on a concentration of endemic and socioeconomically important species, alongside globally threatened species. The site harbours 20 species at-risk-of-extinction globally, 17 of these are endemic to Bolivia, including *Festuca scabrifolia*, *Jacquemontia boliviana*, *Oreopanax atopanthus*, and *Syagrus yungasensis*, all categorised as Endangered (EN) (Appendix 1).

In the delimitation of the Irupana IPA site, the central axis is considered outside the IPA nucleus due to the anthropogenic degradation in that valley. Nevertheless, it should be noted that within this buffer zone Endangered (EN) species such as *Hippeastrum yungacense*, *Dioscorea irupanensis*, *Justicia longiacuminata*, and *Solanum tunariense* still grow.

Regarding the exceptional richness of species of socioeconomic importance, the site includes 132 useful plant species, notably including threatened plants such as *Cedrela fissilis* (VU), *Polylepis lanata*, and *Syagrus yungasensis*, the latter two endemic and considered Endangered. Additionally, the useful plant species include another 13 endemics (Appendix 3).

Habitat and Geology

The main landscape in Irupana consists of serranías (mountain ranges), which are located within the Eastern Cordillera and the Sub-Andean region. Its geomorphology is limited to the west by the Coniri and San Vicente faults, where it separates from the Altiplano, and to the east by the Main Frontal Thrust as the boundary with the Sud-Andean Sierras (GAMI 2023).

In Irupana, the Inter-Andean Dry Forest, Northern Puna, and Yungas ecoregions can be distinguished (Ibisch *et al.* 2003). According to the classification of vegetation and Ecological Systems of Bolivia (Navarro & Ferreira 2011, Navarro 2011) and the IUCN habitat classification scheme (IUCN 2012), this site is mainly covered by Montane Humid Forest and Subtropical/Tropical Dry Forest. The Montane Humid Forest is mostly comprised of hyper-humid lower montane Yungas forests of Coroico and Altamachi-Corani: *Ocotea jelskii-Podocarpus oleifolius* preliminary series, while the Dry Forest consists of the upper basal montane semi-deciduous forest of the Yungas of La Paz: *Cariniana estrellensis-Schinopsis brasiliensis* series (Navarro 2011) (Appendix 2).

Conservation Challenges

Irupana is a unique site by containing Northern Puna, Yungas, and Inter-Andean Dry Forests, which gives it significant botanical and habitat richness. Furthermore, it plays a crucial role connecting with other IPAs and Key Biodiversity Areas (KBAs). The Reserva de Agua y Bosques Montañosos Serranías del Mururata is the only protected area in the site. It is under municipal administration.

It is puzzling why this area was not designated as a conservation area under other criteria. However, according to the IPA subcriteria, this site meets four subcriteria and has significant potential to increase its botanical richness. The delimitation of a nucleus for this IPA site constitutes an important reservoir of vegetation still in a good state of conservation. Nevertheless, its central axis, currently transformed by anthropogenic activities, is an area with historial plant records and populations of endemic species that are highly threatened.

Jacquemontia boliviana © John R.I. Wood

Mandevilla fragilis © Moisés Mendoza

Wet Yungas Forest, at Iquiro © Elmer Cuba

Dry forest overlooking the La Paz River © Elmer Cuba

Dry forest, La Paz River © Elmer Cuba

Grasslands in the vicinity of Totora Pampa © Elmer Cuba

Totora Pampa, on the slopes of Mount Mururata © Elmer Cuba

La Paz River, natural boundary between the municipalities of Irupana (left) and Cajuata (right) © Elmer Cuba

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Montane Forest	48	Major
Subtropical/Tropical Dry Forest	22	Major
Subtropical/Tropical High Altitude Shrubland	17	Major
Subtropical/Tropical High Altitude Grassland	13	Major

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Medium	Ongoing - stable
Annual & perennial non-timber crops	High	Ongoing - stable
Small-holder grazing, ranching or farming	Medium	Ongoing - stable
Increase in fire frequency/intensity	Medium	Ongoing - trend unknown
Mining & quarrying	High	Ongoing - increasing
Pollution - Seepage from mining	High	Ongoing - increasing
Dams & water management/use - Abstraction of surface water (commercial use)	High	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Agriculture (arable)	34	Major
Agriculture (pastoral)	3	Minor
Forestry	56	Major
No use	7	Unknown

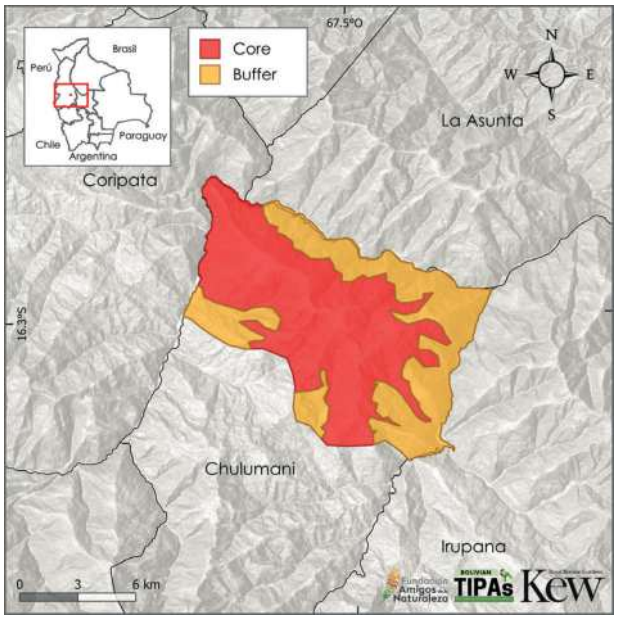
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	Water Reserve and Mountain Forests of the Mururata Mountains	IPA overlaps with the protected/conservation area (6%)	11
Key Biodiversity Area	KBA La Asunta	IPA overlaps with the protected/conservation area (3%)	31
Key Biodiversity Area	KBA Río Caballuni	IPA overlaps with the protected/conservation area (99%)	181
Key Biodiversity Area	KBA Illimani Sur	IPA overlaps with the protected/conservation area (1%)	1

IPA priority species Criterion A									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Acanthaceae	*Justicia longiacuminata*	A(i)	EN	✓					occasional
Amaryllidaceae	*Hippeastrum yungacense*	A(i)	EN	✓	✓		✓		occasional
Apocynaceae	*Mandevilla fragilis*	A(i)	VU	✓	✓				occasional
Araliaceae	*Oreopanax atopanthus*	A(i)	EN	✓					occasional
Arecaceae	*Syagrus yungasensis*	A(i)	EN	✓	✓		✓		occasional
Asteraceae	*Ageratina acevedoi*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Asteraceae	*Critoniopsis yungasensis*	A(i)	VU	✓					unknown
Asteraceae	*Fleischmannia yungasensis*	A(i)	VU	✓	✓				occasional
Asteraceae	*Hieracium tacense*	A(iv)	NE	✓	✓		✓		unknown
Asteraceae	*Llerasia ledifolia*	A(i)	VU	✓					scarce
Begoniaceae	*Begonia subcaudata*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Puya pizarroana*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Cactaceae	*Cleistocactus aurantiacus*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Cactaceae	*Lymanbensonia crenata*	A(iv)	NE	✓	✓		✓		unknown
Calceolariaceae	*Calceolaria monantha*	A(iv)	NE	✓	✓		✓		unknown
Convolvulaceae	*Jacquemontia boliviana*	A(i)	EN	✓	✓				occasional
Dioscoreaceae	*Dioscorea irupanensis*	A(i)	EN	✓		✓			rare
Fabaceae	*Dalea carthagenensis* var. *pilocarpa*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Fabaceae	*Lupinus mandonianus*	A(iii)	NE	✓	✓	✓	✓		unknown
Fabaceae	*Lupinus nubilorum*	A(iii)	NE	✓	✓		✓		unknown
Fabaceae	*Lupinus otto-buchtienii*	A(iii)	NE	✓	✓	✓	✓		unknown
Fabaceae	*Mimosa rusbyana*	A(i)	EN	✓					occasional
Fabaceae	*Piptadenia buchtienii*	A(i)	VU	✓					scarce
Lauraceae	*Ocotea micrantha*	A(i)	EN	✓	✓				occasional
Melastomataceae	*Chaetogastra orbignyana*	A(iv)	NE	✓	✓	✓	✓		unknown
Melastomataceae	*Miconia cinnabarina*	A(i)	VU	✓	✓				occasional
Meliaceae	*Cedrela fissilis*	A(i)	VU	✓					unknown
Meliaceae	*Cedrela weberbaueri*	A(i)	EN	✓					unknown
Orchidaceae	*Malaxis weddellii*	A(iii)	NE	✓	✓	✓	✓		unknown
Piperaceae	*Piper bolivianum*	A(i)	VU	✓					scarce
Poaceae	*Festuca scabrifolia*	A(i)	EN	✓	✓		✓		scarce
Rosaceae	*Polylepis lanata*	A(i)	EN	✓	✓		✓		scarce
Santalaceae	*Phoradendron kuntzei*	A(iv)	NE	✓	✓		✓		unknown
Solanaceae	*Solanum tunariense*	A(i)	EN	✓					occasional

APA APA

Authors: Maira T. Martinez-Ugarteche, Alfredo F. Fuentes, Elmer Cuba-Orozco, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA054	Department/ Province	La Paz: Sud Yungas
Latitude	-16.33080	Longitude	-67.51786
Minimum altitude (m.a.s.l.)	919	Maximum altitude (m.a.s.l.)	2,660
Area (km^2)	124	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(iii)



Site Description

The Serranía de Apa Apa is situated in the Chulumani municipality, Sud Yungas province. Apa Apa is considered a serranía of importance as a source of water for surrounding populated communities. The Apa Apa IPA site is also a Key Biodiversity Area (KBA), and the boundaries of the IPA site coincide with those of the Apa-Apa KBA.

Botanical Significance

The Apa Apa IPA site is among the sites with the highest number of species globally at-risk-of-extinction and with the most endemic species. This value could increase due to the findings by Beck *et al.* (2024), who state that Apa Apa has at least 80 new species yet to be described.

IPA Assessment – Rationale

The Serranía de Apa Apa qualifies as an IPA because of its diversity of endemic, globally threatened, and useful plant species. The botanical richness derives from elevational, topographic and climatic variability, and from the resulting heterogeneous forests. Apa Apa harbours 73 endemic species, of which 23 are globally threatened and 13 endemics with a restricted and potentially threatened geographic range. Two additional species are nationally threatened. To the number of endemic plants can likely be added another 80 species considered new to science (Beck *et al.* 2024).

In addition to the threatened and range-restricted endemic species, the site has 110 useful plant species, which account for 3.4% of the total useful plant species documented for Bolivia.

Among the species at risk of extinction there are endemics such as *Capsicum ceratocalyx* and *Coussapoa david-smithii* (EN), which have more than 50% of their population within this IPA site; and *Mandevilla fragilis* and *Prestonia leco*, both species categorised as Vulnerable (VU).

Of the species qualifying under criterion A, four species grow only in Apa Apa: *Ocotea smithii* (DD), *Scelochilus janeae*, *Stelis enervis*, and *Tournefortia curvilimba*. The latter three species are still without

Scelochilus janeae © MBG-Bolivia/Alfredo Fuentes

Prestonia leco © MBG-Bolivia/Alfredo Fuentes

Coussapoa david-smithii © MBG-Bolivia/Alfredo Fuentes

Capsicum ceratocalyx © MBG-Bolivia/Alfredo Fuentes

Dendropanax oblongifolius © MBG-Bolivia/Alfredo Fuentes

a formal IUCN evaluation but are considered to have a restricted distribution range and are thus potentially threatened.

Among the 110 useful plants recorded within the site, eight are endemic, including *Persea bilocularis* (EN) and *Piptadenia buchtienii* (VU), both globally threatened. Of the useful species, nine are considered wild relatives of cultivated plants (Appendix 3).

Habitat and Geology

Apa Apa presents altitudinal, topographic, and climatic variability, with heterogeneous forests (Beck *et al.* 2024). Physiographically, it is located on the Eastern Cordillera, dominated by serranías (MDSyP 2002).

According to the classification of vegetation and Ecological Systems of Bolivia (Navarro & Ferreira 2011, Navarro 2011) and the IUCN habitat classification system (IUCN 2012) the main habitats in the site are Subtropical/Tropical Dry Forest and Subtropical/Tropical Montane Humid Forest. The Subtropical/Tropical Dry Forest is comprised of upper basal montane semi-deciduous forest of the Yungas of La Paz: *Cariniana estrellensis-Schinopsis brasiliensis* series and lower basal montane xeric Yungas forest of the Boopi Yungas: *Samaipaticereus inquisivensis-Schinopsis brasiliensis* series, while the Subtropical/Tropical Montane Humid Forest is comprised of the humid lower montane Yungas forest of Coroico Yungas: *Prumnopitys harmsiana-Weinmannia pinnata* series (Navarro 2011).

Due to human activities related to coca cultivation (*Erythroxylum coca*) and the uncontrolled use of fire, the coverage of anthropogenic vegetation such as montane savannas, fern-dominated formations (*chusisales*), scrublands, secondary forests, and fallow fields (*barbechos*) is significant. A detailed classification of the Serranía de Apa Apa can be found in Beck *et al.* (2024).

Conservation Challenges

The Serranía de Apa Apa is one of the serranías within the Chulumani municipality with well-conserved forest remnants and is of importance for conservation in Sud Yungas (Beck *et al.* 2024). The pressures present in the area come from activities such as road opening, logging, and the expansion of coca plantations, among others (Beck *et al.* 2024).

According to Beck *et al.* (2024), this site has a high conservation value, both for its botanical richness, high level of endemism, and the ecosystem services that it provides, such as water supply to communities. The Serranía de Apa Apa is also considered a Key Biodiversity Area (KBA 2025d), which reaffirms the importance of its conservation for both the flora and fauna of the site.

Humid montane Forest © MBG-Bolivia/Alfredo Fuentes

Savanna complex © MBG-Bolivia/Alfredo Fuentes

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Dry Forest	65	Major
Subtropical/Tropical Moist Montane Forest	35	Major

Threat		
Threat	**Severity**	**Situation**
Small-holder farming	High	Ongoing - increasing
Mining & quarrying	Medium	Ongoing - stable
Housing & urban areas	Low	Future: planned threat
Transportation & service corridors	Medium	Ongoing - stable
Human intrusions & disturbance - Work & other activities	Medium	Ongoing - increasing

Land Use		
Land use type	**Percent coverage**	**Importance**
Agriculture (arable)	11	Major
Residential/urban development	—	Minor
Utility & service lines	—	Major

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Key Biodiversity Area	Apa-Apa Ecological Reserve	Protected/conservation area matches IPA (100%)	123

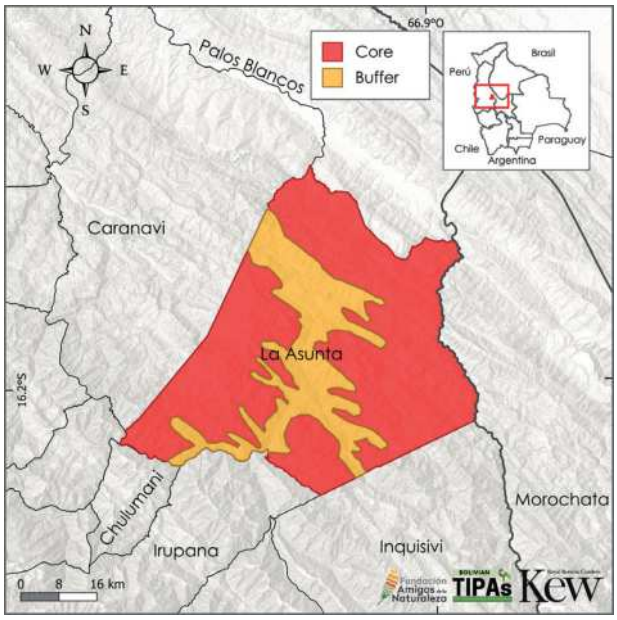
IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Justicia longiacuminata*	A(i)	EN	✓	✓	✓	✓		abundant
Anacardiaceae	*Myracrodruon urundeuva*	A(ii)	VU						unknown
Apocynaceae	*Ditassa mandonii*	A(i)	EN	✓	✓	✓	✓		occasional
Apocynaceae	*Mandevilla fragilis*	A(i)	VU	✓	✓		✓		occasional
Apocynaceae	*Prestonia leco*	A(i)	VU	✓	✓	✓	✓		occasional
Araceae	*Xanthosoma puberulum*	A(iv)	NE	✓	✓	✓	✓		unknown
Araliaceae	*Dendropanax oblongifolius*	A(i)	VU	✓	✓	✓	✓		occasional
Asteraceae	*Critoniopsis yungasensis*	A(i)	VU	✓	✓	✓	✓		occasional
Asteraceae	*Dendrophorbium krukoffii*	A(iii)	NE	✓	✓	✓	✓		unknown
Asteraceae	*Lepidaploa beckii*	A(iv)	NE	✓	✓				unknown
Boraginaceae	*Tournefortia curvilimba*	A(iii)	NE	✓	✓	✓	✓	✓	unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Boraginaceae	*Tournefortia vestita*	A(iii)	NE	✓	✓	✓	✓		unknown
Bromeliaceae	*Guzmania remediosensis*	A(iii)	NE	✓	✓	✓	✓		unknown
Bromeliaceae	*Tillandsia engleriana*	A(i)	CR	✓					rare
Ericaceae	*Satyria boliviana*	A(ii), A(iv)	VU	✓	✓	✓	✓		unknown
Fabaceae	*Cojoba beckii*	A(iii)	DD	✓	✓	✓	✓		rare
Fabaceae	*Mimosa rusbyana*	A(i)	EN	✓	✓		✓		occasional
Fabaceae	*Piptadenia buchtienii*	A(i)	VU	✓		✓			occasional
Gentianaceae	*Macrocarpaea bangiana*	A(i)	VU	✓	✓				scarce
Gentianaceae	*Symbolanthus australis*	A(i)	VU	✓	✓				scarce
Gesneriaceae	*Columnea ultraviolacea*	A(ii), A(iv)	CR	✓	✓	✓	✓		unknown
Lauraceae	*Ocotea comata*	A(i)	VU	✓					scarce
Lauraceae	*Ocotea smithii*	A(iii)	DD	✓	✓	✓	✓	✓	scarce
Lauraceae	*Persea bilocularis*	A(i)	EN	✓	✓				scarce
Melastomataceae	*Meriania boliviensis*	A(i)	EN	✓	✓	✓	✓		occasional
Melastomataceae	*Miconia cinnabarina*	A(i)	VU	✓	✓				occasional
Melastomataceae	*Miconia glomerulifera*	A(i)	EN	✓	✓		✓		occasional
Meliaceae	*Ruagea beckii*	A(iii)	NE	✓	✓	✓	✓		unknown
Moraceae	*Pseudolmedia boliviana*	A(i)	EN	✓	✓	✓	✓		occasional
Orchidaceae	*Scelochilus janeae*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis enervis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Piperaceae	*Piper bolivianum*	A(i)	VU	✓	✓	✓	✓		scarce
Solanaceae	*Capsicum ceratocalyx*	A(i)	EN	✓	✓	✓	✓		occasional
Solanaceae	*Lycianthes reflexa*	A(i)	VU	✓	✓	✓	✓		occasional
Solanaceae	*Solanum chalmersii*	A(i)	EN	✓	✓	✓	✓		frequent
Urticaceae	*Cecropia elongata*	A(i)	VU	✓	✓	✓	✓		occasional
Urticaceae	*Coussapoa david-smithii*	A(i)	EN	✓	✓	✓	✓		occasional

LA ASUNTA

Authors: Maira T. Martinez-Ugarteche, Freddy S. Zenteno-Ruiz, Elmer Cuba-Orozco, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA055	Department/ Province	La Paz: Sud Yungas
Latitude	-16.11472	Longitude	-67.19090
Minimum altitude (m.a.s.l.)	501	Maximum altitude (m.a.s.l.)	3,439
Area (km^2)	2,820	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(iii)



Site Description

La Asunta is in the Sud Yungas province; it borders mainly the Irupana IPA site to the south and Caranavi to the east. The IPA site and the La Asunta municipality have an altitudinal range between 500 and 3,440 m (KBA 2025e). La Asunta is considered a centre of high endemism. It was recently designated as a Key Biodiversity Area (KBA) due to the presence of the species *Syagrus yungasensis*, a palm species known as coquito or ununto (KBA 2025e).

Botanical Significance

Important botanical attributes are the species globally at-risk-of-extinction, notably *Myrcia connata* (EN), a species only known from this site and one record in the Madidi National Park (Canterio & Lucas 2017), and *Syagrus yungasensis* (EN), a palm with a fragmented distribution limited to dry and semi-humid inter-Andean valleys, with edible fruits and useful leaves (Moraes 2021). Of nationally threatened species, there are *Hippeastrum mandonii* (VU), *Siphocampylus dubius* (EN), and *S. werdermannii* (VU), all three endemics.

Additionally, the site harbours endemic species without an official threat category: *Clusia pachamamae*, *Salvia oxyphora*, and *Luehea splendens*, all are categorised as Near Threatened (NT).

The site also stands out for its endemic species with restricted geographic ranges. These species are potentially threatened and only known from this site and from their type specimens. They include *Ascogrammitis clathrata*, *Hippeastrum lara-ricoi*, *Puya boopiensis*, *P. larae*, and *Themistoclesia geniculata*, all still without a formal IUCN extinction risk assessment (Appendix 1). Finally, there are 102 useful species, among which native, endemic,

IPA Assessment – Rationale

La Asunta is an IPA site with high botanical richness, notably 45 endemic species, of which 14 have highly restricted geographic ranges, and 10 are globally threatened.

The site also harbours 102 useful plant species, which account for 3.2% of the useful plants documented for the country.

Hippeastrum lara-ricoi © Freddy Zenteno

and globally and nationally at-risk-of-extinction species can be distinguished (Appendix 3).

Habitat and Geology

Physiographically, the La Asunta IPA site is located on the Eastern Cordillera and in the Sub-Andean region; scenically, it is composed of mountains and serranías (MDSyP 2002). The predominant ecoregion is the Inter-Andean Dry Forest in the central area, Yungas in the high parts and, to a lesser extent towards the south, Southwestern Amazonia (Ibisch *et al.* 2003).

According to the classification of vegetation and Ecological Systems of Bolivia (Navarro & Ferreira 2011, Navarro 2011) and the IUCN habitat classification system (IUCN 2012), the habitat with the greatest extension within this site is the Subtropical/Tropical Montane Humid Forest, comprised of the humid lower montane Yungas forest of Coroico Yungas: *Prumnopitys harmsiana-Weinmannia pinnata* series and pluvial basal montane Yungas Forest-Palm grove: *Protium altsonii-Dictyocaryum lamarckianum* preliminary series, among others (Navarro 2011) (Appendix 2).

Conservation Challenges

This IPA site is part of the Yungas region, an area subjected to agricultural practices and intense crop development (Moraes *et al.* 2009). Coca cultivation and agricultural crops, and small-scale livestock farming are transforming its landscape (KBA 2025e). This IPA site, along with others including Irupana and Apa Apa, are proposed for conservation given their high botanical richness. Yet collectively they still lack any level of protection. Designating them as both KBAs and IPA sites will strengthen the plea for recognition for their protection, and support the recovery of habitat and species in this zone.

Syagrus yungasensis © Freddy Zenteno

Syagrus yungasensis © Freddy Zenteno

Dry forest landscape © Freddy Zenteno

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Montane Forest	45	Major
Subtropical/Tropical Moist Lowland Forest	33	Major
Subtropical/Tropical Dry Forest	23	Major

Threat		
Threat	**Severity**	**Situation**
Small-holder farming	High	Ongoing - stable
Small-holder grazing, ranching or farming	Medium	Ongoing - stable
Increase in fire frequency/intensity	Medium	Past - likely to return
Mining & quarrying	Medium	Ongoing - trend unknown
Annual & perennial non-timber crops	High	Ongoing - increasing

Land Use		
Land use type	**Percent coverage**	**Importance**
Agriculture (arable)	6	Major
Residential/urban development	—	Minor
Utility & service lines	—	Minor

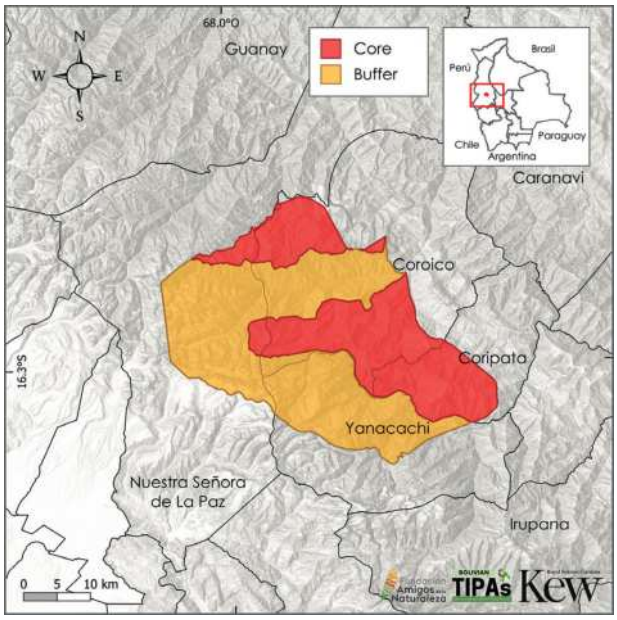
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Protected Area names**	**Area of overlap (km^2)**
Key Biodiversity Area	KBA La Asunta	Protected/conservation area matches IPA (97%)	913

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Justicia beckii*	A(i)	VU	✓					occasional
Acanthaceae	*Justicia yungensis*	A(i)	VU	✓	✓		✓		occasional
Acanthaceae	*Stenostephanus krukoffii*	A(i)	EN	✓	✓	✓	✓		occasional
Amaryllidaceae	*Hippeastrum lara-ricoi*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Apocynaceae	*Prestonia leco*	A(i)	VU	✓	✓				scarce
Arecaceae	*Syagrus yungasensis*	A(i)	EN	✓	✓	✓	✓		frequent
Aspleniaceae	*Asplenium tunquiniense*	A(iii)	NE	✓	✓		✓		unknown
Asteraceae	*Critoniopsis jubifera*	A(i)	VU	✓	✓	✓	✓		frequent
Bromeliaceae	*Puya boopiensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Bromeliaceae	*Puya larae*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Bromeliaceae	*Tillandsia mecapacana*	A(iii)	NE	✓	✓	✓	✓		unknown
Cactaceae	*Pfeiffera miyagawae*	A(iii)	DD	✓	✓	✓	✓		rare
Campanulaceae	*Siphocampylus dubius*	A(ii)	EN	✓	✓		✓		unknown
Campanulaceae	*Siphocampylus werdermannii*	A(ii)	VU	✓	✓				unknown
Caprifoliaceae	*Valeriana weddelliana*	A(iii)	NE	✓	✓	✓	✓		unknown
Ericaceae	*Themistoclesia geniculata*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Ericaceae	*Themistoclesia peruviana*	A(i)	VU	✓					occasional
Fabaceae	*Calliandra chulumania*	A(i)	EN	✓	✓				occasional
Fabaceae	*Mimosa rusbyana*	A(i)	EN	✓	✓	✓	✓		occasional
Fabaceae	*Piptadenia buchtienii*	A(i)	VU	✓	✓				scarce
Melastomataceae	*Chaetogastra panicularis*	A(iv)	NE	✓	✓	✓	✓		unknown
Melastomataceae	*Miconia multiflora*	A(i)	VU	✓					occasional
Myrtaceae	*Myrcia connata*	A(i)	EN	✓	✓	✓	✓	✓	scarce
Orchidaceae	*Telipogon cotapatensis*	A(iii)	NE	✓	✓		✓		unknown
Piperaceae	*Peperomia rhombifolia*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Polypodiaceae	*Grammitis clathrata*	A(iii)	NE	✓	✓		✓	✓	unknown
Polypodiaceae	*Grammitis longicaulis*	A(iii)	NE	✓	✓		✓	✓	unknown
Santalaceae	*Dendrophthora erythrantha*	A(iii)	NE	✓	✓	✓	✓		unknown
Solanaceae	*Capsicum ceratocalyx*	A(i)	EN	✓	✓		✓		occasional
Symplocaceae	*Symplocos hiemalis*	A(i)	EN	✓					occasional

COTAPATA AND RÍO NEGRO

Authors: Oriana A. Lino-Villalba, Elmer Cuba-Orozco, Rosember Hurtado Ulloa, Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas & Bente B. Klitgaard

International code	BOLTIPA056	Department/ Province	La Paz: Nor Yungas, Murillo, Sur Yungas
Latitude	-16.26315	Longitude	-67.81463
Minimum altitude (m.a.s.l.)	1,055	Maximum altitude (m.a.s.l.)	5,464
Area (km^2)	1,144	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)



IPA Assessment – Rationale

The Cotapata National Park and Natural Area of Integrated Management and the Montane Water Reserve and Ecosystem Conservation (RACEM) Río Negro are considered as the sites with the greatest richness of endemic plants nationally. Their forests shelter 90 globally threatened endemic species and 216 species with restricted geographic distribution, underscoring the uniqueness of their flora.

Furthermore, the site features 459 species of useful plants, a number that highlights its vital role for local communities. The protection of this area is crucial not only because it safeguards one of the largest concentrations of endemic plants in the country but also because it preserves unique species that have adapted to different conditions.

Site Description

The IPA site, located northeast of the city of La Paz, aligns with the existing protected areas, coinciding with the Cotapata National Park and Natural Area of Integrated Management and the Montane Water Reserve and Ecosystem Conservation (RACEM) Río Negro. Its delimitation extends to the southeast to include forests and other habitats of importance (MapBiomas Bolivia 2024). This site presents high biodiversity, harbouring many native and endemic species (SERNAP 2005).

Botanical Significance

The botanical significance of the site is its concentration of globally threatened native and endemic species. The site is the only known habitat for critically threatened species such as *Aulonemia longipedicellata* (CR), *Dioscorea ovalifolia* (EN), *Gamochaeta beckii* (CR), *Gentianella chrysantha* (VU), *Hirtella beckii* (CR), *Matelea asplundii* (CR), *Neocuatrecasia yungasensis* (CR), and *Ourisia cotapatensis* (VU). There are 216 range restricted endemics, such as *Chusquea renvoizei* (DD), *Lupinus altiplani* (DD), *Greigia membranacea* (DD), and *Xanthosoma puberulum* (NE). Of this group, 36% belong to the Orchidaceae family and 8% to the Asteraceae family.

The climate conditions, including precipitation and the topography, have been essential in the evolution of this biodiversity, with a predicted

Montane Forest and valley, Río Negro © Elmer Cuba

3,000 endemic species inside the national park and ANMI Cotapata (SERNAP 2005). Collectively, it currently represents 17% of the national endemism, classifying it as a site of exceptional richness and priority for conservation. The list of threatened species is supplemented by useful plants, both native and endemic, representing 17% of all documented useful species in Bolivia (Appendix 3), highlighting the importance of species such as *Cedrela fissilis* (VU) and *Polylepis pepei* (EN). It is important to note that 383 of these species lack IUCN evaluations, which demonstrates a significant data gap and the need for future research.

Habitat and Geology

The IPA site presents a physiography dominated by the Eastern Cordillera and Snow-capped

Xanthosoma puberulum © Rosember Hurtado

Oreopanax thaumasiophyllus © MBG-Bolivia/ Alfredo Fuentes

Peaks, together forming a diverse landscape of mountains, serranías, and snow-capped summits. This complex orography gives rise to the confluence of three ecoregions: the Yungas, the Inter-Andean Dry Forest, and the Northern Puna (MDSyP 2002, Ibisch *et al.* 2003). This site is crucial for water provision (SERNAP 2005).

The vegetation is comprised of Yungas forest, semi-deciduous forest, High Andean grasslands (*pajonales*), among others (Navarro & Ferreira 2011, Navarro 2011, Appendix 2), and classified into Subtropical/Tropical Dry Forest, Subtropical/Tropical Montane Humid Forest, and Subtropical/Tropical High-Altitude Grasslands following the IUCN habitat classification system (IUCN 2012) (Appendix 2).

Conservation Challenges

Due to its complex topography and the presence of high rainfall, its soils are highly susceptible to erosion and mass movement. This process is exacerbated by both natural factors and human intervention. In recent years, mining activity near the communities of Cotapata and Chuspipata (>3,000 m.a.s.l.), inside the RACEM in Atalaya-Santa Elisa (1,600 - 2,100 m.a.s.l.) and on the banks of the Huarinilla River, constitutes the principal threat to the natural ecosystems (Cuba 2022). Adding to this are forest clearing to establish crops (Fundación Natura 2019), and livestock grazing in the higher areas and soil compaction from trampling within the NP and ANMI Cotapata (SERNAP 2005). Although the site still maintains 57% forest cover, 15% rocky outcrops, and 13% scrub or herbaceous formation, agricultural expansion exerts a growing and direct pressure, especially in the eastern portion of the IPA site (MapBiomas Bolivia 2024), threatening the integrity of these vital ecosystems. Despite the anthropogenic pressures, the site is highly diverse and also harbours an important number of useful species such as timber, ornamental, medicinal, and food plants.

Panoramic view of "Death Road", forming the boundary between the Cotapata National Park and ANMI (left) and the Río Negro RACEM (right), Chuspipata community (3,000 m.a.s.l.) © Elmer Cuba

In the background, the glaciated peaks Tiquimani (Llampu) (centre-right) and Tilata (centre-left) are visible. These delineate the western boundary of the Cotapata National Park and ANMI and the IPA site © Elmer Cuba

Panoramic view of the Cotapata National Park and ANMI (centre-right) and the Río Negro RACEM (left), as seen from the town of Coroico, the primary population centre within the influence zone of the IPA site © Elmer Cuba

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Montane Forest	78	Major
Subtropical/Tropical High Altitude Grassland	18	Major
Subtropical/Tropical Dry Forest	4	Minor

Threat

Threat	Severity	Situation
Small-holder farming	High	Ongoing - stable
Nomadic grazing	Medium	Ongoing - stable
Gathering terrestrial plants	High	Ongoing - stable
Mining & quarrying	Medium	Ongoing - trend unknown

Land Use

Land use type	Percent coverage	Importance
Nature conservation	53	Major
Agriculture (arable)	—	Major
Agriculture (pastoral)	—	Major
Harvesting of wild resources	—	Major

Protected areas and other conservation designations

Protected area type	Names (s) of protected area (s)	Relationship between the site and the protected area (% of overlap)	Area of overlap (km^2)
Key Biodiversity Area	KBA Cotapata	IPA overlaps with the protected/conservation area (89%)	605
National Park	PN and ANMI Cotapata	IPA overlaps with the protected/conservation area (100%)	614
Local/Regional Nature Reserve	RACEM Río Negro	IPA overlaps with the protected/conservation area (100%)	61
Key Biodiversity Area	KBA Hampaturi Natural Conservation Area	IPA overlaps with the protected/conservation area (15%)	32
Local/Regional Nature Reserve	Hampaturi Natural Conservation Area	IPA overlaps with the protected/conservation area (14%)	30
Key Biodiversity Area	KBA Polylepis Forest of Taquesi	IPA overlaps with the protected/conservation area (81%)	30
Local/Regional Nature Reserve	Water Reserve and Mountain Forests of the Mururata Mountains	IPA overlaps with the protected/conservation area (9%)	16
Local/Regional Nature Reserve	Cerro Uchumachi Municipal Sanctuary	IPA overlaps with the protected/conservation area (4%)	3

IPA priority species Criterion A									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Acanthaceae	*Justicia yungensis*	A(i)	VU	✓	✓	✓			unknown
Acanthaceae	*Suessenguthia multisetosa*	A(i)	VU	✓					unknown
Actinidiaceae	*Saurauia rusbyi*	A(i)	VU	✓	✓				unknown
Amaranthaceae	*Atriplex asplundii*	A(iii)	NE	✓	✓	✓		✓	unknown
Amaryllidaceae	*Hippeastrum lapacense*	A(i)	EN	✓	✓	✓			unknown
Amaryllidaceae	*Hippeastrum wilsoniae*	A(iii)	NE	✓	✓	✓		✓	unknown
Amaryllidaceae	*Hippeastrum yungacense*	A(i)	EN	✓	✓	✓			unknown
Anacardiaceae	*Myracrodruon urundeuva*	A(ii)	VU						unknown
Apocynaceae	*Ditassa fiebrigii*	A(i)	CR	✓	✓	✓			unknown
Apocynaceae	*Matelea asplundii*	A(i)	CR	✓	✓	✓		✓	unknown
Apocynaceae	*Matelea boliviana*	A(i)	EN	✓	✓				unknown
Apocynaceae	*Oxypetalum pearsonii*	A(i)	VU	✓	✓				unknown
Apocynaceae	*Prestonia leco*	A(i)	VU	✓	✓				unknown
Aquifoliaceae	*Ilex pseudoebenacea*	A(i)	VU	✓	✓				unknown
Araceae	*Xanthosoma puberulum*	A(iv)	NE	✓	✓	✓			scarce
Araliaceae	*Dendropanax oblongifolius*	A(i)	VU	✓	✓				unknown
Araliaceae	*Hydrocotyle boliviana*	A(iv)	NE	✓	✓				unknown
Araliaceae	*Hydrocotyle pseudoboliviana*	A(iii)	NE	✓	✓	✓			unknown
Araliaceae	*Hydrocotyle solomonii*	A(iii)	NE	✓	✓	✓		✓	unknown
Araliaceae	*Oreopanax atopanthus*	A(i)	EN	✓	✓				unknown
Araliaceae	*Oreopanax thaumasiophyllus*	A(i)	EN	✓	✓				unknown
Araliaceae	*Sciodaphyllum bangii*	A(i)	EN	✓	✓	✓			unknown
Aspleniaceae	*Asplenium trilobatum*	A(iii)	NE	✓	✓	✓		✓	unknown
Aspleniaceae	*Asplenium tunquiniense*	A(iii)	NE	✓	✓	✓			unknown
Aspleniaceae	*Blechnum anthracinum*	A(iii)	NE	✓	✓	✓		✓	unknown
Aspleniaceae	*Blechnum reflexum*	A(iv)	NE	✓	✓	✓			unknown
Aspleniaceae	*Blechnum repens*	A(iii)	NE	✓	✓	✓		✓	unknown
Aspleniaceae	*Thelypteris fayorum*	A(iii)	NE	✓	✓	✓		✓	unknown
Aspleniaceae	*Thelypteris lumbricoides*	A(iii)	NE	✓	✓				unknown
Aspleniaceae	*Thelypteris yungensis*	A(iii)	NE	✓	✓				unknown
Asteraceae	*Ayapanopsis euphyes*	A(iv)	NE	✓	✓				unknown
Asteraceae	*Ayapanopsis latipaniculata*	A(iii)	NE	✓	✓	✓			unknown
Asteraceae	*Baccharis saliens* var. *saliens*	A(iii)	NE	✓	✓	✓			unknown
Asteraceae	*Critoniopsis steinbachii*	A(i)	EN	✓	✓				unknown
Asteraceae	*Critoniopsis yungasensis*	A(i)	VU	✓	✓				unknown
Asteraceae	*Dendrophorbium acuminatissimum*	A(i)	VU	✓					unknown
Asteraceae	*Dendrophorbium ayopayense*	A(i)	VU	✓	✓	✓			unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Asteraceae	*Dendrophorbium varicosum*	A(iii)	NE	✓	✓	✓		✓	unknown
Asteraceae	*Dendrophorbium yungasense*	A(i)	EN	✓	✓				unknown
Asteraceae	*Fleischmannia neei*	A(i)	EN	✓	✓				unknown
Asteraceae	*Fleischmannia tamboensis*	A(i)	CR	✓	✓	✓			unknown
Asteraceae	*Fleischmannia yungasensis*	A(i)	VU	✓	✓	✓			unknown
Asteraceae	*Gamochaeta beckii*	A(i)	CR	✓	✓	✓		✓	unknown
Asteraceae	*Hieracium tacense*	A(iv)	NE	✓	✓	✓			unknown
Asteraceae	*Hypserion boliviense*	A(iii)	NE	✓	✓	✓			unknown
Asteraceae	*Jungia beckii*	A(iii)	NE	✓	✓	✓		✓	unknown
Asteraceae	*Lepidaploa beckii*	A(iv)	NE	✓	✓				unknown
Asteraceae	*Lepidaploa deflexa*	A(iv)	NE	✓	✓				unknown
Asteraceae	*Lepidaploa fournetii*	A(iv)	NE	✓	✓	✓			unknown
Asteraceae	*Llerasia ledifolia*	A(i)	VU	✓	✓	✓			unknown
Asteraceae	*Llerasia macrocephala*	A(i)	VU	✓	✓				unknown
Asteraceae	*Mikania dictyota*	A(i)	VU	✓	✓	✓			unknown
Asteraceae	*Mikania rusbyi*	A(i)	VU	✓	✓	✓			unknown
Asteraceae	*Mikania schultzii*	A(i)	EN	✓	✓				unknown
Asteraceae	*Mikania williamsii*	A(i)	EN	✓	✓				unknown
Asteraceae	*Munnozia fournetii*	A(iii)	NE	✓	✓	✓		✓	unknown
Asteraceae	*Munnozia hirta*	A(iv)	NE	✓	✓				unknown
Asteraceae	*Neocuatrecasia yungasensis*	A(i)	CR	✓	✓	✓		✓	unknown
Asteraceae	*Ophryosporus kuntzei*	A(i)	VU	✓	✓				unknown
Asteraceae	*Ophryosporus venosissimus*	A(i)	EN	✓	✓				unknown
Asteraceae	*Oyedaea lanceolata*	A(i)	EN	✓					unknown
Asteraceae	*Pentacalia buchtienii*	A(iv)	NE	✓	✓				unknown
Asteraceae	*Pentacalia zongoensis*	A(iii)	NE	✓	✓	✓		✓	unknown
Asteraceae	*Plagiocheilus ciliaris*	A(iii)	NE	✓	✓	✓		✓	unknown
Asteraceae	*Stevia cochabambensis*	A(iii)	NE	✓	✓	✓		✓	unknown
Asteraceae	*Stevia neglecta*	A(iv)	NE	✓	✓	✓			unknown
Asteraceae	*Stevia tunariensis*	A(iv)	NE	✓	✓				unknown
Asteraceae	*Verbesina lapazii*	A(iii)	NE	✓	✓	✓		✓	unknown
Basellaceae	*Anredera aspera*	A(iv)	NE	✓	✓	✓			unknown
Begoniaceae	*Begonia bangii*	A(iv)	NE	✓	✓	✓			unknown
Begoniaceae	*Begonia fissistyla*	A(iii)	NE	✓	✓	✓			unknown
Begoniaceae	*Begonia santarosensis*	A(iv)	NE	✓	✓	✓			unknown
Begoniaceae	*Begonia subcaudata*	A(iv)	NE	✓	✓				unknown
Brassicaceae	*Cardamine speciosa*	A(iii)	NE	✓	✓	✓		✓	unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥1% global population	≥5% national population	1 of 5 best sites at national level	≥10% global population	Entire global population at the site	Abundance at site
Bromeliaceae	*Fosterella chaparensis*	A(iv)	NE	✓	✓	✓			unknown
Bromeliaceae	*Fosterella heterophylla*	A(iii)	NE	✓	✓				unknown
Bromeliaceae	*Fosterella kroemeri*	A(iii)	NE	✓	✓	✓			unknown
Bromeliaceae	*Greigia acebeyi*	A(iii)	NE	✓	✓	✓		✓	unknown
Bromeliaceae	*Greigia atrocastanea*	A(iii)	NE	✓	✓	✓		✓	unknown
Bromeliaceae	*Greigia cochabambae*	A(iii)	NE	✓	✓	✓			unknown
Bromeliaceae	*Greigia marioi*	A(iii)	NE	✓	✓	✓		✓	unknown
Bromeliaceae	*Greigia membranacea*	A(iii)	DD	✓	✓	✓		✓	unknown
Bromeliaceae	*Puya fosteriana*	A(i)	EN	✓	✓	✓			unknown
Bromeliaceae	*Puya riparia*	A(iii)	NE	✓	✓	✓		✓	unknown
Brunelliaceae	*Brunellia boliviana*	A(ii)	VU	✓	✓				unknown
Buxaceae	*Styloceras columnare*	A(i)	EN	✓	✓				unknown
Cactaceae	*Lymanbensonia crenata*	A(iv)	NE	✓	✓	✓			unknown
Calceolariaceae	*Calceolaria amoena*	A(iii)	NE	✓	✓	✓		✓	unknown
Calophyllaceae	*Kielmeyera paniculata*	A(i)	VU	✓					unknown
Campanulaceae	*Centropogon brittonianus*	A(iii)	NE	✓	✓	✓		✓	unknown
Campanulaceae	*Centropogon gloriosus*	A(i)	EN	✓	✓				unknown
Campanulaceae	*Centropogon magnificus*	A(ii), A(iv)	VU	✓	✓				unknown
Campanulaceae	*Centropogon unduavensis*	A(ii)	VU	✓	✓	✓			unknown
Campanulaceae	*Siphocampylus argutus*	A(iii)	NE	✓	✓	✓		✓	unknown
Campanulaceae	*Siphocampylus dubius*	A(ii)	EN	✓	✓				unknown
Campanulaceae	*Siphocampylus membranaceus*	A(ii), A(iv)	CR	✓	✓				unknown
Campanulaceae	*Siphocampylus sparsipilus*	A(iii)	NE	✓	✓	✓		✓	unknown
Caprifoliaceae	*Valeriana rusbyi*	A(iii)	NE	✓	✓	✓		✓	unknown
Chloranthaceae	*Hedyosmum maximum*	A(i)	VU	✓	✓	✓			unknown
Chrysobalanaceae	*Hirtella beckii*	A(i)	CR	✓	✓	✓		✓	unknown
Cucurbitaceae	*Sicyos kuntzei*	A(iii)	NE	✓	✓	✓		✓	unknown
Cunoniaceae	*Weinmannia bangii*	A(ii), A(iii)	VU	✓	✓				unknown
Cunoniaceae	*Weinmannia davidsonii*	A(i)	VU	✓	✓				unknown
Cunoniaceae	*Weinmannia epicae*	A(i)	EN	✓	✓				unknown
Cunoniaceae	*Weinmannia lyrata*	A(iii)	NE	✓	✓	✓		✓	unknown
Cunoniaceae	*Weinmannia yungasensis*	A(i)	VU	✓	✓	✓			unknown
Cyperaceae	*Carex lapazensis*	A(i)	CR	✓	✓				unknown
Dennstaedtiaceae	*Hypolepis periculosa*	A(iii)	NE	✓	✓	✓		✓	unknown
Dennstaedtiaceae	*Hypolepis scandens*	A(iii)	NE	✓	✓	✓			unknown
Dioscoreaceae	*Dioscorea ovalifolia*	A(i)	EN	✓	✓	✓		✓	unknown
Dryopteridaceae	*Elaphoglossum accedens*	A(iii)	NE	✓	✓				unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Dryopteridaceae	*Elaphoglossum cardioglossum*	A(iii)	NE	✓	✓	✓			unknown
Ericaceae	*Diogenesia racemosa*	A(ii), A(iv)	EN	✓	✓	✓			unknown
Ericaceae	*Gaultheria × serrulata*	A(iii)	NE	✓	✓	✓			unknown
Ericaceae	*Orthaea constans*	A(iv)	NE	✓	✓	✓			unknown
Ericaceae	*Sphyrospermum sessiliflorum*	A(iii)	NE	✓	✓	✓		✓	unknown
Ericaceae	*Themistoclesia peruviana*	A(i)	VU	✓					unknown
Ericaceae	*Themistoclesia tunquiniensis*	A(iii)	NE	✓	✓	✓		✓	unknown
Ericaceae	*Themistoclesia unduavensis*	A(i)	VU	✓	✓	✓			unknown
Euphorbiaceae	*Croton bangii*	A(iv)	NE	✓	✓				unknown
Fabaceae	*Canavalia beniensis*	A(i)	VU	✓	✓				unknown
Fabaceae	*Dalbergia spruceana*	A(i)	VU	✓					unknown
Fabaceae	*Lupinus altiplani*	A(iv)	DD	✓	✓				rare
Gentianaceae	*Gentianella bockii*	A(i)	VU	✓	✓				unknown
Gentianaceae	*Gentianella chrysantha*	A(i)	VU	✓	✓	✓		✓	unknown
Gentianaceae	*Gentianella kusnezowii*	A(iii)	NE	✓	✓				unknown
Gentianaceae	*Gentianella pilgeriana*	A(iii)	NE	✓	✓	✓		✓	unknown
Gentianaceae	*Macrocarpaea cochabambensis*	A(i)	VU	✓	✓				unknown
Gentianaceae	*Symbolanthus australis*	A(i)	VU	✓	✓				unknown
Gesneriaceae	*Columnea oblongifolia*	A(iv)	NE	✓	✓	✓			unknown
Gesneriaceae	*Diastema purpurascens*	A(iii)	NE	✓	✓	✓			unknown
Gleicheniaceae	*Sticherus jacha*	A(iv)	NE	✓	✓				unknown
Gunneraceae	*Gunnera boliviana*	A(iii)	NE	✓	✓	✓			unknown
Iridaceae	*Mastigostyla brevicaulis*	A(iii)	NE	✓	✓				unknown
Lamiaceae	*Aegiphila buchtienii*	A(i)	VU	✓	✓				unknown
Lamiaceae	*Minthostachys diffusa*	A(iii)	NE	✓	✓	✓			unknown
Lauraceae	*Ocotea comata*	A(i)	VU	✓					unknown
Lauraceae	*Ocotea solomonii*	A(i)	EN	✓	✓				unknown
Lauraceae	*Persea bilocularis*	A(i)	EN	✓	✓				unknown
Lauraceae	*Persea buchtienii*	A(i)	VU	✓	✓				unknown
Lauraceae	*Rhodostemonodaphne longiflora*	A(i)	EN	✓	✓				unknown
Loasaceae	*Caiophora pedicularifolia*	A(iv)	NE	✓	✓	✓			unknown
Lycopodiaceae	*Huperzia acuta*	A(iii)	NE	✓	✓	✓		✓	unknown
Malvaceae	*Sida yungasensis*	A(i)	CR	✓	✓				unknown
Melastomataceae	*Axinaea alata*	A(i)	VU	✓	✓	✓			unknown
Melastomataceae	*Axinaea lanceolata*	A(i)	EN	✓					unknown
Melastomataceae	*Chaetogastra capitata*	A(iv)	NE	✓	✓				unknown
Melastomataceae	*Chaetogastra latifolia*	A(iii)	NE	✓	✓				unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥1% global population	≥5% national population	1 of 5 best sites at national level	≥10% global population	Entire global population at the site	Abundance at site
Melastomataceae	*Chaetogastra panicularis*	A(iv)	NE	✓	✓				unknown
Melastomataceae	*Chaetogastra rusbyi*	A(iii)	NE	✓	✓	✓		✓	unknown
Melastomataceae	*Chaetogastra tetrapetala*	A(iv)	NE	✓	✓				unknown
Melastomataceae	*Meriania axinaeoides*	A(i)	VU	✓	✓				unknown
Melastomataceae	*Miconia biacuta*	A(i)	EN	✓	✓				unknown
Melastomataceae	*Miconia cinnabarina*	A(i)	VU	✓	✓				unknown
Melastomataceae	*Miconia glomerulifera*	A(i)	EN	✓	✓				unknown
Melastomataceae	*Miconia mandonii*	A(i)	VU	✓	✓	✓			unknown
Melastomataceae	*Miconia multiflora*	A(i)	VU	✓					unknown
Melastomataceae	*Miconia neei*	A(i)	VU	✓					unknown
Melastomataceae	*Miconia quadrialata*	A(i)	EN	✓	✓				unknown
Melastomataceae	*Miconia recondita*	A(i)	VU	✓	✓				unknown
Melastomataceae	*Miconia yungasensis*	A(iii)	NE	✓	✓				unknown
Meliaceae	*Cedrela fissilis*	A(i)	VU	✓					unknown
Orchidaceae	*Andreettaea infinita*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Barbosella vasquezii*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Baskervilla auriculata* var. *yungasensis*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Brachionidium alpestre*	A(iii)	NE	✓	✓	✓		✓	rare
Orchidaceae	*Brachionidium lopez-robertsiae*	A(iii)	NE	✓	✓	✓		✓	rare
Orchidaceae	*Brachionidium sulcatum*	A(iii)	NE	✓	✓	✓		✓	rare
Orchidaceae	*Brachionidium vasquezii*	A(iii)	NE	✓	✓				rare
Orchidaceae	*Cranichis beckii*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Cyrtochilum vasquezii*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Epidendrum adolfomorenoi*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Epidendrum bolivianum*	A(iii)	NE	✓	✓				unknown
Orchidaceae	*Epidendrum lezlieae*	A(iii)	NE	✓	✓				unknown
Orchidaceae	*Epidendrum solomonii*	A(iii)	NE	✓	✓	✓			unknown
Orchidaceae	*Fernandezia angusta*	A(iii)	NE	✓	✓			✓	unknown
Orchidaceae	*Fernandezia cuneata*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Fernandezia minor* var. *minor*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Fernandezia solomonii*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Fernandezia unduaviae*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Karma gabi-villegasiae*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Lepanthes epibator*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Lepanthes fuchsii*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Lepanthes herzogii*	A(iii)	NE	✓	✓				unknown
Orchidaceae	*Lepanthes microphallica*	A(iii)	NE	✓	✓	✓			unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Orchidaceae	*Lepanthes oxyphylla*	A(iv)	NE	✓	✓				unknown
Orchidaceae	*Lepanthes ptyxis*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Lepanthes recurva*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Lepanthes ringens*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Lepanthes schoonenii*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Lepanthes versicolor*	A(iv)	NE	✓	✓				unknown
Orchidaceae	*Lepanthopsis trulliformis*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Malaxis buchtienii*	A(iv)	NE	✓	✓				unknown
Orchidaceae	*Malaxis mixta*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Masdevallia boliviensis*	A(iii)	NE	✓	✓				unknown
Orchidaceae	*Masdevallia chuspipatae*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Masdevallia exquisita*	A(iii)	NE	✓	✓	✓			unknown
Orchidaceae	*Masdevallia isos*	A(iii)	NE	✓	✓				unknown
Orchidaceae	*Masdevallia luziaemariae*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Masdevallia solomonii*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Maxillaria simacoana*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Microchilus yungasensis*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Oncidium dracoceps*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Oncidium magnificum*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Ornithocephalus dodsonii*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Pleurothallis andina*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Pleurothallis demissa*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Pleurothallis solomonii*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Pterichis obcordatilabia*	A(iii)	NE	✓	✓				unknown
Orchidaceae	*Pterichis yungasensis*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Rodriguezia vasquezii*	A(iii)	NE	✓	✓				unknown
Orchidaceae	*Scelochiloides acebeyae*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Scelochilus pacensium*	A(iii)	NE	✓	✓				unknown
Orchidaceae	*Stelis aligera*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Stelis cauda-equina*	A(iv)	NE	✓	✓				unknown
Orchidaceae	*Stelis chuspipatensis*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Stelis citrinella*	A(iv)	NE	✓	✓	✓			unknown
Orchidaceae	*Stelis dolabrata*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Stelis iwatsukae*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Stelis kilimanjaro*	A(iii)	NE	✓	✓				unknown
Orchidaceae	*Stelis kroemeri*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Stelis leucantha*	A(iii)	NE	✓	✓	✓		✓	unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Orchidaceae	*Stelis lueri*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Stelis mandoniana*	A(iii)	NE	✓	✓				unknown
Orchidaceae	*Stelis nutationis*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Stelis oligobotrya*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Stelis papuligera*	A(iv)	NE	✓	✓				unknown
Orchidaceae	*Stelis pycnochila*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Stelis rufescens*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Stelis setacea*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Stelis tinekae*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Stelis unduavica*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Stelis vasqueziana*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Telipogon calueri*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Telipogon cotapatensis*	A(iii)	NE	✓	✓				unknown
Orchidaceae	*Telipogon juan-torrezii*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Telipogon oliganthus*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Telipogon pubescens*	A(iii)	NE	✓	✓	✓		✓	unknown
Orchidaceae	*Trichosalpinx barbelifera*	A(iii)	NE	✓	✓	✓		✓	unknown
Orobanchaceae	*Agalinis scarlatina*	A(iv)	NE	✓	✓				unknown
Oxalidaceae	*Biophytum mapirense*	A(iv)	NE	✓	✓				unknown
Oxalidaceae	*Oxalis lucumayensis* subsp. *subiens*	A(iv)	NE	✓	✓	✓			unknown
Oxalidaceae	*Oxalis rusbyi*	A(iii)	NE	✓	✓	✓			unknown
Oxalidaceae	*Oxalis solomonii*	A(iv)	NE	✓	✓				unknown
Oxalidaceae	*Oxalis tuberosa* subsp. *unduavensis*	A(iv)	NE	✓	✓				unknown
Oxalidaceae	*Oxalis virgata*	A(iv)	NE	✓	✓	✓			unknown
Passifloraceae	*Passiflora buchtienii*	A(i)	VU	✓	✓	✓			unknown
Passifloraceae	*Passiflora hastifolia*	A(iii)	NE	✓	✓				unknown
Passifloraceae	*Passiflora macropoda*	A(ii), A(iv)	EN	✓	✓	✓			unknown
Pentaphylacaceae	*Freziera alata*	A(i)	VU	✓	✓				unknown
Pentaphylacaceae	*Freziera uniauriculata*	A(i)	VU	✓					unknown
Pentaphylacaceae	*Ternstroemia polyandra*	A(i)	VU	✓	✓				unknown
Phyllanthaceae	*Phyllanthus bolivianus*	A(i)	EN	✓	✓				unknown
Piperaceae	*Peperomia pitiguayana*	A(iii)	NE	✓	✓	✓		✓	rare
Piperaceae	*Peperomia pseudocobana*	A(iv)	NE	✓	✓				scarce
Piperaceae	*Peperomia purpureonervosa*	A(iii)	NE	✓	✓				rare
Piperaceae	*Peperomia suspensa*	A(iii)	NE	✓	✓	✓			rare
Piperaceae	*Peperomia williamsii*	A(iv)	NE	✓	✓				scarce
Piperaceae	*Peperomia yanacachiana*	A(iv)	NE	✓	✓	✓			frequent

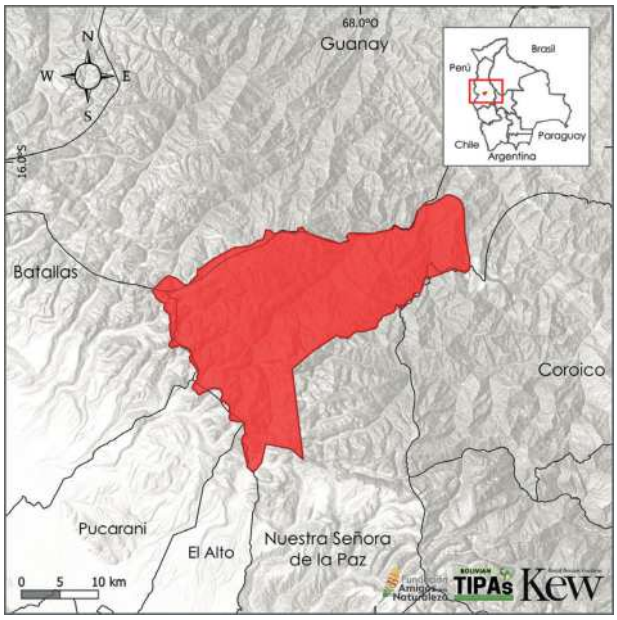
IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Piperaceae	*Piper bolivianum*	A(i)	VU	✓	✓				scarce
Piperaceae	*Piper semimetrale*	A(i)	EN	✓	✓				scarce
Plantaginaceae	*Ourisia cotapatensis*	A(i)	VU	✓	✓	✓		✓	unknown
Poaceae	*Aulonemia boliviana*	A(i)	EN	✓	✓	✓			unknown
Poaceae	*Aulonemia longipedicellata*	A(i)	CR	✓	✓	✓		✓	unknown
Poaceae	*Aulonemia tremula*	A(i)	EN	✓	✓	✓			unknown
Poaceae	*Axonopus andinus*	A(i)	EN	✓	✓				unknown
Poaceae	*Chusquea parodii*	A(i)	EN	✓	✓	✓			unknown
Poaceae	*Chusquea renvoizei*	A(iii)	DD	✓	✓				unknown
Poaceae	*Chusquea yungasensis*	A(i)	EN	✓	✓	✓			unknown
Poaceae	*Cortaderia boliviensis*	A(i)	VU	✓	✓	✓			unknown
Poaceae	*Festuca scabrifolia*	A(i)	EN	✓	✓				unknown
Poaceae	*Festuca soratana*	A(i)	EN	✓	✓	✓			unknown
Podocarpaceae	*Podocarpus rusbyi*	A(i)	VU	✓					unknown
Polygalaceae	*Monnina autraniana*	A(i)	VU	✓	✓	✓			unknown
Polygalaceae	*Monnina boliviensis*	A(iii)	NE	✓	✓	✓		✓	unknown
Polygalaceae	*Monnina buchtienii*	A(iii)	NE	✓	✓	✓		✓	unknown
Polygalaceae	*Monnina herzogii*	A(iv)	NE	✓	✓				unknown
Polygalaceae	*Monnina laureola*	A(iii)	NE	✓	✓				unknown
Polygalaceae	*Monnina weddelliana*	A(iv)	NE	✓	✓	✓			unknown
Polypodiaceae	*Elaphoglossum choquetangae*	A(iii)	NE	✓	✓				unknown
Polypodiaceae	*Elaphoglossum cotapatense*	A(iii)	NE	✓	✓	✓			unknown
Polypodiaceae	*Elaphoglossum sunduei*	A(iii)	NE	✓	✓	✓			unknown
Polypodiaceae	*Grammitis carrascoensis*	A(iv)	NE	✓	✓	✓			unknown
Polypodiaceae	*Grammitis jimenezii*	A(iii)	NE	✓	✓				unknown
Polypodiaceae	*Grammitis kalawayae*	A(iv)	NE	✓	✓				unknown
Polypodiaceae	*Grammitis kessleri*	A(iii)	NE	✓	✓				unknown
Polypodiaceae	*Grammitis labiakii*	A(iii)	NE	✓	✓	✓			unknown
Polypodiaceae	*Grammitis mnemosyne*	A(iii)	NE	✓	✓	✓		✓	unknown
Polypodiaceae	*Grammitis setosora*	A(iii)	NE	✓	✓				unknown
Polypodiaceae	*Grammitis similis*	A(iii)	NE	✓	✓	✓		✓	unknown
Polypodiaceae	*Grammitis tunquiniensis*	A(iii)	NE	✓	✓	✓		✓	unknown
Polypodiaceae	*Megalastrum alticola*	A(iv)	NE	✓	✓				unknown
Polypodiaceae	*Megalastrum bolivianum*	A(iii)	NE	✓	✓				unknown
Polypodiaceae	*Polystichum lepidotum*	A(iii)	NE	✓	✓				unknown
Primulaceae	*Geissanthus multiflorus*	A(iii)	DD	✓	✓	✓		✓	unknown
Proteaceae	*Roupala filiflora*	A(i)	VU	✓	✓				unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Pteridaceae	*Jamesonia ascendens*	A(iii)	NE	✓	✓				unknown
Pteridaceae	*Pteris lellingeri*	A(iii)	NE	✓	✓	✓		✓	unknown
Rosaceae	*Polylepis pepei*	A(i)	EN	✓					unknown
Rosaceae	*Rubus aenigmaticus*	A(iii)	NE	✓	✓	✓		✓	unknown
Rosaceae	*Rubus holtenii*	A(iv)	NE	✓	✓				unknown
Rosaceae	*Rubus rusbyi*	A(iii)	NE	✓	✓	✓		✓	unknown
Rubiaceae	*Galium buchtienii*	A(iii)	NE	✓	✓	✓		✓	unknown
Rubiaceae	*Manettia tomentosa*	A(iv)	NE	✓	✓				unknown
Rubiaceae	*Palicourea madidiensis*	A(i)	VU	✓	✓				unknown
Salicaceae	*Xylosma rusbyana*	A(iii)	DD	✓	✓	✓		✓	unknown
Santalaceae	*Dendrophthora purpurea*	A(iv)	NE	✓	✓	✓			unknown
Selaginellaceae	*Selaginella solomonii*	A(iii)	NE	✓	✓	✓		✓	unknown
Solanaceae	*Capsicum cardenasii*	A(ii), A(iv)	EN	✓	✓				unknown
Solanaceae	*Capsicum ceratocalyx*	A(i)	EN	✓	✓				unknown
Solanaceae	*Lycianthes apiculata*	A(iii)	NE	✓	✓	✓		✓	unknown
Solanaceae	*Lycianthes reflexa*	A(i)	VU	✓	✓				unknown
Solanaceae	*Solanum albescens*	A(i)	EN	✓	✓				unknown
Solanaceae	*Solanum chalmersii*	A(i)	EN	✓	✓				unknown
Solanaceae	*Solanum gonyrhachis*	A(i)	EN	✓	✓				unknown
Solanaceae	*Solanum macbridei*	A(i)	VU	✓					unknown
Solanaceae	*Solanum unilobum*	A(i)	VU	✓					unknown
Symplocaceae	*Symplocos debilis*	A(i)	VU	✓	✓				unknown
Symplocaceae	*Symplocos hiemalis*	A(i)	EN	✓					unknown
Thelypteridaceae	*Thelypteris rosulata*	A(iii)	NE	✓	✓	✓		✓	unknown
Urticaceae	*Cecropia elongata*	A(i)	VU	✓	✓				frequent
Urticaceae	*Phenax flavifolius*	A(iii)	NE	✓	✓	✓		✓	unknown
Urticaceae	*Pilea pauciserrata*	A(iii)	NE	✓	✓	✓		✓	unknown
Vochysiaceae	*Vochysia caesia*	A(iii)	DD	✓	✓	✓		✓	unknown

ZONGO VALLEY

Authors: Maira T. Martinez-Ugarteche, Elmer Cuba-Orozco, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA057	Department/ Province	La Paz: Murillo
Latitude	-16.13230	Longitude	-68.08354
Minimum altitude (m.a.s.l.)	815	Maximum altitude (m.a.s.l.)	6,082
Area (km^2)	611	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)



Site Description

The IPA site named Zongo Valley is part of the Zongo macrodistrict. It is located 80 km north of the city of La Paz, in the Murillo province. It joins the Guanay IPA to the north. Valle de Zongo covers a wide altitudinal range, from 800 up to 6,080 m.a.s.l. (Navarro 2002, Cortez-Fernández 2009).

To the south, the valley is surrounded by an extensive mountain chain of glaciers of the Huayna Potosí – Charquini and la Cumbre, and is characterised by many areas of open water originating from glaciers, páramos, and montane forests (GAMLP 2012).

Botanical Significance

The site is exceptionally diverse, safeguarding a significant number of at-risk-of-extinction species, endemics, and species of socioeconomic importance. It harbours entire populations of some species, for example *Philibertia zongoensis* (CR), *Meliosma minutipetala*, and *Parathesis angustifolia* (DD); and 27 species are known only from this IPA site. Of the 38 species globally at-risk-of-extinction and found in this site, 29 are endemic, including *Oreopanax thaumasiophyllus* (EN) and *Puya solomonii* (VU) (Appendix 1).

In addition to these at-risk-of-extinction species, the site contains a total of 373 useful plant species. Of these, 21 are wild relatives of cultivated plants

IPA Assessment – Rationale

Zongo Valley is one of the 10 IPA sites with the highest endemism in Bolivia; this site contains 38 plant species globally at-risk-of-extinction and eight nationally threatened species. It also features 21 range restricted endemic species, and 35 potentially threatened endemic species with highly restricted ranges. The Zongo Valley IPA site conserves a total of 169 endemic species, reaching 6.4% of the national endemism.

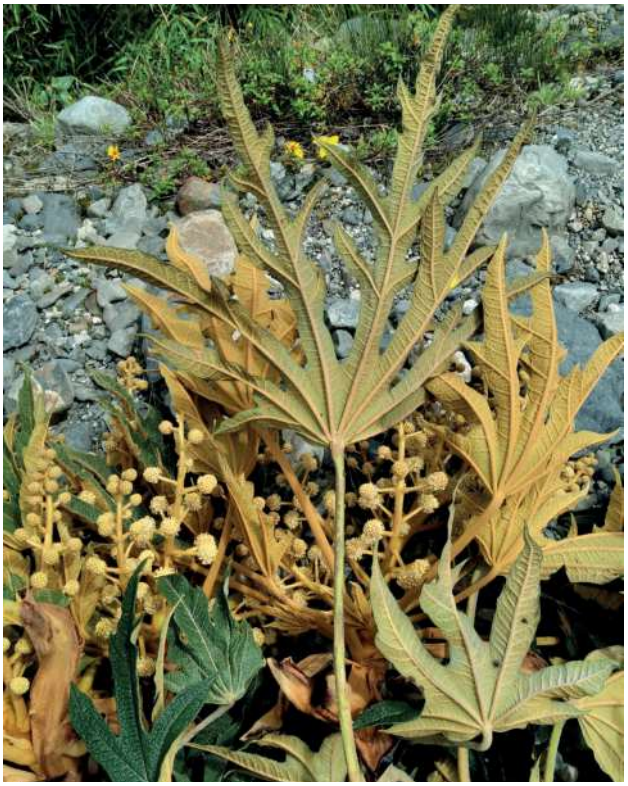
Furthermore, the site has 373 useful species, which account for 11.5% of the total useful species documented for the country. These include 9.7% of wild relatives of cultivated plants registered for Bolivia.

Panoramic view of Huayna Potosí © José Valencia

from genera such as *Lupinus*, *Oxalis*, *Rubus*, and *Solanum* primarily (Appendix 3), including *Solanum unilobum* (VU), a wild relative of the tree tomato (Baldaszti 2024).

Habitat and Geology

The Zongo Valley is located in the Eastern Cordillera and Snow-capped Peaks. The valley surrounds the Zongo River, which originates from the melting of snowcaps such as the Huayna Potosí and flows until it converges with the Coroico River. Its landscape is shaped by features ranging from glaciers to deep valleys. The Zongo IPA site has a wide altitudinal range, from 800 m up to 6,080 m, and a climate ranging from the cold of the Altiplano, temperate in the valleys, to the warm climate of the tropics (Eyzaguirre 2008).



Oreopanax thaumasiophyllus © MBG-Bolivia/Alfredo Fuentes

Puya solomonii © MBG-Bolivia/Alfredo Fuentes

Puya pearcei © MBG-Bolivia/Gustavo Miranda

Puya pearcei inflorescense © MBG-Bolivia/Gustavo Miranda

This entire variation, especially its habitats, makes Zongo a site with a unique flora. Following the classification - vegetation and Ecological Systems of Bolivia (Navarro & Ferreira 2011, Navarro 2011) and the IUCN habitat classification system (IUCN 2012), the habitat with the greatest extent is the Subtropical/Tropical Montane Humid Forest, which is comprised of Yungas forests, *Polylepis* forests, and other communities. Another prominent habitat is High-Altitude Grasslands, which includes the grasslands of the Humid Puna (Navarro 2011) (Appendix 2).

Conservation Challenges

The Zongo Valley is part of the Zongo macrodistrict, an area that presents a notable altitudinal variation, with a large amount of open water originating from glaciers, páramos, and montane forests. It is an area with high hydroelectric exploitation for La Paz and Bolivia, as it has an electric generation system that comes from the flow of the Zongo River and its tributaries (GAMLP 2012). The site is also characterised by its production and commercialisation of the coca leaf (*Erythroxylum coca*) (Esquerdo 2009). Located in a gradient between two distinct altitudinal zones and adding the presence of humid Yungas forest, has resulted in the Zongo valley's high level of flora endemism; and it underpins the site as an area of high conservation value. There are Key Biodiversity Areas (KBA) in this region which coincide with the designated IPA site, supporting its conservation importance for its flora, water resources, and habitats.

Montane forest © MBG-Bolivia/Alfredo Fuentes

Slope with *Puya solomonii* © MBG-Bolivia/Alfredo Fuentes

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Montane Forest	62	Major
Subtropical/Tropical High Altitude Grassland	36	Major
Subtropical/Tropical Moist Lowland Forest	1	Major
Other	–	Unknown

Threat		
Threat	**Severity**	**Situation**
Small-holder farming	Medium	Ongoing - stable
Annual & perennial non-timber crops	Medium	Ongoing - stable
Small-holder grazing, ranching or farming	Medium	Ongoing - stable
Renewable energy	High	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Agriculture (arable)	–	Major
Agriculture (pastoral)	–	Major
Residential/urban development	–	Minor
Utility & service lines	–	Minor

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	Hampaturi Natural Conservation Area	IPA overlaps with the protected/conservation area (2%)	4
National Park	National Park Tuni Condoriri	IPA overlaps with the protected/conservation area (26%)	24
National Park	NP y ANMI Cotapata	IPA overlaps with the protected/conservation area (31%)	5
Key Biodiversity Area	KBA Cotapata	IPA overlaps with the protected/conservation area (10%)	67
Key Biodiversity Area	KBA Hampaturi Natural Conservation Area	IPA overlaps with the protected/conservation area (2%)	4
Key Biodiversity Area	KBA Katari - Tuni Condoriri	IPA overlaps with the protected/conservation area (2%)	18
Key Biodiversity Area	KBA Tuni Condoriri	IPA overlaps with the protected/conservation area (26%)	24

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Ruellia haenkeana f. lutea*	A(iii)	NE						unknown
Actinidiaceae	*Saurauia rusbyi*	A(i)	VU	✓	✓		✓		occasional

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Apiaceae	*Eryngium buchtienii*	A(iv)	NE	✓		✓			unknown
Apocynaceae	*Philibertia zongoensis*	A(i)	CR	✓	✓	✓	✓	✓	rare
Apocynaceae	*Scyphostelma beckii*	A(i)	EN	✓	✓		✓		occasional
Apocynaceae	*Scyphostelma solomonii*	A(iii)	NE						unknown
Araliaceae	*Hydrocotyle escondida*	A(iii)	NE	✓	✓	✓	✓		unknown
Araliaceae	*Hydrocotyle zongoana*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Araliaceae	*Oreopanax thaumasiophyllus*	A(i)	EN	✓	✓		✓		frequent
Asteraceae	*Baccharis glomerata*	A(i)	EN	✓	✓	✓	✓		occasional
Asteraceae	*Baccharis longipedicellata*	A(iv)	NE	✓	✓	✓	✓		unknown
Asteraceae	*Critoniopsis steinbachii*	A(i)	EN	✓	✓		✓		occasional
Asteraceae	*Dendrophorbium ayopayense*	A(i)	VU	✓	✓				occasional
Asteraceae	*Dendrophorbium tabacifolium*	A(i)	VU	✓	✓		✓		occasional
Asteraceae	*Jungia woodii*	A(iii)	NE	✓					unknown
Asteraceae	*Lepidaploa beckii*	A(iv)	NE	✓	✓	✓	✓		unknown
Asteraceae	*Lepidaploa solomonii*	A(iv)	NE	✓	✓	✓	✓		unknown
Asteraceae	*Mniodes argentea*	A(iv)	NE						unknown
Asteraceae	*Ophryosporus kuntzei*	A(i)	VU	✓	✓		✓		scarce
Asteraceae	*Oyedaea bullata*	A(i)	EN	✓	✓		✓		scarce
Asteraceae	*Verbesina cumingii*	A(i)	VU	✓	✓				occasional
Begoniaceae	*Begonia subcaudata*	A(iv)	NE	✓	✓	✓	✓		unknown
Bromeliaceae	*Puya solomonii*	A(i)	VU	✓	✓		✓		occasional
Brunelliaceae	*Brunellia boliviana*	A(ii)	VU	✓	✓	✓	✓		unknown
Campanulaceae	*Centropogon gloriosus*	A(i)	EN	✓	✓	✓	✓		occasional
Campanulaceae	*Siphocampylus dubius*	A(ii)	EN						unknown
Campanulaceae	*Siphocampylus werdermannii*	A(ii)	VU						unknown
Caryophyllaceae	*Pycnophyllopsis keraiopetala*	A(i)	EN	✓					occasional
Cyatheaceae	*Cyathea zongoensis*	A(ii), A(iii)	EN	✓	✓	✓	✓		unknown
Cyperaceae	*Carex beckii*	A(iii)	NE	✓	✓	✓	✓		unknown
Dennstaedtiaceae	*Hypolepis woodii*	A(iii)	NE	✓	✓	✓	✓		unknown
Dryopteridaceae	*Elaphoglossum cardioglossum*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Ericaceae	*Demosthenesia fabulosa*	A(iii)	NE	✓	✓		✓		unknown
Ericaceae	*Diogenesia racemosa*	A(ii), A(iv)	EN	✓					unknown
Erythroxylaceae	*Erythroxylum bangii*	A(iii)	NE	✓	✓	✓	✓		unknown
Fabaceae	*Inga approximata*	A(i)	VU	✓	✓	✓		✓	scarce
Fabaceae	*Lupinus altiplani*	A(iv)	DD	✓	✓		✓		scarce
Gentianaceae	*Macrocarpaea cinchonifolia*	A(i)	VU	✓					scarce
Gentianaceae	*Symbolanthus australis*	A(i)	VU	✓	✓				scarce

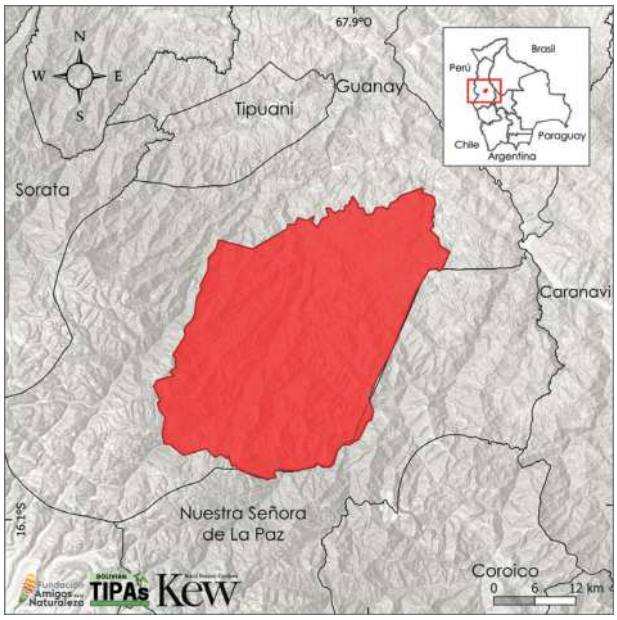
IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥1% global population	≥5% national population	1 of 5 best sites at national level	≥10% global population	Entire global population at the site	Abundance at site
Gesneriaceae	*Columnea oblongifolia*	A(iv)	NE	✓	✓				unknown
Gleicheniaceae	*Sticherus jacha*	A(iv)	NE						unknown
Isoetaceae	*Isoetes herzogii*	A(i)	VU	✓	✓		✓		occasional
Lamiaceae	*Aegiphila buchtienii*	A(i)	VU	✓	✓	✓			occasional
Lauraceae	*Persea buchtienii*	A(i)	VU	✓	✓				occasional
Malvaceae	*Nototriche sajamensis*	A(i)	VU	✓			✓		scarce
Marantaceae	*Stromanthe angustifolia*	A(iii)	NE						unknown
Melastomataceae	*Axinaea glandulosa*	A(i)	EN	✓		✓			scarce
Melastomataceae	*Chaetogastra capitata*	A(iv)	NE	✓	✓				unknown
Melastomataceae	*Chaetogastra tetrapetala*	A(iv)	NE	✓	✓	✓	✓		unknown
Melastomataceae	*Meriania axinaeoides*	A(i)	VU	✓	✓		✓		occasional
Melastomataceae	*Meriania pulcherrima*	A(i)	EN	✓	✓		✓		occasional
Melastomataceae	*Miconia amabilis*	A(i)	VU	✓	✓		✓		occasional
Melastomataceae	*Miconia glomerulifera*	A(i)	EN	✓	✓		✓		occasional
Melastomataceae	*Miconia neei*	A(i)	VU	✓	✓		✓		occasional
Melastomataceae	*Miconia obliqua*	A(iv)	NE						unknown
Melastomataceae	*Miconia recondita*	A(i)	VU	✓					scarce
Nyctaginaceae	*Neea longipedunculata*	A(i)	EN	✓					occasional
Orchidaceae	*Baskervilla boliviana*	A(iii)	NE	✓	✓	✓	✓		unknown
Orchidaceae	*Cyclopogon bangii*	A(iii)	NE	✓	✓				unknown
Orchidaceae	*Epidendrum bolivianum*	A(iii)	NE	✓	✓				unknown
Orchidaceae	*Epidendrum zongoincomptum*	A(iii)	NE	✓	✓	✓	✓		unknown
Orchidaceae	*Lepanthes zongoensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Masdevallia ishikoi*	A(iii)	NE						unknown
Orchidaceae	*Masdevallia zongoensis*	A(iii)	NE						unknown
Orchidaceae	*Pterichis lunatilabia*	A(iii)	NE						unknown
Orchidaceae	*Stelis beckii*	A(iii)	NE						unknown
Orchidaceae	*Stelis cavatella*	A(iii)	NE						unknown
Orchidaceae	*Stelis punchinello*	A(iii)	NE						unknown
Orchidaceae	*Stelis solomonii*	A(iii)	NE						unknown
Orchidaceae	*Stelis varicella*	A(iii)	NE						unknown
Orchidaceae	*Stelis zongoensis*	A(iii)	NE						unknown
Orchidaceae	*Trichosalpinx solomonii*	A(iii)	NE						unknown
Oxalidaceae	*Oxalis tuberosa* subsp. *unduavensis*	A(iv)	NE						unknown
Oxalidaceae	*Oxalis yungasensis*	A(iv)	NE						unknown
Passifloraceae	*Passiflora macropoda*	A(ii), A(iv)	EN						unknown
Piperaceae	*Peperomia magnifoliiflora*	A(iii)	NE						unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Piperaceae	*Peperomia pseudocobana*	A(iv)	NE						unknown
Piperaceae	*Peperomia yanacachiana*	A(iv)	NE						unknown
Piperaceae	*Piper bolivianum*	A(i)	VU	✓					scarce
Piperaceae	*Piper coriaceilimbum*	A(iv)	NE						unknown
Poaceae	*Axonopus andinus*	A(i)	EN	✓	✓	✓	✓		occasional
Poaceae	*Festuca copei*	A(i)	VU	✓	✓	✓			scarce
Poaceae	*Gerritea pseudopetiolata*	A(i)	EN	✓	✓	✓	✓		occasional
Polypodiaceae	*Elaphoglossum solomonii*	A(iii)	NE	✓					unknown
Polypodiaceae	*Polystichum congestum*	A(iii)	NE						unknown
Polypodiaceae	*Polystichum maximum*	A(iii)	NE						unknown
Primulaceae	*Parathesis angustifolia*	A(iii)	DD	✓	✓		✓	✓	rare
Proteaceae	*Roupala filiflora*	A(i)	VU	✓	✓		✓		occasional
Rosaceae	*Polylepis pepei*	A(i)	EN	✓					scarce
Rosaceae	*Rubus holtenii*	A(iv)	NE						unknown
Rubiaceae	*Manettia tomentosa*	A(iv)	NE						unknown
Rubiaceae	*Sabicea boliviensis*	A(iii)	NE						unknown
Sabiaceae	*Meliosma minutipetala*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Selaginellaceae	*Selaginella angustifolia*	A(iii)	NE						unknown
Solanaceae	*Brugmansia sanguinea*	A(i)	EW	✓	✓	✓	✓		unknown
Solanaceae	*Solanum unilobum*	A(i)	VU	✓					scarce
Symplocaceae	*Symplocos hiemalis*	A(i)	EN	✓					occasional

GUANAY

Authors: Maira T. Martinez-Ugarteche, Alfredo F. Fuentes, Elmer Cuba-Orozco, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA058	Department/ Province	La Paz: Larecaja
Latitude	-15.86800	Longitude	-67.98765
Minimum altitude (m.a.s.l.)	607	Maximum altitude (m.a.s.l.)	4,354
Area (km^2)	1,110	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(iii)



Site Description

The Guanay IPA site overlaps with the boundary of the Guanay Natural Area of Integrated Management, which encompasses 32% of the eponymous municipality, located in the Larecaja province. Guanay has an altitudinal range from 600 to 4,354 m.a.s.l. It has a highly variable climate, ranging from a warm lowland climate in the northeast to a cold high-mountain climate in the southwest of the municipality. The average annual precipitation is estimated to vary from 780 to 1,200 mm, depending on the elevation (Cuba 2021).

Botanical Significance

As indicated previously, the Guanay IPA site has a wide altitudinal gradient and with it a landscape and habitat with high plant diversity. Evidence of this is its significant number of range-restricted endemic species and its plant diversity, recently documented through floristic inventories in some areas (MBG-BO 2025). Species such as *Elleanthus yungasensis*, *Pelexia yungasensis*, and *Stelis brittoniana* are restricted and known only from this IPA site. The site also has a significant number of globally threatened species. Among these is

IPA Assessment – Rationale

One of the arguments for designating Guanay as an IPA is the good state of conservation of its forests, as it is considered that 80% of the forests in the Guanay Natural Area of Integrated Management are intact (Conservación Internacional 2021). Within these forests live globally threatened species, range-restricted and potentially threatened endemics, and plants of socioeconomic importance. Guanay contains 17 globally threatened species, three nationally threatened species, and 19 endemic range-restricted and potentially threatened species. The site has a total of 57 endemic species, including the threatened, range-restricted, and some lacking an IUCN evaluation.

The site also contains 204 species of socioeconomic importance, which constitute 6.2% of the total useful plants documented nationwide.

Montane Forest © MBG-Bolivia/Alfredo Fuentes

Aulonemia boliviana (EN), an endemic bamboo that grows in humid Yungas forests (Renvoize 1998). Another species is *Oreopanax ilicifolius* (EN), which has more than 50% of its population within this IPA site and grows in *Polylepis* Yungas forests. *Solanum macbridei* (VU) is another native species, shared with Peru, but which grows in the highest elevation, in the humid grasslands of the Humid Puna (Knapp 2013). Furthermore, Guanay stands out for its the high number of species with socioeconomic importance, totaling 204, or 6.2% of the species documented as useful plants for the country. One of the genera that stands out for its number of useful species is *Solanum*, with a total of 10 (Appendix 3).

Habitat and Geology

Physiographically, Guanay is found in the Eastern Cordillera, dominated by mountains and serranías, and includes the Northern Puna and Yungas ecoregions (Ibisch *et al.* 2003). Due to the existence of a wide altitudinal range and complex orography, the site includes a great variety of vegetation types, ranging from Amazonian forests and dry forests in the lowlands, through seasonal humid forests, basal montane, montane, and altimontane

Masdevallia exquisita © MBG-Bolivia/Alfredo Fuentes

Symbolanthus australis © MBG-Bolivia/Alfredo Fuentes

Miconia biacuta © MBG-Bolivia/Alfredo Fuentes

Centropogon gloriosus © ALWA Turismo Sostenible

pluvial forests, *Polylepis* forests, up to High Andean grasslands (pajonales) of the Humid Puna in the highest parts (Navarro & Ferreira 2007).

According to the classification of vegetation and Ecological Systems of Bolivia (Navarro & Ferreira 2011, Navarro 2011) and the IUCN habitat classification system (IUCN 2012), the habitat with the greatest extension within the IPA site is the Subtropical/Tropical Montane Humid Forest. This is comprised of altimontane forests, High Andean Yungas forests, among others (Navarro 2011) (Appendix 2).

Conservation Challenges

The Guanay Natural Area of Integrated Management was created in 2021, with the purpose to conserve its montane forest ecosystems, its biological diversity, protecting its water sources, and to maintain connectivity between the protection of its forests and its biodiversity (Conservación Internacional 2021). Guanay is also designated a KBA and forms part of the Madidi-Pilón Lajas-Cotapata priority corridor (Conservación Internacional 2021). Now, for the first time here is showcased its botanical richness: its high number of endemic species, species at-risk-of-extinction, and socioeconomically important plants and the good state of conservation of most of its ecosystems.

Guanay represents an important conservation site and, above all, a site for effective management and for improving its administration as a protected area. Although its administration and creation are driven by the Guanay municipality, expanding and strengthening its conservation will achieve greater effectiveness for biodiversity.

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Montane Forest	65	Major
Subtropical/Tropical Moist Lowland Forest	34	Major
Subtropical/Tropical Dry Forest	1	Major
Subtropical/Tropical High Altitude Grassland	–	Major

Threat		
Threat	**Severity**	**Situation**
Small-holder farming	Medium	Ongoing - stable
Small-holder grazing, ranching or farming	Medium	Ongoing - stable
Subsistence/artisanal aquaculture	Medium	Ongoing - trend unknown
Mining	High	Ongoing - trend unknown

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	100	Major
Agriculture (arable)	6	Major
Agriculture (pastoral)	—	Major
Residential/urban development	1	Minor
Forestry	—	Minor
Tourism/recreation	—	Major

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	ANMI Guanay	Protected/conservation area matches IPA (100%)	1,110
Key Biodiversity Area	KBA Guanay	Protected/conservation area matches IPA (100%)	1,106

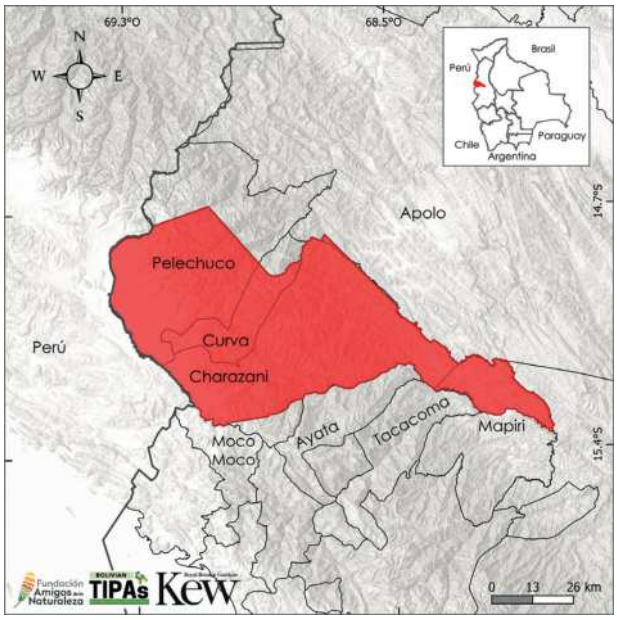
IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Ruellia haenkeana f. lutea*	A(iii)	NE	✓	✓		✓		unknown
Araliaceae	*Oreopanax ilicifolius*	A(i)	EN	✓	✓	✓	✓		scarce
Araliaceae	*Hydrocotyle pseudoboliviana*	A(iii)	NE	✓	✓	✓	✓		unknown
Araliaceae	*Oreopanax thaumasiophyllus*	A(i)	EN	✓	✓		✓		frequent
Asteraceae	*Critoniopsis jubifera*	A(i)	VU	✓	✓				occasional
Campanulaceae	*Centropogon bangii*	A(ii), A(iii)	VU	✓	✓		✓		unknown
Campanulaceae	*Centropogon gloriosus*	A(i)	EN	✓	✓				occasional
Chloranthaceae	*Hedyosmum maximum*	A(i)	VU	✓	✓		✓		occasional
Cunoniaceae	*Weinmannia bangii*	A(ii), A(iii)	VU	✓	✓				unknown
Ericaceae	*Diogenesia racemosa*	A(ii), A(iii)	EN	✓					unknown
Ericaceae	*Rusbya taxifolia*	A(iii)	NE	✓	✓	✓	✓		unknown
Gentianaceae	*Symbolanthus australis*	A(i)	VU	✓	✓				occasional

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Lauraceae	*Persea bilocularis*	A(i)	EN	✓	✓				occasional
Melastomataceae	*Meriania boliviensis*	A(i)	EN	✓	✓		✓		scarce
Melastomataceae	*Miconia amissa*	A(iv)	DD	✓	✓	✓	✓		occasional
Melastomataceae	*Miconia biacuta*	A(i)	EN	✓	✓				occasional
Melastomataceae	*Miconia yungasensis*	A(iii)	NE	✓	✓		✓		unknown
Melastomataceae	*Miconia neei*	A(i)	VU	✓	✓				occasional
Moraceae	*Pseudolmedia boliviana*	A(i)	EN	✓	✓		✓		occasional
Orchidaceae	*Dichaea hamata*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Elleanthus yungasensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Pelexia yungasensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis brittoniana*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Masdevallia exquisita*	A(iii)	NE	✓	✓	✓	✓		unknown
Oxalidaceae	*Oxalis yungasensis*	A(iv)	NE	✓	✓		✓		unknown
Pentaphylacaceae	*Ternstroemia polyandra*	A(i)	VU	✓	✓				occasional
Piperaceae	*Peperomia nudicaulis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Piperaceae	*Piper bolivianum*	A(i)	VU	✓					scarce
Poaceae	*Aulonemia boliviana*	A(i)	EN	✓	✓		✓		occasional
Poaceae	*Merostachys nigricans*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Polypodiaceae	*Grammitis contacta*	A(iv)	NE	✓	✓		✓		unknown
Polypodiaceae	*Grammitis praeceps*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Rubiaceae	*Coussarea boliviensis*	A(i)	VU	✓	✓	✓	✓		occasional
Rubiaceae	*Sabicea boliviensis*	A(iii)	NE	✓	✓		✓		unknown
Solanaceae	*Solanum macbridei*	A(i)	VU	✓					occasional
Symplocaceae	*Symplocos debilis*	A(i)	VU	✓	✓		✓		occasional

APOLOBAMBA NATIONAL NATURAL AREA OF INTEGRATED MANAGEMENT

Authors: Maira T. Martinez-Ugarteche, Alfredo F. Fuentes, Alejandro Araujo-Murakami, Elmer Cuba-Orozco, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA059	Department/ Province	La Paz: Franz Tamayo, Bautista Saavedra, Larecaja
Latitude	-15.03504	Longitude	-68.86482
Minimum altitude (m.a.s.l.)	344	Maximum altitude (m.a.s.l.)	5,861
Area (km^2)	4,742	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)



IPA Assessment – Rationale

The IPA site Apolobamba National Natural Area of Integrated Management (ANMIN) is an exceptionally rich and diverse site in plants, many with great socioeconomic value, and some are globally threatened endemic plant species. It is among the IPA sites in Bolivia that meet all subcriteria A and two of the three subcriteria B.

The site hosts 97 globally threatened species, 17 nationally threatened species, 69 highly restricted and potentially threatened endemic species, and 37 range-restricted endemics. This totals 220 endemic species, 8% of the recognised Bolivian endemism.

The site also features 786 species of plants of socioeconomic importance, which represent 24.2% of the total useful plants documented for the country.

Site Description

The limits of the IPA site are based on those of the ANMIN Apolobamba, which is located in the far west of the La Paz department, in the Bautista Saavedra, Franz Tamayo, and Larecaja provinces, and bordering Peru to the west. Apolobamba has an altitudinal range from 6,000 to 800 m.a.s.l. The Apolobamba mountain range features glaciers such as Cololo, Huila Kollo, and Chaupi Orko, from which rivers pour their waters into the Amazonian basin (La Región 2015).

Given its biological diversity, numerous threatened and restricted plant species, the emblematic wild vicuñas (*Vicugna vicugna*), and characteristic regional fauna species, the site was designated as a Key Biodiversity Area (KBA 2025f).

Botanical Significance

Of the 108 globally threatened or species at-risk-of-extinction plant within Apolobamba IPA 82 species are endemic. Among those in the Critically Endangered (CR) category are *Freziera apolobambensis*, with its entire population within

The upper part of the Pelechuco Puna © Viviana Albarracín

this site, *Carex lapazensis*, *Hippeastrum mariani-savielloi*, *H. scopulorum*, and *Neocuatrecasia feuereri*. These latter three also concentrate their populations in this site, while the Endangered (EN) species highlight trees that are characteristic of well-conserved forests, species such as *Oreopanax boliviensis*, *O. ilicifolius*, *O. pentlandianus*, *O. ruizii*, *Polylepis pacensis*, *P. pepei*, *P. triacontandra*, and *Sciodaphyllum buchtienii*, the latter having 97% of its population within the IPA site.

Another important group are the Vulnerable (VU) species, including herbaceous plants including *Justicia yungensis*, *Macrocarpaea bangiana*, *M. cinchonifolia*, *M. cochabambensis*, *Miconia cinnabarina*, *M. dimorphotheca*, *M. mandonii*, *M. neei*, *M. recondita*, and *Philibertia peduncularis*. In addition to the threatened and endemic species, the site is home to 18 plant species categorised as Data Deficient (DD) or Near Threatened (NT), all endemic and some with a significant part of

Hippeastrum mariani-savielloi © MBG-Bolivia/Roberto Vásquez

Critoniopsis choquetangensis © MBG-Bolivia/Alfredo Fuentes

Barnadesia woodii © MBG-Bolivia/Alfredo Fuentes

Freziera apolobambensis © MBG-Bolivia/Alfredo Fuentes

their population within the Apolobamba IPA site (Appendix 1).

Apolobamba is the fifth richest Bolivian site in socioeconomically important plants, with 787 useful plant species, especially the genus *Miconia* (Melastomataceae) with 16 species, followed by the genus *Anthurium* (Araceae) with 15 and *Baccharis* (Asteraceae) with 12 species. These are only a sample of the great richness of socioeconomically important species that are within this site (Appendix 3).

Habitat and Geology

Apolobamba is located within the Altiplano and Eastern Cordillera of Bolivia. These include mountainous landscapes, serranías, and foothills. The site presents an varied relief with numerous ravines that form small valleys, with steep and rugged slopes. Similarly, owing to glacial melt water, the Apolobamba Cordillera is crossed by ravines that form bodies of open water and flow into the Mapiri River (Amazonian Basin) (SERNAP 2006a).

Apolobamba, is characterized by two ecoregions, Yungas and Northern Puna, and patches of dry valleys corresponding to the Inter-Andean Dry Forests ecoregion (Ibisch *et al.* 2003, SERNAP 2006a). Due to the high altitudinal range, the site is home to wide range of vegetation types, from Sub-Andean Amazonian forests in the lowest parts, dry Yungas forests, seasonal and pluvial Yungas forests in the basal montane, montane, and altimontane zones, up to grasslands, high-altitude wetlands (bofedales), and sub-snowline vegetation of the Puna in the highest parts (Fuentes 2016, Navarro & Ferreira 2007). According to the classification of vegetation and Ecological Systems of Bolivia (Navarro & Ferreira 2011, Navarro 2011) and the IUCN habitat classification system (IUCN 2012), the habitats with the greatest extent in Apolobamba are the Montane Humid Forests and Subtropical/Tropical High-Altitude Grasslands, which together cover 83% of the site.

The Subtropical/Tropical Montane Humid Forest is mainly comprised of altimontane Polylepis forests, pluvial montane forests, the High-altitude Grasslands (=High Andean Grasslands) and the periglacial vgetation of the Humid Puna (Navarro 2011) (Appendix 2).

Conservation Challenges

The ANMIN Apolobamba, which is administered by SERNAP, is a designated Key Biodiversity Area (KBA); it is part of a Ramsar site, and part of the Gloria-Andes Network. Now, thanks to its high botanical diversity, exceptional richness, and high number of species at-risk-of-extinction, Apolobamba is part of the global network of Important Plant Areas (IPA), highlighting its conservation value for plant resources and their ecosystems.

Mining and land-use changes constitute the greatest threat to the large areas of relatively well-conserved forests and savannas. Apolobamba

is also known as one of the protected areas with the greatest impact from gold mining, which has been ongoing for decades but has increased and is affecting rivers and watersheds (CEDIB 2023).

Polylepis pepei forest at Queara © MBG-Bolivia/Alfredo Fuentes

Dry swamp forest, Charazani River © MBG-Bolivia/Alfredo Fuentes

Wet Puna, grassland and bog © MBG-Bolivia/Alfredo Fuentes

Vegetation with *Punotia lagopus* cushion plant, in the Puna at the Ulla Ulla Altiplano ©MBG-Bolivia/Alfredo Fuentes

Sub-Andean Amazonian forest, Paujeyuyo © MBG-Bolivia/ Alfredo Fuentes

Ayata-Cuibajá humid montane forest © MBG-Bolivia/Alfredo Fuentes

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Montane Forest	43	Major
Subtropical/Tropical High Altitude Grassland	40	Major
Subtropical/Tropical Moist Lowland Forest	15	Major
Other	2	Major
Subtropical/Tropical Dry Forest	1	Major

Threat		
Threat	**Severity**	**Situation**
Small-holder farming	Low	Ongoing - stable
Small-holder grazing, ranching or farming	Medium	Ongoing - stable
Mining	High	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	100	Major
Agriculture (arable)	—	Minor
Agriculture (pastoral)	—	Major
Tourism/recreation	—	Major

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
National reserve	ANMIN Apolobamba	Protected/conservation area matches IPA (100%)	4,742
Key Biodiversity Area	KBA Apolobamba	Protected/conservation area matches IPA (100%)	4,738
Ramsar site	Lago Titicaca	IPA overlaps with the protected/conservation area (1%)	197

IPA priority species Criterion A									
Family	Taxon	IPA subcriterion A	IUCN Category	≥1% global population	≥5% national population	1 of 5 best sites at national level	≥10% global population	Entire global population at the site	Abundance at site
Acanthaceae	*Justicia umbricola*	A(i)	EN	✓	✓	✓	✓		frequent
Acanthaceae	*Justicia yungensis*	A(i)	VU	✓	✓		✓		scarce
Acanthaceae	*Justicia yuyoensis*	A(i)	EN	✓	✓		✓		scarce
Acanthaceae	*Ruellia haenkeana* var. *pilosa*	A(iii)	NE	✓	✓	✓	✓		unknown
Amaryllidaceae	*Hippeastrum haywardii*	A(i)	EN	✓	✓		✓		scarce
Amaryllidaceae	*Hippeastrum lapacense*	A(i)	EN	✓	✓	✓	✓		scarce
Amaryllidaceae	*Hippeastrum mariani-savielloi*	A(i)	CR	✓	✓	✓	✓	✓	rare
Amaryllidaceae	*Hippeastrum scopulorum*	A(i)	CR	✓	✓	✓	✓	✓	rare
Amaryllidaceae	*Pyrolirion boliviense*	A(i)	EN	✓	✓	✓	✓		occasional
Apocynaceae	*Mandevilla fragilis*	A(i)	VU	✓	✓	✓	✓		occasional
Apocynaceae	*Oxypetalum pearsonii*	A(i)	VU	✓	✓		✓		scarce
Apocynaceae	*Philibertia peduncularis*	A(i)	VU	✓	✓	✓	✓		occasional
Aquifoliaceae	*Ilex pseudoebenacea*	A(i)	VU	✓	✓	✓	✓		frequent
Araceae	*Anthurium conjunctum*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Araliaceae	*Hydrocotyle longipedunculata*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Araliaceae	*Oreopanax boliviensis*	A(i)	EN	✓	✓	✓	✓		frequent
Araliaceae	*Oreopanax ilicifolius*	A(i)	EN	✓	✓		✓		rare
Araliaceae	*Oreopanax pentlandianus*	A(i)	EN	✓	✓		✓		occasional
Araliaceae	*Oreopanax ruizii*	A(i)	EN	✓					frequent
Araliaceae	*Sciodaphyllum buchtienii*	A(i)	EN	✓	✓	✓	✓		frequent
Aspleniaceae	*Asplenium ayopayense*	A(iv)	NE	✓	✓		✓		unknown
Aspleniaceae	*Asplenium bolivianum*	A(iv)	NE	✓	✓		✓		unknown
Aspleniaceae	*Asplenium herzogii*	A(iii)	NE	✓	✓	✓	✓		unknown
Aspleniaceae	*Blechnum bruneum*	A(iv)	NE	✓	✓	✓	✓		unknown
Aspleniaceae	*Diplazium yuyoense*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Aspleniaceae	*Thelypteris buchtienii*	A(iv)	NE	✓	✓		✓		unknown
Asteraceae	*Ageratina feuereri*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Asteraceae	*Aphanactis boliviana*	A(i)	EN	✓	✓	✓	✓	✓	rare
Asteraceae	*Baccharis longipedicellata*	A(iv)	NE	✓	✓		✓		unknown
Asteraceae	*Barnadesia woodii*	A(i)	EN	✓	✓	✓	✓		occasional
Asteraceae	*Critoniopsis choquetangensis*	A(i)	EN	✓	✓	✓	✓		occasional
Asteraceae	*Dendrophorbium ayopayense*	A(i)	VU	✓	✓		✓		scarce
Asteraceae	*Gynoxys compressissima*	A(i)	VU	✓					occasional
Asteraceae	*Lepidaploa beckii*	A(iv)	NE	✓	✓				unknown
Asteraceae	*Lepidaploa solomonii*	A(iv)	NE	✓	✓		✓		unknown
Asteraceae	*Llerasia macrocephala*	A(i)	VU	✓	✓	✓	✓		occasional

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Asteraceae	*Mikania dictyota*	A(i)	VU	✓	✓		✓		occasional
Asteraceae	*Mikania rubella*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Asteraceae	*Mikania williamsii*	A(i)	EN	✓	✓		✓		occasional
Asteraceae	*Mniodes beckii*	A(iii)	NE	✓	✓		✓		unknown
Asteraceae	*Munnozia rusbyi*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Asteraceae	*Neocuatrecasia feuereri*	A(i)	CR	✓	✓	✓	✓	✓	rare
Asteraceae	*Pentacalia viburnifolia*	A(iii)	NE	✓	✓	✓	✓		unknown
Asteraceae	*Senecio apolobambensis*	A(iv)	NE	✓	✓	✓	✓		unknown
Asteraceae	*Senecio madidiensis*	A(i)	EN	✓	✓		✓		occasional
Asteraceae	*Senecio perezioides*	A(iii)	NE	✓	✓		✓	✓	unknown
Asteraceae	*Senecio potosianus*	A(iv)	NE	✓	✓		✓		unknown
Asteraceae	*Stevia benderi*	A(i)	EN	✓	✓		✓		rare
Begoniaceae	*Begonia galea*	A(iii)	NE	✓	✓		✓		unknown
Brassicaceae	*Brayopsis diapensioides*	A(i)	EN	✓	✓	✓	✓		occasional
Brassicaceae	*Brayopsis gamosepala*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Brassicaceae	*Brayopsis monimocalyx*	A(i)	VU	✓					scarce
Brassicaceae	*Draba quearaensis*	A(iii)	NE	✓	✓	✓	✓		unknown
Brassicaceae	*Polypsecadium apolobamba*	A(iii)	NE	✓	✓		✓	✓	unknown
Bromeliaceae	*Fosterella graminea*	A(iii)	NE	✓	✓	✓	✓		unknown
Bromeliaceae	*Greigia kessleri*	A(i)	VU	✓	✓		✓		occasional
Bromeliaceae	*Puya brittoniana*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Puya ultima*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Bromeliaceae	*Puya cochabambensis*	A(i)	VU	✓	✓	✓	✓		rare
Brunelliaceae	*Brunellia boliviana*	A(ii)	VU	✓	✓	✓	✓		unknown
Burseraceae	*Dacryodes sudyungasensis*	A(i)	VU	✓	✓		✓		occasional
Buxaceae	*Styloceras columnare*	A(i)	EN	✓	✓		✓		scarce
Cactaceae	*Cumulopuntia flexibilispina*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Cactaceae	*Pfeiffera asuntapatensis*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Cactaceae	*Punotia lagopus*	A(i)	VU	✓					occasional
Campanulaceae	*Centropogon magnificus*	A(ii), A(iv)	VU	✓	✓		✓		unknown
Campanulaceae	*Siphocampylus crenatus*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Campanulaceae	*Siphocampylus dubius*	A(ii)	VU	✓	✓		✓		unknown
Campanulaceae	*Siphocampylus membranaceus*	A(ii), A(iv)	CR	✓	✓		✓		unknown
Campanulaceae	*Siphocampylus oblongifolius*	A(ii), A(iv)	EN	✓	✓	✓	✓		unknown
Campanulaceae	*Siphocampylus werdermannii*	A(ii)	VU	✓	✓		✓		unknown
Caprifoliaceae	*Valeriana weddelliana*	A(iii)	NE	✓	✓	✓	✓		unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Caryophyllaceae	*Arenaria andina*	A(iii)	NE	✓	✓		✓		unknown
Caryophyllaceae	*Arenaria stuebelii*	A(iii)	NE	✓	✓	✓	✓		unknown
Caryophyllaceae	*Pycnophyllopsis keraiopetala*	A(i)	EN	✓					occasional
Clusiaceae	*Clusia glauca*	A(i)	EN	✓	✓	✓	✓		rare
Clusiaceae	*Clusia ternstroemioides*	A(i)	EN	✓	✓	✓	✓		frequent
Convolvulaceae	*Ipomoea huayllae*	A(iii)	DD	✓	✓	✓	✓		localized
Costaceae	*Costus alfredoi*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Cunoniaceae	*Weinmannia bangii*	A(ii), A(iii)	VU	✓	✓		✓		unknown
Cunoniaceae	*Weinmannia davidsonii*	A(i)	VU	✓	✓	✓	✓		frequent
Cunoniaceae	*Weinmannia epicae*	A(i)	EN	✓	✓		✓		occasional
Cunoniaceae	*Weinmannia yungasensis*	A(i)	VU	✓					scarce
Cyatheaceae	*Cyathea zongoensis*	A(ii), A(iii)	EN	✓	✓		✓		unknown
Cyperaceae	*Carex lapazensis*	A(i)	CR	✓	✓		✓		scarce
Dioscoreaceae	*Dioscorea rusbyi*	A(i)	CR	✓	✓	✓	✓		rare
Ericaceae	*Orthaea rusbyi*	A(ii), A(iv)	VU	✓	✓	✓	✓	✓	unknown
Ericaceae	*Satyria neglecta*	A(iii)	NE	✓	✓		✓		unknown
Ericaceae	*Siphonandra boliviana*	A(ii), A(iii)	VU	✓	✓	✓	✓	✓	unknown
Ericaceae	*Themistoclesia peruviana*	A(i)	VU	✓				✓	occasional
Ericaceae	*Themistoclesia unduavensis*	A(i)	VU	✓	✓		✓		scarce
Ericaceae	*Thibaudia acacioides*	A(ii), A(iii)	CR	✓	✓		✓		unknown
Ericaceae	*Thibaudia axillaris*	A(ii), A(iii)	VU	✓	✓		✓	✓	unknown
Euphorbiaceae	*Euphorbia beckii*	A(iii)	NE	✓	✓	✓	✓		unknown
Fabaceae	*Dalbergia spruceana*	A(i)	VU	✓				✓	occasional
Fabaceae	*Inga yungasensis*	A(i)	EN	✓	✓	✓	✓		occasional
Fabaceae	*Lupinus chrysanthus*	A(i)	VU	✓					occasional
Gentianaceae	*Gentianella undulatisepala*	A(iii)	DD	✓	✓		✓		scarce
Gentianaceae	*Halenia rusbyi*	A(iii)	NE	✓	✓	✓	✓		unknown
Gentianaceae	*Macrocarpaea bangiana*	A(i)	VU	✓	✓		✓	✓	occasional
Gentianaceae	*Macrocarpaea cinchonifolia*	A(i)	VU	✓	✓				scarce
Gentianaceae	*Macrocarpaea cochabambensis*	A(i)	VU	✓	✓				scarce
Gentianaceae	*Macrocarpaea fuentesii*	A(i)	EN	✓	✓	✓	✓		occasional
Gesneriaceae	*Diastema williamsii*	A(iii)	NE	✓	✓		✓		unknown
Gesneriaceae	*Paradrymonia buchtienii*	A(iii)	NE	✓	✓		✓	✓	unknown
Grossulariaceae	*Ribes steinbachiorum*	A(iv)	NE	✓	✓	✓	✓	✓	unknown
Hymenophyllaceae	*Trichomanes herzogii*	A(iv)	NE	✓	✓		✓		unknown
Lamiaceae	*Salvia amplifrons*	A(i)	EN	✓					rare

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Lauraceae	*Aniba perutilis*	A(i)	VU	✓					occasional
Lauraceae	*Mezilaurus ita-uba*	A(i)	VU	✓					occasional
Lauraceae	*Ocotea comata*	A(i)	VU	✓	✓	✓	✓		occasional
Lauraceae	*Ocotea prunifolia*	A(iv)	DD	✓	✓	✓	✓		rare
Lauraceae	*Ocotea sacculifera*	A(iv)	LC	✓	✓	✓	✓		frequent
Lauraceae	*Ocotea solomonii*	A(i)	EN	✓	✓		✓		scarce
Lauraceae	*Rhodostemonodaphne longiflora*	A(i)	EN	✓	✓		✓		scarce
Magnoliaceae	*Magnolia madidiensis*	A(i)	EN	✓	✓		✓		scarce
Malvaceae	*Nototriche lanata*	A(i)	EN	✓		✓			rare
Malvaceae	*Waltheria ladewii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Melastomataceae	*Axinaea alata*	A(i)	VU	✓	✓		✓		occasional
Melastomataceae	*Axinaea glandulosa*	A(i)	EN	✓					frequent
Melastomataceae	*Axinaea lanceolata*	A(i)	EN	✓					occasional
Melastomataceae	*Brachyotum angustifolium*	A(i)	VU	✓					occasional
Melastomataceae	*Chaetogastra capitata*	A(iv)	NE	✓	✓		✓		unknown
Melastomataceae	*Meriania horrida*	A(iv)	NE	✓	✓		✓		unknown
Melastomataceae	*Miconia biacuta*	A(i)	EN	✓	✓	✓	✓		scarce
Melastomataceae	*Miconia cinnabarina*	A(i)	VU	✓	✓	✓	✓		occasional
Melastomataceae	*Miconia dimorphotheca*	A(i)	VU	✓	✓	✓	✓		frequent
Melastomataceae	*Miconia glomerulifera*	A(i)	EN	✓	✓		✓		scarce
Melastomataceae	*Miconia mandonii*	A(i)	VU	✓	✓	✓	✓		occasional
Melastomataceae	*Miconia neei*	A(i)	VU	✓	✓	✓	✓		occasional
Melastomataceae	*Miconia obliqua*	A(iv)	NE	✓	✓	✓	✓		unknown
Melastomataceae	*Miconia quadrialata*	A(i)	EN	✓	✓		✓		scarce
Melastomataceae	*Miconia recondita*	A(i)	VU	✓	✓	✓	✓		scarce
Meliaceae	*Cedrela fissilis*	A(i)	VU	✓					occasional
Meliaceae	*Cedrela odorata*	A(i)	VU	✓					occasional
Nyctaginaceae	*Neea longipedunculata*	A(i)	EN	✓					scarce
Orchidaceae	*Comparettia splendens*	A(iii)	NE	✓	✓	✓	✓		unknown
Orchidaceae	*Cyrtochilum lapacense*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Dichaea hamata*	A(iv)	NE	✓	✓	✓	✓		unknown
Orchidaceae	*Epidendrum larae*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Fernandezia minor var. breviflora*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Lepanthes herzogii*	A(iii)	NE	✓	✓	✓	✓		unknown
Orchidaceae	*Oncidium vierlingii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Pabstiella glandulipetala*	A(iii)	NE	✓	✓	✓	✓	✓	unknown

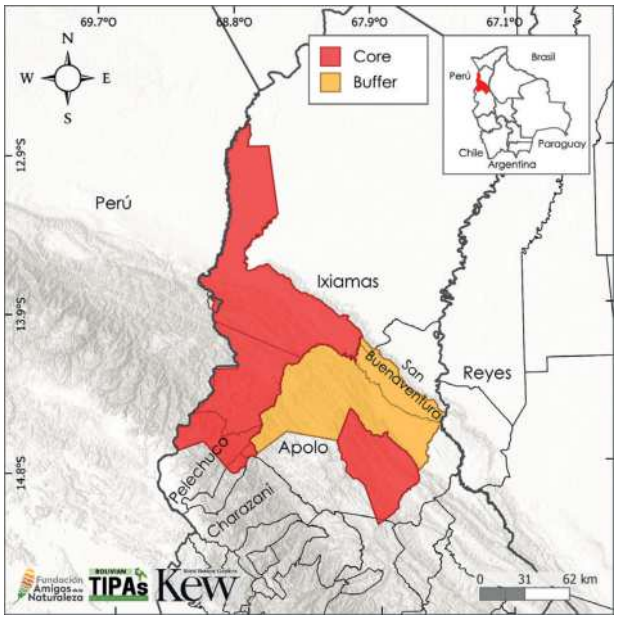
IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Orchidaceae	*Pterichis fuentesii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Pterichis lunatilabia*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Pterichis obcordatilabia*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Pterichis vasquezii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis cavatella*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis saavedrensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis sagittosa*	A(iii)	NE	✓	✓	✓	✓		unknown
Orchidaceae	*Stenia nataliana*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Trichosalpinx tenuiflora*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Oxalidaceae	*Biophytum mapirense*	A(iv)	NE	✓	✓		✓		unknown
Passifloraceae	*Passiflora buchtienii*	A(i)	VU	✓	✓				scarce
Passifloraceae	*Passiflora joergenseniana*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Passifloraceae	*Passiflora macropoda*	A(ii), A(iv)	EN	✓	✓		✓		unknown
Pentaphylacaceae	*Freziera apolobambensis*	A(i)	CR	✓	✓	✓	✓	✓	occasional
Pentaphylacaceae	*Freziera erickitae*	A(i)	EN	✓	✓	✓	✓		rare
Pentaphylacaceae	*Ternstroemia polyandra*	A(i)	VU	✓	✓				scarce
Piperaceae	*Peperomia pseudocobana*	A(iv)	NE	✓	✓		✓		unknown
Piperaceae	*Peperomia purpureonervosa*	A(iii)	NE	✓	✓		✓		unknown
Piperaceae	*Peperomia williamsii*	A(iv)	NE	✓	✓	✓	✓		unknown
Piperaceae	*Piper peltilimbum*	A(i)	VU	✓	✓				scarce
Piperaceae	*Piper punctulantherum*	A(iv)	NE	✓	✓		✓		unknown
Piperaceae	*Piper semimetrale*	A(i)	EN	✓	✓		✓		scarce
Poaceae	*Arthrostylidium canaliculatum*	A(i)	EN	✓	✓	✓	✓		occasional
Poaceae	*Aulonemia boliviana*	A(i)	EN	✓	✓		✓		occasional
Poaceae	*Aulonemia insignis*	A(iv)	DD	✓	✓		✓		occasional
Poaceae	*Axonopus andinus*	A(i)	EN	✓	✓		✓		scarce
Poaceae	*Cinnagrostis hirsuta*	A(i)	EN	✓	✓		✓		rare
Poaceae	*Olyra buchtienii*	A(iv)	NE	✓	✓	✓	✓		unknown
Podocarpaceae	*Podocarpus rusbyi*	A(i)	VU	✓					occasional
Polygalaceae	*Monnina arbutus*	A(ii)	EN	✓	✓		✓		unknown
Polypodiaceae	*Grammitis comosa*	A(iv)	NE	✓	✓	✓	✓		unknown
Polypodiaceae	*Grammitis kalawayae*	A(iv)	NE	✓	✓		✓		unknown
Polypodiaceae	*Grammitis labiakii*	A(iii)	NE	✓	✓		✓		unknown
Polypodiaceae	*Grammitis setosora*	A(iii)	NE	✓	✓		✓		unknown
Polypodiaceae	*Grammitis simacensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Polypodiaceae	*Polystichum albomarginatum*	A(iv)	NE	✓	✓		✓		unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Polypodiaceae	*Serpocaulon silvulae*	A(iv)	NE	✓	✓		✓		unknown
Rosaceae	*Polylepis pacensis*	A(i)	EN	✓	✓				scarce
Rosaceae	*Polylepis pepei*	A(i)	EN	✓					occasional
Rosaceae	*Polylepis triacontandra*	A(i)	EN	✓					frequent
Rosaceae	*Rubus ostrinus*	A(iv)	NE	✓	✓		✓		unknown
Rubiaceae	*Coussarea boliviensis*	A(i)	VU	✓	✓				scarce
Rubiaceae	*Palicourea madidiensis*	A(i)	VU	✓	✓	✓	✓		occasional
Rubiaceae	*Palicourea scabrifolia*	A(ii), A(iv)	EN	✓	✓	✓	✓		unknown
Rubiaceae	*Palicourea valida*	A(iii)	NE	✓	✓	✓	✓		unknown
Rutaceae	*Zanthoxylum aculeatissimum*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Santalaceae	*Phoradendron buchtienii*	A(iv)	NE	✓	✓	✓	✓		unknown
Selaginellaceae	*Selaginella alampeta*	A(iii)	NE	✓	✓	✓	✓		unknown
Solanaceae	*Brugmansia arborea*	A(i)	EW	✓					unknown
Solanaceae	*Brugmansia sanguinea*	A(i)	EW	✓					unknown
Solanaceae	*Lycianthes reflexa*	A(i)	VU	✓	✓				scarce
Solanaceae	*Solanum mapiricum*	A(i)	EN	✓	✓	✓	✓		occasional
Solanaceae	*Solanum monanthemon*	A(i)	EN	✓	✓		✓		occasional
Solanaceae	*Solanum unilobum*	A(i)	VU	✓					occasional
Symplocaceae	*Symplocos debilis*	A(i)	VU	✓	✓		✓		scarce
Symplocaceae	*Symplocos robusta*	A(i)	EN	✓	✓		✓		occasional
Verbenaceae	*Duranta benthamii*	A(iii)	NE	✓	✓	✓	✓		unknown

MADIDI NATIONAL PARK AND INTEGRATED MANAGEMENT NATURAL AREA

Authors: Liliana Arroyo-Herbas, Alfredo F. Fuentes, Freddy S. Zenteno-Ruiz, Alejandro Araujo-Murakami, Elmer Cuba-Orozco, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA060	Department/ Province	La Paz: Franz Tamayo, Abel Iturralde, Bautista Saavedra
Latitude	-14.45993	Longitude	-68.11506
Minimum altitude (m.a.s.l.)	166	Maximum altitude (m.a.s.l.)	6,044
Area (km^2)	18,798	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)



Site Description

The IPA site, Madidi National Park and Natural Area of Integrated Management (ANMIN), is the third largest protected area in Bolivia, located in the northwest of La Paz department, with an altitudinal range between 166 to 6,044 m.a.s.l. It extends across the provinces of Franz Tamayo, Abel Iturralde, and Bautista Saavedra and borders the Tambopata Natural Reserve and the Bahuaja Sonene National Park of Peru to the west (SERNAP 2006b). The unique intersection of factors within this protected area — its vast scale, broad altitudinal gradient, and well-preserved ecosystems, accounts for its exceptional biodiversity. By spanning both the Amazon and the Tropical Andes, the site ranks among the most biodiverse regions globally (Fuentes 2018).

IPA Assessment – Rationale

Madidi qualifies as an IPA site by the presence of large expanses of well-conserved ecosystems such as High Andean vegetation, Montane Yungas forests, Amazonian forests, and Dry forests (Navarro & Ferreira 2007). Along a wide and continuous altitudinal vegetation gradient, these vegetation types safeguard 416 endemic plant species, representing 16% of national endemism. The site also contains 143 globally threatened species, of which 106 species are endemic to the country. The site further includes 18 nationally threatened species and 50 range-restricted and potentially threatened species.

In addition to the endemic species, the site protects 1,432 useful plants, representing 43% of the useful plant species documented for Bolivia, including 47 species of wild relatives of crops such as tobacco, potato, oca, and chili peppers.

The IPA site is composed of the core zone, which exactly coincides with the limits of the National Park, and the buffer zone, which comprises the Natural Area of Integrated Management. Indigenous peoples of Tacana, Leco, and Quechua origin inhabit the site (Salinas & Wallace 2012).

Botanical Significance

The botanical importance of the IPA is thanks to the 416 endemic plant species protected in

Humid montane forest, Queara Tocoaque © MBG-Bolivia/ Alfredo Fuentes

The Resina dry forest along the Tuichi River © MBG-Bolivia/ Alfredo Fuentes

the area. These represent 16% of the national plant endemism. Among these, *Campomanesia madidiensis* (EN), *Hippeastrum paquichanum* (CR), *Justicia kessleri* (VU), and *Weinmannia yungasensis* (VU) are globally threatened. It also shelters species such as *Weinmannia bangii* (VU), *Cyathea bettinae* (VU), and *Brunellia boliviana* (VU), which are nationally threatened and 1% of their national population is found in the site.

Furthermore, the site is one of the best sites nationally for species like *Bauhinia tuichiensis* (EN), *Cinchona anderssonii* (EN), *Hippeastrum lapacense* (EN), *Weinmannia yungasensis* (EN), *Weberbauerocereus madidiensis* (EN), and *Passiflora madidiana* (EN), as more than 50% of their populations are found within the IPA site.

Other important species are *Fosterella pearcei* (NE), *Piper tumupasense* (NE), and *Puya reducta* (LC), which, although not globally or nationally threatened, are restricted in their distribution.

To this number are added 1,433 useful plant species, notably including *Cinchona asperifolia* (EN), *Handroanthus serratifolius* (EN), *Piptadenia buchtienii* (VU), *Clusia pachamamae* (NT), and *Polylepis pepei* (EN), which are endemics of socioeconomic importance and also globally threatened (Appendix 3).

Habitat and Geology

Scenically, the site is characterised by high mountain ranges, deep and wide valleys, areas

Passiflora madidiana © MBG-Bolivia/Alfredo Fuentes

Hippeastrum paquichanum © MBG-Bolivia/Alfredo Fuentes

of steep slopes, and undulating plains belonging to the Eastern Cordillera, Sub-Andean region, and the Chaco-Beniana Plain (SERNAP 2006). The highest mountain ranges are found towards Chokollo in the southwest of the park. Here we find the highest snowcapped mountains between 5,300 and 6,044 m.a.s.l., specifically the Chaupi Orko snow-capped peak (Wallace & Salinas 2020).

Hydrographically, the site is part of the Madre de Dios River basin in the northern zone of the Park, represented by the Heath sub-basin that forms the border with Peru (SERNAP 2006), and the Beni River basin, which is part of the Madidi, Enapurera-Beni, Tuihichi, and Quendene river sub-basins (SERNAP 2006b).

The site belongs to two large biogeographical regions: the Amazonian and the Andean regions (Rivas-Martinez & Navarro 2000, Fuentes 2005). It consists of a mosaic of five ecoregions: Inter-Andean Dry Forests, Northern Puna, Yungas, Southwestern Amazonia, and Cerrado (Ibisch *et al.* 2003). The most representative vegetation types are Amazonian forest, Montane Yungas Forest, bofedales (high-altitude wetlands), pluvial altimontane forest, and grasslands (pajonales) (Navarro & Ferreira 2011, Navarro 2011, Appendix 2). Detailed descriptions of the forest vegetation are found in Fuentes (2016). These vegetation types classify as Subtropical/Tropical Dry Forest, Subtropical/Tropical Lowland Moist Forest, Subtropical/Tropical Swamp Forest, and Subtropical/Tropical Montane Moist Forest following the IUCN habitat classification system (IUCN 2012) (Appendix 2).

Weinmannia yungasensis © MBG-Bolivia/Alejandro Araújo

Wet Puna grasslands at Quaera © MBG-Bolivia/Alfredo Fuentes

High-altitude montane forest, Queara, Muñamachay © MBG-Bolivia/Alfredo Fuentes

Seasonally wet Yungas forest, Mojos © MBG-Bolivia/Alfredo Fuentes

Amazonian swamp forest, Chalalan Lagoon © MBG-Bolivia/Alfredo Fuentes

Conservation Challenges

Thanks to its geographical location, this site ranks as one of the most biodiverse protected areas in Bolivia (Wallace *et al.* 2017). It is recognised as an Area of Importance for Bat Conservation (AICOM) with approximately 90 bat species recorded (Siles & Wallace 2019). Furthermore, it is a designated Key Biodiversity Area (KBA) because it protects endangered mammals and other animal species of great importance for global conservation (Porcel *et al.* 2025, KBA 2025g). However, the largest proportion of the human population inhabiting the

Cyathea bettinae © MBG-Bolivia/Alfredo Fuentes

site is concentrated in the valleys. Their principal activities are agriculture and subsistence livestock farming (SEDEI), as well as timber extraction for housing construction (SEDEI), and the extraction of incense for commercialisation (Zenteno-Ruiz 2007). Finally, among the direct threats are illegal mining around the Pelechuco, Hilo Hilo, Mojos Tuichi rivers, road construction, and spontaneous colonisation (SERNAP 2006, Paredes-Tamayo 2024).

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	59	Major
Subtropical/Tropical Moist Montane Forest	28	Major
Subtropical/Tropical Dry Forest	6	Major
Subtropical/Tropical Swamp Forest	3	Major
Wet savanna	2	Major
Subtropical/Tropical High Altitude Grassland	1	Major

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	High	Past - likely to return
Tourism & recreation areas	Medium	Ongoing - stable
Livestock farming & ranching	Medium	Ongoing - trend unknown
Gathering terrestrial plants	Medium	Ongoing - trend unknown
Small-holder farming	Medium	Ongoing - trend unknown
Energy production & mining	High	Ongoing - increasing
Logging & wood harvesting	High	Ongoing - trend unknown

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	90	Major
Agriculture (arable)	—	Minor
Tourism/recreation	—	Minor
Residential/urban development	—	MInor

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
National Park	NP and ANMI Madidi	Protected/conservation area matches IPA (100%)	18,798
Key Biodiversity Area	KBA Madidi-Alto Madidi-Tequeje	Protected/conservation area matches IPA (97%)	18,737
AICOMs: Areas of Importance for the Conservation of Bats	AICOM, PN and ANMI Madidi	Protected/conservation area matches IPA (100%)	18,798

IPA priority species Criterion A									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Acanthaceae	*Justicia beckii*	A(i)	VU	✓					unknown
Acanthaceae	*Justicia fuentesii*	A(i)	EN	✓	✓		✓		occasional
Acanthaceae	*Justicia kessleri*	A(i)	VU	✓	✓		✓		frequent
Acanthaceae	*Justicia kuntzei* subsp. *robusta*	A(iv)	NE	✓	✓		✓	✓	unknown
Acanthaceae	*Ruellia gracilis*	A(i)	VU	✓					unknown
Acanthaceae	*Stenostephanus madidiensis*	A(iii)	DD	✓	✓		✓	✓	unknown
Acanthaceae	*Stenostephanus suburceolatus*	A(i)	EN	✓	✓		✓	✓	frequent
Acanthaceae	*Suessenguthia multisetosa*	A(i)	VU	✓					abundant
Actinidiaceae	*Saurauia rusbyi*	A(i)	VU	✓	✓		✓		unknown
Amaryllidaceae	*Hippeastrum haywardii*	A(i)	EN	✓	✓		✓		occasional
Amaryllidaceae	*Hippeastrum lapacense*	A(i)	EN	✓	✓	✓	✓		unknown
Amaryllidaceae	*Hippeastrum paquichanum*	A(i)	CR	✓	✓		✓	✓	rare
Amaryllidaceae	*Hippeastrum viridiflorum*	A(i)	EN	✓	✓		✓		unknown
Anacardiaceae	*Myracrodruon urundeuva*	A(ii)	VU	✓					unknown
Annonaceae	*Xylopia peruviana*	A(i)	VU	✓		✓			unknown
Apocynaceae	*Ditassa mandonii*	A(i)	EN	✓	✓		✓		occasional
Apocynaceae	*Mandevilla fragilis*	A(i)	VU	✓	✓		✓		unknown
Apocynaceae	*Prestonia boliviana*	A(i)	VU	✓	✓		✓		unknown
Apocynaceae	*Prestonia leco*	A(i)	VU	✓	✓		✓		unknown
Aquifoliaceae	*Ilex pseudoebenacea*	A(i)	VU	✓	✓				unknown
Araceae	*Monstera kessleri*	A(iii)	NE	✓	✓		✓	✓	unknown
Araceae	*Xanthosoma fuentesii*	A(iii)	NE	✓	✓	✓	✓		unknown
Araliaceae	*Dendropanax oblongifolius*	A(i)	VU	✓	✓		✓		unknown
Araliaceae	*Hydrocotyle coriacea*	A(iii)	NE	✓	✓		✓	✓	unknown
Araliaceae	*Oreopanax boliviensis*	A(i)	EN	✓	✓		✓		frequent
Araliaceae	*Oreopanax pentlandianus*	A(i)	EN	✓	✓		✓		unknown
Araliaceae	*Oreopanax ruizii*	A(i)	EN	✓					unknown
Araliaceae	*Oreopanax weberbaueri*	A(i)	EN	✓					unknown
Arecaceae	*Bactris faucium*	A(i)	EN	✓	✓		✓		unknown
Aspleniaceae	*Athyrium latinervatum*	A(iii)	NE	✓	✓		✓	✓	unknown
Aspleniaceae	*Blechnum pazense*	A(iv)	NE	✓	✓		✓	✓	unknown
Aspleniaceae	*Blechnum tomentosum*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Aspleniaceae	*Diplazium bolivianum*	A(iii)	NE	✓	✓		✓		unknown
Aspleniaceae	*Thelypteris aymarae*	A(iii)	NE	✓	✓		✓	✓	unknown
Aspleniaceae	*Thelypteris buchtienii*	A(iv)	NE	✓	✓		✓		unknown
Aspleniaceae	*Thelypteris fasciola*	A(iii)	NE	✓	✓		✓	✓	unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥1% global population	≥5% national population	1 of 5 best sites at national level	≥10% global population	Entire global population at the site	Abundance at site
Aspleniaceae	*Thelypteris lumbricoides*	A(iii)	NE	✓	✓		✓		unknown
Aspleniaceae	*Thelypteris madidiensis*	A(iii)	NE	✓	✓		✓	✓	unknown
Asteraceae	*Amboroa geminata*	A(i)	VU	✓	✓		✓		occasional
Asteraceae	*Ayapanopsis latipaniculata*	A(iii)	NE	✓	✓	✓	✓		unknown
Asteraceae	*Barnadesia woodii*	A(i)	EN	✓	✓	✓	✓		unknown
Asteraceae	*Critoniopsis jubifera*	A(i)	VU	✓	✓	✓	✓		unknown
Asteraceae	*Dendrophorbium acuminatissimum*	A(i)	VU	✓		✓			unknown
Asteraceae	*Dendrophorbium krukoffii*	A(iii)	NE	✓	✓		✓		unknown
Asteraceae	*Dendrophorbium yungasense*	A(i)	EN	✓	✓	✓	✓		unknown
Asteraceae	*Diplostephium cinereum*	A(i)	EN	✓					unknown
Asteraceae	*Gynoxys compressissima*	A(i)	VU	✓					unknown
Asteraceae	*Lepidaploa beckii*	A(iv)	NE	✓	✓				unknown
Asteraceae	*Lepidaploa solomonii*	A(iv)	NE	✓	✓		✓		unknown
Asteraceae	*Llerasia ledifolia*	A(i)	VU	✓					occasional
Asteraceae	*Llerasia macrocephala*	A(i)	VU	✓	✓		✓		unknown
Asteraceae	*Mikania steinbachii*	A(iv)	NE	✓	✓		✓		unknown
Asteraceae	*Onoseris fraterna*	A(iii)	NE	✓	✓		✓		unknown
Asteraceae	*Pentacalia viburnifolia*	A(iii)	NE	✓	✓		✓		unknown
Asteraceae	*Senecio apolobambensis*	A(iv)	NE	✓	✓		✓		unknown
Asteraceae	*Senecio madidiensis*	A(i)	EN	✓	✓		✓		occasional
Asteraceae	*Senecio potosianus*	A(iv)	NE	✓	✓		✓		unknown
Bignoniaceae	*Handroanthus incanus*	A(i)	VU	✓					unknown
Bignoniaceae	*Handroanthus serratifolius*	A(i)	EN	✓		✓			unknown
Brassicaceae	*Brayopsis diapensioides*	A(i)	EN	✓	✓	✓	✓		unknown
Brassicaceae	*Draba quearaensis*	A(iii)	NE	✓	✓	✓	✓		unknown
Bromeliaceae	*Barfussia laxissima*	A(iii)	NE	✓	✓	✓	✓		unknown
Bromeliaceae	*Billbergia microlepis*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Fosterella caulescens*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Fosterella gracilis*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Fosterella graminea*	A(iii)	NE	✓	✓		✓		unknown
Bromeliaceae	*Fosterella pearcei*	A(iv)	NE	✓	✓		✓	✓	unknown
Bromeliaceae	*Puya brittoniana*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Puya fiebrigii*	A(iii)	NE	✓	✓		✓	✓	unknown
Bromeliaceae	*Racinaea pardina*	A(iii)	NE	✓	✓		✓		unknown
Bromeliaceae	*Tillandsia engleriana*	A(i)	CR	✓					unknown
Bromeliaceae	*Werauhia boliviana*	A(iii)	NE	✓	✓		✓	✓	unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Brunelliaceae	*Brunellia boliviana*	A(ii)	VU	✓	✓	✓	✓		unknown
Burseraceae	*Dacryodes sudyungasensis*	A(i)	VU	✓	✓		✓		abundant
Buxaceae	*Styloceras columnare*	A(i)	EN	✓	✓		✓		frequent
Buxaceae	*Styloceras connatum*	A(i)	EN	✓	✓		✓		unknown
Cactaceae	*Cereus yungasensis*	A(iii)	NE	✓	✓	✓	✓	✓	occasional
Cactaceae	*Weberbauerocereus madidiensis*	A(i)	EN	✓	✓		✓	✓	occasional
Calophyllaceae	*Kielmeyera paniculata*	A(i)	VU	✓	✓	✓	✓		frequent
Campanulaceae	*Centropogon magnificus*	A(ii), A(iv)	VU	✓	✓		✓		unknown
Campanulaceae	*Centropogon unduavensis*	A(ii)	VU	✓	✓		✓		unknown
Campanulaceae	*Siphocampylus dubius*	A(ii)	EN	✓	✓		✓		unknown
Campanulaceae	*Siphocampylus membranaceus*	A(ii), A(iv)	CR	✓	✓		✓		unknown
Campanulaceae	*Siphocampylus oblongifolius*	A(ii), A(iv)	EN	✓	✓		✓		unknown
Campanulaceae	*Siphocampylus subcordatus*	A(ii), A(iv)	VU	✓	✓		✓		unknown
Campanulaceae	*Siphocampylus werdermannii*	A(ii)	VU	✓	✓	✓	✓		unknown
Clusiaceae	*Clusia glauca*	A(i)	EN	✓	✓	✓	✓		unknown
Clusiaceae	*Clusia ternstroemioides*	A(i)	EN	✓	✓		✓		unknown
Convolvulaceae	*Ipomoea huayllae*	A(iii)	DD	✓	✓		✓		localized
Convolvulaceae	*Ipomoea opulifolia*	A(i)	VU	✓	✓		✓		unknown
Convolvulaceae	*Ipomoea suburceolata*	A(i)	EN	✓	✓		✓		unknown
Convolvulaceae	*Jacquemontia longipedunculata*	A(iii)	DD	✓	✓		✓	✓	unknown
Cucurbitaceae	*Fevillea anomalosperma*	A(iii)	NE	✓	✓		✓	✓	unknown
Cunoniaceae	*Weinmannia bangii*	A(ii), A(iii)	VU	✓	✓		✓		unknown
Cunoniaceae	*Weinmannia davidsonii*	A(i)	VU	✓	✓		✓		occasional
Cunoniaceae	*Weinmannia epicae*	A(i)	EN	✓	✓	✓	✓		unknown
Cunoniaceae	*Weinmannia yungasensis*	A(i)	VU	✓	✓		✓		frequent
Cyatheaceae	*Cyathea bettinae*	A(ii), A(iii)	VU	✓	✓	✓	✓	✓	unknown
Cyatheaceae	*Cyathea zongoensis*	A(ii), A(iii)	EN	✓	✓	✓	✓		unknown
Cyperaceae	*Carex lapazensis*	A(i)	CR	✓	✓		✓		occasional
Ebenaceae	*Lissocarpa tetramera*	A(i)	VU	✓					unknown
Ericaceae	*Orthaea constans*	A(iv)	NE	✓	✓		✓		unknown
Ericaceae	*Orthaea madidiensis*	A(iii)	NE	✓	✓		✓	✓	unknown
Ericaceae	*Themistoclesia peruviana*	A(i)	VU	✓					unknown
Ericaceae	*Themistoclesia unduavensis*	A(i)	VU	✓	✓		✓		unknown
Erythroxylaceae	*Erythroxylum pauciflorum*	A(ii)	VU	✓	✓		✓		unknown
Euphorbiaceae	*Croton abutilifolius*	A(i)	VU	✓	✓		✓		unknown
Euphorbiaceae	*Manihot condensata*	A(i)	VU	✓	✓		✓		unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥1% global population	≥5% national population	1 of 5 best sites at national level	≥10% global population	Entire global population at the site	Abundance at site
Fabaceae	*Amburana cearensis*	A(i)	EN	✓					unknown
Fabaceae	*Bauhinia tuichiensis*	A(i)	EN	✓	✓		✓	✓	frequent
Fabaceae	*Calliandra chulumania*	A(i)	EN	✓	✓	✓	✓		abundant
Fabaceae	*Canavalia beniensis*	A(i)	VU	✓	✓		✓		unknown
Fabaceae	*Dalbergia spruceana*	A(i)	VU	✓					unknown
Fabaceae	*Inga yungasensis*	A(i)	EN	✓					occasional
Fabaceae	*Lonchocarpus riparius*	A(i)	EN	✓	✓		✓		unknown
Fabaceae	*Lonchocarpus sericophyllus*	A(i)	VU	✓	✓		✓		occasional
Fabaceae	*Luetzelburgia andina*	A(i)	VU	✓	✓		✓		occasional
Fabaceae	*Machaerium subrhombiforme*	A(i)	EN	✓	✓		✓		occasional
Fabaceae	*Mimosa rusbyana*	A(i)	EN	✓	✓		✓		unknown
Fabaceae	*Piptadenia buchtienii*	A(i)	VU	✓	✓		✓		frequent
Fabaceae	*Pterocarpus steinbachianus*	A(i)	VU	✓					unknown
Gentianaceae	*Gentianella stenosepala*	A(iii)	NE	✓	✓		✓	✓	unknown
Gentianaceae	*Macrocarpaea bangiana*	A(i)	VU	✓	✓		✓		frequent
Gentianaceae	*Macrocarpaea cinchonifolia*	A(i)	VU	✓	✓		✓		frequent
Gentianaceae	*Macrocarpaea cochabambensis*	A(i)	VU	✓	✓		✓		unknown
Gentianaceae	*Macrocarpaea fuentesii*	A(i)	EN	✓	✓	✓	✓		unknown
Gesneriaceae	*Columnea ultraviolacea*	A(ii), A(iv)	CR	✓	✓		✓		unknown
Grossulariaceae	*Ribes steinbachiorum*	A(iv)	NE	✓	✓		✓		unknown
Humiriaceae	*Vantanea compacta* subsp. *microcarpa*	A(iii)	NE	✓	✓		✓	✓	unknown
Hymenophyllaceae	*Hymenophyllum jimenezii*	A(iii)	NE	✓	✓		✓	✓	unknown
Hymenophyllaceae	*Trichomanes herzogii*	A(iv)	NE	✓	✓		✓		unknown
Isoetaceae	*Isoetes herzogii*	A(i)	VU	✓	✓	✓	✓		unknown
Lamiaceae	*Aegiphila buchtienii*	A(i)	VU	✓	✓		✓		abundant
Lauraceae	*Aniba perutilis*	A(i)	VU	✓					unknown
Lauraceae	*Mezilaurus ita-uba*	A(i)	VU	✓					unknown
Lauraceae	*Ocotea comata*	A(i)	VU	✓	✓		✓		abundant
Lauraceae	*Ocotea illustris*	A(iii)	DD	✓	✓		✓	✓	unknown
Lauraceae	*Ocotea micrantha*	A(i)	EN	✓	✓		✓		frequent
Lauraceae	*Ocotea solomonii*	A(i)	EN	✓	✓				unknown
Lauraceae	*Ocotea stenophylla*	A(i)	EN	✓	✓		✓		unknown
Lauraceae	*Persea buchtienii*	A(i)	VU	✓	✓		✓		unknown
Lauraceae	*Rhodostemonodaphne longiflora*	A(i)	EN	✓	✓	✓	✓		unknown
Loasaceae	*Caiophora pedicularifolia*	A(iv)	NE	✓	✓		✓		unknown
Loranthaceae	*Tristerix rhodanthus*	A(iii)	NE	✓	✓		✓	✓	unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Lythraceae	*Cuphea nivea*	A(ii), A(iii)	CR	✓	✓		✓	✓	unknown
Magnoliaceae	*Magnolia boliviana*	A(i)	EN	✓	✓		✓		unknown
Magnoliaceae	*Magnolia madidiensis*	A(i)	EN	✓	✓		✓		scarce
Malvaceae	*Hibiscus benensis*	A(i)	EN	✓	✓		✓		unknown
Malvaceae	*Hibiscus manuripiensis*	A(iii)	DD	✓	✓		✓		unknown
Melastomataceae	*Axinaea glandulosa*	A(i)	EN	✓					unknown
Melastomataceae	*Axinaea lanceolata*	A(i)	EN	✓		✓			unknown
Melastomataceae	*Bellucia beckii*	A(i)	VU	✓		✓			unknown
Melastomataceae	*Bellucia gracilis*	A(i)	VU	✓	✓		✓		occasional
Melastomataceae	*Brachyotum angustifolium*	A(i)	VU	✓		✓			unknown
Melastomataceae	*Desmoscelis calcarata*	A(iv)	NE	✓	✓		✓		unknown
Melastomataceae	*Henriettea boliviensis*	A(i)	VU	✓	✓		✓		occasional
Melastomataceae	*Meriania horrida*	A(iv)	NE	✓	✓		✓		unknown
Melastomataceae	*Meriania pulcherrima*	A(i)	EN	✓	✓		✓		frequent
Melastomataceae	*Miconia amabilis*	A(i)	VU	✓	✓		✓		unknown
Melastomataceae	*Miconia biacuta*	A(i)	EN	✓	✓		✓		scarce
Melastomataceae	*Miconia cinnabarina*	A(i)	VU	✓	✓		✓		unknown
Melastomataceae	*Miconia dimorphotheca*	A(i)	VU	✓	✓		✓		frequent
Melastomataceae	*Miconia glomerulifera*	A(i)	EN	✓	✓		✓		unknown
Melastomataceae	*Miconia incachacana*	A(i)	VU	✓	✓		✓		occasional
Melastomataceae	*Miconia mandonii*	A(i)	VU	✓					occasional
Melastomataceae	*Miconia multiflora*	A(i)	VU	✓					unknown
Melastomataceae	*Miconia neei*	A(i)	VU	✓					frequent
Melastomataceae	*Miconia quadrialata*	A(i)	EN	✓	✓		✓		unknown
Melastomataceae	*Miconia recondita*	A(i)	VU	✓	✓		✓		unknown
Meliaceae	*Cedrela fissilis*	A(i)	VU	✓					unknown
Meliaceae	*Cedrela odorata*	A(i)	VU	✓					unknown
Meliaceae	*Swietenia macrophylla*	A(i)	EN	✓					unknown
Monimiaceae	*Mollinedia steinbachiana*	A(i)	VU	✓	✓		✓		frequent
Moraceae	*Pseudolmedia boliviana*	A(i)	EN	✓	✓	✓	✓		unknown
Myrtaceae	*Campomanesia madidiensis*	A(i)	EN	✓	✓		✓		abundant
Myrtaceae	*Eugenia marlierioides*	A(i)	VU	✓					unknown
Myrtaceae	*Myrcia haenkeana*	A(iv)	NE	✓	✓		✓		unknown
Myrtaceae	*Siphoneugena minima*	A(i)	VU	✓	✓		✓	✓	frequent
Nyctaginaceae	*Neea dimorphophylla*	A(i)	EN	✓	✓		✓		unknown
Nyctaginaceae	*Neea longipedunculata*	A(i)	EN	✓					unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥1% global population	≥5% national population	1 of 5 best sites at national level	≥10% global population	Entire global population at the site	Abundance at site
Ochnaceae	*Ouratea oblongifolia*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Aa trilobulata*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Anathallis gracilenta*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Brachionidium uxorium*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Bulbophyllum bolivianum*	A(iii)	NE	✓	✓	✓	✓		unknown
Orchidaceae	*Cyrtochilum gracielae*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Dichaea hamata*	A(iv)	NE	✓	✓	✓	✓		unknown
Orchidaceae	*Epidendrum larae*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Masdevallia frilehmannii*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Masdevallia omorenoi*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Phragmipedium caudatum*	A(i)	EN	✓					unknown
Orchidaceae	*Pleurothallopsis carnosa*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Sobralia herzogii*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Stelis cauda-equina*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis pertusa*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Stelis soratana*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Stelis vasquezii*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Vitekorchis vasquezii*	A(iv)	NE	✓	✓		✓		unknown
Oxalidaceae	*Biophytum bolivianum*	A(iii)	NE	✓	✓	✓	✓		unknown
Oxalidaceae	*Biophytum mapirense*	A(iv)	NE	✓	✓	✓	✓		unknown
Oxalidaceae	*Oxalis solomonii*	A(iv)	NE	✓	✓		✓		unknown
Oxalidaceae	*Oxalis virgata*	A(iv)	NE	✓	✓		✓		unknown
Oxalidaceae	*Oxalis yungasensis*	A(iv)	NE	✓	✓		✓		unknown
Passifloraceae	*Passiflora buchtienii*	A(i)	VU	✓	✓		✓		unknown
Passifloraceae	*Passiflora madidiana*	A(i)	EN	✓	✓	✓	✓	✓	frequent
Passifloraceae	*Passiflora venosa*	A(ii)	VU	✓	✓		✓		unknown
Pentaphylacaceae	*Freziera alata*	A(i)	VU	✓	✓		✓		unknown
Pentaphylacaceae	*Freziera angulosa*	A(i)	EN	✓	✓		✓		unknown
Pentaphylacaceae	*Freziera uniauriculata*	A(i)	VU	✓					unknown
Pentaphylacaceae	*Ternstroemia polyandra*	A(i)	VU	✓	✓		✓		frequent
Piperaceae	*Peperomia kuntzei*	A(iii)	NE	✓	✓		✓		unknown
Piperaceae	*Peperomia pseudocobana*	A(iv)	NE	✓	✓		✓		unknown
Piperaceae	*Peperomia williamsii*	A(iv)	NE	✓	✓		✓		unknown
Piperaceae	*Piper bolivianum*	A(i)	VU	✓	✓		✓		abundant
Piperaceae	*Piper microtrichum*	A(iv)	NE	✓	✓		✓		unknown
Piperaceae	*Piper peltilimbum*	A(i)	VU	✓	✓		✓		unknown

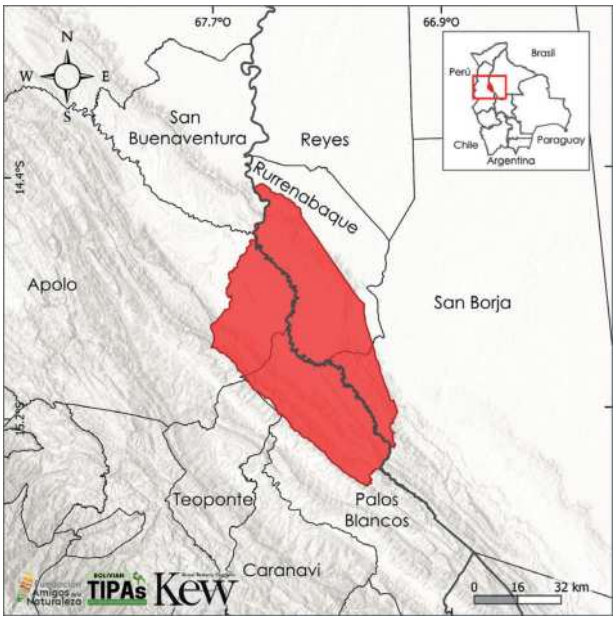
IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Piperaceae	*Piper tumupasense*	A(iv)	NE	✓	✓		✓		unknown
Poaceae	*Aulonemia bromoides*	A(i)	CR	✓	✓		✓	✓	occasional
Poaceae	*Aulonemia fuentesii*	A(iii)	DD	✓	✓		✓	✓	unknown
Poaceae	*Aulonemia insignis*	A(iv)	DD	✓	✓	✓	✓		unknown
Poaceae	*Aulonemia scripta*	A(iii)	DD	✓	✓		✓	✓	unknown
Poaceae	*Chusquea ovatifolia*	A(i)	VU	✓	✓		✓	✓	frequent
Poaceae	*Chusquea parodii*	A(i)	EN	✓	✓	✓	✓		unknown
Poaceae	*Chusquea renvoizei*	A(iii)	DD	✓	✓	✓	✓		unknown
Poaceae	*Merostachys yungasensis*	A(i)	EN	✓	✓		✓		unknown
Podocarpaceae	*Retrophyllum rospigliosii*	A(i)	VU	✓					unknown
Polygalaceae	*Monnina arbutus*	A(ii)	EN	✓	✓		✓		unknown
Polygonaceae	*Triplaris efistulifera*	A(i)	EN	✓	✓		✓		occasional
Polypodiaceae	*Elaphoglossum catenatum*	A(iv)	NE	✓	✓	✓	✓		unknown
Polypodiaceae	*Elaphoglossum cotapatense*	A(iii)	NE	✓	✓	✓	✓		unknown
Polypodiaceae	*Elaphoglossum filipes*	A(iii)	NE	✓	✓	✓	✓		unknown
Polypodiaceae	*Elaphoglossum gonzalesiae*	A(iv)	NE	✓	✓	✓	✓		unknown
Polypodiaceae	*Elaphoglossum madidiense*	A(iii)	NE	✓	✓		✓	✓	unknown
Polypodiaceae	*Elaphoglossum mandonii*	A(iii)	NE	✓	✓		✓	✓	unknown
Polypodiaceae	*Grammitis comosa*	A(iv)	NE	✓	✓		✓		unknown
Polypodiaceae	*Grammitis contacta*	A(iv)	NE	✓	✓		✓		unknown
Polypodiaceae	*Grammitis jimenezii*	A(iii)	NE	✓	✓		✓		unknown
Polypodiaceae	*Grammitis kalawayae*	A(iv)	NE	✓	✓		✓		unknown
Polypodiaceae	*Polystichum albomarginatum*	A(iv)	NE	✓	✓		✓		unknown
Polypodiaceae	*Polystichum lepidotum*	A(iii)	NE	✓	✓		✓		unknown
Polypodiaceae	*Serpocaulon silvulae*	A(iv)	NE	✓	✓		✓		unknown
Proteaceae	*Roupala filiflora*	A(i)	VU	✓	✓		✓		unknown
Pteridaceae	*Jamesonia madidiensis*	A(iii)	NE	✓	✓		✓	✓	unknown
Pteridaceae	*Pteris boliviensis*	A(iii)	NE	✓	✓		✓		unknown
Rosaceae	*Polylepis pepei*	A(i)	EN	✓					unknown
Rosaceae	*Polylepis triacontandra*	A(i)	EN	✓					unknown
Rosaceae	*Rubus holtenii*	A(iv)	NE	✓	✓		✓		unknown
Rosaceae	*Rubus ostrinus*	A(iv)	NE	✓	✓		✓		unknown
Rubiaceae	*Cinchona anderssonii*	A(i)	EN	✓	✓	✓	✓	✓	occasional
Rubiaceae	*Cinchona asperifolia*	A(i)	EN	✓	✓	✓	✓		occasional
Rubiaceae	*Coussarea boliviensis*	A(i)	VU	✓	✓	✓	✓		frequent
Rubiaceae	*Gonzalagunia whitei*	A(iii)	NE	✓	✓		✓		unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥1% global population	≥5% national population	1 of 5 best sites at national level	≥10% global population	Entire global population at the site	Abundance at site
Rubiaceae	*Manettia tomentosa*	A(iv)	NE	✓	✓		✓		unknown
Rubiaceae	*Palicourea madidiensis*	A(i)	VU	✓	✓		✓		unknown
Rubiaceae	*Simira fragrans*	A(i)	EN	✓	✓		✓		occasional
Santalaceae	*Dendrophthora purpurea*	A(iv)	NE	✓	✓	✓	✓		unknown
Selaginellaceae	*Selaginella bryophila*	A(iii)	NE	✓	✓		✓	✓	unknown
Solanaceae	*Solanum bombycinum*	A(i)	CR	✓	✓		✓	✓	scarce
Solanaceae	*Solanum chmielewskii*	A(i)	EN	✓					unknown
Solanaceae	*Solanum daphnophyllum*	A(i)	VU	✓					unknown
Solanaceae	*Solanum monanthemon*	A(i)	EN	✓	✓		✓		unknown
Symplocaceae	*Symplocos debilis*	A(i)	VU	✓	✓		✓		unknown
Symplocaceae	*Symplocos robusta*	A(i)	EN	✓	✓		✓		unknown
Thymelaeaceae	*Daphnopsis boliviana*	A(i)	EN	✓	✓		✓	✓	unknown
Tofieldiaceae	*Harperocallis longiflora*	A(ii), A(iii)	VU	✓	✓		✓		unknown
Verbenaceae	*Duranta benthamii*	A(iii)	NE	✓	✓	✓	✓		unknown

PILÓN LAJAS BIOSPHERE RESERVE AND ORIGINAL COMMUNAL LANDS

Authors: Maira T. Martinez-Ugarteche, Freddy S. Zenteno-Ruiz, Elmer Cuba-Orozco, Araceli Laura Moya Huanca, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA061	Department/ Province	La Paz: Franz Tamayo, Sud Yungas Beni: José Ballivián
Latitude	-14.9662	Longitude	-67.36089
Minimum altitude (m.a.s.l.)	194	Maximum altitude (m.a.s.l.)	1,988
Area (km^2)	3,918	Qualifying IPA criteria	A(i), A(iii), A(iv), B(iii)



IPA Assessment – Rationale

Botanical attributes, by which Pilón Lajas Biosphere Reserve and Communal Land of Origin (RB-TCO) is considered an IPA site, are the presence of globally threatened, endemic and/or range-restricted species and species of socioeconomic importance. Pilón Lajas harbours 13 globally threatened species, nine of which are endemic. Another six are highly restricted endemics, and two are range-restricted and potentially threatened endemics. The site totals 33 endemic species and 217 useful plant species, which represent 6.7% of the total useful species documented for Bolivia.

Site Description

The limits of the Pilón Lajas IPA site is based on the boundaries of the Pilón Lajas Biosphere Reserve and Communal Land of Origin (RB-TCO) and is found in the southwest of the Beni department (Ballivián-Rurrenabaque-San Borja province) and in the eastern La Paz department (Sud Yungas-Palos Blancos and Franz Tamayo-Apolo provinces). Furthermore, it borders the Madidi Park to the west. The Pilón Lajas Biosphere Reserve and Original Communal Land was created with the objective of preserving biodiversity, ecosystems, and the cultural heritage of the indigenous Tsimané and Mosetene communities inhabiting the reserve. The reserve overlaps 90% with the indigenous territory, having a dual categorisation: as a protected area and as an indigenous territory (SERNAP 2007). Administratively, the area depends on SERNAP and the Consejo Regional Tsimán-Mosetén (CRTM), through a co-management and co-administration between the two (KBA 2025h).

Botanical Significance

Among the threatened species of Pilón Lajas is *Ruellia beniana* which is Critically Endangered (CR). It is a unique and restricted species with its entire population within the site. The species grows on a ridgetop with grasslands and Cerrado elements. The species was recently collected, 22 years after its type collection in 2003. Other Endangered (EN) species are *Guadua chaparensis*, *Hippeastrum lapacense*, *Sida calva*, and *Suessenguthia*

Pilón Lajas River, border between La Paz and Beni © Nicole Cuqui

wenzelii. Of these *H. lapacense* and *S. wenzelii* concentrate 50% of their population within the Pilón Lajas IPA site. Additionally, the site is home to species categorised as Data Deficient (DD): *Hibiscus commixtus* and *Ruellia saccata*, both highly restricted endemic and potentially threatened species. In the case of *R. saccata*, a rare herbaceous species with a small population and restricted to Pilón Lajas. Additionally, the site has 24 endemic species, some considered as being of Least Concern (LC) and others that still lack a formal IUCN evaluation (Priority species table and Appendix 1).

Pilón Lajas also stands out by protecting 217 useful species, with three endemic species and two native species categorised as Globally Vulnerable - *Cedrela odorata* and *Dalbergia spruceana* (Appendix 3). Also worth highlighting is vanilla (*Vanilla pompona*), a species that grows in association with the royal palm (*Mauritia flexuosa*) in wetlands or around water bodies (Laguna Azul, for example).

Habitat and Geology

Physiographically, Pilón Lajas is found in the Sub-Andean region and partly in the Chaco-

Ruellia beniana © Trustees RBG Kew/Maira Martinez

Ruellia saccata © Trustees RBG Kew/Maira Martinez

Beniana Plain (SERNAP 2007, MDSyP 2002). Two ecoregions are present in the site: the Yungas and Southwestern Amazonia (Ibisch *et al.* 2003). It presents serranías with steep slopes and deep valleys and foothills that extend on the eastern side and in the central part.

A foothill plain extends along the banks of the Quiquebey River (SERNAP 2007, KBA 2025h). According to the classification of vegetation and Ecological Systems of Bolivia (Navarro & Ferreira 2011, Navarro 2011) and classification based on the IUCN habitat classification (IUCN 2012), the Pilón Lajas Reserve has the Subtropical/ Tropical Lowland Moist Forest as its main habitat, which is mostly comprised of the seasonally humid Amazonian forest of the Northern Sub-Andean region: *Pentaplaris davidsmithii-Protium altissimum* (*Tetragastris altissima*) series (Navarro 2011) (Appendix 2).

Conservation Challenges

In the Pilón Lajas IPA site tourism is one of the main human activities. However, the site faces external pressures owing to settlements in its surrounding areas, mainly along the Yucumo-Rurrenabaque road. These settlements develop agricultural activities, which generate threats to the native habitats and biodiversity of the reserve. A clear example is the human induced fires of 2023, which spread from these communities, where the expansion of agriculture continues.

Semi-humid forests, Rurrenabaque © Trustees RBG Kew/Maira Martinez

Andean foothill forest by the Quiquebey River © Trustees RBG Kew/Maira Martinez

Grasslands with Cerrado-type vegetation, Rurrenabaque ©Trustees RBG Kew/Maira Martinez

The Colorado River plain, with Andean foothill forest in the background © Trustees RBG Kew/Maira Martinez

Quiquebey River, centre of RB-TCO Pilón Lajas, border between La Paz and Beni © Trustees RBG Kew/Maira Martinez

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	91	Major
Subtropical/Tropical Swamp Forest	8	Major
Subtropical/Tropical Dry Forest	_	Major
Subtropical/Tropical Moist Montane Forest	_	Major

Threat		
Threat	**Severity**	**Situation**
Annual & perennial non-timber crops	Low	Ongoing - stable
Fishing & harvesting aquatic resources	Low	Ongoing - stable
Gathering terrestrial plants	Low	Ongoing - stable
Hunting & collecting terrestrial animals	Low	Ongoing - stable
Logging & wood harvesting	Low	Ongoing - stable
Increase in fire frequency/intensity	High	Past - likely to return
Logging & wood harvesting	High	Ongoing - trend unknown

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	100	Major
Agriculture (arable)	—	Minor
Agriculture (pastoral)	—	Major
Tourism/recreation	—	Major

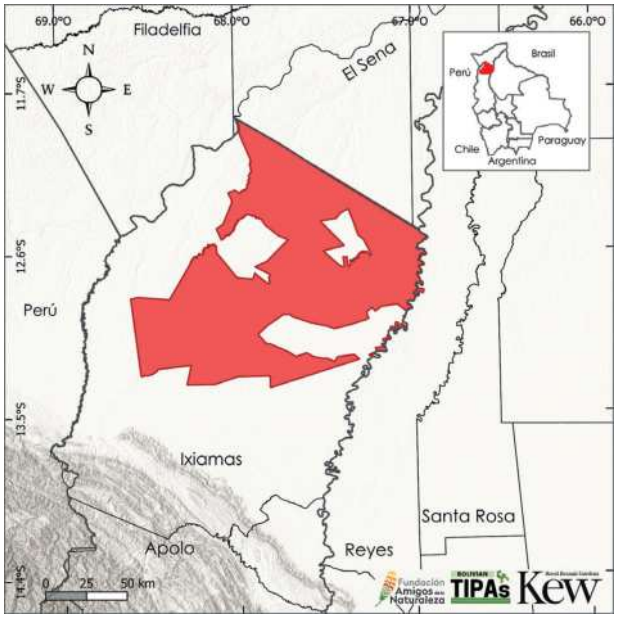
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
National reserve	RB-TCO Pilón Lajas	IPA overlaps with the protected/conservation area (100%)	3,859
Key Biodiversity Area	KBA Pilón Lajas	IPA overlaps with the protected/conservation area (96%)	3,911

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥1% global population**	**≥5% national population**	**1 of 5 best sites at national level**	**≥10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Justicia dryadum*	A(i)	VU	✓	✓		✓		occasional
Acanthaceae	*Ruellia beniana*	A(i)	CR	✓	✓	✓	✓	✓	scarce/localized
Acanthaceae	*Ruellia gracilis*	A(i)	VU						occasional
Acanthaceae	*Ruellia saccata*	A(iii)	DD	✓	✓	✓	✓	✓	scarce/localized
Acanthaceae	*Suessenguthia multisetosa*	A(i)	VU	✓					scarce
Acanthaceae	*Suessenguthia wenzelii*	A(i)	EN	✓	✓	✓	✓		rare
Amaryllidaceae	*Hippeastrum lapacense*	A(i)	EN	✓	✓				scarce
Aspleniaceae	*Thelypteris pilonensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Bromeliaceae	*Fosterella gracilis*	A(iv)	NE	✓	✓		✓		unknown
Convolvulaceae	*Ipomoea opulifolia*	A(i)	VU	✓	✓				occasional
Fabaceae	*Dalbergia spruceana*	A(i)	VU						unknown
Malvaceae	*Hibiscus commixtus*	A(iii)	DD	✓	✓	✓	✓		rare
Malvaceae	*Sida calva*	A(i)	EN	✓	✓		✓		occasional
Meliaceae	*Cedrela odorata*	A(i)	VU						unknown
Myrtaceae	*Eugenia marlierioides*	A(i)	VU						unknown
Ochnaceae	*Ouratea oblongifolia*	A(iii)	NE	✓	✓		✓		occasional
Orchidaceae	*Scelochilus kroemeri*	A(iii)	NE	✓	✓		✓		rare
Poaceae	*Guadua chaparensis*	A(i)	EN	✓	✓	✓	✓		occasional
Polypodiaceae	*Elaphoglossum gonzalesiae*	A(iv)	NE	✓	✓		✓		scarce
Primulaceae	*Cybianthus buchtienii*	A(i)	VU	✓	✓	✓	✓		scarce
Rubiaceae	*Gonzalagunia whitei*	A(iii)	NE	✓	✓		✓		unknown

BAJO MADIDI MUNICIPAL CONSERVATION AND MANAGEMENT AREA

Authors: Maira T. Martinez-Ugarteche, Alejandro Araujo-Murakami, Elmer Cuba-Orozco, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA062	Department/ Province	La Paz: Abel Iturralde
Latitude	-12.74311	Longitude	-67.75609
Minimum altitude (m.a.s.l.)	134	Maximum altitude (m.a.s.l.)	242
Area (km^2)	13,667	Qualifying IPA criteria	A(i), B(iii)



Site Description

The boundaries of the Bajo Madidi IPA site follow the Bajo Madidi Municipal Conservation and Management Area (AMCM-BM) located in the Ixiamas municipality, northern La Paz. The basins of the Madidi, Manurimi, and Manupare rivers are located within this site (KBA 2025i). Bajo Madidi adjoins the Madidi National Park and Natural Area of Integrated Management (NP y ANMI), the municipal protected area Serranía del Tigre - Alto Madidi, the TCOs (*Tierras Comunitarias de Origen*) of the Tacana Indigenous People, Tacana II, and the Araona Nation, with which it forms an important conservation corridor (KBA 2025i).

Botanical Significance

Among the threatened species harboured in Bajo Madidi is *Cedrela longipetiolulata* (EN), a native tree distributed in Peru and Bolivia, where it is threatened by illegal logging and habitat loss (Fernández-Hilario 2024). In Bolivia, the Bajo Madidi IPA site is the only known locality for the species. Locally known as cedro del bajío, the species grows in humid forests (Jorgensen *et al.* 2015 onwards, Araujo-Murakami *et al.* 2020). Other important tree species include *Dipteryx alata* and *Porcelia steinbachii*, both Vulnerable (VU). Additionally, seven endemic species grow in this site, including *Paspalum reticulinerve*, a grass still without an IUCN evaluation. This species is

IPA Assessment – Rationale

The Bajo Madidi Municipal Conservation and Management Area (AMCM-BM) is an IPA site characterised by significant areas of intact forests, the best-conserved Amazonian savanna in the country, and it forms part of an important conservation corridor (KBA 2025i).

Within its boundaries, it safeguards a high diversity of native plants, many with great socioeconomic value and several globally threatened endemic plant species, more specifically five globally threatened and seven endemic species.

In addition to these, the site features 174 species of socioeconomic importance, which represent 5.3% of the useful plants documented for the country.

Tumupasa, road to Ixiamas, lower and upper Madidi © Andrea Soliz

found in open Cerrado and Amazonia (Jorgensen *et al.* 2015 onwards) (Appendix 1).

Bajo Madidi also stands out with its 174 useful plant species. Within this group are 16 palm species, including *Euterpe precatoria* (LC), one of the most important non-timber products in South America and with more than 70 uses in Bolivia and Peru (Paniagua-Zambrana *et al.* 2020). Another species of socioeconomic importance is *Bertholletia excelsa*, the Brazil nut tree, of high importance in the Bolivian Amazon. Furthermore, the presence of Siringa or rubber (*Hevea brasiliensis*) and wild cacao (*Theobroma cacao*) are noteworthy.

Habitat and Geology

Physiographically, the Bajo Madidi site is located on the Chaco-Beniana Plains. Scenically, the site is comprised of plains and lowlands. The Cerrado and Southwestern Amazonia ecoregions can be identified (Ibisch *et al.* 2003). According to the classification of vegetation and Ecological Systems of Bolivia (Navarro & Ferreira 2011, Navarro 2011) and the IUCN habitat classification system (IUCN 2012), this site is mostly covered by the Subtropical/Tropical Lowland Moist Forest and Subtropical/Tropical Swamp Forest, jointly accounting for 65% of the site surface. Another habitat is the Humid Savanna, comprised of the flooded arboreal-shrubby savanna of the Heath-Bajo-Madidi: *Cardiopetalum calophyllum-Xylopia aromatica* series (Navarro 2011) (Appendix 2).

Conservation Challenges

The site features largely intact extensive forests. Furthermore, its natural savannas are considered the best conserved in the country and Amazonia (KBA 2025i). The different botanical attributes of this site and the importance of its ecosystems as a refuge for biodiversity, the different ecosystem services they provide, and the connectivity it affords in the northern La Paz region are strong arguments to support the management and administration of the Bajo Madidi Municipal Conservation and Management Area.

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	45	Major
Wet savanna	26	Major
Subtropical/Tropical Swamp Forest	20	Major
Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	8	Major

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Low	Ongoing - stable
Annual & perennial non-timber crops	Medium	Ongoing - stable
Agro-industry grazing, ranching or farming	High	Ongoing - stable
Increase in fire frequency/intensity	Medium	Past - likely to return
Logging & wood harvesting	Low	Ongoing - trend unknown
Climate change & severe weather - Habitat shifting & alteration	Unknown	Ongoing - trend unknown

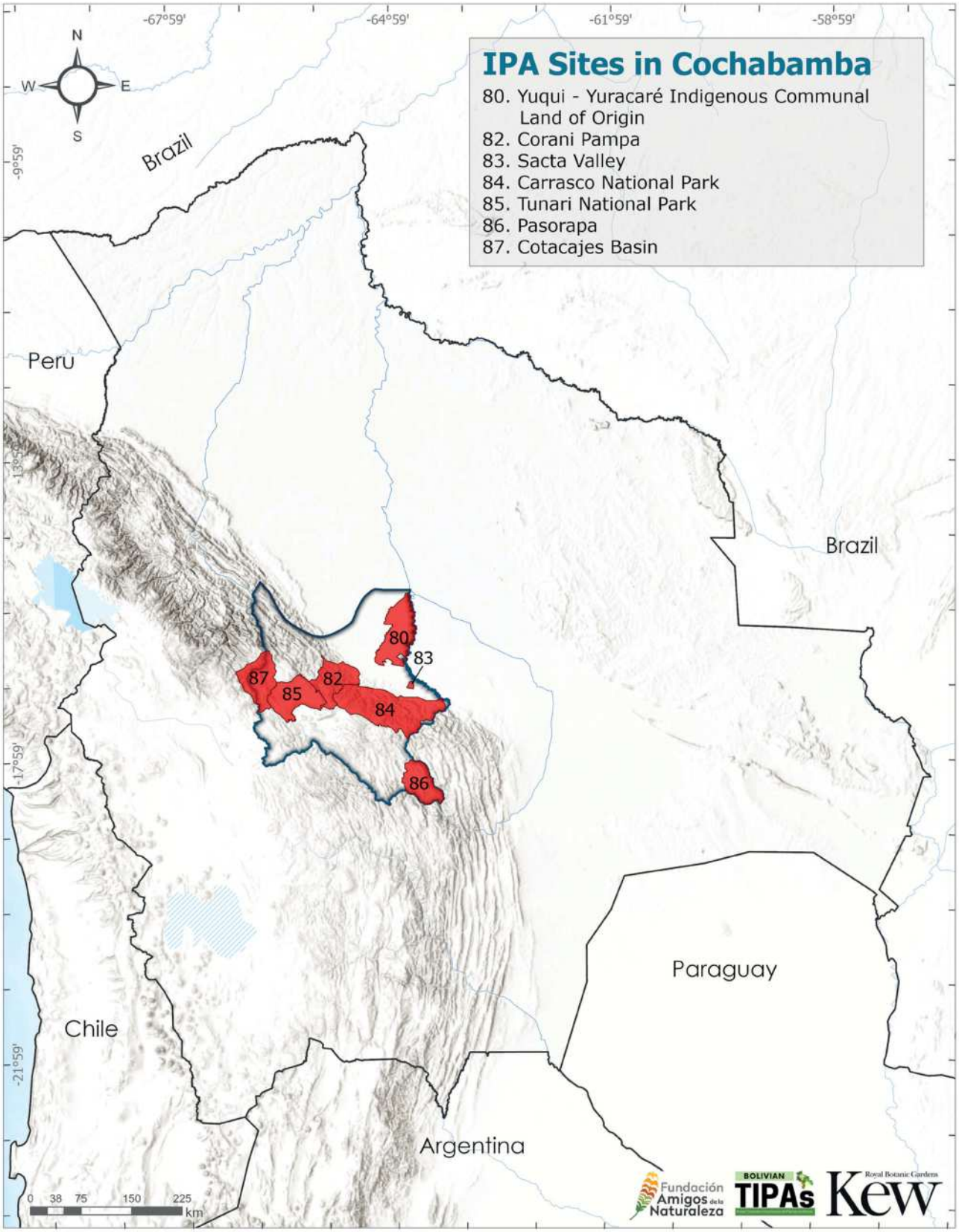
Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	100	Major
Agriculture (arable)	—	Major
Agriculture (pastoral)	—	Major
Forestry	—	Major
Residential/urban development	—	Minor
Harvesting of wild resources	—	Minor

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	(AMCM-BM) Bajo Madidi	Protected/conservation area matches IPA (100%)	13,667
Key Biodiversity Area	KBA Bajo Madidi Ixiamas	Protected/conservation area matches IPA (89%)	13,665

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Annonaceae	*Porcelia steinbachii*	A(i)	VU	✓	✓				escasa
Arecaceae	*Desmoncus latisectus*	A(i)	VU	✓	✓				ocasional
Fabaceae	*Dipteryx alata*	A(i)	VU	✓					ocasional
Malvaceae	*Hibiscus adscensionis*	A(i)	VU	✓	✓	✓	✓		ocasional
Meliaceae	*Cedrela longipetiolulata*	A(i)	EN	✓					escasa

COCHABAMBA

Valleys, canyons, Pasorapa © Daniel Aguilar


IPA Sites in Cochabamba
80. Yuqui - Yuracaré Indigenous Communal Land of Origin
82. Corani Pampa
83. Sacta Valley
84. Carrasco National Park
85. Tunari National Park
86. Pasorapa
87. Cotacajes Basin
-67°59'
-64°59'
-61°59'
-58°59'
-9°59'
-13°59'
-17°59'
-21°59'
N
S
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E
Brazil
Peru
Brazil
Paraguay
Chile
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80
83
87
85
82
84
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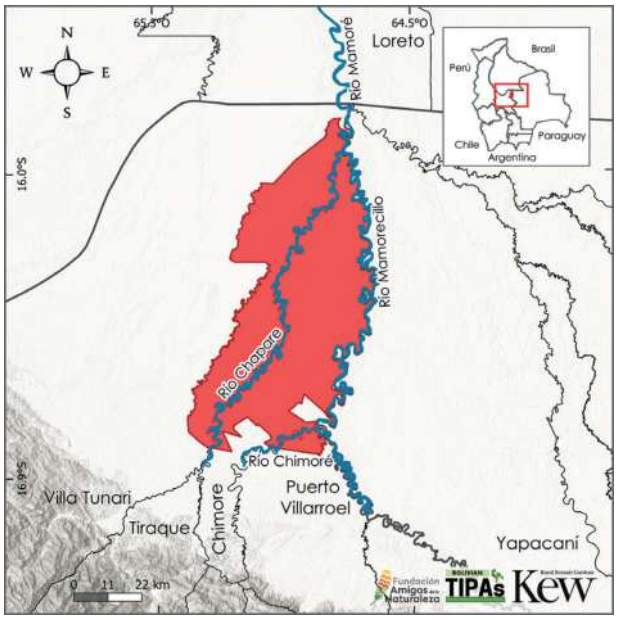
0 38 75 150 225 km
Fundación Amigos de la Naturaleza
BOLIVIAN TIPAs
Royal Botanic Gardens Kew

YUQUI-YURACARÉ INDIGENOUS COMMUNAL LAND OF ORIGIN

Authors: Liliana Arroyo-Herbas, Huber Villca-Corani, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA080	Department/ Province	Cochabamba: Carrasco, Chapare
Latitude	-16.38596	Longitude	-64.90922
Minimum altitude (m.a.s.l.)	137	Maximum altitude (m.a.s.l.)	241
Area (km^2)	3,587	Qualifying IPA criteria	A(i)



IPA Assessment – Rationale

The IPA site is central to the conservation of the territory belonging to the Yuqui and Yuracaré indigenous communities, who constitute an integral element of Bolivia's living cultural heritage. Furthermore, the site safeguards three Bolivian endemic plant species, two of which are globally threatened. It is also home to 23 useful plant species, 13 of which are listed as Least Concern on the global IUCN Red List.

Within the site, many plant species are used by the Yuquis and Yuracarés. They include vital sources of food, tools, traditional medicine, materials for construction, toys, and boats. Currently, these people actively inhabit and safeguard the territory, maintaining sustainable practices that safeguard the ecosystems for future generations.

Site Description

The Yuqui – Yacaré Ingigenous Territory is found in the northeast of the Cochabamba department, spanning 3,587 km^2 across the municipalities of Chimoré, Villa Tunari, and Puerto Villarroel. The site contains the Yuquis, an indigenous people of high vulnerability in ethnocultural terms (Tamburini 2019, Melgar-Ortíz 2025), located along the Chimoré River in the Carrasco province. The Yuracarés, another indigenous group, is located on the upper banks of the tributaries of the Mamoré River, such as the Chaparé, Sécure, Chipiriri, and Ichilo rivers, in the Chaparé province (Mikkelsen 2010, MDRyT 2018b). This is an area of great ecological importance, considered one of the rainiest in the country, where precipitation reaches some of the highest recorded values in Bolivia (Navarro & Maldonado 2002).

Botanical Significance

This area stands out for its high biological diversity which protects two endemic plant species. One of these, *Coccoloba steinbachii* (VU), is globally threatened. Additionally, this site features 23 useful species, including important the palms such as *Bactris gasipaes* (LC), *Iriartea deltoidea* (LC), *Oenocarpus bataua* (LC), *Euterpe precatoria* (LC),

Panoramic view of Yuracaré territory, on the banks of Chapare River © Oliver Mercado

and *Attalea phalerata* (LC) (Montoya-Montaño 2012).

To date, few biological inventories have been conducted in the Yuqui–Yuracaré Indigenous Territory. This reflects the region's sensitivity, stemming from the presence of the Yuqui and Yuracaré peoples, whose spiritual and cultural heritage is a cornerstone of the nation's identity.

Habitat and Geology

The site belongs to the Chaco – Beniana Plain with notable hydrographic and ecological diversity of the converging rivers: the Chaparé, Isiboro Securé, and Ichilo, all belonging to the Mamoré River basin (Pouilly *et al.* 2004).

The region's vegetation comprises evergreen and Amazonian *terra firme* forests, alongside seasonally flooded *várzeas*. According to Ibisch *et al.* (2003), these riparian and flooded forests are characteristic of the Southwestern Amazonia ecoregion. Furthermore, the inclusion of the Andean foothills introduces significant altitudinal

Bactris gasipaes © Trustees RBG Kew/William Milliken

Oenocarpus bataua © Daniela Sasaki

Fruits of *Bactris gasipaes* © Trustees RBG Kew/William Milliken

and ecological gradients to the landscape (Vilca-Corani pers. obs.).

These vegetation types are classified as Subtropical/Tropical Lowland Humid Forest and Subtropical/Tropical Swamp Forest following the IUCN habitat classification system (IUCN 2012) (Appendix 2).

Conservation Challenges

The site is important thanks to the indigenous populations of the Yuquis, who inhabit the site, and who face demographic and territorial vulnerability (OPS/OMS 2012). The Yuracaré also live along the Chapare River basin in small family groups (MDRyT 2018b). The site's botanical diversity remains poorly documented, with existing records largely limited to species used for timber or local consumption. It is highly probable that more intensive research would reveal significantly higher species richness. Currently, one of the primary threats to the area is the rapid and unregulated expansion of settlements (Aguirre 2006).

In addition to the indiscriminate and illegal exploitation of the forest for timber, the illegal cultivation of coca is expanding. This situation has intensified pressure on natural resources and accelerated habitat fragmentation, posing a direct threat to the ecosystem. Nevertheless, the area's unique environmental conditions continue to sustain lush vegetation with dense canopy cover, endemic species, and a highly complex floristic composition.

Chapare River and riparian vegetation © Oliver Mercado

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	48	Major
Subtropical/Tropical Swamp Forest	27	Major
Wet savanna	12	Unknown
Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	2	Unknown

Threat		
Threat	**Severity**	**Situation**
Small-holder farming	Low	Ongoing - trend unknown
Gathering terrestrial plants	Low	Ongoing - trend unknown
Annual & perennial non-timber crops	High	Ongoing - stable
Logging & wood harvesting	High	Ongoing - stable

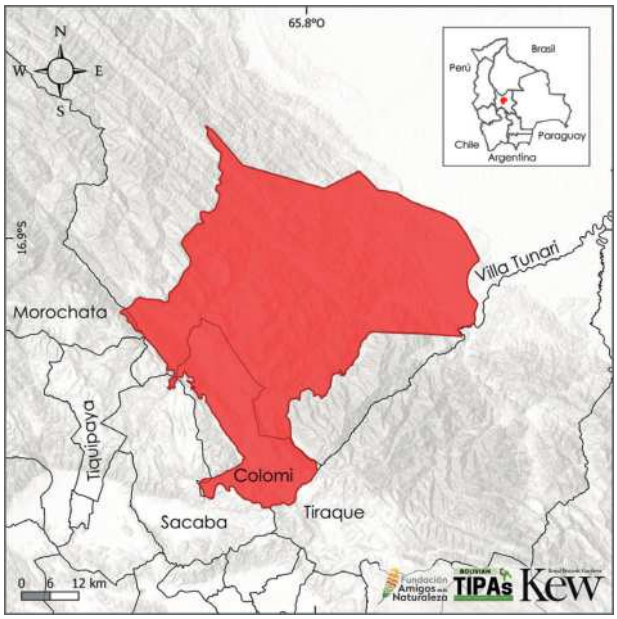
Land Use		
Land use type	**Percent coverage**	**Importance**
Agriculture (arable)	—	Major
Harvesting of wild resources	—	Major

IPA priority species Criterion A									
Family	Taxon	IPA subcriterion A	IUCN Category	≥1% global population	≥5% national population	1 of 5 best sites at national level	≥10% global population	Entire global population at the site	Abundance at site
Polygonaceae	*Coccoloba steinbachii*	A(i)	VU	✓	✓	✓			unknown

CORANI PAMPA

Authors: Liliana Arroyo-Herbas, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA082	Department/ Province	Cochabamba: Villa Tunari, Colomi
Latitude	-17.00571	Longitude	-65.79625
Minimum altitude (m.a.s.l.)	234	Maximum altitude (m.a.s.l.)	4,232
Area (km^2)	2,752	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)



IPA Assessment – Rationale

Strategically located as a biological corridor between the Carrasco and Tunari protected areas, Corani Pampa is home to 230 endemic plant taxa, accounting for 9% of Bolivia's total endemism. The conservation significance of this site is underscored by the presence of 29 globally threatened and 11 nationally threatened species. Additionally, the area supports 85 highly range-restricted species and 30 potentially threatened taxa.

Beyond its rarity, the site protects 352 species of useful plants (11% of the national total), including 12 critical crop wild relatives.

Site Description

Located in the Cochabamba department, approximately 25 km east of Sacaba, the site covers 4,232 km^2 across the Villa Tunari and Colomi provinces. It occupies a strategic position amidst several major protected areas, bordering Carrasco National Park to the south, Tunari National Park to the west, TIPNIS to the north, and the Altamachi Natural Area of Integrated Management to the northwest. In addition to its conservation value, the region is celebrated for its lush landscapes and prominent tourist landmarks, such as Corani Lagoon and the Incachaca ecological park.

Botanical Significance

Corani Pampa possesses extraordinary botanical value, harbouring 230 endemic plant taxa. This includes 32 globally threatened species. Notably, the site protects over 10% of the populations of *Hippeastrum fragrantissimum* (CR), *Puya ibischii* (EN), and *Neea boliviana* (EN). Additionally, 83 species found here have extremely limited distributions. Many of these, such as the orchids *Fernandezia bilineata*, *Masdevallia tinekeae*, and *Stelis phaeomelana*, are characteristic of the Montane Yungas ecological system (Ibisch & Mérida 2003).

Panoramic view of Laguna Corani, Colomi © Daniel Aguilar

Likewise, the site contains 24 range-restricted and potentially threatened species, with more than 10% of their population protected within the site, as well as 352 species of useful plants, representing 11% of Bolivia's useful species (Appendix 3).

Habitat and Geology

The landscape is defined by a complex topography of mountain ranges (*serranías*), deep canyons, and plains spanning the Eastern Cordillera and the Sub-Andean region (MDSyP 2002). Situated within the upper basins of the Ichilo and Isiboro rivers, the site serves as a convergence zone for the Yungas, Northern Puna, and Southwestern Amazonia ecoregions (Ibisch *et al.* 2003). The vegetation reflects this diversity, transitioning from pluvial Montane Yungas and Sub-Andean evergreen forests to High Andean grasslands and scrublands (Navarro & Ferreira 2011). Under the IUCN habitat classification system, these ecosystems are categorised as Subtropical/Tropical Montane Humid Forest, Lowland Humid Forest, and High-Altitude Scrub (IUCN 2012) (Appendix 2).

Conservation Challenges

Within the region lies the town of Colomi, where 17% of the land is designated for agricultural and pastoral use (GAMC 2021). Potato and *locoto* (chili pepper) cultivation are particularly significant, covering over 200 hectares. The southern portion of the territory hosts the Corani Lagoon and Incachaca Ecological Park; however, this area is also characterised by a larger human footprint due to spreading urban zones. Ultimately, the site's strategic location between two national parks - combined with its rare botanical characteristics, creates a critical biological bridge that helps preserve the endemic plant life of the Yungas.

Hippeastrum incachacanum © Margoth Atahuachi

Passiflora umbilicata © Alexander Parada

Yungas Forest, Incachaca Ecological Park © Liliana Arroyo

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Montane Forest	65	Major
Subtropical/Tropical Moist Lowland Forest	30	Major
Subtropical/Tropical High Altitude Grassland	2	Major

Threat		
Threat	**Severity**	**Situation**
Logging & wood harvesting	High	Ongoing - stable
Livestock farming & ranching	High	Ongoing - stable
Tourism & recreation areas	Medium	Ongoing - stable
Housing & urban areas	Low	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Agriculture (arable)	—	Major
Tourism/recreation	—	Minor
Residential/urban development	—	Minor

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Key Biodiversity Area	KBA Cristal Mayu and Surrounding Areas	IPA encompasses protected/conservation area (100%)	365
Key Biodiversity Area	KBA Candelaria-Corani	IPA encompasses protected/conservation area (100%)	135
Local/Regional Nature Reserve	Incachaca Ecological Park	IPA encompasses protected/conservation area (100%)	3

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Stenostephanus cochabambensis*	A(i)	EN	✓	✓	✓	✓		frequent
Acanthaceae	*Stenostephanus pyramidalis*	A(i)	VU	✓	✓		✓		unknown
Acanthaceae	*Stenostephanus spicatus*	A(i)	EN	✓	✓		✓		unknown
Actinidiaceae	*Saurauia chaparensis*	A(i)	EN	✓	✓		✓		unknown
Amaryllidaceae	*Hippeastrum fragrantissimum*	A(i)	CR	✓	✓	✓	✓	✓	escasa
Amaryllidaceae	*Hippeastrum incachacanum*	A(i)	EN	✓	✓		✓		scarce
Apiaceae	*Eryngium buchtienii*	A(iv)	NE	✓	✓	✓	✓		unknown
Apocynaceae	*Oxypetalum dactylostelma*	A(i)	EN	✓	✓		✓		unknown
Apocynaceae	*Oxypetalum urceolatum*	A(i)	EN	✓	✓		✓		unknown
Araceae	*Anthurium besseae*	A(iii)	NE	✓	✓	✓	✓	✓	scarce
Araceae	*Xanthosoma chaparense*	A(iii)	NE	✓	✓	✓	✓	✓	scarce
Araliaceae	*Oreopanax trollii*	A(i)	LC	✓					occasional
Araliaceae	*Sciodaphyllum allocotanthum*	A(i)	VU	✓	✓	✓	✓		frequent
Arecaceae	*Bactris faucium*	A(i)	EN	✓	✓		✓		occasional
Asteraceae	*Aldama coraniana*	A(iii)	NE	✓	✓	✓	✓	✓	scarce
Asteraceae	*Baccharis chaparensis*	A(iv)	NE	✓	✓		✓		unknown
Asteraceae	*Baccharis kessleri*	A(iv)	NE	✓	✓		✓		unknown
Asteraceae	*Barnadesia macrocephala*	A(iii)	NE	✓	✓	✓	✓		unknown
Asteraceae	*Critoniopsis yungasensis*	A(i)	VU	✓	✓				unknown
Asteraceae	*Dendrophorbium ayopayense*	A(i)	VU	✓	✓	✓	✓		scarce
Asteraceae	*Fleischmannia bridgesii*	A(iii)	NE	✓	✓		✓		unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Asteraceae	*Gynoxys cochabambensis*	A(iii)	DD	✓	✓		✓		unknown
Asteraceae	*Llerasia boliviensis*	A(iii)	NE	✓	✓	✓	✓	✓	scarce
Asteraceae	*Mikania cochabambana*	A(iii)	NE	✓	✓	✓	✓	✓	scarce
Asteraceae	*Mikania perstipulata*	A(iii)	NE	✓	✓	✓	✓	✓	scarce
Asteraceae	*Mikania williamsii*	A(i)	EN	✓	✓		✓		scarce
Asteraceae	*Senecio colaminus*	A(iv)	NE	✓	✓		✓		unknown
Asteraceae	*Stevia santacruzensis*	A(iv)	NE	✓	✓		✓		unknown
Begoniaceae	*Begonia bangii*	A(iv)	NE	✓	✓		✓		unknown
Begoniaceae	*Begonia buchtienii*	A(iii)	NE	✓	✓	✓	✓	✓	scarce
Begoniaceae	*Begonia oblanceolata*	A(iii)	NE	✓	✓		✓		unknown
Begoniaceae	*Begonia santarosensis*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Fosterella chaparensis*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Puya brittoniana*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Puya ibischii*	A(i)	EN	✓	✓	✓	✓	✓	rare
Bromeliaceae	*Puya secunda*	A(iii)	NE	✓	✓	✓	✓		unknown
Bromeliaceae	*Puya tristis*	A(iii)	NE	✓	✓	✓	✓	✓	scarce
Brunelliaceae	*Brunellia boliviana*	A(ii)	VU	✓					unknown
Calceolariaceae	*Calceolaria crassa*	A(iv)	NE	✓	✓		✓		unknown
Calceolariaceae	*Calceolaria incachacensis*	A(iii)	NE	✓	✓		✓		unknown
Campanulaceae	*Centropogon unduavensis*	A(ii)	VU	✓	✓		✓		unknown
Campanulaceae	*Siphocampylus reflexus*	A(ii)	EN	✓	✓		✓		unknown
Campanulaceae	*Siphocampylus werdermannii*	A(ii)	VU	✓	✓				unknown
Chloranthaceae	*Hedyosmum maximum*	A(i)	VU	✓	✓		✓		unknown
Dryopteridaceae	*Polystichum chaparense*	A(iii)	NE	✓	✓	✓	✓	✓	scarce
Ericaceae	*Diogenesia racemosa*	A(ii)	EN	✓	✓	✓	✓		unknown
Ericaceae	*Gaultheria × serrulata*	A(iii)	NE	✓	✓		✓		unknown
Ericaceae	*Thibaudia densiflora*	A(ii)	VU	✓	✓	✓	✓		unknown
Fabaceae	*Inga approximata*	A(i)	VU	✓	✓		✓		occasional
Fabaceae	*Lupinus cardenasianus*	A(iii)	NE	✓	✓	✓	✓	✓	scarce
Gentianaceae	*Gentianella bockii*	A(i)	VU	✓	✓		✓		scarce
Gentianaceae	*Gentianella lythroides*	A(iii)	NE	✓	✓		✓		unknown
Gentianaceae	*Gentianella pringlei*	A(iii)	NE	✓	✓	✓	✓		scarce
Gentianaceae	*Halenia herzogii*	A(iii)	NE	✓	✓	✓	✓	✓	scarce
Gentianaceae	*Halenia robusta*	A(iii)	NE	✓	✓		✓		unknown
Gentianaceae	*Macrocarpaea cochabambensis*	A(i)	VU	✓	✓				unknown
Geraniaceae	*Geranium tablasense*	A(iv)	NE	✓	✓		✓		unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Grossulariaceae	*Ribes steinbachiorum*	A(iv)	NE	✓	✓		✓		unknown
Isoetaceae	*Isoetes herzogii*	A(i)	VU	✓	✓		✓		unknown
Malvaceae	*Sida albinervia*	A(iii)	NE	✓	✓	✓	✓	✓	scarce
Melastomataceae	*Chaetogastra aurea*	A(iii)	NE	✓	✓	✓	✓	✓	scarce
Melastomataceae	*Chaetogastra excoriata*	A(iii)	NE	✓	✓	✓	✓		unknown
Melastomataceae	*Chaetogastra venosa*	A(iv)	NE	✓	✓		✓		unknown
Melastomataceae	*Miconia galeiformis*	A(i)	CR	✓	✓		✓		scarce
Melastomataceae	*Miconia incachacana*	A(i)	VU	✓	✓				rare
Melastomataceae	*Miconia mandonii*	A(i)	VU	✓	✓				unknown
Melastomataceae	*Miconia neei*	A(i)	VU	✓					scarce
Nyctaginaceae	*Neea boliviana*	A(i)	EN	✓	✓		✓		frequent
Onagraceae	*Fuchsia cochabambana*	A(ii)	VU	✓	✓				unknown
Onagraceae	*Fuchsia garleppiana*	A(ii)	EN	✓	✓		✓		unknown
Onagraceae	*Fuchsia nana*	A(ii)	VU	✓	✓		✓		unknown
Onagraceae	*Oenothera pseudoelongata*	A(iii)	NE	✓	✓	✓	✓	✓	scarce
Orchidaceae	*Acianthera heliconioides*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Acianthera venulosa*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Crossoglossa dodsonii*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Cyclopogon cochabambae*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Cyclopogon sillarensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Cyclopogon williamsii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Cyrtochilum gracielae*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Draconanthes lueriana*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Epidendrum campylostele*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Epidendrum larae*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Epidendrum ophidion*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Fernandezia bilineata*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Fernandezia chaparensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Fernandezia luerorum*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Fernandezia pandurata*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Fernandezia shoveliformis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Fernandezia shoveliformis* var. *inversa*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Fernandezia teranii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Gongora ileneana*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Lepanthes brevis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Lepanthes complicata*	A(iv)	NE	✓	✓		✓		unknown

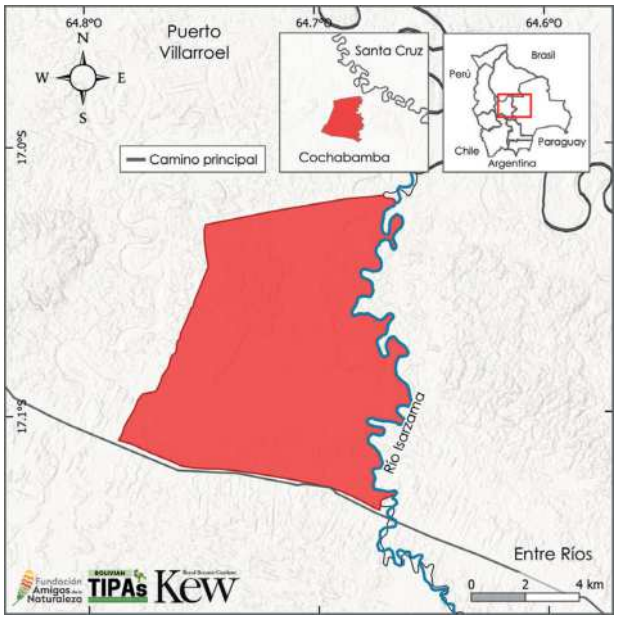
IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Orchidaceae	*Lepanthes crescentiformis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Lepanthes dictyota*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Lepanthes echidna*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Lepanthes megalocephala*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Lepanthes oxyphylla*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Lepanthes papilio*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Lepanthes pileata*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Masdevallia burianii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Masdevallia chaparensis*	A(iv)	NE	✓	✓	✓	✓		unknown
Orchidaceae	*Masdevallia helenae*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Masdevallia nitens*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Masdevallia tinekeae*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Pleurothallis chaparensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Pterichis saxicola*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Rodriguezia vasquezii*	A(iii)	NE	✓	✓	✓	✓		unknown
Orchidaceae	*Scelochilus limatamboensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Scelochilus neudeckeri*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Scelochilus sillarensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Sievekingia trollii*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis amethystina*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis aurantiaca*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis carnosipetala*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis cloesiorum*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis cochabambensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis comosa*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis consors*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis darwinii*	A(iii)	NE	✓	✓	✓	✓		unknown
Orchidaceae	*Stelis flexa*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis kilimanjaro*	A(iii)	NE	✓	✓	✓	✓		unknown
Orchidaceae	*Stelis melanostele*	A(iii)	NE	✓	✓	✓	✓		unknown
Orchidaceae	*Stelis naviculigera*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis phaeomelana*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis saltatrix*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis tamboensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Telipogon boliviensis*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Telipogon pampatamboensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Orchidaceae	*Telipogon vasquezii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orobanchaceae	*Agalinis reflexidens*	A(iii)	NE	✓	✓		✓		unknown
Orobanchaceae	*Agalinis scarlatina*	A(iv)	NE	✓	✓	✓	✓		unknown
Passifloraceae	*Passiflora calicicalyx*	A(iv)	NE	✓	✓		✓		unknown
Passifloraceae	*Passiflora carrascoensis*	A(ii)	EN	✓	✓		✓		unknown
Passifloraceae	*Passiflora chaparensis*	A(ii)	CR	✓	✓		✓		unknown
Poaceae	*Cortaderia boliviensis*	A(i)	VU	✓					occasional
Poaceae	*Festuca cochabambana*	A(i)	VU	✓	✓		✓		scarce
Poaceae	*Festuca steinbachii*	A(iii)	DD	✓	✓	✓	✓	✓	scarce
Poaceae	*Festuca trollii*	A(i)	EN	✓	✓		✓		rare
Polygalaceae	*Monnina alatodrupacea*	A(iii)	NE	✓	✓	✓	✓	✓	scarce
Polypodiaceae	*Grammitis carrascoensis*	A(iv)	NE	✓	✓		✓		unknown
Ranunculaceae	*Thalictrum cincinnatum*	A(iii)	NE	✓	✓		✓		unknown
Rubiaceae	*Macrocnemum tortuosum*	A(i)	VU	✓	✓				scarce
Selaginellaceae	*Selaginella glossophylla*	A(iii)	NE	✓	✓	✓	✓	✓	scarce
Tropaeolaceae	*Tropaeolum elzae*	A(iii)	NE	✓	✓	✓	✓		unknown
Urticaceae	*Myriocarpa obscura*	A(iii)	NE	✓	✓		✓		unknown
Urticaceae	*Phenax globulifera*	A(iii)	NE	✓	✓	✓	✓	✓	scarce

SACTA VALLEY

Authors: Maira T. Martinez-Ugarteche, Beatriz Nieto-Ariza, Huber Villca-Corani, Luzmila Arroyo Padilla, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA083	Department/ Province	Cochabamba: Carrasco
Latitude	-17.07967	Longitude	-64.73189
Minimum altitude (m.a.s.l.)	201	Maximum altitude (m.a.s.l.)	280
Area (km^2)	78	Qualifying IPA criteria	A(ii), A(iii), B(iii)



IPA Assessment – Rationale

The Sacta Valley qualifies as an IPA thanks to its significant botanical features, which include five nationally threatened species, five endemic species (one of which is highly range-restricted), and 112 species of socioeconomic value. The site serves as a critical sanctuary for one of the last remaining fragments of natural vegetation in Cochabamba's Pre-Andean zone located outside the SERNAP national system. Furthermore, as one of Bolivia's highest-rainfall zones, it sustains a distinct floristic composition characterised by endemic, rare, and range-restricted species (Zárate 2008).

Site Description

Situated in the Puerto Villarroel municipality of Cochabamba's Carrasco province, this site is owned by the Universidad Mayor de San Simón and managed by its Faculty of Agronomy. The area is geographically defined by the Isarzama River and the Cochabamba–Santa Cruz highway. This region experiences a tropical climate with annual rainfall reaching up to 5,000 mm (Navarro & Maldonado 2002), representing one of the highest precipitation levels in the country (Hijmans *et al.* 2005).

Botanical Significance

Sacta Valley stands out for its botanical richness, harbouring native species categorised as nationally threatened: species such as *Geonoma stricta* (VU), a palm up to 2.5 metres tall, threatened by population reduction due to deforestation (Moraes *et al.* 2020); *Symphonia globulifera* (VU), a tree growing in flooded forests with stagnant water in Southwestern Amazonia (Antezana *et al.* 2020); and species such as *Diplazium mapiriense*, a highly restricted endemic species, along with other endemics like *Juanulloa verrucosa*, *Salvia oxyphora*, *Schizocalyx magnorum*, and *Solanum urticans*.

Of the useful species, the abundance of tree species such as *Pouteria bangii*, *P. glabrescens*, *Pseudolmedia laevis*, and *P. macrophylla*, stands out. The list of useful species recorded in Sacta Valley represents 3.4% of the total useful species documented for the country. Another aspect

Pre-Andean várzea forests along the banks of the Isarzama River © Beatriz Nieto Ariza

to highlight is the endemic species *Guadua chaparensis* (EN). Although not recorded in the IPA site itself, populations are known near Pilón Lajas and Carrasco National Park, and close to Valle de Sacta. The species is therefore likely to be found within the boundaries of the Valle de Sacta IPA site.

In addition to all these botanical characteristics, this site has been recognised as an IPA site for conserving relicts of Amazonian forest of the Pre-Andean (foothills), mature *várzea* forests of the foothills, and rain forests of the Chapare (Navarro & Ferreira 2011, Navarro 2011).

Habitat and Geology

Located within the Cochabamba department on the eastern flank of the Bolivian Andes, the Sacta Valley forms a critical part of the Chapare region and stands as one of the nation's most humid and biodiverse areas. Biogeographically situated within the Amazonian Chapare District, the valley is characterised by a humid to hyper-humid thermotropical bioclimate, with annual precipitation potentially exceeding 5,000 mm (Navarro & Maldonado 2002). This zone serves as an ecological transition between the Andean heights and the Amazonian lowlands, a position that fosters significant environmental heterogeneity.

The lower elevations of the site are defined by Amazonian pluvial and *várzea* forests, while the higher reaches encompass the Andean foothills. The vegetation is notably lush, characterised by a dense canopy, a significant presence of endemic species, and a complex floristic structure.

According to the classification of Bolivia's vegetation (Navarro 2011) and the IUCN habitat classification (IUCN 2012), this site is mainly covered by Subtropical/Tropical Lowland Humid Forest, which is comprised of the Amazonian forest of the central Pre-Andean foothills: *Eschweilera coriacea-Dipteryx odorata* series and the pluvial Amazonian forest of the Chapare: *Elaeagia obovata-Talauma boliviana* series, as well as flooded forests of the alluvial plain of white-water rivers of the Southwestern and Central-Southern Amazonia, which in this region mainly comprise the várzea forests of the central Andean foothills: *Xylopia ligustrifolia-Hura crepitans* series (Navarro & Ferreira 2011, Navarro 2011) (Appendix 2).

Canopy view of pre-Andean várzea forest © Beatriz Nieto Ariza

Panoramic view of pre-Andean várzea forest © Beatriz Nieto Ariza

Successional riparian complex of pre-Andean várzea vegetation © Beatriz Nieto Ariza

Conservation Challenges

The Sacta Valley currently lacks formal national protection, managed only as a field and research station of the *Universidad Mayor de San Simón.* While the university develops experimental initiatives, including buffalo husbandry and permanent agro-pastoral plots, the site faces intensifying anthropogenic pressure beyond its boundaries. Data indicates a 51% expansion in agricultural and livestock cover and a surge of over 200% in urban infrastructure over the past 24 years (MapBiomas Bolivia 2024). The site also faces intensive agricultural encroachment along the Isarzama River and within the forest. Chemical waste from these activities is discharged directly into the river, with seasonal floods further dispersing pollutants throughout the aquatic and riparian ecosystems. Consequently, the conservation of this forest relict must encompass both its botanical significance and the essential ecosystem services it provides to the region.

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	69	Major
Subtropical/Tropical Swamp Forest	20	Major
Other	11	Minor

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	High	Ongoing - increasing
Annual & perennial non-timber crops	High	Ongoing - increasing
Livestock farming & ranching - Agro-industry grazing, ranching or farming	High	Ongoing - increasing
Wood & pulp plantations - Scale Unknown/Unrecorded	Medium	Ongoing - increasing
Subsistence/artisanal aquaculture	Medium	Ongoing - increasing

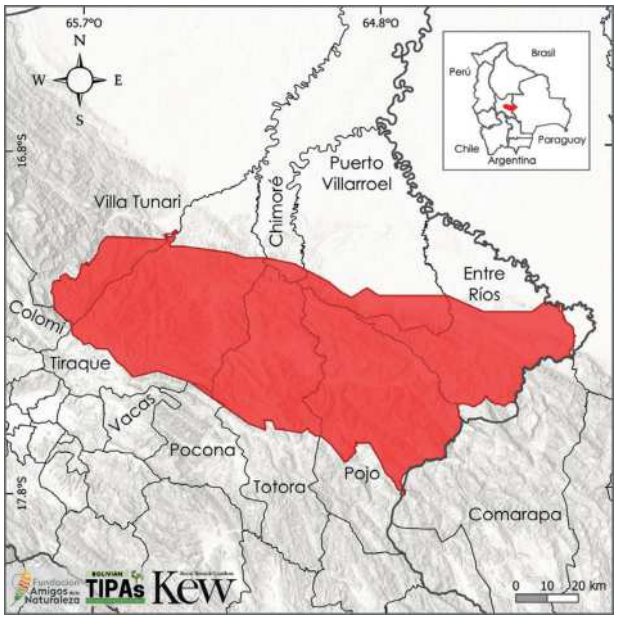
Land Use		
Land use type	**Percent coverage**	**Importance**
Agriculture (arable)	6	Major
Agriculture (pastoral)	—	Minor
Forestry	—	Unknown
Residential/urban development	—	Major
Harvesting of wild resources	—	Unknown

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Arecaceae	*Geonoma stricta*	A(ii)	VU						unknown
Aspleniaceae	*Diplazium mapiriense*	A(iii)	NE	✓	✓		✓		unknown
Burseraceae	*Protium unifoliolatum*	A(ii)	VU						unknown
Clusiaceae	*Symphonia globulifera*	A(ii)	VU						unknown
Elaeocarpaceae	*Sloanea rufa*	A(ii)	EN						unknown
Urticaceae	*Pourouma cecropiifolia*	A(ii)	EN						unknown

CARRASCO NATIONAL PARK

Authors: Liliana Arroyo-Herbas, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA084	Department/ Province	Cochabamba: Chapare, Carrasco, Tiraque
Latitude	-17.38071	Longitude	-65.05627
Minimum altitude (m.a.s.l.)	231	Maximum altitude (m.a.s.l.)	4,684
Area (km^2)	6,801	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)



IPA Assessment – Rationale

The Carrasco National Park is part of the Amboró-Madidi biological corridor and safeguards 316 endemic plant taxa. Of these, 41 are globally threatened, 97 are highly range-restricted, and 40 are range-restricted and potentially threatened. The area stands out as one of Bolivia's protected areas with the highest number of endemic taxa (316 taxa representing 13% of the national endemism).

Furthermore, the site protects 594 useful plant species, representing 18% Bolivia's useful species.

Site Description

Located in the eastern part of Cochabamba department, the site covers 6,801 km^2 and spans eight municipalities (Galarza *et al.* 2025). The limits of the site overlap 100% with those of the Carrasco National Park, a protected area created to conserve the biodiversity of the High Andean and Yungas ecosystems (SERNAP n.d.). Relative to other conservation areas, the site borders the Amboró National Park and forms part of the Amboró – Madidi biological corridor (Ibisch *et al.* 2007).

Botanical Significance

The botanical importance of the site is focussed on the 316 endemic plant taxa, of which 43 are globally threatened, for example: *Chusquea yungasensis* (EN), *Psychotria cochabambana* (EN), *Salvia cardenasii* (EN), *Sida beckii* (CR), and *Guadua chaparensis* (EN), species with 5% of their population protected within the site. In addition, 95 highly restricted species grow is the site, among these: *Gynoxys cochabambensis* (DD), *Puya sehuencasensis* (NE), and *Stenostephanus sehuencasii* (NE). Furthermore, it is home to 32 range-restricted and potentially threatened species, including *Grammitis carrascoensis* (NE), *Fosterella chaparensis* (NE), and *Baccharis chaparensis* (NE), species that, although not formally evaluated by the IUCN, are endemic and with more than 50% of their population in the site.

The site is also home to 594 useful plant species, representing 18% of the Bolivian useful species

Mountain ranges in the Carrasco National Park © Liliana Arroyo

(Appendix 3), including 25 considered crop wild relatives (CWR).

Habitat and Geology

Landscape-wise the site is characterised by a set of mountain ranges (*serranías*), mountains with deep valleys, glacial lagoons, and steep slopes, belonging to the Eastern Cordillera and the Sub-Andean region (MDSyP 2002). Regarding its hydrology, the most important basins are the Iviruzu, Chimoré, Sajta, Ichilo, and San Mateo rivers (AICOMs 2024). The vegetation is characterised by Montane Yungas forests, seasonally humid Yungas forests, Yungas *ceja* cloud forest, and High Montane grasslands (*pajonales*) of the Humid Puna, belonging to the Yungas, Northern Puna, Tucumano – Bolivian Forest, and Inter-Andean Dry Forests ecoregions (Ibisch *et al.* 2003). All these vegetation types are classified as Subtropical/Tropical Montane Humid Forest and Subtropical/Tropical Lowland Humid Forest following the IUCN habitat classification system (IUCN 2012) (Appendix 2).

Conservation Challenges

Strategically located within the Amboró–Madidi

Habit of *Salvia cardenasii* © Alexander Parada

Flowers of *Salvia cardenasii* © Alexander Parada

Cloud forests of the Ceja de Yunga © Edu Navia

Montane forests of the Yungas © Edu Navia

and Vilcabamba–Amboró corridors, this site forms a vital link in the Tropical Andes Biodiversity Hotspot (Ibisch *et al.* 2007).

Despite its ecological significance, the area faces intensifying pressures from mining, road expansion, illicit crop cultivation, and encroaching colonisation in its buffer zones (Mongabay 2025).

Botanically, the site is of national importance; its 316 endemic taxa represent 13% of Bolivia's total endemism, while over 95 range-restricted species concentrate significant portions of their populations here. Consequently, consolidating this as a priority Important Plant Area (IPA) is essential for the long-term conservation of Bolivia's endemic flora.

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Montane Forest	67	Major
Subtropical/Tropical Moist Lowland Forest	25	Major
Subtropical/Tropical High Altitude Grassland	5	Major
Subtropical/Tropical Swamp Forest	1	Major

Threat		
Threat	**Severity**	**Situation**
Small-holder farming	High	Ongoing - stable
Housing & urban areas	High	Ongoing - stable
Roads & railroads	High	Past - likely to return
Annual & perennial non-timber crops	High	Ongoing - stable
Energy production & mining	High	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	93	Major
Residential/urban development	—	Minor
Agriculture (arable)	—	Unknown
Extractive industry	—	Major
Tourism/recreation	—	Major

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
National Park	NP Carrasco	Protected/conservation area matches IPA (100%)	6,801
Key Biodiversity Area	KBA Carrasco	IPA encompasses protected/conservation area (100%)	6,795
AICOMs: Areas of Importance for the Conservation of Bats	AICOMs NP Carrasco	Protected/conservation area matches IPA (100%)	6,801

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Dicliptera palmariensis*	A(i)	CR	✓	✓	✓	✓	✓	rare
Acanthaceae	*Justicia chapareensis*	A(i)	EN	✓	✓	✓	✓		scarce
Acanthaceae	*Stenostephanus cochabambensis*	A(i)	EN	✓	✓				occasional
Acanthaceae	*Stenostephanus pyramidalis*	A(i)	VU	✓	✓	✓	✓		frequent
Acanthaceae	*Stenostephanus sehuencasii*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Acanthaceae	*Stenostephanus spicatus*	A(i)	EN	✓	✓	✓	✓		occasional
Actinidiaceae	*Saurauia chaparensis*	A(i)	EN	✓	✓		✓		frequent
Alstroemeriaceae	*Bomarea chaparensis*	A(ii), A(iii)	VU	✓	✓	✓	✓		unknown
Apocynaceae	*Orthosia boliviana*	A(iii)	NE	✓	✓	✓	✓		scarce
Apocynaceae	*Oxypetalum dactylostelma*	A(i)	EN	✓	✓		✓		occasional
Apocynaceae	*Scyphostelma bolivianum*	A(iii)	NE	✓	✓	✓	✓		scarce
Apocynaceae	*Scyphostelma gracile*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Araceae	*Philodendron noelii*	A(iv)	NE	✓	✓	✓	✓	✓	unknown
Araliaceae	*Hydrocotyle boliviana*	A(iv)	NE	✓	✓		✓		unknown
Araliaceae	*Oreopanax atopanthus*	A(i)	EN	✓	✓	✓	✓		occasional
Araliaceae	*Sciodaphyllum allocotanthum*	A(i)	VU	✓	✓				occasional
Arecaceae	*Bactris faucium*	A(i)	EN	✓	✓				unknown
Aspleniaceae	*Blechnum cochabambense*	A(iii)	NE	✓	✓		✓		scarce
Aspleniaceae	*Blechnum reflexum*	A(iv)	NE	✓	✓		✓		unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥1% global population	≥5% national population	1 of 5 best sites at national level	≥10% global population	Entire global population at the site	Abundance at site
Aspleniaceae	*Thelypteris chaparensis*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Aspleniaceae	*Thelypteris yungensis*	A(iii)	NE	✓	✓		✓		scarce
Asteraceae	*Baccharis chaparensis*	A(iv)	NE	✓	✓		✓		scarce
Asteraceae	*Baccharis kessleri*	A(iv)	NE	✓	✓		✓		unknown
Asteraceae	*Baccharis neoaustralis*	A(iii)	NE	✓	✓	✓	✓		scarce
Asteraceae	*Critoniopsis yungasensis*	A(i)	VU	✓	✓				occasional
Asteraceae	*Dendrophorbium ayopayense*	A(i)	VU	✓	✓				occasional
Asteraceae	*Gynoxys cochabambensis*	A(iii)	DD	✓	✓		✓		scarce
Asteraceae	*Gynoxys hoffmannii*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Asteraceae	*Gynoxys neovelutina*	A(i)	EN	✓	✓	✓	✓	✓	scarce
Asteraceae	*Mikania schultzii*	A(i)	EN	✓	✓		✓		occasional
Asteraceae	*Munnozia glandulosa*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Asteraceae	*Munnozia hirta*	A(iv)	NE	✓	✓	✓	✓		unknown
Asteraceae	*Nordenstamia kingii*	A(i)	VU	✓	✓		✓		scarce
Asteraceae	*Pentacalia comarapensis*	A(i)	EN	✓	✓		✓		occasional
Asteraceae	*Senecio colaminus*	A(iv)	NE	✓	✓		✓		unknown
Asteraceae	*Stevia kuhnioides*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Asteraceae	*Stevia santacruzensis*	A(iv)	NE	✓	✓		✓		unknown
Begoniaceae	*Begonia bangii*	A(iv)	NE	✓	✓		✓		unknown
Begoniaceae	*Begonia santarosensis*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Billbergia cardenasii*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Bromeliaceae	*Fosterella chaparensis*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Greigia cochabambae*	A(iii)	NE	✓	✓		✓		scarce
Bromeliaceae	*Pitcairnia heydlauffii*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Bromeliaceae	*Puya raimondii*	A(i)	EN	✓					occasional
Bromeliaceae	*Puya secunda*	A(iii)	NE	✓	✓		✓		scarce
Bromeliaceae	*Puya sehuencasensis*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Brunelliaceae	*Brunellia boliviana*	A(ii)	VU	✓					unknown
Cactaceae	*Diplazium exindusiatum*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Calophyllaceae	*Calophyllum brasiliense*	A(ii)	VU						unknown
Campanulaceae	*Siphocampylus siberiensis*	A(i)	VU	✓	✓	✓	✓		frequent
Campanulaceae	*Siphocampylus tunicatus*	A(ii), A(iv)	CR	✓	✓		✓		occasional
Chloranthaceae	*Hedyosmum maximum*	A(i)	VU	✓	✓	✓	✓		scarce
Cunoniaceae	*Weinmannia bangii*	A(ii), A(iii)	VU	✓	✓		✓		occasional
Dennstaedtiaceae	*Hypolepis scandens*	A(iii)	NE	✓	✓		✓		scarce
Ericaceae	*Satyria boliviana*	A(ii), A(iv)	VU	✓	✓				occasional

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Ericaceae	*Thibaudia densiflora*	A(ii), A(iii)	VU	✓	✓		✓		occasional
Euphorbiaceae	*Croton laeticapsulus*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Fabaceae	*Inga approximata*	A(i)	VU	✓	✓		✓		occasional
Fabaceae	*Punjuba centiflora*	A(i)	EN	✓	✓	✓	✓	✓	scarce
Gentianaceae	*Gentianella dasythamna*	A(iii)	NE	✓	✓	✓	✓		scarce
Gentianaceae	*Gentianella kusnezowii*	A(iii)	NE	✓	✓		✓		scarce
Gentianaceae	*Gentianella palcana*	A(i)	EN	✓	✓		✓		scarce
Gentianaceae	*Gentianella pluvialis*	A(iv)	NE	✓	✓		✓		unknown
Gentianaceae	*Gentianella quechuana*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Gentianaceae	*Gentianella sancti-mathaeii*	A(iv)	NE	✓	✓		✓		unknown
Gentianaceae	*Macrocarpaea cochabambensis*	A(i)	VU	✓	✓		✓		scarce
Geraniaceae	*Geranium tablasense*	A(iv)	NE	✓	✓		✓		unknown
Gesneriaceae	*Columnea hypocyrtantha*	A(ii), A(iv)	CR	✓	✓		✓		unknown
Gleicheniaceae	*Sticherus jacha*	A(iv)	NE	✓	✓		✓		unknown
Hymenophyllaceae	*Hymenophyllum latisorum*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Hymenophyllaceae	*Trichomanes herzogii*	A(iv)	NE	✓	✓		✓		unknown
Isoetaceae	*Isoetes eshbaughii*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Lamiaceae	*Clinopodium bolivianum* subsp. *diffusum*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Lamiaceae	*Salvia cardenasii*	A(i)	EN	✓	✓	✓	✓		occasional
Lamiaceae	*Salvia raymondii* subsp. *mairanae*	A(iv)	NE	✓	✓	✓	✓		unknown
Lamiaceae	*Salvia raymondii* subsp. *raymondii*	A(iv)	NE	✓	✓				unknown
Magnoliaceae	*Magnolia boliviana*	A(i)	EN	✓	✓		✓		scarce
Malvaceae	*Sida beckii*	A(i)	CR	✓	✓	✓	✓	✓	scarce
Melastomataceae	*Axinaea lanceolata*	A(i)	EN	✓					unknown
Melastomataceae	*Chaetogastra lancifolia*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Melastomataceae	*Chaetogastra venosa*	A(iv)	NE	✓	✓	✓	✓		unknown
Melastomataceae	*Miconia amabilis*	A(i)	VU	✓	✓		✓		occasional
Melastomataceae	*Miconia galeiformis*	A(i)	CR	✓	✓		✓		scarce
Melastomataceae	*Miconia herzogii*	A(iv)	NE	✓	✓		✓		unknown
Melastomataceae	*Miconia incachacana*	A(i)	VU	✓	✓				occasional
Melastomataceae	*Miconia kuntzei*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Melastomataceae	*Miconia multiflora*	A(i)	VU	✓					scarce
Melastomataceae	*Miconia neei*	A(i)	VU	✓	✓				occasional
Melastomataceae	*Miconia rusbyana*	A(iv)	NE	✓	✓		✓		unknown
Meliaceae	*Cedrela angustifolia*	A(i)	VU	✓					occasional
Meliaceae	*Cedrela fissilis*	A(i)	VU	✓					occasional

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Monimiaceae	*Mollinedia steinbachiana*	A(i)	VU	✓	✓		✓		occasional
Moraceae	*Ficus chaparensis*	A(i)	CR	✓	✓	✓	✓	✓	scarce
Nyctaginaceae	*Neea boliviana*	A(i)	EN	✓	✓	✓	✓		scarce
Onagraceae	*Fuchsia cochabambana*	A(ii), A(iv)	VU	✓	✓		✓		occasional
Onagraceae	*Fuchsia garleppiana*	A(ii), A(iv)	EN	✓	✓		✓		unknown
Onagraceae	*Fuchsia nana*	A(ii), A(iv)	VU	✓	✓		✓		unknown
Orchidaceae	*Andreettaea cynocephala*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Comparettia splendens*	A(iii)	NE	✓	✓		✓		scarce
Orchidaceae	*Cranichis garayana*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Epidendrum buchtienii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Epidendrum lezlieae*	A(iii)	NE	✓	✓		✓		scarce
Orchidaceae	*Epidendrum ophidion*	A(iii)	NE	✓	✓		✓		scarce
Orchidaceae	*Epidendrum panteonense*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Habenaria bangii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Ixyophora luerorum*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Lepanthes altamiranoi*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Lepanthes cochliops*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Lepanthes crista-piscis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Lepanthes croatii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Lepanthes dictyota*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Lepanthes garayi*	A(iii)	NE	✓	✓		✓		scarce
Orchidaceae	*Lepanthes incredibilis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Lepanthes oxyphylla*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Lepanthes panisca*	A(iii)	NE	✓	✓	✓	✓		scarce
Orchidaceae	*Lepanthes papilio*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Lepanthes versicolor*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Lepanthes vogelii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Malaxis buchtienii*	A(iv)	NE	✓	✓	✓	✓		unknown
Orchidaceae	*Masdevallia cocapatae*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Masdevallia nitens*	A(iii)	NE	✓	✓		✓		scarce
Orchidaceae	*Masdevallia tinekeae*	A(iii)	NE	✓	✓		✓		scarce
Orchidaceae	*Masdevallia vasquezii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Maxillaria dolichophylla*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Maxillaria margretiae*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Maxillaria mariaisabeliae*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Maxillaria mungoschraderi*	A(iii)	NE	✓	✓	✓	✓	✓	rare

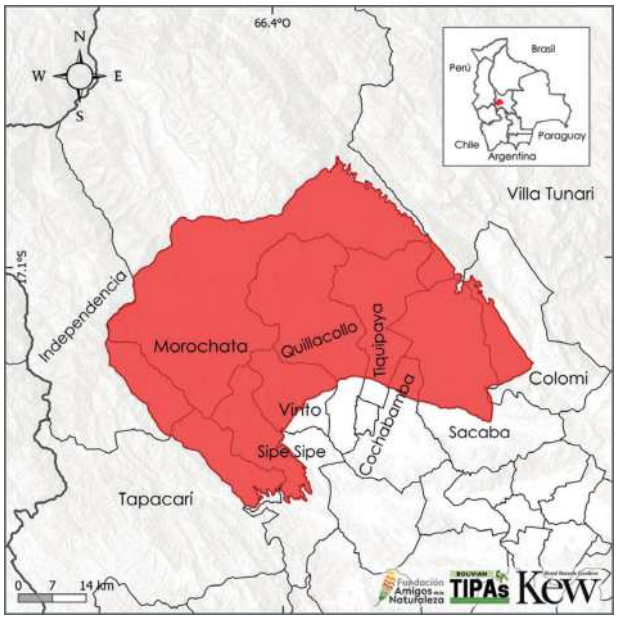
IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Orchidaceae	*Myoxanthus bolivianus*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Oliveriana simulans*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Oncidium micklowii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Pleurothallis amentacea*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Ponthieva vasquezii*	A(iii)	NE	✓	✓		✓		scarce
Orchidaceae	*Prosthechea vasquezii*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Orchidaceae	*Solenocentrum lueri*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Orchidaceae	*Stelis adelphae*	A(iii)	NE	✓	✓	✓	✓		scarce
Orchidaceae	*Stelis flexa*	A(iii)	NE	✓	✓	✓	✓		scarce
Orchidaceae	*Stelis fuchsii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis ibischiorum*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Orchidaceae	*Stelis larsenii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis naviculigera*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis papuligera*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis pendens*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Orchidaceae	*Stelis pholeoglossa*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis ricii*	A(iii)	NE	✓	✓	✓	✓		scarce
Orchidaceae	*Stelis rosulenta*	A(iii)	NE	✓	✓		✓		scarce
Orchidaceae	*Stelis rutrum*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis seriata*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis succuba*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis tomentosa*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis torrenticola*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis trullifera*	A(iii)	NE	✓	✓	✓	✓		scarce
Orchidaceae	*Stelis tunariensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis vallata*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stenia vasquezii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Telipogon boliviensis*	A(iii)	NE	✓	✓		✓		scarce
Orchidaceae	*Telipogon roberti*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Warczewiczella palatina*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Zygostates chaparensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Oxalidaceae	*Oxalis phaseolifolia*	A(iii)	NE	✓	✓	✓	✓		scarce
Passifloraceae	*Passiflora calicicalyx*	A(iv)	NE	✓	✓	✓	✓		unknown
Passifloraceae	*Passiflora carrascoensis*	A(ii), A(iv)	EN	✓	✓	✓	✓		frequent
Passifloraceae	*Passiflora chaparensis*	A(ii), A(iii)	CR	✓	✓	✓	✓		frequent
Passifloraceae	*Passiflora pilosicorona*	A(ii), A(iv)	VU	✓	✓		✓		occasional

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Pentaphylacaceae	*Freziera alata*	A(i)	VU	✓	✓		✓		scarce
Piperaceae	*Peperomia adenocarpa*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Piperaceae	*Peperomia carnifolia*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Piperaceae	*Peperomia sirupayana*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Poaceae	*Aulonemia cochabambensis*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Poaceae	*Chusquea yungasensis*	A(i)	EN	✓	✓		✓		scarce
Poaceae	*Cortaderia boliviensis*	A(i)	VU	✓					occasional
Poaceae	*Festuca carrascana*	A(i)	EN	✓	✓		✓		scarce
Poaceae	*Guadua chaparensis*	A(i)	EN	✓	✓		✓		occasional
Podocarpaceae	*Podocarpus rusbyi*	A(i)	VU	✓					occasional
Polygalaceae	*Monnina arbutus*	A(ii)	EN	✓	✓				unknown
Polypodiaceae	*Elaphoglossum carrascoense*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Polypodiaceae	*Grammitis carrascoensis*	A(iv)	NE	✓	✓				unknown
Polypodiaceae	*Grammitis pilipalaea*	A(iii)	NE	✓	✓		✓		scarce
Polypodiaceae	*Megalastrum alticola*	A(iv)	NE	✓	✓		✓		unknown
Polypodiaceae	*Megalastrum bolivianum*	A(iii)	NE	✓	✓		✓		scarce
Proteaceae	*Roupala steinbachii*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Pteridaceae	*Jamesonia ascendens*	A(iii)	NE	✓	✓		✓		scarce
Pteridaceae	*Pteris boliviensis*	A(iii)	NE	✓	✓		✓		scarce
Rosaceae	*Polylepis besseri*	A(i)	VU	✓					frequent
Rosaceae	*Polylepis incanoides*	A(i)	VU	✓	✓				frequent
Rosaceae	*Polylepis lanata*	A(i)	EN	✓	✓				frequent
Rosaceae	*Rubus herzogii*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Rubiaceae	*Macrocnemum tortuosum*	A(i)	VU	✓	✓	✓	✓		scarce
Rubiaceae	*Psychotria cochabambana*	A(i)	EN	✓	✓	✓	✓	✓	rare
Solanaceae	*Capsicum caballeroi*	A(i)	VU	✓					occasional
Solanaceae	*Lycianthes reflexa*	A(i)	VU	✓	✓	✓			occasional
Solanaceae	*Solanum okadae*	A(i)	EN	✓					frequent
Solanaceae	*Solanum superbum*	A(i)	VU	✓					rare
Solanaceae	*Solanum unilobum*	A(i)	VU	✓					unknown
Tropaeolaceae	*Tropaeolum hirsutum*	A(iii)	NE	✓	✓	✓	✓	✓	rare

TUNARI NATIONAL PARK

Authors: Liliana Arroyo-Herbas, Oriana A. Lino-Villalba, Maira T. Martinez-Ugarteche & Bente B. Klitgaard

International code	BOLTIPA085	Department/ Province	Cochabamba: Ayopaya, Cercado, Chapare, Quillacollo, Tapacarí
Latitude	-17.22084	Longitude	-66.35523
Minimum altitude (m.a.s.l.)	1,800	Maximum altitude (m.a.s.l.)	5,087
Area (km^2)	3,281	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)



IPA Assessment – Rationale

The Tunari National Park is a protected area close to Cochabamba city and highly important for water provision for city. The site is home to 101 endemic plant taxa, 24 of which are globally threatened, two nationally threatened, 21 species are highly range-restricted, and 16 categorised as Least Concern (LC).

Furthermore, 209 useful plant species grow in the site, representing 6% of Bolivia's useful species, and include crop wild relatives (CWR) of potato, for example.

Site Description

Spanning 3,281 km^2 across the Ayopaya, Chapare, Independencia, Quillacollo, and Tapacarí provinces, this site encompasses 11 municipalities, including six within the Cochabamba metropolitan region (Gareca & Aguirre 2023). Its boundaries align with Tunari National Park, established to mitigate vegetation degradation, erosion, and flood risks (Cahill *et al.* 2022). Crucially, the area serves as a vital hydrological reserve, containing over 60 watersheds and 338 lagoons that provide an estimated 490 million m^3 of water per annum to the department (Gareca & Aguirre 2023). Notable landmarks include the Tunari peak, which, at over 5,000 metres above sea level, is the region's second-highest summit.

Botanical Significance

Within the site, 101 endemic plant taxa are protected, including 24 globally threatened species, for example *Anatherostipa coroi* (EN), *Chlidanthus boliviensis* (CR), and *Stenostephanus cochabambensis* (EN). It is also one of the best five sites nationally for potentially threatened species such as *Puya cardenasii* (NE), *Dioscorea calderillensis* (NE), and *Caiophora chuquisacana* (NE), which, although not evaluated by the IUCN, have large parts of their population within the site. Other important species are *Evolvulus boliviensis* (NE), *Stevia tunariensis* (NE), and *Begonia comata* (NE), species that besides being endemic are range-restricted. Lastly, 209 useful plant species are protected within the site, among these

Panoramic view of the Tunari Mountain Range © Daniel Aguilar

Solanum okadae (EN), *Solanum boliviense* (LC), and *Solanum brevicaule* (LC), are noteworthy for being wild relatives of the potato crops (SERNAP 2015).

Habitat and Geology

Physiographically, the site is comprised of the Tunari mountain range, the Mazo Cruz mountain

Puya glabrescens © MBG-Bolivia/Gustavo Miranda

Puya mirabilis © MBG-Bolivia/Gustavo Miranda

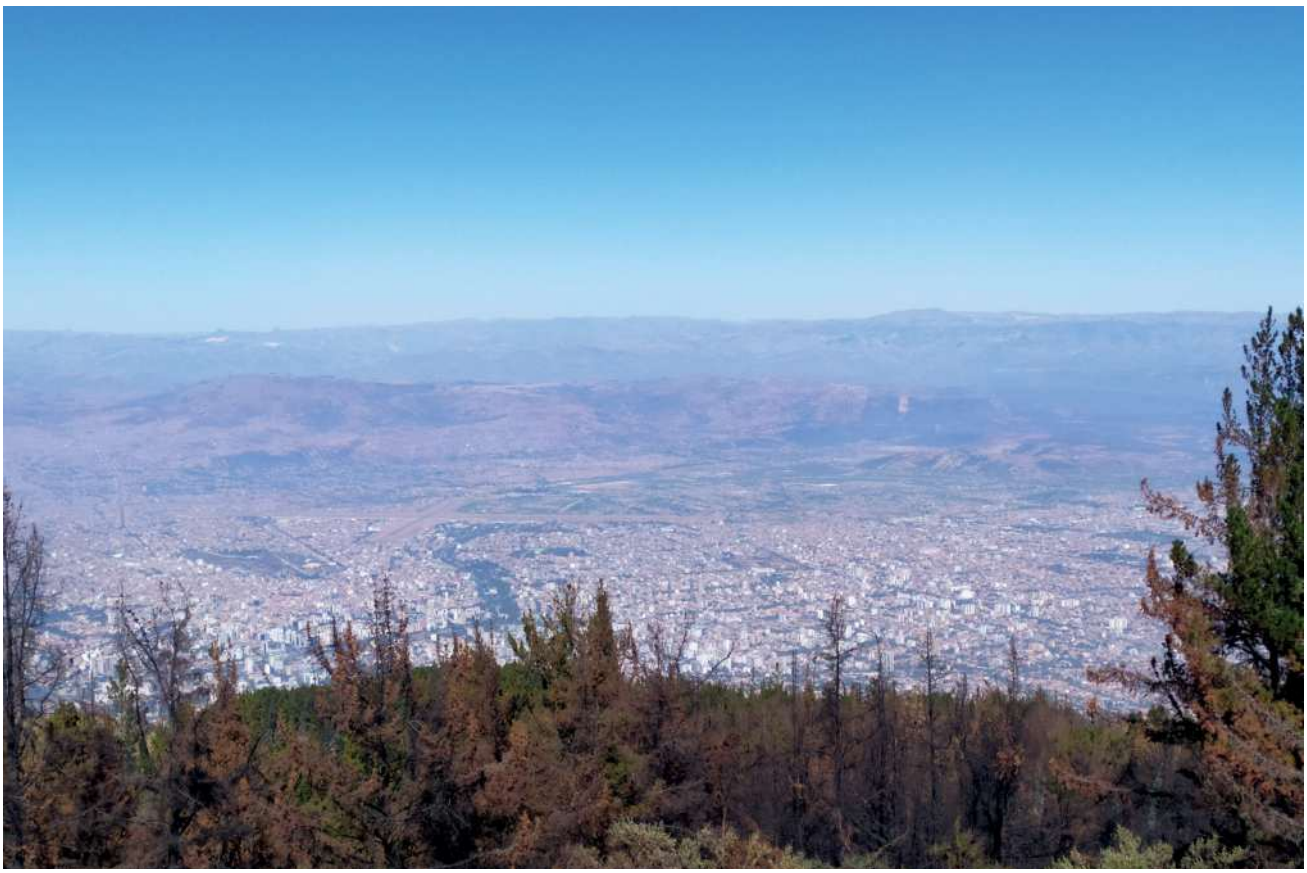
range, and the Huari Pucara mountain range, which belong to the Eastern Bolivian Cordillera. Towards the site's southern extreme, the Andean foothills form alluvial fans giving rise to the Cochabamba Valley (SERNAP 2015).

Biogeographically, the site belongs to the Inter-Andean Dry Forests, Northern Puna, and Yungas ecoregions, where the characteristic vegetation includes Yungas forests, altimontane forests, and relict Polylepis forests (Navarro & Ferreira 2011, Navarro 2011). These vegetation types are classified as Subtropical/Tropical High-Altitude Grasslands, Subtropical/Tropical Montane Humid Forest, and Subtropical/Tropical High-Altitude Scrub following the IUCN habitat classification system (IUCN 2012) (Appendix 2).

Conservation Challenges

As one of the few national protected areas bordering a major city, the site faces significant pressure from Cochabamba's urban footprint, which has expanded by 174% over the last four decades (MapBiomas Bolivia 2024). This growth increasingly encroaches upon vital buffer zones and water recharge areas within the Sacaba municipalities (Gareca & Aguirre 2023). Despite these threats, the site remains a national centre of botanical diversity, hosting an exceptional number of endemic and range-restricted plant taxa. By consolidating its status as a priority site for plants, conservation efforts can simultaneously safeguard these unique floristic communities and reinforce the area's role as a critical biological corridor for avian and mammalian fauna.

Mountain ranges and Puna vegetation in Tunari National Park © Daniel Aguilar



Panoramic view of the city of Cochabamba and its limits with Tunari National Park © Liliana Arroyo

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical High Altitude Grassland	54	Major
Subtropical/Tropical Moist Montane Forest	36	Major
Subtropical/Tropical High Altitude Shrubland	5	Unknown
Subtropical/Tropical Dry Forest	1	Unknown
Other	3	Unknown

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	High	Ongoing - stable
Agricultura en pequeña escala	High	Ongoing - trend unknown
Small-scale, extensive livestock farming	Medium	Ongoing - trend unknown

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	70	Major
Agriculture (pastoral)	—	Unknown
Tourism/recreation	—	Major
Utility & service lines	—	Minor

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
National Park	NP Tunari	Protected/conservation area matches IPA (100%)	3,281
Key Biodiversity Area	KBA Tunari	Protected/conservation area matches IPA (100%)	3,281

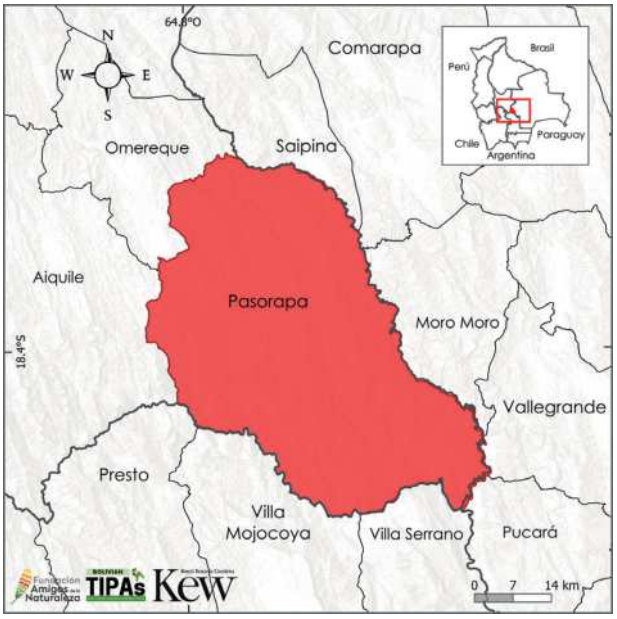
IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Stenostephanus cochabambensis*	A(i)	EN	✓	✓				unknown
Amaryllidaceae	*Chlidanthus boliviensis*	A(i)	CR	✓	✓	✓	✓	✓	rare
Amaryllidaceae	*Pyrolirion boliviense*	A(i)	EN	✓	✓				unknown
Amaryllidaceae	*Pyrolirion cutleri*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Apocynaceae	*Oxypetalum pearsonii*	A(i)	VU	✓	✓		✓		unknown
Apocynaceae	*Philibertia navarroana*	A(i)	CR	✓	✓	✓	✓	✓	rare
Asteraceae	*Chersodoma filifolia*	A(i)	EN	✓	✓	✓	✓		scarce
Asteraceae	*Cosmos peucedanifolius var. cochabambensis*	A(iv)	NE	✓	✓	✓	✓		scarce
Asteraceae	*Gynoxys tablaensis*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Asteraceae	*Ophryosporus kuntzei*	A(i)	VU	✓	✓		✓		unknown
Asteraceae	*Ophryosporus venosissimus*	A(i)	EN	✓	✓		✓		unknown
Asteraceae	*Stevia kuntzei*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Asteraceae	*Stevia neglecta*	A(iv)	NE	✓	✓		✓		scarce
Asteraceae	*Stevia obovata*	A(iv)	NE	✓	✓	✓	✓		scarce
Asteraceae	*Stevia tunariensis*	A(iv)	NE	✓	✓		✓		scarce
Begoniaceae	*Begonia comata*	A(iv)	NE	✓	✓		✓		scarce
Bromeliaceae	*Puya cardenasii*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Bromeliaceae	*Puya cochabambensis*	A(i)	VU	✓	✓	✓	✓	✓	rare
Cactaceae	*Leucostele tunariensis*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Cactaceae	*Leucostele werdermanniana*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Convolvulaceae	*Evolvulus boliviensis*	A(iv)	NE	✓	✓		✓		scarce
Cyperaceae	*Carex ownbeyi*	A(i)	CR	✓	✓	✓	✓	✓	rare
Dioscoreaceae	*Dioscorea calderillensis*	A(i)	EN	✓	✓	✓	✓		scarce
Dioscoreaceae	*Dioscorea kuntzei*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Gentianaceae	*Gentianella bangii*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Gentianaceae	*Gentianella bockii*	A(i)	VU	✓	✓	✓	✓		scarce
Asteraceae	*Gochnatia boliviana*	A(i)	VU	✓					occasional
Gentianaceae	*Gentianella longisepala*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Gentianaceae	*Gentianella lythroides*	A(iii)	NE	✓	✓		✓		scarce

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Gentianaceae	*Gentianella palcana*	A(i)	EN	✓	✓		✓		scarce
Bignoniaceae	*Jacaranda mimosifolia*	A(i)	VU	✓					occasional
Gentianaceae	*Gentianella pringlei*	A(iii)	NE	✓	✓		✓		scarce
Gentianaceae	*Gentianella sancti-mathaeii*	A(iv)	NE	✓	✓		✓		unknown
Gentianaceae	*Gentianella undulatisepala*	A(iii)	DD	✓	✓		✓		scarce
Gentianaceae	*Halenia robusta*	A(iii)	NE	✓	✓		✓		scarce
Iridaceae	*Mastigostyla tunariensis*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Isoetaceae	*Isoetes herzogii*	A(i)	VU	✓	✓		✓		unknown
Loasaceae	*Caiophora chuquisacana*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Malvaceae	*Gaya pilocarpa*	A(i)	EN	✓	✓	✓	✓		scarce
Malvaceae	*Gaya rubricaulis*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Malvaceae	*Wissadula cardenasii*	A(i)	CR	✓	✓	✓	✓	✓	rare
Nyctaginaceae	*Mirabilis glutinosa*	A(i)	CR	✓	✓		✓		scarce
Rosaceae	*Polylepis besseri*	A(i)	VU	✓					frequent
Onagraceae	*Fuchsia garleppiana*	A(ii)	EN	✓	✓				unknown
Onagraceae	*Fuchsia nana*	A(ii)	VU	✓	✓		✓		unknown
Onagraceae	*Oenothera brevipetala*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Orchidaceae	*Chloraea boliviana*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Orchidaceae	*Fernandezia quadrangularis*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Piperaceae	*Peperomia pseudorufescens*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Poaceae	*Anatherostipa coroi*	A(i)	EN	✓	✓		✓		unknown
Lamiaceae	*Salvia amplifrons*	A(i)	EN	✓					occasional
Solanaceae	*Solanum okadae*	A(i)	EN	✓					unknown
Poaceae	*Chascolytrum altimontanum*	A(i)	VU	✓	✓		✓		unknown
Poaceae	*Festuca boliviana*	A(i)	VU	✓	✓	✓	✓		unknown
Poaceae	*Festuca cochabambana*	A(i)	VU	✓	✓				scarce
Poaceae	*Festuca copei*	A(i)	VU	✓	✓				unknown
Rosaceae	*Polylepis lanata*	A(i)	EN	✓	✓		✓		unknown
Rosaceae	*Polylepis subtusalbida*	A(i)	EN	✓	✓		✓		frequent
Rubiaceae	*Richardia cruciata*	A(iii)	NE	✓	✓	✓	✓	✓	rare

PASORAPA

Authors: Maira T. Martinez-Ugarteche, John R.I. Wood, Margoth Atahuachi, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA086	Department/ Province	Cochabamba: Campero
Latitude	-18.39192	Longitude	-64.60185
Minimum altitude (m.a.s.l.)	924	Maximum altitude (m.a.s.l.)	3,067
Area (km^2)	2,394	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(iii)



IPA Assessment – Rationale

Pasorapa is an IPA site with a significant plant diversity, including endemic, socioeconomically important, and globally threatened species. It is part of the Inter-Andean Dry Valleys, a set of xeric forests and scrublands with a high level of endemism.

The botanical characteristics of Pasorapa are its 50 endemic species of Bolivia, 19 globally threatened species, six highly range-restricted and potentially threatened endemics. It also features 150 species of socioeconomic importance, which represent 4.6% of Bolivia's useful plants.

Site Description

Located in the centre of Bolivia, in the Campero province, Cochabamba department, the limits of this IPA site overlap 100% with municipal limits of Pasorapa. The site borders the departments of Santa Cruz (with Saipina and Vallegrande) and Chuquisaca (with Presto and Villa Mojocoya). Furthermore, the Pasorapa site overlaps 99% with the Pasorapa Natural Area of Integrated Management, created in 2010 as a municipal protected area.

Botanical Significance

The location and characteristics of Pasorapa stand out as an environment of great plant diversity. Among the species found here is *Baccharis woodii* (EN), a subshrub that develops in deep, dry valleys, and rocky slopes covered by dry forests or scrublands (Müller 2006). *Bonamia riograndina* and *Ipomoea juliagutierreziae* are two species categorised as Endangered (EN) and share the characteristic of growing in xerophytic scrublands and dry forests, on rocky soils, and growing in the Río Grande valley, an important centre of endemic species (Wood *et al.* 2015). Also growing in the site are *Aspidosperma resonans* (VU), *Piptadenia boliviana* (VU), *Pseudosenegalia riograndensis* (EN), and *Pseudobombax andicola* (VU). All of these are characteristic, endemic trees of the dry valleys and, in some cases, also useful: *A. resonans*, a tree used to construct charangos (Wood 2005), and *Piptadenia boliviana* and *Psedobombax andicola* are forage plants moderately and occasionally

Valleys and canyons at Pasorapa © Daniel Aguilar

consumed during the dry and winter seasons (GIZ – UCB 2020). Additionally, the site has range-restricted species such as *Aristolochia stevechurchillii*, an unevaluated species that, along with other endemics, totals 50 endemic species in Pasorapa.

Of the 150 useful species identified within the Pasorapa IPA, 16 are endemic to Bolivia. Given that extensive livestock husbandry—predominantly sheep, goats, and cattle, constitutes a primary economic pillar for the Pasorapa municipality, the native flora serves as an essential forage resource.

Baccharis woodii © Darwin Initiative project (11-010)

Piptadenia boliviana © Maira Martinez

Pseudosenegalia riograndensis © Darwin Initiative project (11-010)

Pseudosenegalia riograndensis © Darwin Initiative project (11-010)

Pseudosenegalia riograndensis © Darwin Initiative project (11-010)

Recent research has documented over 190 forage species across Pasorapa and the adjacent municipalities of Omereque and Aiquile (De la Barra & Navarro 2021).

Habitat and Geology

According to Ibisch *et al.* (2003), the Inter-Andean Dry Forest and the Chaco Serrano ecoregions converge in Pasorapa, and physiographically

Semi-arid inter-Andean forest of Caraparí and Soto © Daniel Aguilar

Inter-Andean dry forest of Mara valluna and Soto © Maira Martinez

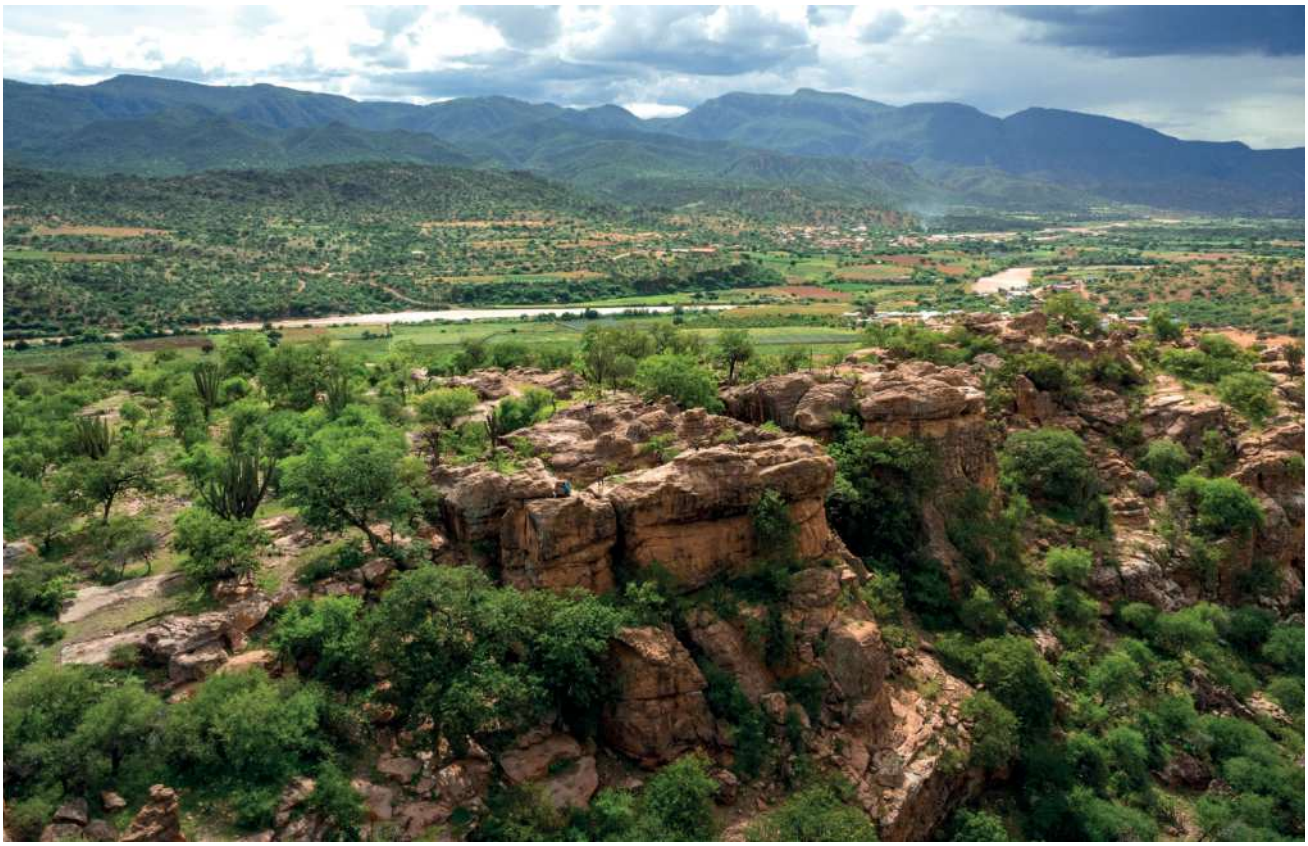
the sites form part of the Eastern Cordillera. Pasorapa is also an element of the Inter-Andean Dry Valleys, a complex of dry forests, *chaparrales*, and scrublands, comprising plateaus, hills, and valleys, which are characterised by their xeric environments, rocky soils, and deciduous trees in the dry season (Beck *et al.* 1993, Ibisch *et al.* 2003, Wood 2005, Beck 2014).

According to The Classification of Vegetation and Ecological Systems of Bolivia (Navarro & Ferreira 2011, Navarro 2011) and the IUCN habitat classification scheme (IUCN 2012), this site is mainly covered by Subtropical/Tropical Dry Forest. This dry forest is comprised of the Inter-Andean dry forest of *Mara Valluna* and *Soto*: *Cardenasiodendron brachypterum-Schinopsis haenkeana* series and the Inter-Andean semi-arid forest of Caraparí and Soto: *Neocardenasia herzogiana-Schinopsis haenkeana* series (Navarro 2011) (Appendix 2).

Conservation Challenges

Approximately 70% of the Pasorapa municipality is encompassed by the Pasorapa Natural Area of Integrated Management (ANMI), a designation that harmonises nature conservation with sustainable community development. This area forms a vital ecological corridor alongside the Río Grande Cruceño Valleys (Santa Cruz) and El Palmar (Chuquisaca). This regional network, which includes the Nuevo Mundo IPA, constitutes a significant centre of endemism situated between the Río Grande and Mizque rivers.

While agriculture and extensive livestock farming have remained the primary economic drivers for decades—predominantly in the valley bottoms—the region's status as a sanctuary for both unique flora and threatened avian species necessitates the integration of these biodiversity values into future development strategies.



Pasorapa Valley, dry forests and mountain ranges with sub-humid forests © Daniel Aguilar

Harrisia tetracantha © Darwin Initiative Project (11-010)

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Dry Forest	100	Major
Subtropical/Tropical High Altitude Shrubland	–	Major
Other	–	Minor

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Medium	Ongoing - stable
Annual & perennial non-timber crops	High	Ongoing - stable
Livestock farming & ranching - Nomadic grazing	High	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	70	Major
Agriculture (arable)	–	Major
Agriculture (pastoral)	–	Major
Residential/urban development	–	Minor

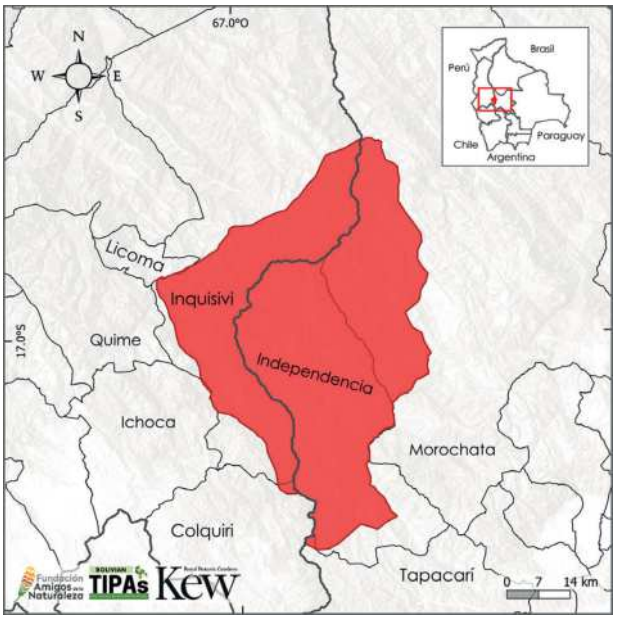
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	ANMI Pasorapa	IPA encompasses protected/conservation area (99%)	1,780

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥1% global population**	**≥5% national population**	**1 of 5 best sites at national level**	**≥10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Justicia aequilabris* subsp. *riograndina*	A(iv)	NE	✓	✓		✓		occasional
Amaranthaceae	*Gomphrena stellata*	A(ii), A(iii)	EN	✓	✓	✓			rare
Apocynaceae	*Aspidosperma resonans*	A(i)	VU	✓	✓				occasional
Apocynaceae	*Philibertia velutina*	A(i)	VU	✓	✓				occasional
Apocynaceae	*Funastrum rupicola*	A(iv)	NT	✓	✓	✓			scarce
Aristolochiaceae	*Aristolochia stevechurchillii*	A(iv)	NE	✓	✓	✓	✓		occasional
Asteraceae	*Aldama emaciata*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Asteraceae	*Baccharis woodii*	A(i)	EN	✓	✓		✓		occasional
Asteraceae	*Gochnatia boliviana*	A(i)	VU	✓	✓				occasional
Bignoniaceae	*Tecoma beckii*	A(iv)	NE	✓	✓	✓	✓		unknown
Bromeliaceae	*Deuterocohnia scapigera*	A(i)	VU	✓	✓		✓		occasional
Bromeliaceae	*Tillandsia comarapaensis*	A(i)	VU	✓	✓		✓		occasional
Bromeliaceae	*Tillandsia koehresiana*	A(i)	EN	✓	✓		✓		occasional
Cactaceae	*Weingartia cardenasiana*	A(iii)	NE	✓		✓			occasional
Convolvulaceae	*Bonamia riograndina*	A(i)	EN	✓	✓		✓		occasional
Convolvulaceae	*Ipomoea juliagutierreziae*	A(i)	EN	✓	✓		✓		occasional
Convolvulaceae	*Ipomoea lilloana*	A(i)	VU	✓					occasional
Euphorbiaceae	*Croton curculiospermus*	A(iii)	NE	✓	✓	✓	✓	✓	occasional
Fabaceae	*Myrocarpus emarginatus*	A(i)	EN	✓	✓		✓		occasional
Fabaceae	*Piptadenia boliviana*	A(i)	VU	✓					occasional
Fabaceae	*Pseudosenegalia riograndensis*	A(i)	EN	✓	✓		✓		localized
Malvaceae	*Malvastrum trifidum*	A(i)	EN	✓	✓		✓		occasional
Malvaceae	*Pseudobombax andicola*	A(i)	VU	✓	✓		✓		occasional
Malvaceae	*Sida gracilipes*	A(i)	VU	✓					occasional
Malvaceae	*Wissadula cruziana*	A(i)	VU	✓	✓				occasional
Malvaceae	*Fuertesimalva woodii*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Rubiaceae	*Palicourea herzogii*	A(iv)	NE	✓	✓		✓		occasional
Solanaceae	*Brugmansia arborea*	A(i)	EW	✓					occasional

COTACAJES BASIN

Authors: Liliana Arroyo-Herbas, Elmer Cuba-Orozco, Oriana A. Lino-Villalba, Maira T. Martinez-Ugarteche, Daniel Villarroel & Bente B. Klitgaard

International code	BOLTIPA087	Department/ Province	La Paz: Inquisivi Cochabamba: Ayopaya
Latitude	-16.97761	Longitude	-66.84025
Minimum altitude (m.a.s.l.)	1,135	Maximum altitude (m.a.s.l.)	4,839
Area (km^2)	3,051	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)



IPA Assessment – Rationale

The site is characterised by a system of mountains and hills forming a deep valley. It constitutes a transition zone between the Yungas region and the Inter-Andean Dry Forests. These physiographic characteristics safeguard 30 globally threatened plant species and two nationally threatened species. The site also protects 33 range-restricted and potentially threatened species.

Furthermore, 125 endemic plant species are safeguarded in the site, representing 5% of the national endemics. To this number are added 232 useful plant species, representing 7% of the Bolivian useful species.

Site Description

Spanning 3,051 km^2 across the borders of the Inquisivi (La Paz) and Ayopaya (Cochabamba) provinces, the Cotacajes Basin serves as a significant intersection of natural and cultural heritage. The IPA site exhibits substantial overlap with two Key Biodiversity Areas (KBA): the Cotacajes Basin Cochabamba and Cotacajes Basin La Paz, while connecting to Tunari National Park in the southwest. Beyond its biological importance, the basin possesses immense archaeological value, housing at least 21 documented sites (La Razón 2015). These include Inka and Colonial-era agricultural terraces, subterranean tombs, and ecclesiastical ruins (Bengtsson & Avilés 2005), alongside the Chawpisuyo rock art and various Tiwanaku vestiges (Cordero *et al.* 2013).

Botanical Significance

The botanical significance is highlighted by the 125 endemic species recorded for the site, with 25 globally threatened. Among the priority species for conservation is *Mimosa woodii* (EN), a species that, in addition to being globally threatened, has its entire population restricted to this site. Another priority species is *Yungasocereus inquisivensis* (LC), which, although not under an extinction risk category, has its entire population within the site.

It is also one of best five sites nationally for the conservation of endemic species such as *Philibertia fontellae* (EN), *Boliviadendron bolivianum* (EN), *Tillandsia pseudocardenasii* (EN), and Clinopodium pallidum (VU), species that are globally threatened

Sacambaya River, border between the departments of La Paz and Cochabamba © Trustees RBG Kew/Anna Haigh

and contain 5% of their population within the site. Additionally, the site contains 232 useful species, representing 7% of the total of Bolivian useful species (Appendix 3), including 17 species of crop wild relatives (CWR), such as *Capsicum eximium* (NE) and *Nicotiana otophora* (LC), relatives of chili pepper and tobacco, respectively.

Habitat and Geology

Situated within the Eastern Cordillera, the Cotacajes Basin is physiographically characterised by rugged mountain ranges and hills with extensive steep slopes, deeply dissected by fluvial erosion into entrenched valleys. Hydrographically, the site forms part of the upper Beni River basin—within the broader Amazon drainage system—and encompasses the Sacambaya and Cotacajes rivers, which extend for at least 263 km. The area is a significant ecological crossroads where three ecoregions converge: Inter-Andean Dry Forests, Yungas, and elements of the Northern Puna (Ibisch *et al.* 2003).

Salvia orbignaei © Darwin Initiative Project (11-010)

The site is characterised by protecting well-conserved relics of the Inter-Andean Dry Forests with typical genera such as *Piptadenia*, *Puya*, and *Salvia*, especially in the transition zone of the Inquisivi and Quime municipalities in the La Paz department. All the vegetation types present in Cotacajes are classified as Subtropical/Tropical Dry Forest, Subtropical/Tropical Montane Humid Forest, and Subtropical/Tropical High-Altitude Grasslands following the IUCN habitat classification system (IUCN 2012) (Appendix 2).

Conservation Challenges

The area is a centre of agricultural and livestock production, with a decrease in natural vegetation cover, and forest loss of 4,027 ha from 1995 to 2020 (MapBiomas Bolivia 2024). This may be due to the main threats, such as intensive agricultural activities for potato, barley, coca, and quinoa, in addition to cattle and sheep farming (KBA 2025j). Likewise, in the Independencia municipality, less than 2 km from the site, is the Kami mine, one of the largest mining concessions in Cochabamba (Mancomunidad Ayopaya 2020). Although this mining does not occur directly on the site, interest in new explorations in the region may arise in the future. Despite the fact that the Cotacajes Basin receives no formal protection to-date, its botanical characteristics demonstrate that conservation efforts must be united in the site, focusing on priority groups such as endemic plant species, plant species at risk of extinction, and especially for the species that are highly restricted to the site.

Mountain ranges along the Sacambaya river valley, Sacambaya River © Trustees RBG Kew/Anna Haigh

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Montane Forest	70	Major
Subtropical/Tropical Dry Forest	24	Major
Subtropical/Tropical High Altitude Grassland	6	Minor

Amenazas

Amenazas	Severidad	Situación
Housing & urban areas	Medium	Ongoing - stable
Small-holder farming	High	Ongoing - stable
Annual & perennial non-timber crops	Low	Ongoing - stable
Small-scale, extensive livestock farming	Medium	Ongoing - stable

Uso de Suelo

Tipo de uso de suelo	Porcentaje de cobertura	Importancia
Nature conservation	70	Major
Agriculture (arable)	—	Unknown

Protected areas and other conservation designations

Protected area type	Names (s) of protected area (s)	Relationship between the site and the protected area (% of overlap)	Area of overlap (km^2)
Key Biodiversity Area	KBA Cuenca de Cotacajes La Paz	Protected/conservation area matches IPA (34%)	1,040
Key Biodiversity Area	KBA Cuenca de Cotacajes Cochabamba	Protected/conservation area matches IPA (66%)	2,011

IPA priority species Criterion A

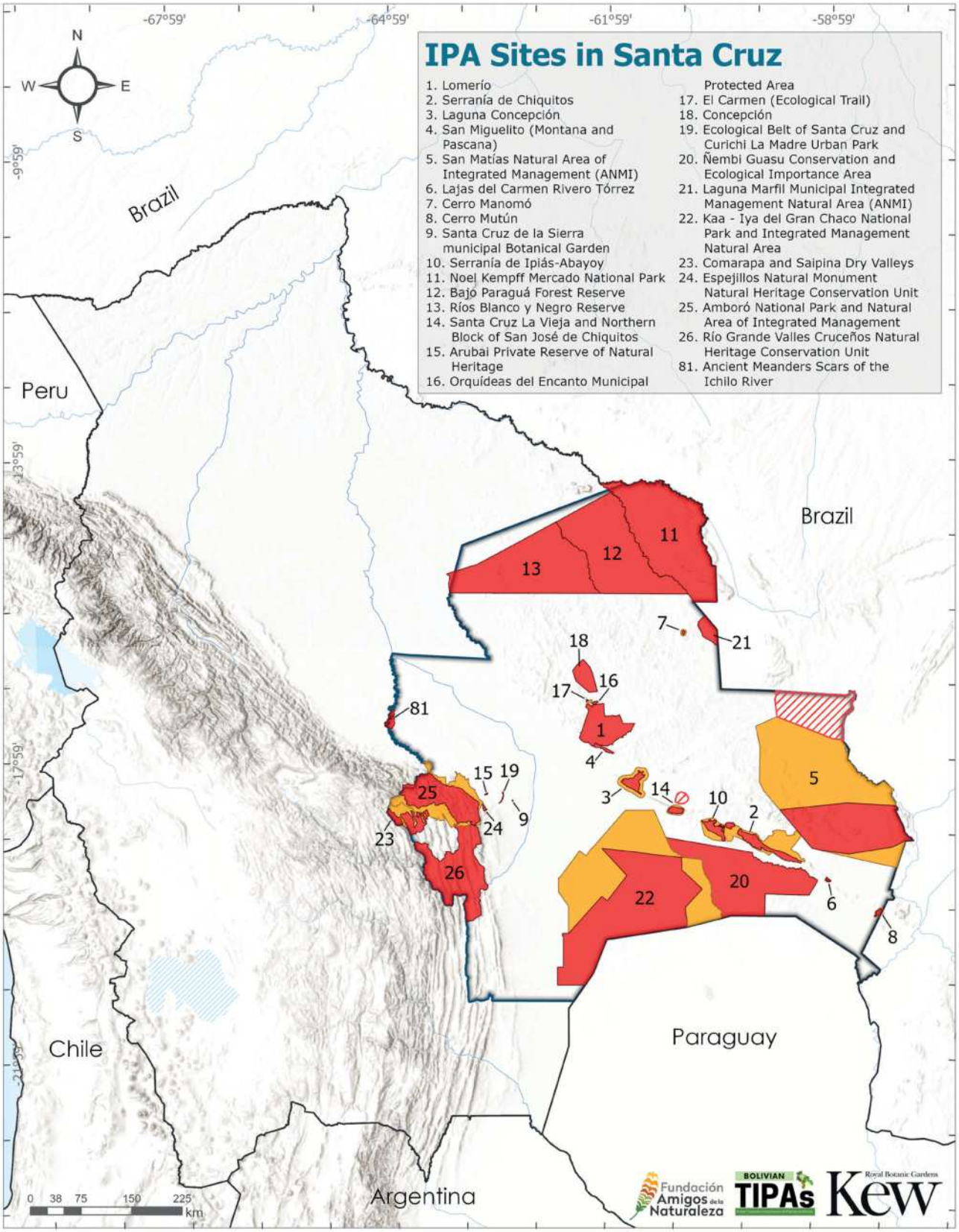
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Acanthaceae	*Aphelandra kolobantha*	A(i)	EN	✓	✓	✓	✓		scarce
Amaranthaceae	*Pedersenia cardenasii*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Apocynaceae	*Orthosia boliviana*	A(iii)	NE	✓	✓		✓		scarce
Apocynaceae	*Orthosia goyderiana*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Apocynaceae	*Philibertia fontellae*	A(i)	EN	✓	✓	✓	✓	✓	occasional
Araliaceae	*Oreopanax atopanthus*	A(i)	EN	✓	✓				occasional
Araliaceae	*Oreopanax pentlandianus*	A(i)	EN	✓	✓		✓		occasional
Araliaceae	*Sciodaphyllum nebularum*	A(i)	EN	✓	✓	✓	✓		unknown
Aspleniaceae	*Asplenium ayopayense*	A(iv)	NE	✓	✓	✓	✓		occasional
Aspleniaceae	*Asplenium bolivianum*	A(iv)	NE	✓	✓	✓	✓		occasional
Aspleniaceae	*Diplazium bolivianum*	A(iii)	NE	✓	✓		✓		scarce

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Asteraceae	*Ayapanopsis euphyes*	A(iv)	NE	✓	✓		✓		scarce
Asteraceae	*Dendrophorbium ayopayense*	A(i)	VU	✓	✓				scarce
Asteraceae	*Fleischmannia soratae*	A(i)	CR	✓	✓		✓		scarce
Asteraceae	*Galinsoga boliviensis*	A(i)	EN	✓	✓		✓		occasional
Begoniaceae	*Begonia santarosensis*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Fosterella cotacajensis*	A(i)	VU	✓	✓		✓		unknown
Bromeliaceae	*Fosterella elviragrossiae*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Bromeliaceae	*Puya claudiae*	A(iv)	NE	✓	✓		✓		scarce
Bromeliaceae	*Tillandsia pseudocardenasii*	A(i)	EN	✓	✓		✓		rare
Burseraceae	*Trattinnickia nebulae*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Buxaceae	*Styloceras columnare*	A(i)	EN	✓	✓				unknown
Campanulaceae	*Siphocampylus werdermannii*	A(ii)	VU	✓	✓				unknown
Ericaceae	*Thibaudia cardenasii*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Fabaceae	*Boliviadendron bolivianum*	A(i)	EN	✓	✓	✓	✓		rare
Fabaceae	*Mimosa woodii*	A(i)	EN	✓	✓	✓	✓	✓	rare
Gentianaceae	*Gentianella bridgesii*	A(iii)	DD	✓	✓		✓		scarce
Gentianaceae	*Gentianella sancti-mathaeii*	A(iv)	NE	✓	✓		✓		unknown
Iridaceae	*Cypella mandonii*	A(iv)	NE	✓	✓		✓		unknown
Lamiaceae	*Clinopodium pallidum*	A(i)	VU	✓	✓	✓	✓		frequent
Malvaceae	*Gaya pilocarpa*	A(i)	EN	✓	✓		✓		scarce
Melastomataceae	*Miconia mandonii*	A(i)	VU	✓					unknown
Meliaceae	*Cedrela angustifolia*	A(i)	VU	✓					unknown
Onagraceae	*Fuchsia garleppiana*	A(ii)	EN	✓	✓				unknown
Orchidaceae	*Bulbophyllum tricolor*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Orchidaceae	*Fernandezia cardenasii*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Orchidaceae	*Macroclinium lueri*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Orchidaceae	*Restrepia vasquezii*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Orchidaceae	*Scelochilus newyorkorum*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Orchidaceae	*Stelis citrinella*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis darwinii*	A(iii)	NE	✓	✓		✓		scarce
Orchidaceae	*Stelis melanostele*	A(iii)	NE	✓	✓		✓		scarce
Orchidaceae	*Stelis pachyrrhiza*	A(iii)	NE	✓	✓		✓		scarce
Orchidaceae	*Stelis rosulenta*	A(iii)	NE	✓	✓		✓		scarce
Orchidaceae	*Stelis strigosa*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Orchidaceae	*Zygostates riefenstahliae*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Poaceae	*Cortaderia boliviensis*	A(i)	VU	✓					scarce

IPA priority species Criterion A Cont.									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥1% global population**	**≥5% national population**	**1 of 5 best sites at national level**	**≥10% global population**	**Entire global population at the site**	**Abundance at site**
Poaceae	*Festuca cochabambana*	A(i)	VU	✓	✓				occasional
Poaceae	*Festuca stebeckii*	A(i)	CR	✓	✓	✓	✓	✓	rare
Polypodiaceae	*Elaphoglossum catenatum*	A(iv)	NE	✓	✓		✓		unknown
Polypodiaceae	*Elaphoglossum ellenbergianum*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Polypodiaceae	*Polystichum bachii*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Rosaceae	*Polylepis lanata*	A(i)	EN	✓	✓		✓		unknown
Rutaceae	*Zanthoxylum nebuletorum*	A(i)	VU	✓	✓		✓		unknown
Salicaceae	*Abatia spicata*	A(i)	VU	✓			✓		rare
Santalaceae	*Phoradendron kuntzei*	A(iv)	NE	✓	✓		✓		unknown
Scrophulariaceae	*Buddleja cardenasii*	A(i)	EN	✓	✓	✓	✓	✓	rare
Solanaceae	*Brugmansia arborea*	A(i)	EW	✓					unknown
Solanaceae	*Lycianthes reflexa*	A(i)	VU	✓	✓				unknown
Solanaceae	*Solanum monanthemon*	A(i)	EN	✓	✓		✓		unknown
Solanaceae	*Solanum okadae*	A(i)	EN	✓					scarce
Solanaceae	*Solanum stellativelutinum*	A(iv)	NE	✓	✓	✓	✓		rare
Solanaceae	*Solanum tunariense*	A(i)	EN	✓	✓	✓	✓		occasional
Verbenaceae	*Duranta benthamii*	A(iii)	NE	✓	✓		✓		scarce

SANTA CRUZ

Chiquitos mountain range © Daniel Aguilar


IPA Sites in Santa Cruz
1. Lomerío
2. Serranía de Chiquitos
3. Laguna Concepción
4. San Miguelito (Montana and Pascana)
5. San Matías Natural Area of Integrated Management (ANMI)
6. Lajas del Carmen Rivero Tórrez
7. Cerro Manomó
8. Cerro Mutún
9. Santa Cruz de la Sierra municipal Botanical Garden
10. Serranía de Ipiás-Abayoy
11. Noel Kempff Mercado National Park
12. Bajo Paraguá Forest Reserve
13. Ríos Blanco y Negro Reserve
14. Santa Cruz La Vieja and Northern Block of San José de Chiquitos
15. Arubai Private Reserve of Natural Heritage
16. Orquídeas del Encanto Municipal Protected Area
17. El Carmen (Ecological Trail)
18. Concepción
19. Ecological Belt of Santa Cruz and Curichi La Madre Urban Park
20. Ñembi Guasu Conservation and Ecological Importance Area
21. Laguna Marfil Municipal Integrated Management Natural Area (ANMI)
22. Kaa - Iya del Gran Chaco National Park and Integrated Management Natural Area
23. Comarapa and Saipina Dry Valleys
24. Espejillos Natural Monument Natural Heritage Conservation Unit
25. Amboró National Park and Natural Area of Integrated Management
26. Río Grande Valles Cruceños Natural Heritage Conservation Unit
81. Ancient Meanders Scars of the Ichilo River
N
W
E
S
-67°59'
-64°59'
-61°59'
-58°59'
-9°59'
-13°59'
-17°59'
-21°59'
Brazil
Peru
Brazil
Chile
Paraguay
Argentina
0 38 75 150 225 km
Fundación Amigos de la Naturaleza
BOLIVIAN TIPAs
Royal Botanic Gardens Kew

LOMERÍO

Authors: Rosemary Clegg, Maira T. Martinez-Ugarteche, John R.I. Wood, Roxana Ledezma-Vargas, Marisol Toledo & Bente B. Klitgaard

International code	BOLTIPA001	Department/ Province	Santa Cruz: Ñuflo de Chávez
Latitude	-16.79244	Longitude	-61.80567
Minimum altitude (m.a.s.l.)	240	Maximum altitude (m.a.s.l.)	731
Area (km^2)	3,004	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), C(ii), C(iii)

IPA Assessment – Rationale

The indigenous territory of the Monkoxi, known as Lomerío, is unique within the Chiquitania ecoregion in the eastern lowlands of Bolivia. Lomerío features rolling hills with a diversity of vegetation types, including Cerrado, Chiquitano Dry Forest, and rocky outcrops. Thanks to its diversity of soil types, geology, and topography, Lomerío is host to a mosaic of vegetation types, which contains numerous globally threatened, endemic, rare and useful plants. Lomerío is thus botanically important because of its 18 globally threatened species, of which 13 are endemic, and for its 435 species of socioeconomic importance (Appendix 3). The latter represent 13.4% of the useful plants documented for the country.

For the description, illustration, and information regarding the Important Plant Area (BOLTIPA001), Lomerío, see:

Rosie Clegg, Maira T. Martinez-Ugarteche, John Wood, Roxana Ledezma-Vargas, Marisol Toledo & Bente B. Klitgaard. 2023. Área Tropical Importante de Plantas Lomerío (BOLTIPA001). *Kempffiana* Vol. 19(2): 69-82.

El Cerrito, the highest peak in Lomerío © Darwin Initiative Project (26-024)

Hibiscus conceptionis © Maira Martinez

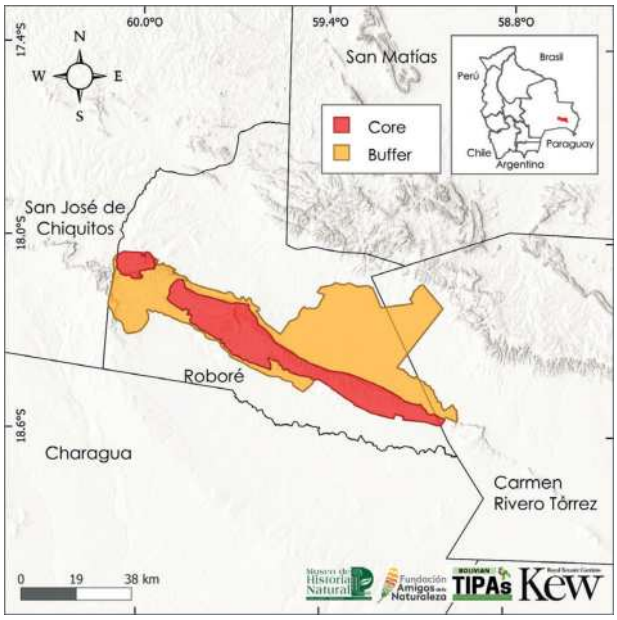
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Acanthaceae	*Lepidagathis riedeliana*	A(i)	EN	✓					scarce
Anacardiaceae	*Myracrodruon urundeuva*	A(ii)	VU						frequent
Asteraceae	*Neocuatrecasia epapposa*	A(i)	VU	✓	✓	✓	✓		frequent
Asteraceae	*Pectis harryi*	A(i)	EN	✓	✓	✓	✓		unknown
Bignoniaceae	*Handroanthus serratifolius*	A(i)	EN	✓					frequent
Fabaceae	*Amburana cearensis*	A(i)	EN	✓					unknown
Fabaceae	*Ancistrotropis subhastata*	A(i)	EN	✓	✓	✓	✓		scarce
Fabaceae	*Arachis inflata*	A(i)	VU	✓	✓	✓	✓		frequent
Fabaceae	*Chamaecrista chiquitana*	A(i)	EN	✓	✓	✓	✓		scarce
Fabaceae	*Dipteryx alata*	A(i)	VU	✓					frequent
Fabaceae	*Steinbachiella leptoclada*	A(i)	VU	✓	✓				scarce
Isoetaceae	*Isoetes afloramientorum*	A(iii)	NE	✓	✓		✓	✓	unknown
Isoetaceae	*Isoetes santacruzensis*	A(iii)	NE	✓	✓		✓		unknown
Malpighiaceae	*Heteropterys falcifera*	A(i)	EN	✓	✓	✓	✓		scarce
Malpighiaceae	*Stigmaphyllon boliviense*	A(i)	CR	✓	✓		✓		rare
Malvaceae	*Pseudabutilon leucothrix*	A(iii)	DD	✓	✓		✓	✓	rare
Meliaceae	*Cedrela fissilis*	A(i)	VU	✓					unknown
Myrtaceae	*Eugenia cydoniifolia*	A(i)	VU	✓	✓	✓	✓		occasional
Myrtaceae	*Eugenia lomeroensis*	A(i)	EN	✓	✓	✓	✓		scarce
Myrtaceae	*Eugenia teresa-ruiziana*	A(i)	CR	✓	✓	✓	✓	✓	scarce
Orchidaceae	*Sarcoglottis herzogii*	A(iv)	DD	✓	✓		✓		occasional
Poaceae	*Andropogon multiflorus*	A(iii)	NE	✓	✓		✓		unknown
Poaceae	*Paspalum crucense*	A(i)	EN	✓	✓	✓	✓		occasional
Rubiaceae	*Mitracarpus bicrucis*	A(i)	VU	✓	✓	✓	✓		occasional
Rutaceae	*Zanthoxylum comosum*	A(iii)	DD	✓	✓		✓	✓	unknown

TUCABACA CONSERVATION AND NATURAL HERITAGE UNIT (Serranía de Chiquitos)

Authors: Rosemary Clegg, Maira T. Martinez-Ugarteche, G. Alexander Parada, John R.I. Wood, Anna Haigh, Sue Frisby, Marisol Toledo & Bente B. Klitgaard

International code	BOLTIPA002	Department/ Province	Santa Cruz: Chiquitos, Germán Busch
Latitude	-18.36111	Longitude	-59.52442
Minimum altitude (m.a.s.l.)	147	Maximum altitude (m.a.s.l.)	1,305
Area (km^2)	2,936	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(iii), C(ii), C(iii)



IPA Assessment – Rationale

The Tucabaca Conservation and Natural Heritage Unit (UCPN) encompasses the Serranía de Chiquitos, which marks the southern limits of the Chiquitania ecoregion. A mosaic of vegetation and a high level of endemism characterise this site and is due to its topographic, geological, soil diversity. For plants the UCPN Tucabaca and Serranía de Chiquitos are critical conservation sites, hosting 54 Bolivian endemics (38 threatened) and 342 socioeconomically important species (Appendix 3) representing 10.5% of Bolivia's documented useful plants.

For the description, illustration, and information regarding the Important Plant Area (BOLTIPA002), Serranía de Chiquitos, see:

Rosie Clegg, Maira T. Martinez-Ugarteche, G. Alexander Parada, John Wood, Anna Haigh, Sue Frisby, Marisol Toledo & Bente B. Klitgaard 2023. Área Tropical Importante de Plantas Serranía de Chiquitos (BOLTIPA002). *Kempffiana* Vol. 19(2): 82-103.

At the view point from Santiago de Chiquitos © Darwin Initiative Project (26-024)

Mimosa auriculata © Darwin Initiative Project (26-024)

IPA priority species Criterion A

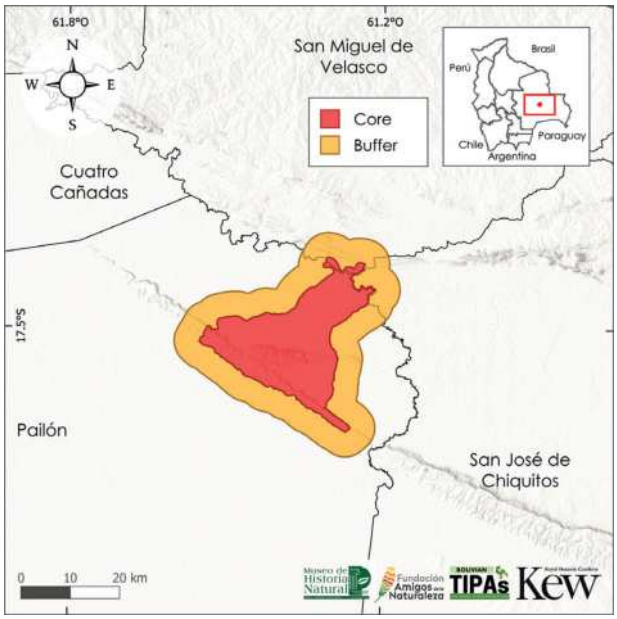
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Acanthaceae	*Justicia adhaerens*	A(i)	CR	✓	✓	✓	✓	✓	scarce
Acanthaceae	*Justicia kessleri*	A(i)	VU	✓	✓	✓	✓		scarce
Acanthaceae	*Justicia mesetarum* subsp. *chiquitana*	A(iv)	NE	✓	✓	✓	✓	✓	scarce
Amaranthaceae	*Gomphrena cardenasii*	A(i)	VU	✓	✓	✓	✓		occasional
Amaranthaceae	*Pfaffia rotundifolia*	A(i)	EN	✓	✓	✓	✓		occasional
Amaryllidaceae	*Hippeastrum starkiorum*	A(iii)	NE	✓	✓	✓	✓		occasional
Amaryllidaceae	*Hippeastrum viridiflorum*	A(i)	EN	✓	✓	✓	✓		rare
Anacardiaceae	*Astronium woodii*	A(i)	EN	✓	✓	✓	✓		scarce
Anacardiaceae	*Myracrodruon urundeuva*	A(ii)	LC						frequent
Apocynaceae	*Austrochthamalia boliviana*	A(i)	EN	✓	✓	✓	✓		rare
Apocynaceae	*Blepharodon crabronum*	A(i)	EN	✓	✓	✓	✓		occasional
Apocynaceae	*Blepharodon philibertioides*	A(i)	EN	✓	✓	✓	✓		occasional
Apocynaceae	*Minaria praetermissa*	A(i)	EN	✓	✓	✓	✓		frequent
Asteraceae	*Bidens herzogii*	A(i)	EN	✓	✓	✓	✓		occasional
Asteraceae	*Calea dalyi*	A(i)	EN	✓	✓	✓	✓	✓	frequent
Asteraceae	*Centratherum cardenasii*	A(i)	VU	✓	✓	✓	✓		scarce
Asteraceae	*Ichthyothere woodii*	A(i)	EN	✓	✓	✓			occasional
Asteraceae	*Neocuatrecasia tysonii*	A(i)	VU	✓	✓	✓			occasional
Asteraceae	*Praxelis chiquitensis*	A(i)	EN	✓	✓	✓	✓	✓	localized
Asteraceae	*Praxelis porophylloides*	A(i)	EN	✓	✓	✓	✓	✓	scarce

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Asteraceae	*Wedelia cardenasii*	A(i)	VU	✓	✓	✓			unknown
Bignoniaceae	*Handroanthus abayoy*	A(i)	VU	✓	✓	✓			occasional
Bromeliaceae	*Fosterella yuvinkae*	A(i)	EN	✓	✓	✓	✓		occasional
Bromeliaceae	*Pitcairnia cardenasii*	A(i)	EN	✓	✓	✓	✓		frequent
Bromeliaceae	*Pitcairnia chiquitana*	A(i)	EN	✓	✓	✓	✓		frequent
Bromeliaceae	*Pitcairnia mohammadii*	A(i)	EN	✓	✓	✓	✓	✓	frequent
Bromeliaceae	*Pitcairnia platystemon*	A(i)	VU	✓	✓	✓	✓	✓	frequent
Bromeliaceae	*Tillandsia santiagoensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Cactaceae	*Frailea chiquitana*	A(iii)	DD	✓	✓	✓	✓	✓	occasional
Convolvulaceae	*Ipomoea psammophila*	A(i)	EN	✓	✓	✓	✓		occasional
Cyperaceae	*Bulbostylis boliviana*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Euphorbiaceae	*Cnidoscolus orientensis*	A(i)	EN	✓	✓	✓			occasional
Euphorbiaceae	*Croton herzogianus*	A(i)	VU	✓	✓	✓			scarce
Euphorbiaceae	*Manihot fabianae*	A(i)	EN	✓	✓	✓	✓		scarce
Euphorbiaceae	*Manihot linearifolia*	A(i)	EN	✓	✓	✓	✓		occasional
Fabaceae	*Arachis chiquitana*	A(i)	EN	✓	✓	✓	✓		scarce
Fabaceae	*Dipteryx alata*	A(i)	VU	✓					frequent
Fabaceae	*Luetzelburgia sotoi*	A(i)	VU	✓	✓	✓			frequent
Fabaceae	*Mimosa auriculata*	A(i)	EN	✓	✓	✓	✓	✓	frequent
Fabaceae	*Mimosa chiquitaniensis*	A(i)	CR	✓	✓	✓	✓	✓	occasional
Fabaceae	*Mimosa chochisensis*	A(i)	EN	✓	✓	✓	✓	✓	frequent
Fabaceae	*Mimosa jacobita*	A(i)	VU	✓	✓	✓	✓		occasional
Fabaceae	*Mimosa josephina*	A(i)	VU	✓	✓	✓	✓		occasional
Lamiaceae	*Hyptis tuberosa*	A(i)	VU	✓	✓	✓	✓	✓	scarce
Malvaceae	*Pavonia chiquitensis*	A(i)	CR	✓	✓	✓	✓	✓	scarce
Malvaceae	*Peltaea chiquitana*	A(i)	EN	✓	✓	✓	✓		occasional
Melastomataceae	*Microlicia woodii*	A(i)	DD	✓	✓		✓	✓	occasional
Melastomataceae	*Pleroma amoenum*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Meliaceae	*Cedrela fissilis*	A(i)	VU	✓					unknown
Myrtaceae	*Eugenia michaelneei*	A(i)	EN	✓	✓	✓	✓		scarce
Orchidaceae	*Epidendrum syringodes*	A(iii)	NE	✓	✓		✓	✓	unknown
Plantaginaceae	*Plantago pyrophila*	A(i)	VU	✓	✓	✓	✓	✓	occasional
Rubiaceae	*Galianthe chiquitosiana*	A(i)	EN	✓	✓	✓	✓		frequent
Rubiaceae	*Mitracarpus bicrucis*	A(i)	VU	✓	✓	✓			frequent

LAGUNA CONCEPCIÓN

Authors: Rosemary Clegg, Maira T. Martinez-Ugarteche, John R.I. Wood, Marisol Toledo & Bente B. Klitgaard

International code	BOLTIPA003	Department/ Province	Santa Cruz: Chiquitos, José Miguel de Velasco
Latitude	-17.52416	Longitude	-61.36778
Minimum altitude (m.a.s.l.)	233	Maximum altitude (m.a.s.l.)	635
Area (km^2)	1,188	Qualifying IPA criteria	A(i), A(iii), A(iv)



IPA Assessment – Rationale

Laguna Concepción is an IPA site on the southwestern limits of the Chiquitania where the Chaco, Cerrado, and Chiquitano Dry Forest converge. There are 11 different water sources flowing into the lagoon, contributing to a unique vegetation mosaic. Laguna Concepción is botanically important because of its eight endemic globally threatened species, and other endemic species with restricted distribution. It also contains 80 species of socioeconomic importance (Appendix 3).

For the description, illustration, and information regarding the Important Plant Area (BOLTIPA003), Laguna Concepción, see:

Rosie Clegg, Maira T. Martinez-Ugarteche, John Wood, Marisol Toledo & Bente B. Klitgaard. 2023. Área Tropical Importante de Plantas Laguna Concepción (BOLTIPA003). *Kempffiana* Vol. 19(2): 104-116.

Mountain peak at the southern edge of Laguna Concepción ©Darwin Initiative Project (26-024)

Ipomoea densibracteata © Maira Martinez

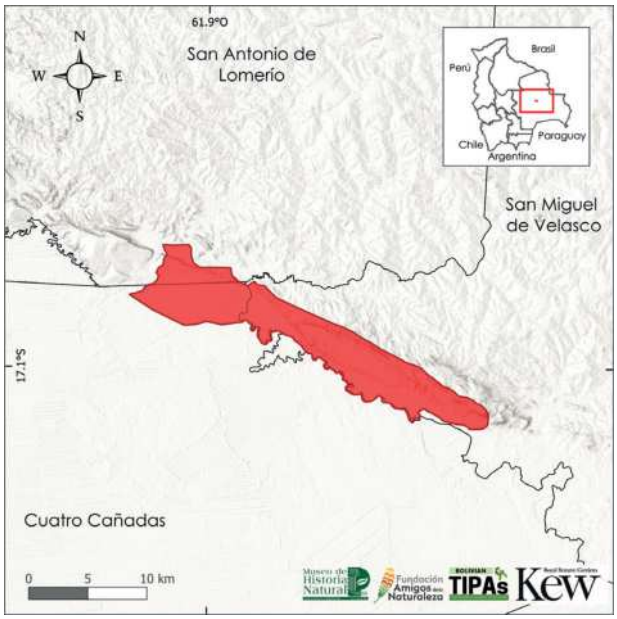
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Acanthaceae	*Justicia mesetarum* subsp. *chiquitana*	A(iv)	NE	✓	✓		✓		unknown
Cactaceae	*Gymnocalycium chiquitanum*	A(iii)	DD	✓	✓				occasional
Convolvulaceae	*Ipomoea densibracteata*	A(i)	VU	✓	✓		✓		occasional
Fabaceae	*Arachis cruziana*	A(i)	VU	✓	✓	✓	✓		occasional
Fabaceae	*Luetzelburgia sotoi*	A(i)	VU	✓	✓		✓		frequent
Fabaceae	*Mimosa craspedisetosa*	A(i)	EN	✓	✓		✓		occasional
Malvaceae	*Byttneria fontis*	A(i)	EN	✓	✓	✓	✓		abundant
Myrtaceae	*Eugenia lomeroensis*	A(i)	EN	✓	✓	✓	✓		frequent
Rubiaceae	*Mitracarpus bicrucis*	A(i)	VU	✓	✓		✓		occasional
Solanaceae	*Solanum arachnidanthum*	A(i)	VU	✓					scarce

SAN MIGUELITO (MONTANA Y PASCANA)

Authors: Rosemary Clegg, Maira T. Martinez-Ugarteche, Roxana Ledezma-Vargas, John R.I. Wood, Marisol Toledo & Bente B. Klitgaard

International code	BOLTIPA004	Department/ Province	Santa Cruz: Ñuflo de Chávez
Latitude	-17.07649	Longitude	-61.80531
Minimum altitude (m.a.s.l.)	244	Maximum altitude (m.a.s.l.)	628
Area (km^2)	115	Qualifying IPA criteria	A(i), A(ii), A(iii), B(iii), C(iii)



IPA Assessment – Rationale

San Miguelito is an IPA site on the western limits of the Chiquitania where the Chaco vegetation meets with and transitions into the Cerrado and the Chiquitano Dry Forest. The site is connected to the rivers Zapocó, Tunas, San Julián, and Parapetí. San Miguelito is botanically important becaue of its eight globally threatened species, of which six are endemic to Bolivia.

It also hosts 139 species of socioeconomic importance, which represent 4.3% of the useful plants documented for the country (Appendix 3).

For the description, illustration, and information regarding the Important Plant Area (BOLTIPA004), San Miguelito, see:

Rosie Clegg, Maira T. Martinez-Ugarteche, Roxana Ledezma-Vargas, John Wood, Marisol Toledo & Bente B. Klitgaard. 2023. Área Tropical Importante de Plantas San Miguelito (BOLTIPA004). *Kempffiana* Vol. 19(2): 117-132.

Seasonally flooded Chaco forest and palm grove © Darwin Initiative Project (26-024)

Byttneria fontis © Darwin Initiative Project (26-024)

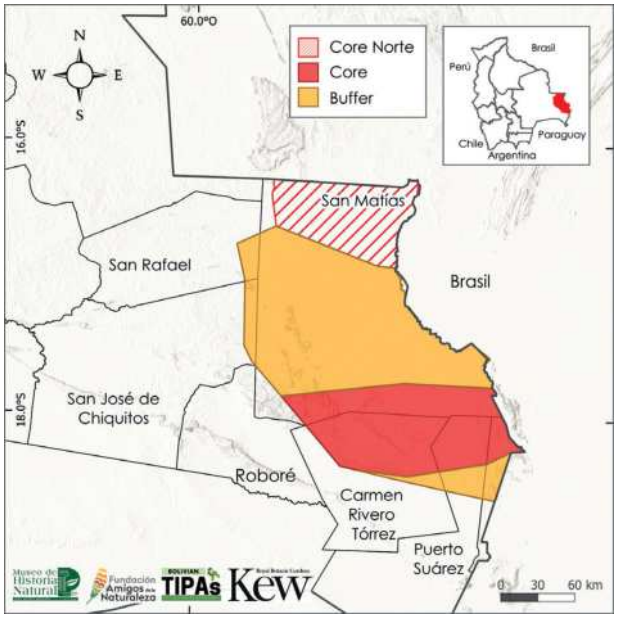
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Apocynaceae	*Austrochthamalia boliviana*	A(i)	EN	✓	✓		✓		unknown
Fabaceae	*Luetzelburgia sotoi*	A(i)	VU	✓	✓				occasional
Fabaceae	*Steinbachiella leptoclada*	A(i)	VU	✓	✓				occasional
Malvaceae	*Byttneria fontis*	A(i)	EN	✓	✓	✓	✓		occasional
Malvaceae	*Cienfuegosia angustifolia*	A(i)	CR	✓	✓	✓	✓	✓	occasional
Malvaceae	*Pseudobombax pulchellum*	A(i)	EN	✓	✓		✓		abundant
Solanaceae	*Solanum moxosense*	A(i)	EN	✓	✓		✓		frequent
Zygophyllaceae	*Plectrocarpa sarmientoi*	A(i)	EN	✓					occasional

SAN MATÍAS, NATURAL AREA OF INTEGRATED MANAGEMENT (ANMI)

Authors: Maira T. Martinez-Ugarteche, Rosemary Clegg, Roxana Ledezma-Vargas, John R.I. Wood, Marisol Toledo & Bente B. Klitgaard

International code	BOLTIPA005	Department/ Province	Santa Cruz: Ángel Sandoval, Chiquitos, Germán Busch, José Miguel de Velasco
Latitude	-17.41859	Longitude	-58.81647
Minimum altitude (m.a.s.l.)	74	Maximum altitude (m.a.s.l.)	1,269
Area (km^2)	35,101	Qualifying IPA criteria	A(i), A(ii), A(iii), B(iii), C(ii), C(iii)



IPA Assessment – Rationale

The site is located on the eastern extreme of the Santa Cruz department and includes the San Matías Natural Area of Integrated Management (ANMI San Matías), the second most extensive protected area nationally, covering approximately 2.9 million ha. The site is significant because it contains 13 globally threatened species, including six endemic and two others endemic, with limited ranges.

Furthermore, 305 species of socioeconomic importance grow at this IPA site, representing 9.4% of the useful plants documented for Bolivia (Appendix 3). Within this group of useful plants, the genus *Arachis* stand out as the crop wild relative (CWR) of the peanut *A. hypogaea*. This IPA site is a centre of morphological and genetic variation of the genus *Arachis* (Bertioli *et al.* 2011).

For the description, illustration, and information regarding the Important Plant Area (BOLTIPA005), San Matías, see:

Maira T. Martinez-Ugarteche, Rosie Clegg, Roxana Ledezma-Vargas, John Wood, Marisol Toledo & Bente B. Klitgaard. 2023. Área Tropical Importante de Plantas San Matías (BOLTIPA005). *Kempffiana* Vol. 19(2): 133-151.

Pavonia filiformis © Darwin Initiative Project (19-004)

Sida schininii © Darwin Initiative Project (26-024)

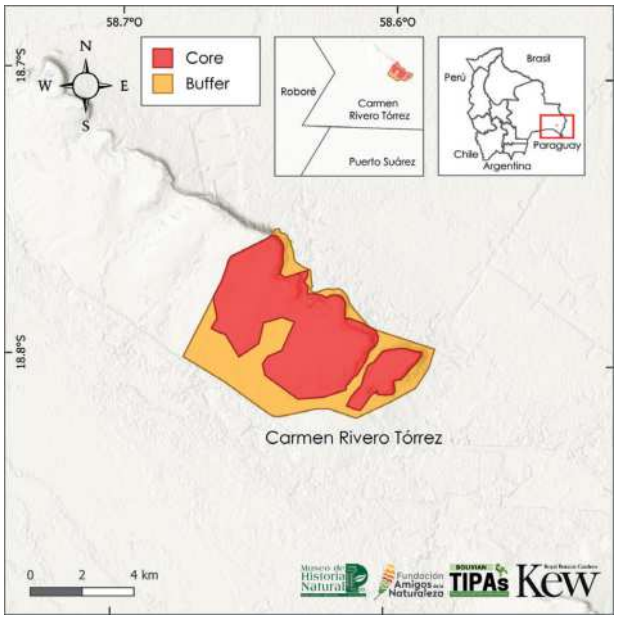
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Acanthaceae	*Stenandrium villarroelii*	A(i)	CR	✓	✓	✓	✓	✓	scarce
Apocynaceae	*Minaria praetermissa*	A(i)	EN	✓	✓	✓	✓		occasional
Asteraceae	*Wedelia cardenasii*	A(i)	VU	✓					occasional
Convolvulaceae	*Ipomoea densibracteata*	A(i)	VU	✓	✓				scarce
Convolvulaceae	*Ipomoea mucronatoproducta*	A(i)	VU	✓	✓	✓	✓		scarce
Euphorbiaceae	*Manihot stellata*	A(i)	CR	✓	✓	✓	✓	✓	rare/ localized
Fabaceae	*Amburana cearensis*	A(i)	EN						unknown
Fabaceae	*Arachis simpsonii*	A(i)	EN	✓					rare
Fabaceae	*Dipteryx alata*	A(i)	VU						frequent
Fabaceae	*Luetzelburgia sotoi*	A(i)	VU	✓	✓	✓	✓		frequent
Fabaceae	*Mimosa craspedisetosa*	A(i)	EN	✓	✓				scarce
Iridaceae	*Cypella boliviana*	A(iii)	DD	✓	✓	✓	✓	✓	rare/ localized
Malvaceae	*Pavonia filiformis*	A(iii)	DD	✓	✓	✓	✓	✓	unknown
Malvaceae	*Sida schininii*	A(i)	VU	✓			✓		occasional
Rubiaceae	*Chomelia chiquitensis*	A(i)	EN	✓	✓	✓	✓	✓	scarce

LAJAS DEL CARMEN RIVERO TÓRREZ

Authors: Rosemary Clegg, Maira T. Martinez-Ugarteche, Alexander Parada, John R.I. Wood, Anna Haigh, Sue Frisby, D. J. Nicholas Hind, Marisol Toledo & Bente B. Klitgaard

International code	BOLTIPA006	Department/ Province	Santa Cruz: Germán Busch
Latitude	-18.77839	Longitude	-58.65028
Minimum altitude (m.a.s.l.)	131	Maximum altitude (m.a.s.l.)	359
Area (km^2)	39	Qualifying IPA criteria	A(i), A(iii)



IPA Assessment – Rationale

Lajas del Carmen Rivero Tórrez is an IPA site in the southeastern Chiquitania ecoregion, where the vegetation transitions between Chaco, Cerrado, and Chiquitano Dry Forest, in the vicinity of the Pantanal wetlands. The Lajas del Carmen Rivero Tórrez site hosts six globally threatened species, four of which are endemic to Bolivia and restricted to the Chiquitania region.

For the description, illustration, and information regarding the Important Plant Area (BOLTIPA006), Lajas del Carmen Rivero Tórrez, see:

Rosie Clegg, Maira T. Martinez-Ugarteche, Alexander Parada, John Wood, Anna Haigh, Sue Frisby, Nicholas Hind, Marisol Toledo & Bente B. Klitgaard. 2023. Área Tropical Importante de Plantas Lajas del Carmen Rivero Tórrez (BOLTIPA006). *Kempffiana* Vol. 19(2): 152-165.

Flowers of *Handroanthus abayoy* © Alexander Parada

Foliage and fruit of *Handroanthus abayoy* © Alexander Parada

Rocky outcrops in the La Rinconada sector © Alexander Parada

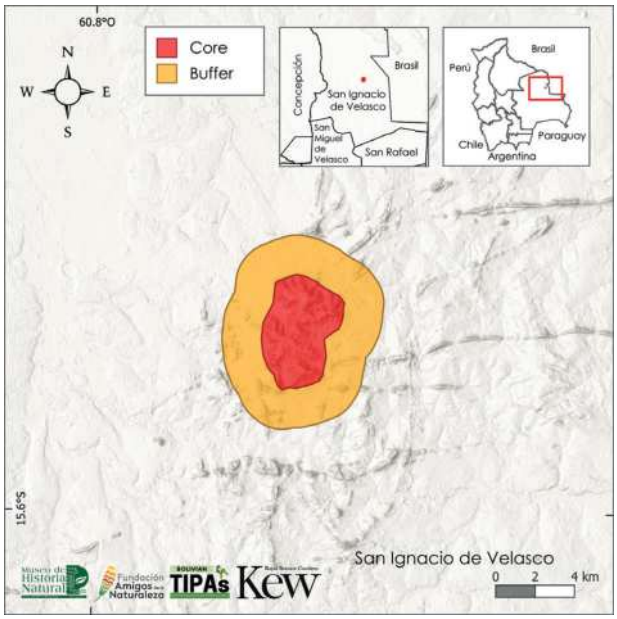
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Bignoniaceae	*Handroanthus abayoy*	A(i)	VU	✓	✓				occasional
Bromeliaceae	*Pitcairnia chiquitana*	A(i)	EN	✓	✓				occasional
Cactaceae	*Gymnocalycium chiquitanum*	A(iii)	DD	✓	✓	✓			scarce
Convolvulaceae	*Ipomoea densibracteata*	A(i)	VU	✓					occasional
Fabaceae	*Dipteryx alata*	A(i)	VU						occasional
Fabaceae	*Mimosa jacobita*	A(i)	VU	✓	✓				scarce
Fabaceae	*Luetzelburgia sotoi*	A(i)	VU	✓	✓				occasional

CERRO MANOMÓ

Authors: Rosemary Clegg, John R.I. Wood, Maira T. Martinez-Ugarteche, D. J. Nicholas Hind, Marisol Toledo & Bente B. Klitgaard

International code	BOLTIPA007	Department/ Province	Santa Cruz: José Miguel de Velasco
Latitude	-15.51694	Longitude	-60.70266
Minimum altitude (m.a.s.l.)	261	Maximum altitude (m.a.s.l.)	700
Area (km^2)	62	Qualifying IPA criteria	A(i), C(ii)



IPA Assessment – Rationale

Within the IPA network, the Cerro Manomó site is an important site: it hosts *Mikania manomoi*, an endemic and Endangered (EN) species restricted to this site and it forms an important connection between the Chiquitania ecoregion and Amazonia via the Paraguá River. Three ecoregions are transitioning within this site, forming a mosaic of Cerrado, Chiquitano Dry Forest, and seasonally flooded grasslands (pampas).

For the description, illustration, and information regarding the Important Plant Area (BOLTIPA007), Cerro Manomó, see:

Rosie Clegg, John Wood, Maira T. Martinez-Ugarteche, Nicholas Hind, Marisol Toledo & Bente B. Klitgaard. 2023. Área Tropical Importante de Plantas Cerro Manomó (BOLTIPA007). *Kempffiana* Vol. 19(2): 166-175.

Panoramic view of Cerro Manamó with Cerrado vegetation © Darwin Initiative Project (16-004)

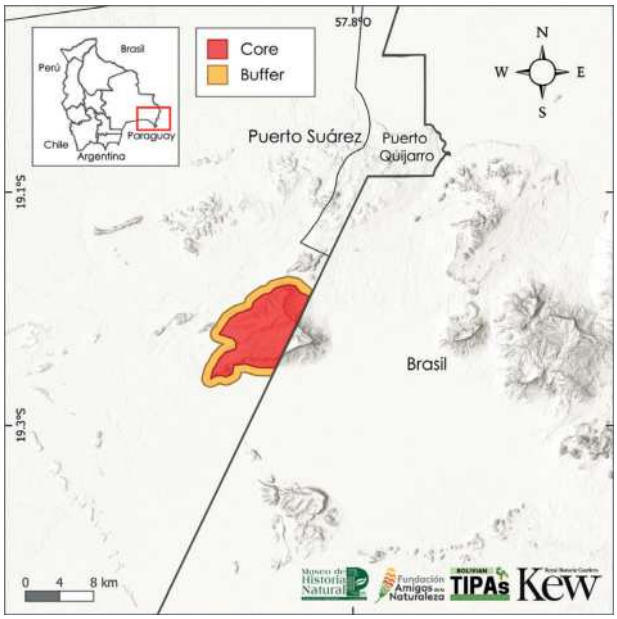
Mikania manomoi © Darwin Initiative project (16-004)

IPA priority species Criterion A									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Asteraceae	*Mikania manomoi*	A(i)	EN	✓	✓	✓	✓	✓	occasional

CERRO MUTÚN

Authors: Maira T. Martinez-Ugarteche, Rosemary Clegg, Daniel Villarroel, Marisol Toledo & Bente B. Klitgaard

International code	BOLTIPA008	Department/ Province	Santa Cruz: Germán Busch
Latitude	-19.20768	Longitude	-57.90162
Minimum altitude (m.a.s.l.)	81	Maximum altitude (m.a.s.l.)	768
Area (km^2)	100	Qualifying IPA criteria	A(i), C(iii)



IPA Assessment – Rationale

Cerro Mutún, with an altitudinal range of 81 to 768 meters m.a.s.l., exhibits different vegetation mosaics. These are distributed following altitudinal and edaphic gradients. Among the site's botanical richness are three globally threatened species (two range-restricted), and 70 species of socioeconomic importance (Appendix 3).

For the description, illustration, and information regarding the Important Plant Area (BOLTIPA008), Cerro Mutún, see:

Maira T. Martinez-Ugarteche, Rosie Clegg, Daniel Villarroel, Marisol Toledo & Bente B. Klitgaard. 2023. Área Tropical Importante de Plantas Cerro Mutún (BOLTIPA007). *Kempffiana* Vol. 19(2): 176-189.

Typical Cerrado with rocky cliffs © Alexander Parada

Ipomoea cardenasiana © Alexander Parada

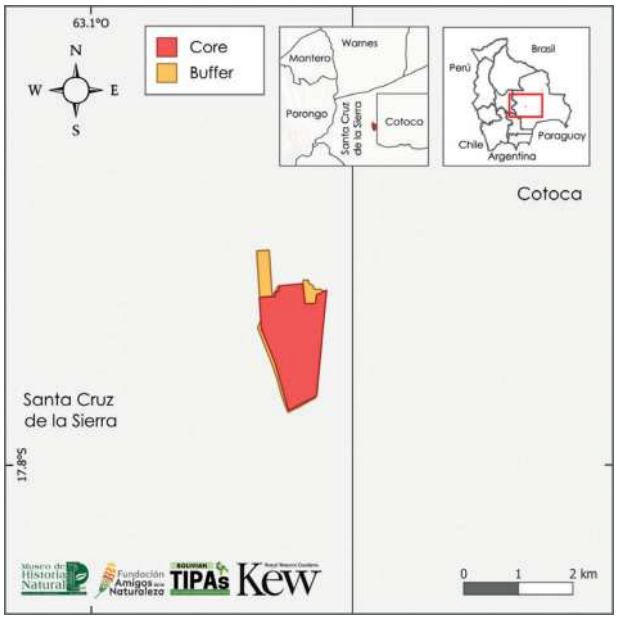
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Cactaceae	*Discocactus ferricola*	A(i)	EN	✓	✓	✓	✓	✓	occasional
Convolvulaceae	*Ipomoea cardenasiana*	A(i)	EN	✓	✓	✓			scarce
Meliaceae	*Cedrela odorata*	A(i)	VU						unknown

SANTA CRUZ DE LA SIERRA MUNICIPAL BOTANICAL GARDEN

Authors: Maira T. Martinez-Ugarteche, Rosemary Clegg, José Daniel Soto, Gloria Gutiérrez, Marisol Toledo & Bente B. Klitgaard

International code	BOLTIPA009	Department/ Province	Santa Cruz: Andrés Ibáñez
Latitude	-17.77933	Longitude	-63.06482
Minimum altitude (m.a.s.l.)	382	Maximum altitude (m.a.s.l.)	404
Area (km^2)	2	Qualifying IPA criteria	A(i), A(ii), A(iv), B(iii)



IPA Assessment – Rationale

The Santa Cruz de la Sierra Municipal Botanical Garden is almost flat and covered by Chiquitano Semi-deciduous and Chaco Floodplain Forest. These vegetation types are considered relicts of the original vegetation of the municipality of Santa Cruz de la Sierra, which has been almost entirely transformed by urbanisation. Within its limits, the site hosts six globally threatened species and 244 species of socioeconomic importance. The latter represent 7.5% of the useful plants documented for the country (Appendix 3).

For the description, illustration, and information regarding the Important Plant Area (BOLTIPA009), Santa Cruz de la Sierra Municipal Botanical Garden, see:

Maira T. Martinez-Ugarteche, Rosie Clegg, Daniel Soto, Gloria Gutiérrez, Marisol Toledo & Bente B. Klitgaard. 2023. Área Tropical Importante de Plantas Jardín Botánico Municipal de Santa Cruz de la Sierra (BOLTIPA009). *Kempffiana* Vol. 19(2): 190-204.

Guapilo Stream © JBMSC

Senna coimbrae © Virna Abrego

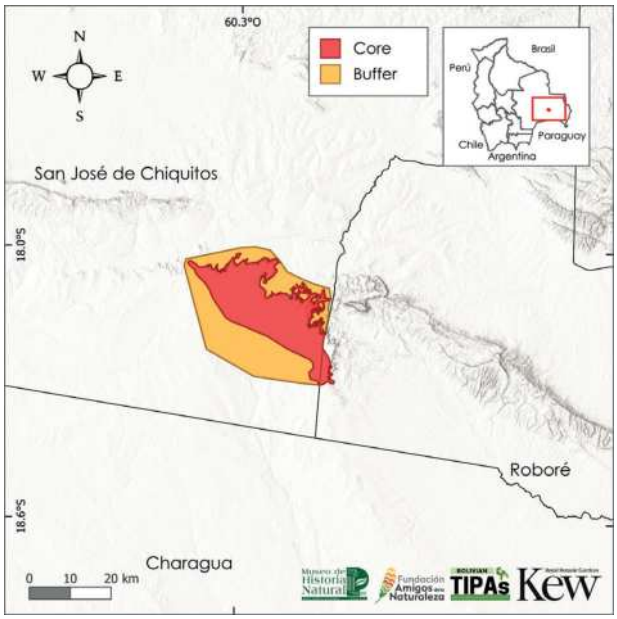
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Anacardiaceae	*Myracrodruon urundeuva*	A(ii)	VU						unknown
Convolvulaceae	*Bonamia boliviana*	A(i)	EN	✓	✓	✓	✓		rare
Fabaceae	*Mimosa debilis* var. *parapitiensis*	A(iv)	NE	✓	✓		✓		unknown
Fabaceae	*Piptadenia buchtienii*	A(i)	VU	✓	✓				scarce
Fabaceae	*Senna coimbrae*	A(i)	EN	✓	✓	✓	✓		rare/ localized
Lamiaceae	*Aegiphila steinbachii*	A(i)	VU	✓	✓		✓		scarce
Malpighiaceae	*Heteropterys falcifera*	A(i)	EN	✓	✓		✓		occasional
Myrtaceae	*Eugenia boliviana*	A(i)	VU	✓	✓				scarce

SERRANÍA DE IPÍAS - ABAYOY

Authors: Maira T. Martinez-Ugarteche, John R.I. Wood, Marisol Toledo & Bente B. Klitgaard

International code	BOLTIPA010	Department/ Province	Santa Cruz: Chiquitos
Latitude	-18.13567	Longitude	-60.22818
Minimum altitude (m.a.s.l.)	359	Maximum altitude (m.a.s.l.)	891
Area (km^2)	885	Qualifying IPA criteria	A(i)



IPA Assessment – Rationale

This IPA site is shaped by the Ipías mountain range (*serranía*) and the plain to the west. Within the site, habitats differentiate into Abayoy, rocky outcrops, *campo sujo* (grassland savannas dotted with shrubs and trees), and Cerrado rupestre (Cerrado on rocky outcrops), each in different proportions. These vegetation types are hosts to a high level of botanical endemism, represented by 17 globally threatened plant species, 13 of which are range-restricted endemics. Some of the threatened or range-restricted endemic species are also of socioeconomic importance as crop wild relatives (CWR), for example species of the genus *Arachis* (peanut) and *Manihot* (Appendix 3).

For the description, illustration, and information regarding the Important Plant Area (BOLTIPA010), Serranía de Ipías-Abayoy, see:

Maira T. Martinez-Ugarteche, John Wood, Marisol Toledo & Bente B. Klitgaard. 2023. Área Tropical Importante de Plantas Serranía de Ipías-Abayoy (BOLTIPA010). *Kempffiana* Vol. 19(2): 205-219.

Cerrado rupestre, western sector of the Serranía de Ipías © Darwin Initiative Project (26-024)

General view of the western sector of the Serranía de Ipías © Darwin Initiative Project (26-024)

Manihot arenaria © Darwin Initiative project (26-024)

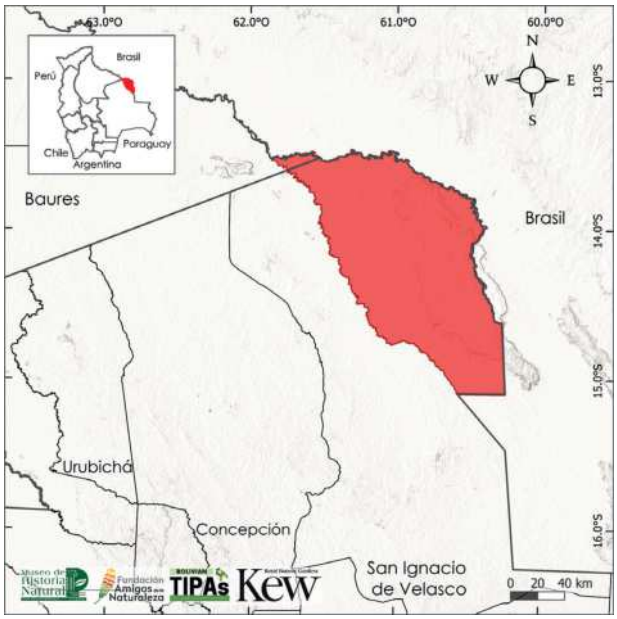
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥1% global population	≥5% national population	1 of 5 best sites at national level	≥10% global population	Entire global population at the site	Abundance at site
Amaranthaceae	*Pfaffia rotundifolia*	A(i)	EN	✓	✓		✓		occasional
Anacardiaceae	*Astronium woodii*	A(i)	EN	✓	✓	✓			scarce
Apocynaceae	*Blepharodon crabronum*	A(i)	EN	✓	✓	✓			scarce
Asteraceae	*Centratherum cardenasii*	A(i)	VU	✓	✓		✓		occasional
Asteraceae	*Ichthyothere woodii*	A(i)	EN	✓	✓		✓		rare
Asteraceae	*Wedelia cardenasii*	A(i)	VU	✓	✓				frequent
Bignoniaceae	*Handroanthus abayoy*	A(i)	VU	✓					scarce
Convolvulaceae	*Bonamia rosiewiseae*	A(i)	EN	✓	✓	✓	✓		occasional
Convolvulaceae	*Ipomoea psammophila*	A(i)	EN	✓	✓		✓		occasional
Euphorbiaceae	*Cnidoscolus orientensis*	A(i)	EN	✓	✓	✓	✓		occasional
Euphorbiaceae	*Manihot arenaria*	A(i)	EN	✓	✓	✓	✓		frequent
Fabaceae	*Arachis krapovickasii*	A(i)	EN	✓	✓		✓		scarce
Fabaceae	*Hymenaea travassosii*	A(i)	VU	✓	✓	✓	✓		frequent
Fabaceae	*Luetzelburgia sotoi*	A(i)	VU	✓	✓				occasional
Fabaceae	*Mimosa chochisensis*	A(i)	EN	✓	✓		✓		scarce
Fabaceae	*Mimosa josephina*	A(i)	VU	✓	✓		✓		occasional
Rubiaceae	*Galianthe chiquitosiana*	A(i)	EN	✓	✓				scarce

NOEL KEMPFF MERCADO NATIONAL PARK

Authors: Rosemary Clegg, Maira T. Martinez-Ugarteche, John R.I. Wood, D. J. Nicholas Hind, Marisol Toledo & Bente B. Klitgaard

International code	BOLTIPA011	Department/ Province	Santa Cruz: José Miguel de Velasco
Latitude	-14.21488	Longitude	-60.90724
Minimum altitude (m.a.s.l.)	145	Maximum altitude (m.a.s.l.)	920
Area (km^2)	15,940	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(iii), C(ii), C(iii)



IPA Assessment – Rationale

The Noel Kempff Mercado National Park, declared a UNESCO World Natural Heritage Site in 2000, is in the José Miguel de Velasco province of the Santa Cruz department. It contains the northernmost extensions of the Chiquitania flora and transitions towards the Amazonia, whilst the Caparuch Plateau (*Meseta de Caparuch*) hosts one of the largest areas of intact Cerrado remaining in the world.

This IPA site is botanically important because of its diversity of habitats and associated high level of endemism. There are 57 restricted endemic plant species growing in this site, of which 31 are globally threatened. Additional to are 983 species of socioeconomic importance, representing 30.2% of the useful plants documented for Bolivia (Appendix 3).

For the description, illustration, and information regarding the Important Plant Area (BOLTIPA011), Noel Kempff Mercado National Park, see:

Rosie Clegg, Maira T. Martinez-Ugarteche, John Wood, Nicholas Hind, Marisol Toledo & Bente B. Klitgaard. 2023. Área Tropical Importante de Plantas Parque Nacional Noel Kempff Mercado (BOLTIPA011). *Kempffiana* Vol. 19(2): 220-241.

Habitats within the PNNKM © Darwin Initiative Project (16-004)

Myrcia proencana © Darwin Initiative project (16-004)

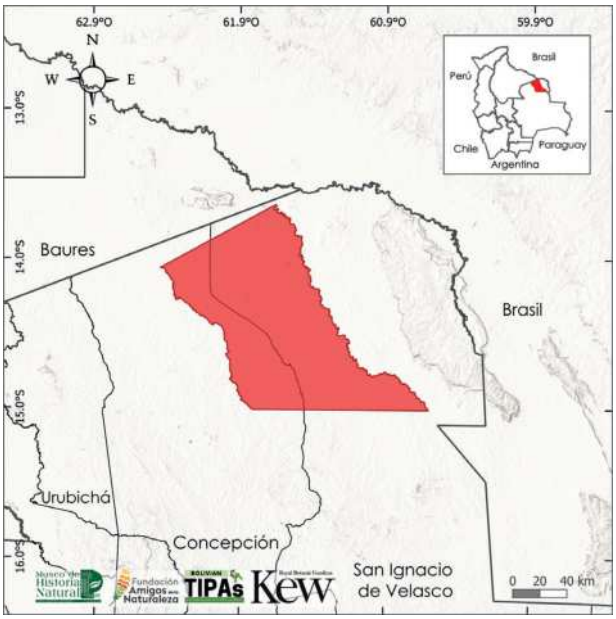
IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Lepidagathis riedeliana*	A(i)	EN	✓		✓			unknown
Acanthaceae	*Suessenguthia multisetosa*	A(i)	VU	✓					unknown
Amaryllidaceae	*Hippeastrum starkiorum*	A(iii)	NE	✓	✓	✓	✓		unknown
Annonaceae	*Ephedranthus boliviensis*	A(i)	VU	✓					unknown
Arecaceae	*Desmoncus latisectus*	A(i)	VU	✓	✓				unknown
Arecaceae	*Syagrus elata*	A(ii)	EN						unknown
Asteraceae	*Calea huanchacana*	A(i)	EN	✓	✓	✓	✓		unknown
Asteraceae	*Calea nematophylla*	A(i)	EN	✓	✓	✓	✓		unknown
Asteraceae	*Lessingianthus ixiamensis*	A(iii)	NE	✓	✓		✓		unknown
Asteraceae	*Wedelia cardenasii*	A(i)	VU	✓					unknown
Bignoniaceae	*Handroanthus capitatus*	A(i)	VU	✓					unknown
Bignoniaceae	*Handroanthus serratifolius*	A(i)	EN	✓					unknown
Bromeliaceae	*Bromelia ignaciana*	A(i)	VU	✓	✓	✓	✓		unknown
Bromeliaceae	*Pitcairnia cardenasii*	A(i)	EN	✓	✓	✓	✓		unknown
Convolvulaceae	*Ipomoea deminuta*	A(iii)	DD	✓	✓	✓	✓	✓	unknown
Cyperaceae	*Rhynchospora melanocarpa*	A(iii)	DD	✓	✓	✓	✓	✓	unknown
Eriocaulaceae	*Eriocaulon huanchacanum*	A(i)	VU	✓	✓	✓	✓	✓	unknown
Euphorbiaceae	*Euphorbia riinae*	A(i)	VU	✓	✓	✓	✓	✓	unknown
Fabaceae	*Amburana cearensis*	A(i)	EN						unknown
Fabaceae	*Dalbergia spruceana*	A(i)	VU	✓					unknown
Fabaceae	*Dipteryx alata*	A(i)	VU						unknown
Fabaceae	*Mimosa huanchacae*	A(i)	EN	✓	✓	✓	✓	✓	unknown
Fabaceae	*Mimosa jacobita*	A(i)	VU	✓	✓				unknown
Fabaceae	*Mimosa rastrera*	A(i)	VU	✓	✓	✓	✓	✓	unknown
Fabaceae	*Mimosa suberosa*	A(i)	VU	✓	✓	✓	✓	✓	unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥1% global population	≥5% national population	1 of 5 best sites at national level	≥10% global population	Entire global population at the site	Abundance at site
Fabaceae	*Pterocarpus steinbachianus*	A(i)	VU	✓					unknown
Ixonanthaceae	*Ochthocosmus berryi*	A(i)	VU	✓					unknown
Lamiaceae	*Hyptis grisea*	A(i)	VU	✓	✓	✓	✓	✓	unknown
Lamiaceae	*Hyptis kempffiana*	A(i)	VU	✓	✓	✓	✓	✓	unknown
Lamiaceae	*Hyptis woodii*	A(i)	VU	✓	✓	✓	✓	✓	unknown
Lythraceae	*Cuphea luteola*	A(i)	VU	✓	✓		✓		unknown
Malvaceae	*Hibiscus benensis*	A(i)	EN	✓	✓		✓		unknown
Malvaceae	*Hibiscus conceptionis*	A(i)	EN	✓	✓	✓			occasional
Malvaceae	*Pachira rurrenabaqueana*	A(i)	VU	✓	✓				unknown
Melastomataceae	*Bellucia beckii*	A(i)	VU						unknown
Melastomataceae	*Miconia multiflora*	A(i)	VU	✓					unknown
Melastomataceae	*Poteranthera inopinata*	A(iii)	NE	✓	✓		✓	✓	unknown
Melastomataceae	*Poteranthera leptalea*	A(i)	VU	✓	✓		✓	✓	unknown
Meliaceae	*Cedrela fissilis*	A(i)	VU						unknown
Meliaceae	*Swietenia macrophylla*	A(i)	EN						unknown
Myrtaceae	*Myrcia proencana*	A(i)	VU	✓	✓	✓	✓	✓	unknown
Ochnaceae	*Ouratea boliviana*	A(i)	EN	✓	✓	✓	✓		unknown
Orchidaceae	*Catasetum justinianum*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Epidendrum espiritu-santense*	A(i)	EN	✓	✓		✓	✓	unknown
Orchidaceae	*Sarcoglottis herzogii*	A(iv)	DD	✓	✓		✓		unknown
Plantaginaceae	*Boelckea beckii*	A(i)	EN	✓			✓		unknown
Poaceae	*Schizachyrium beckii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Polygonaceae	*Coccoloba steinbachii*	A(i)	VU	✓	✓		✓		unknown
Primulaceae	*Cybianthus buchtienii*	A(i)	VU	✓	✓		✓		unknown
Rubiaceae	*Spermacoce johnwoodii*	A(i)	EN	✓	✓		✓	✓	unknown
Rubiaceae	*Spermacoce santacruciana*	A(i)	CR	✓	✓	✓	✓		unknown
Sapindaceae	*Serjania rigida*	A(iv)	NE	✓	✓		✓		unknown
Xyridaceae	*Xyris boliviana*	A(i)	CR	✓	✓	✓	✓	✓	unknown
Xyridaceae	*Xyris crassifunda*	A(i)	CR	✓	✓	✓	✓	✓	unknown
Xyridaceae	*Xyris guillenii*	A(i)	CR	✓	✓	✓	✓	✓	unknown
Xyridaceae	*Xyris subasperula*	A(i)	VU	✓	✓	✓	✓	✓	unknown
Xyridaceae	*Xyris submetallica*	A(iii)	NE	✓	✓	✓	✓	✓	unknown

BAJO PARAGUÁ FOREST RESERVE

Authors: Rosemary Clegg, John R.I. Wood, Maira T. Martinez-Ugarteche, D. J. Nicholas Hind, Roxana Ledezma-Vargas, Marisol Toledo & Bente B. Klitgaard

International code	BOLTIPA012	Department/ Province	Santa Cruz: Ñuflo de Chávez, José Miguel de Velasco
Latitude	-14.42379	Longitude	-61.67170
Minimum altitude (m.a.s.l.)	136	Maximum altitude (m.a.s.l.)	507
Area (km^2)	13,611	Qualifying IPA criteria	A(i), A(ii), A(iii), B(iii), C(ii), C(iii)



IPA Assessment – Rationale

This IPA site comprises an extensive territory with a mosaic of forest formations (Amazonian forests, evergreen forests, transitional Chiquitano forests), grassland formations (*campestres*), savannas, and rocky outcrops. A high number of endemics, rare, globally threatened, and socioeconomically important plant species are growing in its different vegetation types. Twenty one endemic Bolivian species are known with nine globally threatened, and 582 species of socioeconomic importance, representing 17.9% of the useful plants documented for the country (Appendix 3).

For the description, illustration, and information regarding the Important Plant Area (BOLTIPA012), Bajo Paraguá, see:

Rosie Clegg, John Wood, Maira T. Martinez-Ugarteche, Nicholas Hind, Roxana Ledezma-Vargas, Marisol Toledo & Bente B. Klitgaard. 2023. Área Tropical Importante de Plantas Bajo Paraguá (BOLTIPA012). *Kempffiana* Vol. 19(2): 242-258.

Pampas and forest islands, Bajo Paraguá © FAN/Andrés Unterladstaetter

Ipomoea caloneura © John R.I. Wood

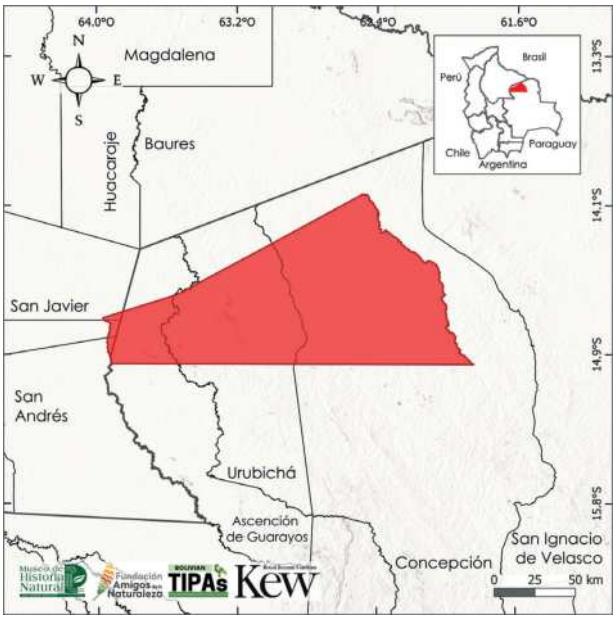
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥1% global population	≥5% national population	1 of 5 best sites at national level	≥10% global population	Entire global population at the site	Abundance at site
Acanthaceae	*Suessenguthia multisetosa*	A(i)	VU	✓					scarce
Anacardiaceae	*Myracrodruon urundeuva*	A(ii)	VU						unknown
Arecaceae	*Syagrus elata*	A(ii)	EN	✓					unknown
Asteraceae	*Neocuatrecasia tysonii*	A(i)	VU	✓	✓		✓		occasional
Bignoniaceae	*Handroanthus serratifolius*	A(i)	EN						unknown
Convolvulaceae	*Ipomoea caloneura*	A(i)	EN	✓					occasional
Ebenaceae	*Diospyros kanizur*	A(i)	CR	✓					unknown
Fabaceae	*Amburana cearensis*	A(i)	EN						unknown
Fabaceae	*Ancistrotropis subhastata*	A(i)	EN	✓	✓		✓		occasional
Fabaceae	*Dalbergia villosa*	A(i)	VU						unknown
Fabaceae	*Dipteryx alata*	A(i)	VU	✓					unknown
Fabaceae	*Pterocarpus steinbachianus*	A(i)	VU	✓					unknown
Fabaceae	*Steinbachiella leptoclada*	A(i)	VU	✓	✓		✓		scarce
Loranthaceae	*Passovia diffusa*	A(i)	CR	✓	✓	✓	✓	✓	unknown
Malvaceae	*Pachira rurrenabaqueana*	A(i)	VU	✓	✓				unknown
Malvaceae	*Woodianthus sotoi*	A(i)	VU	✓	✓	✓	✓	✓	rare
Meliaceae	*Cedrela fissilis*	A(i)	VU						unknown
Meliaceae	*Cedrela odorata*	A(i)	VU						unknown
Meliaceae	*Swietenia macrophylla*	A(i)	EN						unknown
Myrtaceae	*Eugenia cydoniifolia*	A(i)	VU	✓	✓		✓		scarce
Orchidaceae	*Catasetum ricii*	A(iii)	NE	✓	✓		✓	✓	unknown
Piperaceae	*Peperomia kuntzei*	A(iii)	NE	✓	✓		✓		unknown
Rubiaceae	*Spermacoce velascoana*	A(i)	CR	✓	✓	✓	✓	✓	scarce

RÍOS BLANCO Y NEGRO RESERVE (PERSEVERANCIA AND OQUIRIQUIA)

Authors: Rosemary Clegg, Maira T. Martinez-Ugarteche, Marisol Toledo & Bente B. Klitgaard

International code	BOLTIPA013	Department/ Province	Santa Cruz: Ñuflo de Chávez, Guarayos
Latitude	-14.67141	Longitude	-62.82940
Minimum altitude (m.a.s.l.)	142	Maximum altitude (m.a.s.l.)	604
Area (km^2)	13,994	Qualifying IPA criteria	A(i), A(ii), A(iii), B(iii)



IPA Assessment – Rationale

Perseverancia and Oquiriquia are two focal points within the eastern part of the Ríos Blanco y Negro Wildlife Reserve, in the north of the Chiquitania, in the Ñuflo de Chávez province, within the River Negro and San Martín River basins. The IPA site is botanically important thanks to its three range-restricted endemic species, its globally threatened species, and its 302 species of socioeconomic importance (Appendix 3).

In addition to the botanical importance represented by the site, it also provides protection for nationally threatened habitats.

For the description, illustration, and information regarding the Important Plant Area (BOLTIPA013), Ríos Blanco y Negro, see:

Rosie Clegg, Maira T. Martinez-Ugarteche, Marisol Toledo & Bente B. Klitgaard. 2023. Área Tropical Importante de Plantas Ríos Blanco y Negro (BOLTIPA013). *Kempffiana* Vol. 19(2): 259-270.

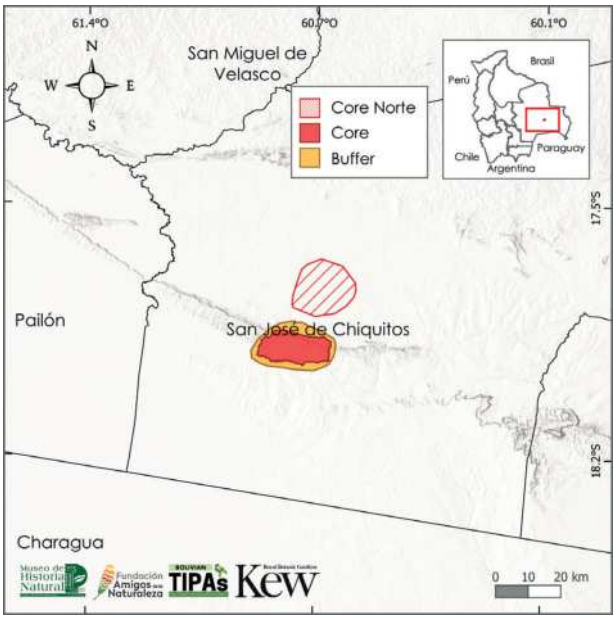
Fruiting branch of *Handroanthus serratifolius* © Alexander Parada

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥1% global population**	**≥5% national population**	**1 of 5 best sites at national level**	**≥10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Justicia israelvargasii*	A(iii)	DD	✓	✓	✓	✓	✓	unknown
Anacardiaceae	*Myracrodruon urundeuva*	A(ii)	VU						unknown
Bignoniaceae	*Handroanthus serratifolius*	A(i)	EN						unknown
Meliaceae	*Cedrela fissilis*	A(i)	VU						unknown
Meliaceae	*Swietenia macrophylla*	A(i)	EN						unknown
Orchidaceae	*Gongora guaraya*	A(iii)	NE	✓	✓		✓		unknown
Piperaceae	*Piper pandoense*	A(iii)	DD	✓	✓		✓		unknown
Solanaceae	*Solanum arachnidanthum*	A(i)	VU						unknown

SANTA CRUZ LA VIEJA AND NORTHERN BLOCK OF SAN JOSÉ DE CHIQUITOS

Authors: Maira T. Martinez-Ugarteche, John R.I. Wood, Marisol Toledo & Bente B. Klitgaard

International code	BOLTIPA014	Department/ Province	Santa Cruz: Chiquitos
Latitude	-17.89902	Longitude	-60.78044
Minimum altitude (m.a.s.l.)	256	Maximum altitude (m.a.s.l.)	663
Area (km^2)	546	Qualifying IPA criteria	A(i), A(iii), B(iii), C(ii)



IPA Assessment – Rationale

This IPA site features landscapes of mountain ranges (serranías), plains, and occasionally isolated peaks. The lowest area is 270 and the highest 600 m.a.s.l. The two sectors of the IPA site are composed of a vegetation mosaic, ranging from edapho-hydrophilic Chiquitano dry forest, Chiquitano dry forest, Abayoy grasslands and savannas, campo rupestre (Cerrado on rocky outcrops), and cerrado in a broader sense.

The site hosts 17 endemic species (14 globally threatened), and it contains 107 species of socioeconomic importance (Appendix 3).

For the description, illustration, and information regarding the Important Plant Area (BOLTIPA014), Santa Cruz la Vieja and the northern block of San José de Chiquitos, see:

Maira T. Martinez-Ugarteche, John Wood, Marisol Toledo & Bente B. Klitgaard. 2023. Área Tropical Importante de Plantas Santa Cruz la Vieja y bloque norte de San José de Chiquitos (BOLTIPA014). *Kempffiana* Vol. 19(2): 271-287.

Ipomoea psammophila © Trustees RBG Kew/Maira Martinez

Peltaea chiquitana © Trustees RBG Kew/Maira Martinez

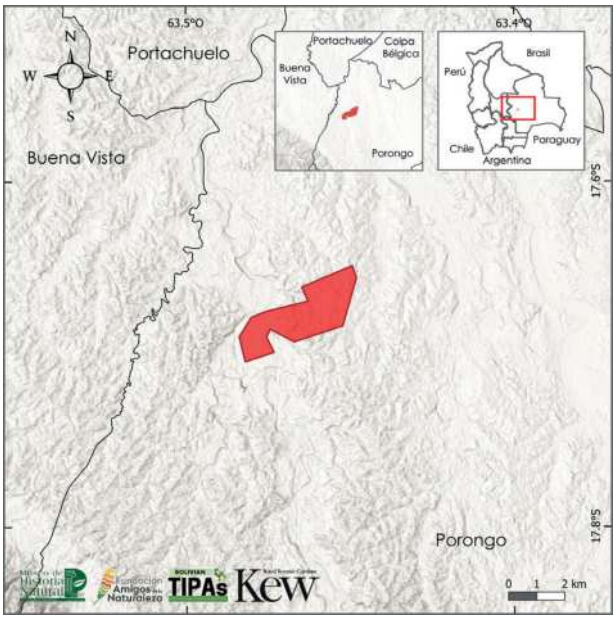
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Amaranthaceae	*Pfaffia rotundifolia*	A(i)	EN	✓	✓	✓	✓		frequent
Cactaceae	*Gymnocalycium chiquitanum*	A(iii)	DD	✓	✓	✓	✓		localized
Convolvulaceae	*Ipomoea psammophila*	A(i)	EN	✓	✓				rare
Convolvulaceae	*Ipomoea densibracteata*	A(i)	VU	✓					occasional
Euphorbiaceae	*Cnidoscolus orientensis*	A(i)	EN	✓	✓	✓	✓		occasional
Euphorbiaceae	*Manihot linearifolia*	A(i)	EN	✓	✓	✓	✓		localized
Fabaceae	*Arachis chiquitana*	A(i)	EN	✓	✓	✓	✓		rare
Fabaceae	*Arachis cruziana*	A(i)	VU	✓	✓	✓	✓		rare
Fabaceae	*Arachis herzogii*	A(i)	EN	✓	✓	✓	✓		rare
Fabaceae	*Mimosa chochisensis*	A(i)	EN	✓	✓	✓	✓		scarce
Fabaceae	*Mimosa craspedisetosa*	A(i)	EN	✓	✓				scarce
Fabaceae	*Mimosa jacobita*	A(i)	VU	✓	✓	✓			scarce
Fabaceae	*Mimosa josephina*	A(i)	VU	✓	✓	✓			scarce
Malvaceae	*Peltaea chiquitana*	A(i)	EN	✓	✓		✓		occasional
Rubiaceae	*Mitracarpus bicrucis*	A(i)	VU	✓	✓		✓		frequent

ARUBAI PRIVATE RESERVE OF NATURAL HERITAGE

Authors: Maira T. Martinez-Ugarteche, Javier Coimbra, Marisol Toledo & Bente B. Klitgaard

International code	BOLTIPA015	Department/ Province	Santa Cruz: Andrés Ibáñez
Latitude	-17.69184	Longitude	-63.43113
Minimum altitude (m.a.s.l.)	387	Maximum altitude (m.a.s.l.)	489
Area (km^2)	6	Qualifying IPA criteria	A(i), A(ii), A(iii)



IPA Assessment – Rationale

The Arubai Private Reserve of Natural Heritage is located 33 km west of Santa Cruz de la Sierra and c. 7 km from Terebinto, following the road to Luquillas. The IPA site presents vegetation ranging from grassland and open savannas to forests represented by the Sub-Andean transitional Chiquitano forest, the Amazonian forest, and even várzea forest. Within the site and its different habitats, are recorded seven globally threatened species, six of which are endemic to Bolivia. The site also hosts 85 species of socioeconomic importance (Appendix 3).

For the description, illustration, and information regarding the Important Plant Area (BOLTIPA015), Arubai Reserve, see:

Maira T. Martinez-Ugarteche, Javier Coimbra, Marisol Toledo & Bente B. Klitgaard. 2023. Área Tropical Importante de Plantas, Reserva Arubai (BOLTIPA015). *Kempffiana* Vol. 19(2): 288-302.

Sub-Andean, transitional Chiquitano forest © Trustees RBG Kew/Maira Martinez

Bromelia arubaiensis © Trustees RBG Kew/Maira Martinez

Fruit of *Eugenia boliviana* © Trustees RBG Kew/Maira Martinez

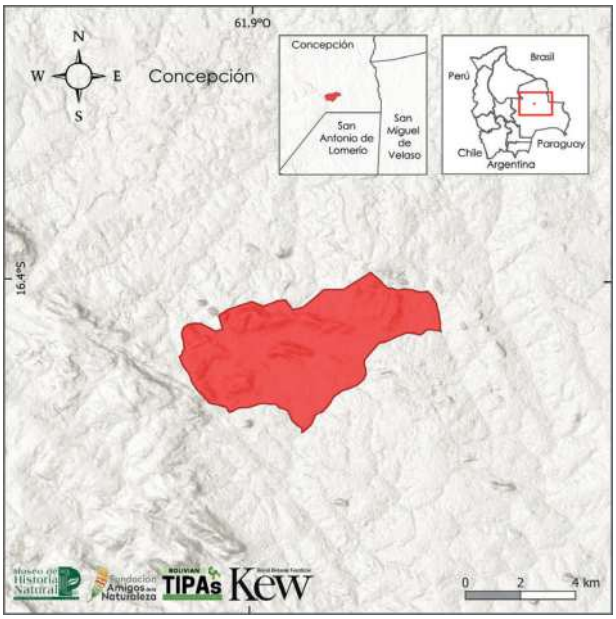
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥1% global population	≥5% national population	1 of 5 best sites at national level	≥10% global population	Entire global population at the site	Abundance at site
Acanthaceae	*Suessenguthia multisetosa*	A(i)	VU	✓					occasional
Araliaceae	*Dendropanax bolivianus*	A(i)	EN	✓	✓	✓			scarce
Asteraceae	*Stevia sarensis*	A(i)	VU	✓					occasional
Bromeliaceae	*Billbergia jandebrabanderi*	A(iii)	NE	✓	✓	✓	✓		rare
Bromeliaceae	*Bromelia arubaiensis*	A(i)	EN	✓	✓	✓	✓		occasional
Bromeliaceae	*Fosterella christophii*	A(iii)	NE	✓	✓	✓	✓		unknown
Erythroxylaceae	*Erythroxylum pauciflorum*	A(ii)	VU	✓					scarce
Fabaceae	*Dipteryx alata*	A(i)	VU						unknown
Myrtaceae	*Eugenia boliviana*	A(i)	VU	✓	✓	✓	✓		frequent
Orchidaceae	*Scelochiloides coimbrae*	A(iii)	NE	✓	✓	✓	✓		unknown
Santalaceae	*Acanthosyris asipapote*	A(i)	EN	✓	✓	✓	✓		scarce

ORQUÍDEAS DEL ENCANTO MUNICIPAL PROTECTED AREA

Authors: Maira T. Martinez-Ugarteche, Roxana Ledezma-Vargas, John R.I. Wood, Marisol Toledo & Bente B. Klitgaard

International code	BOLTIPA016	Department/ Province	Santa Cruz: Ñuflo de Chávez
Latitude	-16.46613	Longitude	-61.92086
Minimum altitude (m.a.s.l.)	451	Maximum altitude (m.a.s.l.)	745
Area (km^2)	29	Qualifying IPA criteria	A(i), C(iii)



IPA Assessment – Rationale

Orquídeas del Encanto is located 47 km south of the Concepción municipality. It is primarily composed of the San Juan del Encanto, a community of indigenous Chiquitano origin. Their livelihoods are focused on cattle ranching, subsistence agriculture, and the commercialisation of their surplus meat and vegetables. The area is characterised by its rocky outcrops: El Cerro Bambá, Cerro Padre, Cueva del Tigre, and La Fuente. These tourist attractions are mostly surrounded by Chiquitano semi-deciduous sub-humid forest, Cerrado in the strict sense, and dense patches of the native widespread grass species guapá (*Guadua paniculata*). Collectively, each habitat forms part of the protected area's conservation objects, along with the richness of its orchid species, primarily *Cattleya nobilior* (or "stone flower," common name in the community). As an area of a mosaic of habitats, the Orquídeas del Encanto Protected Area with its orchid species, harbours additional botanical richness: eight endemic, threatened species grow on the site.

For the description, illustration, and information regarding the Important Plant Area (BOLTIPA016), Orquídeas del Encanto, see:

Maira T. Martinez-Ugarteche, Roxana Ledezma-Vargas, John Wood, Marisol Toledo & Bente B. Klitgaard. 2023. Área Tropical Importante de Plantas, Orquídeas del Encanto (BOLTIPA016). *Kempffiana* Vol. 19(2): 303-315.

Cerro Bamba, El Encanto © Darwin Initiative Project (26-024)

Flowers of *Eugenia lomeroensis* © Darwin Initiative Project (26-024)

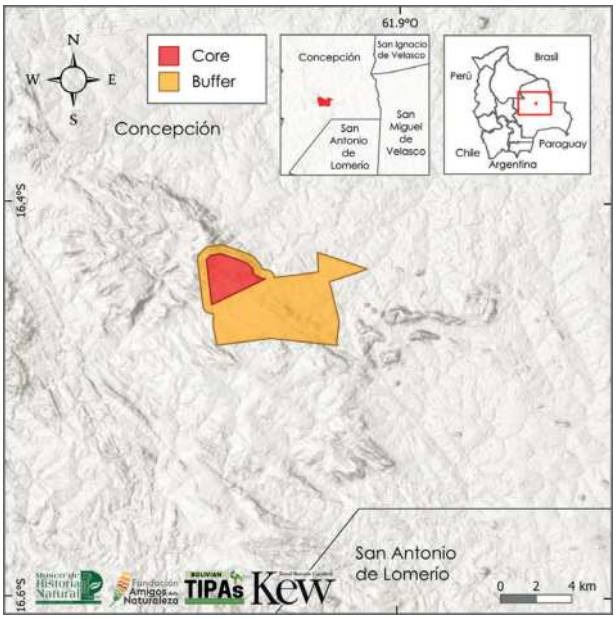
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Asteraceae	*Neocuatrecasia epapposa*	A(i)	VU	✓	✓		✓		scarce
Convolvulaceae	*Ipomoea densibracteata*	A(i)	VU	✓	✓		✓		occasional
Fabaceae	*Ancistrotropis subhastata*	A(i)	EN	✓	✓		✓		occasional
Malpighiaceae	*Stigmaphyllon boliviense*	A(i)	CR	✓	✓		✓		occasional
Malvaceae	*Hibiscus conceptionis*	A(i)	EN	✓	✓	✓	✓		occasional
Myrtaceae	*Eugenia cydoniifolia*	A(i)	VU	✓	✓		✓		occasional
Myrtaceae	*Eugenia lomeroensis*	A(i)	EN	✓	✓		✓		scarce
Poaceae	*Paspalum crucense*	A(i)	EN	✓	✓		✓		occasional

EL CARMEN (ECOLOGICAL TRAIL)

Authors: Maira T. Martinez-Ugarteche, Roxana Ledezma-Vargas, Marisol Toledo & Bente B. Klitgaard

International code	BOLTIPA017	Department/ Province	Santa Cruz: Ñuflo de Chávez
Latitude	-16.45093	Longitude	-62.00203
Minimum altitude (m.a.s.l.)	519	Maximum altitude (m.a.s.l.)	831
Area (km^2)	34	Qualifying IPA criteria	A(i), C(iii)



IPA Assessment – Rationale

El Carmen (Ecological Trail) is situated south of Concepción and north of Lomerío. El Carmen is an indigenous community of Monkoxi or Chiquitano origin. Its community members engage in subsistence agriculture, small-scale livestock farming, and ecological tourism, these activities being their main economic driver. With its 3,000 ha, the community boundary is proposed as the IPA site: yet with the tourist ecological trails in the mountain range (*serranía*) as the nucleus of the site. The mountain range, or nucleus, is composed of Cerrado vegetation types, Chiquitano semi-deciduous sub-humid forests, flattened rocky outcrops (*lajas*), and anthropic areas. The Cerrado vegetation and rock slabs are most representative and important for the globally threatened and endemic species. The site hosts seven range-restricted globally threatened species, of which six are endemic to Bolivia; and it is host to 39 species of socioeconomic importance (Appendix 3).

For the description, illustration, and information regarding the Important Plant Area (BOLTIPA017), El Carmen, see:

Maira T. Martinez-Ugarteche, Roxana Ledezma-Vargas, Marisol Toledo & Bente B. Klitgaard. 2023. Área Tropical Importante de Plantas El Carmen (BOLTIPA017). *Kempffiana* Vol. 19(2): 316-330.

Panoramic view from the Mirador, El Carmen © Darwin Initiative Project (26-024)

Hibiscus conceptionis © Darwin Initiative project (26-024)

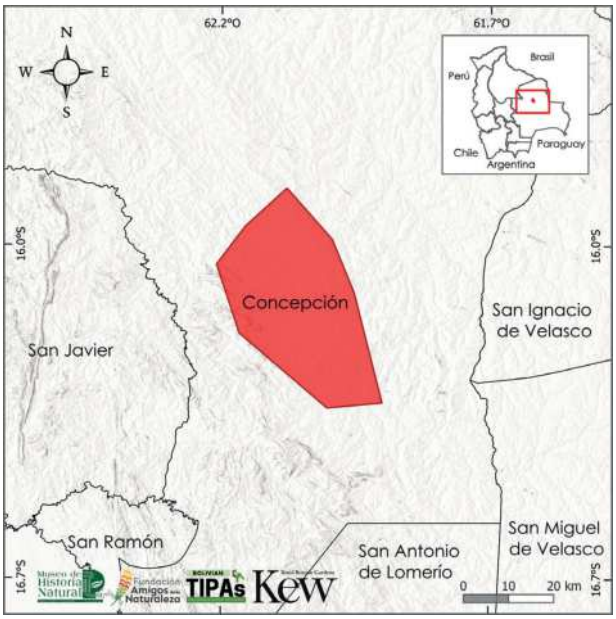
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Asteraceae	*Neocuatrecasia epapposa*	A(i)	VU	✓	✓		✓		occasional
Convolvulaceae	*Ipomoea densibracteata*	A(i)	VU	✓	✓		✓		occasional
Fabaceae	*Ancistrotropis subhastata*	A(i)	EN	✓	✓				occasional
Malvaceae	*Hibiscus conceptionis*	A(i)	EN	✓	✓	✓	✓		occasional
Malvaceae	*Sida schininii*	A(i)	VU	✓					occasional
Myrtaceae	*Eugenia cydoniifolia*	A(i)	VU	✓	✓		✓		occasional
Poaceae	*Paspalum crucense*	A(i)	EN	✓	✓		✓		occasional

CONCEPCIÓN

Authors: Maira T. Martinez-Ugarteche, Roxana Ledezma-Vargas, Scarleth J. Quiroga-Méndez, Marisol Toledo & Bente B. Klitgaard

International code	BOLTIPA018	Department/ Province	Santa Cruz: Ñuflo de Chávez
Latitude	-16.11709	Longitude	-62.05953
Minimum altitude (m.a.s.l.)	397	Maximum altitude (m.a.s.l.)	775
Area (km^2)	1,017	Qualifying IPA criteria	A(i), A(ii), A(iii), B(iii), C(ii), C(iii)



IPA Assessment – Rationale

Concepción is situated between Santa Rosa de la Roca and San Javier; and it extends along the highway to San Ignacio de Velasco and borders the TCO Lomerío to the south. The IPA site is restricted to the Chiquitano Shield and the Chaco-Beniana Plain. In a mosaic it includes every vegetation type from mountain ranges (*serranías*), peneplains (foothill plains), alluvial plains, grasslands (*planicies*), lowlands (*bajíos*), forest formations, grasslands, Cerrado savannas, flat rocky outcrops (*lajas*), and granitic domes, giving rise to a notable botanical richness. In the site is recorded 11 globally threatened species, eight of which are endemic to Bolivia. Additionally, it hosts another 391 species of socioeconomic importance (Appendix 3).

For the description, illustration, and information regarding the Important Plant Area (BOLTIPA018), Concepción, see:

Maira T. Martinez-Ugarteche, Roxana Ledezma-Vargas, Scarleth J. Quiroga-Méndez, Marisol Toledo & Bente B. Klitgaard. 2023. Área Tropical Importante de Plantas, Concepción (BOLTIPA018). *Kempffiana* Vol. 19(2): 331-346.

Seasonally flooded area at Piedra Calama © Darwin Initiative Project (26-024)

Neocuatrecasia epapposa © Darwin Initiative project (26-024)

Granitic dome at Monte Cristo © Darwin Initiative Project (26-024)

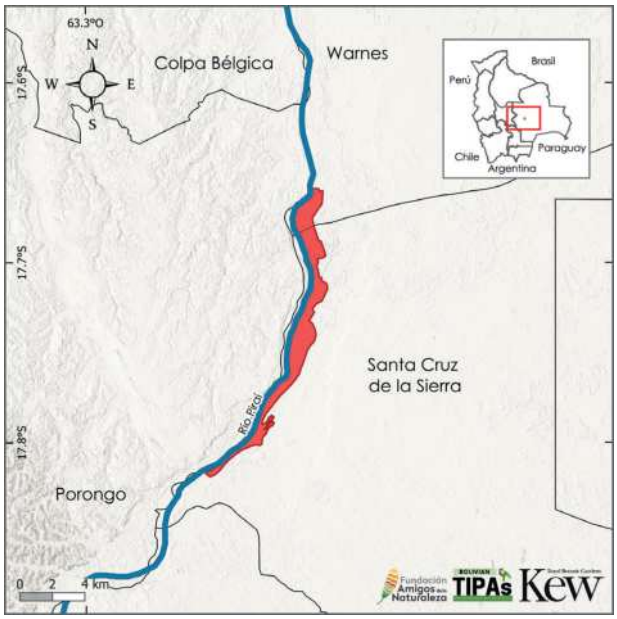
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Anacardiaceae	*Myracrodruon urundeuva*	A(ii)	VU						frequent
Asteraceae	*Neocuatrecasia epapposa*	A(i)	VU	✓	✓	✓			occasional
Asteraceae	*Stevia sarensis*	A(i)	VU	✓					occasional
Asteraceae	*Wedelia cardenasii*	A(i)	VU	✓					occasional
Convolvulaceae	*Ipomoea densibracteata*	A(i)	VU	✓	✓				occasional
Fabaceae	*Dipteryx alata*	A(i)	VU						frequent
Fabaceae	*Steinbachiella leptoclada*	A(i)	VU	✓	✓				occasional
Lamiaceae	*Aegiphila steinbachii*	A(i)	VU	✓	✓		✓		occasional
Malvaceae	*Hibiscus conceptionis*	A(i)	EN	✓	✓	✓	✓		occasional
Meliaceae	*Cedrela fissilis*	A(i)	VU						unknown
Poaceae	*Digitaria killeenii*	A(iii)	DD	✓	✓	✓	✓	✓	unknown
Poaceae	*Paspalum crucense*	A(i)	EN	✓	✓	✓	✓		occasional
Ranunculaceae	*Clematis uruboensis*	A(i)	VU	✓	✓		✓		occasional

ECOLOGICAL BELT OF SANTA CRUZ AND CURICHI LA MADRE URBAN PARK

Authors: Oriana A. Lino-Villalba, José Daniel Soto, Marisol Toledo, Luzmila Arroyo Padilla, G. Alexander Parada, Alejandro A. Angulo, Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas & Bente B. Klitgaard

International code	BOLTIPA019	Department/ Province	Santa Cruz: Andrés Ibáñez, Warnes
Latitude	-17.74724	Longitude	-63.20455
Minimum altitude (m.a.s.l.)	378	Maximum altitude (m.a.s.l.)	443
Area (km^2)	17	Qualifying IPA criteria	A(i), B(iii)



IPA Assessment – Rationale

The Ecological Belt of Santa Cruz de la Sierra and Curichi La Madre Urban Park qualify as an IPA site by possessing relicts of Chiquitano Dry forests on the alluvial-aeolian plain. Together with the forests of the IPA site "Santa Cruz de la Sierra Botanical Garden", these are the only remnants of the native vegetation of Santa Cruz de la Sierra. A demonstration of this is the site's botanical richness: five globally threatened endemic species or at risk of extinction, and 16 taxa of conservation importance stressing it's exceptional conservation value. Additionally, this site features 196 species of useful plants, further highlighting its importance (Appendix 3).

Site Description

This IPA site is located to the west of Santa Cruz de la Sierra and was delimited following the boundaries of the "Curichi La Madre" Urban Ecological Preservation Park, Municipal Protected Area, and the Piraí River Ecological Protection Park. The latter is a wetland that, although surrounded by the urban sprawl with strong anthropic pressure from housing construction, fulfills essential ecosystem functions and services.

Botanical Significance

The botanical significance of this site is due to the riparian vegetation which acts as a buffer zone to the terrestrial systems, and its additional habitats containing endemic and useful species. Among the outstanding species are *Acanthosyris asipapote* (EN), a leafy tree over 12 meters tall, providing edible fruits for wildlife and endemic to the Santa Cruz department, and *Senna coimbrae* (EN), a shrub growing near *curichis* (or flooded areas), although it is also found in distant and fragmented populations, in the Jardín Botánico de Santa Cruz and Santa Rosa del Sara. Additional endemic and threatened species include *Aegiphila steinbachii*, *Croton abutifolius*, and *Gaya cruziana*, all categorised as Vulnerable according to the IUCN Red List. More taxa of conservation importance are *Aechmea longicuspis* var. *kuntzeana* (NE),

Santa Cruz Ecological Corridor © Raúl Suárez

Solanum urticans (NE), *Coccoloba meissneriana* (NT), *Juanulloa verrucosa* (LC) and *Bougainvillea modesta* (LC), for being endemic taxa to Bolivia.

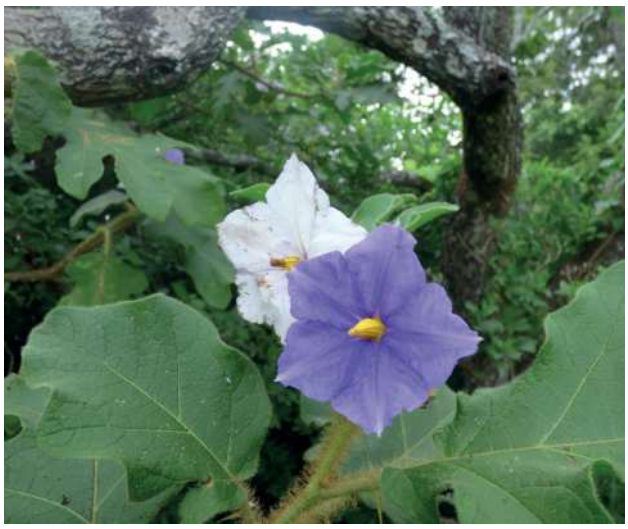
To this number of species, 196 useful plants are added, (5% of the useful species documented in Bolivia), where *Acanthosyris falcata* (NT), *Annona papilionella* (LC), *Aralia warmingiana* (LC), and *Eirmocephala megaphylla* (LC) are worth noting as infrequent in the site (Appendix 3).

Habitat and Geology

The IPA site is primarily confound to the Amazonian region, although it also includes transitional zones into which the Chiquitania region extends (Pinto-Viveros & Taborga 2023). Geologically, it presents alluvial deposits directly dependent on the precipitation of the Piraí River basin. Its soils are sandy or sand-loamy, with scarce presence of silts and clays. It is characterised by presenting Chiquitano forest on sands of the alluvio-aeolian

Senna coimbrae © Alejandro Angulo

Gaya cruziana © Alexander Parada



Solanum urticans © Alejandro Angulo

Aechmea longicuspis var. *kuntzeana* © Alejandro Angulo

Bougainvillea modesta © Alejandro Angulo

Juanulloa verrucosa © Alejandro Angulo

plain and a complex of Amazonian riparian successional vegetation (Navarro & Ferreira 2011, Navarro 2011), classified into Subtropical/Tropical Dry Forest and Subtropical/Tropical Lowland Humid Forest following the IUCN habitat classification scheme (IUCN 2012) (Appendix 2).

Swampy area in Curichi La Madre nature reserve © Sandy Rojas Banegas

Conservation Challenges

The area is a vital space for the Santa Cruz de la Sierra urban centre (*urbe cruceña*), because it performs essential ecosystem services, including a key regulator of the Piraí River floods, a reserve of urban biodiversity, and an important tourist attraction. Despite its importance, the site faces intense human pressure. As of 2023, 9% of it area is covered by urban infrastructure (MapBiomas Bolivia 2024).

Specifically, the Curichi La Madre faces problems of solid and liquid waste accumulation, indiscriminate flora extraction, and the proliferation of invasive plants (Quiroga *et al.* 2015). Furthermore, the ecological belt contains agricultural and livestock areas (Quiroga *et al.* 2015, Pinto-Viveros & Taborga 2023).

Despite the pressures and deterioration that it faces, the site's biological importance and the valuable ecosystem services that it offers to the city of Santa Cruz de la Sierra make its legal protection of paramount importance.

Anthropogenic activity within the Santa Cruz Ecological Corridor © Raúl Suárez

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Dry Forest	64	Major
Subtropical/Tropical Moist Lowland Forest	35	Major
Other	2	Minor

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	High	Ongoing - stable
Tourism & recreation areas	Medium	Ongoing - stable
Small-holder grazing, ranching or farming	Medium	Ongoing - stable
Gathering terrestrial plants	High	Ongoing - stable
Invasive non-native/alien species/diseases	Low	Ongoing - stable
Garbage & solid waste	High	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	100	Major
Agriculture (arable)	17	Minor
Residential/urban development	9	Major
Agriculture (pastoral)	—	Minor
Tourism/recreation	—	Major
Harvesting of wild resources	—	Minor

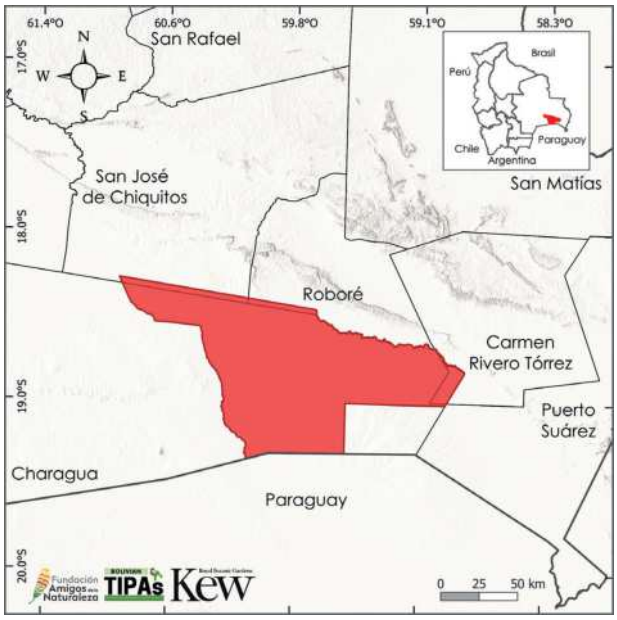
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	Río Piraí Ecological Protection Park	IPA encompasses protected/conservation area (94%)	16
Local/Regional Nature Reserve	Municipal Protected Area – Curichi la Madre Urban Park	IPA encompasses protected/conservation area (6%)	1

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Euphorbiaceae	*Croton abutilifolius*	A(i)	VU	✓	✓		✓		frequent
Fabaceae	*Senna coimbrae*	A(i)	EN	✓	✓	✓	✓		occasional
Lamiaceae	*Aegiphila steinbachii*	A(i)	VU	✓	✓		✓		occasional
Malvaceae	*Gaya cruziana*	A(i)	VU	✓	✓		✓		occasional
Meliaceae	*Cedrela fissilis*	A(i)	VU	✓					frequent
Santalaceae	*Acanthosyris asipapote*	A(i)	EN	✓	✓	✓	✓		scarce

ÑEMBI GUASU CONSERVATION AND ECOLOGICAL IMPORTANCE AREA

Authors: Maira T. Martinez-Ugarteche, Oswaldo Maillard, G. Alexander Parada, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA020	Department/ Province	Santa Cruz: Chiquitos, Cordillera Germán Busch
Latitude	-18.78931	Longitude	-59.82148
Minimum altitude (m.a.s.l.)	124	Maximum altitude (m.a.s.l.)	536
Area (km^2)	11.979	Qualifying IPA criteria	A(i), A(iv)



IPA Assessment – Rationale

The Ñembi Guasu Area of Conservation and Ecological Importance (ACIE) is a region of transition between the Chiquitano Dry Forest, Cerrado, Chaco, and Pantanal ecoregions. The site contains vegetation types and botanical richness, harbouring an important diversity of native plants, many globally threatened endemic and native plant species, and some with great socioeconomic value. This site contains the largest extension of the Abayoy, a near-endemic Bolivian ecosystem, which hosts 11 endemic plant species, nine of which are at global risk of extinction. Furthermore, 61 species of useful plants and seven species of crop wild relatives were recorded.

Site Description

The ACIE Ñembi Guasu site is a protected area established by the Charagua Iyambae Indigenous Autonomy, making it the first indigenous protected area in Bolivia. With an area of 11,979 km^2, this area is located southeast of Santa Cruz. It borders the Kaa-Iya National Park to the west and Paraguay to the south. Among its main conservation values and highlights are the presence of the indigenous people in voluntary isolation (the Totobiegosodes, who inhabit between Bolivia and Paraguay), the Abayoy, and the connectivity of the Otuquis-Kaa-Iya block.

Botanical Significance

This area presents a notable number of endemic, threatened, and useful species. Additionally, it harbours species with affinity to the Abayoy and its sandy soil, including species *Arachis cruziana* (VU) and *Arachis krapovickasii* (EN), and *Hymenaea travassosii* (VU), a small tree linked to this sandy-soil thicket. *Myrciaria coimbrarum* (NE), which grows in the Abayoy with sparse tree cover, was recently described (Villarroel et al. 2025). Other endemic and Endangered (EN) plant species are *Cnidoscolus orientensis*, *Ipomoea psammophila*, *Minaria praetermissa*, and *Manihot arenaria*, which develop in sandy soils. Ñembi Guasu constitutes one of the most representative sites for species and their conservation. Additionally, three species are shared with Paraguay: *Ipomoea mucronifolia*, *Handronathus abayoy*, and *Luetzelburgia sotoi*. These species are restricted to the Abayoy and

Chaparral de Abayoy © Trustees RBG Kew/Maira Martinez

Hymenaea travassosii © Trustees RBG Kew/Maira Martinez

Ipomoea longibarbis © Trustees RBG Kew/Maira Martinez

Cnidoscolus orientensis © Trustees RBG Kew/Maira Martinez

Ipomoea psammophila © Alexander Parada

are considered Vulnerable (VU), due to pressure on their habitat and their narrowly restricted distribution.

Habitat and Geology

Physiographically, Ñembi Guasu is located on the Chaco-Beniana Plain (MDSyP 2002). Three ecoregions converge in this area: Chaco Cerrado, Gran Chaco, and Pantanal Flooded Savannas (Ibisch *et al.* 2003).

The habitat with the largest extension is the Dry Savanna (Sclerophyllous thickets of the Chiquitania transition to the Chaco on sand plains or Abayoy) and the Subtropical/Tropical Dry Forest (Transitional Chiquitano dry forest to the Chaco on well-drained soils and Chiquitano forests transitional to the Pantanal and the Chaco on poorly drained and flooded soils) (Navarro & Ferreira 2011, Navarro 2011, IUCN 2012) (Appendix 2).

Conservation Challenges

Ñembi Guasu is a protected area of importance because of its unique vegetation, culture, and its significance as the first indigenous protected area

Open Abayoy vegetation © Trustees RBG Kew/Maira Martinez

Abayoy vegetation, typically sandy soils © Trustees RBG Kew/Maira Martinez

and one of the most extensive in the Santa Cruz department. Simultaneously, it is under pressure from anthropic activities, including the planned construction project of a highway to traverse its entire territory up to Alto Paraguay (Navia & Paredes 2024). Another challenge is the large-scale forest fires (Maillard *et al.* 2022a) with the highest levels of intensity in Bolivia over the past two decades (Maillard *et al.* 2022b). During 2019 and 2021, the area was impacted by a series of fire events that severely affected both its forest vegetation and the Abayoy thickets (Ledezma-Vargas & Nina 2021). The fires recorded so far have started during the dry season and enter from productive areas. The site generally has a unique vegetation assemblage, which has given rise to a particular flora that is probably only represented in this zone of the department and is therefore a site with high value for its conservation.

Vegetation after fire, with dead trees and regerating herbs and shrubs © Trustees RBG Kew/Maira Martinez

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Dry savanna	54	Major
Subtropical/Tropical Dry Forest	42	Major
Wet savanna	4	Major

Threat		
Threat	**Severity**	**Situation**
Agro-industry grazing, ranching or farming	Medium	Ongoing - stable
Roads	High	Future - planned activity
Increase in fire frequency/intensity	High	Past - likely to return

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	100	Major
Agriculture (pasture)	—	Minor
Utility & services lines for telecommunication and gas pipelines crossing	—	Major
Military operations	—	Minor

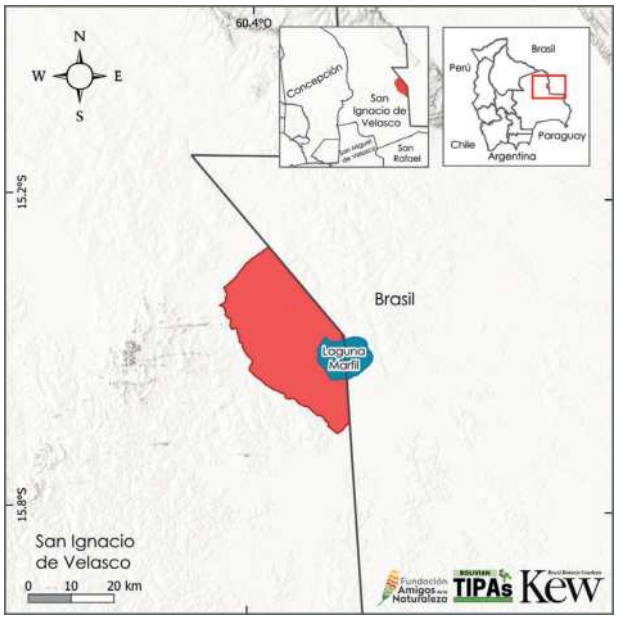
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	Ñembi Guasu Conservation Area and Ecological Importance	Protected/conservation area matches IPA (100%)	11,979
Key Biodiversity Area	KBA Ñembi Guasu	Protected/conservation area matches IPA (100%)	11,979
Ramsar site	Pantanal Boliviano	IPA encompasses protected/conservation area (2%)	499

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Apocynaceae	*Minaria praetermissa*	A(i)	EN	✓	✓	✓	✓		occasional
Asteraceae	*Centratherum cardenasii*	A(i)	VU	✓	✓	✓			occasional
Bignoniaceae	*Handroanthus abayoy*	A(i)	VU	✓		✓			occasional
Convolvulaceae	*Ipomoea densibracteata*	A(i)	VU	✓					occasional
Convolvulaceae	*Ipomoea mucronifolia*	A(i)	EN	✓	✓	✓	✓		unknown
Convolvulaceae	*Ipomoea psammophila*	A(i)	EN	✓	✓		✓		occasional
Euphorbiaceae	*Cnidoscolus orientensis*	A(i)	EN	✓	✓	✓	✓		occasional
Euphorbiaceae	*Manihot arenaria*	A(i)	EN	✓	✓	✓	✓		occasional
Fabaceae	*Arachis cruziana*	A(i)	VU	✓	✓	✓	✓		occasional
Fabaceae	*Arachis krapovickasii*	A(i)	EN	✓	✓	✓	✓		occasional
Fabaceae	*Hymenaea travassosii*	A(i)	VU	✓	✓	✓	✓		frequent
Fabaceae	*Luetzelburgia sotoi*	A(i)	VU	✓	✓				occasional
Myrtaceae	*Myrciaria coimbrarum*	A(iv)	NE	✓	✓	✓	✓		occasional

LAGUNA MARFIL MUNICIPAL INTEGRATED MANAGEMENT NATURAL AREA (ANMI)

Authors: Liliana Arroyo-Herbas, Oswaldo Maillard, Javier Coimbra, José Daniel Soto, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA021	Department/ Province	Santa Cruz: José Miguel de Velasco
Latitude	-15.48149	Longitude	-60.35811
Minimum altitude (m.a.s.l.)	192	Maximum altitude (m.a.s.l.)	357
Area (km^2)	708	Qualifying IPA criteria	A(i), A(ii)



Site Description

The Laguna Marfil ANMI is located in the northeast of the Santa Cruz department, in the San Ignacio de Velasco province, bordering the Republic of Brazil (Maillard *et al.* 2022b). The site is a municipal protected area; among its conservation objects is the Laguna Marfil, which covers an area of 7,164 hectares extending to the Brazilian border, where it functions as a water regulator and watershed protection system (Lilienfeld 2020).

Botanical Significance

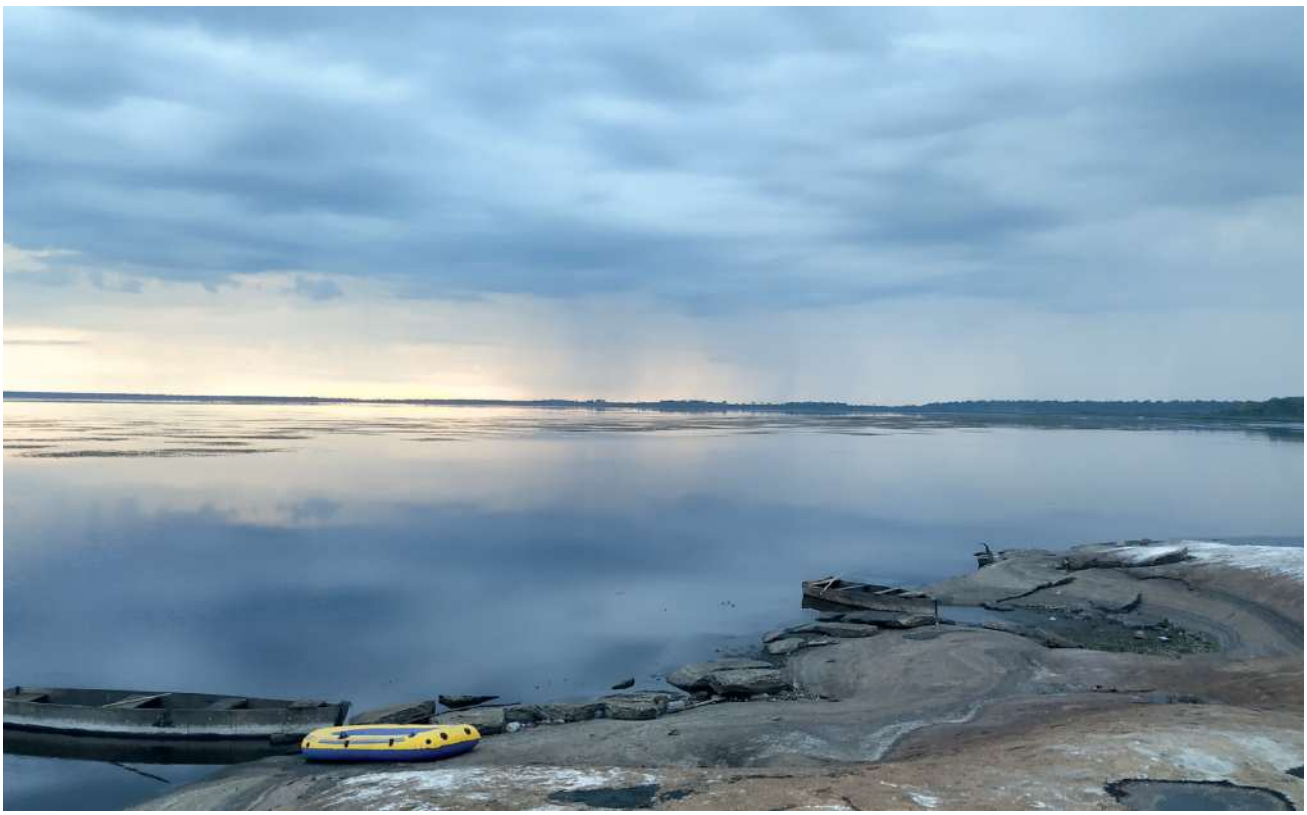
The botanical value of the site lies in its protection of species threatened at both global and national levels, alongside a significant number of socioeconomically important species. Among the globally threatened endemic species are *Ipomoea densibracteata* (VU) and *Macrocnemum tortuosum* (VU). Other species of conservation interest included in the IUCN Red List are *Cedrela fissilis* (VU) and *Dipteryx alata* (VU). Additionally, species such as *Luehea candicans* (EN), *Kielmeyera coriacea* (VU), and *Myracrodruon urundeuva* (VU) are included in the National Red List (MMAyA 2020).

The site also harbours species that, while not globally threatened, have a very narrowly restricted distribution within Bolivia close to the border with

IPA Assessment – Rationale

The Municipal Natural Area Laguna Marfil of Integrated Management (ANMI) is a protected area characterised as a transition zone between the Chiquitano Dry Forest, Cerrado, and Pantanal ecoregions. This IPA site represents a heterogeneous mosaic of habitats hosting more than 100 recorded plant species. Among these are three nationally threatened species and four species in a global risk of extinction category, two of which are endemic to Bolivia.

Furthermore, approximately 300 species of useful plants are recorded at the site, representing about 10% of useful species nationally (Appendix 3). These factors combined, the site has the potential for the discovery of new records for Bolivia's flora and of plant species new to science.



View from the bay at Laguna Marfil © W. Sergio Pantoja

Brazil, such as *Syagrus comosa* (LC), *Morori pusa* (LC), and possibly *Diospyros coccolobifolia* (LC), whose presence has been documented exclusively in the San Ignacio de Velasco municipality (Soto 2025, pers. obs.). More broadly distributed species extending into the San Matías municipality include useful plants like *Hancornia speciosa* (LC), *Eugenia dysenterica* (LC), and *Vatairea macrocarpa* (LC).

Given its geographical location and proximity to Brazil, the Laguna Marfil ANMI likely contains new species records, particularly within the Spermacoceae tribe of the Rubiaceae family and other new species in rocky formations near the area (Soto 2025, pers. obs.).

Habitat and Geology

Physiographically, the site is characterised by plains, lowlands, low hills, and water bodies belonging to the Precambrian Chiquitano Shield province (Lilienfeld 2020). In terms of hydrology, it belongs to the Amazon basin and the Guaporé (Iténez) River basin, specifically the Tarvo River and Santa Rosa stream sub-basins (Lilienfeld 2020).

Flowers of *Mouriri pusa* © Javier Coimbra

Fruits of *Mouriri pusa* © Javier Coimbra

Typical cerrado habitat © Daniel Soto

Cerrado vegetation © Oswaldo Maillard

The vegetation is a mosaic of formations including cerrado, pampas, Chiquitano semi-deciduous forest, open savannas, open forests, and Pantanal wooded savannas (Maillard et al. 2020). Under the IUCN habitat classification scheme (IUCN 2012), these correspond to Subtropical/Tropical Dry Forest, Dry Savanna, Humid Savanna, and Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland (Appendix 2).

Conservation Challenges

Laguna Marfil is a protected area that safeguards an extensive wetland vital to the region, known in Brazil as Baía Grande (Loredo 2022). In recent years, a reduction in the water surface has been recorded, associated with climate-induced factors and human activities. One of the primary threats is the recurrence of forest fires; in 2019 and 2020 alone, fires impacted between 16,927 and 22,175 hectares (Maillard *et al.* 2022b).

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Dry Forest	65	Major
Dry savanna	26	Major
Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	6	Unknown
Wet savanna	1	Unknown

Threat		
Threat	**Severity**	**Situation**
Livestock farming & ranching	High	Ongoing - trend unknown
Small-holder farming	Medium	Ongoing - trend unknown
Fire & fire suppression	High	Past - likely to return

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	—	Major
Harvesting of wild resources	—	Major
Residential/urban development	—	Unknown
Agriculture (arable)	—	Minor

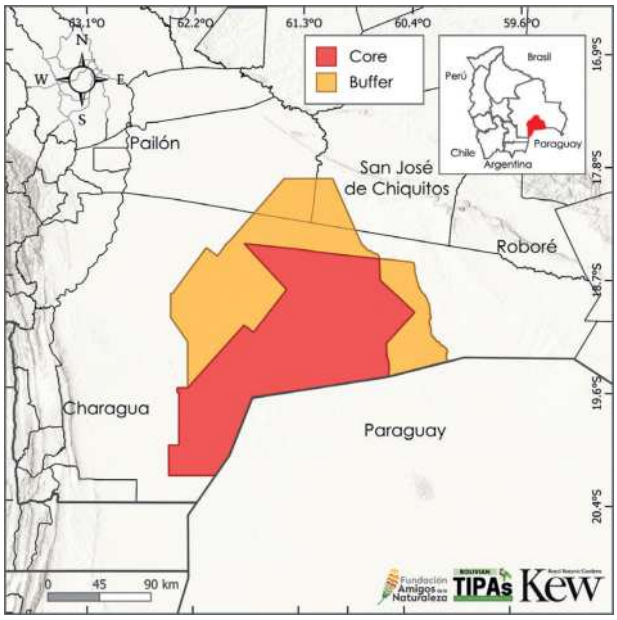
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	ANMI Laguna Marfil	Protected/conservation area matches IPA (100%)	708

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥1% global population**	**≥5% national population**	**1 of 5 best sites at national level**	**≥10% global population**	**Entire global population at the site**	**Abundance at site**
Anacardiaceae	*Myracrodruon urundeuva*	A(ii)	VU						unknown
Calophyllaceae	*Kielmeyera coriacea*	A(ii)	VU	✓					unknown
Convolvulaceae	*Ipomoea densibracteata*	A(i)	VU	✓					unknown
Fabaceae	*Dipteryx alata*	A(i)	VU						unknown
Meliaceae	*Cedrela fissilis*	A(i)	VU						unknown
Rubiaceae	*Macrocnemum tortuosum*	A(i)	VU	✓					unknown

KAA - IYA DEL GRAN CHACO NATIONAL PARK AND INTEGRATED MANAGEMENT NATURAL AREA

Authors: Maira T. Martinez-Ugarteche, Marisol Toledo, Alejandro Araujo-Murakami, G. Alexander Parada, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA022	Department/ Province	Santa Cruz: Chiquitos, Cordillera
Latitude	-19.24793	Longitude	-61.42505
Minimum altitude (m.a.s.l.)	182	Maximum altitude (m.a.s.l.)	844
Area (km^2)	34,177	Qualifying IPA criteria	A(i), A(ii), A(iii), B(iii)



IPA Assessment – Rationale

The IPA site, Kaa-Iya del Gran Chaco National Park and Natural Area of Integrated Management (ANMI) constitutes a transition between the Chaco region, the Chiquitano Forest, and the Cerrado. It harbours immense biodiversity and is considered the best-preserved tropical dry forest globally (Alarcón & Cuéllar 2017). Furthermore, it hosts a significant diversity of native plants, many of high socioeconomic value, and 14 globally threatened species, 11 of which are endemic to Bolivia. The site also contains two species with highly restricted geographic ranges whose entire global populations are concentrated within the Kaa-Iya IPA. In addition to these the site contains 221 species of socioeconomic importance, representing approximately 6% of the total documented useful plants in the national list (Appendix 3).

Site Description

The Kaa-Iya del Gran Chaco National Park and ANMI is the largest protected area in Bolivia. It is found in the Santa Cruz department, within the Chiquitos and Cordillera provinces, spanning the municipalities Charagua, San José de Chiquitos, and Pailón. Its primary boundaries are Paraguay to the south and the Ñembi Guasu Conservation and Ecological Importance Area to the east. The National Park and ANMI categories function as the core and buffer zones, respectively, for the Kaa-Iya site. Furthermore, the IPA site encompasses RAMSAR sites such as the Palmar de las Islas - Salinas de San José, as well as parts of the Bañados del Izozog - Parapetí River.

Botanical Significance

The area's botanical significance is focused on its concentration of endemic and useful species, alongside globally threatened taxa. Notable species within the Kaa-Iya site include *Bonamia boliviana* and *Jacquemontia mairae*, both categorised as Endangered (EN) and endemic

Extensive plain of chaco forest © FAN/Liliana Arroyo

to the Chaco forest; a large portion of their global population is concentrated here. Another characteristic species is *Guaiacum nellii* (VU), locally known as *guayacán negro* (Navarro *et al.* 2020). This tree is found in the eastern sector, in the area known as Izozog. While most species occur on the plains dominated by Chaco vegetation, Cerro San Miguel—an isolated hill further south—is noteworthy for its saxicolous vegetation, where the cactus *Gymnocalycium chacoense* (VU) grows, known exclusively from this site. Other vital landscapes include the palm groves known as Palmar de las Islas, with a high abundance of *Copernicia alba*. In areas near this site, *Euphorbia fuentesii* (NE) occurs, a species recorded in 1998 that remains known only from that single record.

Habitat and Geology

The vast territory of the Kaa-Iya del Gran Chaco National Park and ANMI is situated upon the Chaco-Beniana Plain. The Chaco plain in Kaa-Iya is covered by Quaternary and Tertiary sediments, with isolated hills and tabular mountain ranges in the western plain. There are also outcrops of

Guaiacum nellii © Alexander Parada

Jacquemontia mairae © Trustees RBG Kew/Maira Martinez

Gymnocalycium chacoense © Alexander Parada

Paleozoic calcareous rocks from the Cambrian (SERNAP 2012b). These plains form part of the alluvial fans of the Grande, Parapetí, and Pilcomayo rivers (SERNAP 2012b). Two ecoregions converge within its boundaries: the Gran Chaco and the Chaco Cerrado (Ibisch *et al.* 2003). A prominent feature is Cerro San Miguel at 839 m.a.s.l., offering a vantage point over the extensive plains of Chaco vegetation. Also of note are the Palmar de las Islas and Salinas de San José wetlands. These belong to the Flooded Palm Grove and Northern Chaco Flooded Salt Flat Vegetation ecological systems (Navarro & Ferreira 2011), or what is termed Humid Savannas following the IUCN habitat classification scheme (IUCN 2012) (Appendix 2).

Ascent to Cerro San Miguel, sweeping view of the Chaco vegetation © Trustees RBG Kew/Maira Martinez

Chaco forest © Trustees RBG Kew/Maira Martinez

Saxicolous vegetation, Cerro San Miguel © Alexander Parada

Palmar de las Islas, rainy season © Maira Martinez

Conservation Challenges

Land-use changes represent a major threat to these large, relatively well-preserved areas of forest and savanna. Local populations engage in small-scale agriculture, livestock rearing, and subsistence hunting.

As one of the largest national parks, Kaa-Iya del Gran Chaco faces administrative challenges and external pressure at its borders, particularly to the west (bordering Charagua), the south (Paraguay), and the north (Pailón and San José de Chiquitos). In these areas, there is an observed increase in extensive agricultural crops and cattle ranches, alongside threats from new settlements, deforestation, and fires (SERNAP 2012b). The region is also experiencing strong population growth, primarily driven by the construction of the Santa Cruz – Puerto Suárez highway. While these land-cover changes are not within the park itself, their proximity to the boundaries directly affects the ANMI.

Another critical aspect of this IPA is the convergence of RAMSAR sites and Key Biodiversity Areas (KBA), underscoring its value to the southern region of the country. Landscapes like Cerro San Miguel provide unique vegetation turnover and host specialised cacti species.

Cerro San Miguel, view from the Fortín Ravelo barracks © Maira Martinez

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Dry Forest	76	Major
Dry savanna	16	Major
Wet savanna	7	Major

Threat		
Threat	**Severity**	**Situation**
Livestock farming & ranching	Medium	Ongoing - stable
Roads	Medium	Future - planned activity
Increase in fire frequency/intensity	Medium	Past - likely to return

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	100	Major
Agriculture (pasture)	—	Minor

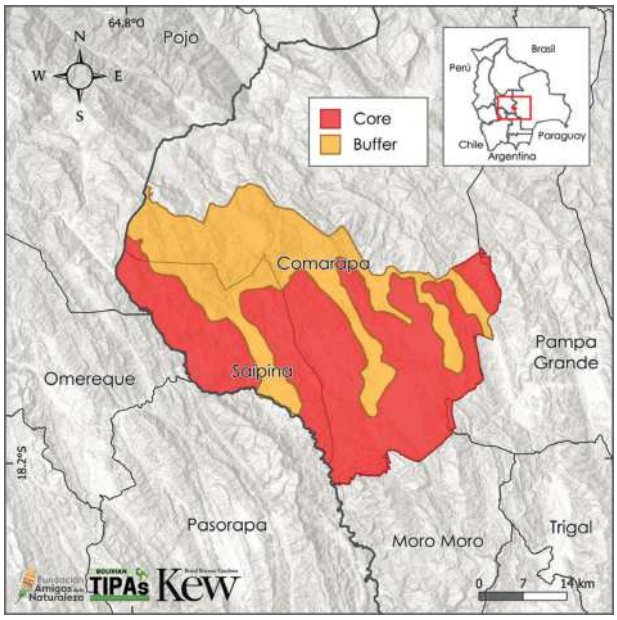
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
National Park	NP y ANMI Kaa-Iya del Gran Chaco	Protected/conservation area matches IPA (100%)	34,177
Key Biodiversity Area	KBA Kaa-Iya del Gran Chaco	IPA encompasses protected/conservation area (100%)	34,146
Ramsar site	Bañados del Izozog and Parapetí River	IPA encompasses protected/conservation area (77%)	4,754
Ramsar site	Palmar de las Islas and Salinas de San José	IPA encompasses protected/conservation area (100%)	8,449

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Amaryllidaceae	*Zephyranthes breviscapa*	A(i)	CR	✓	✓		✓	✓	rare
Asteraceae	*Centratherum cardenasii*	A(i)	VU	✓	✓				occasional
Bignoniaceae	*Handroanthus abayoy*	A(i)	VU	✓		✓			occasional
Cactaceae	*Gymnocalycium chacoense*	A(ii), A(iii)	EN	✓	✓	✓	✓	✓	rare
Convolvulaceae	*Bonamia boliviana*	A(i)	EN	✓	✓		✓		rare
Convolvulaceae	*Ipomoea densibracteata*	A(i)	VU	✓	✓		✓		frequent
Convolvulaceae	*Jacquemontia mairae*	A(i)	EN	✓	✓	✓	✓		occasional
Euphorbiaceae	*Euphorbia fuentesii*	A(iii)	NE	✓	✓		✓	✓	rare
Fabaceae	*Hymenaea travassosii*	A(i)	VU	✓	✓	✓	✓		occasional
Fabaceae	*Mimosa craspedisetosa*	A(i)	EN	✓	✓		✓		occasional
Malpighiaceae	*Heteropterys falcifera*	A(i)	EN	✓	✓		✓		occasional
Malvaceae	*Pseudobombax pulchellum*	A(i)	EN	✓	✓		✓		occasional
Plantaginaceae	*Angelonia chiquitensis*	A(i)	VU	✓	✓		✓		occasional
Solanaceae	*Solanum michaelis*	A(i)	VU	✓	✓	✓			occasional
Zygophyllaceae	*Guaiacum nellii*	A(i)	VU	✓	✓		✓	✓	occasional
Zygophyllaceae	*Plectrocarpa sarmientoi*	A(i)	EN	✓					occasional

COMARAPA AND SAIPINA DRY VALLEYS

Authors: Maira T. Martinez-Ugarteche, G. Alexander Parada, Margoth Atahuachi, José Daniel Soto, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA023	Department/ Province	Santa Cruz: Manuel María Caballero
Latitude	-17.93895	Longitude	-64.56739
Minimum altitude (m.a.s.l.)	1.276	Maximum altitude (m.a.s.l.)	3,190
Area (km^2)	1,636	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)



Site Description

The IPA site is situated in the west of the Santa Cruz department, approximately 230 km from the city of Santa Cruz de la Sierra. It encompasses parts of the Comarapa and Saipina municipalities. The boundary of this site is primarily based on the Inter-Andean Dry Valleys, including an area in the northern zone bordering the Amboró Natural Area of Integrated Management (ANMI), from El Churo to San Juan del Potrero, which contains more humid forests. The core is based on zones with minimal anthropic activity, while the valleys, cultivated areas, and/or residential areas are considered buffer zones.

Furthermore, the location and climatic conditions of the area—its depth and extensive valleys—form a most emblematic landscape, named the Jardín de las Cactáceas (the Cactus Garden). This municipal protected area hosts a high diversity of cactus species and a high level of endemism. Worldwide, this reserve is the one with the second highest density of cacti. Additionally, this site contains the Red-fronted Macaw (*Ara rubrogenys*) Sanctuary,

IPA Assessment – Rationale

The Comarapa and Saipina Dry Valleys IPA site is characterised by a significant diversity of native plants, many of high socioeconomic value, and several globally threatened endemic plant species. Within its boundaries, the site contains an emblematic protected area known for its high level of endemism and a zone with unique characteristics, where one can find everything from humid forests to xeric dry valleys. The botanical value is attributed to 48 globally threatened species, of which 42 are endemic, five nationally threatened species, 25 highly restricted endemics, and 14 range-restricted endemics that are potentially threatened. These species comprise a total of 155 endemic species, representing 5.8% of the national endemism. In addition to the threatened and/or range-restricted species, 407 species of socioeconomic importance are recorded, representing 12.5% of the total useful plants documented for Bolivia (Appendix 3). Within this group of useful plants, 19 are wild relatives of cultivated plants.

Overview of the central valley, Cactus Garden © Trustees RBG Kew/Bente Klitgaard

a Critically Endangered (CR) species (BirdLife International 2021).

Botanical Significance

The botanical importance of the Comarapa and Saipina Valleys is attributed to the number of threatened species at both global and national levels, the concentration of endemic species, and useful species. Among the globally threatened species are *Chascolytrum altimontanum*, *Dyckia pulquinensis*, and *Tillandsia comarapensis*, all categorised as Vulnerable (VU); other species such as *Boliviadendron bolivianum*, *Corryocactus pulquinensis*, and *Gaya cardenasii* are Endangered (EN). All these species are endemic and nearly restricted to the dry valleys, while *Oreopanax boliviensis* and *Polylepis neglecta*, both Endangered (EN), are tree species found in the

Corryocactus pulquinensis © Martin Lowry

Weingartia neocumingii subsp. *pulquinensis* © Moises Mendoza

Parodia columnaris © Martin Lowry

Bougainvillea berberidifolia © Trustees RBG Kew/Maira Martinez

Ipomoea lilloana © Maira Martinez

Justicia consanguinea © Trustees RBG Kew/Maira Martinez

forested transition zone to the Yungas, towards the north of the IPA site.

Likewise, the site contains several highly restricted and potentially threatened endemic species that do not yet have a formal IUCN evaluation or are listed as Near Threatened (NT)—species such as *Bougainvillea berberidifolia*, *Cardenasiodendron brachypterum*, and *Parodia columnaris* (Appendix 1). The site concentrates a total of 407 useful plant species, of which 12 are endemic and globally threatened, including *Capsicum caballeroi* (VU) and *Solanum neocardenasii* (EN) (Appendix 3). Notably, among the species considered useful, those of genetic importance stand out as wild relatives of cultivated plants, such as *Solanum chacoense* (LC), known as the *papa chaqueña* (Chaco potato) (Knapp & Cadima 2020), and *Solanum maternum*,

the progenitor species of the tomatillo (Appendix 3).

Habitat and Geology

Physiographically, the site is characterised by mountain ranges (*serranías*), plains, and narrow valleys belonging to the Eastern Cordillera. From the northwestern sector, moving from El Churo towards La Laguna Verde, lies the highest and most humid zone of the site, which connects with the Amboró ANMI. Meanwhile, the central zone towards the south primarily features dry valleys with a semi-arid climate belonging to the Rio Grande basin (Ibisch *et al.* 2001). This pattern aligns with the observations of Mendoza et al. (2019) in the description of the vegetation of the Jardín de las Cactáceas, where the central valley is covered by Inter-Andean Dry Valleys and the highest peaks by Tucuman-Bolivian Forests.

Cloud Forest, Laguna Verde, Comarapa © Eliana Calzadilla

Inter-Andean semi-arid forest of Caraparí and Soto, Jardín de las Cactáceas © Trustees RBG Kew/Bente Klitgaard

Inter-Andean dry forest of Mara Valluna and Soto, El Tunal © Maira Martinez

Inter-Andean dry forest of Mara Valluna and Soto, El Tunal © Maira Martinez

Regarding its hydrography, the IPA site forms part of the Comarapa River sub-basin, with 83.71% located in the Comarapa and 16.29% in the Saipina municipality. This sub-basin is composed of seven rivers and drains into Saipina (GIZ-PROAGRO 2011). The site contains a mosaic of four ecoregions: Inter-Andean Dry Forests, Chaco Serrano, Yungas, and Tucuman-Bolivian Forest (Ibisch *et al.* 2003). The most representative vegetation types are Inter-Andean semi-arid forest, Inter-Andean dry forest, Yungueño semi-deciduous forest, and Bolivian-Tucuman pine-*sahuintal* transitional to the Yungas (Navarro & Ferreira 2011, Navarro 2011, Appendix 2). These vegetation types are classified as Subtropical/tropical dry forest and Subtropical/tropical montane moist forest following the IUCN habitat classification scheme (IUCN 2012) (Appendix 2).

Conservation Challenges

The IPA site is in an area where the primary socioeconomic activities are agriculture and livestock farming. Agriculture is mostly developed on slopes and valley floors and is of an intensive type, while livestock farming is extensive. New cultivation areas are increasingly frequent along slopes and valley floors. Combined with new areas designated for urban use and new housing developments, these constitute the main threat to the site.

In contrast, the site benefits from the Jardín de las Cactáceas de Bolivia Municipal Protected Area, the first protected area dedicated to the conservation, study, and dissemination of Bolivian cacti. The site also safeguards a high diversity of dry valley endemics (GADSC 2015, Soto 2015).

Furthermore, the area has tourist potential that thas not yet reached its capacity, but representing an economic and sustainable development alternative. The designation as an IPA, based on its botanical richness and the presence of endemic, globally threatened and range-restricted species, demonstrates that this site is of paramount importance, despite the dry valleys being a region with fewer studies compared to other zones of the country.

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Dry Forest	83	Major
Subtropical/Tropical Moist Montane Forest	12	Major
Subtropical/Tropical High Altitude Shrubland	4	Major
Other	1	Unknown

Threat		
Threat	**Severity**	**Situation**
Residential & commercial development - Housing & urban areas	Medium	Future - planned activity
Residential & commercial development - Housing & urban areas	Medium	Ongoing - stable
Agriculture - Annual & perennial non-timber crops - Small-holder farming	High	Ongoing - stable
Small-scale, extensive livestock farming	Medium	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	38	Major
Agriculture (arable)	5	Major
Agriculture (pastoral)	—	Major
Residential/urban development	—	Major

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	Churo Negro Municipal Protected Area	IPA encompasses protected/conservation area (100%)	13
Local/Regional Nature Reserve	Jardín de Cactáceas de Bolivia Municipal Protected Area	IPA encompasses protected/conservation area (99%)	238
Key Biodiversity Area	KBA Comarapa	IPA encompasses protected/conservation area (100%)	65
Key Biodiversity Area	KBA Jardín de Cactaceas-Saipina	IPA encompasses protected/conservation area (99%)	305

IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Acanthaceae	*Justicia aequilabris* subsp. *riograndina*	A(iv)	NE	✓	✓		✓		unknown
Acanthaceae	*Justicia chuquisacensis*	A(i)	VU	✓	✓		✓		occasional
Acanthaceae	*Stenostephanus pyramidalis*	A(i)	VU	✓	✓				scarce
Anacardiaceae	*Myracrodruon urundeuva*	A(ii)	VU						frequent
Apocynaceae	*Funastrum rupicola*	A(iv)	NT	✓	✓	✓			rare
Apocynaceae	*Orthosia woodii*	A(i)	EN	✓	✓		✓		unknown
Araliaceae	*Oreopanax boliviensis*	A(i)	EN	✓					occasional
Asparagaceae	*Furcraea boliviensis*	A(iv)	NE	✓	✓	✓	✓		unknown
Asteraceae	*Bishovia boliviensis*	A(i)	VU	✓	✓	✓	✓		occasional
Asteraceae	*Gochnatia boliviana*	A(i)	VU	✓	✓				occasional
Asteraceae	*Hyaloseris quadriflora*	A(ii)	VU	✓					unknown
Asteraceae	*Mikania schultzii*	A(i)	EN	✓	✓		✓		occasional
Asteraceae	*Senecio leuceria*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Asteraceae	*Senecio viridilacus*	A(iii)	NE	✓	✓	✓	✓		unknown
Asteraceae	*Stevia copiosa*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Asteraceae	*Stevia discolor*	A(iii)	NE	✓	✓		✓		unknown
Asteraceae	*Stevia santacruzensis*	A(iv)	NE	✓	✓	✓	✓		unknown
Asteraceae	*Stevia sarensis*	A(i)	VU	✓					scarce
Asteraceae	*Verbesina rhomboidea*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Bromeliaceae	*Deuterocohnia scapigera*	A(i)	VU	✓	✓		✓		occasional
Bromeliaceae	*Dyckia pulquinensis*	A(i)	VU	✓	✓	✓	✓		occasional
Bromeliaceae	*Guzmania remediosensis*	A(iii)	NE	✓	✓		✓		unknown
Bromeliaceae	*Puya laxa*	A(i)	VU	✓	✓		✓		occasional
Bromeliaceae	*Tillandsia comarapaensis*	A(i)	VU	✓	✓	✓	✓		occasional
Bromeliaceae	*Tillandsia koehresiana*	A(i)	EN	✓	✓		✓		scarce
Bromeliaceae	*Tillandsia pseudocardenasii*	A(i)	EN	✓	✓		✓		rare

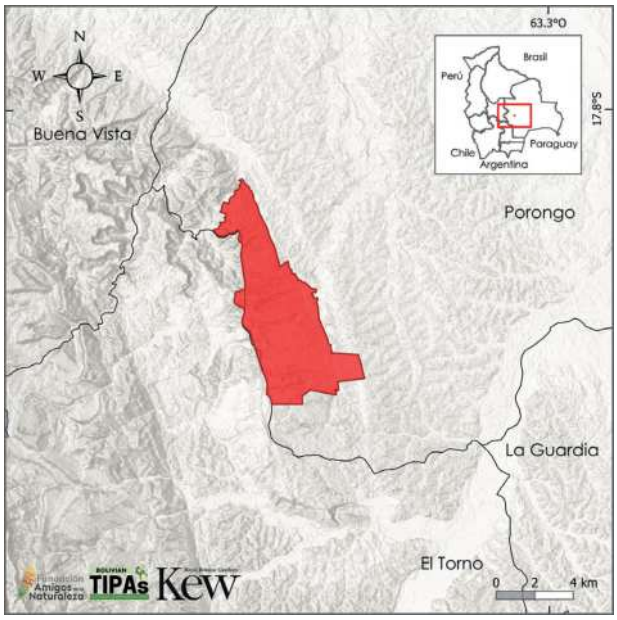
IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Cactaceae	*Corryocactus pulquinensis*	A(i)	EN	✓	✓	✓	✓		occasional
Cactaceae	*Lobivia bridgesii* subsp. *vallegrandensis*	A(iv)	NE	✓	✓		✓		unknown
Cactaceae	*Neoraimondia herzogiana*	A(ii)	VU	✓	✓	✓	✓		abundant
Cactaceae	*Weingartia neocumingii*	A(iii)	NE	✓	✓	✓	✓		occasional
Cactaceae	*Weingartia neocumingii* subsp. *pulquinensis*	A(iii)	NE	✓	✓	✓	✓		occasional
Campanulaceae	*Centropogon gloriosus*	A(i)	EN	✓	✓				scarce
Campanulaceae	*Siphocampylus tunicatus*	A(ii), A(iv)	CR	✓	✓		✓		unknown
Convolvulaceae	*Ipomoea lilloana*	A(i)	VU	✓					occasional
Escalloniaceae	*Escallonia reticulata*	A(i)	VU	✓					scarce
Euphorbiaceae	*Euphorbia chenopodiifolia*	A(iii)	NE	✓	✓	✓	✓		unknown
Euphorbiaceae	*Euphorbia duriuscula*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Euphorbiaceae	*Euphorbia mayfieldii*	A(iii)	NE	✓	✓		✓		unknown
Fabaceae	*Boliviadendron bolivianum*	A(i)	EN	✓	✓		✓		rare
Fabaceae	*Inga approximata*	A(i)	VU	✓	✓				occasional
Fabaceae	*Piptadenia boliviana*	A(i)	VU	✓	✓		✓		occasional
Koeberliniaceae	*Koeberlinia holacantha*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Lamiaceae	*Lepechinia nubigena*	A(iii)	NE	✓	✓		✓		unknown
Lamiaceae	*Salvia amplifrons*	A(i)	EN	✓	✓				occasional
Lamiaceae	*Salvia raymondii*	A(i)	VU	✓	✓		✓		occasional
Lamiaceae	*Salvia raymondii* subsp. *raymondii*	A(iv)	NE	✓	✓	✓	✓		unknown
Lamiaceae	*Salvia serranoae*	A(i)	EN	✓	✓	✓	✓		rare
Malvaceae	*Gaya cardenasii*	A(i)	EN	✓	✓	✓	✓		rare
Malvaceae	*Gaya cruziana*	A(i)	VU	✓		✓			occasional
Malvaceae	*Malvastrum trifidum*	A(i)	EN	✓	✓		✓		occasional
Malvaceae	*Sida cordifolia* var. *serrata*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Malvaceae	*Sida gracilipes*	A(i)	VU	✓	✓	✓	✓		frequent
Malvaceae	*Wissadula cruziana*	A(i)	VU	✓	✓	✓	✓		occasional
Melastomataceae	*Miconia multiflora*	A(i)	VU	✓					occasional
Melastomataceae	*Miconia neei*	A(i)	VU	✓	✓		✓		occasional
Meliaceae	*Cedrela angustifolia*	A(i)	VU	✓					unknown
Meliaceae	*Cedrela fissilis*	A(i)	VU	✓					unknown
Monimiaceae	*Mollinedia steinbachiana*	A(i)	VU	✓					occasional
Onagraceae	*Fuchsia cochabambana*	A(ii), A(iv)	VU	✓	✓				unknown
Orchidaceae	*Epidendrum nigricans*	A(iv)	NE	✓	✓		✓		scarce
Orchidaceae	*Fernandezia dorriana*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Fernandezia herzogii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Kefersteinia ricii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Orchidaceae	*Lepanthes barbatula*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Microchilus siberianus*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Pleurothallis micklowii*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Stelis bacriosa*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis papuligera*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis patzii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Orchidaceae	*Stelis rutrum*	A(iv)	NE	✓	✓	✓	✓		unknown
Passifloraceae	*Passiflora pilosicorona*	A(ii), A(iv)	VU	✓	✓		✓		unknown
Poaceae	*Chascolytrum altimontanum*	A(i)	VU	✓	✓		✓		rare
Poaceae	*Festuca cochabambana*	A(i)	VU	✓	✓				occasional
Poaceae	*Setaria barbinodis*	A(i)	VU	✓	✓	✓	✓		frequent
Podocarpaceae	*Podocarpus rusbyi*	A(i)	VU	✓					occasional
Polypodiaceae	*Grammitis carrascoensis*	A(iv)	NE	✓	✓				unknown
Portulacaceae	*Portulaca gracilis*	A(iii)	NE	✓	✓		✓	✓	unknown
Rosaceae	*Polylepis neglecta*	A(i)	EN	✓	✓		✓		occasional
Rutaceae	*Zanthoxylum nebuletorum*	A(i)	VU	✓	✓	✓	✓		occasional
Santalaceae	*Phoradendron kuntzei*	A(iv)	NE	✓	✓		✓		unknown
Santalaceae	*Phoradendron steinbachii*	A(iii)	NE	✓	✓		✓		unknown
Solanaceae	*Capsicum caballeroi*	A(i)	VU	✓	✓				scarce
Solanaceae	*Solanum hibernum*	A(i)	VU	✓	✓		✓		occasional
Solanaceae	*Solanum monanthemon*	A(i)	EN	✓	✓		✓		rare
Solanaceae	*Solanum neocardenasii*	A(i)	EN	✓	✓		✓		scarce
Solanaceae	*Solanum woodii*	A(i)	VU	✓					occasional
Symplocaceae	*Symplocos neei*	A(i)	VU	✓	✓		✓		occasional
Verbenaceae	*Citharexylum joergensenii*	A(i)	VU	✓	✓	✓	✓		scarce
Zygophyllaceae	*Porlieria arida*	A(iii)	NE	✓	✓		✓	✓	unknown

ESPEJILLOS NATURAL MONUMENT NATURAL HERITAGE CONSERVATION UNIT

Authors: Liliana Arroyo-Herbas, G. Alexander Parada, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA024	Department/ Province	Santa Cruz: Andrés Ibañez
Latitude	-17.87315	Longitude	-63.46380
Minimum altitude (m.a.s.l.)	488	Maximum altitude (m.a.s.l.)	1,154
Area (km^2)	35	Qualifying IPA criteria	A(i), A(iii), A(iv), B(iii)



IPA Assessment – Rationale

The Espejillos IPA site qualifies as an IPA by protecting 31 endemic plant taxa, of which 13 are at risk of extinction, six species are potentially threatened, and one is a range-restricted species. In addition to endemics, the site hosts 126 useful plant species, representing c. 4% of the useful species documented for Bolivia. The group of useful species includes three crop wild relatives (CWR) (Appendix 3).

Site Description

This IPA site is in the southwestern part of the Santa Cruz department, more precisely - the Andrés Ibáñez province, Porongo municipality, approximately 30 km from the city of Santa Cruz de la Sierra. Forming part of the Amazon basin (Mamoré and Piraí River sub-basins), the Guenda River, Surutú River, and the Espejillos waterfalls (converging within its boundaries), the IPA is a designated water resource reserve (GADSC 2014). The delimitation of the site coincides with the boundaries of the Espejillos Natural Monument and the Natural Area of Integrated Management, a departmental conservation area created to protect water sources and recharge zones. To the northeast, it borders the Amboró National Park and Natural Area of Integrated Management.

Botanical Significance

The botanical importance of the site is based on its endemic plant taxa, globally threatened species, range-restricted species, and the presence of socioeconomically important plants. Among the endemic and globally threatened taxa is *Ipomoea paradae* (EN), a species restricted to Espejillos and the Vallegrande area (Wood *et al.* 2015). Other notable species include *Luehea herzogiana* (EN), *Porcelia steinbachii*, and *Vernonanthura santacruzensis*, both considered Vulnerable (VU); it is estimated that 10% of their population is protected within this site.

The site also protects a significant number of useful species, with a total of 124 representing 4% of the species documented for Bolivia (Appendix 3). These include *Syagrus cardenasii* (LC) and *Dipteryx alata* (VU). Furthermore, the site harbours

Overview of natural pools in Espejillos © DICOPAN

Gochnatia boliviana (NE), *Bougainvillea modesta* (LC), *Passiflora rosacea* (NE), and *Aristolochia pseudotriangularis* (NE)—species which, while not currently categorised under a threat level, are of conservation importance due to being endemic to Bolivia.

Habitat and Geology

The site is characterised by a landscape of mountain ranges (*serranías*) and undulating plains belonging to the Sub-Andean zone, where a series of parallel chains rise above the Chaco plain (GADSC 2014). Biogeographically, it belongs to the transition zone between the Brazilian-Paranense, Amazonian, and Andean regions (Navarro 2002, Parada 2010). According to Navarro & Ferreira (2011), the most representative vegetation of the site is the Lower Northern Sub-Andean Chiquitano Forest of Santa Cruz (*Acanthosyris asipapote-Astronium urundeuva* series) and the seasonally humid Amazonian forest. These vegetation types are classified as Subtropical/Tropical Dry Forest

Ipomoea paradae © Alexander Parada

Luehea herzogiana © Trustees RBG Kew/Maira Martinez

Cerrado de Subandino, on the way to the viewpoint © Alexander Parada

General view from the viewpoint area © Alexander Parada

and Subtropical/Tropical Lowland Humid Forest following the IUCN habitat classification system (IUCN 2012) (Appendix 2).

Conservation Challenges

Espejillos was established as a departmentally protected area primarily for its hydrological qualities. Its proximity to the city of Santa Cruz de la Sierra and the scenic beauty of its waterfalls and natural pools have made it one of the department's main tourist attractions. While this activity provides income for surrounding communities, it indirectly generates waste pollution. However, tourism is seasonal, occurring mainly during the spring and summer.

Other identified threats include hunting, slash-and-burn clearing (*chaqueo*), poor livestock practices, timber extraction, and the introduction of invasive species for grazing (GADSC 2014). Despite these threats, its geographical location between Santa Cruz de la Sierra and Amboró National Park, combined with its botanical attributes, makes the Espejillos IPA a vital connectivity zone for the conservation of priority plant species due to their high levels of endemism and extinction risk.

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Dry Forest	98	Major
Subtropical/Tropical Moist Lowland Forest	2	Major

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Medium	Ongoing - stable
Tourism & recreation areas	High	Ongoing - stable
Small-holder plantations	Medium	Ongoing - trend unknown
Logging & wood harvesting	Unknown	Ongoing - trend unknown
Small-holder grazing, ranching or farming	Medium	Ongoing - trend unknown

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	80	Major
Agriculture (arable)	—	Major
Agriculture (pastoral)	—	Minor
Tourism/recreation	—	Major
Residential/urban development	—	Minor

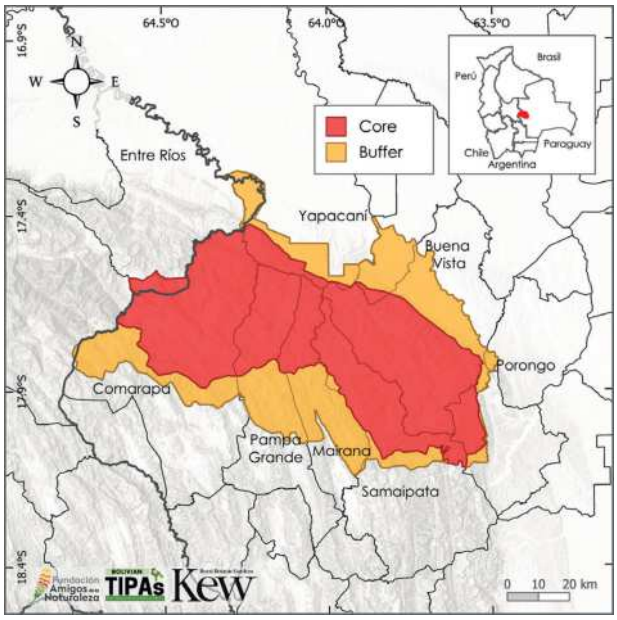
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	UCPN Espejillos Departmental Natural Monument	Protected/conservation area matches IPA (100%)	35

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Suessenguthia multisetosa*	A(i)	VU	✓					abundant
Amaryllidaceae	*Hippeastrum incachacanum*	A(i)	EN	✓	✓		✓		occasional
Annonaceae	*Annona fosteri*	A(i)	VU	✓					unknown
Annonaceae	*Porcelia steinbachii*	A(i)	VU	✓	✓	✓	✓		occasional
Araliaceae	*Dendropanax bolivianus*	A(i)	EN	✓	✓		✓		occasional
Aristolochiaceae	*Aristolochia pseudotriangularis*	A(iii)	DD	✓	✓	✓	✓	✓	rare/restricted
Asteraceae	*Chaetacalia stylotricha*	A(i)	NE	✓	✓	✓	✓		rare
Asteraceae	*Gochnatia boliviana*	A(i)	VU	✓					occasional
Asteraceae	*Vernonanthura santacruzensis*	A(i)	VU	✓	✓				unknown
Begoniaceae	*Begonia cremnophila*	A(iii)	NE	✓	✓	✓	✓		unknown
Convolvulaceae	*Ipomoea paradae*	A(i)	EN	✓	✓		✓		rare
Euphorbiaceae	*Euphorbia mayfieldii*	A(iii)	NE	✓	✓		✓		unknown
Fabaceae	*Dipteryx alata*	A(i)	VU	✓					unknown
Fabaceae	*Lonchocarpus neei*	A(i)	VU	✓	✓				occasional
Malvaceae	*Luehea herzogiana*	A(i)	EN	✓	✓		✓		occasional
Orchidaceae	*Catasetum kempfii*	A(i)	VU	✓	✓		✓		unknown
Orchidaceae	*Zygostates morenoi*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Passifloraceae	*Passiflora rosacea*	A(iii)	NE	✓	✓		✓		unknown
Rubiaceae	*Palicourea herzogii*	A(iv)	NE	✓	✓		✓		unknown
Sapindaceae	*Serjania rubicunda*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Solanaceae	*Solanum unilobum*	A(i)	VU	✓					unknown
Verbenaceae	*Recordia boliviana*	A(i)	VU	✓					unknown

AMBORÓ NATIONAL PARK AND NATURAL AREA OF INTEGRATED MANAGEMENT

Authors: Maira T. Martinez-Ugarteche, Luzmila Arroyo Padilla, Marisol Toledo, Elmer Cuba-Orozco, John R.I. Wood, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA025	Department/ Province	Santa Cruz: Andrés Ibáñez, Ichilo, Florida, Manuel María Caballero
Latitude	-17.74692	Longitude	-64.04951
Minimum altitude (m.a.s.l.)	231	Maximum altitude (m.a.s.l.)	3,347
Area (km^2)	6,846	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)



Site Description

The Amboró National Park and Natural Area of Integrated Management is in the Santa Cruz department, spanning five provinces. The National Park boundary corresponds to the core zone of this IPA site, while the ANMI constitutes the buffer zone. An additional area extending from Samaipata to Comarapa was added to this IPA boundary due to its high botanical value.

Amboró also marks part of the departmental border with Cochabamba and was previously part of the proposed Vilcabamba-Amboró Conservation Corridor (VACC), which integrated various protected areas in Bolivia and Peru; however, this initiative currently lacks continuity (Sierra 2021). Beyond its biodiversity and conservation importance, the protected area is noted for its tourist attractions, including the Jardín de las Delicias waterfalls, Mataracú, Laguna Verde, the Cueva de los Vencejos y Murciélagos, the Cloud Forest of Tree Ferns, and the Volcanes region, among others (SERNAP 2020a).

IPA Assessment – Rationale

The Amboró National Park and Natural Area of Integrated Management (NP and ANMI) is ranked among the top five Bolivian IPA sites with the greatest botanical characteristics. This is reflected in the 76 globally threatened plant species that it harbours, of which 63 are Bolivian endemics and three are strictly restricted to the Amboró site. Added to this are another 231 endemic species categorised as Least Concern, Near Threatened, or lacking a formal IUCN evaluation. Of this total, 95 species are range-restricted and 11 species have a national extinction risk assessment. With a total of 293 endemic species, this IPA site concentrates 11% of Bolivia's total endemic species richness. Another defining botanical attribute is the exceptional richness of socioeconomically important species, hosting a total of 879 useful plants or 27% of the total species documented nationally), a figure that includes 31 species considered wild relatives of cultivated plants (Appendix 3).

Botanical Significance

The IPA site possesses high botanical value due to the presence of numerous endemic, useful, and

Waterfalls in the Jardín de las Delicias © Jonatan Jost

threatened species. This richness makes it difficult to describe each species in detail or highlight only certain groups. Among the most relevant species is *Ipomoea odontophylla* (CR), a herb restricted to this site whose population has been affected by anthropic activities. Notable trees include *Magnolia boliviana* (EN), *Myrcia siberiensis* (CR) — restricted to the Siberia zone on the park's western limit—and *Recordia boliviana* (VU). In addition to these threatened endemics, other species of interest include *Salvia oxyphora* and *Solanum comarapanum*, both listed as Near Threatened (NT).

To these species, 878 useful plants are added, notably *Capsicum caballeroi* (VU), *Gochnatia boliviana* (VU), *Nectandra apiculata* (CR), and *Porcelia steinbachii* (VU), which are both endemic and socioeconomically important while being globally threatened (Appendix 3).

Habitat and Geology

Physiographically, the Amboró site is situated across the Eastern Cordillera, the Sub-Andean zone, and the Chaco-Beniana Plain, forming a mosaic of landscapes including mountain ranges, hills, foothills, and plains (MDSyP 2002). According

Magnolia boliviana © MHNNKM/Michael Nee

Ipomoea odontophylla © John Pink

Recordia boliviana © Alexander Parada

Solanum comarapanum © Alexander Parada

to Ibisch *et al.* (2003), several ecoregions converge here, including the Tucuman-Bolivian Forest, the Yungas, the Inter-Andean Dry Forests, and Southwestern Amazonia. The predominant vegetation corresponds to Yungas altimontane forests, montane Yungueño forests, and Tucuman-Bolivian montane forests and pine groves (Navarro & Ferreira 2011, Navarro 2011, Appendix 2). These vegetation types are classified into three major categories under the IUCN habitat classification scheme (IUCN 2012): Montane Humid Forest, Dry Forest, and Subtropical/Tropical High-Altitude Shrubland (Appendix 2).

Conservation Challenges

Amboró National Park is located within the Tropical Andes, considered the hotspot with the greatest biological richness and diversity on the planet (Mittermeier *et al.* 2004). It is also part of the Amboró-Madidi conservation corridor, recognised for its elevated biodiversity and high degree of endemism (Andersen *et al.* 2006).

Recently, the Amboró National Park and ANMI was designated as a Key Biodiversity Area (KBA 2025j). Beyond its extraordinary biological value and role in ecological connectivity, this protected space is characterised by the importance of its tributaries, which supply water resources to surrounding communities and the city of Santa Cruz de la Sierra. However, the expansion of the agricultural frontiers - primarily for coca cultivation, illegal timber extraction and new settlements, are the main threats to the forests (Fernández & Paredes 2023, UNODC 2025). This heavy pressure, particularly on the ANMI territory, is centered in the sector spanning from Yapacaní and Huaytú to

Yungas Forest, La Siberia © Eliana Calzadilla

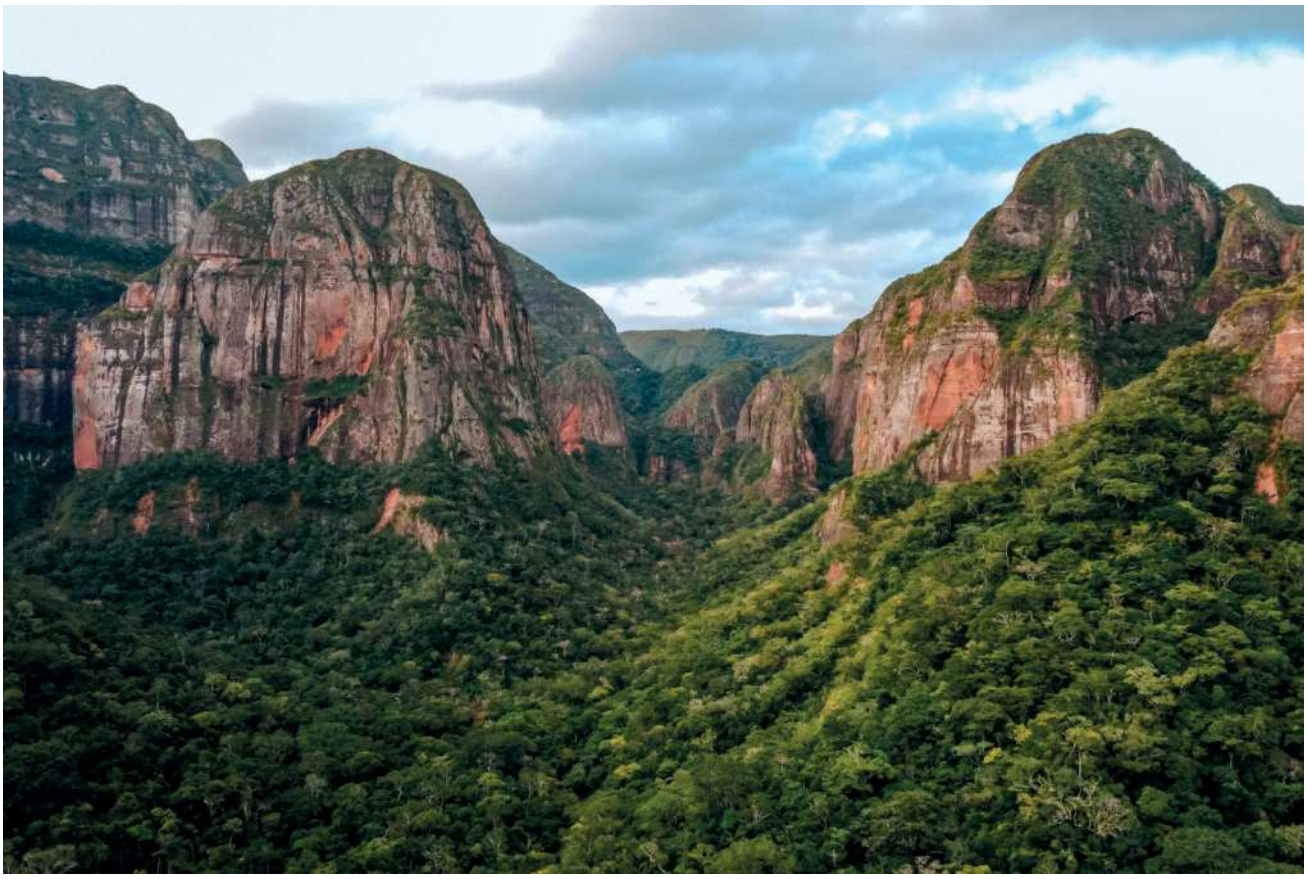
Sesonally dry Yungas forest © Eliana Calzadilla

Yungas forest with palm grove © NP y ANMI Amboró

Seasonally rainy montane Yungas forest, La Siberia © Eliana Calzadilla

Jardín de las Delicias, as well as the opposing zone in Siberia, Comarapa, and Mairana. The relevance of this protected area and its designation as an IPA lies in its essential role for flora conservation and ecosystem services.

Therefore, it is of paramount importance to strengthen administrative and management strategies, while granting the recognition and valuation it deserves as one of the five sites with the highest botanical richness in the country.



Escarpments © Daniel Aguilar

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Montane Forest	36	Major
Subtropical/Tropical Moist Lowland Forest	34	Major
Subtropical/Tropical Dry Forest	28	Major
Subtropical/Tropical High Altitude Shrubland	1	Major
Other	1	Medium

Threat		
Threat	**Severity**	**Situation**
Small-holder farming	Medium	Ongoing - stable
Small-holder grazing, ranching or farming	Low	Future - planned activity
Gathering terrestrial plants	Medium	Ongoing - stable
Logging & wood harvesting	Medium	Ongoing - stable
Abstraction of surface water (agricultural use)	Medium	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	94	Major
Agriculture (arable)	1	Minor
Agriculture (pastoral)	4	Minor
Mosaic of uses	2	Minor

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
National Park	NP y ANMI Amboró	Protected/conservation area matches IPA (100%)	6,208
Local/Regional Nature Reserve	Water Sanctuary, Wildlife, and ANMI El Chape Micro-watershed	IPA encompasses protected/conservation area (100%)	30
Key Biodiversity Area	KBA Amboró	Protected/conservation area matches IPA (99%)	6,209

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Justicia chuquisacensis*	A(i)	VU	✓	✓		✓		scarce
Acanthaceae	*Justicia mandonii*	A(iii)	NE	✓					unknown
Acanthaceae	*Stenostephanus pyramidalis*	A(i)	VU	✓	✓		✓		frequent
Acanthaceae	*Stenostephanus tenellus*	A(i)	EN	✓	✓		✓		occasional

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥1% global population	≥5% national population	1 of 5 best sites at national level	≥10% global population	Entire global population at the site	Abundance at site
Acanthaceae	*Suessenguthia multisetosa*	A(i)	VU	✓	✓		✓		occasional
Actinidiaceae	*Saurauia chaparensis*	A(i)	EN	✓	✓		✓		occasional
Annonaceae	*Porcelia steinbachii*	A(i)	VU	✓	✓				scarce
Apiaceae	*Eryngium beckii*	A(i)	EN	✓	✓	✓	✓		occasional
Apiaceae	*Eryngium bolivianum*	A(iii)	NE	✓	✓		✓		unknown
Apiaceae	*Eryngium buchtienii*	A(iv)	NE	✓	✓		✓		unknown
Apiaceae	*Eryngium neei*	A(iii)	NE	✓	✓		✓		unknown
Apocynaceae	*Orthosia boliviana*	A(iii)	NE	✓	✓		✓		unknown
Apocynaceae	*Oxypetalum fuscum*	A(i)	VU	✓	✓				scarce
Araliaceae	*Dendropanax bolivianus*	A(i)	EN	✓	✓				occasional
Araliaceae	*Hydrocotyle felipae*	A(iii)	NE	✓	✓		✓	✓	unknown
Araliaceae	*Hydrocotyle juanae*	A(iii)	NE	✓	✓		✓	✓	unknown
Araliaceae	*Hydrocotyle lopeziae*	A(iii)	NE	✓	✓		✓		unknown
Araliaceae	*Oreopanax boliviensis*	A(i)	EN	✓	✓				occasional
Araliaceae	*Sciodaphyllum allocotanthum*	A(i)	VU	✓	✓	✓	✓		occasional
Arecaceae	*Bactris faucium*	A(i)	EN	✓	✓				scarce
Aspleniaceae	*Asplenium herzogii*	A(iii)	NE	✓	✓		✓		unknown
Aspleniaceae	*Blechnum bruneum*	A(iv)	NE	✓	✓		✓		unknown
Aspleniaceae	*Thelypteris parva*	A(iii)	NE	✓	✓		✓	✓	unknown
Asteraceae	*Amboroa geminata*	A(i)	VU	✓	✓		✓		occasional
Asteraceae	*Baccharis vargasii*	A(iii)	NE	✓	✓		✓	✓	unknown
Asteraceae	*Chromolaena austera*	A(iv)	NE	✓	✓		✓		unknown
Asteraceae	*Critoniopsis steinbachii*	A(i)	EN	✓	✓		✓		rare
Asteraceae	*Critoniopsis yungasensis*	A(i)	VU	✓	✓				scarce
Asteraceae	*Dendrophorbium ayopayense*	A(i)	VU	✓	✓				occasional
Asteraceae	*Dendrophorbium tabacifolium*	A(i)	VU	✓	✓	✓	✓		occasional
Asteraceae	*Fleischmannia neei*	A(i)	EN	✓	✓		✓		scarce
Asteraceae	*Fleischmannia steinbachii*	A(iii)	NE	✓	✓		✓		unknown
Asteraceae	*Gochnatia boliviana*	A(i)	VU	✓					scarce
Asteraceae	*Gynoxys cochabambensis*	A(iii)	DD	✓	✓		✓		scarce
Asteraceae	*Kaunia hosanensis*	A(iii)	NE	✓	✓		✓	✓	unknown
Asteraceae	*Mikania comarapensis*	A(iii)	NE	✓	✓		✓	✓	unknown
Asteraceae	*Mikania dictyota*	A(i)	VU	✓	✓		✓		occasional
Asteraceae	*Mikania schultzii*	A(i)	EN	✓	✓		✓		occasional
Asteraceae	*Munnozia hirta*	A(iv)	NE	✓	✓		✓		unknown
Asteraceae	*Nordenstamia kingii*	A(i)	VU	✓	✓	✓	✓		occasional
Asteraceae	*Pentacalia comarapensis*	A(i)	EN	✓	✓	✓	✓		scarce

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥1% global population	≥5% national population	1 of 5 best sites at national level	≥10% global population	Entire global population at the site	Abundance at site
Asteraceae	*Quechualia smithii*	A(iii)	NE	✓	✓		✓	✓	unknown
Asteraceae	*Stevia sarensis*	A(i)	VU	✓	✓	✓			occasional
Berberidaceae	*Berberis keissleriana*	A(iv)	DD	✓	✓		✓		occasional
Bignoniaceae	*Jacaranda mimosifolia*	A(i)	VU	✓					scarce
Boraginaceae	*Cordia santacruzensis*	A(i)	EN	✓	✓	✓	✓		rare
Bromeliaceae	*Bromelia arubaiensis*	A(i)	EN	✓	✓		✓		scarce
Bromeliaceae	*Deuterocohnia gableana*	A(iii)	NE	✓	✓		✓	✓	unknown
Bromeliaceae	*Dyckia pulquinensis*	A(i)	VU	✓					scarce
Bromeliaceae	*Fosterella christophii*	A(iii)	NE	✓	✓		✓		unknown
Bromeliaceae	*Greigia kessleri*	A(i)	VU	✓	✓		✓		rare
Bromeliaceae	*Pitcairnia amboroensis*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Pitcairnia longissimiflora*	A(iii)	NE	✓	✓		✓		unknown
Bromeliaceae	*Puya laxa*	A(i)	VU	✓	✓	✓	✓		occasional
Bromeliaceae	*Puya nana*	A(iv)	NE	✓	✓				unknown
Bromeliaceae	*Tillandsia edithae*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Tillandsia engleriana*	A(i)	CR	✓					scarce
Bromeliaceae	*Tillandsia lechneri*	A(iii)	NE	✓	✓		✓	✓	unknown
Calceolariaceae	*Calceolaria crassa*	A(iv)	NE	✓	✓		✓		unknown
Calceolariaceae	*Calceolaria incachacensis*	A(iii)	NE	✓	✓		✓		unknown
Campanulaceae	*Siphocampylus reflexus*	A(ii), A(iv)	EN	✓	✓		✓		occasional
Campanulaceae	*Siphocampylus tunicatus*	A(ii), A(iv)	CR	✓	✓	✓	✓		occasional
Campanulaceae	*Siphocampylus werdermannii*	A(ii)	VU	✓	✓				scarce
Columelliaceae	*Columellia oblonga* subsp. *serrata*	A(iii)	NE	✓	✓		✓		unknown
Convolvulaceae	*Ipomoea lactifera*	A(i)	VU	✓					rare
Convolvulaceae	*Ipomoea odontophylla*	A(i)	CR	✓	✓	✓	✓	✓	rare
Cunoniaceae	*Weinmannia bangii*	A(ii), A(iii)	VU	✓	✓				unknown
Dioscoreaceae	*Dioscorea hunzikeri*	A(i)	CR	✓	✓	✓	✓	✓	rare
Ericaceae	*Satyria boliviana*	A(ii), A(iv)	VU	✓	✓				scarce
Escalloniaceae	*Escallonia reticulata*	A(i)	VU	✓	✓				scarce
Euphorbiaceae	*Croton erythrochyloides*	A(i)	EN	✓	✓		✓		occasional
Fabaceae	*Inga amboroensis*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Fabaceae	*Inga approximata*	A(i)	VU	✓	✓		✓		occasional
Fabaceae	*Lonchocarpus neei*	A(i)	VU	✓	✓		✓		occasional
Fabaceae	*Lonchocarpus riparius*	A(i)	EN	✓	✓		✓		scarce
Fabaceae	*Piptadenia boliviana*	A(i)	VU	✓	✓		✓		scarce
Fabaceae	*Piptadenia buchtienii*	A(i)	VU	✓					scarce
Gentianaceae	*Gentianella pluvialis*	A(iv)	NE	✓	✓		✓		unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥1% global population	≥5% national population	1 of 5 best sites at national level	≥10% global population	Entire global population at the site	Abundance at site
Gentianaceae	*Gentianella sancti-mathaeii*	A(iv)	NE	✓	✓		✓		unknown
Geraniaceae	*Geranium comarapense*	A(iii)	NE	✓	✓		✓	✓	unknown
Gesneriaceae	*Columnea hypocyrtantha*	A(ii), A(iv)	CR	✓	✓	✓	✓		rare
Gunneraceae	*Gunnera boliviana*	A(iii)	NE	✓	✓		✓		unknown
Isoetaceae	*Isoetes herzogii*	A(i)	VU	✓	✓		✓		scarce
Lamiaceae	*Aegiphila steinbachii*	A(i)	VU	✓	✓		✓		occasional
Lamiaceae	*Lepechinia nubigena*	A(iii)	NE	✓	✓		✓		unknown
Lamiaceae	*Salvia alba*	A(iii)	NE	✓					unknown
Lamiaceae	*Salvia amplifrons*	A(i)	EN	✓	✓	✓	✓		occasional
Lamiaceae	*Salvia raymondii* subsp. *mairanae*	A(iv)	NE	✓	✓		✓		unknown
Lamiaceae	*Salvia raymondii* subsp. *raymondii*	A(iv)	NE	✓	✓		✓		unknown
Lauraceae	*Nectandra apiculata*	A(i)	CR	✓	✓	✓	✓	✓	rare
Lauraceae	*Persea buchtienii*	A(i)	VU	✓	✓				scarce
Loasaceae	*Nasa herzogii*	A(ii), A(iii)	EN	✓	✓	✓	✓	✓	rare
Magnoliaceae	*Magnolia boliviana*	A(i)	EN	✓	✓	✓	✓		frequent
Malvaceae	*Luehea steinbachii*	A(i)	VU	✓	✓		✓		frequent
Malvaceae	*Pachira rurrenabaqueana*	A(i)	VU	✓	✓	✓	✓		occasional
Malvaceae	*Sida calva*	A(i)	EN	✓	✓		✓		occasional
Melastomataceae	*Axinaea lanceolata*	A(i)	EN	✓					scarce
Melastomataceae	*Chaetogastra venosa*	A(iv)	NE	✓	✓		✓		unknown
Melastomataceae	*Miconia amabilis*	A(i)	VU	✓	✓				occasional
Melastomataceae	*Miconia ciliaris*	A(i)	VU	✓					scarce
Melastomataceae	*Miconia dulcis*	A(iii)	NE	✓	✓		✓	✓	unknown
Melastomataceae	*Miconia herzogii*	A(iv)	NE	✓	✓		✓		unknown
Melastomataceae	*Miconia longicuspidata*	A(iii)	NE	✓	✓		✓	✓	unknown
Melastomataceae	*Miconia mandonii*	A(i)	VU	✓	✓				occasional
Melastomataceae	*Miconia multiflora*	A(i)	VU	✓					scarce
Melastomataceae	*Miconia neei*	A(i)	VU	✓	✓	✓	✓		occasional
Melastomataceae	*Miconia steinbachii*	A(iv)	NE	✓	✓		✓		unknown
Meliaceae	*Cedrela angustifolia*	A(i)	VU	✓					occasional
Meliaceae	*Swietenia macrophylla*	A(i)	EN	✓					scarce
Monimiaceae	*Mollinedia steinbachiana*	A(i)	VU	✓					scarce
Myrtaceae	*Myrceugenia linda*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Myrtaceae	*Myrcia siberiensis*	A(i)	CR	✓	✓	✓	✓	✓	rare
Onagraceae	*Fuchsia cochabambana*	A(ii), A(iv)	VU	✓	✓	✓	✓		occasional
Onagraceae	*Fuchsia nana*	A(ii), A(iv)	VU	✓	✓	✓	✓		occasional
Orchidaceae	*Andinia ricii*	A(iii)	NE	✓	✓		✓	✓	unknown

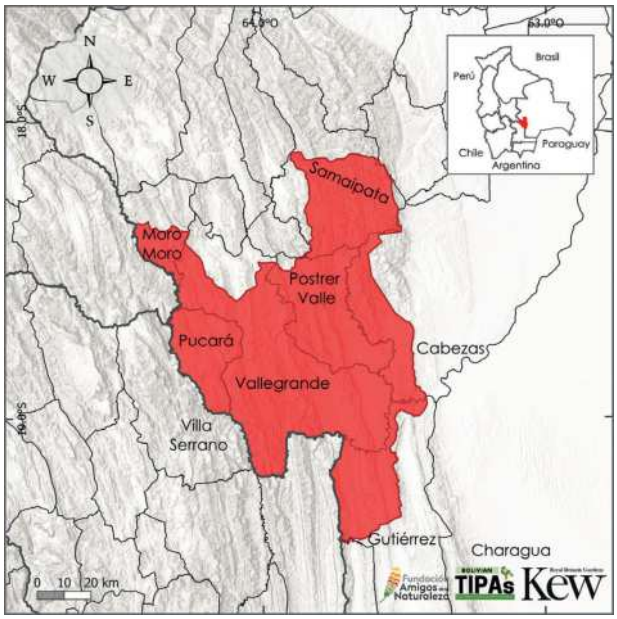
IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Orchidaceae	*Cyrtochilum aurantiacum*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Epidendrum larae*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Epidendrum nigricans*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Fernandezia amboroensis*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Fernandezia barnettiae*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Fernandezia jordaniae*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Fernandezia jordaniae* var. *trullata*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Fernandezia pastinaca*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Fernandezia steinbachii*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Fernandezia tinquiana*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Lepanthes garayi*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Lepanthes usitata*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Lepanthes vespa*	A(iv)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Masdevallia chaparensis*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Masdevallia elachys*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Masdevallia heideri*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Masdevallia helenae*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Masdevallia mascarata*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Masdevallia notosibirica*	A(i)	VU	✓	✓		✓		occasional
Orchidaceae	*Masdevallia phacopsis*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Masdevallia ricii*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Masdevallia soennemarkii*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Microchilus cruciformis*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Mormodes morenoi*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Oncidium lykaiosii*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Scelochilus amboroensis*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Sobralia rupicola*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis morenoi*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis papuligera*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis samaipatensis*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis siberica*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Trichocentrum stacyi*	A(iv)	NE	✓	✓				unknown
Orobanchaceae	*Agalinis scarlatina*	A(iv)	NE	✓	✓		✓		unknown
Oxalidaceae	*Oxalis tuberosa* subsp. *unduavensis*	A(iv)	NE	✓	✓		✓		unknown
Passifloraceae	*Passiflora carrascoensis*	A(ii), A(iv)	EN	✓	✓		✓		scarce
Passifloraceae	*Passiflora pilosicorona*	A(ii), A(iv)	VU	✓	✓		✓		occasional
Phyllanthaceae	*Phyllanthus bolivianus*	A(i)	EN	✓	✓		✓		rare

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Poaceae	*Cortaderia boliviensis*	A(i)	VU	✓	✓				unknown
Podocarpaceae	*Podocarpus rusbyi*	A(i)	VU	✓					unknown
Polygalaceae	*Monnina arbutus*	A(ii)	EN	✓	✓	✓	✓		unknown
Polygalaceae	*Monnina herzogii*	A(iv)	NE	✓	✓		✓		unknown
Polypodiaceae	*Grammitis carrascoensis*	A(iv)	NE	✓	✓		✓		unknown
Polypodiaceae	*Grammitis kessleri*	A(iii)	NE	✓	✓		✓		unknown
Polypodiaceae	*Grammitis pilipalaea*	A(iii)	NE	✓	✓		✓		unknown
Rosaceae	*Polylepis hieronymi*	A(i)	EN	✓					unknown
Rosaceae	*Polylepis neglecta*	A(i)	EN	✓	✓		✓		unknown
Rubiaceae	*Macrocnemum tortuosum*	A(i)	VU	✓	✓	✓	✓		unknown
Rubiaceae	*Palicourea herzogii*	A(iv)	NE	✓	✓		✓		unknown
Rutaceae	*Zanthoxylum nebuletorum*	A(i)	VU	✓	✓		✓		unknown
Sabiaceae	*Meliosma caballeroensis*	A(iii)	NE	✓	✓		✓	✓	unknown
Salicaceae	*Banara boliviana*	A(i)	EN	✓	✓		✓		unknown
Solanaceae	*Brugmansia arborea*	A(i)	EW	✓					unknown
Solanaceae	*Capsicum caballeroi*	A(i)	VU	✓	✓	✓	✓		unknown
Solanaceae	*Capsicum neei*	A(iv)	NE	✓	✓		✓		unknown
Solanaceae	*Solanum hibernum*	A(i)	VU	✓	✓		✓		unknown
Solanaceae	*Solanum unilobum*	A(i)	VU	✓					unknown
Symplocaceae	*Symplocos neei*	A(i)	VU	✓	✓		✓		unknown
Verbenaceae	*Citharexylum joergensenii*	A(i)	VU	✓	✓	✓	✓		unknown
Verbenaceae	*Recordia boliviana*	A(i)	VU	✓					unknown

RÍO GRANDE VALLES CRUCEÑOS NATURAL HERITAGE CONSERVATION UNIT

Authors: Maira T. Martinez-Ugarteche, G. Alexander Parada, Luzmila Arroyo Padilla, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA026	Department/ Province	Santa Cruz: Andrés Ibáñez, Cordillera, Florida, Vallegrande
Latitude	-18.72553	Longitude	-63.83394
Minimum altitude (m.a.s.l.)	416	Maximum altitude (m.a.s.l.)	2,988
Area (km^2)	7,328	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(ii), B(iii)



IPA Assessment – Rationale

The Río Grande Valles Cruceños Natural Heritage Conservation Unit (UCPN) harbours a significant diversity of native plants, many of high socioeconomic value, alongside globally and nationally threatened endemic plant species. It protects 75 globally threatened plant species, of which 65 are endemic to Bolivia.

Furthermore, it records six nationally threatened species, including both native and endemic taxa. This site concentrates a total of 249 endemic taxa, representing 9% of the country's total endemic richness. Among these endemic plants, 54 are range restricted. In addition to this exceptional number of endemic species, there are 873 species of socioeconomic importance, accounting for over 25% of the total useful plants documented nationwide. This includes 34 species of wild relatives of cultivated plants, primarily from the genera *Capsicum* (peppers), *Nicotiana* (tobacco), and *Solanum* (potato, tomato).

Site Description

The Río Grande Valles Cruceños conservation area and IPA site is located in the southwest of the Santa Cruz department and encompasses the three provinces of Cordillera, Florida, and Vallegrande. The largest portion of the area lies within Vallegrande province, which serves as the departmental border to the northwest, west, and south with the departments of Cochabamba and Chuquisaca, respectively. This conservation area was established primarily to protect the Spectacled Bear (*Tremarctos ornatus*), alongside other conservation values such as its diverse vegetation types. Other emblematic conservation priorities include the Red-fronted Macaw (*Ara rubrogenys*), endemic to the Inter-Andean dry forests, and the Sunkha palm (*Parajubaea sunkha*), an endemic species. Several natural, scenic, and cultural tourism centres are located within the area, including the Fuerte de Samaipata, the Che Guevara Route, and the waterfalls of Cuevas and La Pajcha.

Botanical Significance

The botanical significance of the Río Grande Valles Cruceños area is attributed to the high number

Chaco Serrano Forest, La Angostura © Daniel Aguilar

of globally and nationally threatened species, endemics, and useful plants. Among the globally threatened endemic species are *Bougainvillea trollii* (VU), *Capsicum eshbaughii* (EN), *Eryngium beckii* (EN), *Hippeastrum evansiarum* (VU), *Hippeastrum incachacanum* (EN), *Ibatia elliptica* (CR), *Ipomoea paradae* (EN), *Ipomoea mendozae* (EN), *Luetzelburgia andina* (VU), and *Pitcairnia cantuoides* (EN), representing just a few of the 67 endemic species found here.

The site exhibits further particularities, harbouring populations of species restricted to the site or specific habitats. *Ipomoea prolifera* (CR) is one such plant, restricted to this site and the Inter-Andean dry forests of the Pampa Negra zone in the northwest. *Bonamia riograndina* (EN) and *Funastrum rupicola* (NT) grow in the valleys near the Río Grande, in the Puente Santa Rosa area, all of which are adapted to xeric environments. Conversely, *Begonia germaineana*, a plant known exclusively from this site, grows in the Tucuman-Bolivian Forest. To these species, an additional 873 useful plants are added, notably *Bougainvillea berberidifolia* (NT), *Capsicum caballeroi* (VU), and *Gochnatia boliviana* (VU), which are endemic and socioeconomically important while being globally threatened (Appendix 3). Also prominent is the Sunkha palm, *Parajubaea sunkha* (EN), a restricted endemic species used locally; its fibres are utilised for mattresses, its leaves for hats, baskets, and fans, and its fruits serve as local forage for livestock (Vargas 1994, Enssle 2006).

Habitat and Geology

The Río Grande Valles Cruceños IPA belongs to the Sub-Andean, Eastern Cordillera, and Alluvial Plain (primarily toward the south) physiographic regions. It is mostly composed of mountain ranges, oriented north-to-south, with higher peaks such as Alto Veladero and Salsipuedes Grande in Vallegrande province. Elevations of up to 3,000 m.a.s.l. were recorded in the western sector, descending to 427 m.a.s.l. in the east as it transitions into an alluvial plain (Maillard *et al.* 2019, Parada *et al.* 2022). The region experiences a wet season from October to March and a dry season from April to September. Given its location, topographic and climatic variations result in the convergence of several ecoregions: Tucuman-Bolivian Forest, Inter-Andean Dry Forests, Chaco Serrano, Gran Chaco, and Yungas (Ibisch *et al.* 2003). Parada *et al.* (2022) describe in detail the vegetation of the Vallegrande province; Villarroel *et al.* (2009) describe the vegetation of the Florida province; and Maillard *et al.* (2019) describe the vegetation of the Cordillera province. According to the classification of Bolivian ecological systems (Navarro & Ferreira 2011, Navarro 2011) and the IUCN habit classification system (IUCN 2012) the primary habitats are categorised as Subtropical/tropical dry forest and Subtropical/tropical montane moist forest (Appendix 2).

Conservation Challenges

The UCPN Río Grande Valles Cruceños is a departmental conservation area whose

Dry valleys, Pampa Negra, Vallegrande © Maira Martinez

Begonia germaineana © Alexander Parada

Bonamia riograndina © Trustees RBG Kew/Maira Martinez

Ipomoea prolifera © Maira Martinez

Ipomoea paradae © Alexander Parada

Parajubaea sunkha © Alexander Parada

Río Grande, Santa Rosa bridge, Vallegrande © FAN/Oriana Lino

El Palmar, Vallegrande © Alexander Parada

administration involves several municipalities. Its main socioeconomic activities are agriculture and livestock farming at various scales. Due to its characteristics, the primary threat to this protected area is deforestation, mirroring trends in the rest of the Santa Cruz department.

Another significant area of uncertainty involves the proposed construction of a hydroelectric dam. In the south of Vallegrande province, the Rositas hydroelectric project remains a point of contention; it has not been activated due to resistance from Guaraní indigenous peoples and local communities. The execution of the Rositas project would affect 500 fauna species, over 2,400 flora species, and natural habitats within the area and its surroundings (Cabrera 2022). This IPA site possesses a high botanical value; its plant diversity, heterogeneity, topographic and climatic variations, and sociocultural integration establish it as an area of paramount importance, requiring intensified conservation efforts for its notable existing diversity and new species yet to be discovered.

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Dry Forest	76	Major
Subtropical/Tropical Moist Montane Forest	19	Major
Subtropical/Tropical High Altitude Shrubland	3	Medium
Subtropical/Tropical Moist Lowland Forest	1	Medium
Other	1	Unknown

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Medium	Ongoing - stable
Annual & perennial non-timber crops	High	Ongoing - stable
Small-holder farming	High	Ongoing - stable
Nomadic grazing	High	Ongoing - stable
Small-holder grazing, ranching or farming	High	Ongoing - stable
Logging & wood harvesting	Medium	Ongoing - stable
Large dams	High	Future - planned activity

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	—	Major
Agriculture (arable)	2	Major
Agriculture (pastoral)	—	Major
Residential/urban development	—	Minor

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	UCPN Río Grande Valles Cruceños	Protected/conservation area matches IPA (100%)	7,328

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥1% global population**	**≥5% national population**	**1 of 5 best sites at national level**	**≥10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Justicia aequilabris* subsp. *riograndina*	A(iv)	NE	✓	✓	✓	✓		occasional
Acanthaceae	*Justicia chuquisacensis*	A(i)	VU	✓	✓		✓		occasional
Amaranthaceae	*Alternanthera altacruzensis*	A(iv)	NE	✓	✓	✓	✓		unknown
Amaranthaceae	*Gomphrena stellata*	A(ii), A(iii)	EN	✓	✓	✓	✓		occasional
Amaryllidaceae	*Hippeastrum evansiarum*	A(i)	VU	✓	✓	✓	✓		occasional
Amaryllidaceae	*Hippeastrum incachacanum*	A(i)	EN	✓	✓	✓	✓		occasional
Anacardiaceae	*Myracrodruon urundeuva*	A(ii)	VU						unknown
Anacardiaceae	*Schinus villosa*	A(iv)	NE	✓	✓				unknown
Annonaceae	*Porcelia steinbachii*	A(i)	VU	✓	✓				occasional
Apiaceae	*Eryngium beckii*	A(i)	EN	✓	✓	✓	✓		occasional
Apocynaceae	*Ditassa subalpina*	A(i)	EN	✓	✓	✓	✓		occasional
Apocynaceae	*Funastrum rupicola*	A(iv)	NT	✓	✓		✓		rare
Apocynaceae	*Ibatia pucara*	A(i)	CR	✓	✓	✓	✓	✓	rare
Apocynaceae	*Matelea neei*	A(i)	EN	✓	✓		✓	✓	occasional
Apocynaceae	*Oxypetalum fuscum*	A(i)	VU	✓	✓		✓		occasional
Apocynaceae	*Oxypetalum urceolatum*	A(i)	EN	✓	✓		✓		occasional
Apocynaceae	*Prestonia boliviana*	A(i)	VU	✓	✓		✓		occasional
Araliaceae	*Dendropanax bolivianus*	A(i)	EN	✓	✓		✓		frequent
Arecaceae	*Parajubaea sunkha*	A(i)	EN	✓	✓				occasional
Aristolochiaceae	*Aristolochia andina*	A(ii), A(iv)	VU	✓	✓		✓		unknown
Aristolochiaceae	*Aristolochia werdermanniana*	A(iii)	NE	✓	✓		✓	✓	unknown
Aspleniaceae	*Blechnum vallegrandense*	A(iii)	NE	✓	✓		✓	✓	unknown
Asteraceae	*Bishovia boliviensis*	A(i)	VU	✓	✓		✓		scarce

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Asteraceae	*Chaetacalia stylotricha*	A(iii)	NE	✓	✓		✓		unknown
Asteraceae	*Dendrophorbium tabacifolium*	A(i)	VU	✓	✓		✓		occasional
Asteraceae	*Fleischmannia neei*	A(i)	EN	✓	✓	✓	✓		occasional
Asteraceae	*Fleischmannia steinbachii*	A(iii)	NE	✓	✓		✓		unknown
Asteraceae	*Gochnatia boliviana*	A(i)	VU	✓	✓		✓		frequent
Asteraceae	*Liabum steinbachii*	A(iv)	NE	✓	✓		✓		unknown
Asteraceae	*Stevia beckii*	A(iv)	NE	✓	✓		✓		unknown
Asteraceae	*Stevia vaccinioides*	A(iii)	NE	✓	✓		✓	✓	unknown
Asteraceae	*Vernonanthura santacruzensis*	A(i)	VU	✓	✓		✓		occasional
Begoniaceae	*Begonia cremnophila*	A(iii)	NE	✓	✓		✓		unknown
Begoniaceae	*Begonia germaineana*	A(iii)	NE	✓	✓		✓	✓	unknown
Begoniaceae	*Begonia micranthera* subsp. *albonervia*	A(iii)	NE	✓	✓		✓	✓	unknown
Begoniaceae	*Begonia phantasma*	A(iv)	NE	✓	✓		✓		unknown
Bignoniaceae	*Jacaranda mimosifolia*	A(i)	VU	✓					frequent
Boraginaceae	*Cordia santacruzensis*	A(i)	EN	✓	✓	✓	✓		occasional
Bromeliaceae	*Deuterocohnia meziana* subsp. *pedicellata*	A(iii)	NE	✓	✓		✓		unknown
Bromeliaceae	*Deuterocohnia scapigera*	A(i)	VU	✓	✓		✓		occasional
Bromeliaceae	*Deuterocohnia scapigera* subsp. *sanctae-crucis*	A(iii)	NE	✓	✓		✓	✓	unknown
Bromeliaceae	*Fosterella christophii*	A(iii)	NE	✓	✓		✓		unknown
Bromeliaceae	*Fosterella floridensis*	A(iii)	NE	✓	✓		✓		unknown
Bromeliaceae	*Pitcairnia cantuoides*	A(i)	EN	✓	✓		✓		occasional
Bromeliaceae	*Pitcairnia cardenasii*	A(i)	EN	✓	✓		✓		occasional
Bromeliaceae	*Pitcairnia longissimiflora*	A(iii)	NE	✓	✓		✓		unknown
Bromeliaceae	*Puya claudiae*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Puya elviragrossiae*	A(i)	CR	✓	✓	✓	✓	✓	occasional
Bromeliaceae	*Puya laxa*	A(i)	VU	✓	✓		✓		occasional
Bromeliaceae	*Puya minima*	A(i)	VU	✓	✓		✓		occasional
Bromeliaceae	*Puya nana*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Puya pachyphylla*	A(i)	CR	✓	✓	✓	✓	✓	rare
Bromeliaceae	*Puya tuberosa*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Puya vasquezii*	A(iii)	NE	✓	✓		✓	✓	unknown
Bromeliaceae	*Tillandsia bermejoensis*	A(i)	EN	✓	✓		✓		occasional
Bromeliaceae	*Tillandsia edithae*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Tillandsia lotteae*	A(i)	VU	✓	✓		✓		occasional
Cactaceae	*Cleistocactus colademononis*	A(iii)	NE	✓	✓		✓	✓	unknown
Cactaceae	*Cleistocactus dependens*	A(iii)	NE	✓	✓		✓		unknown
Cactaceae	*Lobivia bridgesii* subsp. *vallegrandensis*	A(iv)	NE	✓	✓		✓		unknown

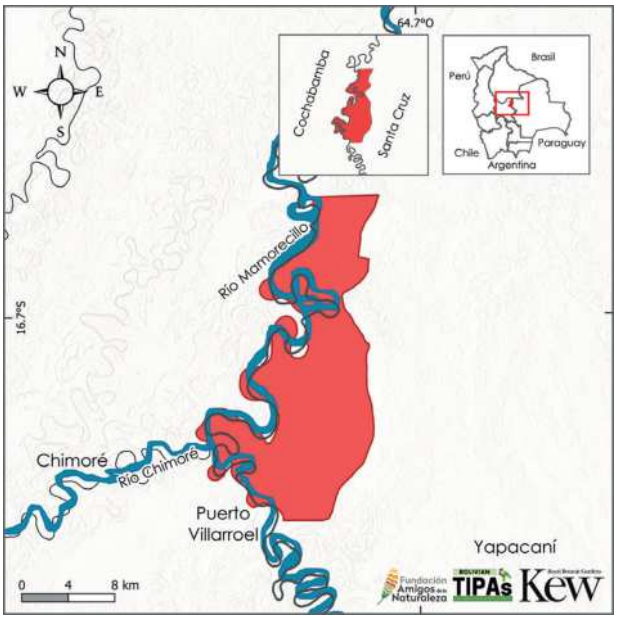
IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Cactaceae	*Neoraimondia herzogiana*	A(ii)	VU	✓	✓		✓		unknown
Campanulaceae	*Siphocampylus ambivalens*	A(ii), A(iv)	VU	✓	✓		✓	✓	unknown
Campanulaceae	*Siphocampylus aureus*	A(ii)	VU	✓	✓				unknown
Campanulaceae	*Siphocampylus neurotrichus*	A(iv)	NE	✓	✓		✓		unknown
Convolvulaceae	*Bonamia riograndina*	A(i)	EN	✓	✓	✓	✓		rare/localized
Convolvulaceae	*Ipomoea exserta*	A(i)	VU	✓	✓		✓		occasional
Convolvulaceae	*Ipomoea juliagutierreziae*	A(i)	EN	✓	✓		✓		rare/localized
Convolvulaceae	*Ipomoea mendozae*	A(i)	EN	✓	✓		✓		rare/localized
Convolvulaceae	*Ipomoea paradae*	A(i)	EN	✓	✓		✓		occasional
Convolvulaceae	*Ipomoea prolifera*	A(i)	CR	✓	✓	✓	✓	✓	rare
Convolvulaceae	*Jacquemontia chuquisacensis*	A(i)	EN	✓	✓		✓		rare/localized
Escalloniaceae	*Escallonia reticulata*	A(i)	VU	✓	✓		✓		occasional
Euphorbiaceae	*Croton abutilifolius*	A(i)	VU	✓	✓		✓		scarce
Euphorbiaceae	*Croton tartonrairoides*	A(iii)	NE	✓	✓		✓		unknown
Fabaceae	*Inga approximata*	A(i)	VU	✓	✓		✓		occasional
Fabaceae	*Lonchocarpus neei*	A(i)	VU	✓	✓		✓		occasional
Fabaceae	*Luetzelburgia andina*	A(i)	VU	✓	✓		✓		frequent
Fabaceae	*Myrocarpus emarginatus*	A(i)	EN	✓	✓		✓		occasional
Fabaceae	*Piptadenia boliviana*	A(i)	VU	✓					frequent
Fabaceae	*Piptadenia buchtienii*	A(i)	VU	✓	✓		✓		frequent
Gentianaceae	*Gentianella kuntzei*	A(iii)	NE	✓	✓		✓		unknown
Gentianaceae	*Gentianella longipes*	A(iii)	NE	✓	✓		✓		unknown
Lamiaceae	*Aegiphila steinbachii*	A(i)	VU	✓	✓		✓		scarce
Lamiaceae	*Salvia amplifrons*	A(i)	EN	✓					occasional
Lauraceae	*Persea buchtienii*	A(i)	VU	✓	✓				occasional
Malpighiaceae	*Heteropterys oxenderi*	A(iv)	NE	✓	✓		✓		unknown
Malvaceae	*Gaya cruziana*	A(i)	VU	✓	✓		✓		occasional
Malvaceae	*Luehea herzogiana*	A(i)	EN	✓	✓		✓		frequent
Malvaceae	*Luehea steinbachii*	A(i)	VU	✓	✓		✓		frequent
Malvaceae	*Malvastrum pucarense*	A(i)	EN	✓	✓		✓		occasional
Malvaceae	*Pavonia ionthacarpa*	A(i)	EN	✓	✓		✓		occasional
Malvaceae	*Pavonia yatarendana*	A(i)	CR	✓	✓	✓	✓	✓	occasional
Malvaceae	*Sida gracilipes*	A(i)	VU	✓	✓				frequent
Melastomataceae	*Miconia neei*	A(i)	VU	✓					scarce
Melastomataceae	*Miconia stenocardia*	A(iv)	DD	✓	✓		✓		unknown
Meliaceae	*Cedrela angustifolia*	A(i)	VU	✓					unknown
Meliaceae	*Cedrela fissilis*	A(i)	VU	✓					unknown

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Meliaceae	*Cedrela odorata*	A(i)	VU	✓					unknown
Monimiaceae	*Mollinedia steinbachiana*	A(i)	VU	✓	✓		✓		occasional
Myrtaceae	*Acca macrostema*	A(i)	EN	✓	✓	✓	✓		occasional
Nyctaginaceae	*Bougainvillea trollii*	A(i)	VU	✓	✓		✓		occasional
Orchidaceae	*Acianthera krahnii*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Acianthera morenoi*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Dryadella yupanki*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Epidendrum theodori*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Habenaria williamsii*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Masdevallia heideri*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Oncidium lykaiosii*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Pleurothallis serrisepala*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Scelochiloides coimbrae*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Sobralia rupicola*	A(iv)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis herzogii*	A(iii)	NE	✓	✓		✓	✓	unknown
Orchidaceae	*Stelis jubata*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Stelis samaipatensis*	A(iii)	NE	✓	✓		✓		unknown
Orchidaceae	*Vitekorchis vasquezii*	A(iv)	NE	✓	✓		✓		unknown
Passifloraceae	*Passiflora pilosicorona*	A(ii), A(iv)	VU	✓	✓		✓		unknown
Pentaphylacaceae	*Freziera neei*	A(i)	VU	✓	✓		✓		occasional
Poaceae	*Chascolytrum altimontanum*	A(i)	VU	✓	✓		✓		scarce
Poaceae	*Festuca cochabambana*	A(i)	VU	✓	✓		✓		occasional
Poaceae	*Festuca samensis*	A(i)	VU	✓					occasional
Poaceae	*Nassella trachyphylla*	A(iii)	DD	✓	✓	✓	✓	✓	unknown
Polypodiaceae	*Grammitis pseudotenuicula*	A(iii)	NE	✓	✓		✓		unknown
Rosaceae	*Polylepis hieronymi*	A(i)	EN	✓					frequent
Rubiaceae	*Palicourea herzogii*	A(iv)	NE	✓	✓		✓		unknown
Salicaceae	*Banara boliviana*	A(i)	EN	✓	✓	✓	✓		occasional
Solanaceae	*Brugmansia arborea*	A(i)	EW	✓					unknown
Solanaceae	*Capsicum caballeroi*	A(i)	VU	✓					occasional
Solanaceae	*Capsicum eshbaughii*	A(i)	EN	✓	✓	✓	✓		occasional
Solanaceae	*Solanum daphnophyllum*	A(i)	VU	✓					occasional
Solanaceae	*Solanum woodii*	A(i)	VU	✓					occasional
Symplocaceae	*Symplocos neei*	A(i)	VU	✓	✓		✓		occasional
Velloziaceae	*Vellozia andina*	A(i)	EN	✓	✓		✓		occasional
Verbenaceae	*Recordia boliviana*	A(i)	VU	✓	✓		✓		occasional

NATURAL HERITAGE CONSERVATION UNIT: DEPARTMENTAL WILDLIFE REFUGE OF THE ANCIENT MEANDER SCARS OF THE ICHILO RIVER

Authors: Liliana Arroyo-Herbas, Oriana A. Lino-Villalba, Maira. T. Martinez-Ugarteche & Bente B. Klitgaard

International code	BOLTIPA081	Department/ Province	Santa Cruz: Ichilo
Latitude	-16.69911	Longitude	-64.75657
Minimum altitude (m.a.s.l.)	117	Maximum altitude (m.a.s.l.)	224
Area (km^2)	225	Qualifying IPA criteria	C(iii)



IPA Assessment – Rationale

Located in southeastern Amazonia, the IPA site: Ancient Meander Scars of the Ichilo River safeguards Floodplain Forests, a habitat considered threatened and at risk of collapse—categorised as Vulnerable (VU) at the national level—which covers 44% of the site's surface area.

Furthermore, four native plant species occur within the site, three of which are globally categorised as Least Concern (LC).

Other conservation values of the site include the preservation of water resources and the protection of the landscape formed by the meander scars of the Ichilo River.

Site Description

The site is situated in the west of the Santa Cruz department, within the Ichilo province, precisely on the natural border formed by the Ichilo River with the Cochabamba department. The delimitation was established according to the boundaries of the Ichilo River Ancient Meander Scars Departmental Wildlife Refuge Natural Heritage Conservation Unit, created to protect water resources, scenic values, and existing biodiversity (GADSC 2015). In relation to other conservation areas, it borders the Chapare Immobilisation Reserve to the south and the Humedales del Norte Departmental Natural Area of Integrated Management to the north.

Botanical Significance

The botanical value of the site lies in the habitats protected within the area, as 44% of the surface corresponds to Southwestern Amazonian white-water seasonal floodplain forests. This habitat is threatened and officially recognised as such at the national level (MMAyA 2020). Additionally, the site harbours four native species, three of which are globally considered of Least Concern (LC).

Habitat and Geology

The Ichilo meanders are characterised by a landscape of plains and an alluvial fan with numerous channels belonging to the Ichilo and Ibabo rivers (GAMY 2016). The site is part of the

Wetlands of the Ichilo River © FAN/Oliver Mercado

Flooded Savannas and Southwestern Amazonia ecoregions (Ibisch *et al.* 2003), featuring a complex of flooded forests, aquatic and palustrine vegetation, and gallery forests (Navarro & Ferreira 2011, Navarro 2011). According to the IUCN habitat classification system (IUCN 2012), these vegetation types are categorized as Subtropical/tropical lowland humid forest, Subtropical/tropical swamp forest, and Subtropical/tropical seasonally wet/flooded lowland grassland (Appendix 2).

Conservation Challenges

The IPA site is also a protected area established to conserve the meander scars of the Ichilo River. However, 55% of its surface is designated for intensive extractive natural resource use, and only 23% constitutes the core zone. This core zone protects vegetation consisting of degraded forests that are at risk of collapse (MMAyA 2020), as well as areas with high forestry potential (GAMY 2016).

Wetlands of the Ichilo River © FAN/Oliver Mercado

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Lowland Forest	69	Major
Subtropical/Tropical Swamp Forest	21	Major
Wet savanna	7	Major
Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	3	Major

Threatened Habitats – IPA Criterion C

Habitat Type	IPA Subcriterion C	≥ 5% of national resource	≥ 10% of national resource	1 of the 5 highest-ranking sites at a national level	Estimated site area (km^2)
Subtropical/Tropical Swamp Forest					
Stagnant White-water Inundated Forests of the South-western Amazon	C(iii)				44
Subtropical/Tropical Moist Lowland Forest					
Gallery Forests of the Beni Streams	C(iii)				

Threat

Threat	Severity	Situation
Logging & wood harvesting	High	Ongoing - stable
Housing & urban areas	Low	Ongoing - stable

Land Use

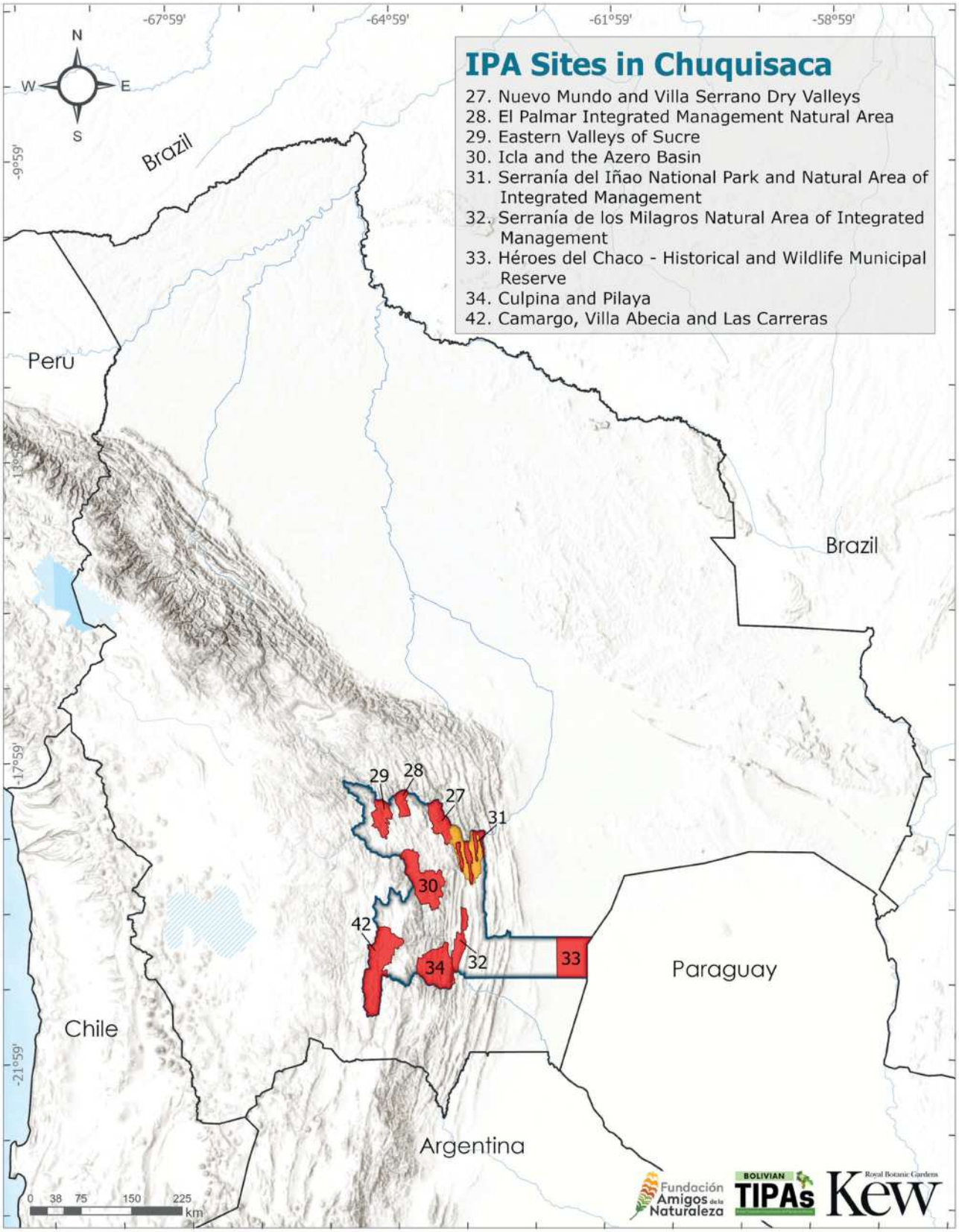
Land use type	Percent coverage	Importance
Nature conservation	65	Major
Residential/urban development	—	Minor

Protected areas and other conservation designations

Protected area type	Protected Area names	Relationship between the site and the protected area (% of overlap)	Area of overlap (km^2)
Local/Regional Nature Reserve	UCPN Ichilo Wildlife Sanctuary Scars Meanders	Protected/conservation area matches IPA (100%)	225

CHUQUISACA

El Palmar Integrated Management Natural Area © Heidy Resnikowski


IPA Sites in Chuquisaca
27. Nuevo Mundo and Villa Serrano Dry Valleys
28. El Palmar Integrated Management Natural Area
29. Eastern Valleys of Sucre
30. Icla and the Azero Basin
31. Serranía del Iñao National Park and Natural Area of Integrated Management
32. Serranía de los Milagros Natural Area of Integrated Management
33. Héroes del Chaco - Historical and Wildlife Municipal Reserve
34. Culpina and Pilaya
42. Camargo, Villa Abecia and Las Carreras
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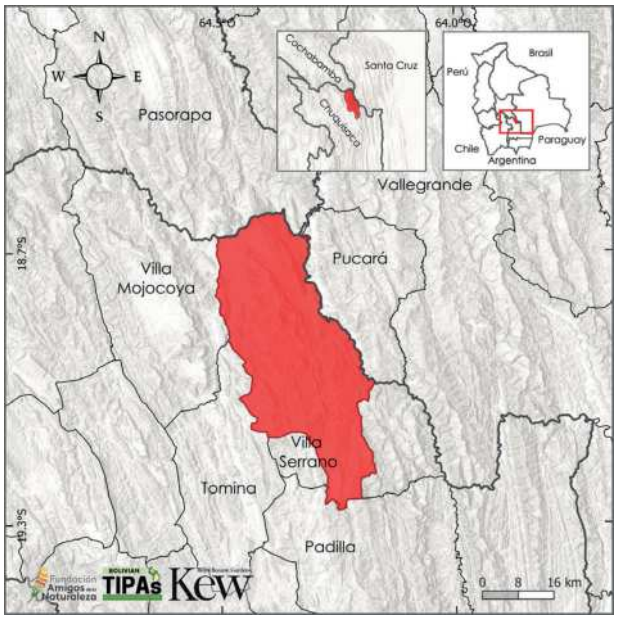
NUEVO MUNDO AND VILLA SERRANO DRY VALLEYS

Authors: Oriana A. Lino-Villalba, John R.I. Wood, Martha Serrano Pacheco, Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas & Bente B. Klitgaard

International code	BOLTIPA027	Departamento/ Provincia	Chuquisaca: Belisario Boeto
Latitude	-18.90199	Longitude	-64.34223
Minimum altitude (m.a.s.l.)	798	Maximum altitude (m.a.s.l.)	3,442
Area (km^2)	1,271	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(iii)



IPA Assessment – Rationale

Nuevo Mundo and Villa Serrano Dry Valleys qualify as an IPA site by being predominantly covered by Inter-Andean dry and semi-arid forests, which form part of the Río Grande valley system. The result is an area characterised by a high level of endemism, shared with regions such as the Santa Rosa Bridge (Vallegrande) on the departmental border between Santa Cruz and Cochabamba.

The site is host to 56 endemic taxa, of which 18 are globally at risk of extinction, and three species are categorised as threatened nationally. Documented for the site are also 203 useful plant species.

Site Description

The IPA site is situated in the north-eastern portion of the Chuquisaca Department, approximately 187 kilometres east of Sucre. Its boundaries were delineated to align with the municipal limits of Villa Serrano, encompassing the south-central zone while omitting the south-western and south-eastern extremities.

The site is bordered by Pasorapa (Cochabamba) to the north and Pucará (Santa Cruz) to the east. Positioned within an ecological transition zone, the area possesses distinctive biogeographical characteristics and exhibits a pronounced climatic gradient. The northern sector—extending from the Santa Rosa junction to Nuevo Mundo—is characterised by an extreme climate with high thermal levels; it is precisely within these warmer reaches that species richness is centrered. Conversely, moving south-wards from Nuevo Mundo towards Villa Serrano, the climate transitions into a notably more temperate regime.

Botanical significance

From both a landscape and an ecological perspective, this IPA site exhibits pronounced environmental contrasts. Xeric and semi-arid forests predominate along the northern and eastern sectors—tracing the course of the Río Grande—as well as across the western provincial border. These valleys and highlands are characterised by extreme

aridity and high seasonal thermal maxima (Wood 2013). Notwithstanding these harsh conditions, the sector supports various endemic species of significant conservation value. including *Bonamia riograndina* (EN), *Funastrum rupicola* (NT), and *Jacquemontia chuquisacensis* (EN). These species are restricted to this xeric habitat, growing on unstable rocky slopes amongst thorny shrublands, which underscores their vulnerability and the urgent need for conservation (Wood 2013, Wood & Clegg 2021).

Another group of globally threatened endemic species includes *Bougainvillea trollii* (VU), a poorly known species (Nina-Churqui & Nee 2019), *Cinnagrostis ciliata* (CR), *Justicia chuquisacensis* (VU), and *Tillandsia lotteae* (VU). While linked to dry environments, they have relatively wider geographic ranges. The site also hosts four *Polylepis* species, all of which are globally threatened: *P. besseri*, *P. crista-galli*, *P. hieronymi*, and *P. neglecta*, the latter is endemic to Bolivia. The these species are linked to montane moist forests or *khewiñares* (Appendix 2) present in the highest and most humid parts of the south-central sector of the IPA, often occurring as fragmented vegetation relicts.

Finally, reinforcing the botanical importance of this site, a total of 203 useful plants were reported. These represent 6% of the national total of documented useful species (Appendix 3).

Bonamia riograndina © Trustees RBG Kew/Maira Martinez

Funastrum rupicola © Trustees RBG Kew/Maira Martinez

Jacquemontia chuquisacensis © John Pink

Jacquemontia chuquisacensis © John Pink

Habitat and Geology

The IPA site features an undulating relief, mountain ranges with steep slopes, heavily dissected hills, and valleys with hills where remnants of dry Andean foothill forests are prominent. Certain areas consist of rocky outcrops with soils ranging from very shallow to moderately deep. The ecoregions present include the Bolivian-Tucuman Forest, Inter-Andean Dry Forest, and Chaco Serrano (ZONISIG 2001, Ibisch *et al.* 2003). The predominant vegetation consists of high-montane grasslands (*pajonales*) and shrublands, as well as the Caparí and Soto Inter-Andean semi-arid forest: *Neocardenasia herzogiana-Schinopsis haenkeana* series, among others (Navarro & Ferreira 2011, Navarro 2011, Appendix 2). In valleys with gentler slopes, the forest cover is notably more extensive (ZONISIG 2001, Google Earth 2025). According to the IUCN habitat classification system (IUCN 2012), the vegetation characterised as Subtropical/tropical dry forest, Subtropical/tropical high-altitude shrubland, and Subtropical/tropical montane moist forest (Appendix 2).

Conservation challenges

The region is exposed to constant risks of drought, exacerbated by deforestation and livestock grazing (predominantly goats), which negatively impacts the natural regeneration of the plant cover. Furthermore, the forest is used for various extractive purposes, leading to soil erosion (ZONISIG 2001, Ribera 2011, Noya 2016,

Dry valleys © Trustees RBG Kew/Maira Martinez

Scattered dry forest on the Chuquisaca side of the Rio Grande region © Trustees RBG Kew/Maira Martinez

View of the Rio Grande valley, descending from Nuevo Mundo © Darwin Initiative Project (11-010)

Valley with dry forests, El Oro © FAN/Oriana Lino

Google Earth 2025). In Villa Serrano, land use is characterised by temporary and intensive agriculture. Consequently, frost, hailstorms, and droughts are detrimental factors triggering the loss of agricultural production (Noya 2016). Such events may directly affect the endemic species. It is important to note that the IPA site overlaps with a Key Biodiversity Area (KBA), providing an additional layer of protection. This coincidence not only reinforces its importance as a conservation mechanism but also consolidates it as a vital connectivity corridor linking other conservation zones in northern Cochabamba and western Santa Cruz. Additionally, the area safeguards endemic species that have only been collected once, such as *Philibertia alba* (DD), therefore, effective conservation measures are essential.

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Dry Forest	64	Major
Subtropical/Tropical High Altitude Shrubland	27	Major
Subtropical/Tropical Moist Montane Forest	9	Major

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Medium	Ongoing - stable
Small-holder farming	High	Ongoing - stable
Small-holder grazing, ranching or farming	Medium	Ongoing - stable
Soil erosion, sedimentation	Medium	Ongoing - trend unknown
Temperature extremes	Medium	Ongoing - trend unknown

Land Use		
Land use type	**Percent coverage**	**Importance**
Agriculture (arable)	1	Major
Agriculture (pastoral)	2	Major

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Key Biodiversity Area	KBA Padilla	IPA overlaps with the protected/conservation area (32%)	450

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Justicia aequilabris* subsp. *riograndina*	A(iv)	NE	✓	✓		✓		frequent
Acanthaceae	*Justicia chuquisacensis*	A(i)	VU	✓	✓		✓		occasional
Amaranthaceae	*Gomphrena stellata*	A(ii), A(iii)	EN	✓	✓	✓	✓		rare
Anacardiaceae	*Schinus villosa*	A(iv)	NE	✓	✓	✓	✓		abundant

IPA priority species Criterion A Cont.									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Apocynaceae	*Funastrum rupicola*	A(iv)	NT	✓	✓				rare
Apocynaceae	*Orthosia woodii*	A(i)	EN	✓	✓		✓		unknown
Apocynaceae	*Philibertia alba*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Asteraceae	*Gochnatia boliviana*	A(i)	VU	✓					occasional
Asteraceae	*Stevia calderillensis*	A(i)	VU	✓	✓		✓		unknown
Begoniaceae	*Begonia chrysantha*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Bromeliaceae	*Deuterocohnia meziana* subsp. *pedicellata*	A(iii)	NE	✓	✓	✓	✓		rare
Bromeliaceae	*Puya kuntzeana*	A(i)	EN	✓	✓	✓	✓		unknown
Bromeliaceae	*Puya laxa*	A(i)	VU	✓	✓		✓		unknown
Bromeliaceae	*Tillandsia bermejoensis*	A(i)	EN	✓	✓		✓		occasional
Bromeliaceae	*Tillandsia lotteae*	A(i)	VU	✓	✓	✓	✓		occasional
Convolvulaceae	*Bonamia riograndina*	A(i)	EN	✓	✓	✓	✓		rare
Convolvulaceae	*Ipomoea exserta*	A(i)	VU	✓	✓				occasional
Convolvulaceae	*Jacquemontia chuquisacensis*	A(i)	EN	✓	✓	✓	✓		rare
Cyperaceae	*Carex pachamamae*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Fabaceae	*Amburana cearensis*	A(i)	EN	✓					unknown
Fabaceae	*Piptadenia boliviana*	A(i)	VU	✓					occasional
Lentibulariaceae	*Pinguicula jarmilae*	A(ii)	CR	✓	✓	✓	✓	✓	rare
Malvaceae	*Sida gracilipes*	A(i)	VU	✓	✓	✓			frequent
Nyctaginaceae	*Bougainvillea trollii*	A(i)	VU	✓	✓				occasional
Poaceae	*Cinnagrostis ciliata*	A(i)	CR	✓	✓	✓	✓		rare
Poaceae	*Nassella chaparensis*	A(i)	CR	✓	✓	✓	✓		rare
Polygalaceae	*Monnina arbutus*	A(ii)	EN	✓	✓				unknown
Rosaceae	*Polylepis besseri*	A(i)	VU	✓					scarce
Rosaceae	*Polylepis crista-galli*	A(i)	VU	✓					occasional
Rosaceae	*Polylepis hieronymi*	A(i)	EN	✓					unknown
Rosaceae	*Polylepis neglecta*	A(i)	EN	✓	✓	✓	✓		abundant
Velloziaceae	*Vellozia andina*	A(i)	EN	✓	✓				occasional

EL PALMAR INTEGRATED MANAGEMENT NATURAL AREA

Authors: Liliana Arroyo-Herbas, Julia Gutiérrez-Romero, John R.I. Wood, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA028	Department/ Province	Chuquisaca: Zudáñez
Latitude	-18.66319	Longitude	-64.86470
Minimum altitude (m.a.s.l.)	1,205	Maximum altitude (m.a.s.l.)	3,177
Area (km^2)	600	Qualifying IPA criteria	A(i), A(iii), A(iv)

IPA Assessment – Rationale

The El Palmar Natural Area of Integrated Management (ANMI) is one of the Bolivian protected areas that safeguards relicts of primary Inter-Andean Dry Forest. It is host to 34 endemic plant taxa, including nine globally threatened species and six highly range-restricted species. Furthermore, the site hosts 76 species of useful or socioeconomically important plants. This group includes 10 crop wild relatives (CWRs) of cultivated chili peppers.

Site Description

The El Palmar IPA is in the Zudáñez province of the Chuquisaca department, approximately 152 km northeast of the city of Sucre. The site was delimited following the boundaries of the El Palmar Natural Area of Integrated Management, covering 602 km^2. The Area was established to protect and conserve populations of *Parajubaea torallyi*, colloquially known as Janchicoco, and to preserve the primary Inter-Andean Dry Forests ecosystem (SERNAP 2013).

Regarding other conservation units, the IPA site borders with the Pasorapa ANMI to the east and the Lagarpampa Mollepampa ANMI to the north.

Botanical Significance

The IPA site is ranked as one of the top five national priority areas for the conservation of globally threatened species such as *Parajubaea torallyi* (EN), which has more than 10% of its global population within the site. This species holds considerable socioeconomic value for rural people, as a source of fibre used in fine basketry. Additionally, 58 wild species with food value have been recorded at the site (Gutiérrez 2016), including *Capsicum chacoense* (NE) and *Capsicum eximium* (LC), both of which are socioeconomically important to local communities in the northern sector of the protected area.

Of equal conservation importance and under equal global threat are *Festuca carrascana* (EN) and *Ipomoea juliagutierreziae* (EN), which both concentrate at least 10% of their population within the site. Similarly, *Jacquemontia cuspidata* (DD)

Panoramic view of the Parajuabaea torallyi forest © Gabriela Tavera

and *Gomphrena palmariensis* (NE) grow on the site. Although not assigned a specific threat level, the entire known population of this species exists only at this site. The area also safeguards at least six endemic species, which have no extinction risk assessments but are conservation priorities because they are unique to the Inter-Andean Dry Forest ecoregion.

Parajubaea torallyi © John R.I. Wood

Habitat and Geology

The landscape of the El Palmar Natural Area of Integrated Management is characterized by alternating valleys and mountain ranges (*serranías*). Situated within the Eastern Cordillera, the site encompasses three ecoregions: Transitional Bolivian-Tucuman Forest, Chaco Serrano, and Inter-Andean Dry Forests (Ibisch *et al.* 2003), the latter being the most representative. The site is notable for its evergreen forest patches containing the palm species *Parajubaea torallyi* (SERNAP 2013). According to the IUCN habitat classification scheme (IUCN 2012), these vegetation types are classified as Subtropical/tropical dry forest and Subtropical/tropical montane moist forest (Appendix 2).

Jacquemontia cuspidata © Julia Gutiérrez

Habit of *Ipomoea juliagutierreziae* © Julia Gutiérrez

Flower of *Ipomoea juliagutierreziae* © Julia Gutiérrez

Conservation Challenges

Over the past 37 years (1985 to 2020), the IPA site has experienced a loss of natural vegetation with at least 887 hectares lost during this period (MapBiomas Bolivia 2024). While these figures are not immediately alarming, this trend could increase due to threats such as agriculture, livestock farming, and fires. The agroclimatic characteristics of Inter-Andean dry forest soils make them highly favoured for agriculture.

In areas with *Parajubaea torallyi*, people harvest its fruit to produce and sell handicrafts, putting additional pressure on the vegetation. However, eco-tourism has grown recently, highlighting efforts to preserve the site's unique plants and increasing support and attention for its future protection.

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Montane Forest	56	Major
Subtropical/Tropical Dry Forest	44	Major

Threat		
Threat	**Severity**	**Situation**
Small-holder farming	Medium	Ongoing - stable
Small-holder plantations	Medium	Ongoing - stable
Fire & fire suppression	Low	Past - likely to return

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	94	Major
Agriculture (arable)	3	Major
Tourism/recreation	—	Major
Residential/urban development	—	Minor
Harvesting of wild resources	—	Minor

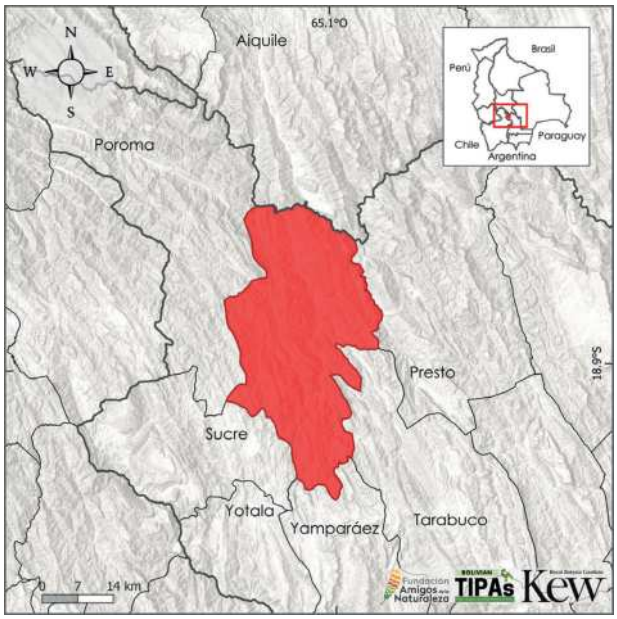
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
National reserve	ANMI El Palmar	Protected/conservation area matches IPA (99%)	599
Key Biodiversity Area	KBA El Palmar	Protected/conservation area matches IPA (99%)	599

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥1% global population**	**≥5% national population**	**1 of 5 best sites at national level**	**≥10% global population**	**Entire global population at the site**	**Abundance at site**
Acanthaceae	*Justicia aequilabris* subsp. *riograndina*	A(iv)	NE	✓	✓		✓		unknown
Amaranthaceae	*Gomphrena palmariensis*	A(iii)	NE	✓					rare
Apiaceae	*Eryngium woodii*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Apocynaceae	*Aspidosperma resonans*	A(i)	VU	✓	✓				frequent
Apocynaceae	*Funastrum rupicola*	A(iv)	NT	✓	✓		✓		occasional
Arecaceae	*Parajubaea torallyi*	A(i)	EN	✓	✓	✓	✓		abundant
Arecaceae	*Parajubaea torallyi* var. *torallyi*	A(iii)	NE	✓	✓	✓	✓		scarce
Asteraceae	*Gochnatia boliviana*	A(i)	VU	✓	✓				scarce
Bromeliaceae	*Puya valida*	A(ii)	CR	✓	✓	✓	✓		rare
Cactaceae	*Neoraimondia herzogiana*	A(i)	VU	✓	✓		✓		frequent
Convolvulaceae	*Ipomoea juliagutierreziae*	A(i)	EN	✓	✓		✓		frequent
Convolvulaceae	*Jacquemontia cuspidata*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Convolvulaceae	*Jacquemontia mairae*	A(i)	EN	✓	✓	✓	✓		occasional
Iridaceae	*Mastigostyla woodii*	A(iii)	NE	✓	✓		✓		rare
Malvaceae	*Pseudobombax andicola*	A(i)	VU	✓	✓		✓		occasional
Malvaceae	*Sida gracilipes*	A(i)	VU	✓					occasional
Orchidaceae	*Stelis purpurina*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Poaceae	*Festuca carrascana*	A(i)	EN	✓	✓	✓	✓		rare

EASTERN VALLEYS OF SUCRE

Authors: Liliana Arroyo-Herbas, John R.I. Wood, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA029	Department/ Province	Chuquisaca: Oropeza
Latitude	-18.84436	Longitude	-65.15701
Minimum altitude (m.a.s.l.)	1,438	Maximum altitude (m.a.s.l.)	3,249
Area (km^2)	1,079	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv)



IPA Assessment – Rationale

The Eastern Valleys of Sucre IPA site is characterised by a landscape of deep valleys with rocky slopes covered in natural vegetation that safeguards relicts of Inter-Andean Dry Forests. These forests protect 29 endemic species, 12 of which are globally threatened and three are highly range-restricted. Furthermore, the site is host to 38 useful plant species, representing 1% of the documented species at the national level.

Site Description

The site is in the Oropeza province of the Chuquisaca department. It covers 1,079 km^2, encompassing approximately 63% of the Sucre municipality. To the southwest, it borders Sucre, the capital of the Chuquisaca department, and to the north, the Río Grande serves as a natural boundary with the Cochabamba department. In terms of conservation areas, the site fully incorporates the Monte Willca Natural Area of Integrated Management (ANMI), which was established to protect populations of *Anadenanthera colubrina* (locally known as willca). Additionally, part of the site overlaps with the TCO (Communal Land of Origin) of the Indigenous communities Ayllus and Markas of Poroma.

Botanical Significance

The botanical significance of the Eastern Valleys of Sucre is thanks to 29 endemic plant species, including 12 globally threatened taxa. Priority species for protection include *Hippeastrum mollevillquense* (EN), *Ipomoea lilloana* (VU), and *Puya valida* (CR)—all of which are both endemic and globally threatened. Furthermore, the site hosts the endemic species *Euploca riochiquensis* (NE) and *Salvia graciliramulosa* (LC), that although not currently at risk of extinction, are of high conservation priority as their entire global populations are restricted to this site.

Additionally, the area protects 36 useful species, including Aspidosperma resonans (VU), *Bougainvillea berberidifolia* (NT), and *Tillandsia*

View of the landscape of the Dry Valleys of Sucre © Trustees RBG Kew/Maira Martinez

Ipomoea lilloana © Trustees RBG Kew/Maira Martinez

cardenasii (NT), all are endemic and globally threatened (Appendix 3).

Habitat and Geology

The Sucre municipality features a landscape of mountains, ridges (*serranías*), hills, and foothills located within the Eastern Cordillera. Notable among the geological formations are the calcareous deposits of Cerro Orkho, which constitute one of the most important limestone sources for the municipality (ZONISIG 2000a).

The vegetation is of Inter-Andean Dry Forests, composed of deciduous and semi-deciduous assemblages and shrublands belonging to the Inter-Andean Dry Forest and Chaco Serrano ecoregions (Ibisch et al. 2003). According to the IUCN habitat classification system (IUCN 2012), these vegetation types are categorized as Subtropical/tropical dry forest and Subtropical/tropical high-altitude shrubland (Appendix 2).

Habit of *Aspidosperma resonans* © Darwin Initiative Project (11-010)

Fruit of *Aspidosperma resonans* © Darwin Initiative Project (11-010)

Flowers of *Aspidosperma resonans* © Trustees RBG Kew/Maira Martinez

Habit of *Tillandsia cardenasii* © Darwin Initiative Project (11-010)

Flowers of *Tillandsia cardenasii* © Darwin Initiative Project (11-010)

Remnant interandean dry forest © Trustees RBG Kew/Maira Martinez

City limit with the Sucre Dry Valley site in the background © Yamil C. Bernal

Conservation Challenges

Due to the distinctive features of the landscape, the valley region within the municipality holds significant economic value. Agricultural and livestock activities are primarily located on the terraces and foothills (Carretero *et al.* 2011). Additionally, the capital city Sucre, the fifth most populous Bolivian city, is located less than 5 km from the IPA site. While not a direct threat for the site at the moment, future population growth could impact the surrounding vegetation.

Between 1985 and 2020 data shows a loss of 4,212 hectares of natural cover (MapBiomas Bolivia 2024). Although this figure is not critical, it could rise with an expansion of nearby cement industries, peri-urban growth, and increasing agricultural and livestock pressure.

Despite the threats identified in the site, conservation efforts persist within the municipality, notably through the Monte Willca Municipal Natural Area of Integrated Management (ANMI). Its primary conservation objectives include the protection of populations of *Anadenanthera colubrina*, locally known as willca, as well as the preservation of *Neoraimondia herzogiana* forests (Saravia-Jimenez *et al.* n.d.).

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Dry Forest	97	Major
Subtropical/Tropical High Altitude Shrubland	2	Major
Subtropical/Tropical Moist Montane Forest	1	Major

Threat		
Threat	**Severity**	**Situation**
Small-holder farming	High	Ongoing - stable
Small-holder plantations	Medium	Ongoing - stable
Small-holder grazing, ranching or farming	High	Ongoing - stable
Fire & fire suppression	Low	Past - likely to return
Roads & railroads	Medium	Past - likely to return
Housing & urban areas	Medium	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	3	Major
Agriculture (arable)	—	Major
Residential/urban development	—	Medium

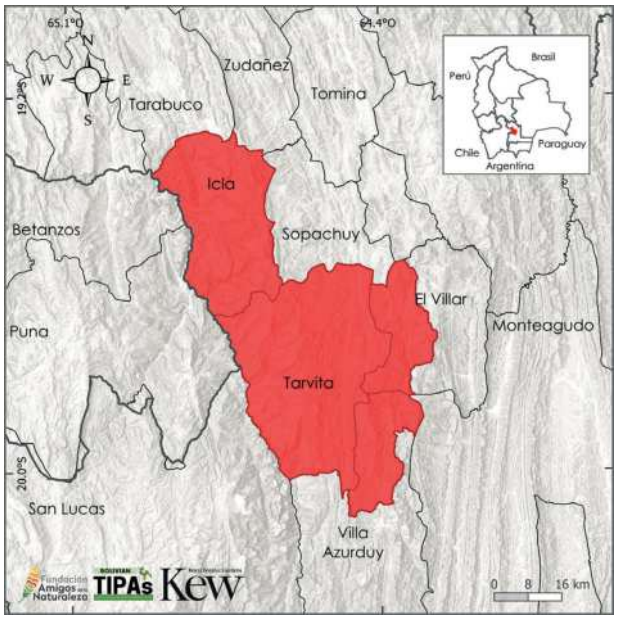
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	ANMI Monte Willka	IPA overlaps with the protected/conservation area (100%)	37

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Amaryllidaceae	*Hippeastrum mollevillquense*	A(i)	EN	✓	✓	✓	✓		rare
Apocynaceae	*Aspidosperma resonans*	A(i)	VU	✓	✓				frequent
Apocynaceae	*Funastrum rupicola*	A(iv)	NT	✓	✓				scarce
Arecaceae	*Parajubaea torallyi*	A(i)	EN	✓	✓				scarce
Asteraceae	*Galinsoga boliviensis*	A(i)	EN	✓	✓	✓	✓		scarce
Asteraceae	*Gochnatia boliviana*	A(i)	VU	✓					occasional
Asteraceae	*Hyaloseris quadriflora*	A(ii)	VU	✓					unknown
Bignoniaceae	*Tecoma beckii*	A(iv)	NE	✓	✓	✓	✓		unknown
Bromeliaceae	*Puya ugentiana*	A(iii)	DD	✓	✓	✓	✓	✓	unknown
Bromeliaceae	*Puya valida*	A(i)	CR	✓					rare
Bromeliaceae	*Tillandsia helmutii*	A(i)	EN	✓	✓	✓	✓		scarce
Bromeliaceae	*Tillandsia lotteae*	A(i)	VU	✓	✓	✓	✓		scarce
Bromeliaceae	*Tillandsia oropezana*	A(i)	CR	✓	✓	✓	✓	✓	rare
Convolvulaceae	*Ipomoea lilloana*	A(i)	VU	✓					rare
Dryopteridaceae	*Euploca riochiquensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Fabaceae	*Piptadenia boliviana*	A(i)	VU	✓					rare
Malvaceae	*Sida gracilipes*	A(i)	VU	✓					scarce
Solanaceae	*Solanum doddsii*	A(i)	EN	✓	✓		✓		unknown

ICLA AND THE AZERO BASIN

Authors: Maira T. Martinez-Ugarteche, Elmer Cuba-Orozco, Freddy S. Zenteno-Ruiz, Martha Serrano Pacheco, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba, Daniel Villarroel & Bente B. Klitgaard

International code	BOLTIPA030	Department/ Province	Chuquisaca: Zudañez, Tomina, Azurduy
Latitude	-19.69516	Longitude	-64.57665
Minimum altitude (m.a.s.l.)	1,470	Maximum altitude (m.a.s.l.)	4,289
Area (km^2)	2,812	Qualifying IPA criteria	A(i), A(iii), A(iv), B(iii)



IPA Assessment – Rationale

The Icla and Azero Basin IPA site protects 13 globally threatened species, of which 10 are endemic. In addition, there are 29 other endemic species, seven with highly restricted ranges, and four that are categorized globally as Near Threatened (NT).

Another rationale for this site designation relates to useful species, which total 166 and represent 5% of the useful plants documented in Bolivia.

Site Description

The Icla and Azero Basin site in the Chuquisaca department, is primarily centred on the Icla and Tarvita municipalities, and parts of Azurduy and El Villar. Except for Icla, these municipalities form part of the upper and middle basin of the Azero River. To the west, the IPA site limits with the Pilcomayo River, a significant and characteristic affluent of the region. It also includes other headwaters of the Azero basin, all tributaries of the Amazonian basin. The site is situated in a zone with seasonally sub-humid (Tarvita) and dry climates - dry (El Villar) and semi-arid (Icla) (Navarro & Ferreira 2011).

This IPA site is located centrally in relation to three Key Biodiversity Areas (KBAs). It encompasses part of the San Jacinto KBA on its western limit, forms a corridor to the east with the Padilla and Iñao KBA, and to the south with the Upper Parapetí River Basin KBA (KBA 2025l). These KBAs are established based on fauna and one plant species, the botanical characteristics described for this IPA thus further support the need for this IPA site.

Botanical Significance

Within this IPA site, 10 globally threatened endemic species stand out, including *Bulnesia rivas-martinezii* (EN), a typical shrub of the Prepuna with a discontinuous distribution that can be locally abundant (Navarro 1994, López 2024). Other notable species include *Gochnatia boliviana* (VU) and *Parajubaea torallyi* (EN), both of which are endemic and hold significant socioeconomic value. The fruits and seeds of *Parajubaea torallyi* are used for food and forage; the leaves and trunks

serve as construction materials; and leaf fibres are used in the manufacture of domestic utensils, ropes, and handicrafts (Moraes 2004, 2022; Thompson 2007).

It is crucial to highlight the socioeconomically important species, including both endemics and those with documented utility. These include *Polylepis neglecta* (EN), *Cleistocactus brookeae*, *Cleistocactus tominensis* (LC), *Mimosa lepidota*, and *Cardenasiodendron brachypterum* (NT), along with another 164 useful species present at the site (Appendix 3). Finally, the site supports a significant number of crop wild relatives (CWR) of tomatoes, chili peppers, and potatoes, such as *Solanum berthaultii*, *Solanum boliviense*, *Solanum chacoense*, and *Solanum brevicaule*.

Habitat and Geology

Physiographically, the site is situated within the Eastern Cordillera and part of the Sub-Andean zone (MDSyP 2002, Michel 2011). The landscape is dominated by mountains, ridges (*serranías*), foothills, and some plains. Altitudinal ranges extend from 1,700 to 3,140 m a.s.l. in the Sombreros mountain range, reaching above 4,000 m a.s.l. in other zones (Michel 2011).

The most extensive habitats are Subtropical/tropical dry forest and Subtropical/tropical high-altitude shrubland according to the classification of Bolivian ecological systems (Navarro & Ferreira 2011, Navarro 2011) and the IUCN habitat classification scheme (IUCN 2012) (Appendix 2). The dry forest is primarily composed of montane sub-humid forests and Bolivian-Tucuman Inter-Andean xerophytic forests (Navarro 2011, Appendix 2). Meanwhile, the high-altitude shrubland consists of low Inter-Andean xerophytic forests or semi-arid thorny shrublands with remnants of low forests interspersed with columnar and globose cacti, collectively known locally as dry valleys (Zenteno-Ruiz *et al.* 2020, Appendix 2).

Salvia sucrensis © Darwin Initiative project (11-010)

Philibertia woodii © John R.I. Wood

Gochnatia boliviana © Alexander Parada

Dry forest with *Cremnocereus albipilosus* © Denis Kibenko

Conservation Challenges

The region is characterised by socioeconomic activities linked to agriculture and livestock farming, the latter being predominantly extensive grazing of cattle, goats, and sheep. These activities lead to habitat degradation, soil erosion, and a reduction in water availability (Moya *et al.* 2021).

This IPA site is of great regional value as it includes protected areas and a significant portion of the Azero River basin, a tributary of the Rio Grande. Its fundamental importance results from its high hydrological potential, biodiversity richness, and productive value, all concentrated within a basin vital to the region. The hydrographic relevance and botanical characteristics make Icla and the Azero Basin highly significant areas. Consequently, ensuring effective conservation would benefit several municipalities in a region characterised by conservation gaps and a lack of protected areas integrated into the national network.

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Dry Forest	48	Major
Subtropical/Tropical Moist Montane Forest	25	Major
Subtropical/Tropical High Altitude Shrubland	26	Major

Threat		
Threat	**Severity**	**Situation**
Small-holder farming	High	Ongoing - stable
Small-holder grazing, ranching or farming	High	Ongoing - stable
Mining & quarrying	Low	Ongoing - trend unknown
Roads	High	Future - planned activity
Increase in fire frequency/intensity	High	Past - likely to return

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	3	Major
Agriculture (arable)	—	Major
Agriculture (pastoral)	—	Major
Residential/urban development	—	Minor

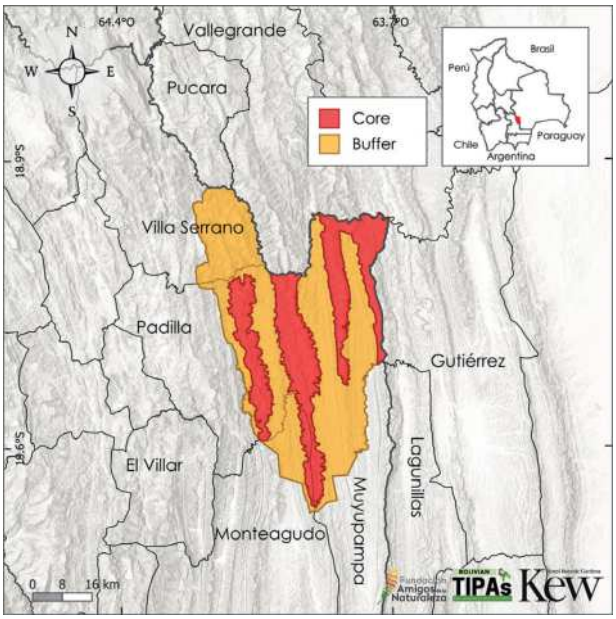
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	El Villar Forest and Hydrological Immobilisation Zone	IPA overlaps with the protected/conservation area (43%)	32
Key Biodiversity Area	KBA San Jacinto	IPA overlaps with the protected/conservation area (57%)	41

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Amaryllidaceae	*Zephyranthes rosalensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Anacardiaceae	*Schinus villosa*	A(iv)	NE	✓	✓				unknown
Apocynaceae	*Oxypetalum fuscum*	A(i)	VU	✓					occasional
Apocynaceae	*Philibertia globiflora*	A(i)	VU	✓	✓		✓		occasional
Apocynaceae	*Philibertia velutina*	A(i)	VU	✓	✓				occasional
Arecaceae	*Parajubaea torallyi*	A(i)	EN	✓	✓	✓	✓		occasional
Arecaceae	*Parajubaea torallyi* var. *microcarpa*	A(iii)	NE	✓	✓	✓	✓		unknown
Asteraceae	*Fleischmannia bridgesii*	A(iii)	NE	✓	✓	✓	✓		unknown
Asteraceae	*Gochnatia boliviana*	A(i)	VU	✓					scarce
Bignoniaceae	*Jacaranda mimosifolia*	A(i)	VU	✓					frequent
Bromeliaceae	*Puya alba*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Bromeliaceae	*Puya potosina*	A(iii)	NE	✓	✓	✓	✓		unknown
Cactaceae	*Cremnocereus albipilosus*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Geraniaceae	*Hypseocharis malpasensis*	A(iii)	NE	✓	✓		✓		unknown
Malvaceae	*Sida gracilipes*	A(i)	VU	✓					scarce
Rosaceae	*Polylepis besseri*	A(i)	VU	✓					occasional
Rosaceae	*Polylepis crista-galli*	A(i)	VU	✓					occasional
Rosaceae	*Polylepis neglecta*	A(i)	EN	✓	✓		✓		occasional
Rutaceae	*Zanthoxylum nebuletorum*	A(i)	VU	✓	✓		✓		scarce
Solanaceae	*Nicotiana cutleri*	A(i)	VU	✓	✓		✓		occasional
Zygophyllaceae	*Bulnesia rivas-martinezii*	A(i)	EN	✓	✓	✓	✓		abundant

SERRANÍA DEL IÑAO NATIONAL PARK AND NATURAL AREA OF INTEGRATED MANAGEMENT

Authors: Liliana Arroyo-Herbas, Julia Gutiérrez-Romero, Freddy S. Zenteno-Ruiz, Elmer Cuba-Orozco, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA031	Department/ Province	Chuquisaca: Belisario Boeto, Hernando Siles, Luis Calvo, Tomina
Latitude	-19.42104	Longitude	-63.93629
Minimum altitude (m.a.s.l.)	514	Maximum altitude (m.a.s.l.)	3,051
Area (km^2)	2,635	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(iii)



IPA Assessment – Rationale

The Serranía del Iñao National Park and Natural Area of Integrated Management (ANMI) protects a mountain range characterised by extensive valleys. It qualifies as an IPA site thanks to its high number of plant species, including 42 taxa endemic to Bolivia, 10 of which are globally threatened and seven range-restricted and potentially threatened. The site also safeguards 331 useful species, which represents 10% of the useful species documented for Bolivia.

Site Description

The Serranía del Iñao IPA site is in the northeast of the Chuquisaca department, within the provinces Luis Calvo, Hernando Siles, Tomina and Belisario Boeto (SERNAP 2011). To the northwest, a portion of the site overlaps 33% with the Itikaraparirenda TCO (Communal Land of Origin); and in terms of conservation areas, the site coincides 100% with the Iñao KBA (Key Biodiversity Area) (KBA 2025l). The delimitation of this IPA site matches the boundaries of the Serranía del Iñao Protected Area, which features a system of mountain chains serving as recharge zones and headwaters for various rivers and micro-basins. The Protected Area was created to protect the Iñao, Ñahuañanca, and Khaska Orqo ranges as core areas for ecosystem services (SERNAP 2011).

Botanical Significance

The botanical significance of the Serranía del Iñao derives from the 42 endemic taxa inhabiting the site. Among these, *Prestonia boliviana* (VU), *Ipomoea exserta* (VU), *Oxypetalum fuscum* (EN), and *Hippeastrum evansiarum* (VU) are globally threatened species with at least 10% of their population protected within the site. Another globally threatened species of paramount conservation importance is *Zanthoxylum chuquisaquense* (CR), as its entire global population is found within this site.

The site also protects 331 useful species, representing 10% of the useful species documented in Bolivia (Appendix 3). This group includes

Chaetogastra herzogii © Julia Gutiérrez

Escallonia harrisii © Julia Gutiérrez

175 medicinal species (Gutiérrez 2020), which accounts for approximately 5% of the medicinal species recorded for Bolivia (De Lucca & Zalles 1992). Furthermore, 80 wild species with food value were recorded (Gutiérrez 2024). This group includes 16 crop wild relatives (CWRs), such as *Nicotiana otophora* (LC), *Ipomoea schulziana* (NE), *and Solanum betaceum* (NE), which are relatives of cultivated tobacco, sweet potato, and tree tomato, respectively.

Habitat and Geology

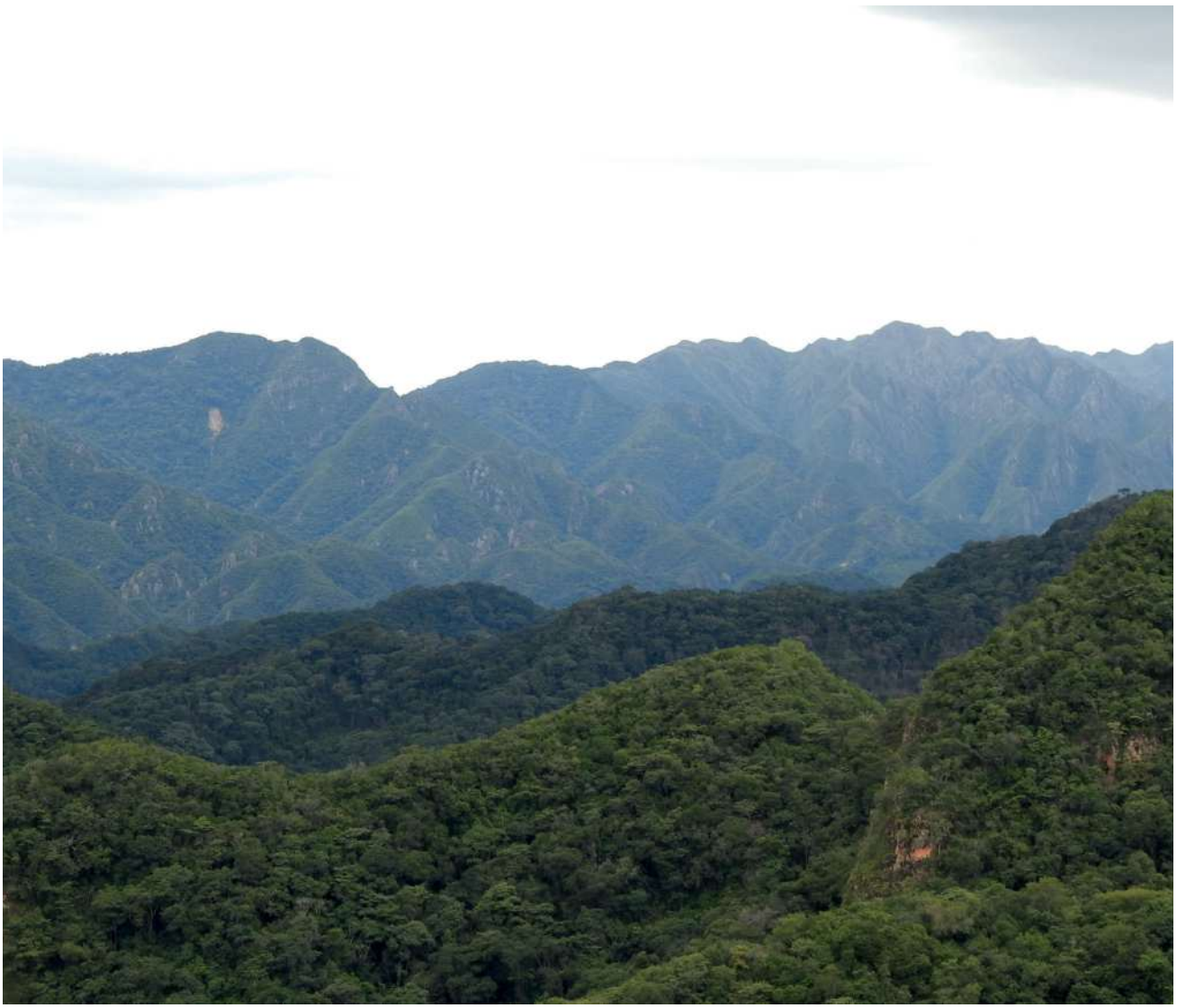
Physiographically, the site is characterised by a system of mountain ranges or *serranías* separated by broad valleys belonging to the Sub-Andean zone, situated within the Eastern Cordillera (SERNAP 2011). Regarding the site's hydrology, the basins of the Azero and Pili Pili rivers converge here, both belonging to the Amazon River macro-basin (Escurra & Beate 2021).

The site corresponds to three biogeographical provinces: Bolivian-Tucuman Forest, Gran Chaco, and Chaco Serrano. Depending on the physical characteristics of the different areas of the range, the site hosts a convergence of dry forests, moist forests, and even grasslands (SERNAP 2011), according to the classification of vegetation and Ecological Systems of Bolivia (Navarro & Ferreira 2011, Navarro 2011). Accoding to the IUCN habitat classification system (IUCN 2012), the primary habitats and vegetation types present are categorised as Subtropical/tropical dry forest and Subtropical/tropical montane moist forest (Appendix 2).

Conservation Challenges

The site possesses established management instruments, as it coincides 100% with a national park and is also designated as a Key Biodiversity Area (KBA) for protecting bird species at risk of extinction, such as *Amazona tucumana* (VU) and *Ara militaris* (VU) (KBA 2025m). However, subsistence activities have been reported from the area, including cattle, pigs, and poultry farming (SERNAP 2011)—an activity that has reportedly increased by 117% over the last 13 years (MapBiomas Bolivia 2024).

Other identified pressures include the exploitation of timber species such as cedar, walnut, quina, and roble, as well as the hunting of wild animals and trapping for fishing (Moya *et al.* 2021). Furthermore, between 2020 and 2024 parts of the territory have been affected by forest fires (Fundación ACLO 2024).



Overview of the landscape in the Puca Mayu area © Freddy Zenteno

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Dry Forest	72	Major
Subtropical/Tropical Moist Montane Forest	26	Major
Subtropical/Tropical High Altitude Shrubland	2	Major

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Medium	Ongoing - stable
Tourism & recreation areas	Unknown	Ongoing - stable
Small-holder plantations	Medium	Ongoing - trend unknown
Logging & wood harvesting	Unknown	Ongoing - trend unknown
Small-holder grazing, ranching or farming	Medium	Ongoing - trend unknown
Roads & railroads	High	Ongoing - trend unknown
Other threat (hydrocarbon pipelines)	Medium	Ongoing - trend unknown

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	80	Major
Agriculture (arable)	—	Minor
Tourism/recreation	—	Unknown

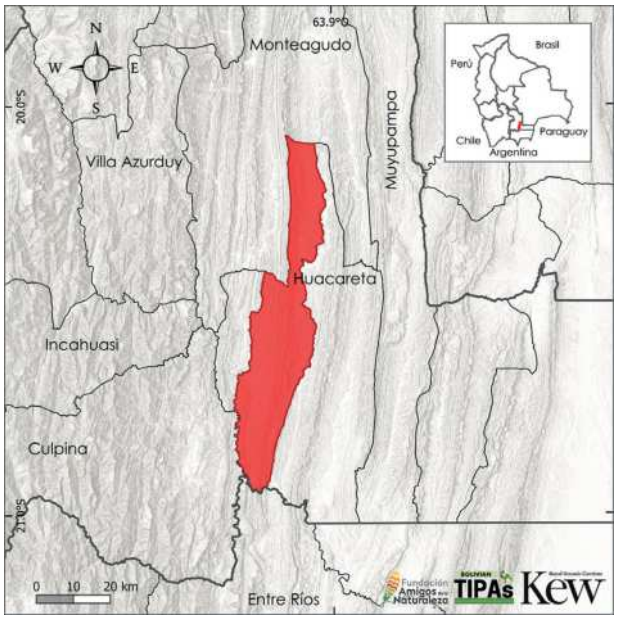
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
National Park	PN y ANMI Iñao	Protected/conservation area matches IPA (100%)	2,635
Key Biodiversity Area	KBA Iñao	Protected/conservation area matches IPA (100%)	2,631

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Amaryllidaceae	*Hippeastrum evansiarum*	A(i)	VU	✓	✓	✓			rare
Anacardiaceae	*Myracrodruon urundeuva*	A(ii)	VU						unknown
Anacardiaceae	*Schinus villosa*	A(iv)	NE	✓	✓				unknown
Apocynaceae	*Oxypetalum dactylostelma*	A(i)	EN	✓	✓		✓		occasional
Apocynaceae	*Oxypetalum urceolatum*	A(i)	EN	✓	✓		✓		occasional
Apocynaceae	*Prestonia boliviana*	A(i)	VU	✓	✓	✓	✓		scarce
Asteraceae	*Gochnatia boliviana*	A(i)	VU	✓					occasional
Begoniaceae	*Begonia comata*	A(iv)	NE	✓	✓		✓		scarce
Brassicaceae	*Yunkia boliviana*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Bromeliaceae	*Pitcairnia cardenasii*	A(i)	EN	✓					scarce
Bromeliaceae	*Pitcairnia multiramosa*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Puya serranoensis*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Calceolariaceae	*Calceolaria monantha*	A(iv)	NE	✓	✓		✓		scarce
Campanulaceae	*Siphocampylus aureus*	A(ii)	NE	✓	✓	✓	✓		unknown
Convolvulaceae	*Ipomoea exserta*	A(i)	VU	✓	✓		✓		scarce
Pentaphylacaceae	*Freziera neei*	A(i)	VU	✓	✓				unknown
Polygalaceae	*Monnina arbutus*	A(ii)	NE	✓	✓		✓		unknown
Rutaceae	*Zanthoxylum chuquisaquense*	A(i)	DD	✓	✓	✓	✓	✓	rare
Solanaceae	*Capsicum neei*	A(iv)	NE	✓	✓	✓	✓		frequent
Solanaceae	*Solanum daphnophyllum*	A(i)	VU	✓					unknown
Verbenaceae	*Recordia boliviana*	A(i)	VU	✓					scarce

SERRANÍA DE LOS MILAGROS NATURAL AREA OF INTEGRATED MANAGEMENT

Authors: Liliana Arroyo-Herbas, Julia Gutiérrez-Romero, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA032	Department/ Province	Chuquisaca: Hernando Siles
Latitude	-20.52349	Longitude	-64.07011
Minimum altitude (m.a.s.l.)	625	Maximum altitude (m.a.s.l.)	2,338
Area (km^2)	1,033	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(iii)



IPA Assessment – Rationale

The IPA site Serranía de los Milagros Natural Area of Integrated Management (ANMI) is home to 25 plant taxa endemic to Bolivia, of which three species are globally threatened; and two species with their entire population restricted to this IPA site. The area protects 163 species of useful plants, representing 5% of the useful species documented for Bolivia. Complementing this figure are five endemic species which, while not currently categorised as threatened, are of high conservation priority due to their restricted national distribution.

Site Description

The site is situated in the southern part of the Chuquisaca department, within the Hernando Siles province and the municipality of Huacareta. To the north, the site borders the Monteagudo municipality, and to the south, the Tarija department. The area encompasses the Avatiri-Ingre TCO (Communal Land of Origin) and the Huacareta Community Association. Its boundaries coincide with the Serranía de los Milagros Protected Area, which was established primarily for the conservation of water resources within the Huacareta municipality (Peñaranda & Castro 2017).

Botanical Significance

The botanical value of the Serranía de los Milagros is defined by the high density of endemic species protected within its boundaries. Of the 25 endemic taxa, *Capsicum caballeroi* (VU), *Escallonia reticulata* (VU), *Prestonia boliviana* (VU), and *Syagrus cardenasii* (VU) are globally threatened, with approximately 1% of their global populations protected here. Other notable endemics include *Begonia pearcei* (NE), *Puya olivacea* (NE), and *Cissus camiriensis* (NE); although they lack a formal threat category, they are of significant conservation interest as the site protects roughly 10% of their total populations.

Furthermore, the site protects 163 species of useful plants, including globally threatened taxa such as *Cedrela fissilis* (NE), *Coccoloba tiliacea* (VU), *Libidibia paraguariensis* (VU), and *Senegalia etilis*

Overview of the landscape in the Serranía de los Milagros © Julio Oña

(VU) (Appendix 3). This group also contains crop wild relatives (CWRs), including *Nicotiana otophora* (NE), *Solanum betaceum* (NE), and *Manihot anisophylla* (NE)—wild relatives of tobacco, tree tomato, and cassava, respectively. Additionally, ethnobotanical studies in the Huacareta municipality suggest the site may harbour upwards of 200 medicinal plant species (Gutiérrez *et al.* 2014).

Habitat and Geology

The Serranía de los Milagros is characterised by a complex of ridges, high and low mountains, and rocky outcrops belonging to the Southern Sub-Andean province (GAMH n.d., Peñaranda & Castro 2017). Biogeographically, three ecoregions predominate: the Bolivian-Tucuman Forest, Chaco Serrano Forest, and Chaco Forest (Ibisch *et al.* 2003, Peñaranda & Castro 2017). According to Navarro (2011), the site contains a diverse array of vegetation types, including semi-deciduous forests, Bolivian-Tucuman forests, montane and basi-montane sub-Andean forests, and transitional xerophytic Bolivian-Tucuman forests of the lower sub-Andean zone, as well as high-montane and high-Andean grasslands and shrublands. According to the IUCN habitat classification system (IUCN 2012), these vegetation types are grouped primarily into Subtropical/tropical dry forest (the most extensive), followed by Subtropical/tropical montane moist forest (Appendix 2).

Bougainvillea modesta © Alejandro Angulo

Clematis uruboensis © J. B. Alcorn

Tucumano-Bolivian sub-Andean montane and foothill, semi-deciduous forests © Edith Abigail Copa

Conservation Challenges

The site is located within the Huacareta municipality, where socioeconomic and subsistence activities are centred on agriculture—specifically the production of cassava, peanuts, maize, and citrus, and cattle ranching (Peñaranda & Castro 2017). These two activities have reportedly increased by 84% over the last 10 years within the municipality (MapBiomas Bolivia 2024), leading to habitat loss through land-use change.

Although the IPA boundaries coincide 100% with the protected area, the site currently lacks an official management plan and zoning, which are essential requirements for the effective protection of endemic and useful plant species, as well as the long-term preservation of vital water resources.

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Dry Forest	71	Major
Subtropical/Tropical Moist Montane Forest	23	Major
Subtropical/Tropical High Altitude Shrubland	6	Minor
Subtropical/Tropical Moist Lowland Forest	—	Unknown

Threat		
Threat	**Severity**	**Situation**
Small-holder farming	Medium	Ongoing - stable
Oil & gas drilling	Unknown	Future - planned activity
Housing & urban areas	Low	Ongoing – declining
Small-holder grazing, ranching or farming	Medium	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	88	Major
Agriculture (arable)	13	Minor
Agriculture (pastoral)	—	Minor
Residential/urban development	—	Minor

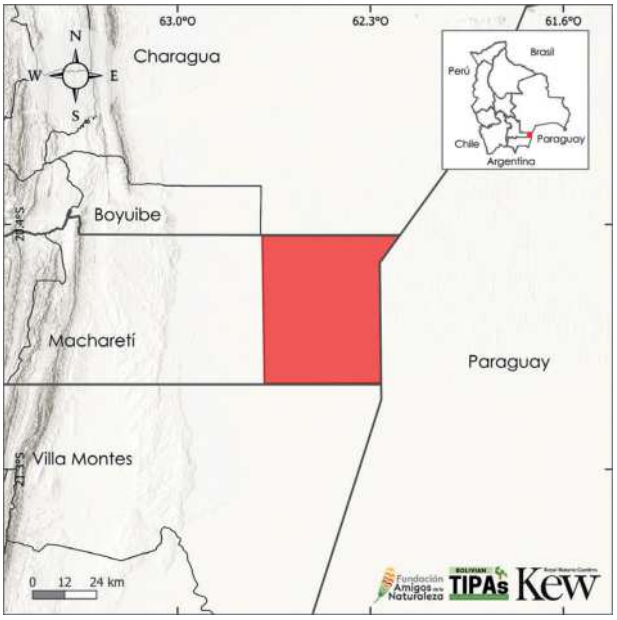
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	ANMI Serranía de los Milagros	Protected/conservation area matches IPA	1,033

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Amaryllidaceae	*Hippeastrum evansiarum*	A(i)	VU	✓					frequent
Anacardiaceae	*Myracrodruon urundeuva*	A(ii)	VU	✓					frequent
Apocynaceae	*Prestonia boliviana*	A(i)	VU	✓	✓		✓		occasional
Begoniaceae	*Begonia pearcei*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Pitcairnia cardenasii*	A(i)	EN	✓					occasional
Bromeliaceae	*Puya olivacea*	A(iv)	NE	✓	✓	✓	✓		rare
Bromeliaceae	*Puya trollii*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Escalloniaceae	*Escallonia reticulata*	A(i)	VU	✓					unknown
Meliaceae	*Cedrela fissilis*	A(i)	VU	✓					frequent
Ranunculaceae	*Clematis uruboensis*	A(i)	VU	✓					occasional
Solanaceae	*Capsicum caballeroi*	A(i)	VU	✓					scarce

HÉROES DEL CHACO - HISTORICAL AND WILDLIFE MUNICIPAL RESERVE

Authors: Liliana Arroyo-Herbas, Martha Serrano Pacheco, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA033	Department/ Province	Chuquisaca: Luis Calvo
Latitude	-20.72807	Longitude	-62.47316
Minimum altitude (m.a.s.l.)	334	Maximum altitude (m.a.s.l.)	499
Area (km^2)	2,664	Qualifying IPA criteria	A(i), C(ii)



IPA Assessment – Rationale

The IPA site, Héroes del Chaco Historical and Wildlife Municipal Reserve, is distinguished by its extent of Chaco Forest, which protects two globally threatened plant species. The site also safeguards 24 species of useful plants, representing 0.7% of the documented useful species in Bolivia.

Furthermore, the area protects a vast expanse of xeric forest on the ancient alluvial plains of the north western Chaco and sandy area forests of the north western Chaco. Both ecosystems are threatened according to the Red Data Book of the Bolivian Lowlands (MMAyA 2020). Additionally, the site serves as a national boundary with the Republic of Paraguay.

Site Description

The site is in the Chuquisaca department, within the Luis Calvo province and the municipality of Macharetí, on the border between Bolivia and Paraguay. To the south, the site borders the Villamontes municipality (Gran Chaco province, Tarija department), and to the north, it borders the Charagua municipality (Cordillera province, Santa Cruz department). The boundaries of this IPA site are based on the administrative limits of the Héroes del Chaco Historical and Wildlife Municipal Reserve, which was established to conserve Gran Chaco vegetation and to preserve the historical setting of the Chaco War battles (GAMM 2006). The site encompassess the Macharetí Community Association Zone - TCO (Communal Land of Origin), comprising 15 Guaraní communities (MDRyT 2018c).

Botanical Significance

The botanical significance of the site results from species such as *Solanum michaelis* (VU), which is globally threatened and has at least 20% of its population restricted to Chaco vegetation (Baldazi 2024). Another key species is *Plectrocarpa sarmientoi* (EN), also globally threatened although distributed across the Chaco regions of Bolivia, Paraguay, and Argentina (Barstow 2018). The site hosts 24 useful species, accounting for 0.7% of those documented in Bolivia (Appendix 3).

Chaco forest with Caraparí © Eduardo Unzueta

Characteristic species of the Chaco vegetation include *Chloroleucon chacoense* (LC), *Abutilon herzogianum* (LC), *Solanum chacoense* (LC), *Jatropha grossidentata* (NT), *Tabebuia nodosa* (LC), and *Senegalia riparia* (LC). Although these are not in high-threat categories, at least 1% of their population is found within the site. Furthermore, the importance of the area results from the vast extent of the Chaco Forest, an ecosystem threatened by livestock overstocking and fires in the Chuquisaca

Chloroleucon chacoense © Trustees RBG Kew/Maira Martinez

Cochlospermum tetraporum © Eduardo Unzueta

region. It ecosystem is categorised as a Vulnerable (VU) ecosystem in the Red Data Book of the Bolivian Lowlands (MMAyA 2020).

Habitat and Geology

The area pertains to the Chaco-Beniana Plains, characterised by a low-lying, dry alluvial plain that gradually decreases in elevation toward the border with Paraguay (GAMM 2006).

The characteristic vegetation consists of dense to sparse low-altitude forest and extremely xeromorphic sparse to dense shrublands belonging to the Gran Chaco ecoregion (Ibisch *et al.* 2003). According to the IUCN habitat classification scheme (IUCN 2012), these vegetation types are characterised as Subtropical/tropical dry forest and Dry savanna (Appendix 2).

Conservation Challenges

Cattle ranching is one of the primary productive activities in the Chaco region, occupying 38% of the total area (Peralta & Cuellar 2018). In recent years, this activity has exceeded sustainable limits due to overstocking and overgrazing. According to 2015 INE data, the region hosts approximately 11% of the national cattle herd (Peralta & Cuellar 2018).

Specifically, in the Macharetí municipality, livestock farming increased by 94% between 2013 and 2023 (MapBiomas Bolivia 2024), expanding toward the eastern plains where the protected area is located. This has led to evident loss of plant cover due to land-use change. Given the drastic environmental changes occurring to the west and across the Paraguayan border, it is highly probable that this site will remain as a vital relict of Chaco vegetation.

Hygrophytic forest of the Chaco © Eduardo Unzueta

Threatened Habitats – IPA Criterion C					
Habitat Type	IPA Subcriterion C	≥ 5% of national resource	≥ 10% of national resource	1 of the 5 highest-ranking sites at a national level	Estimated site area (km^2)
Subtropical/Tropical Dry Forest					
Xeric Forests of the Ancient Alluvial Plains of the North-western Chaco	C(ii)	✓	✓	✓	2,082
Forests on Poorly Drained Soils of the North-western Chaco	C(ii)				38
Dry savanna					
Forests of the Sand Sheets of the North-western Chaco	C(ii)	✓			210
Wet savanna					
Hygrophytic Forests of the Northern Chaco	C(ii)				6

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Dry Forest	92	Major
Dry savanna	8	Major
Wet savanna	—	Unknown

Threat		
Threat	Severity	Situation
Livestock farming & ranching	High	Ongoing - stable
Small-holder grazing, ranching or farming	High	Ongoing - stable

Land Use		
Land use type	Percent coverage	Importance
Nature conservation	90	Major
Agriculture (pastoral)	—	Major
Residential/urban development	—	Minor
Agriculture (arable)	—	Minor

Protected areas and other conservation designations			
Protected area type	Names (s) of protected area (s)	Relationship between the site and the protected area (% of overlap)	Area of overlap (km^2)
Local/Regional Nature Reserve	Héroes del Chaco Historical and Wildlife Municipal Reserve	Protected/conservation area matches IPA (100%)	2,664
Key Biodiversity Area	KBA Héroes del Chaco	Protected/conservation area matches IPA (100%)	2,664

IPA priority species Criterion A									
Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Solanaceae	*Solanum michaelis*	A(i)	VU	✓	✓				scarce

CULPINA AND PILAYA

Authors: Oriana A. Lino-Villalba, Martha Serrano Pacheco, Liliana Arroyo-Herbas, Maira T. Martinez-Ugarteche & Bente B. Klitgaard

International code	BOLTIPA034	Department/ Province	Chuquisaca: Sur Cinti
Latitude	-20.86778	Longitude	-64.39756
Minimum altitude (m.a.s.l.)	622	Maximum altitude (m.a.s.l.)	3,452
Area (km^2)	2,611	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(iii)

IPA Assessment – Rationale

Culpina and Pilaya qualifies as an Important Plant Area (IPA) thanks to its vast extent of forest, high-altitude grasslands, and shrublands that protect 23 endemic taxa, five of which are globally threatened, and two of which are range-restricted species. Furthermore, the site provides a refuge for one native species threatened nationally and 292 useful species, representing 9% of the useful plants documented nationwide. Within the useful species group there are 10 crop wild relatives (CWRs), including wild varieties of tobacco and chili peppers, accounting for 5% of the national list of wild relatives.

Site Description

The Culpina and Pilaya IPA site was delimited based on the eastern zone of the Culpina municipality. It is situated at the southern extremity of the Chuquisaca department, bordering Tarija. The region features notable topographical landmarks such as Mount Los Tigrecillos, Mount Bufete, and El Palmar, among others, which serve as habitats for several plant species of high conservation priority.

Botanical Significance

The botanical importance of this site is attributed to the high number of globally threatened species and the high concentration of endemic and useful taxa. Among the globally threatened endemic species are: *Luehea herzogiana* (EN), *Matelea attenuata* (EN), *Ophryosporus kuntzei* (VU), *Piptadenia boliviana* (VU), and *Stevia calderillensis* (VU). Additionally, the site harbours highly restricted endemic species such as *Malaxis weddellii* (NE) and *Peperomia barbaranoides* (NE). Several noteworthy, endemic species have not yet been evaluated by the IUCN. They include: *Cuphea scaberrima*, *Lepidaploa tarijensis*, *Manihot boliviana*, and *Stachys mandoniana*. Among the native species categorised as globally Vulnerable are *Cedrela angustifolia*, *Cedrela fissilis*, *Ipomoea lilloana*, *Jacaranda mimosifolia*, and *Polylepis crista-galli*.

Furthermore, 292 useful species (Appendix 3) grow in the site, of which 107 are listed as Least Concern

Manihot boliviana © Alejandro Angulo

Manihot boliviana © Alejandro Angulo

Ipomoea lilloana © Darwin Initiative project (11-010)

Podocarpus parlatorei © Freddy Zenteno

Dense, tall forest, La Rinconada del Bufete © Martha Serrano

Semi-deciduous forest, Serranía El Candado © Martha Serrano

(LC). Notable amongst them is *Podocarpus parlatorei* (VU), a useful species included in CITES Appendix I. Characteristic species of the semi-deciduous forests found here include *Juglans australis* (NE), *Handroanthus lapacho* (NT), *Myroxylon peruiferum* (LC), and *Parapiptadenia excelsa* (LC).

Habitat and Geology

Physiographically, the site is positioned between the Eastern Cordillera and the Sub-Andean zone, featuring a landscape of mountain ranges, plateaus, and plains. Geologically, it is characterised by unconsolidated Quaternary sediments, as well as Silurian and Tertiary sedimentary formations (MDSyP 2002). The area encompasses four distinct ecoregions: the Bolivian-Tucuman Forest, Inter-Andean Dry Forest, Gran Chaco, and Chaco Serrano (Ibisch *et al.* 2003). The most extensive vegetation types are the high-montane and high-Andean grasslands and shrublands, alongside transitional sub-humid forests (Navarro & Ferreira 2011, Navarro 2011, Appendix 2). According to the IUCN habitat classification scheme (IUCN 2012), these vegetation types are categorized as: Subtropical/tropical montane moist forest, Subtropical/tropical dry forest, Subtropical/tropical high-altitude shrubland and Subtropical/tropical lowland humid forest (Appendix 2).

Conservation Challenges

The Culpina municipality faces significant conservation challenges. According to the 2013 Bolivian Agricultural Census, the site is a major producer of agricultural and livestock products, including potatoes, maize, and goats (INE 2017). Although 81% of the Culpina and Pilaya IPA site remains as forest cover and 11% consists of other natural non-forest formations (MapBiomas Bolivia 2024), the expansion of agricultural development poses a direct risk to these natural habitats. This threat is compounded by forest fires and severe hailstorms in the region.

A notable feature of the eastern sector is Mount Bufete and Mount Tigrecillos, whose slopes protect a high diversity of species (Schulenberg & Awbrey 1997). Along with Mount La Polla and the Abra El Nogalar, which is connecting to the settlement of San Josecito and borders with Tarija, these areas require protection as they function as critical refugia for local biodiversity.

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Montane Forest	42	Major
Subtropical/Tropical Dry Forest	34	Major
Subtropical/Tropical High Altitude Shrubland	21	Major
Subtropical/Tropical Moist Lowland Forest	—	Minor

Threat		
Threat	**Severity**	**Situation**
Small-holder grazing, ranching or farming	High	Ongoing - stable
Increase in fire frequency/intensity	High	Ongoing - trend unknown
Climate change & severe weather	Unknown	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	—	Major
Agriculture (arable)	1	Major
Agriculture (pastoral)	—	Major

IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Anacardiaceae	*Myracrodruon urundeuva*	A(ii)	VU	✓					frequent
Apocynaceae	*Matelea attenuata*	A(i)	EN	✓	✓	✓	✓		unknown
Asteraceae	*Ophryosporus kuntzei*	A(i)	VU	✓	✓	✓	✓		abundant
Asteraceae	*Stevia calderillensis*	A(i)	VU	✓	✓		✓		abundant
Bignoniaceae	*Jacaranda mimosifolia*	A(i)	VU	✓					frequent
Convolvulaceae	*Ipomoea lilloana*	A(i)	VU	✓					unknown
Fabaceae	*Piptadenia boliviana*	A(i)	VU	✓					unknown
Malvaceae	*Luehea herzogiana*	A(i)	EN	✓	✓				unknown
Meliaceae	*Cedrela angustifolia*	A(i)	VU	✓					frequent
Meliaceae	*Cedrela fissilis*	A(i)	VU	✓					abundant
Orchidaceae	*Malaxis weddellii*	A(iii)	NE	✓	✓	✓	✓		scarce
Piperaceae	*Peperomia barbaranoides*	A(iv)	NE	✓	✓	✓	✓		abundant
Podocarpaceae	*Podocarpus parlatorei*	A(i)	VU	✓					abundant
Rosaceae	*Polylepis crista-galli*	A(i)	VU	✓					scarce

CAMARGO, VILLA ABECIA AND LAS CARRERAS

Authors: Oriana A. Lino-Villalba, Margoth Atahuachi, Freddy S. Zenteno-Ruiz, Araceli Laura Moya Huanca, David Villalba-Vargas, Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas & Bente B. Klitgaard

International code	BOLTIPA042	Department/ Province	Chuquisaca: Nor Cinti y Sud Cinti
Latitude	-20.85541	Longitude	-65.23113
Minimum altitude (m.a.s.l.)	2,163	Maximum altitude (m.a.s.l.)	4,747
Area (km^2)	3,690	Qualifying IPA criteria	A(i), A(iii), A(iv)

IPA Assessment – Rationale

Camargo, Villa Abecia and Las Carreras qualify as an Important Plant Area (IPA) thanks to its endemic vegetation formations on the stony slopes of the Inter-Andean valleys. These formations are composed of various endemic species of Bromeliaceae and Cactaceae, amongst others. A testament to its botanical value is the presence of 10 globally threatened endemic species and two threatened native species. Furthermore, the site safeguards four range-restricted endemic taxa and provides protection for 45 useful species.

Site Description

The IPA site was delimited following the municipal boundaries of Camargo, Villa Abecia, and Las Carreras. The area is notable for the convergence of the Inter-Andean Dry Forest, Prepuna, and Northern Puna ecoregions (Ibisch *et al.* 2003). Known as the Cinti Valley, it is also one of the most significant viticultural regions in Bolivia (Bazán-Contreras 2014, Morales-Ceron 2020).

Botanical Significance

The botanical importance of the Camargo, Villa Abecia and Las Carreras IPA site is attributed to its globally threatened native and endemic species, as well as taxa of socioeconomic utility. Notable globally threatened endemic species include *Pseudosenegalia feddeana* (EN), locally known as Palqui, which is a tree or shrub reaching 2 to 5 m in height (Atahuachi 2012). Another key species is *Bulnesia rivas-martinezii* (EN), which maintains concentrated and isolated populations within the Inter-Andean valley system (MMAyA 2012). Other priority taxa include *Abutilon fuscicalyx* (VU), *Acaulimalva oriastrum* (VU), *Puya weddelliana* (VU), *Tillandsia camargoensis* (VU), and *Tillandsia lotteae* (VU). Furthermore, the site hosts range-restricted endemic species, such as *Stevia glanduloso-pubescens* (NE), *Tillandsia imporaensis* (NE), and *Tillandsia rauschii* (DD). The area also provides a refuge for various useful plants (Appendix 3), most notably *Alternanthera pungens* (NE), *Neltuma alba* (NE), *Opuntia sulphurea* (LC), *Poissonia heterantha* (NE), *Polylepis tomentella* (NT), *Strombocarpa ferox* (NE), and *Vachellia aroma* (NE).

Micro-forest of *Pseudosenegalia feddeana* in the environs of Camargo © Margoth Atahuachi

Habitat and Geology

The IPA site exhibits a complex topography characterised by steep slopes, deep ravines (*quebradas*), valleys of varying widths, and irregular mountain ridges shaped by fluvial and aeolian processes (Bazán-Contreras 2014).

Vachellia aroma, a frequent species of the Camargo slopes © Margoth Atahuachi

Polylepis tomentella © Trustees RBG Kew/Maira Martinez

Poissonia heterantha, a tuberous-rooted species consumed by livestock © Margoth Atahuachi

Opuntia sulphurea © Margoth Atahuachi

Strombocarpa ferox © Alexander Parada

Deuterocohnia strobilifera © Alexander Parada

Geologically, the region pertains to the Eastern Cordillera of the Bolivian Andes, composed of ancient fold-and-thrust belts and faults that define the contemporary relief. The substrate includes Paleozoic sandstones and shales forming high ridges, and Mesozoic formations featuring the striking red Triassic sandstones visible in the canyons and cliffs surrounding Camargo and Villa Abecia. Conversely, the Las Carreras sector is dominated by Paleozoic and Carboniferous formations, resulting in a more rugged and mountainous landscape.

More recent Quaternary deposits fill the valley floors with gravels, sands, and silts; these soils support human settlements and agricultural activities, forming a vital component of the local economy. From a landscape perspective, the zone is distinguished by "micro-forests" of *Pseudosenegalia feddeana* (VU), a dominant species in xerophytic forests and shrublands that thrives on dry, stony, or rocky slopes (Atahuachi 2012). These forests often occur in association with *Echinopsis tacaquirensis*. Together, they constitute the shrubland formations characteristic of the endemic vegetation of Inter-Andean valley slopes (Navarro & Maldonado 2002, Navarro 2011). The region also encompasses Puna forests of *Polylepis* species, dry upper Prepuna forest, and Prepuna shrublands (Appendix 2). These vegetation types are categorised as Subtropical/tropical high-altitude shrubland and Subtropical/tropical high-altitude grassland under the IUCN habitat classification scheme (IUCN 2012) (Appendix 2).

Conservation Challenges

This IPA site faces significant anthropogenic threats, primarily from agriculture and livestock farming. There is substantial pressure from goat and sheep overgrazing, which negatively impacts the natural regeneration of native species (ZONISIG 2001, Bazán-Contreras 2014). In the San Juan del Oro Basin, for instance, extensive goat and sheep breeding is prevalent. Additionally, timber and fuelwood extraction persists despite the area's limited forage resources. Highly palatable species such as *Pseudosenegalia feddeana* (EN) are frequently consumed by goats (Beck *et al.* 2001).

The loss of vegetative cover, combined with logging and overgrazing, has triggered water erosion processes, resulting in the formation of gullies (*zanjas*) or landslides. These processes lead

Ordovician geological stratum in the Camargo-Villa Abecia region © Margoth Atahuachi

Grasslands with *Puya weddelliana* © Trustees RBG Kew/Maira Martinez

to the depletion of organic matter and topsoil, ultimately exposing fractured rock outcrops (ZONISIG 2001, Morales 2020). As of 2023, the site is composed of 55% grassland or herbaceous formations and 30% other non-forest natural formations (MapBiomas Bolivia 2024). Given that the entire IPA site contains only one protected area, the management of natural resources is critical. This lack of formal protection, combined with the presence of restricted and high-priority species, makes the conservation of this zone an indisputable priority.

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical High Altitude Shrubland	100	Major
Subtropical/Tropical High Altitude Grassland	—	Unknown

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Medium	Ongoing - stable
Small-holder farming	High	Ongoing - stable
Nomadic grazing	High	Ongoing - stable
Gathering terrestrial plants	Medium	Ongoing - stable
Soil erosion, sedimentation	High	Ongoing - trend unknown

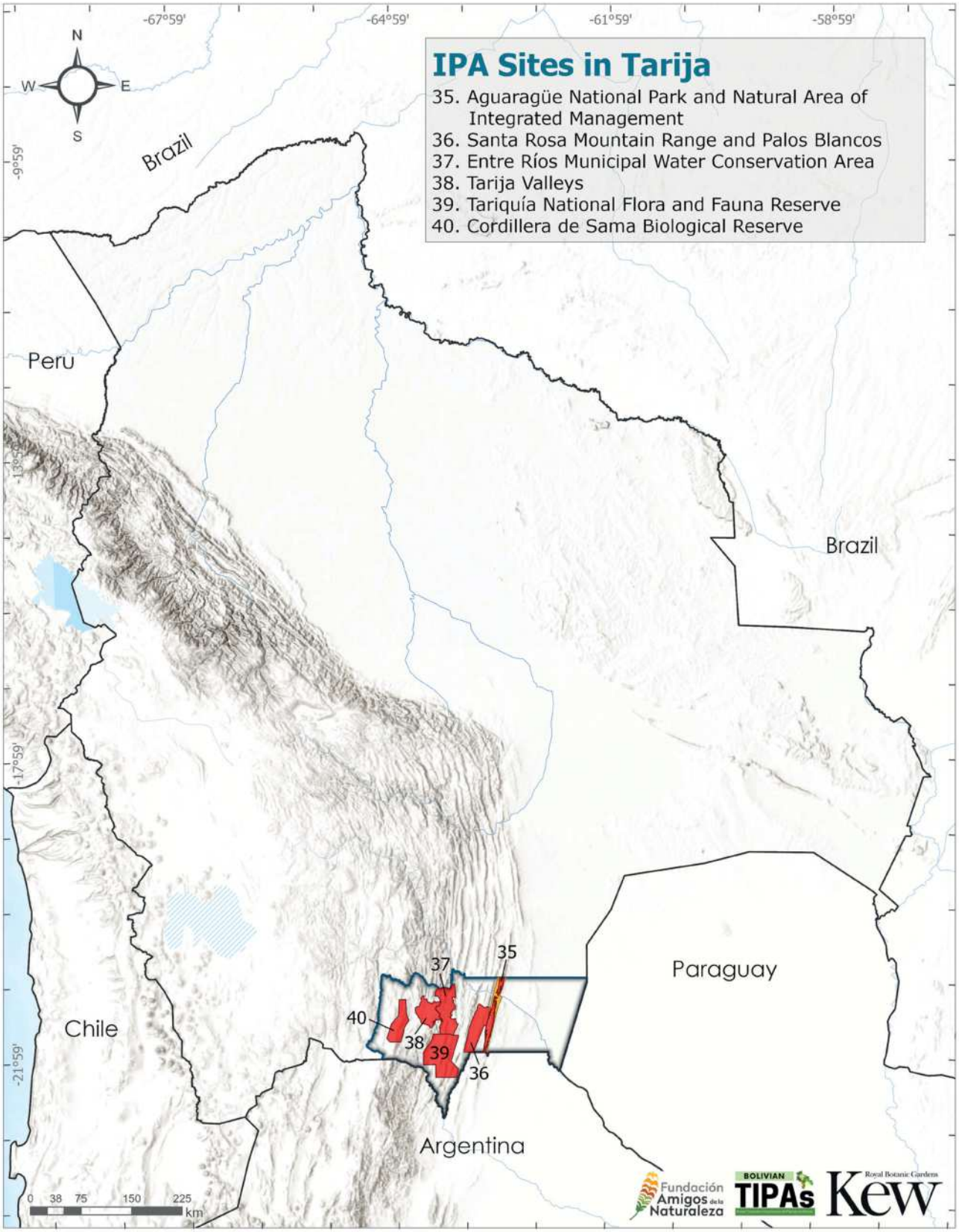
Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	9	Major
Agriculture (arable)	—	Major
Agriculture (pastoral)	—	Major
Harvesting of wild resources	—	Major

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	Villa Abecia Integrated Water Conservation Management Natural Area	IPA overlaps with the protected/conservation area (100%)	347

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥1% global population**	**≥5% national population**	**1 of 5 best sites at national level**	**≥10% global population**	**Entire global population at the site**	**Abundance at site**
Asteraceae	*Stevia glanduloso-pubescens*	A(iii)	NE	✓					rare
Bromeliaceae	*Deuterocohnia scapigera*	A(i)	VU	✓	✓	✓	✓		occasional
Bromeliaceae	*Deuterocohnia strobilifera var. strobilifera*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Puya valida*	A(i)	CR	✓	✓	✓	✓		rare
Bromeliaceae	*Puya weddelliana*	A(i)	VU	✓	✓	✓	✓		occasional
Bromeliaceae	*Tillandsia camargoensis*	A(i)	VU	✓	✓	✓	✓		occasional
Bromeliaceae	*Tillandsia imporaensis*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Bromeliaceae	*Tillandsia lotteae*	A(i)	VU	✓	✓		✓		rare
Bromeliaceae	*Tillandsia rauschii*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Fabaceae	*Pseudosenegalia feddeana*	A(i)	EN	✓	✓	✓	✓		frequent
Malvaceae	*Abutilon fuscicalyx*	A(i)	VU	✓	✓	✓	✓		occasional
Malvaceae	*Acaulimalva oriastrum*	A(i)	VU	✓	✓	✓	✓		unknown
Poaceae	*Setaria barbinodis*	A(i)	VU	✓	✓		✓		rare
Zygophyllaceae	*Bulnesia rivas-martinezii*	A(i)	EN	✓	✓	✓	✓		occasional

TARIJA

Cordillera de Sama Biological Reserve, Erquis Ceibal © Maira Martínez


IPA Sites in Tarija
35. Aguaragüe National Park and Natural Area of Integrated Management
36. Santa Rosa Mountain Range and Palos Blancos
37. Entre Ríos Municipal Water Conservation Area
38. Tarija Valleys
39. Tariquía National Flora and Fauna Reserve
40. Cordillera de Sama Biological Reserve
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BOLIVIAN TIPAs
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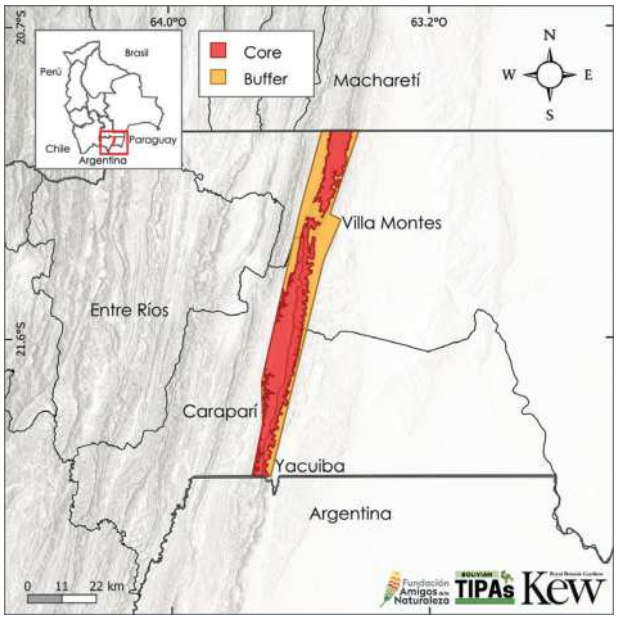
AGUARAGÜE NATIONAL PARK AND NATURAL AREA OF INTEGRATED MANAGEMENT

Authors: Liliana Arroyo-Herbas, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA035	Department/ Province	Tarija: Gran Chaco
Latitude	-21.51825	Longitude	-63.61446
Minimum altitude (m.a.s.l.)	362	Maximum altitude (m.a.s.l.)	1,325
Area (km^2)	1,110	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(iii)



IPA Assessment – Rationale

The IPA site, Aguaragüe National Park and Natural Area of Integrated Management (ANMI), is distinguished by its representative samples of transitional ecosystems between montane forests and the Chaco Serrano. The site protects 13 globally threatened plant species, 10 of which are endemic to Bolivia. Furthermore, it protects an additional six endemic taxa, including five range-restricted species that are potentially threatened, and one species threatened nationally. Furthermore, the site records 146 useful plant species, representing 4% of the nationally documented total.

Site Description

The site is located in the Gran Chaco province of the Tarija department. It covers an area of 1,000 km^2, encompassing parts of the Yacuiba, Caparí, and Villamontes municipalities. To the north, it borders the Chuquisaca department, and to the south, the Republic of Argentina. The IPA boundaries coincide 100% with the Aguaragüe National Park and ANMI, established to conserve the transitional ecosystems between montane forests and Chaco Serrano, and to protect the Serranía de Aguaragüe as a primary water source for the people living in the Tarija Chaco (SERNAP 2020b). Additionally, the site overlaps with the Macharetí Zone Community Association TCO (Communal Land of Origin).

Botanical Significance

The botanical significance of the site because of the 19 endemic plant taxa protected within its boundaries. Species such as *Croton abutilifolius* (VU), *Ipomoea appendiculata* (EN), *Ipomoea spinulifera* (EN), and *Myrocarpus emarginatus* (EN) are globally threatened, with at least 10% of their total populations growing in the site. Other endemics of high conservation priority include *Cnidoscolus beckii* (NE) and *Siphocampylus neurotrichus* (NE), which have not yet been evaluated under IUCN criteria, but whose entire global populations are restricted to the site. Additionally, *Porophyllum woodii* (DD) and *Stevia pauciflora* (NE) are identified as potentially threatened species.

Overview of the Serranía de Aguaragüe © FAN/Oriana Lino

Beyond the endemic taxa, the area protects 145 useful plant species, including the globally threatened legumes *Amburana cearensis* (EN), *Arachis ipaensis* (CR), *Piptadenia buchtienii* (VU), and *Senegalia etilis* (VU) (Appendix 3). This group also includes crop wild relatives (CWRs) without formal IUCN evaluation, such as *Manihot guaranitica* (NE), *Nicotiana otophora* (NE), and *Capsicum chacoense* (NE), which are related to cassava, tobacco, and chili peppers, respectively.

Ipomoea spinulifera © John R.I. Wood

Habitat and Geology

Physiographically, the IPA site is part of the Sub-Andean province and the Chaco-Beniana Plain with 96% of its surface occupied by the Serranía and a series of medium and low hills. The foothills account for 1% of the site's area and serve as the transition zone between the range and the plains (SERNAP 2020b). Hydrologically, the site belongs to the La Plata region within the Pilcomayo River Basin, where the Zanja Honda River, Caraparí River, and Gritado Stream converge. Due to its geological and physiographic characteristics, the zone is of vital importance for aquifer recharge and water supply for surrounding communities (SERNAP 2020b).

Biogeographically, the site corresponds to the ecoregions of the Bolivian-Tucuman Forest, the Chaco Serrano, and the Gran Chaco. Five distinct vegetation types exist – the Chaco Serrano forest, sub-humid Bolivian-Tucuman forest, Inter-Andean dry forest, and Chaco forest. Under the IUCN habitat classification scheme (IUCN 2012), these are categorised as Subtropical/tropical dry forest and Subtropical/tropical high-altitude shrubland (Appendix 2).

Conservation Challenges

Aguaragüe's geological characteristics render it an essential area for water recharge, providing

Chaqueño Serrano Forest, Pilcomayo River, through the Angosto from Villamontes © Maira Martinez

vital resources to the communities of Villamontes, Yacuiba, and Caraparí.

The site is also designated a Key Biodiversity Area (KBA) due to the presence of endangered species such as *Myrocarpus emarginatus* (EN) and significant animals like the *Vultur gryphus* (NE) and *Penelope dabbenei* (NE) (KBA 2025n). However, according to the management plan, the primary economic activity is subsistence agriculture and livestock farming, which occupies 12% of the area (SERNAP 2020b). The region is also defined by its hydrocarbon potential; at least 56 exploration wells have been recorded within the area since the 1960s, along with 39 environmental liabilities (Vacaflor 2016).

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Dry Forest	85	Major
Subtropical/Tropical High Altitude Shrubland	2	Major

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Medium	Ongoing - stable
Oil & gas drilling	High	Ongoing – declining
Small-scale, extensive livestock farming	Medium	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	94	Major
Small-holder farming	2	Medium
Extractive industry	—	Major
Residential/urban development	—	Major
Livestock farming & ranching	1	Major

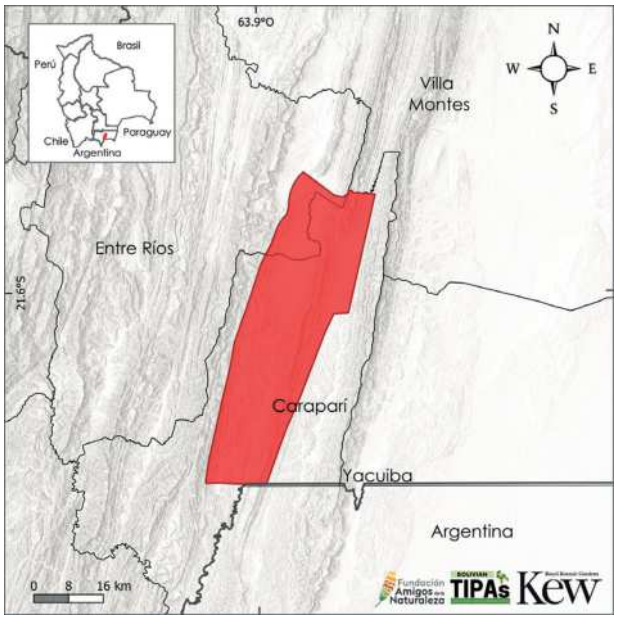
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
National Park	PN y ANMI Aguaragüe	Protected/conservation area matches IPA (100%)	1,110
Key Biodiversity Area	KBA Serranía de Aguaragüe	Protected/conservation area matches IPA (100%)	1,109

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Asteraceae	*Porophyllum woodii*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Asteraceae	*Stevia pauciflora*	A(iii)	NE	✓	✓	✓	✓		rare
Campanulaceae	*Siphocampylus aureus*	A(ii)	VU	✓	✓				unknown
Campanulaceae	*Siphocampylus neurotrichus*	A(iv)	NE	✓	✓		✓		unknown
Convolvulaceae	*Ipomoea appendiculata*	A(i)	EN	✓	✓	✓	✓		scarce
Convolvulaceae	*Ipomoea exserta*	A(i)	VU	✓	✓		✓		scarce
Convolvulaceae	*Ipomoea lilloana*	A(i)	VU	✓					unknown
Convolvulaceae	*Ipomoea spinulifera*	A(i)	EN	✓	✓		✓		occasional
Convolvulaceae	*Jacquemontia mairae*	A(i)	EN	✓	✓	✓	✓		scarce
Euphorbiaceae	*Cnidoscolus beckii*	A(iv)	NE	✓	✓	✓	✓		rare
Euphorbiaceae	*Croton abutilifolius*	A(i)	VU	✓	✓		✓		unknown
Fabaceae	*Amburana cearensis*	A(i)	EN	✓					unknown
Fabaceae	*Arachis ipaensis*	A(i)	CR	✓	✓	✓			scarce
Fabaceae	*Myrocarpus emarginatus*	A(i)	EN	✓	✓		✓		scarce
Fabaceae	*Piptadenia buchtienii*	A(i)	VU	✓					occasional
Gentianaceae	*Gentianella kuntzei*	A(iii)	NE	✓	✓		✓		unknown
Malvaceae	*Pseudobombax andicola*	A(i)	VU	✓	✓		✓		unknown
Malvaceae	*Wissadula cruziana*	A(i)	VU	✓	✓				scarce

SANTA ROSA MOUNTAIN RANGE AND PALOS BLANCOS

Authors: Maira T. Martinez-Ugarteche, Rosember Hurtado Ulloa, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA036	Department/ Province	Tarija: Burnet O'Connor, Gran Chaco
Latitude	-21.67298	Longitude	-63.83541
Minimum altitude (m.a.s.l.)	652	Maximum altitude (m.a.s.l.)	1,818
Area (km^2)	1,310	Qualifying IPA criteria	A(i), A(ii), A(iii)



IPA Assessment – Rationale

The Important Plant Area (IPA) the Santa Rosa Mountain Range and Palos Blancos contain significant diversity of native plants, many of which hold substantial socioeconomic value, alongside some globally threatened endemic plant species. The botanical significance of this IPA is determined by the presence of eight globally threatened plant species, four of which are endemic to Bolivia. Furthermore, the site harbours two species threatened nationally, and two endemic species restricted to this locality. Alongside these threatened and endemic taxa, the site supports 52 useful plant species.

It also forms part of a chain of IPAs that protect numerous mountain ranges extending from Aguaragüe towards Tariquía—ranges that are fundamental for the protection of the headwaters of the Pilcomayo River and other water bodies.

Site Description

The Santa Rosa Mountain Range and Palos Blancos IPA site is in the Tarija Department, primarily in the municipality Caraparí, with a small extension into the municipality Entre Ríos. The boundaries of this IPA encompass the limits of the Serranía de Santa Rosa Natural Area of Integrated Water Management, situated within the Caraparí municipality.

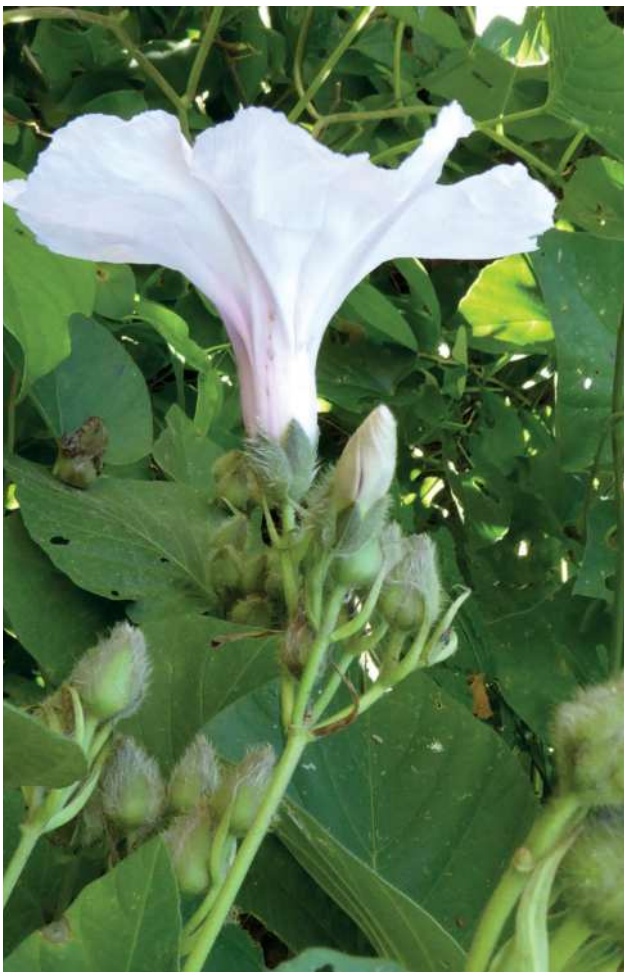
Moreover, it borders the Aguaragüe IPA site (NP (National Park) and ANMI (Natural Area of Integrated Management)) to the west and Tariquía to the south. Generally, this region is characterised by a climatic gradient ranging from arid and sub-humid warm climates to semi-humid and semi-arid temperate climates (GAMC 2016).

Botanical Significance

Among the species at risk of extinction are *Ipomoea exserta* and *Bougainvillea trollii*, both of which are Vulnerable (VU) endemic species growing in the Chaco Montane Forest (Ibisch *et al.* 2003, Beck 2014). Another notable species is *Jacquemontia mairae* (EN), a climber inhabiting

Jacquemontia mairae © Trustees RBG Kew/Maira Martinez

Ipomoea exserta © Maira Martinez



Ipomoea longibarbis © Maira Martinez

shrublands within the Inter-Andean Dry Valleys (Wood & Clegg 2021). Additionally, native species such as *Erythrostemon coulterioides* (EN) are present. This species grows across Bolivia and Argentina and is recorded in two IPA sites. Another representative is *Ipomoea lilloana* (VU), a species shared with Argentina but occurring with greater frequency in Bolivia (Wood *et al.* 2020). A native tree species classified as Endangered (EN) is *Cochlospermum tetraporum*, which is endemic to the sub-Andean foothill forests of Argentina and Bolivia. In Bolivia, it is found within the Chaco Dry Forest, Chaco Montane Forest, and Dry Valleys (Prado 1998, Jorgensen *et al.* 2014).

The site is notable for useful taxa belonging to the Solanaceae family (peppers, tomatoes, potatoes), with six species of the genus *Solanum* recorded. One species in particular, *Capsicum chacoense*, is a crop wild relative (CWR). The cactus *Neoraimondia herzogiana* (VU) is threatened nationally and is used medicinally (Appendix 3).

Habitat and Geology

Biographically, the area is situated within the Sub-Andean zone, between the southern cordillera and the Chaco plain, featuring a landscape dominated by mountain ranges, foothills, hills, and plains (MDSyP 2002). Three ecoregions converge within the IPA: the Bolivian-Tucuman Forest, the Chaco Montane Forest, and the Gran Chaco (Ibisch *et al.* 2003). According to the vegetation classification and the Ecological Systems of Bolivia (Navarro & Ferreira 2011, Navarro 2011) and the IUCN habitat classification scheme (IUCN 2012) (Appendix 2), the primary habitats at the site are Dry Forest and Subtropical/Tropical High-Altitude Shrubland. The habitat designated as Dry Forest is composed of vegetation series such as the lower basi-montane transitional sub-humid forest of the *Bermejo basin*, *Gleditsia amorphoides-Calycophyllum multiflorum* preliminary series and the Bolivian-Tucuman forest of Chari and Tipa, *Parapiptadenia excelsa-Tipuana tipu* series (Appendix 2).

Conservation Challenges

A strategic advantages of this IPA is its location within the municipalities of Caraparí and Entre Ríos. These adjacent municipalities are host to a single municipal conservation area: the Santa Rosa Mountain Range Natural Area of Integrated Water Management, established to safeguard

Mountain range and Chaco plain near Palos Blancos © Rosember Hurtado

Mountain ranges, vegetation of Chaco Serrano © Rosember Hurtado

Neoraimondia herzogiana © Rosember Hurtado

the headwaters of the Pilcomayo River and the Bermejo River watershed.

A significant populated centre is Palos Blancos, which serves as the boundary between the two provinces comprising the site. These provinces are major hubs for oil and gas wells within the Tarija Department. The mountain ranges that form part of this site and adjacent IPAs, such as Aguaragüe and Tariquía, represent a vital resource for the water supply of various localities. Furthermore, they constitute a biological corridor that is of paramount importance for the conservation of landscapes and their diverse habitats.

Cochlospermum tetraporum © Rosember Hurtado

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Dry Forest	44	Major
Subtropical/Tropical High Altitude Shrubland	15	Major
Subtropical/Tropical Moist Montane Forest	5	Major
Other	36	Minor

Threat

Threat	Severity	Situation
Small-holder farming	High	Ongoing - stable
Small-holder grazing, ranching or farming	High	Ongoing - stable
Oil & gas drilling	Medium	Future - planned activity

Land Use

Land use type	Percent coverage	Importance
Nature conservation	36	Major
Agriculture (arable)	3	Major
Agriculture (pastoral)	3	Major

Protected areas and other conservation designations

Protected area type	Names (s) of protected area (s)	Relationship between the site and the protected area (% of overlap)	Area of overlap (km^2)
Local/Regional Nature Reserve	Serranía Santa Rosa Integrated Water Management Natural Area	The IPA covers protected/conservation areas (100%)	467

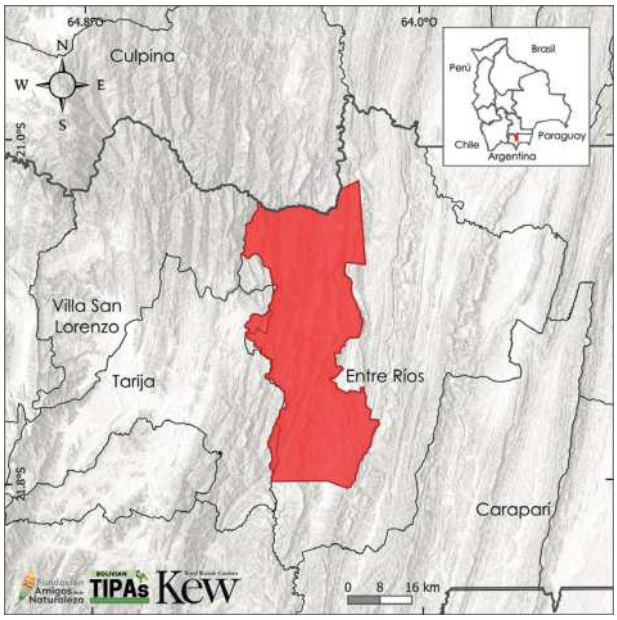
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Asteraceae	*Senecio tarijensis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Bromeliaceae	*Puya alba*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Cactaceae	*Neoraimondia herzogiana*	A(ii)	VU	✓					frequent
Convolvulaceae	*Ipomoea exserta*	A(i)	VU	✓	✓				occasional
Convolvulaceae	*Ipomoea lilloana*	A(i)	VU	✓					scarce
Convolvulaceae	*Jacquemontia mairae*	A(i)	EN	✓	✓	✓	✓		occasional
Fabaceae	*Erythrostemon coulterioides*	A(i)	EN	✓	✓	✓	✓		unknown
Malvaceae	*Malvastrum pucarense*	A(i)	EN	✓	✓	✓	✓		occasional
Meliaceae	*Cedrela odorata*	A(i)	VU	✓					scarce
Nyctaginaceae	*Bougainvillea trollii*	A(i)	VU	✓	✓	✓	✓		unknown
Solanaceae	*Solanum michaelis*	A(i)	VU	✓					unknown
Zygophyllaceae	*Plectrocarpa bonariensis*	A(ii)	VU						rare

ENTRE RÍOS MUNICIPAL WATER CONSERVATION AREA

Authors: Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA037	Department/ Province	Tarija: Burnet O'Connor
Latitude	-21.43164	Longitude	-64.26355
Minimum altitude (m.a.s.l.)	778	Maximum altitude (m.a.s.l.)	3,395
Area (km^2)	1,602	Qualifying IPA criteria	A(i), A(iii), A(iv), B(iii)



Site Description

The Entre Ríos Municipal Water Conservation Area and IPA is a recently established municipal protected area, situated in the central part of the Tarija Department and encompasses the municipality of Entre Ríos.

In addition to its status as a municipal protected area—the objectives of which include the protection of watersheds, the maintenance of water quality and quantity, and the conservation of flora and fauna, the site is also recognised as a Key Biodiversity Area (KBA). Generally, the site is characterised by socioeconomic activities related to both intensive and extensive agriculture livestock farming, and forestry (VMABCCyGDF 2022).

IPA Assessment – Rationale

The Important Plant Area (IPA) Entre Ríos Municipal Water Conservation Area contains many native plants, many of which hold high socioeconomic value, alongside globally threatened endemic plant species. The botanical importance of this IPA is because of 38 taxa endemic to Bolivia, and 17 globally threatened plant species, 13 of which are also endemic. Furthermore, the site is home to three endemic species, whose entire population is restricted to this IPA site. Alongside this high number of endemic and globally threatened species, there are 284 species of socio-economic importance, representing more than 8% of the total useful plants documented for Bolivia.

Botanical Significance

The site is notable for its high concentration of endemic and socioeconomically significant species, including 37 taxa native to the country—13 of which are globally threatened, such as *Fleischmannia tambo* and *Philibertia fiebrigii* which are classified as Critically Endangered (CR), with the latter known only from this specific site. *Deuterocohnia lotteae*, *Ipomoea spinulifera*, *Ipomoea tarijensis*, and *Philibertia tactila* are categorised as Endangered (EN), while five other species are considered Vulnerable (VU). Other endemic species found at this site include *Mimosa lepidota* and *Philibertia woodii*, both of which are ranked as Near Threatened (NT). These species

Mimosa lepidota © Alexander Parada

Oxypetalum fuscum © Alexander Parada

Philibertia woodii © FAN/Liliana Arroyo

Ipomoea exserta © Maira Martinez

occur in areas of Inter-Andean xerophytic forests, Bolivian-Tucuman montane forests, and dry valleys (Keller & Goyder 2021, Zenteno & Moraes 2024). In addition to these globally threatened endemic species, four other globally threatened native species are recorded.

Of the 284 species of useful plants growing on the site, those belonging to the family Solanaceae are particularly prominent, with 13 species of the genus *Solanum* recorded. Three *Solanum* species are of socioeconomic importance as crop wild relatives (CWRs) of chilli peppers, tomatoes and potatoes (Appendix 3).

Habitat and Geology

From a physiographic perspective, the site is situated within the Sub-Andean zone and the Eastern Cordillera. This region is characterised by a rugged, mountainous topography comprising three distinct ecoregions: the Bolivian-Tucuman Forest, the Inter-Andean Dry Forests, and the Chaco Montane Forest (Ibisch et al. 2003). In accordance with the vegetation classifications and Ecological Systems of Bolivia (Navarro & Ferreira 2011; Navarro 2011), as well as the IUCN habitat classification scheme (IUCN 2012), the predominant habitats at the site are identified as Dry Forest and Subtropical/Tropical Moist Montane Forest. The Dry Forest habitat is represented by the Bolivian-Tucuman forest of Chari and Tipa (*Parapiptadenia excelsa-Tipuana tipu* series). Conversely, the Moist Montane Forest is characterised by the Bolivian-Tucuman montane alder association, specifically the *Prunus tucumanensis-Alnus acuminata* series (Navarro 2011) (Appendix 2).

Conservation Challenges

The primary socioeconomic activities in Entre Ríos are agrarian, pastoral, and silvicultural in nature, practised at both intensive and extensive scales. These land uses exert persistent pressure upon the local scrublands and forest cover, occurring predominantly within the intermontane valley floors.

Designated as a municipal protected area and identified as both a Key Biodiversity Area (KBA) and an Important Plant Area (IPA) — owing to its botanical significance, hydrological importance, and unique habitats, the site provides a robust rationale for the strengthening of protective

frameworks. It is, therefore, essential to formulate a management plan that incorporates rigorous zonation to ensure the long-term conservation of the area's biota.

Entre Ríos, with the mountain ranges that form part of the protected area and IPA site in the background © Daniel Aguilar

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Dry Forest	42	Major
Subtropical/Tropical Moist Montane Forest	37	Major
Subtropical/Tropical High Altitude Shrubland	19	Major
Other	3	Unknown

Threat		
Threat	**Severity**	**Situation**
Small-holder farming	High	Ongoing - stable
Nomadic grazing	High	Ongoing - stable
Small-holder grazing, ranching or farming	High	Ongoing - stable
Logging & wood harvesting	Medium	Ongoing - trend unknown

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	100	Major
Agriculture (arable)	1	Major
Agriculture (pastoral)	1	Major
Forestry	—	Medium

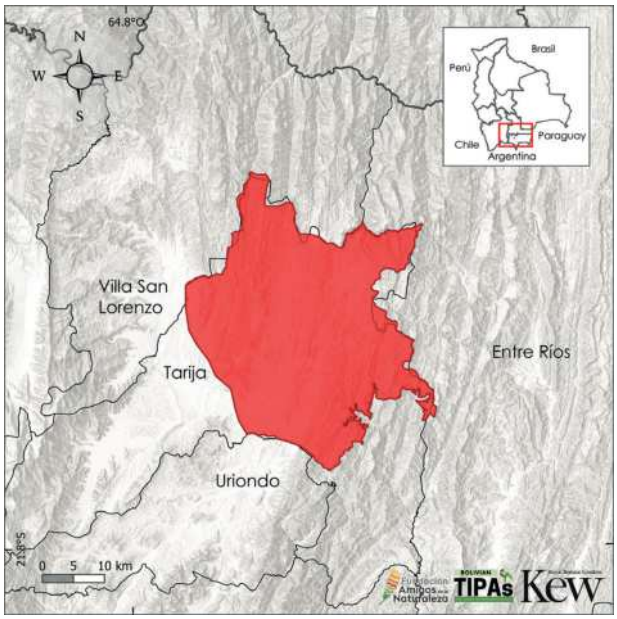
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	Entre Ríos Municipal Water Conservation Area	Protected/conservation area matches IPA (100%)	1,602
Key Biodiversity Area	KBA Entre Ríos	Protected/conservation area matches IPA (100%)	1,602

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Anacardiaceae	*Schinus meyeri*	A(i)	VU	✓					occasional
Anacardiaceae	*Schinus obliqua*	A(iii)	NE	✓	✓	✓	✓		occasional
Apocynaceae	*Oxypetalum fuscum*	A(i)	VU	✓	✓				occasional
Apocynaceae	*Philibertia fiebrigii*	A(i)	CR	✓	✓	✓	✓	✓	occasional
Apocynaceae	*Philibertia tactila*	A(i)	EN	✓	✓	✓	✓		occasional
Asteraceae	*Chersodoma helianthemoides*	A(i)	EN	✓	✓	✓	✓		occasional
Asteraceae	*Fleischmannia tamboensis*	A(i)	CR	✓	✓		✓		occasional
Asteraceae	*Stevia calderillensis*	A(i)	VU	✓	✓		✓		occasional
Begoniaceae	*Begonia pearcei*	A(iv)	NE	✓	✓	✓	✓		unknown
Begoniaceae	*Begonia phantasma*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Deuterocohnia lotteae*	A(i)	EN	✓	✓	✓	✓		occasional
Bromeliaceae	*Puya entre-riosensis*	A(iii)	NE	✓	✓	✓	✓		unknown
Bromeliaceae	*Puya minima*	A(i)	VU	✓	✓		✓		occasional
Bromeliaceae	*Tillandsia walter-richteri*	A(iii)	NE	✓	✓		✓	✓	unknown
Convolvulaceae	*Ipomoea exserta*	A(i)	VU	✓	✓	✓			occasional
Convolvulaceae	*Ipomoea spinulifera*	A(i)	EN	✓	✓	✓	✓		occasional
Convolvulaceae	*Ipomoea tarijensis*	A(i)	EN	✓	✓	✓	✓		occasional
Dioscoreaceae	*Dioscorea hastiformis*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Fabaceae	*Amicia micrantha* subsp. *tarijensis*	A(iv)	NE	✓	✓		✓		unknown
Lamiaceae	*Salvia amplifrons*	A(i)	EN	✓					scarce
Meliaceae	*Cedrela montana*	A(i)	VU	✓					unknown
Rosaceae	*Polylepis crista-galli*	A(i)	VU	✓					unknown
Rosaceae	*Polylepis hieronymi*	A(i)	EN	✓					unknown
Rutaceae	*Zanthoxylum nebuletorum*	A(i)	VU	✓	✓		✓		occasional

TARIJA VALLEYS

Authors: Maira T. Martinez-Ugarteche, Freddy S. Zenteno-Ruiz, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA038	Department/ Province	Tarija: Burnet O'Connor
Latitude	-21.46321	Longitude	-64.53131
Minimum altitude (m.a.s.l.)	1,781	Maximum altitude (m.a.s.l.)	3,391
Area (km^2)	1,043	Qualifying IPA criteria	A(i), A(iii), A(iv)



IPA Assessment – Rationale

The Tarija Valleys represent an Important Plant Area (IPA) defined by its significant connectivity with adjacent IPAs and a high diversity of native flora. This diversity includes species of considerable socioeconomic value as well as globally threatened endemic plant taxa. Within its boundaries, 19 endemic taxa are protected, five of which are globally threatened. Furthermore, the site serves as a refuge for three additional globally threatened native species. In addition to the number of endemic species, the site safeguards 60 useful plants.

Site Description

This IPA is situated within the Tarija Department, specifically in the O'Connor Province and across a large portion of the Tarija Municipality. The site limits follow the natural boundaries of the Dry Valleys present in the region, excluding the western sector that encompasses the urban footprint of Tarija city. To the east, the site borders the Entre Ríos Municipal Water Conservation Area IPA.

A notable feature of this site is that approximately 80% of its area includes part of the Guadalquivir River basin towards the northeast. This basin, which comprises the so-called Central Valley of Tarija, is distinguished as one of the Bolivian valleys with most potential for agriculture, exemplified by its significant commercial wine production (SIHITA).

Botanical Significance

The botanical significance of the Tarija Valleys IPA is thanks to its concentration of endemic and socioeconomically important species, occurring alongside globally threatened taxa. Among the globally threatened species classified as Endangered (EN) are: *Corryocactus tarijensis*, an endemic range-restricted cactus species found in Inter-Andean Dry Valleys, currently threatened by overgrazing and trampling by goats (Lowry 2013); and *Ipomoea gypsophila*, another endemic restricted to the Tarija Department. The latter is a rare plant inhabiting open rocky slopes (Wood *et al.* 2015), and this IPA presently constitutes the only conservation area for the species. *Ipomoea tarijensis* is also endemic and restricted to this department, occurring on rocky slopes and in

Extensive valley covered with crops and remnants of dry forests © FAN/Liliana Arroyo

Ipomoea tarijensis © John R.I. Wood

Corryocactus tarijensis © Martin Lowry

Dyschoriste boliviana © Darwin Initiative Project (11-010)

shrublands; while it can be locally common, its range is strictly limited to this zone (Wood *et al.* 2015).

Furthermore, the sites host two globally threatened bromeliad species *Deuterocohnia lotteae* (EN) and *Puya weddelliana* (VU). Both are endemic, with *P. weddelliana* as a terrestrial plant reaching an impressive height of 3 metres, typically growing on steep open slopes within dry valleys.

In addition to these taxa, the site supports 60 useful plant species. Among these, *Polylepis crista-galli* (VU) is particularly noteworthy. This native tree is found in Argentina and Bolivia, though its populations are highly fragmented. Its primary threats include its use for timber and fuel, compounded by intensive grazing (Araujo-Murakami *et al.* 2024) (Appendix 3).

Habitat and Geology

Physiographically, the site is positioned over the Eastern Cordillera and the Sub-Andean zone. The landscape is composed of a mosaic of mountain ranges, foothills, hills, and plains (MDSyP 2002).

According to the vegetation classification and the Ecological Systems of Bolivia (Navarro & Ferreira 2011, Navarro 2011) and the IUCN habitat classification scheme (IUCN 2012), the primary habitat is Subtropical/Tropical High-Altitude Shrubland, locally known as the Tarija Dry Valleys. This high-altitude shrubland encompasses altimontane and high-Andean grasslands and shrublands, as well as the dry Prepuna forest of the Tarija-Bermejo River Basin, specifically the *Gochnatia curviflora-Viposia integerrima* preliminary series (Navarro 2011) (Appendix 2).

Conservation Challenges

A portion of this IPA is recognised as a Key Biodiversity Area (KBA), specifically the Guadalquivir River in the central valley of Tarija. Its importance is focused on its water resources, which are vital for everything from human consumption to agro-industrial use (KBA 2025o). Despite this conservation initiative, there are currently no other high-impact measures with the potential for consolidation through municipal or departmental administration. In this context, some local communities have begun to develop apiculture as a sustainable productive alternative. This activity not only contributes to the local economy but also promotes the conservation of the surrounding ecosystems (Zenteno-Ruiz *et al.* 2022).

It should be noted that the Guadalquivir River KBA was designated due to the presence of the cactus species *Echinopsis caulescens* (EN). Although currently no records of this species exist from within the Tarija Valleys IPA, further investigation may confirm its presence. Integrating these two conservation spaces into a single corridor and combining the botanical characteristics of the two areas would significantly enhance the impact of conservation efforts within the Tarija valleys.

Dry forests © FAN/Liliana Arroyo

Dry Valleys © FAN/Liliana Arroyo

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical High Altitude Shrubland	52	Major
Subtropical/Tropical Dry Forest	32	Major
Subtropical/Tropical Moist Montane Forest	15	Major
Other	—	Minor

Threat		
Threat	**Severity**	**Situation**
Small-holder farming	Medium	Ongoing - stable
Agro-industry farming	High	Ongoing - stable
Small-holder grazing, ranching or farming	Medium	Ongoing - stable
Oil & gas drilling	Unknown	Future - planned activity

Land Use		
Land use type	**Percent coverage**	**Importance**
Agriculture (arable)	—	Major
Agriculture (pastoral)	—	Minor
Residential/urban development	—	Minor
Nature conservation	11	Major

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	San Agustín Flora and Fauna Reserve	IPA overlaps with the protected/conservation area (1%)	1
Key Biodiversity Area	KBA Río Guadalquivir	IPA overlaps with the protected/conservation area (34%)	119

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Anacardiaceae	*Schinus obliqua*	A(iii)	NE	✓	✓		✓		unknown
Asteraceae	*Chromolaena bangii*	A(i)	VU	✓	✓	✓	✓		occasional
Asteraceae	*Stevia camachensis*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Deuterocohnia lotteae*	A(i)	EN	✓	✓	✓	✓		scarce
Bromeliaceae	*Puya weddelliana*	A(i)	VU	✓	✓	✓	✓		scattered
Cactaceae	*Corryocactus tarijensis*	A(i)	EN	✓	✓	✓	✓		occasional
Convolvulaceae	*Ipomoea gypsophila*	A(i)	EN	✓	✓	✓	✓		rare
Convolvulaceae	*Ipomoea lilloana*	A(i)	VU	✓		✓			occasional
Convolvulaceae	*Ipomoea tarijensis*	A(i)	EN	✓	✓	✓	✓		abundant
Rosaceae	*Polylepis crista-galli*	A(i)	VU	✓					unknown

TARIQUÍA NATIONAL FLORA AND FAUNA RESERVE

Authors: Liliana Arroyo-Herbas, Freddy S. Zenteno-Ruiz, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA039	Department/ Province	Tarija: Cercado, Arce, Gran Chaco, Burnet O'Connor
Latitude	-22.03713	Longitude	-64.33743
Minimum altitude (m.a.s.l.)	472	Maximum altitude (m.a.s.l.)	3,290
Area (km^2)	2,473	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv), B(iii)

IPA Assessment – Rationale

The Tariquía Flora and Fauna Reserve is of significant conservation importance as it safeguards a representative sample of the biodiversity of the Andean Yungas (Cloud Forest) ecosystem. This area shelters five globally threatened plant species, two of which are endemic to Bolivia. Furthermore, the site protects one nationally threatened species and three highly range-restricted and potentially threatened species. Of useful plants, the site protects 218 species, representing 6% of the documented useful flora in Bolivia.

Site Description

The reserve is in the southern Tarija Department, spanning the borders of the Arce, Cercado, Gran Chaco, and Burnet O'Connor provinces. The site is demarcated according to the statutory boundaries of the Tariquía Flora and Fauna Reserve, established with the objective of conserving the Andean Yungas (Cloud Forest) ecosystem and regulating the hydrological flow of the Grande de Tarija and Bermejo river basins (SERNAP 2006c). Relative to other conservation areas, it is bordered to the north by the Entre Ríos Municipal Water Conservation Area and to the east by the San Nicolas Municipal Protected Area.

Botanical Significance

The site's botanical value is based on its 213 registered useful species, representing approximately 6% of the useful species documented for Bolivia (Appendix 3). Notable among these are *Myrcianthes callicoma*, the cedars *Cedrela angustifolia* and *C. odorata*, and the mountain pine *Podocarpus parlatorei*, all of which are considered Vulnerable (VU), globally. Conversely, species such as tipa (*Tipuana tipu*), wilka or cebil (*Anadenanthera colubrina*), cuchi (*Myracrodruon urundeuva*), and tajibo (*Handroanthus ochraceus*) are currently listed as Least Concern (LC). However, they continue to be conservation priorities due to constant pressure from timber extraction within the zone (Leaños 2021). The group of useful plants also include crop wild relatives (CWRs) of cultivated plants, such as *Solanum chacoense* (LC) and *S. betaceum* (NE).

Additionally, the site protects 11 endemic species with 5% or more of their total population housed

Cedrela angustifolia © Freddy Zenteno

Cedrela angustifolia © Freddy Zenteno

Ipomoea spinulifera © John R.I. Wood

within the site. These include *Ipomoea spinulifera* (EN) and *Galinsoga boliviensis* (EN), both globally threatened, while *Grammitis pseudotenuicula* (NE) and *Tillandsia mollis* (NE) are potentially threatened, and *Begonia pearcei* (NE) a range-restricted species.

Habitat and Geology

Belonging to the Sub-Andean zone and the Eastern Cordillera, topographically, the site is characterised by mountains, ridges, and deep valleys ranging from 500 to 3,300 m a.s.l. (SERNAP 2006c). The site contains part of the La Plata River hydrological system, where the Grande de Tarija and Bermejo rivers converge. Two ecoregions meet within the area: the Bolivian-Tucuman Forest and the *Chaco Serrano* (Ibisch *et al.* 2003). The external buffer zone acts as a transition between the Bolivian-Tucuman Forest and the Southern Puna (SERNAP 2006c). According to the IUCN habitat classification scheme (IUCN 2012), these vegetation types are categorised as Subtropical/Tropical Dry Forest, Subtropical/Tropical Moist Montane Forest, and Subtropical/Tropical High-Altitude Shrubland (Appendix 2).

Conservation Challenges

The IPA site is furthermore a recognised Key Biodiversity Area (KBA) for its role in protecting populations of the Andean Bear (*Tremarctos ornatus*), a species listed as Vulnerable (VU) on the IUCN Red List (KBA 2025p). However, studies by Leaños (2021) indicate that from 1986 to 2020 approximately 4,153 hectares were lost within the area, representing a deforestation rate of 134 hectares per year. The reserve is situated within, Bolivia's primary hydrocarbon region. The situation is exacerbated by the fact that four exploitation zones (San Telmo Norte, San Telmo Sur, Astillero, and Churumas) have been authorised within the protected area, representing approximately 35.6% of its total surface area (Gaite 2019, CEDIB 2024).

While threats have been identified within the site, its botanical characteristics reinforce its conservation value as a priority area for plant preservation. It contributes significantly to the maintenance of regional flora, as many species are either useful or representative of Cloud Forests and are restricted to this specific region.

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Montane Forest	67	Major
Subtropical/Tropical Dry Forest	29	Major
Subtropical/Tropical High Altitude Shrubland	4	Unknown

Threat

Threat	Severity	Situation
Housing & urban areas	Medium	Ongoing - stable
Small-holder farming	Medium	Ongoing - stable
Annual & perennial non-timber crops	Medium	Ongoing – declining
Logging & wood harvesting	High	Ongoing - stable
Oil & gas drilling	High	Ongoing - stable

Land Use

Land use type	Percent coverage	Importance
Nature conservation	96	Major
Agriculture (arable)	3	Major
Extractive industry	–	Major

Protected areas and other conservation designations

Protected area type	Names (s) of protected area (s)	Relationship between the site and the protected area (% of overlap)	Area of overlap (km^2)
National Nature Reserve	Tariquía National Flora and Fauna Reserve	Protected/conservation area matches IPA (100%)	2,473
Key Biodiversity Area	KBA Tariquía	Protected/conservation area matches IPA (100%)	2,473

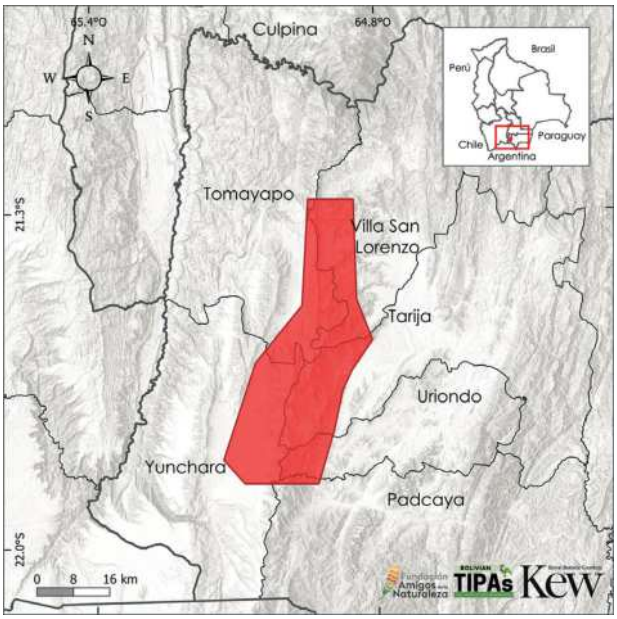
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Anacardiaceae	*Myracrodruon urundeuva*	A(ii)	VU	✓					abundant
Asteraceae	*Galinsoga boliviensis*	A(i)	EN	✓	✓		✓		scarce
Begoniaceae	*Begonia pearcei*	A(iv)	NE	✓	✓	✓	✓		scarce
Bromeliaceae	*Tillandsia mollis*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Convolvulaceae	*Ipomoea spinulifera*	A(i)	EN	✓	✓		✓		scarce
Meliaceae	*Cedrela angustifolia*	A(i)	VU	✓					occasional
Polypodiaceae	*Grammitis pseudotenuicula*	A(iii)	NE	✓	✓	✓	✓		rare

CORDILLERA DE SAMA BIOLOGICAL RESERVE

Authors: Maira T. Martinez-Ugarteche, Elmer Cuba-Orozco, Máximo Condori Sanguino, Alain Medina Ramallo, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA040	Department/ Province	Tarija: Arce, Avilez, Cercado, Méndez
Latitude	-21.61359	Longitude	-64.95207
Minimum altitude (m.a.s.l.)	2,016	Maximum altitude (m.a.s.l.)	4,636
Area (km^2)	1,068	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv)



IPA Assessment – Rationale

The Cordillera de Sama Biological Reserve is a protected area of paramount importance due to its hydrological resources, notably the Tajzara basin, which is a RAMSAR site providing essential habitat and refuge for Andean and migratory waterfowl. Furthermore, the Cordillera de Sama possesses a significant diversity of native flora, including many species of high socioeconomic value and endemic, globally threatened species. The site harbours 22 endemic taxa, five of which are globally threatened and one nationally threatened. Two additional native species are categorised as Vulnerable (VU); and another seven range-restricted endemic species grow here, although none of these have yet been evaluated for IUCN extinction risk. Additionally, 86 useful plant species are recorded at the site.

Site Description

The Cordillera de Sama Biological Reserve is located west of the city of Tarija. The boundaries of the IPA site correspond to the official limits of the reserve. The Cordillera de Sama concentrates vital water resources: in the highlands, the Tajzara basin comprises both permanent and seasonal lagoons; to the north-east lies the Tamayapo basin; and on the border with El Cardón to the west, it includes tributaries of the San Juan del Oro River.

Botanical Significance

The Cordillera de Sama is notable for sheltering species that are globally threatened and restricted to this IPA site. This is exemplified by the critically endangered *Baccharis pumila*, a species known exclusively from the Cordillera de Sama, as well as *Dioscorea calderillensis* and *D. tarijensis*, both considered Endangered (EN), which maintain a large proportion of their populations within this area. Other globally threatened species include *Puya minima* and *Stevia calderillensis* (VU), along with *Ennealophus boliviensis* (VU), which is threatened at a national level.

The site also hosts 20 endemic species, including threatened, range-restricted, or non-evaluated taxa, such as *Oxypetalum boliviense* (NT), *Stevia eclipes* (NE), and *Eryngium andicolum* (NE). The

View of the mountain range, Cordillera de Sama © Elmer Cuba

latter is represented in both the Cordillera de Sama and the Tarija Valleys, occurring on rocky and humid slopes. Appendix 3 lists the 86 useful species growing within the Cordillera de Sama IPA. Among these is *Polylepis crista-galli*, a native species of Argentina and Bolivia, considered Vulnerable (VU) due to its fragmented populations and habitat loss, particularly in Bolivia, where it faces intense pressure from its use as fuel and timber (Araujo-Murakami *et al.* 2024).

Eryngium andicolum © Trustees RBG Kew/Maira Martinez

Eryngium andicolum © Trustees RBG Kew/Maira Martinez

Relict of Khewiñar, Calderilla River © Trustees RBG Kew/Maira Martinez

Grasslands and rocky slopes, Calderilla © Trustees RBG Kew/Maira Martinez

Grasslands, old road between Tarija and Iscayachi © TrusteesRBG Kew/Maira Martinez

Surroundings of the Tajzara Lagoon © Trustees RBG Kew/Maira Martinez

Habitat and Geology

The Cordillera de Sama consists of a mountain range forming part of the Eastern Cordillera, with peaks reaching 4,700 m a.s.l. and valleys descending to 1,950 m a.s.l. (PEA Bermejo-SERNAP 2004). Within the Cordillera de Sama, are recorded the Bolivian-Tucuman Forest, Inter-Andean Dry Forests, and the Northern Puna (Ibisch *et al.* 2003). According to the vegetation classification and Ecological Systems of Bolivia (Navarro & Ferreira 2011, Navarro 2011) and the IUCN habitat classification scheme (IUCN 2012), this site is predominantly covered by Subtropical/Tropical Moist Montane Forest and Subtropical/Tropical High-Altitude Grassland. The Moist Montane Forest is largely composed of the Southern Bolivian-Tucuman *Khewiñar*: the *Escallonia hypoglauca-Polylepis crista-galli* series, while the High-Altitude Grasslands encompass high-Andean Puna *pajonales* (Navarro & Ferreira 2011, Navarro 2011) (Appendix 2).

Conservation Challenges

The primary objective of the Cordillera de Sama Biological Reserve is to protect its watersheds to ensure the supply of potable water for the city of Tarija, in addition to preserving its diverse ecosystems and protecting endangered flora and fauna (SERNAP 2017).

In the recent Bolivian update of Key Biodiversity Areas (KBA), the site was recorded as Cordillera de Sama – Tajzara, based on the presence of threatened birds and the RAMSAR Tajzara Basin site (KBA 2025q).

The designation of the Cordillera de Sama as an Important Plant Area (IPA) highlights and provides essential data for the threatened flora within its boundaries, as well as for the high number of endemic and useful plants. Conversely, its ecosystems remain vulnerable thanks to anthropogenic activities, such as land-use change

and overgrazing by cattle, sheep, and camelids, which are increasing and impacting various zones of the reserve. Other challenges include *pajonal* fires, erosive processes, aggregate extraction, and agricultural activities leading to intensive cultivation and the use of chemical fertilizer (Moya *et al.* 2021).

Given its botanical characteristics and the importance of its ecosystems for water supply and other resources, efforts must focus on strengthening environmental education and recognising the vital importance of these ecosystems for both biodiversity and the populations living within and around the reserve.

Sand dunes on the south side of the Tajzara Lagoon © Trustees RBG Kew/Maira Martinez

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical Moist Montane Forest	44	Major
Subtropical/Tropical High Altitude Grassland	34	Major
Subtropical/Tropical High Altitude Shrubland	21	Major
Subtropical/Tropical Dry Forest	1	Medium
Other	1	Minor

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	High	Ongoing - stable
Annual & perennial non-timber crops	High	Ongoing - stable
Livestock farming & ranching - Nomadic grazing	High	Ongoing - stable
Transportation & service corridors - Roads & railroads	Medium	Past - likely to return
Fire & fire suppression - Increase in fire frequency/intensity	High	Ongoing - stable
Logging & wood harvesting	High	Ongoing - trend unknown

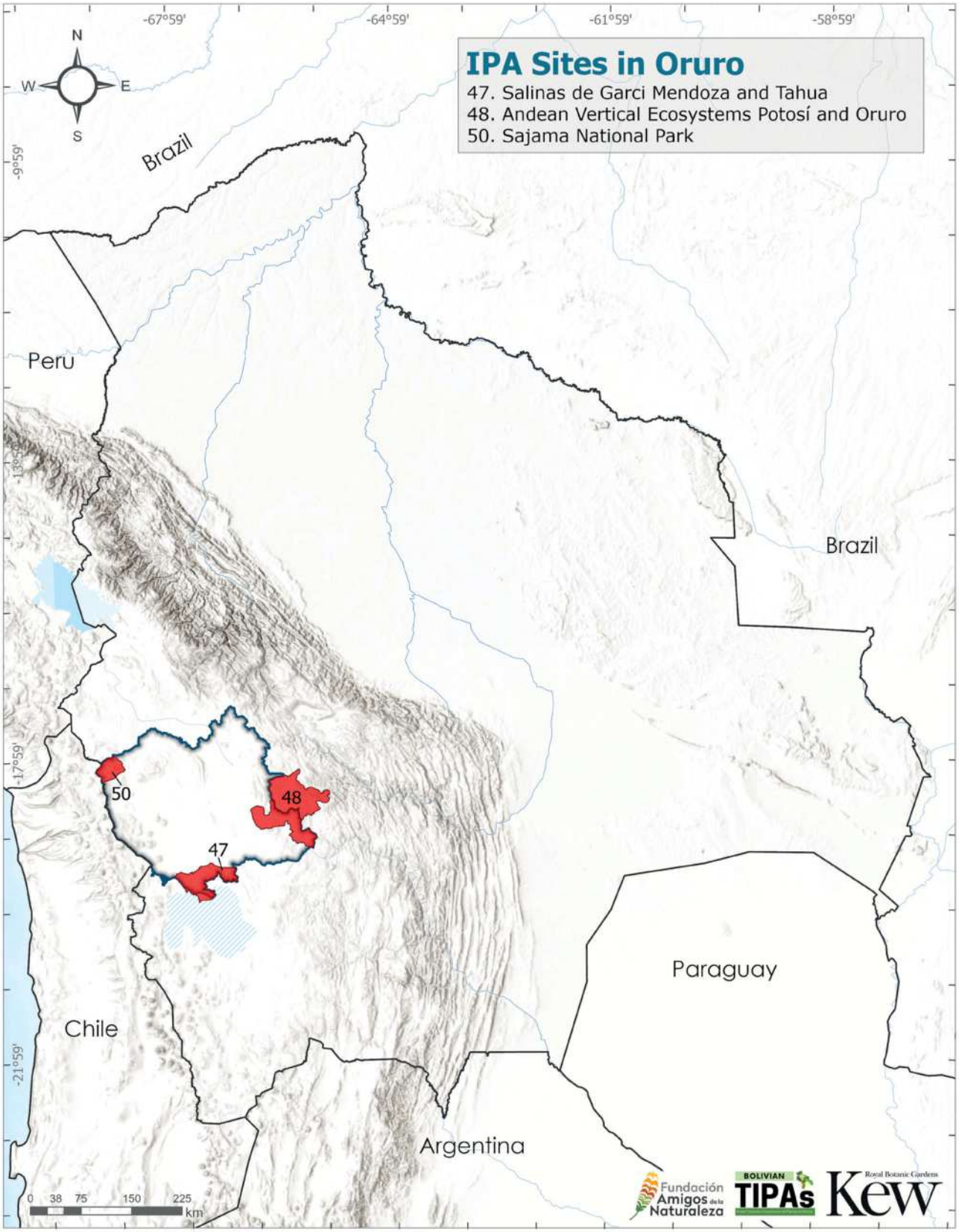
Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	100	Major
Agriculture (arable)	—	Major
Agriculture (pastoral)	—	Major

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
National Nature Reserve	Cordillera de Sama Biological Reserve	Protected/conservation area matches IPA (100%)	1,068
Key Biodiversity Area	Sama Mountain Range - Tajzara	Protected/conservation area matches IPA (69%)	1,068
Ramsar site	Tajzara Basin	IPA overlaps with protected/conservation area (60%)	277

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Anacardiaceae	*Schinus tarijensis*	A(iv)	NE	✓	✓	✓			scarce
Asteraceae	*Baccharis pumila*	A(i)	CR	✓	✓	✓	✓	✓	rare
Asteraceae	*Stevia calderillensis*	A(i)	VU	✓	✓	✓	✓		scarce
Asteraceae	*Stevia eclipes*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Asteraceae	*Stevia glomerata*	A(iii)	NE	✓	✓	✓	✓		scarce
Bromeliaceae	*Puya minima*	A(i)	VU	✓	✓	✓	✓		occasional
Dioscoreaceae	*Dioscorea calderillensis*	A(i)	EN	✓	✓	✓	✓		scarce
Dioscoreaceae	*Dioscorea tarijensis*	A(i)	EN	✓	✓	✓	✓		scarce
Fabaceae	*Amicia micrantha* subsp. *tarijensis*	A(iv)	NE	✓	✓	✓	✓		unknown
Iridaceae	*Ennealophus boliviensis*	A(ii), A(iii)	VU	✓	✓	✓	✓		scarce
Lamiaceae	*Clinopodium pilosum*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Onagraceae	*Oenothera tarijensis*	A(iii)	NE	✓	✓	✓	✓	✓	scarce
Orobanchaceae	*Agalinis humilis*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Rosaceae	*Polylepis crista-galli*	A(i)	VU	✓	✓	✓			occasional
Verbenaceae	*Citharexylum joergensenii*	A(i)	VU	✓	✓	✓	✓		occasional

ORURO

Nevado Sajama © Marcelo Char


IPA Sites in Oruro
47. Salinas de Garci Mendoza and Tahua
48. Andean Vertical Ecosystems Potosí and Oruro
50. Sajama National Park
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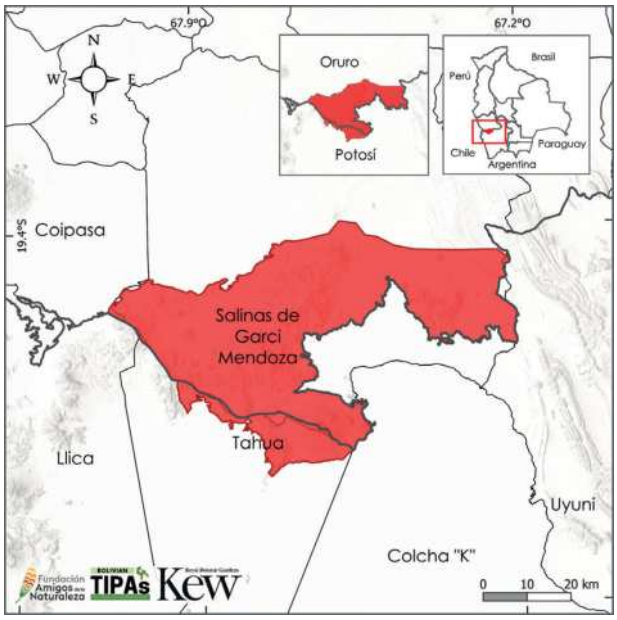
SALINAS DE GARCI MENDOZA AND TAHUA

Authors: Liliana Arroyo-Herbas, Mónica R. Zeballos Montes de Oca, Elmer Cuba-Orozco, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA047	Department/ Province	Oruro: Ladislao Cabrera Potosí: Daniel Campos
Latitude	-19.63643	Longitude	-67.66258
Minimum altitude (m.a.s.l.)	3,613	Maximum altitude (m.a.s.l.)	5,321
Area (km^2)	2,328	Qualifying IPA criteria	A(ii)



IPA Assessment – Rationale

The geographical position of the Salinas de Garci Mendoza and Tahua IPA site renders it a vital zone of connectivity between the salt flats of the Puna region. Despite the extreme environmental conditions of the site, it shelters five plant species threatened nationally and 14 useful plant species, one of which is recognised as a crop wild relative of significant nutritional value in the High Andean region.

The site is also of critical importance to the vulnerable ecosystems that it protects, such as the mesophytic-phreatophytic *tolares of the Altiplano* (dominated primarily by *Parastrephia lepidophylla*, which is intensively harvested for firewood) and *bofedales* (high-altitude peatlands), which act as essential reservoirs and hydrological regulators in otherwise arid desert zones.

Site Description

The Salinas de Garci Mendoza and Tahua site is situated in the south-west of the Bolivian Altiplano, within the Department of Oruro (which contains 90% of its surface area) and the Department of Potosí (GADO 2016). Relative to other conservation priority areas, it is bordered to the north-west by the Salar de Coipasa and to the south-east by the Salar de Uyuni. Due to its unique geographical features, the site is established as a significant tourist attraction, featuring salt flats, the Tunupa Volcano, and the Alcaya Archaeological Park, where ethnic groups such as the Karankas, Urus, Puquinas, Uriquillas, and Aymaras once coexisted (GMSGM 2016).

Botanical Significance

The botanical significance of Salinas de Garci Mendoza and Tahua is rooted in the 18 useful plant species protected within the site. Among these are *Parastrephia lepidophylla* (EN), *Lampayo castellanii* (VU), and *Trichocereus atacamensis* (EN), all nationally threatened species with part of their populations growing within the area. *Chenopodium quinoa* (NE) is also recorded as a useful plant. It is a crop wild relative (CWR) and holds immense importance due to its nutritional value in the High Andean region.

Overview of the landscape of Salinas de Garci Mendoza and Tahua © Elmer Cuba

While the site does not currently boast a high number of species, partly due to a lack of botanical exploration, it is located within the Xerophytic Puna. This region contains critical and vulnerable ecosystems, notably the mesophytic-phreatophytic tolares of the Altiplano dominated by various *Parastrephia* species, particularly *P. lepidophylla*. These are heavily exploited for fuel (firewood). Additionally, the bofedales serve as vital water reservoirs and regulators in hyper-arid zones (MMAyA 2012).

Habitat and Geology

Topographically, the area is characterised by a complex of plains, plateaus, hills, mountains, foothills, salt flats, and saline lagoons belonging to the Altiplano region and the Western Cordillera (MDSyP 2002). The vegetation is characterized

Lampayes, with quinoa crops in the background © Monica Zeballos

Oenothera nana © Alexander Parada

by extensive tolar shrublands, *bofedales*, and brackish and calcareous meadows pertaining to the Southern Puna ecoregion (Navarro & Ferreira 2011, Navarro 2011, GAMSGM 2016). According to the IUCN habitat classification scheme (IUCN 2012), these vegetation types are categorised as Subtropical/Tropical High-Altitude Shrubland, Subtropical/Tropical High-Altitude Grassland, and Permanent Saline, Brackish, or Alkaline Lakes (Appendix 2).

Conservation Challenges

The expansion of the agricultural frontier, driven by increased quinoa cultivation and the introduction of heavy machinery (tractors), is causing loss of native habitats and changes to the floristic composition of the site (Zeballos 2025 pers. obs.). The Department of Oruro currently manages four conservation areas, including Sajama National Park to the north and Lake Poopó to the east. However, a significant conservation gap exists towards the southern zone. The consolidation of Salinas de Garci Mendoza and Tahua as a priority site for the plants and habitats of the Southern Puna would act as a vital conservation corridor between the Salar de Uyuni and the Salar de Coipasa. Furthermore, areas of high interest such as the Tunupa Volcano remain poorly understood botanically. Increased research efforts are likely to result in a higher number of recorded species.

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical High Altitude Shrubland	89	Major
Subtropical/Tropical High Altitude Grassland	10	Major
Permanent saline, brackish or alkaline lakes	1	Major

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Low	Ongoing - stable
Livestock farming & ranching	High	Ongoing - stable
Small-holder grazing, ranching or farming	High	Ongoing - stable

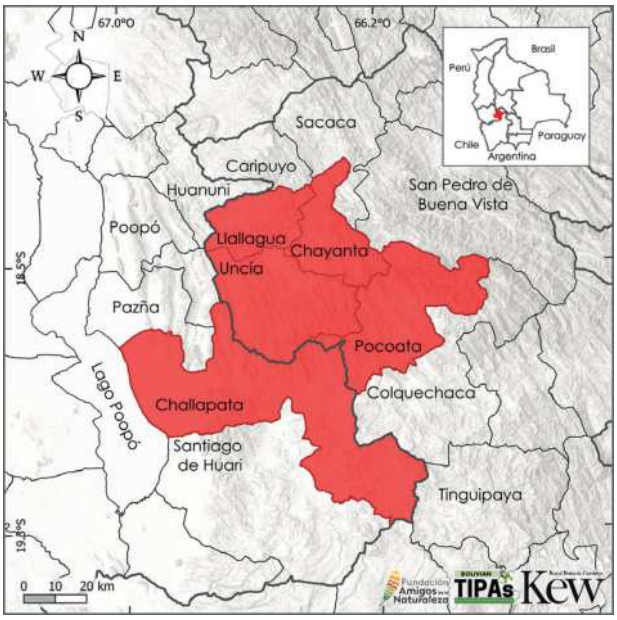
Land Use		
Land use type	**Percent coverage**	**Importance**
Residential/urban development	—	Major
Agriculture (pastoral)	—	Unknown

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥1% global population**	**≥5% national population**	**1 of 5 best sites at national level**	**≥10% global population**	**Entire global population at the site**	**Abundance at site**
Apiaceae	*Azorella compacta*	A(ii)	EN	✓	✓	✓			frequent
Asteraceae	*Parastrephia lepidophylla*	A(ii)	EN	✓		✓			scarce
Balanophoraceae	*Ombrophytum subterraneum*	A(ii)	EN	✓					unknown
Cactaceae	*Trichocereus atacamensis*	A(ii)	EN	✓		✓			frequent
Verbenaceae	*Lampayo castellani*	A(ii)	VU	✓					frequent

ANDEAN VERTICAL ECOSYSTEMS POTOSÍ AND ORURO

Authors: Oriana A. Lino-Villalba, Elmer Cuba-Orozco, Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas & Bente B. Klitgaard

International code	BOLTIPA048	Department/ Province	Potosí: Rafael Bustillo y Chayanta Oruro: Abaroa
Latitude	-18.71598	Longitude	-66.44226
Minimum altitude (m.a.s.l.)	2,481	Maximum altitude (m.a.s.l.)	5,219
Area (km^2)	6,061	Qualifying IPA criteria	A(i), A(iii)



IPA Assessment – Rationale

The Andean Vertical Ecosystems (EVA) of Potosí and Oruro qualify as an Important Plant Area (IPA) due to being a scientifically under-explored region with considerable potential diversity across its contrasting landscapes. Furthermore, the site holds infinite value for indigenous peoples who maintain a profound cultural and ancestral connection with this territory, underscoring the urgent need for its conservation. The area safeguards 13 endemic species, seven of which are globally threatened or at risk of extinction. Additionally, the site provides habitat for 51 useful plant species.

Site Description

This IPA site is strategically located in north-western Potosí and south-eastern Oruro, a region of high ecological value within the Andean Altiplano. The area is inhabited by 13 indigenous communities, ten of which live in the Department of Potosí and three in Oruro (MMAyA 2017).

Botanical Significance

The botanical importance is due to the concentration of endemic species, notably the globally threatened *Festuca copei* (VU), *Hieronymiella cardenasii* (EN), *Pyrolirion boliviense* (EN), and *Tillandsia camargoensis* (VU). Furthermore, the site hosts species restricted to the site, which increases its conservation priority. These include *Nototriche coactilis* (EN), *N. trollii* (CR), *N. agyna* (DD), and *Stevia potosiensis* (CR). It is important to note that few records exist for these species, highlighting a significant information gap and the necessity for further research to ensure their effective protection. Other endemic species growing on the site include *Baccharis potosiensis* (LC), *Ovidia sericea* (LC), and *Puya glabrescens* (NE). Additionally, it protects a high diversity of useful plants (Appendix 3), most notably *Caiophora andina* (LC), *Polylepis hieronymi* (EN), *P. tomentella* (NT), and *Senna aymara* (LC).

Habitat and Geology

Geographically, 90% of the area belongs to the Eastern Cordillera, while the remaining 10%

Panoramic view of the surroundings of the Chupi Chullpa Community, municipality of Uncía © Elmer Cuba

Polylepis tomentella © Trustees RBG Kew/Maira Martinez

pertains to the basin of the Altiplano. The Eastern Cordillera is composed of 70% ridges (*serranía*), 18% mountains, 6% plateaus, 2% plains, and 2% hills, and is distinguished by its mineral richness. The Altiplano comprises 82% plains, 4% foothills, and 4% water bodies (MDSyP 2002, MMAyA 2017). The vegetation of the site includes *Polylepis* forests, prepuna forests, *pajonales* (high-altitude grasslands), and shrublands (Navarro & Ferreira 2011, Navarro 2011, Appendix 2). According to the IUCN habitat classification scheme (IUCN 2012), these are categorised as Subtropical/Tropical High-Altitude Shrubland, Subtropical/Tropical High -Altitude Grassland, Subtropical/Tropical Moist Montane Forest, and Subtropical/Tropical Dry Forest.

Conservation Challenges

The site faces a long history of resource exploitation, particularly the use of water for mining. Activities such as livestock farming, intensive agricultural practices (clearing, burning, and overgrazing), and mining degrade ecosystems, contaminate water sources and soils, and impede natural recovery. These pressures, combined with extreme climatic conditions, lead to continuous deterioration and the risk of desertification. The overexploitation of flora (e.g., *tolares*) and fauna, alongside adverse

Livichuco community, municipality of Challapata, at an altitude of almost 4,100 m.a.s.l. In the background, part of the Wawachani mountain range can be seen. © Elmer Cuba

environmental factors, has resulted in habitat fragmentation and population declines. There is a notable lack of documentation regarding biodiversity and local traditional knowledge, making further studies essential for proper management and conservation. Nevertheless, the site remains a critical habitat for various useful plants vital to the *ayllus* (indigenous communities) of northern Potosí and south-eastern Oruro, used for medicine, forage, and food. The degree of cultural knowledge regarding these resources is exceptionally high (MMAyA 2017). Notably, three conservation areas overlap within the boundaries of the EVA Potosí and Oruro IPA site.

Crops on moderately sloping hillsides, Chupi Chullpa community, municipality of Uncía © Elmer Cuba

Agricultural areas in the Churacasi community, notable for their potato, bean, corn and apple crops, municipality of Chayanta © Elmer Cuba

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical High Altitude Shrubland	85	Major
Subtropical/Tropical High Altitude Grassland	8	Major
Subtropical/Tropical Moist Montane Forest	1	Major
Subtropical/Tropical Dry Forest	1	Minor

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Medium	Ongoing - stable
Small-holder farming	Medium	Ongoing - stable
Small-holder grazing, ranching or farming	Medium	Ongoing - stable
Mining & quarrying	High	Ongoing - stable
Hunting & collecting terrestrial animals	Medium	Ongoing - trend unknown
Gathering terrestrial plants	High	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Agriculture (arable)	2	Major
Agriculture (pastoral)	—	Major
Extractive industry	—	Major
Harvesting of wild resources	—	Unknown

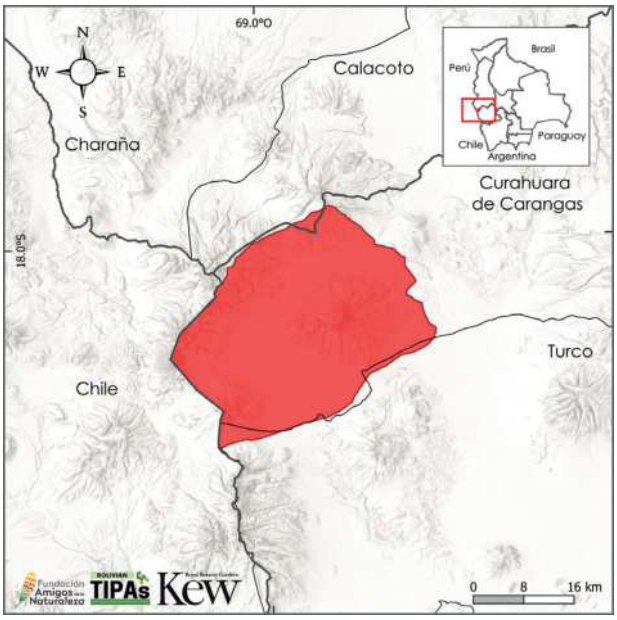
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Ramsar site	Lagos Poopo y Uru Uru	El área protegida/de conservación abarca las IPA (4%)	388
Key Biodiversity Area	KBA Lagos Poopo y Uru Uru	El área protegida/de conservación abarca las IPA (4%)	388
Key Biodiversity Area	KBA Cerro Azanaques	El área protegida/de conservación abarca las IPA (51%)	242

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥1% global population**	**≥5% national population**	**1 of 5 best sites at national level**	**≥10% global population**	**Entire global population at the site**	**Abundance at site**
Amaryllidaceae	*Hieronymiella cardenasii*	A(i)	EN	✓	✓	✓	✓		rare
Amaryllidaceae	*Pyrolirion boliviense*	A(i)	EN	✓	✓				occasional
Asteraceae	*Stevia potosiensis*	A(i)	CR	✓	✓	✓	✓	✓	occasional
Bromeliaceae	*Tillandsia camargoensis*	A(i)	VU	✓	✓	✓	✓		occasional
Malvaceae	*Nototriche agyna*	A(iii)	DD	✓	✓	✓	✓	✓	rare
Malvaceae	*Nototriche coactilis*	A(i)	EN	✓	✓	✓	✓	✓	rare
Malvaceae	*Nototriche trollii*	A(i)	CR	✓	✓	✓	✓	✓	rare
Poaceae	*Festuca copei*	A(i)	VU	✓	✓	✓	✓		occasional
Rosaceae	*Polylepis hieronymi*	A(i)	EN	✓					occasional

SAJAMA NATIONAL PARK

Authors: Oriana A. Lino-Villalba, Mónica R. Zeballos Montes de Oca, Maira T. Martinez-Ugarteche, Liliana Arroyo-Herbas & Bente B. Klitgaard

International code	BOLTIPA050	Department/ Province	Oruro: Sajama
Latitude	-18.12285	Longitude	-68.94496
Minimum altitude (m.a.s.l.)	3,948	Maximum altitude (m.a.s.l.)	6,577
Area (km^2)	950	Qualifying IPA criteria	A(i), A(ii)



IPA Assessment – Rationale

Sajama National Park qualifies as an Important Plant Area (IPA) due to its ecological and scenic value, which integrates snow-capped peaks, arid landscapes, and a unique flora. Evidence of its botanical significance includes the presence of four native species at risk of global extinction and six at risk of national extinction. Furthermore, this site shelters 22 useful species. The conservation of Sajama is critical, not only for these taxa but also because the site protects restricted species specific to the zone, rendering its ecosystem an essential heritage.

Site Description

The IPA site was demarcated according to the statutory boundaries of Sajama National Park, one of the first protected areas established in Bolivia. It is located in the north-west of Oruro, within the municipalities of Curahuara de Carangas and Turco. The park features the Sajama volcano, one of the highest peaks in the country. The local communities within the site include Caripe, Lagunas, Manasaya, Papelpampa, and Sajama. Due to its high elevation and sparse cloud cover, the area experiences high levels of solar radiation throughout the year (Beck *et al.* 2010).

Botanical Significance

The botanical significance of the area lies in the protection of native and globally threatened species: *Nototriche sajamensis* (VU) and *N. turritella* (VU), both of which are associated with volcanic soils, as well as *Pycnophyllum spathulatum* (VU) and *Diplostephium cinereum* (EN).

Furthermore, the site hosts species threatened at the national level, such as *Azorella compacta* (EN), *Mutisia lanigera* (VU), *Xenophyllum digitatum* (EN), *Nototriche hillii* (VU), *Parastrephia lepidophylla* (EN), and *Zameioscirpus atacamensis* (EN).

Additionally, 22 useful species are found within the site, including *Baccharis tola* (NE), *Ephedra americana* (LC), *Parastrephia quadrangularis* (LC), and *Polylepis tarapacana* (NT) (Appendix 3).

Habitat and Geology

The IPA site is situated within the Andean Western Cordillera. The landscape is distinguished by

Nototriche turritella © Alexander Parada

Polylepis tarapacana © Alexander Parada

the predominance of volcanoes, as well as high plateaus and mountain ranges resulting from ancient volcanic eruptions. It features high-Andean lagoons and *bofedales* (Beck *et al.* 2010). The dominant vegetation formations are represented by open tolar shrublands with *Parastrephia* spp., stands of *Polylepis tarapacana*, compact cushions of Azorella, *pajonales* (grasslands), wet meadows, and *bofedales* (Navarro & Ferreira 2011, Navarro 2011, Appendix 2). According to the IUCN habitat classification scheme (IUCN 2012), these are categorised as Subtropical/Tropical High-Altitude Grassland and Subtropical/Tropical High-Altitude Shrubland (Appendix 2).

Azorella compacta cushion © Mónica Zeballos

Tolar shrublands with *Parastrephia* spp. on alluvial plains © Mónica Zeballos

Stands of *Polylepis tarapacana* on slopes © Mónica Zeballos

Pycnophyllum cushion formations © Mónica Zeballos

Conservation Challenges

This site represents both a natural and cultural heritage due to its imposing landscapes and its status as a hub for ecotourism. The extensive rearing of camelids (llamas and alpacas) is a central economic activity for local communities. However, overgrazing exerts significant pressure on native vegetation, affecting *bofedales* and grasslands, leading to landscape degradation and the invasion of pioneer species of the genus *Pycnophyllum*, which forms dense cushions. Local inhabitants possess extensive knowledge regarding the use of plants, with medicinal application being the most common. There is also evidence of the overexploitation of *Diplostephium cinereum* (EN), known locally as *K'oa*, which is used in ceremonies for purification and rituals of gratitude (Beck *et al.* 2010).

Camelids grazing © Eva Mollinedo

Wetlands degraded by overgrazing © Mónica Zeballos

Nevado Sajama © Marcelo Char

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical High Altitude Grassland	52	Major
Subtropical/Tropical High Altitude Shrubland	48	Major

Threat		
Threat	**Severity**	**Situation**
Tourism & recreation areas	Medium	Ongoing - stable
Nomadic grazing	High	Ongoing - stable
Gathering terrestrial plants	Medium	Ongoing - stable
Problematic native species/diseases	Medium	Ongoing - stable

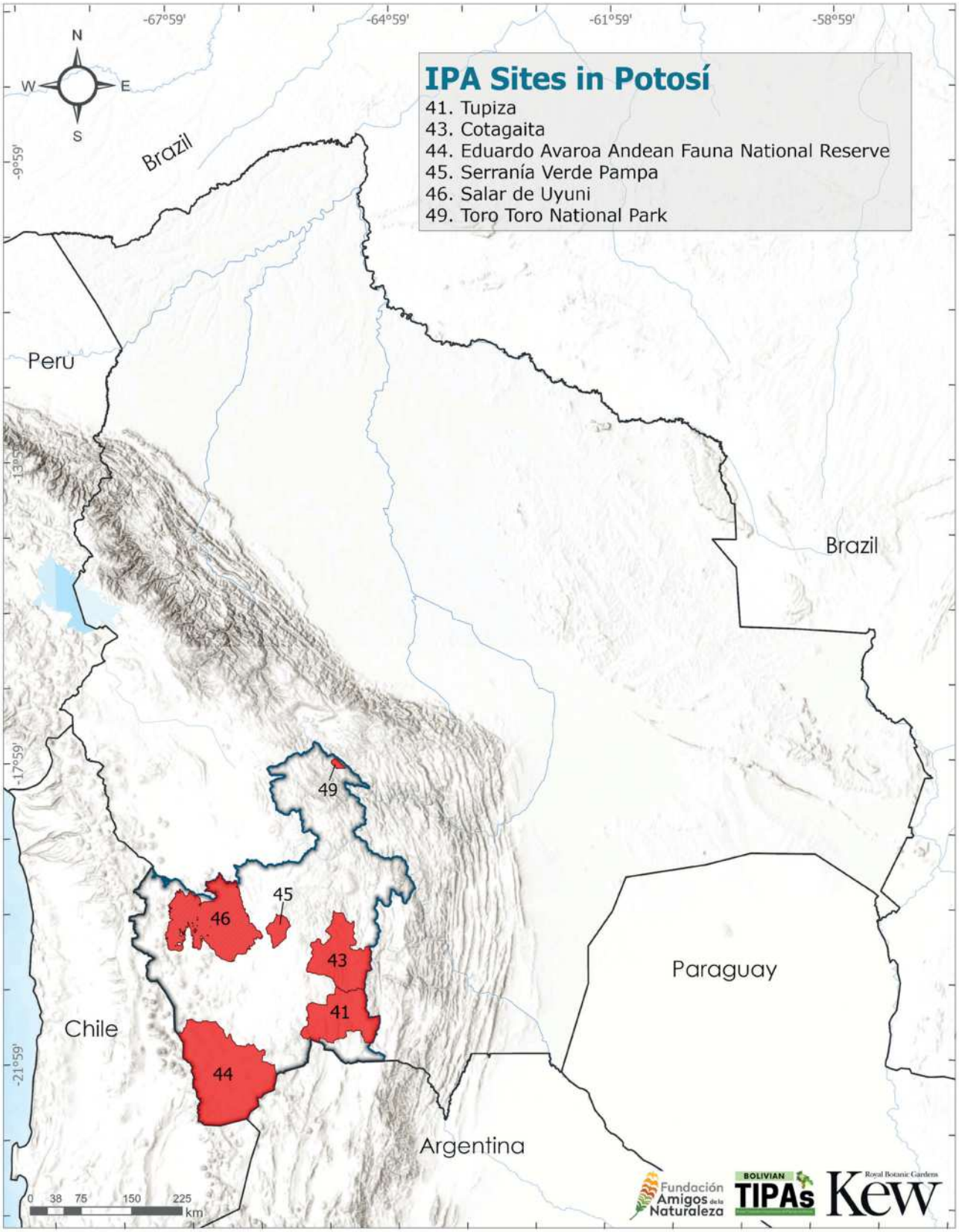
Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	100	Major
Agriculture (arable)	—	Major
Tourism/recreation	—	Major
Harvesting of wild resources	—	Minor

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Key Biodiversity Area	KBA Sajama	Protected/conservation area matches IPA (100%)	950
National Park	PN Sajama	Protected/conservation area matches IPA (100%)	947

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Asteraceae	*Diplostephium cinereum*	A(i)	EN	✓					occasional
Asteraceae	*Mutisia lanigera*	A(ii)	VU	✓					occasional
Asteraceae	*Parastrephia lepidophylla*	A(ii)	EN	✓					occasional
Asteraceae	*Xenophyllum digitatum*	A(ii)	EN						scarce
Caryophyllaceae	*Pycnophyllum spathulatum*	A(i)	VU	✓		✓			occasional
Malvaceae	*Nototriche hillii*	A(ii)	VU						rare
Malvaceae	*Nototriche sajamensis*	A(i)	VU	✓					rare
Malvaceae	*Nototriche turritella*	A(i)	VU	✓		✓			occasional

POTOSÍ

Vegetation surrounding the Salar de Uyuni © Daniel Aguilar


IPA Sites in Potosí
41. Tupiza
43. Cotagaita
44. Eduardo Avaroa Andean Fauna National Reserve
45. Serranía Verde Pampa
46. Salar de Uyuni
49. Toro Toro National Park
-67°59'
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Fundación Amigos de la Naturaleza
BOLIVIAN TIPAs
Royal Botanic Gardens Kew

TUPIZA

Authors: Maira T. Martinez-Ugarteche, Freddy S. Zenteno-Ruiz, Araceli Laura Moya Huanca, David Villalba-Vargas, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA041	Department/ Province	Potosí: Sur Chichas
Latitude	-21.49739	Longitude	-65.80427
Minimum altitude (m.a.s.l.)	2,420	Maximum altitude (m.a.s.l.)	5,333
Area (km^2)	6,196	Qualifying IPA criteria	A(i), A(ii), A(iii), A(iv)

IPA Assessment – Rationale

Tupiza is an Important Plant Area (IPA) that possesses a significant diversity of native plants, many with great socioeconomic value, and alongside endemic globally threatened plant species. The site harbours 19 endemic taxa, of which seven are globally threatened, two are threatened nationally, and nine are range-restricted. Additionally, 46 species of useful plants have been recorded on the site.

Site Description

The Tupiza site is located within the Potosí Department, with its boundaries encompassing the entire territory of the Tupiza municipality. It is one of the southernmost sites in the country, situated in a zone characterised by deep valleys and variable hills, with an altitudinal range extending from 2,420 m to 5,320 m above sea level (Zenteno-Ruiz *et al.* 2011).

Botanical Significance

The site contains species at risk of extinction globally and nationally, all endemic and essentially restricted to the region of this IPA site. for example, *palqui* (*Pseudosenegalia feddeana* (EN)) is restricted to Tupiza and the IPAs of Camargo, Villa Abecia, and Las Carreras to the east, and Cotagaita to the north. This shrub, characteristic of the area, grows in zones with dry and rocky soil. Another notable species is *Puya weddelliana* (VU), a terrestrial plant found primarily in open areas with rocky substrates. *Tillandsia camargoensis* and *Trompettia cardenasiana* are two other endemic species categorised as Vulnerable (VU), both of which are primarily represented within this IPA.

Of the nationally threatened species, *Fabiana fiebrigii* (VU) and *Gomphrena trollii* (EN) have 50% of their populations within the Tupiza site. Furthermore, *Puya yakespala* has been recorded here; yet previously regarded as endemic to Argentina (where it is considered a threatened species). It grows in the Puna and flowers during winter in the high mountains (Bartl 2019, Velásquez-Noriega *et al.* 2023). Additionally, the high diversity of Cactaceae species recorded here underscores the need for the conservation of

View from El Sillar towards Tupiza © Trustees RBG Kew/Maira Martinez

biodiversity in southern Bolivia, particularly within the context of the Prepuna vegetation formation, which currently lacks national protection.

Of the total 46 useful plant species recorded in the Tupiza IPA, seven are endemic, some of which are categorised as threatened nationally and globally, notably *Festuca boliviana* (VU), a grass of significant forage value, and *Gomphrena trollii* (EN), locally known as 'peregrina', which is employed in traditional medicine (Zenteno-Ruiz *et al.* 2011).

Habitat and Geology

Situated upon the Eastern Cordillera and the Sub-Andean zone, the landscape is composed of mountain ridges (*serranías*), foothills, hills, and plains (MDSyP 2002). According to the vegetation classification and Ecological Systems of Bolivia

Habit of *Puya weddelliana* © Freddy Zenteno

Inflorescence of *Puya weddelliana* © Freddy Zenteno

Trompettia cardenasiana © FAN/Oriana Lino

Gomphrena trollii © Freddy Zenteno

(Navarro & Ferreira 2011, Navarro 2011), and the IUCN habitat classification scheme (IUCN 2012), the primary habitat of the site is Subtropical/Tropical High-Altitude Shrubland. This habitat encompasses altimontane and high-Andean *pajonales* and shrublands, as well as the dry Prepuna forest of the Tarija-Bermejo river basin: specifically, the preliminary *Gochnatia curviflora-Viposia integerrima* series (Navarro 2011) (Appendix 2).

Scrubland, Salo Wawañusca © Freddy Zenteno

Grasslands of El Sillar © Trustees RBG Kew/Maira Martinez

Grasslands, descending from Sillar towards Tupiza © Maira Martinez

Grasslands, San Vicente Viewpoint © Trustees RBG Kew/Maira Martinez

Conservation Challenges

Tupiza exhibits high floristic diversity and predominantly hosts the Prepuna formation, which is characterised by an absence of protected areas across its extent and constitutes one of the ecological formations with the lowest representation in the national conservation system (López 2000). This region has also been subject to intensive historical use, making it particularly vulnerable to pressures derived from various socioeconomic activities. Among the most significant impacts are soil degradation processes, especially erosion.

Currently, with all the available botanical information, the presence of endemic and endangered species serves as a compelling argument to strengthen the management and conservation of this site.

Prepuna and *Pseudosenegalia feddeana* © Freddy Zenteno

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical High Altitude Shrubland	94	Major
Subtropical/Tropical High Altitude Grassland	5	Major
Subtropical/Tropical Moist Montane Forest	1	Minor

Threat		
Threat	**Severity**	**Situation**
Small-holder farming	Medium	Ongoing - stable
Agro-industry farming	High	Ongoing - stable
Small-holder grazing, ranching or farming	Medium	Ongoing - stable
Oil & gas drilling	Unknown	Future - planned activity
Mining & quarrying	Medium	Future - planned activity
Housing & urban areas	Medium	Ongoing - trend unknown

Land Use		
Land use type	**Percent coverage**	**Importance**
Agriculture (arable)	—	Major
Agriculture (pastoral)	—	Medium
Residential/urban development	—	Medium
Nature conservation	11	Major

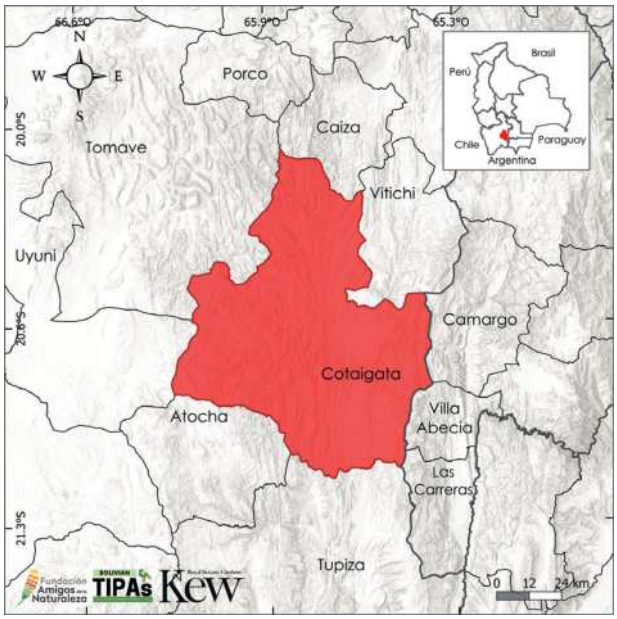
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	Encantado Ecopark Natural Monument	IPA overlaps with the protected/conservation area (100%)	38
Local/Regional Nature Reserve	Chichas Mountain Range Wildlife Sanctuary and ANMI - Mochara	IPA overlaps with the protected/conservation area (100%)	362

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥1% global population**	**≥5% national population**	**1 of 5 best sites at national level**	**≥10% global population**	**Entire global population at the site**	**Abundance at site**
Amaranthaceae	*Gomphrena trollii*	A(ii), A(iii)	EN	✓	✓	✓			occasional
Asteraceae	*Baccharis beckii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Asteraceae	*Neocuatrecasia thymifolia*	A(iii)	NE	✓	✓	✓	✓		scarce
Brassicaceae	*Lepidium stephan-beckii*	A(iii)	NE	✓	✓	✓	✓	✓	unknown
Bromeliaceae	*Deuterocohnia strobilifera* var. *strobilifera*	A(iv)	NE	✓	✓		✓		unknown
Bromeliaceae	*Puya weddelliana*	A(i)	VU	✓	✓	✓	✓		frequent
Bromeliaceae	*Tillandsia camargoensis*	A(i)	VU	✓	✓	✓	✓		occasional
Cactaceae	*Lobivia sucrensis*	A(iii)	NE	✓	✓	✓			unknown
Fabaceae	*Pseudosenegalia feddeana*	A(i)	EN	✓	✓	✓	✓		abundant
Geraniaceae	*Hypseocharis malpasensis*	A(iii)	NE	✓	✓		✓		unknown
Poaceae	*Danthonia annableae*	A(ii), A(iii)	NE	✓	✓	✓	✓	✓	unknown
Poaceae	*Festuca boliviana*	A(i)	VU	✓			✓		occasional
Poaceae	*Festuca copei*	A(i)	VU	✓	✓		✓		occasional
Poaceae	*Setaria barbinodis*	A(i)	VU	✓	✓		✓		frequent
Rubiaceae	*Richardia boliviensis*	A(iii)	NE	✓	✓	✓	✓		scarce
Solanaceae	*Fabiana fiebrigii*	A(ii), A(iii)	VU	✓	✓	✓	✓		occasional
Solanaceae	*Trompettia cardenasiana*	A(i)	VU	✓	✓	✓	✓		occasional

COTAGAITA

Authors: Maira T. Martinez-Ugarteche, Freddy S. Zenteno-Ruiz, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA043	Department/ Province	Potosí: Nor Chichas
Latitude	-20.68192	Longitude	-65.78461
Minimum altitude (m.a.s.l.)	2,385	Maximum altitude (m.a.s.l.)	5,518
Area (km^2)	6,427	Qualifying IPA criteria	A(i), A(iii), A(iv)



IPA Assessment – Rationale

Cotagaita is part of a cluster of Important Plant Areas (IPAs) characterised by xeric environments, including the Prepuna with distinct vegetation and flora. The landscape is semi-desert, featuring relatively wide valleys and small plains. Furthermore, the site harbours ecosystems that are under-represented within the national system of protected areas (López 2000, López & Zambrana-Torrelio 2006). In addition to representing these xeric environments, the Cotagaita IPA shelters eight globally threatened endemic species, five endemic species currently listed as Least Concern (LC) or not yet evaluated, and a total of 37 useful plant species.

Site Description

Cotagaita is found in the Nor Chichas Province, approximately 180 km from the city of Potosí. The IPA site includes the entire municipality of Cotagaita and borders the Tupiza IPA to the south and Camargo IPA to the east. Historically known as the 'Land of the Chaskañawi', Cotagaita is characterised by socioeconomic activities including viticulture, mining, agriculture, livestock ranching, and tourism.

Botanical Significance

Notable species among the endemic and globally threatened species restricted to the Cotagaita IPA are *Abutilon fuscicalyx* (VU), a shrub found in xerophytic forests with rocky soils and recorded in only two IPA sites; *Deuterocohnia scapigera* and *Festuca boliviana*, both Vulnerable (VU); and *Stevia cardiatica* (CR), a species with 50% of its total population in the Cotagaita IPA. *Tillandsia cotagaitensis* (EN) has its entire population within this site, while *Verbesina benderi* (DD) is a range-restricted and potentially threatened species. The *palqui* (*Pseudosenegalia feddeana* (EN)) is also represented here.

With Tupiza, Camargo, Villa Abecia, and Las Carreras, Cotagaita shares the Prepuna formation, which exhibits exceptionally high levels of endemism for Cactaceae and Bromeliaceae in Bolivia. Consequently, it is considered one of the most important centres of richness in these families (Ibisch *et al.* 2003). This is evidenced

Cotagaita River, on the way to Palca Grande © Trustees RBG Kew/Maira Martinez

by the nine endemic bromeliad species and six cactus species found here. Finally, 37 useful plants are recorded in Cotagaita, including *Polylepis tomentella* (NT), a species native to Argentina and Bolivia and used for firewood (Boza 2024); and *Pseudosenegalia feddeana* (EN) and *Trompettia cardenasiana* (VU), both of which are endemic and recognised as regionally useful.

Habit of *Pseudosenegalia feddeana* © Alexander Parada

Fruit of *Pseudosenegalia feddeana* © Alexander Parada

Trompettia cardenasiana © FAN/Oriana Lino

Polylepis tomentella © Freddy Zenteno

Habitat and Geology

Physiographically, this site is situated in Bolivia's Eastern Cordillera and is characterised by an undulating topography, ranging from plains with gentle slopes and surrounding hills. It comprises the Prepuna and Northern Puna ecoregions. The Prepuna is defined by a semi-desert landscape of relatively wide valleys and small plains (López 2000, Ibisch *et al.* 2003).

According to the vegetation classification and Ecological Systems of Bolivia (Navarro & Ferreira 2011, Navarro 2011) and the IUCN habitat classification scheme (IUCN 2012), the primary habitat is Subtropical/Tropical High-Altitude Shrubland. This consists mainly of the Dry Upper Prepuna Forest of the San Juan del Oro River Basin (*Hoffmannseggia pumilio-Prosopis ferox* series) and the Semi-arid Lower Prepuna Shrubland of the San Juan del Oro River Basin (*Hyaloseris camataquiensis-Pseudosenegalia feddeana* series) (Appendix 2).

Conservation Challenges

Cotagaita is in a zone with no designated, as highlighted by López (2000). The protection of dry arid landscapes is low nationally, reaching only 0.5% compared to other ecosystems.

Cotagaita, alongside IPAs such as Tupiza, Camargo, Villa Abecia, Las Carreras, and Icla, forms part of a network intended to highlight the high levels of endemism and the importance of the flora and vegetation within these arid environments. Achieving protection through management at municipal, departmental, and national government levels remains one of the greatest challenges for these IPAs; however, such progress would be a major milestone for the conservation of an area with a unique biology.

Shrublands beyond the Limeta Tabla Chica junction © Trustees RBG Kew/Maira Martinez

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical High Altitude Shrubland	99	Major
Subtropical/Tropical High Altitude Grassland	1	Major

Threat		
Threat	**Severity**	**Situation**
Small-holder farming	Medium	Ongoing - stable
Small-holder grazing, ranching or farming	High	Ongoing - trend unknown
Mining	Unknown	Ongoing - trend unknown

Land Use		
Land use type	**Percent coverage**	**Importance**
Agriculture (arable)	—	Major
Agriculture (pastoral)	—	Major
Residential/urban development	—	Medium
Tourism/recreation	—	Medium

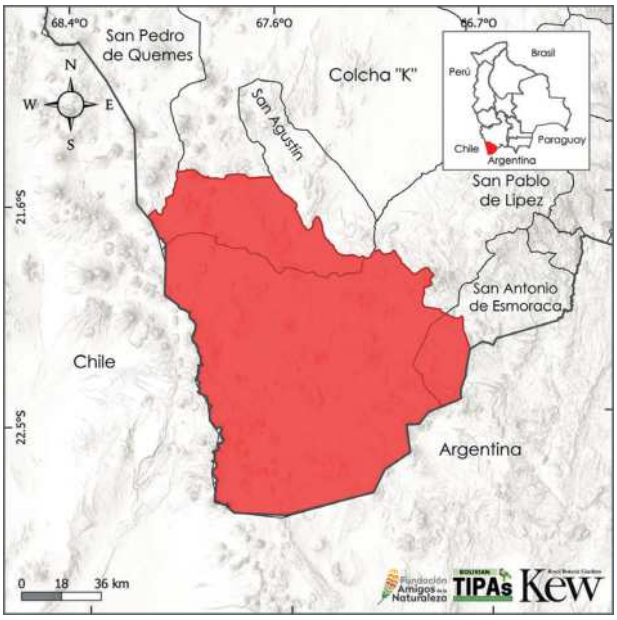
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
Local/Regional Nature Reserve	Wildlife Sanctuary and ANMI La Cordillera Crucero La Tranca	IPA overlaps with the protected/conservation area (100%)	80

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥1% global population**	**≥5% national population**	**1 of 5 best sites at national level**	**≥10% global population**	**Entire global population at the site**	**Abundance at site**
Asteraceae	*Stevia benderi*	A(i)	EN	✓	✓		✓		rare
Asteraceae	*Stevia cardiatica*	A(i)	CR	✓	✓	✓	✓		rare
Asteraceae	*Verbesina benderi*	A(iii)	DD	✓	✓	✓	✓	✓	unknown
Bromeliaceae	*Deuterocohnia scapigera*	A(i)	VU	✓	✓		✓		scarce
Bromeliaceae	*Deuterocohnia strobilifera* var. *strobilifera*	A(iv)	NE	✓	✓		✓		occasional
Bromeliaceae	*Tillandsia cotagaitensis*	A(i)	EN	✓	✓	✓	✓	✓	rare
Fabaceae	*Pseudosenegalia feddeana*	A(i)	EN	✓	✓	✓	✓		abundant
Malvaceae	*Abutilon fuscicalyx*	A(i)	VU	✓	✓	✓	✓		abundant
Poaceae	*Festuca boliviana*	A(i)	VU	✓	✓	✓			occasional
Solanaceae	*Trompettia cardenasiana*	A(i)	VU	✓	✓	✓	✓		occasional

EDUARDO AVAROA ANDEAN FAUNA NATIONAL RESERVE

Authors: Liliana Arroyo-Herbas, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA044	Department/ Province	Potosí: Sur Lipez
Latitude	-22.20684	Longitude	-67.48078
Minimum altitude (m.a.s.l.)	3,895	Maximum altitude (m.a.s.l.)	6,006
Area (km^2)	14,186	Qualifying IPA criteria	A(i), A(ii)



Site Description

The Eduardo Avaroa Reserve, located in the far southwest of Bolivia's Potosí Department, covers a total area of 14,186 km^2 spanning the Nor and Sud Lípez provinces. Established to safeguard populations of flamingos, vicuñas, and suris, the reserve also serves to conserve distinctive high-altitude ecosystems, such as saline lagoons and specialised bofedales (SERNAP 2020c). Consequently, the site's remarkable landscape features have established it as one of the premier destinations for tourism within the country's network of protected areas. Key attractions include Laguna Colorada, Laguna Verde, the Sol de Mañana geyser field, and the *Árbol de Piedra* (Stone Tree) (SAVIA & SERNAP 2006).

IPA Assessment – Rationale

The Eduardo Avaroa Andean Fauna National Reserve is characterised by its extraordinary scenic beauty, featuring vast deserts, salt flats, saline lagoons, and geysers. Ten species of native useful plants have been recorded within the site, including one globally threatened species and one threatened nationally.

The value of the reserve comes from its protection of it protecting vulnerable and critical ecosystems, such as bofedales (high-altitude peatlands) and tolares (shrublands), which face constant pressure from livestock grazing and firewood extraction. Furthermore, the sparse vegetation of the site is highly localised and specifically adapted to extreme conditions, such as high soil salinity.

Botanical Significance

Its botanical significance is thanks to its ten native useful plant species, including *Fabiana squamata* (EN), which is globally threatened, and *Azorella compacta* (EN), which is threatened nationally. Another species of conservation importance is *Polylepis tarapacana* (NT). Although not currently threatened, it is considered vulnerable in the region due to extraction for fuel and construction (Fjeldså & Kessler 1996). This species is distributed in vegetation relicts across rocky zones (SAVIA & SERNAP 2006). While the site's vegetation is sparse and highly restricted in distribution, it is remarkably adapted to extreme environmental

Green Lagoon, Quetena Chico © Trustees RBG Kew/Maira Martinez

stresses, including high salinity levels and low temperatures (SAVIA & SERNAP 2006).

Habitat and Geology

Physiographically, the site is characterised by a complex of mountain ridges, hills, mountains, plains, lagoons, and wetlands pertaining to the Western Cordillera (MDSyP 2002).

Hydrographically the area belongs to the Altiplano basin, specifically within the sub-basins of the Salar de Uyuni, Laguna Colorada, Laguna Verde, Laguna Hedionda, and the Salar de Challviri (Plaza 2018). The vegetation is composed of high-Andean *bofedales*, *tolares*, *queñuales* (*Polylepis* woodlands), and *yaratales* (*Azorella* cushion heaths), featuring species adapted to very specific

Azorella compacta growing on rock © Trustees RBG Kew/ Maira Martinez

Grassland vegetation present on the site © Trustees RBGKew/ Maira Martinez

High-Altitude Peatlands © Trustees RBG Kew/Maira Martinez

Sol de Mañana Geysers © Trustees RBG Kew/Maira Martinez

The volcanos Licancabur and Sairecabur © Trustees RBG Kew/Maira Martinez

ecosystems within the Southern Puna ecoregion (SAVIA & SERNAP 2006). According to the IUCN habitat classification scheme (IUCN 2012), these vegetation types are categorised as Subtropical/ Tropical High-Altitude Shrubland, Subtropical/ Tropical High-Altitude Grassland, and Permanent Saline, Brackish, or Alkaline Lakes (Appendix 2).

Conservation Challenges

Internationally, the reserve is designated as a RAMSAR site thanks to the permanent saline endorheic lake complexes, *bofedales*, and geothermal wetlands. These habitats support approximately 25% to 50% of the global population of the Andean Flamingo

(*Phoenicoparrus andinus*) and James's Flamingo (*Phoenicoparrus jamesi*) (RAMSAR 2009b).

The scenic beauty of the site makes it one of Bolivia's premier tourist attractions, receiving approximately 119,474 visitors per year (Plaza-Ordoñez 2018). However, vulnerable ecosystems such as *bofedales* and *tolares* are adversely affected by traditional camelid ranching and firewood extraction (SAVIA & SERNAP 2006).

Although this is one of Bolivia's most significant eco-tourism sites, it faces intense pressure from tourism activities, and its sparse vegetation remains highly sensitive due to its localised distribution.

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical High Altitude Grassland	61	Major
Subtropical/Tropical High Altitude Shrubland	37	Major
Permanent saline, brackish or alkaline lakes	2	Major

Threat		
Threat	**Severity**	**Situation**
Tourism & recreation areas	High	Ongoing - stable
Logging & wood harvesting	Medium	Ongoing - stable
Small-holder grazing, ranching or farming	High	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	—	Major
Tourism/recreation	—	Major

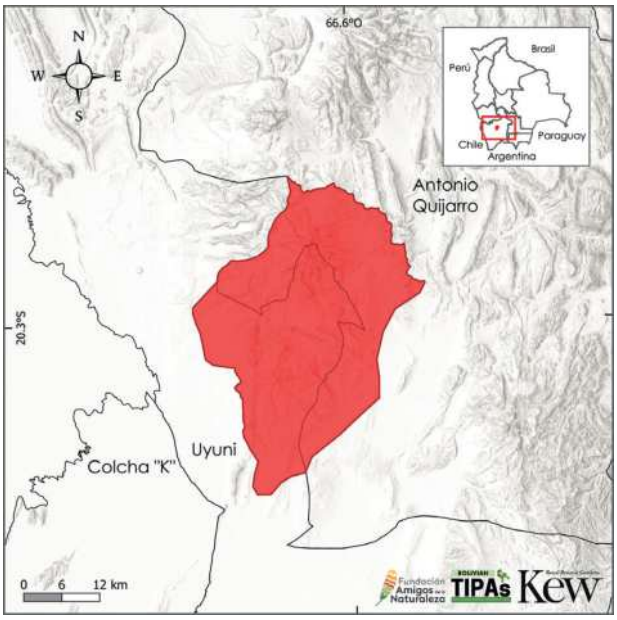
Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
National reserve	Eduardo Avaroa Andean Fauna National Reserve	Protected/conservation area matches IPA (100%)	14,186
Key Biodiversity Area	KBA Los Lípez	Protected/conservation area matches IPA (100%)	14,175
Ramsar site	Los Lípez	Protected/conservation area matches IPA (100%)	14,186

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Apiaceae	*Azorella compacta*	A(ii)	EN	✓	✓	✓			frequent
Solanaceae	*Fabiana squamata*	A(i)	EN	✓	✓	✓	✓		unknown

SERRANÍA VERDE PAMPA

Authors: Liliana Arroyo-Herbas, Maira T. Martinez-Ugarteche, Oriana A. Lino-Villalba & Bente B. Klitgaard

International code	BOLTIPA045	Department/ Province	Potosí: Antonio Quijarro
Latitude	-20.30736	Longitude	-66.66732
Minimum altitude (m.a.s.l.)	3,747	Maximum altitude (m.a.s.l.)	5,224
Area (km^2)	999	Qualifying IPA criteria	A(ii), A(iii)



IPA Assessment – Rationale

The Serranía Verde Pampa is characterised as a remnant of native vegetation and is located near the city of Uyuni. It safeguards six species of useful plants, including an endemic species, highly restricted to the site. Furthermore, it protects *Polylepis tarapacana*, which is potentially threatened by firewood extraction and browsing by camelids.

The sparse vegetation is attributed to the physiographic characteristics of the mountain range. Nevertheless, it remains a zone of botanical interest for Altiplanic flora, as it hosts species characteristic of this region.

Site Description

The site is in the eastern zone of the Potosí Department, within the Antonio Quijarro Province (ZONISIG 2000b). It covers 999 km^2 extending across the municipalities of Tomave and Uyuni, situated less than 16 km from the Salar de Uyuni. In relation to other conservation areas, it borders the Yura Departmental Fauna Reserve to the north-east. Within the site are the Taransaya and Urinsaya Community Lands (Tierras *Comunitarias de Origen* – TCO) and the Tauka Grande and Chicoca *Ayllus*.

Botanical Significance

The site is valuable as being one of the few vegetated zones near the city of Uyuni and shelters six species of useful plants. Notable among these is *Lupinus otto-kuntzeanus* (NE), a highly restricted endemic species with 50% of its total population restricted to this site. Another significant species is *Polylepis tarapacana* (NT), a tree characteristic of the Altiplano region that faces threats from collection for firewood and livestock grazing (Boza 2024). Due to the specific landscape features, the vegetation is sparse or thin; however, a great abundance of Cactaceae can be observed throughout the range, suggesting that this family is likely one of the most characteristic in the serranía (Arroyo-Herbas 2025 pers. obs.).

Habitat and Geology

Physiographically, the site comprises a large mountain range along with a complex of small hills and foothills pertaining to the Altiplano

Landscape of the Verde Pampa mountain range, road between Uyuni and the city of Potosí © Trustees RBG Kew/Maira Martinez

and part of the Western Cordillera (MDSyP 2022). Biogeographically, it corresponds to the Northern Puna ecoregion (Ibisch *et al.* 2003). The vegetation covering the range is characterised by thin *pajonales* (grasslands) and *gramadales* (turf-grasslands); towards the lower sections, small shrublands appear with patches of the species characteristic of the area, such as *Fabiana*

Opuntia sp. © Trustees RBG Kew/Maira Martinez

Fabiana densa © Alexander Parada

Landscape and grasslands of the Serranía Verde Pampa © Trustees RBG Kew/Maira Martinez

densa and *Baccharis tola* (Navarro & Ferreira 2011, Navarro 2011). According to the IUCN habitat classification scheme (IUCN 2012), these vegetation types are grouped into Subtropical/Tropical High-Altitude Shrubland and Subtropical/Tropical High-Altitude Grassland (Appendix 2).

Conservation Challenges

The Serranía Verde Pampa is located within the Uyuni municipality, less than 16 km from the salt flat, making it part of a national transit route. In the surroundings of the site, quinoa cultivation, camelid browsing, and urban settlements are evident.

On the other hand, the site protects a highly restricted species and represents one of the few zones with vegetation relicts near the city of Uyuni. Its consolidation as a priority site for plants contributes to the conservation of local flora and helps address conservation gaps within the Potosí Department.

Lupinus otto-kuntzeanus © Trustees RBG Kew/Maira Martinez

Sparse vegetation with *Baccharis* spp. (Tola) © Trustees RBG Kew/Maira Martinez

Landscape and grasslands of the Serranía Verde Pampa © Trustees RBG Kew/Maira Martinez

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical High Altitude Shrubland	87	Major
Subtropical/Tropical High Altitude Grassland	13	Major

Threat		
Threat	**Severity**	**Situation**
Small-holder farming	Medium	Ongoing - stable
Housing & urban areas	High	Ongoing - stable
Roads & railroads	High	Ongoing - stable

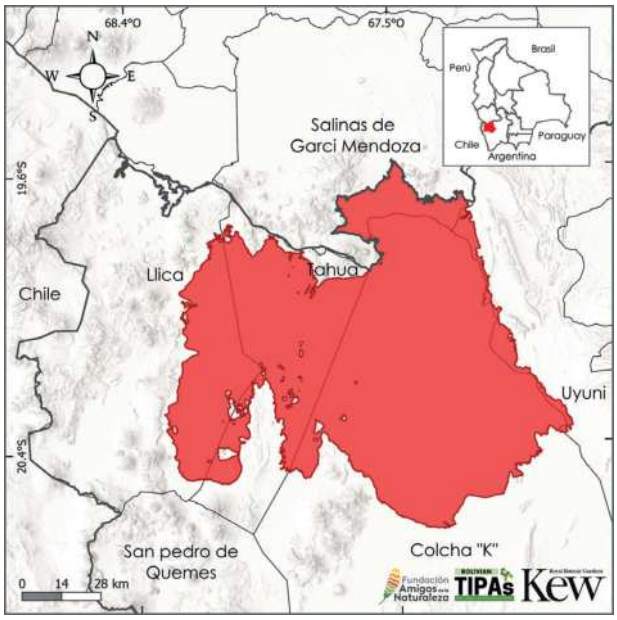
Land Use		
Land use type	**Percent coverage**	**Importance**
Residential/urban development	—	Minor
Agriculture (arable)	—	Minor

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥ 1% global population**	**≥ 5% national population**	**1 of 5 best sites at national level**	**≥ 10% global population**	**Entire global population at the site**	**Abundance at site**
Fabaceae	*Lupinus otto-kuntzeanus*	A(iii)	NE	✓	✓	✓	✓		rare
Verbenaceae	*Lampayo castellani*	A(ii)	VU	✓	✓	✓	✓		unknown

SALAR DE UYUNI

Authors: Liliana Arroyo-Herbas, Huber Villca-Corani, Oriana A. Lino-Villalba, Maira T. Martinez-Ugarteche & Bente B. Klitgaard

International code	BOLTIPA046	Department/ Province	Potosí, Daniel Campos
Latitude	-20.17023	Longitude	-67.58985
Minimum altitude (m.a.s.l.)	3,599	Maximum altitude (m.a.s.l.)	3,903
Area (km^2)	10,321	Qualifying IPA criteria	A(i), A(ii), A(iii)



Site Description

The Salar de Uyuni is located within the Potosí Department, in the Daniel Campos Province, situated in the south-west of the Bolivian Altiplano. It is the world's largest salt desert, covering approximately 10,321 km^2, and constitutes the most significant saline deposit on the continent due to its vast extent and the accumulation of minerals such as sodium chloride, sodium carbonate, sodium sulphate, magnesium sulphate, potassium nitrate, and lithium (Asociación Boliviana para la Conservación 2001).

This site is distinguished by its extraordinary scenic and natural value, housing a system of 64 islands that provide evidence of three flooding stages occurred during the last 20,000 years, associated with different interglacial periods. These phases are horizontally recorded via calcium carbonate sedimentary structures, visible both on each island and the surrounding mainland, upon which a unique saxicolous vegetation resides (Coca-Salazar *et al.* 2016). This geological and ecological singularity positions the area as one of the most extreme deserts on the planet, possessing high tourism potential due to its scenic richness (Valdez & Andersen 2009).

IPA Assessment – Rationale

The Salar de Uyuni is the largest salt desert in the world. Its interior features a system of 64 island bodies of varying sizes and heights, each with distinct geological origins. Despite these extreme conditions, the Salar safeguards eight plant species threatened all threatened nationally, one highly range-restricted endemic species, and one globally threatened species. Furthermore, the site protects 33 species of useful plants, five of which are categorised as Least Concern (LC).

The botanical importance of the Salar lies not only in the rarity of its flora but also in the ecological context in which it exists: as a geographically isolated area with insular biogeographic characteristics, this isolation favours the evolution of unique species. However, it also renders them more vulnerable to external threats, reinforcing the conservation priority of the vegetation present in this area.

Panoramic view of the Salar de Uyuni landscape © Freddy Zenteno

Botanical Significance

The botanical significance of this IPA site is based on the presence of eight regionally threatened species and the high concentration of native species of ecological and socioeconomic value. Among these are *Parastrephia lepidophylla* (EN), *Hoffmannseggia minor* (VU), *Trichocereus atacamensis* (EN), and *Atriplex imbricata* (EN), as well as species such as *Ephedra breana* (LC), *Chuquiraga spinosa* (NE), *Haplopappus rigidus* (NE), *Fabiana squamata* (EN), and *Junellia seriphioides* (NE), all of which are native Puna species of the High-Andean region (Coca-Salazar *et al.* 2016).

Hoffmannseggia minor © Freddy Zenteno

Furthermore, the site protects a portion of the population of the endemic *Clinanthus chihuanhuayu* (NE), which, although not globally evaluated, has a restricted regional distribution. The area also hosts 33 useful plant species, including *Mutisia lanigera* (VU), *Atriplex imbricata* (EN), *Parastrephia quadrangularis* (VU), and *Hoffmannseggia minor* (VU), all species that are regionally threatened.

Habitat and Geology

The Salar de Uyuni is situated within the Xerophytic Puna Biogeographic Province, Salar de Uyuni Sector (Navarro & Ferreira 2009). Topographically, the site is characterised by a vast salt plain containing islands of diverse geological origin (volcanic and sedimentary) belonging to the Altiplano region and the Western Cordillera (MDSyP 2002). The vegetation is characterised by adaptations to saline soils, high solar radiation, and temperatures fluctuating between -30°C at night and 15°C (Ballivián & Risacher 1981, Coca-Salazar et al. 2016). Dominant formations include hygrophilous shrublands and High-Andean herblands featuring *Trichocereus atacamensis* and *Parastrephia lepidophylla*, pertaining to the Southern Puna ecoregion (Navarro & Ferreira 2011, Navarro 2011). Following the IUCN habitat classification scheme (IUCN 2012), these vegetation types are grouped into Subtropical/Tropical High-Altitude Shrubland, Subtropical/Tropical High-Altitude Grassland, and Permanent Saline, Brackish, or Alkaline Lakes (Appendix 2).

Vegetation surrounding the Salar de Uyuni © Daniel Aguilar

Panoramic view of the intersaline islands © Daniel Aguilar

Conservation Challenges

Arid systems face significant global challenges, and the Salar de Uyuni is no exception. This unique ecosystem is gravely threatened by various human activities, such as the excavation of large evaporation ponds for lithium extraction, which contaminates the soil and consumes vast quantities of fresh water, thereby altering the hydrological cycle and affecting dependent ecosystems. Unregulated tourism leaves waste and contributes to the scenic degradation of this iconic site. Peripheral vegetation, such as *tolares* (a group of Compositae) and *Trichocereus atacamensis* (pasacana), is being overexploited as a source of firewood and material for handicrafts and construction, reducing essential vegetative cover for Andean fauna. Additionally, climate change intensifies the fragility of this singular habitat, with its fluctuations in temperature and evaporation rates, weakening the key role this site plays as a regional climate regulator.

Tourism activities within Salar de Uyuni © Oriana Lino

Grazing of camelids © Daniel Aguilar

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Permanent saline, brackish or alkaline lakes	94	Major
Subtropical/Tropical High Altitude Grassland	4	Unknown
Subtropical/Tropical High Altitude Shrubland	2	Minor

Threat		
Threat	**Severity**	**Situation**
Tourism & recreation areas	High	Ongoing - stable
Other ecosystem modifications	High	Future - planned activity
Residential & commercial development	Medium	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Tourism/recreation	—	Major
Industrial development	—	Unknown
Residential/urban development	—	Unknown

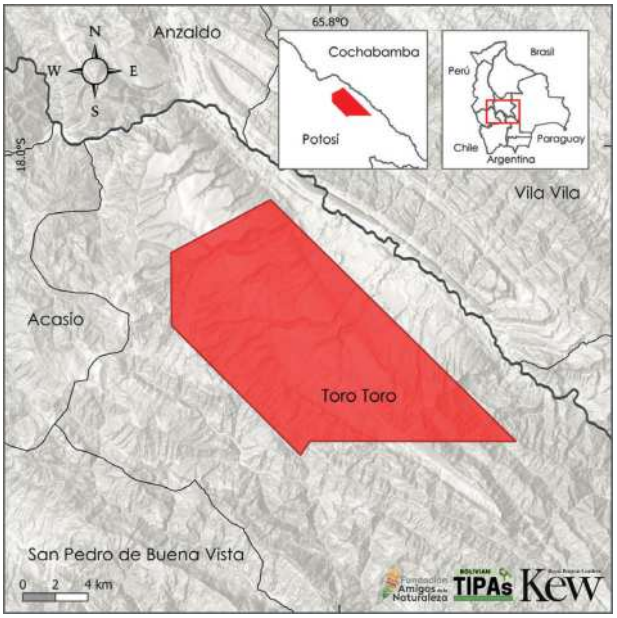
IPA priority species Criterion A

Family	Taxon	IPA subcriterion A	IUCN Category	≥ 1% global population	≥ 5% national population	1 of 5 best sites at national level	≥ 10% global population	Entire global population at the site	Abundance at site
Amarantaceae	*Atriplex imbricata*	A(ii)	EN	✓					unknown
Amaryllidaceae	*Clinanthus chihuanhuayu*	A(iii)	NE	✓	✓	✓	✓		rare
Asteraceae	*Mutisia lanigera*	A(ii)	VU	✓					occasional
Asteraceae	*Parastrephia lepidophylla*	A(ii)	EN	✓					unknown
Asteraceae	*Parastrephia quadrangularis*	A(ii)	VU	✓					unknown
Cactaceae	*Trichocereus atacamensis*	A(ii)	EN	✓		✓			frequent
Fabaceae	*Hoffmannseggia minor*	A(ii)	VU	✓		✓			occasional
Solanaceae	*Fabiana squamata*	A(i)	EN	✓		✓			unknown

TORO TORO NATIONAL PARK

Authors: Maira T. Martinez-Ugarteche, Elmer Cuba-Orozco, Liliana Arroyo-Herbas, Oriana A. Lino-Villalba, Daniel Villarroel & Bente B. Klitgaard

International code	BOLTIPA049	Department/ Province	Potosí: Charcas
Latitude	-18.10608	Longitude	-65.79158
Minimum altitude (m.a.s.l.)	2,032	Maximum altitude (m.a.s.l.)	3,583
Area (km^2)	168	Qualifying IPA criteria	A(i), A(iii)



Site Description

The Toro Toro IPA site is defined by the administrative boundaries of Toro Toro National Park, located in the north of the Potosí Department near the border with the Cochabamba Department. Toro Toro is considered one of the country's major tourist attractions due to its variety of geological and palaeontological features, such as dinosaur trackways, the great Garrapatal Canyon, El Vergel waterfalls, and the Umajalanta Cave, among other sites (Canaviri 2020).

Furthermore, this protected area is designated as an AICOM (Area of Importance for the Conservation of Bats), as its cave complex supports 15 significant bat species (Navarro *et al.* 2021).

IPA Assessment – Rationale

Toro Toro National Park qualifies as an Important Plant Area (IPA) by because of its diverse populations of native and endemic plants. This botanical attribute is evidenced by the presence of 18 endemic, nine of which are globally threatened. Notably, one of these species has its entire population concentrated within this IPA site.

Additionally, 18 species of useful plants have been recorded in this site.

Botanical Significance

All the globally threatened species found in Toro Toro are endemic and include *Aspidosperma resonans*, *Chascolytrum altimontanum*, and *Clinopodium pallidum*, all three of which are considered Vulnerable (VU). Also present are *Hippeastrum mollevillquense*, *Meriania pulcherrima*, and *Orthosia woodii*, all categorised as Endangered (EN), as well as *Hieronymiella bedelarii*, listed as Critically Endangered (CR), which has its population concentrated within this IPA site. Another endemic species currently lacking an extinction risk assessment is *Mastigostyla torotoroensis*, a species restricted to Toro Toro.

Regarding the 18 species of useful plants documented for Toro Toro, *Aspidosperma resonans* and *Piptadenia boliviana* are particularly noteworthy, as both are endemic tree species categorised as Vulnerable.

Toro Toro Canyon, seen from the viewpoint © Elmer Cuba

Hippeastrum mollevillquense © Margoth Atahuachi

Mastigostyla torotoroensis © Darwin Initiative project (11-010)

Habitat and Geology

Toro Toro is situated within the Eastern Cordillera region of central and southern Bolivia (Navarro & Maldonado 2005). The topography is composed of a mountain complex, plateaus, narrow valleys, and alluvial-colluvial terraces where two ecoregions converge: the Inter-Andean Dry Forest and the Northern Puna (Ibisch *et al.* 2003).

According to the vegetation classification and Ecological Systems of Bolivia (Navarro & Ferreira 2011, Navarro 2011) the IUCN habitat classification scheme (IUCN 2012), this site is predominantly covered by Subtropical/Tropical High-Altitude Shrubland. This habitat consists of Bolivian-Tucuman altimontane and high-Andean pajonales (grasslands) and shrublands, as well as Bolivian-Tucuman altimontane saxicolous vegetation (Navarro 2011) (Appendix 2). Further details on the vegetation of Toro Toro can to be found in Altamirano *et al.* (2016).

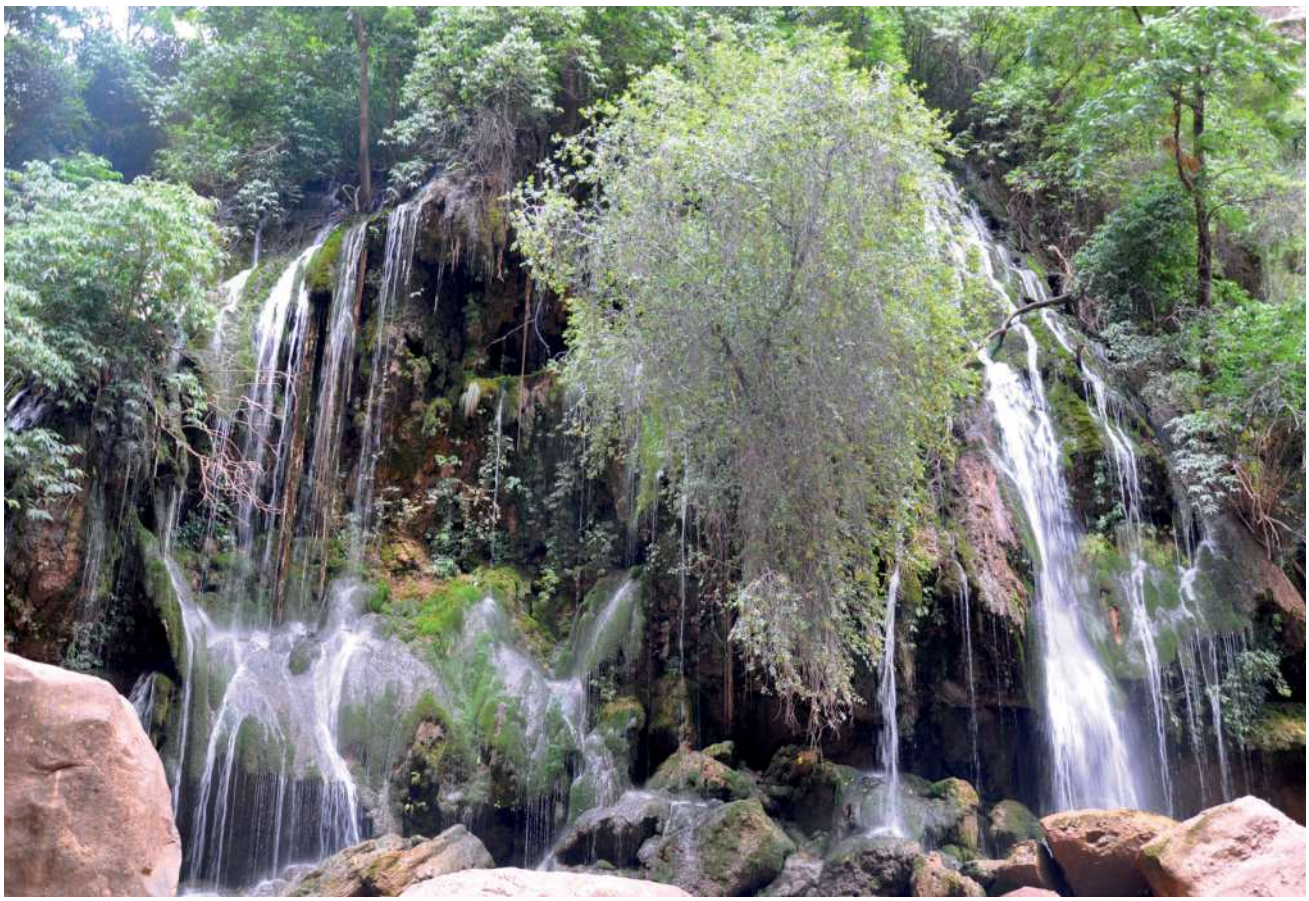
Conservation Challenges

Toro Toro National Park is one of Bolivia's primary tourist destinations, given its striking landscapes, extensive caverns, and a reservoir of over 3,000

Scrubland, upper part of the Toro Toro Canyon © Elmer Cuba

Inter-Andean Dry Valleys, along the river Caine © Elmer Cuba

dinosaur footprints. Consequently, there is high tourist demand, necessitating a strategy for the management and control of its tourism capacity. Furthermore, the area is characterised by mountains with deep canyons and valleys, the latter formed by the Caine River. The most significant agricultural zones are distributed along this river, surrounded by Inter-Andean Dry Forests, which represent one of the habitats with the highest plant diversity. Land-use change and erosive processes cause severe deterioration of both soil and vegetation, impacts that are exacerbated by intensive overgrazing, burning, and firewood extraction.



El Vergel waterfall © Elmer Cuba

Habitats (Following the IUCN habitat classification system (ver. 3.1), see Appendix 2)	Percent coverage	Importance
Subtropical/Tropical High Altitude Shrubland	50	Major
Subtropical/Tropical Moist Montane Forest	43	Major
Subtropical/Tropical Dry Forest	7	Major

Threat		
Threat	**Severity**	**Situation**
Housing & urban areas	Low	Ongoing - stable
Annual & perennial non-timber crops	High	Ongoing - stable
Livestock farming & ranching - Nomadic grazing	High	Ongoing - stable
Soil erosion	High	Ongoing - stable
Climate change (water resources, winds, frost, drought, floods, hailstorms)	Medium	Ongoing - stable

Land Use		
Land use type	**Percent coverage**	**Importance**
Nature conservation	100	Major
Agriculture (arable)	—	Major
Agriculture (pastoral)	—	Major
Tourism/recreation	—	Major

Protected areas and other conservation designations			
Protected area type	**Names (s) of protected area (s)**	**Relationship between the site and the protected area (% of overlap)**	**Area of overlap (km^2)**
National Park	PN Toro Toro	Protected/conservation area matches IPA (100%)	168
AICOMs: Areas of Importance for the Conservation of Bats	AICOM PN Toro Toro	Protected/conservation area matches IPA (100%)	168

IPA priority species Criterion A									
Family	**Taxon**	**IPA subcriterion A**	**IUCN Category**	**≥1% global population**	**≥5% national population**	**1 of 5 best sites at national level**	**≥10% global population**	**Entire global population at the site**	**Abundance at site**
Amaryllidaceae	*Hieronymiella bedelarii*	A(i)	CR	✓	✓	✓	✓	✓	rare
Amaryllidaceae	*Hippeastrum mollevillquense*	A(i)	EN	✓	✓		✓		occasional
Apocynaceae	*Aspidosperma resonans*	A(i)	VU	✓	✓				occasional
Apocynaceae	*Orthosia woodii*	A(i)	EN	✓	✓		✓		occasional
Bromeliaceae	*Tillandsia koehresiana*	A(i)	EN	✓	✓		✓		occasional
Fabaceae	*Piptadenia boliviana*	A(i)	VU	✓					occasional
Iridaceae	*Mastigostyla torotoroensis*	A(iii)	NE	✓	✓	✓	✓	✓	rare
Lamiaceae	*Clinopodium pallidum*	A(i)	VU	✓	✓		✓		occasional
Melastomataceae	*Meriania pulcherrima*	A(i)	EN	✓	✓		✓		occasional
Poaceae	*Chascolytrum altimontanum*	A(i)	VU	✓	✓		✓		scarce

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APPENDIX 1

Endemic species of Bolivia - IUCN category (global and/or national), IPA criteria, and presence in Bolivia's IPA sites

Globally threatened species - A(i)
Nationally or regionally threatened species - A(ii)
Highly restricted and potentially threatened species - A(iii)
Restricted and potentially threatened species - A(iv)
Species of conservation importance due to their endemism - B(ii)

IUCN Category: Not Evaluated (NE), Data Deficient (DD), Least Concern (LC), Near Threatened (NT), Vulnerable (VU), Endangered (EN), Critically Endangered (CR), Extinct in the Wild (EW)

***National IUCN Category, # Preliminary global threatened IUCN category (CR, EN, VU)**

Bolivian endemic species (taxa), IUCN category (global and/or national), IPA criteria, and presence in Bolivia's IPA sites

Family	Species - taxon	Author(s)	IUCN category - global and/or national*	IUCN criteria - global and/ or national* criteria	IPA criteria	Presence in IPA sites	Family	Species - taxon	Author(s)	IUCN category - global and/or national*	IUCN criteria - global and/ or national* criteria	IPA criteria	Presence in IPA sites
Acanthaceae	*Aphelandra kolobantha*	Lindau	# EN	B2ab(iii)	A(i), B(ii)	87	Acanthaceae	*Justicia steinbachiorum*	Wassh. & J.R.I.Wood	DD		B(ii)	23, 25, 84
Acanthaceae	*Aphelandra rusbyi*	Britton ex Rusby	LC		B(ii)	24, 25, 26, 61, 78, 84	Acanthaceae	*Justicia tocantina* subsp. *andina*	Wassh. & J.R.I.Wood	NE		B(ii)	23, 25, 26, 30, 31, 32, 34
Acanthaceae	*Dicliptera palmariensis*	Wassh. & J.R.I.Wood	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	84	Acanthaceae	*Justicia umbricola*	Wassh. & J.R.I.Wood	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	59
Acanthaceae	*Dyschoriste boliviana*	Wassh. & J.R.I.Wood	LC		B(ii)	23, 26, 30, 38, 49, 86	Acanthaceae	*Justicia vernalis*	Wassh. & J.R.I.Wood	LC		B(ii)	25, 26, 31
Acanthaceae	*Dyschoriste prostrata*	Wassh. & J.R.I.Wood	NT	B1a+2a	B(ii)	86	Acanthaceae	*Justicia yungensis*	Wassh. & J.R.I.Wood	# VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	55, 56, 59
Acanthaceae	*Justicia adhaerens*	Wassh. & J.R.I.Wood	CR	B1ab(iii)+2ab(iii);D	A(i), B(ii)	2	Acanthaceae	*Ruellia antiquorum*	Wassh. & J.R.I.Wood	LC		B(ii)	25, 26
Acanthaceae	*Justicia aequilabris* subsp. *riograndina*	Wassh. & J.R.I.Wood	NE		A(iv), B(ii)	23, 26, 27, 28, 86	Acanthaceae	*Ruellia beniana*	J.R.I.Wood	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	61
Acanthaceae	*Justicia albadenia*	(Rusby) Wassh. & J.R.I.Wood	NT	B2ab(iii)	B(ii)	60, 61	Acanthaceae	*Ruellia boliviana*	Govaerts	NE		B(ii)	26, 55, 60, 61, 82, 84
Acanthaceae	*Justicia arcuata*	Wassh. & J.R.I.Wood	LC		B(ii)	25, 60, 84	Acanthaceae	*Ruellia dolichosiphon*	Wassh. & J.R.I.Wood	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	67
Acanthaceae	*Justicia boliviana* subsp. *subintegrifolia*	(Rusby) Wassh. & J.R.I.Wood	NE		B(ii)	11, 18, 27, 55, 60	Acanthaceae	*Ruellia haenkeana* f. *lutea*	Wassh. & J.R.I.Wood	NE		A(iii), B(ii)	57, 58
Acanthaceae	*Justicia boliviensis*	(Bremek.) V.A.W.Graham	LC		B(ii)	25, 26, 54, 55, 56, 57, 59, 60, 84	Acanthaceae	*Ruellia haenkeana* var. *pilosa*	Wassh. & J.R.I.Wood	NE		A(iii), B(ii)	59
Acanthaceae	*Justicia chapareensis*	Wassh. & J.R.I.Wood	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	84	Acanthaceae	*Ruellia saccata*	Schmidt-Leb. & E.A.Tripp	DD		A(iii), B(ii)	61
Acanthaceae	*Justicia chuquisacensis*	Wassh. & J.R.I.Wood	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	23, 25, 26, 27	Acanthaceae	*Stenandrium villarroelii*	J.R.I.Wood	CR	B1ab(i,ii,iii,iv,v) +2ab(i,ii,iii,iv,v)	A(i), B(ii)	5
Acanthaceae	*Justicia consanguinea*	(Lindau) Wassh. & C.Ezcurra	LC		B(ii)	23, 26, 27, 28, 29, 86	Acanthaceae	*Stenostephanus cochabambensis*	Wassh.	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	82, 84, 85
Acanthaceae	*Justicia dryadum*	Wassh. & J.R.I.Wood	# VU	B2ab(iii)	A(i), B(ii)	61	Acanthaceae	*Stenostephanus crenulatus*	(Britton ex Rusby) Wassh.	NT	B1ab(iii)+2ab(iii)	B(ii)	54, 57, 58, 59, 60
Acanthaceae	*Justicia fuentesii*	J.R.I.Wood	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	60	Acanthaceae	*Stenostephanus krukoffii*	Wassh.	# EN	B2ab(iii)	A(i), B(ii)	55, 79
Acanthaceae	*Justicia israelvargasii*	Wassh. & J.R.I.Wood	DD		A(iii), B(ii)	13	Acanthaceae	*Stenostephanus lyman-smithii*	Wassh.	LC		B(ii)	23, 25, 55, 56, 60, 61, 84
Acanthaceae	*Justicia kessleri*	Wassh. & J.R.I.Wood	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	2, 60	Acanthaceae	*Stenostephanus madidiensis*	J.R.I.Wood	DD		A(iii), B(ii)	60
Acanthaceae	*Justicia kuntzei* subsp. *robusta*	(Rusby) Wassh. & J.R.I.Wood	NE		A(iv), B(ii)	60	Acanthaceae	*Stenostephanus pyramidalis*	(Lindau) Wassh.	# VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	23, 25, 82, 84
Acanthaceae	*Justicia longiacuminata*	Rusby	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	53, 54	Acanthaceae	*Stenostephanus sehuencasii*	J.R.I.Wood	NE		A(iii), B(ii)	84
Acanthaceae	*Justicia mandonii*	(Lindau) Wassh. & C. Ezcurra	NE		A(iii), B(ii)	25	Acanthaceae	*Stenostephanus spicatus*	Wassh. & J.R.I.Wood	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	82, 84
Acanthaceae	*Justicia mesetarum* subsp. *chiquitana*	J.R.I.Wood	NE		A(iv), B(ii)	2, 3	Acanthaceae	*Stenostephanus suburceolatus*	J.R.I.Wood	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	60
Acanthaceae	*Justicia miguelii*	V.A.W.Graham	LC		B(ii)	55, 59, 60, 79	Acanthaceae	*Stenostephanus tenellus*	Wassh. & J.R.I.Wood	# EN	B2ab(iii)	A(i), B(ii)	25
Acanthaceae	*Justicia pluriformis*	Wassh. & J.R.I.Wood	LC		B(ii)	26, 85, 87	Acanthaceae	*Suessenguthia koessleri*	Schmidt-Leb.	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	65, 68, 70
Acanthaceae	*Justicia rusbyana*	Lindau	LC		B(ii)	53, 55, 56, 59, 60, 87	Acanthaceae	*Suessenguthia multisetosa*	(Rusby) Wassh. & J.R.I.Wood ex Schmidt-Lebuhn	VU	B2ab(iii)	A(i), B(ii)	11, 12, 15, 24, 25, 56, 60, 61

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Acanthaceae	*Suessenguthia wenzelii*	Schmidt-Leb.	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	61
Actinidiaceae	*Saurauia chaparensis*	Soejarto	EN	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	25, 82, 84
Actinidiaceae	*Saurauia rusbyi*	Britton	VU	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	56, 57, 60
Actinidiaceae	*Saurauia spectabilis*	Hook.	NT	B2ab(iii)	B(ii)	56, 57, 59, 60, 79, 84
Alstroemeriaceae	*Bomarea chaparensis*	Hofreiter	NE/VU*	B1+2ab(iii)	A(ii), A(iii), B(ii)	84
Amaranthaceae	*Alternanthera altacruzensis*	Suess.	NE		A(iv), B(ii)	26
Amaranthaceae	*Atriplex asplundii*	Standl.	NE		A(iii), B(ii)	56
Amaranthaceae	*Atriplex rusbyi*	Britton	NE		A(iv), B(ii)	52
Amaranthaceae	*Gomphrena cardenasii*	Standl. ex E.Holzh.	VU	B1ab(i,ii,iii,iv,v) +2ab(i,ii,iii,iv,v)	A(i), B(ii)	2
Amaranthaceae	*Gomphrena palmariensis*	T. Ortuño, J. Gutiérrez. & Montesinos	NE		A(iii), B(ii)	28
Amaranthaceae	*Gomphrena stellata*	T.Ortuño & Borsch	NE/EN*	B1+2ab(iii)	A(ii), A(iii), B(ii)	26, 27, 86
Amaranthaceae	*Gomphrena trollii*	Suess.	NE/EN*	B1ab(iii)	A(ii), A(iii), B(ii)	41
Amaranthaceae	*Pedersenia cardenasii*	(Standl.) Holub	NE		A(iii), B(ii)	87
Amaranthaceae	*Pfaffia rotundifolia*	Pedersen	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	2, 10, 14
Amaryllidaceae	*Chlidanthus boliviensis*	Traub & I.S.Nelson	CR	B1ab(iii, iv) +B2ab(iii,iv)	A(i), B(ii)	85
Amaryllidaceae	*Clinanthus chihuanhuayu*	(Cárdenas) Meerow	NE		A(iii), B(ii)	46
Amaryllidaceae	*Hieronymiella bedelarii*	R.Lara & Huaylla	# CR	B2ab(iii)	A(i), B(ii)	49
Amaryllidaceae	*Hieronymiella cardenasii*	(Traub) R.Lara	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	48
Amaryllidaceae	*Hippeastrum divijulianum*	(Cárdenas) Meerow	# CR	B2ab(ii,iii)	A(i), B(ii)	79
Amaryllidaceae	*Hippeastrum evansiarum*	(Traub & I.S.Nelson) H.E.Moore	# VU	B2ab(iii)	A(i), B(ii)	26, 31, 32
Amaryllidaceae	*Hippeastrum fragrantissimum*	(Cárdenas) Meerow	# CR	B2ab(iii)	A(i), B(ii)	82
Amaryllidaceae	*Hippeastrum haywardii*	(Traub & Uphof) R.Lara & R.Vásquez	# EN	B2ab(iii)	A(i), B(ii)	59, 60
Amaryllidaceae	*Hippeastrum incachacanum*	(Cárdenas) Van Scheepen	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	24, 26, 82
Amaryllidaceae	*Hippeastrum lapacense*	(Cárdenas) Van Scheepen	# EN	B2ab(iii)	A(i), B(ii)	56, 59, 60, 61
Amaryllidaceae	*Hippeastrum lara-ricoi*	A.L.Moya, D.Villalba & Zent.-Ruíz	NE		A(iii), B(ii)	55
Amaryllidaceae	*Hippeastrum mariani-savielloi*	R. Lara & Huaylla	# CR	B2ab(iii,iv)	A(i), B(ii)	59
Amaryllidaceae	*Hippeastrum mollevillquense*	(Cárdenas) Van Scheepen	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	29, 49
Amaryllidaceae	*Hippeastrum paquichanum*	(Cárdenas) Dutilh	# CR	B1ab(iii)	A(i), B(ii)	60
Amaryllidaceae	*Hippeastrum scopulorum*	Baker	# CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	59
Amaryllidaceae	*Hippeastrum starkiorum*	(I.S.Nelson & Traub) Van Scheepen	NE		A(iii), B(ii)	2, 11
Amaryllidaceae	*Hippeastrum viridiflorum*	Rusby	# EN	B2ab(iii)	A(i), B(ii)	2, 60
Amaryllidaceae	*Hippeastrum wilsoniae*	L.J.Doran & F.W.Mey.	NE		A(iii), B(ii)	56
Amaryllidaceae	*Hippeastrum yungacense*	(Cárdenas & I.S.Nelson) Meerow	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	53, 56
Amaryllidaceae	*Pyrolirion boliviense*	(Baker) Sealy	# EN	B2ab(iii)	A(i), B(ii)	48, 52, 59, 85
Amaryllidaceae	*Pyrolirion cutleri*	(Cárdenas) Ravenna	NE		A(iii), B(ii)	85
Amaryllidaceae	*Zephyranthes albolilacina*	Cárdenas	NE		B(ii)	85
Amaryllidaceae	*Zephyranthes breviscapa*	Ravenna	# CR	B2ab(iii)	A(i), B(ii)	22
Amaryllidaceae	*Zephyranthes rosalensis*	Ravenna	NE		A(iii), B(ii)	30
Anacardiaceae	*Astronium woodii*	Villarroel & M.T. Martinez	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	2, 10
Anacardiaceae	*Cardenasiodendron brachypterum*	(Loes.) F.A.Barkley	NT	B1ab(iii)+2ab(iii)	B(ii)	23, 26, 27, 30, 31, 86
Anacardiaceae	*Schinus congestiflora*	Silva-Luz & Pirani	NE		B(ii)	23, 25, 26, 27, 84, 85
Anacardiaceae	*Schinus obliqua*	Silva-Luz & J.D.Mitch.	NE		A(iii), B(ii)	37, 38
Anacardiaceae	*Schinus tarijensis*	Silva-Luz & J.D.Mitch.	NE		A(iv), B(ii)	40
Anacardiaceae	*Schinus villosa*	Silva-Luz & J.D.Mitch.	NE		A(iv), B(ii)	26, 27, 30, 31
Annonaceae	*Annona boliviana*	(R.E.Fr.) H.Rainer	NT	B2ab(iii)	B(ii)	57, 59, 60
Annonaceae	*Cremastosperma leiophyllum*	R.E.Fr.	LC		B(ii)	3, 12, 25, 59, 60, 64, 67
Annonaceae	*Porcelia steinbachii*	(Diels) R.E.Fr.	VU	B2ab(iii,v)	A(i), B(ii)	24, 25, 26, 62, 67
Apiaceae	*Eryngium andicolum*	H.Wolff	NE		B(ii)	38, 40
Apiaceae	*Eryngium beckii*	M.Mend.	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	25, 26
Apiaceae	*Eryngium bolivianum*	M.Mend.	NE		A(iii), B(ii)	25

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Apiaceae	*Eryngium buchtienii*	H.Wolff	NE		A(iv), B(ii)	25, 57, 82
Apiaceae	*Eryngium neei*	M.Mend.	NE		A(iii), B(ii)	25
Apiaceae	*Eryngium woodii*	M.Mend.	NE		A(iii), B(ii)	28
Apiaceae	*Eryngium bolivianum*	M.Mend.	NE		A(iii), B(ii)	25
Apiaceae	*Eryngium buchtienii*	H.Wolff	NE		A(iv), B(ii)	25, 57, 82
Apiaceae	*Eryngium neei*	M.Mend.	NE		A(iii), B(ii)	25
Apiaceae	*Eryngium woodii*	M.Mend.	NE		A(iii), B(ii)	28
Apocynaceae	*Aspidosperma resonans*	H.J.Will. & Goyder	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	28, 29, 49, 86
Apocynaceae	*Austrochthamalia boliviana*	Morillo & Fontella	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	2, 4
Apocynaceae	*Blepharodon crabronum*	Goyder	EN	D	A(i), B(ii)	2,10
Apocynaceae	*Blepharodon philibertioides*	Schltr.	EN	B1ab(iii)+2ab(iii);D	A(i), B(ii)	2
Apocynaceae	*Ditassa fiebrigii*	Malme	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	56
Apocynaceae	*Ditassa mandonii*	Rusby	# EN	B2ab(iii)	A(i), B(ii)	54, 60
Apocynaceae	*Ditassa subalpina*	Schltr.	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	26
Apocynaceae	*Funastrum rupicola*	Goyder	NT	D1	A(iv),B(ii)	23, 26, 27, 28, 29, 86
Apocynaceae	*Ibatia pucara*	Morillo	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	26
Apocynaceae	*Ibatia sartago-diaboli*	(Goyder) Morillo	NE		B(ii)	23, 27
Apocynaceae	*Mandevilla andina*	J.F.Morales & A.Fuentes	LC		B(ii)	25
Apocynaceae	*Mandevilla fragilis*	Woodson	# VU	B2ab(iii)	A(i), B(ii)	53, 54, 59, 60
Apocynaceae	*Matelea asplundii*	(Malme) Morillo	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	56
Apocynaceae	*Matelea attenuata*	(Rusby) Morillo	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	34
Apocynaceae	*Matelea boliviana*	Morillo	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	56
Apocynaceae	*Matelea neei*	Morillo	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	26
Apocynaceae	*Matelea sartago-diaboli*	Goyder	NT		B(ii)	86
Apocynaceae	*Metastelma fiebrigii*	Schltr.	NE		B(ii)	26, 31, 37
Apocynaceae	*Minaria praetermissa*	W.D.Stevens & Arbeláez	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	2, 5, 20
Apocynaceae	*Orthosia boliviana*	Liede & Meve	NE		A(iii), B(ii)	25, 84, 87
Apocynaceae	*Orthosia goyderiana*	Liede & Meve	NE		A(iii), B(ii)	87
Apocynaceae	*Orthosia pearcei*	(Rusby) Liede & Meve	NE		B(ii)	25, 26, 27, 87
Apocynaceae	*Orthosia woodii*	Meve & Liede	# EN	B2ab(iii)	A(i), B(ii)	23, 27, 49
Apocynaceae	*Oxypetalum attenuatum*	(Rusby) Malme	LC		B(ii)	25, 26, 28, 49, 82, 84
Apocynaceae	*Oxypetalum boliviense*	Schltr.	NT	B2ab(iii)	B(ii)	26, 40
Apocynaceae	*Oxypetalum dactylostelma*	Goyder	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	31, 82, 84
Apocynaceae	*Oxypetalum fuscum*	Goyder & Fontella	VU	B2ab(iii)	A(i), B(ii)	25, 26, 30, 37
Apocynaceae	*Oxypetalum heptalobum*	Goyder & Rapini	LC		B(ii)	26, 27, 30
Apocynaceae	*Oxypetalum pearsonii*	(Rusby) Goyder & Fontella	VU	B2ab(iii)	A(i), B(ii)	56, 59, 85
Apocynaceae	*Oxypetalum urceolatum*	Farinaccio & Goyder	EN	B2ab(iii)	A(i), B(ii)	26, 31, 82
Apocynaceae	*Petalostelma auriculatum*	A.P.B.Santos & Meve	NT	B1b(iii)	B(ii)	60
Apocynaceae	*Philibertia alba*	Goyder	DD		A(iii), B(ii)	27
Apocynaceae	*Philibertia amblystigma*	Goyder	LC		B(ii)	85, 87
Apocynaceae	*Philibertia fiebrigii*	(Schltr.) Liede	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	37
Apocynaceae	*Philibertia fontellae*	Goyder	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	87
Apocynaceae	*Philibertia globiflora*	Goyder	VU	B2ab(iii)	A(i), B(ii)	30
Apocynaceae	*Philibertia navarroana*	H.A.Keller, Liede & Balderrama	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	85
Apocynaceae	*Philibertia peduncularis*	(Benth.) Goyder	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	59
Apocynaceae	*Philibertia tactila*	Goyder	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	37
Apocynaceae	*Philibertia urceolata*	Goyder	LC		B(ii)	26, 30
Apocynaceae	*Philibertia velutina*	Goyder	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	30, 86
Apocynaceae	*Philibertia woodii*	H.A.Keller & Goyder	NT	B1ab(iii)+2ab(iii)	B(ii)	30, 32, 37, 86
Apocynaceae	*Philibertia zongoensis*	Goyder	# CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	57

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Apocynaceae	*Prestonia boliviana*	J.F.Morales & A.Fuentes	VU	B2ab(iii)	A(i), B(ii)	26, 31, 32, 60
Apocynaceae	*Prestonia leco*	A.Fuentes & J.F.Morales	# VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	54, 55, 56, 60
Apocynaceae	*Scyphostelma beckii*	(Morillo) Liede & Meve	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	57
Apocynaceae	*Scyphostelma bolivianum*	Y.M.Pineda, Liede & Meve	NE		A(iii), B(ii)	84
Apocynaceae	*Scyphostelma gracile*	H.A.Keller, Meve & Liede	NE		A(iii), B(ii)	84
Apocynaceae	*Scyphostelma solomonii*	Meve & Y.M.Pineda	NE		A(iii), B(ii)	57
Aquifoliaceae	*Ilex mandonii*	Loes.	LC		B(ii)	25, 56, 59, 60
Aquifoliaceae	*Ilex pseudoebenacea*	Loes.	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	56, 59, 60
Araceae	*Anthurium atropurpureum* var. *thomasii*	Croat	NE		A(iii), B(ii)	76
Araceae	*Anthurium beckii*	Croat & Acebey	NE		B(ii)	59, 60, 84
Araceae	*Anthurium besseae*	Croat	NE		A(iii), B(ii)	82
Araceae	*Anthurium conjunctum*	K.Krause	NE		A(iii), B(ii)	59
Araceae	*Anthurium ottobuchtienii*	Croat	NE		B(ii)	52, 56, 57, 60, 79, 84
Araceae	*Anthurium solomonii*	Croat	NE		B(ii)	60
Araceae	*Anthurium yungasense*	Croat & Acebey	NE		B(ii)	54, 59, 60
Araceae	*Gorgonidium mirabile*	Schott	NE		B(ii)	25, 34, 84, 87
Araceae	*Gorgonidium striatum*	Hett., Ibisch & E.G.Gonç.	NE		B(ii)	23, 25, 37, 53, 84
Araceae	*Monstera kessleri*	Croat	NE		A(iii), B(ii)	60
Araceae	*Philodendron noelii*	Grayum	NE		A(iv), B(ii)	84
Araceae	*Stenospermation dictyoneurum*	Croat & Acebey	NE		B(ii)	56
Araceae	*Xanthosoma chaparense*	Croat & Delannay	NE		A(iii), B(ii)	82
Araceae	*Xanthosoma fuentesii*	Croat & Delannay	NE		A(iii), B(ii)	60
Araceae	*Xanthosoma puberulum*	Croat	NE		A(iv), B(ii)	54, 56
Araceae	*Xanthosoma seideliae*	Croat	NE		B(ii)	36, 76
Araliaceae	*Dendropanax bolivianus*	Gand.	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	15, 24, 25, 26
Araliaceae	*Dendropanax oblongifolius*	Rusby	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	54, 56, 60
Araliaceae	*Didymopanax leco*	A.Fuentes & M.Mend.	LC		B(ii)	59, 60
Araliaceae	*Hydrocotyle adrianae*	M.Mend.	NE		B(ii)	25, 56, 59
Araliaceae	*Hydrocotyle boliviana*	(Kuntze) Mathias	NE		A(iv), B(ii)	56, 84
Araliaceae	*Hydrocotyle coriacea*	M.Mend.	NE		A(iii), B(ii)	60
Araliaceae	*Hydrocotyle escondida*	M.Mend.	NE		A(iii), B(ii)	57
Araliaceae	*Hydrocotyle felipae*	M.Mend.	NE		A(iii), B(ii)	25
Araliaceae	*Hydrocotyle juanae*	M.Mend.	NE		A(iii), B(ii)	25
Araliaceae	*Hydrocotyle longipedunculata*	M.Mend.	NE		A(iii), B(ii)	59
Araliaceae	*Hydrocotyle lopeziae*	M.Mend.	NE		A(iii), B(ii)	25
Araliaceae	*Hydrocotyle pseudoboliviana*	M.Mend.	NE		A(iii), B(ii)	56, 58
Araliaceae	*Hydrocotyle solomonii*	M.Mend.	NE		A(iii), B(ii)	56
Araliaceae	*Hydrocotyle zongoana*	M.Mend.	NE		A(iii), B(ii)	57
Araliaceae	*Oreopanax atopanthus*	Harms	# EN	B2ab(iii,iv,v)	A(i), B(ii)	53, 56, 82, 84, 87
Araliaceae	*Oreopanax boliviensis*	Seem.	# EN	B1ab(iii,v)+2ab(iii,v)	A(i), B(ii)	23, 25, 59, 60
Araliaceae	*Oreopanax ilicifolius*	Marchal	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	58, 59
Araliaceae	*Oreopanax macrocephalus*	Decne. & Planch. ex Wedd.	LC		B(ii)	53, 56, 57, 59, 82, 84, 87
Araliaceae	*Oreopanax membranaceus*	Rusby	LC		B(ii)	25, 53, 54, 56, 57, 59, 60, 79, 84
Araliaceae	*Oreopanax pentlandianus*	Decne. & Planch. ex Wedd.	# EN	B2ab(iii)	A(i), B(ii)	59, 60, 87
Araliaceae	*Oreopanax steinbachianus*	Harms	LC		B(ii)	23, 25, 26, 56, 57, 59, 60, 79, 82, 84
Araliaceae	*Oreopanax thaumasiophyllus*	Harms	EN	B1ab(iii,v)	A(i), B(ii)	56, 57, 58
Araliaceae	*Oreopanax trollii*	Harms	LC		B(ii)	53, 54, 56, 57, 59, 60, 82, 84
Araliaceae	*Sciodaphyllum allocotanthum*	(Harms) Lowry, G.M.Plunkett & M.M.Mora	# VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	25, 82, 84
Araliaceae	*Sciodaphyllum bangii*	(Harms) Lowry, G.M.Plunkett & M.M.Mora	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	56
Araliaceae	*Sciodaphyllum buchtienii*	(Harms) Lowry, G.M.Plunkett & M.M.Mora	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	59

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Araliaceae	*Sciodaphyllum herzogii*	(Harms) Lowry, G.M.Plunkett & M.M.Mora	LC		B(ii)	53, 54, 56, 57, 59, 60, 82, 84, 85	Aspleniaceae	*Asplenium tunquiniense*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	55, 56
Araliaceae	*Sciodaphyllum nebularum*	(Harms) Lowry, G.M.Plunkett & M.M.Mora	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	87	Aspleniaceae	*Athyrium latinervatum*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	60
Araliaceae	*Sciodaphyllum rivas-martinezii*	A.Fuentes & Cayola	NE		B(ii)	58, 82	Aspleniaceae	*Blechnum anthracinum*	R.C.Moran	NE		A(iii), B(ii)	56
Arecaceae	*Aiphanes truncata*	(Brongn. ex Mart.) H.Wendl.	LC		B(ii)	15, 25, 26, 56, 57, 59, 60, 66, 79, 82, 84	Aspleniaceae	*Blechnum bicolor*	M.Kessler & A.R.Sm.	NE		B(ii)	56, 59, 60
Arecaceae	*Bactris faucium*	Mart.	EN	B2ab(ii,iii)	A(i), B(ii)	25, 60, 79, 82, 84	Aspleniaceae	*Blechnum bolivianum*	M.Kessler & A.R.Sm.	NE		B(ii)	25, 54, 56, 60
Arecaceae	*Bactris major var. socialis*	(Mart.) Drude	NE		B(ii)	25, 26, 64	Aspleniaceae	*Blechnum bruneum*	M.Kessler & A.R.Sm.	NE		A(iv), B(ii)	25, 59
Arecaceae	*Desmoncus latisectus*	Burret	# VU	B2ab(iii)	A(i), B(ii)	11, 62, 70	Aspleniaceae	*Blechnum cochabambense*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	84
Arecaceae	*Parajubaea sunkha*	M.Moraes	EN	B1ab(iii)c(iv) +2ab(iii)c(iv)	A(i), B(ii)	26	Aspleniaceae	*Blechnum pazense*	M.Kessler & A.R.Sm.	NE		A(iv), B(ii)	60
Arecaceae	*Parajubaea torallyi*	(Mart.) Burret	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	28, 29, 30	Aspleniaceae	*Blechnum reflexum*	Rosenst. ex M.Kessler & A.R.Sm.	NE		A(iv), B(ii)	56, 84
Arecaceae	*Parajubaea torallyi var. microcarpa*	M.Moraes	NE		A(iii), B(ii)	30	Aspleniaceae	*Blechnum repens*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	56
Arecaceae	*Parajubaea torallyi var. torallyi*		NE		A(iii), B(ii)	28	Aspleniaceae	*Blechnum smilodon*	M.Kessler & Lehnert	NE		B(ii)	56, 57, 59, 82, 84
Arecaceae	*Syagrus cardenasii*	Glassman	LC		B(ii)	24, 25, 26, 30, 31, 32, 34	Aspleniaceae	*Blechnum squamatum*	M.Kessler & A.R.Sm.	NE		B(ii)	56, 59, 60, 84
Arecaceae	*Syagrus elata*	(L.R.Moreno & O.I.Moreno) Noblick	NE/EN*	B2 b (i, iii, iv)	A(ii), B(ii)	11, 12	Aspleniaceae	*Blechnum tomentosum*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	60
Arecaceae	*Syagrus yungasensis*	M.Moraes	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	53, 55	Aspleniaceae	*Blechnum vallegrandense*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	26
Aristolochiaceae	*Aristolochia andina*	F.González & I.G.Vargas	NE/VU*	B1ab(i,iii)	A(ii), A(iv), B(ii)	26	Aspleniaceae	*Diplazium bolivianum*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	60, 87
Aristolochiaceae	*Aristolochia pseudotriangularis*	O.C.Schmidt	DD		A(iii), B(ii)	24	Aspleniaceae	*Diplazium mapiriense*	Rosenst.	NE		A(iii), B(ii)	83
Aristolochiaceae	*Aristolochia stevechurchillii*	F.González & Pabón-Mora	NE		A(iv), B(ii)	86	Aspleniaceae	*Diplazium yuyoense*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	59
Aristolochiaceae	*Aristolochia werdermanniana*	O.C.Schmidt	NE		A(iii), B(ii)	26	Aspleniaceae	*Thelypteris aymarae*	A.R.Sm. & M.Kessler	NE		A(iii), B(ii)	60
Asparagaceae	*Furcraea boliviensis*	Ravenna	NE		A(iv), B(ii)	23	Aspleniaceae	*Thelypteris buchtienii*	A.R.Sm.	NE		A(iv), B(ii)	59, 60
Aspleniaceae	*Asplenium ayopayense*	M.Kessler & A.R.Sm.	NE		A(iv), B(ii)	59, 87	Aspleniaceae	*Thelypteris chaparensis*	A.R.Sm. & M.Kessler	NE		A(iii), B(ii)	84
Aspleniaceae	*Asplenium bolivianum*	M.Kessler & A.R.Sm.	NE		A(iv), B(ii)	59, 87	Aspleniaceae	*Thelypteris fasciola*	A.R.Sm. & M.Kessler	NE		A(iii), B(ii)	60
Aspleniaceae	*Asplenium herzogii*	Rosenst.	NE		A(iii), B(ii)	25, 59	Aspleniaceae	*Thelypteris fayorum*	A.R.Sm. & M.Kessler	NE		A(iii), B(ii)	56
Aspleniaceae	*Asplenium mosetenense*	M.Kessler	NE		A(iii), B(ii)	79	Aspleniaceae	*Thelypteris lumbricoides*	A.R.Sm. & M.Kessler	NE		A(iii), B(ii)	56, 60
Aspleniaceae	*Asplenium poloense*	Rosenst.	NE		B(ii)	59, 61	Aspleniaceae	*Thelypteris madidiensis*	A.R.Sm. & M.Kessler	NE		A(iii), B(ii)	60
Aspleniaceae	*Asplenium trilobatum*	C.Chr.	NE		A(iii), B(ii)	56	Aspleniaceae	*Thelypteris parva*	A.R.Sm. & M.Kessler	NE		A(iii), B(ii)	25

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Aspleniaceae	*Thelypteris pelludia*	A.R.Sm. & M.Kessler	NE		B(ii)	56, 59, 60, 84
Aspleniaceae	*Thelypteris pilonensis*	A.R.Sm. & M.Kessler	NE		A(iii), B(ii)	61
Aspleniaceae	*Thelypteris stephanii*	A.R.Sm. & M.Kessler	NE		B(ii)	60, 61
Aspleniaceae	*Thelypteris yungensis*	A.R.Sm. & M.Kessler	NE		A(iii), B(ii)	56, 84
Asteraceae	*Ageratina acevedoi*	H.Rob.	NE		A(iii), B(ii)	53
Asteraceae	*Ageratina feuereri*	H.Rob.	NE		A(iii), B(ii)	59
Asteraceae	*Aldama coraniana*	(A.A.Sáenz) E.E.Schill. & Panero	NE		A(iii), B(ii)	82
Asteraceae	*Aldama emaciata*	(H.Rob. & A.J.Moore) E.E.Schill. & Panero	NE		A(iii), B(ii)	86
Asteraceae	*Amboroa geminata*	Cabrera	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	25, 60
Asteraceae	*Andicolea unduaviensis*	(Cuatrec.) Mayta & Molinari	NE		B(ii)	59, 60
Asteraceae	*Aphanactis boliviana*	H.Rob.	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	59
Asteraceae	*Ayapanopsis beckii*	H.Rob.	NE		B(ii)	54, 57, 59, 60
Asteraceae	*Ayapanopsis euphyes*	(B.L.Rob.) R.M.King & H.Rob.	NE		A(iv), B(ii)	56, 87
Asteraceae	*Ayapanopsis latipaniculata*	(Rusby) R.M.King & H.Rob.	NE		A(iii), B(ii)	56, 60
Asteraceae	*Baccharis beckii*	Joch.Müll.	NE		A(iii), B(ii)	41
Asteraceae	*Baccharis chaparensis*	(Joch.Müll.) G.Heiden	NE		A(iv), B(ii)	82, 84
Asteraceae	*Baccharis densiflora* subsp. *densiflora*		NE		A(iv), B(ii)	52
Asteraceae	*Baccharis glomerata*	Joch.Müll.	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	52, 57
Asteraceae	*Baccharis integrifolia*	(Joch.Müll.) G.Heiden	NE		B(ii)	25, 26, 56, 60
Asteraceae	*Baccharis kessleri*	(Joch.Müll.) G.Heiden	NE		A(iv), B(ii)	82, 84
Asteraceae	*Baccharis linearifolia* subsp. *polycephala*	(Wedd.) Joch.Müll.	NE		B(ii)	23, 25, 26, 37, 38, 40, 52, 85
Asteraceae	*Baccharis longipedicellata*	(Joch.Müll.) G.Heiden	NE		A(iv), B(ii)	57, 59
Asteraceae	*Baccharis mandonii*	Sch.Bip. ex Klatt	LC		B(ii)	56, 57, 59, 60, 82, 84
Asteraceae	*Baccharis neoaustralis*	G.Heiden	NE		A(iii), B(ii)	84
Asteraceae	*Baccharis potosiensis*	H.Rob.	LC		B(ii)	30, 41, 48

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Asteraceae	*Baccharis pumila*	Joch.Müll.	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	40
Asteraceae	*Baccharis saliens* var. *saliens*		NE		A(iii), B(ii)	56
Asteraceae	*Baccharis serranoi*	H.Rob.	LC		B(ii)	25, 26, 27, 82, 84, 85, 87
Asteraceae	*Baccharis torricoi*	Joch.Müll.	NE		B(ii)	41
Asteraceae	*Baccharis trinervis* var. *debilis*	(Rusby) Joch.Müll.	NE		B(ii)	26, 53, 73
Asteraceae	*Baccharis vargasii*	(Joch.Müll.) G.Heiden	NE		A(iii), B(ii)	25
Asteraceae	*Baccharis woodii*	Joch.Müll.	EN	B2ab(iii)	A(i), B(ii)	86
Asteraceae	*Baccharis yungensis*	(Joch.Müll.) G.Heiden	NE		B(ii)	53, 56, 87
Asteraceae	*Baccharis zongoensis*	Joch.Müll.	LC		B(ii)	56, 57, 85
Asteraceae	*Barnadesia macrocephala*	Kuntze	NE		A(iii), B(ii)	82
Asteraceae	*Barnadesia woodii*	D.J.N.Hind	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	59, 60
Asteraceae	*Bidens herzogii*	(Sherff) D.J.N.Hind	EN	B1ab(iii)	A(i), B(ii)	2
Asteraceae	*Bishovia boliviensis*	R.M.King & H.Rob.	VU	B2ab(iii)	A(i), B(ii)	23, 26
Asteraceae	*Calea huanchacana*	Pruski	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	11
Asteraceae	*Calea nematophylla*	Pruski	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	11
Asteraceae	*Centratherum cardenasii*	H.Rob.	VU	B1ab(iii)	A(i), B(ii)	2, 10, 20, 22
Asteraceae	*Chaetacalia stylotricha*	(Cabrera) Pruski	NE		A(iii), B(ii)	24, 26
Asteraceae	*Chersodoma filifolia*	M.Zárate	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	85
Asteraceae	*Chersodoma helianthemoides*	(Wedd.) J.Calvo & M.Zárate	EN	B2ab(iii)	A(i), B(ii)	37
Asteraceae	*Chromolaena austera*	(B.L.Rob.) R.M.King & H.Rob.	NE		A(iv), B(ii)	25
Asteraceae	*Chromolaena mallota*	(B.L.Rob.) R.M.King & H.Rob.	LC		B(ii)	25, 60
Asteraceae	*Chromolaena tunariensis*	(Hieron.) R.M.King & H.Rob.	NE		B(ii)	23, 25, 26, 37, 40, 87
Asteraceae	*Cosmos peucedanifolius* var. *cochabambensis*	Sherff	NE		A(iv), B(ii)	85
Asteraceae	*Critoniopsis choquetangensis*	H.Rob.	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	59
Asteraceae	*Critoniopsis jubifera*	(Rusby) H.Rob.	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	55, 58, 60

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Asteraceae	*Critoniopsis steinbachii*	H.Rob.	# EN	B2ab(iii)	A(i), B(ii)	25, 56, 57	Asteraceae	*Hieracium tacense*	Hieron.	NE		A(iv), B(ii)	53, 56
Asteraceae	*Critoniopsis yungasensis*	(Britton) H.Rob.	# VU	B2ab(iii)	A(i), B(ii)	25, 53, 54, 56, 82, 84	Asteraceae	*Hieracium trichodontum*	(Sch.Bip.) Rusby	NE		B(ii)	56, 57, 59, 60
Asteraceae	*Dendrophorbium ayopayense*	(Cuatrec.) D.J.N.Hind	# VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	25, 56, 57, 59, 82, 84, 87	Asteraceae	*Hyaloseris quadriflora*	J.Kost.	NE/VU*	B1b(iii)	A(ii), B(ii)	23, 29
Asteraceae	*Dendrophorbium chulumanicum*	(Cabrera) S.Beck & D.Ibáñez	NE		B(ii)	53	Asteraceae	*Hypserion boliviense*	G.L.Nesom	NE		A(iii), B(ii)	56
Asteraceae	*Dendrophorbium coroicense*	(Rusby) C.Jeffrey	LC		B(ii)	54, 59, 60	Asteraceae	*Ichthyothere woodii*	Frisby & D.J.N.Hind	EN	B1ab(i,ii,iii,iv,v) +2ab(i,ii,iii,iv,v)	A(i), B(ii)	2, 10
Asteraceae	*Dendrophorbium krukoffii*	(Cuatrec.) C.Jeffrey	NE		A(iii), B(ii)	54, 60	Asteraceae	*Jungia beckii*	Harling	NE		A(iii), B(ii)	56
Asteraceae	*Dendrophorbium tabacifolium*	(Rusby) C.Jeffrey	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	25, 26, 57	Asteraceae	*Jungia woodii*	D.J.N.Hind	NE		A(iii), B(ii)	57
Asteraceae	*Dendrophorbium varicosum*	J.Calvo	NE		A(iii), B(ii)	56	Asteraceae	*Kaunia camataquiensis*	(Hieron.) R.M.King & H.Rob.	NE		B(ii)	23, 26, 42
Asteraceae	*Dendrophorbium yungasense*	(Britton) C.Jeffrey	# EN	B2ab(iii)	A(i), B(ii)	56, 60	Asteraceae	*Kaunia gynoximorpha*	(Rusby ex B.L.Rob.) R.M.King & H.Rob.	NE		B(ii)	25, 26, 54, 56, 57, 58, 59, 60
Asteraceae	*Fleischmannia bridgesii*	(B.L.Rob.) R.M.King & H.Rob.	NE		A(iii), B(ii)	30, 82	Asteraceae	*Kaunia hosanensis*	(B.L.Rob.) R.M.King & H.Rob.	NE		A(iii), B(ii)	25
Asteraceae	*Fleischmannia neei*	H.Rob.	# EN	B2ab(iii)	A(i), B(ii)	25, 26, 56	Asteraceae	*Lepidaploa aristosquamosa*	(Britton) H.Rob.	NE		B(ii)	60
Asteraceae	*Fleischmannia soratae*	(Sch.Bip. ex B.L.Rob.) R.M.King & H.Rob.	# CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	87	Asteraceae	*Lepidaploa beckii*	H.Rob.	NE		A(iv), B(ii)	54, 56, 57, 59, 60
Asteraceae	*Fleischmannia steinbachii*	H.Rob.	NE		A(iii), B(ii)	25, 26	Asteraceae	*Lepidaploa deflexa*	(Rusby) H.Rob.	NE		A(iv), B(ii)	56
Asteraceae	*Fleischmannia tamboensis*	(Hieron.) R.M.King & H.Rob.	# CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	37, 56	Asteraceae	*Lepidaploa densipaniculata*	(Rusby) H.Rob.	NE		B(ii)	56, 57, 59, 60
Asteraceae	*Fleischmannia yungasensis*	(B.L.Rob.) R.M.King & H.Rob.	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	53, 56	Asteraceae	*Lepidaploa fournetii*	(H.Rob. & B.Kahn) H.Rob.	NE		A(iv), B(ii)	56
Asteraceae	*Galinsoga boliviensis*	Canne	EN	B2ab(iii)	A(i), B(ii)	29, 39, 51, 87	Asteraceae	*Lepidaploa solomonii*	H.Rob.	NE		A(iv), B(ii)	57, 59, 60
Asteraceae	*Gamochaeta beckii*	Urtubey & S.E.Freire	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	56	Asteraceae	*Lepidaploa tarijensis*	(Griseb.) H.Rob.	NE		B(ii)	26, 31, 34
Asteraceae	*Gochnatia boliviana*	S.F.Blake	# VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	23, 24, 25, 26, 27, 28, 29, 30, 31, 85, 86	Asteraceae	*Lepidaploa tristis*	(Hieron.) H.Rob.	NE		B(ii)	59, 84
Asteraceae	*Gynoxys asterotricha*	Sch.Bip.	NE		B(ii)	25, 56, 57, 59, 60, 84, 87	Asteraceae	*Lessingianthus coriarius*	M.B.Angulo	NE		B(ii)	23, 26, 60
Asteraceae	*Gynoxys cochabambensis*	Cabrera	DD		A(iii), B(ii)	25, 82, 84	Asteraceae	*Lessingianthus ixiamensis*	(Rusby) H.Rob.	NE		A(iii), B(ii)	11
Asteraceae	*Gynoxys hoffmannii*	Kuntze	NE		A(iii), B(ii)	84	Asteraceae	*Lessingianthus robustus*	(Rusby) H.Rob.	NE		B(ii)	22, 56
Asteraceae	*Gynoxys mandonii*	Sch.Bip. ex Rusby	LC		B(ii)	53, 56, 59, 60, 82, 84, 87	Asteraceae	*Liabum steinbachii*	H.Rob.	NE		A(iv), B(ii)	26
Asteraceae	*Gynoxys neovelutina*	Cuatrec.	EN	B2ab(iii)	A(i), B(ii)	84	Asteraceae	*Llerasia boliviensis*	(Cabrera) Cuatrec.	NE		A(iii), B(ii)	82
Asteraceae	*Gynoxys psilophylla*	Klatt	NE		B(ii)	25, 30, 55, 79, 82, 84, 85, 87	Asteraceae	*Llerasia ledifolia*	(S.F.Blake) Cuatrec.	# VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	53, 56, 60
Asteraceae	*Gynoxys tablaensis*	Cabrera	DD		A(iii), B(ii)	85	Asteraceae	*Llerasia macrocephala*	(Rusby) Pruski	# VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	56, 59, 60

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Asteraceae	*Llerasia soratensis*	(S.F.Blake) Cuatrec.	NE		B(ii)	25, 59
Asteraceae	*Mikania cochabambana*	B.L.Rob.	NE		A(iii), B(ii)	82
Asteraceae	*Mikania comarapensis*	B.L.Rob.	NE		A(iii), B(ii)	25
Asteraceae	*Mikania dictyota*	B.L.Rob.	# VU	B2ab(ii)	A(i), B(ii)	25, 56, 59
Asteraceae	*Mikania leucophylla*	B.L.Rob.	LC		B(ii)	23, 25, 26, 31, 54, 56, 59, 60, 82, 84, 85, 87
Asteraceae	*Mikania manomoi*	D.J.N.Hind & Frisby	EN	D	A(i), B(ii)	7
Asteraceae	*Mikania perstipulata*	W.C.Holmes	NE		A(iii), B(ii)	82
Asteraceae	*Mikania rubella*	Lingelsh.	NE		A(iii), B(ii)	59
Asteraceae	*Mikania rusbyi*	B.L.Rob.	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	56
Asteraceae	*Mikania schultzii*	B.L.Rob.	EN	B2ab(iii)	A(i), B(ii)	23, 25, 56, 84
Asteraceae	*Mikania steinbachii*	B.L.Rob.	NE		A(iv), B(ii)	60
Asteraceae	*Mikania williamsii*	B.L.Rob.	EN	B2ab(iii)	A(i), B(ii)	56, 59, 82
Asteraceae	*Mniodes argentea*	(Wedd.) M.O.Dillon	NE		A(iv), B(ii)	52, 57
Asteraceae	*Mniodes beckii*	Quip. & M.O.Dillon	NE		A(iii), B(ii)	59
Asteraceae	*Moquiniastrum bolivianum*	(Rusby) G.Sancho	NE		B(ii)	2, 11, 25, 26, 53, 59, 60
Asteraceae	*Munnozia fournetii*	H.Rob.	NE		A(iii), B(ii)	56
Asteraceae	*Munnozia glandulosa*	Rusby	NE		A(iii), B(ii)	84
Asteraceae	*Munnozia hirta*	Rusby	NE		A(iv), B(ii)	25, 56, 84
Asteraceae	*Munnozia rusbyi*	Britton ex Rusby	NE		A(iii), B(ii)	59
Asteraceae	*Mutisia vicia*	J.Kost.	LC		B(ii)	23, 26, 52, 84, 86
Asteraceae	*Neocuatrecasia epapposa*	D.J.N.Hind	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	1, 16, 17, 18
Asteraceae	*Neocuatrecasia feuereri*	R.M.King & H.Rob.	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	59
Asteraceae	*Neocuatrecasia thymifolia*	(Britton) R.M.King & H.Rob.	NE		A(iii), B(ii)	41
Asteraceae	*Neocuatrecasia tysonii*	H.Rob.	VU	B2ab(i,ii,iii,iv)	A(i), B(ii)	2, 12
Asteraceae	*Neocuatrecasia yungasensis*	H.Rob.	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	56

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Asteraceae	*Nordenstamia kingii*	(H.Rob. & Cuatrec.) B.Nord.	# VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	25, 84
Asteraceae	*Nordenstamia repanda*	(Wedd.) Lundin	NT		B(ii)	58
Asteraceae	*Onoseris fraterna*	S.F.Blake	NE		A(iii), B(ii)	60
Asteraceae	*Onoseris sagittatus*	Rusby	NE		B(ii)	26, 49, 85
Asteraceae	*Ophryosporus cumingii*	Benth. ex Baker	LC		B(ii)	25, 26, 56, 57, 82, 84
Asteraceae	*Ophryosporus kuntzei*	Hieron.	VU	B2ab(iii)	A(i), B(ii)	34, 56, 57, 85
Asteraceae	*Ophryosporus venosissimus*	B.L.Rob.	# EN	B2ab(iii)	A(i), B(ii)	56, 85
Asteraceae	*Oyedaea boliviana*	Britton	LC		B(ii)	19, 23, 24, 25, 26, 40, 56, 57, 58, 59, 60, 82, 84
Asteraceae	*Oyedaea bullata*	J.Kost.	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	57
Asteraceae	*Oyedaea neei*	Pruski	NE		B(ii)	24, 26
Asteraceae	*Paranephelius asperifolius*	(Muschl.) H.Rob. & Brettell	NE		B(ii)	26, 56, 85
Asteraceae	*Parthenium glomeratum*	Rollins	NE		B(ii)	38, 39
Asteraceae	*Pectis harryi*	D.J.N.Hind & Frisby	EN	B1ab(i,ii,iii,iv,v) +2ab(i,ii,iii,iv,v)	A(i), B(ii)	1
Asteraceae	*Pentacalia beckii*	(Cabrera) Cuatrec.	LC		B(ii)	25, 56, 57, 60, 84
Asteraceae	*Pentacalia buchtienii*	(Greenm.) Cuatrec.	NE		A(iv), B(ii)	56
Asteraceae	*Pentacalia cardenasii*	(Cuatrec.) Cuatrec.	NE		B(ii)	26, 60
Asteraceae	*Pentacalia comarapensis*	(Cabrera) Cuatrec.	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	25, 84
Asteraceae	*Pentacalia viburnifolia*	J.Calvo & A.Fuentes	NE		A(iii), B(ii)	59, 60
Asteraceae	*Pentacalia zongoensis*	(Cabrera) J.Calvo	NE		A(iii), B(ii)	56
Asteraceae	*Plagiocheilus ciliaris*	Wedd.	NE		A(iii), B(ii)	56
Asteraceae	*Porophyllum woodii*	D.J.N.Hind	DD		A(iii), B(ii)	35
Asteraceae	*Praxelis chiquitensis*	(B.L.Rob.) R.M.King & H.Rob.	EN	D	A(i), B(ii)	2
Asteraceae	*Praxelis cleggiae*	D.J.N.Hind & S.L.Edwards	NE		B(ii)	1, 12, 18
Asteraceae	*Praxelis conoclinanthia*	(Hieron.) R.M.King & H.Rob.	NE		B(ii)	26, 27, 30, 59, 60
Asteraceae	*Praxelis porophylloides*	(B.L.Rob.) D.J.N.Hind	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	2

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Asteraceae	*Quechualia smithii*	H.Rob.	NE		A(iii), B(ii)	25
Asteraceae	*Senecio apolobambensis*	Cabrera	NE		A(iv), B(ii)	59, 60
Asteraceae	*Senecio colaminus*	Cuatrec.	NE		A(iv), B(ii)	82, 84
Asteraceae	*Senecio leuceria*	Cabrera	NE		A(iii), B(ii)	23
Asteraceae	*Senecio loayzanus*	Cabrera	NE		A(iii), B(ii)	52
Asteraceae	*Senecio madidiensis*	J.Calvo & A.Fuentes	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	59, 60
Asteraceae	*Senecio perezioides*	Pruski	NE		A(iii), B(ii)	59
Asteraceae	*Senecio potosianus*	Klatt	NE		A(iv), B(ii)	52, 59, 60
Asteraceae	*Senecio tarijensis*	Cabrera	NE		A(iii), B(ii)	36
Asteraceae	*Senecio viridilacus*	Cabrera	NE		A(iii), B(ii)	23
Asteraceae	*Stevia beckii*	R.M.King & H.Rob.	NE		A(iv), B(ii)	26
Asteraceae	*Stevia benderi*	Perkins	EN	B2ab(iii)	A(i), B(ii)	43, 59
Asteraceae	*Stevia boliviensis*	Sch.Bip. ex Rusby	NE		B(ii)	23, 25, 26, 56, 57, 82
Asteraceae	*Stevia calderillensis*	Hieron.	VU	B2ab(iii)	A(i), B(ii)	27, 34, 37, 40
Asteraceae	*Stevia camachensis*	Hieron.	NE		A(iv), B(ii)	38
Asteraceae	*Stevia cardiatica*	Perkins	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	43
Asteraceae	*Stevia cochabambensis*	Hieron.	NE		A(iii), B(ii)	56
Asteraceae	*Stevia copiosa*	J.Kost.	NE		A(iii), B(ii)	23
Asteraceae	*Stevia discolor*	B.L.Rob.	NE		A(iii), B(ii)	23
Asteraceae	*Stevia eclipes*	B.L.Rob.	NE		A(iii), B(ii)	40
Asteraceae	*Stevia filipes*	Rusby	NE		B(ii)	26
Asteraceae	*Stevia glanduloso-pubescens*	Hieron.	NE		A(iii)	42
Asteraceae	*Stevia glomerata*	Hieron.	NE		A(iii), B(ii)	40
Asteraceae	*Stevia kuhnioides*	Rusby ex B.L.Rob.	NE		A(iii), B(ii)	84
Asteraceae	*Stevia kuntzei*	Hieron.	NE		A(iii), B(ii)	85
Asteraceae	*Stevia neglecta*	Rusby	NE		A(iv), B(ii)	56, 85
Asteraceae	*Stevia obovata*	Rusby	NE		A(iv), B(ii)	85
Asteraceae	*Stevia pauciflora*	J.Kost.	NE		A(iii), B(ii)	35
Asteraceae	*Stevia potosiensis*	R.M.King & H.Rob.	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	48
Asteraceae	*Stevia santacruzensis*	Hieron.	NE		A(iv), B(ii)	23, 82, 84
Asteraceae	*Stevia sarensis*	B.L.Rob.	VU	B2ab(ii,iii,iv)	A(i), B(ii)	15, 18, 23, 25
Asteraceae	*Stevia setifera*	Rusby ex B.L.Rob.	LC		B(ii)	53, 56, 57, 85, 86
Asteraceae	*Stevia stuebelii*	Hieron.	NE		A(iii), B(ii)	52
Asteraceae	*Stevia tunariensis*	Hieron.	NE		A(iv), B(ii)	56, 85
Asteraceae	*Stevia vaccinioides*	J.Kost.	NE		A(iii), B(ii)	26
Asteraceae	*Tagetes mandonii*	Sch.Bip. ex Klatt	NE		B(ii)	52, 53, 56, 59, 60
Asteraceae	*Trichogonia capitata*	B.L.Rob.	DD		B(ii)	23, 26, 87
Asteraceae	*Verbesina benderi*	Perkins	DD		A(iii), B(ii)	43
Asteraceae	*Verbesina boliviana*	Klatt	NE		A(iv), B(ii)	52
Asteraceae	*Verbesina cinerea*	Rusby	DD		B(ii)	23, 26, 40, 49, 82, 85, 86
Asteraceae	*Verbesina flavovirens*	R.E.Fr.	NE		B(ii)	23, 26
Asteraceae	*Verbesina lapazii*	Panero	NE		A(iii), B(ii)	56
Asteraceae	*Verbesina leucactinota*	B.L.Rob.	NE		B(ii)	56, 60
Asteraceae	*Verbesina pflanzii*	Perkins	NE		A(iii), B(ii)	52
Asteraceae	*Verbesina rhomboidea*	J.Kost.	NE		A(iii), B(ii)	23
Asteraceae	*Vernonanthura santacruzensis*	(Hieron.) H.Rob.	# VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	24, 26
Basellaceae	*Anredera aspera*	Sperling	NE		A(iv), B(ii)	56
Begoniaceae	*Begonia bangii*	Kuntze	NE		A(iv), B(ii)	56, 82, 84
Begoniaceae	*Begonia buchtienii*	Irmsch.	NE		A(iii), B(ii)	82
Begoniaceae	*Begonia chaetocarpa*	Kuntze	NE		B(ii)	25, 26, 31, 55, 56, 82, 84

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Begoniaceae	*Begonia chrysantha*	Tebbitt	NE		A(iii), B(ii)	27
Begoniaceae	*Begonia comata*	Kuntze	NE		A(iv), B(ii)	31, 85
Begoniaceae	*Begonia cremnophila*	Tebbitt	NE		A(iii), B(ii)	24, 26
Begoniaceae	*Begonia fissistyla*	Irmsch.	NE		A(iii), B(ii)	56
Begoniaceae	*Begonia galea*	Moonlight & A.Fuentes	NE		A(iii), B(ii)	59
Begoniaceae	*Begonia germaineana*	Tebbitt	NE		A(iii), B(ii)	26
Begoniaceae	*Begonia juntasensis*	Kuntze	NE		B(ii)	25, 26, 56, 57, 60, 61, 82, 84
Begoniaceae	*Begonia leathermaniae*	O'Reilly & Kareg.	NE		B(ii)	25, 84
Begoniaceae	*Begonia leptostyla*	Irmsch.	NE		B(ii)	59, 60
Begoniaceae	*Begonia micranthera* subsp. *albonervia*	Tebbitt	NE		A(iii), B(ii)	26
Begoniaceae	*Begonia oblanceolata*	Rusby	NE		A(iii), B(ii)	82
Begoniaceae	*Begonia pearcei*	Hook.f.	NE		A(iv), B(ii)	32, 37, 39
Begoniaceae	*Begonia phantasma*	Tebbitt	NE		A(iv), B(ii)	26, 37
Begoniaceae	*Begonia santarosensis*	Kuntze	NE		A(iv), B(ii)	56, 82, 84, 87
Begoniaceae	*Begonia subcaudata*	Rusby ex L.B.Sm. & Schub.	NE		A(iv), B(ii)	53, 56, 57
Begoniaceae	*Begonia unduavensis*	Rusby	NE		B(ii)	53, 56, 57, 59, 60, 82, 84, 87
Begoniaceae	*Begonia varistyla*	Irmsch.	NE		B(ii)	24, 25, 26, 54, 59, 60, 84
Berberidaceae	*Berberis ciliaris*	Lindl.	NE		B(ii)	25, 56, 57, 59, 87
Berberidaceae	*Berberis fiebrigii*	C.K.Schneid.	NE		B(ii)	26, 27, 31
Berberidaceae	*Berberis keissleriana*	C.K.Schneid.	DD		A(iv), B(ii)	25
Berberidaceae	*Berberis ovalifolia*	Rusby	NE		B(ii)	56, 59
Berberidaceae	*Berberis phyllacantha*	Rusby	NE		B(ii)	25, 56, 57, 82
Bignoniaceae	*Tecoma beckii*	J.R.I.Wood	NE		A(iv), B(ii)	29, 86
Boraginaceae	*Cordia santacruzensis*	J.S.Mill. & M.Nee	EN	B1ab(ii)+2ab(iii)	A(i), B(ii)	25, 26
Boraginaceae	*Tournefortia curvilimba*	Killip	NE		A(iii), B(ii)	54

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Boraginaceae	*Tournefortia vestita*	Killip	NE		A(iii), B(ii)	54
Boraginaceae	*Varronia lantanifolia*	J.S.Mill. & J.R.I.Wood	NE		B(ii)	29, 86
Brassicaceae	*Aschersoniodoxa mandoniana*	(Wedd.) Gilg & Muschl.	NT	B1b(iii)	B(ii)	56, 57, 84
Brassicaceae	*Brayopsis diapensioides*	(Wedd.) Gilg & Muschl.	EN	B1ab(iii,iv)	A(i), B(ii)	59, 60
Brassicaceae	*Brayopsis gamosepala*	Al-Shehbaz	NE		A(iii), B(ii)	59
Brassicaceae	*Cardamine speciosa*	Britton	NE		A(iii), B(ii)	56
Brassicaceae	*Draba quearaensis*	Al-Shehbaz	NE		A(iii), B(ii)	59, 60
Brassicaceae	*Lepidium stephan-beckii*	Al-Shehbaz	NE		A(iii), B(ii)	41
Brassicaceae	*Polypsecadium apolobamba*	Al-Shehbaz & A.Fuentes	NE		A(iii), B(ii)	59
Brassicaceae	*Yunkia boliviana*	(Britton) Salariato & Al-Shehbaz	NE		A(iii), B(ii)	31
Brassicaceae	*Yunkia subscandens*	(Kuntze) Salariato & Al-Shehbaz	NE		B(ii)	31, 56, 82
Bromeliaceae	*Aechmea longicuspis* var. *kuntzeana*	(Mez) Gouda	NE		B(ii)	12, 19, 60
Bromeliaceae	*Barfussia laxissima*	(Mez) Manzan. & W.Till	NE		A(iii), B(ii)	60
Bromeliaceae	*Billbergia cardenasii*	L.B.Sm.	DD		A(iii), B(ii)	84
Bromeliaceae	*Billbergia jandebrabanderi*	R.Vásquez & Ibisch	NE		A(iii), B(ii)	15
Bromeliaceae	*Billbergia microlepis*	L.B.Sm.	NE		A(iv), B(ii)	60
Bromeliaceae	*Bromelia arubaiensis*	Ibisch & R.Vásquez	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	15, 25
Bromeliaceae	*Bromelia ignaciana*	R.Vásquez & Ibisch	VU	D2	A(i), B(ii)	11
Bromeliaceae	*Deuterocohnia brevispicata*	Rauh & L.Hrom.	LC		B(ii)	30, 31
Bromeliaceae	*Deuterocohnia gableana*	R.Vásquez & Ibisch	NE		A(iii), B(ii)	25
Bromeliaceae	*Deuterocohnia lotteae*	(Rauh) M.A.Spencer & L.B.Sm.	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	37, 38
Bromeliaceae	*Deuterocohnia meziana* subsp. *pedicellata*	(W.Till) N.Schütz	NE		A(iii), B(ii)	26, 27
Bromeliaceae	*Deuterocohnia scapigera*	(Rauh & L.Hrom.) M.A.Spencer & L.B.Sm.	VU	B2ab(iii)	A(i), B(ii)	23, 26, 42, 43, 86
Bromeliaceae	*Deuterocohnia scapigera* subsp. *sanctae-crucis*	(W.Till) N.Schütz	NE		A(iii), B(ii)	26
Bromeliaceae	*Deuterocohnia strobilifera*	Mez	NE		B(ii)	42, 43

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Bromeliaceae	*Deuterocohnia strobilifera* var. *strobilifera*		NE		A(iv), B(ii)	41, 42, 43
Bromeliaceae	*Dyckia pulquinensis*	Wittm.	VU	B2ab(iii)	A(i), B(ii)	23, 25
Bromeliaceae	*Fosterella caulescens*	Rauh	NE		A(iv), B(ii)	60
Bromeliaceae	*Fosterella chaparensis*	Ibisch, R.Vásquez & E.Gross	NE		A(iv), B(ii)	56, 82, 84
Bromeliaceae	*Fosterella christophii*	Ibisch, R.Vásquez & J.Peters	NE		A(iii), B(ii)	15, 25, 26
Bromeliaceae	*Fosterella cotacajensis*	M.Kessler, Ibisch & E.Gross	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	87
Bromeliaceae	*Fosterella elviragrossiae*	Ibisch, R.Vásquez & J.Peters	NE		A(iii), B(ii)	87
Bromeliaceae	*Fosterella floridensis*	Ibisch, R.Vásquez & E.Gross	NE		A(iii), B(ii)	26
Bromeliaceae	*Fosterella gracilis*	(Rusby) L.B.Sm.	NE		A(iv), B(ii)	60, 61
Bromeliaceae	*Fosterella graminea*	(L.B.Sm.) L.B.Sm.	NE		A(iii), B(ii)	59, 60
Bromeliaceae	*Fosterella heterophylla*	Rauh	NE		A(iii), B(ii)	56
Bromeliaceae	*Fosterella kroemeri*	Ibisch, R.Vásquez & J.Peters	NE		A(iii), B(ii)	56
Bromeliaceae	*Fosterella pearcei*	(Baker) L.B.Sm.	NE		A(iv), B(ii)	60
Bromeliaceae	*Fosterella vasquezii*	E.Gross & Ibisch	LC		B(ii)	11
Bromeliaceae	*Fosterella villosula*	(Harms) L.B.Sm.	NE		B(ii)	60, 82, 84
Bromeliaceae	*Fosterella weddelliana*	(Brongn. ex Baker) L.B.Sm.	NE		B(ii)	53, 55, 56, 60, 87
Bromeliaceae	*Fosterella yuvinkae*	Ibisch, R.Vásquez, E.Gross & S.Reichle	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	2
Bromeliaceae	*Greigia acebeyi*	B.Will, T.Krömer, M.Kessler, Karger & H.Luther	NE		A(iii), B(ii)	56
Bromeliaceae	*Greigia atrocastanea*	H.Luther	NE		A(iii), B(ii)	56
Bromeliaceae	*Greigia cochabambae*	H.Luther	NE		A(iii), B(ii)	56, 84
Bromeliaceae	*Greigia kessleri*	H.Luther	VU	B1ab(iii)	A(i), B(ii)	25, 59
Bromeliaceae	*Greigia marioi*	B.Will, T.Krömer, M.Kessler, Karger & H.Luther	NE		A(iii), B(ii)	56
Bromeliaceae	*Greigia membranacea*	B.Will, T.Krömer, M.Kessler, Karger & H.Luther	DD		A(iii), B(ii)	56
Bromeliaceae	*Guzmania remediosensis*	E.Gross	NE		A(iii), B(ii)	23, 54
Bromeliaceae	*Pitcairnia amboroensis*	Ibisch, R.Vásquez, E.Gross & M.Kessler	NE		A(iv), B(ii)	25

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Bromeliaceae	*Pitcairnia cantuoides*	R.Vásquez & Ibisch	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	26
Bromeliaceae	*Pitcairnia cardenasii*	L.B.Sm.	EN	B2ab(iii)	A(i), B(ii)	2, 11, 26, 31, 32
Bromeliaceae	*Pitcairnia chiquitana*	R.Vásquez & Ibisch	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	2, 6
Bromeliaceae	*Pitcairnia crassa*	L.B.Sm.	NE		B(ii)	25, 59, 82
Bromeliaceae	*Pitcairnia divaricata*	Wittm.	NE		B(ii)	56
Bromeliaceae	*Pitcairnia heydlauffii*	R.Vásquez & Ibisch	NE		A(iii), B(ii)	84
Bromeliaceae	*Pitcairnia longissimiflora*	Ibisch, R.Vásquez & E.Gross	NE		A(iii), B(ii)	25, 26
Bromeliaceae	*Pitcairnia mohammadii*	Ibisch & R.Vásquez	EN	B1ab(v)+2ab(v)	A(i), B(ii)	2
Bromeliaceae	*Pitcairnia multiramosa*	(Mez) Mez	NE		A(iv), B(ii)	31
Bromeliaceae	*Pitcairnia platystemon*	(Mez) Mez	VU	D2	A(i), B(ii)	2
Bromeliaceae	*Puya alba*	L.B.Sm.	NE		A(iii), B(ii)	30, 36
Bromeliaceae	*Puya atra*	L.B.Sm.	LC		B(ii)	23, 25, 56, 82, 84
Bromeliaceae	*Puya boopiensis*	R.Vásquez, Ibisch & R.Lara	NE		A(iii), B(ii)	55
Bromeliaceae	*Puya brittoniana*	Baker	NE		A(iv), B(ii)	59, 60, 82
Bromeliaceae	*Puya cardenasii*	L.B.Sm.	NE		A(iii), B(ii)	85
Bromeliaceae	*Puya claudiae*	Ibisch, R.Vásquez & E.Gross	NE		A(iv), B(ii)	26, 87
Bromeliaceae	*Puya ctenorhyncha*	L.B.Sm.	NT	B1a	B(ii)	57, 84
Bromeliaceae	*Puya elviragrossiae*	R.Vásquez & Ibisch	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	26
Bromeliaceae	*Puya entre-riosensis*	Ibisch & E.Gross	NE		A(iii), B(ii)	37
Bromeliaceae	*Puya fiebrigii*	Mez	NE		A(iii), B(ii)	60
Bromeliaceae	*Puya fosteriana*	L.B.Sm.	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	56
Bromeliaceae	*Puya glabrescens*	L.B.Sm.	NE		B(ii)	48, 85
Bromeliaceae	*Puya herzogii*	Wittm.	LC		B(ii)	59, 82, 84, 87
Bromeliaceae	*Puya humilis*	Mez	NE		B(ii)	79, 82
Bromeliaceae	*Puya ibischii*	R.Vásquez	EN	B1ab(ii,v)	A(i), B(ii)	82

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Bromeliaceae	*Puya kuntzeana*	Mez	EN	B2ab(iii)	A(i), B(ii)	27
Bromeliaceae	*Puya larae*	R.Vásquez & Ibisch	NE		A(iii), B(ii)	55
Bromeliaceae	*Puya laxa*	L.B.Sm.	VU	B2ab(iii)	A(i), B(ii)	23, 25, 26, 27
Bromeliaceae	*Puya minima*	L.B.Sm.	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	26, 37, 40
Bromeliaceae	*Puya nana*	Wittm.	NE		A(iv), B(ii)	25, 26
Bromeliaceae	*Puya olivacea*	Wittm.	NE		A(iv), B(ii)	32
Bromeliaceae	*Puya pachyphylla*	R.Vásquez & Ibisch	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	26
Bromeliaceae	*Puya pearcei*	(Baker) Mez	NE		B(ii)	26, 56, 57, 60, 82
Bromeliaceae	*Puya pizarroana*	R.Vásquez, Ibisch & S.Beck	NE		A(iii), B(ii)	53
Bromeliaceae	*Puya potosina*	L.B.Sm.	NE		A(iii), B(ii)	30
Bromeliaceae	*Puya reducta*	L.B.Sm.	LC		B(ii)	60
Bromeliaceae	*Puya riparia*	L.B.Sm.	NE		A(iii), B(ii)	56
Bromeliaceae	*Puya sanctae-crucis*	(Baker) L.B.Sm.	LC		B(ii)	26, 57, 82
Bromeliaceae	*Puya secunda*	L.B.Sm.	NE		A(iii), B(ii)	82, 84
Bromeliaceae	*Puya sehuencasensis*	R.Vásquez, Ibisch & R.Lara	NE		A(iii), B(ii)	84
Bromeliaceae	*Puya serranoensis*	Rauh	NE		A(iii), B(ii)	31
Bromeliaceae	*Puya solomonii*	G.S.Varad.	# VU	D2	A(i), B(ii)	57
Bromeliaceae	*Puya stenothyrsa*	(Baker) Mez	LC		B(ii)	23, 26, 48, 57, 79, 85
Bromeliaceae	*Puya tristis*	L.B.Sm.	NE		A(iii), B(ii)	82
Bromeliaceae	*Puya trollii*	L.B.Sm.	NE		A(iii), B(ii)	32
Bromeliaceae	*Puya tuberosa*	Mez	NE		A(iv), B(ii)	26
Bromeliaceae	*Puya tunarensis*	Mez	NE		B(ii)	84, 85, 87
Bromeliaceae	*Puya ugentiana*	L.B.Sm.	DD		A(iii), B(ii)	29
Bromeliaceae	*Puya ultima*	L.B.Sm.	NE		A(iii), B(ii)	59
Bromeliaceae	*Puya valida*	L.B.Sm.	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	28, 29, 42

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Bromeliaceae	*Puya vasquezii*	Ibisch & E.Gross	NE		A(iii), B(ii)	26
Bromeliaceae	*Puya weddelliana*	(Baker) Mez	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	38, 41, 42
Bromeliaceae	*Racinaea pardina*	(L.B.Sm.) M.A.Spencer & L.B.Sm.	NE		A(iii), B(ii)	60
Bromeliaceae	*Tillandsia bermejoensis*	H.Hrom. ex Rauh	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	26, 27
Bromeliaceae	*Tillandsia camargoensis*	L.Hrom.	VU	D2	A(i), B(ii)	41, 42, 48
Bromeliaceae	*Tillandsia cardenasii*	L.B.Sm.	NT		B(ii)	29
Bromeliaceae	*Tillandsia comarapaensis*	H.Luther	VU	B2ab(iii)	A(i), B(ii)	23, 86
Bromeliaceae	*Tillandsia cotagaitensis*	L.Hrom.	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	43
Bromeliaceae	*Tillandsia edithae*	Rauh	NE		A(iv), B(ii)	25, 26
Bromeliaceae	*Tillandsia helmutii*	L.Hrom.	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	29
Bromeliaceae	*Tillandsia imporaensis*	Ehlers	NE		A(iii), B(ii)	42
Bromeliaceae	*Tillandsia kessleri*	H.Luther	NE		B(ii)	60, 84
Bromeliaceae	*Tillandsia koehresiana*	Ehlers	EN	B2ab(iii)	A(i), B(ii)	23, 49, 86
Bromeliaceae	*Tillandsia krukoffiana*	L.B.Sm.	NE		B(ii)	26, 60, 87
Bromeliaceae	*Tillandsia kuntzeana*	Mez	NE		B(ii)	60, 84, 85
Bromeliaceae	*Tillandsia lechneri*	W.Till & Barfuss	NE		A(iii), B(ii)	25
Bromeliaceae	*Tillandsia lotteae*	H.Hrom. ex Rauh	VU	B2ab(iii)	A(i), B(ii)	26, 27, 29, 42
Bromeliaceae	*Tillandsia mecapacana*	Seringer, Barfuss & W.Till	NE		A(iii), B(ii)	55
Bromeliaceae	*Tillandsia mollis*	H.Hrom. & W.Till	NE		A(iii), B(ii)	39
Bromeliaceae	*Tillandsia oropezana*	L.Hrom.	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	29
Bromeliaceae	*Tillandsia pseudocardenasii*	W.Weber	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	23, 87
Bromeliaceae	*Tillandsia rauschii*	Rauh & H.Lehm.	DD		A(iii), B(ii)	42
Bromeliaceae	*Tillandsia samaipatensis*	W.Till	NE		B(ii)	26, 60
Bromeliaceae	*Tillandsia santiagoensis*	H.Hrom. & L.Hrom.	NE		A(iii), B(ii)	2
Bromeliaceae	*Tillandsia walter-richteri*	W.Weber	NE		A(iii), B(ii)	37

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Bromeliaceae	*Werauhia boliviana*	H.Luther	NE		A(iii), B(ii)	60
Brunelliaceae	*Brunellia boliviana*	Britton ex Rusby	NE/VU*	B1ab(iii)	A(ii), B(ii)	56, 57, 59, 60, 82, 84
Brunelliaceae	*Brunellia rhoides*	Rusby	NE		B(ii)	25, 54, 56, 57, 60, 84
Burseraceae	*Dacryodes sudyungasensis*	Daly & M.C.Martínez	VU	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	59, 60
Burseraceae	*Trattinnickia nebulae*	M.F.F.Melo & Daly	DD		A(iii), B(ii)	87
Buxaceae	*Styloceras columnare*	Müll.Arg.	EN	B2ab(ii,iii)	A(i), B(ii)	56, 59, 60, 87
Buxaceae	*Styloceras connatum*	Torrez & P.Jørg.	EN	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	60
Cactaceae	*Cereus yungasensis*	A.Fuentes & Quispe	NE		A(iii), B(ii)	60
Cactaceae	*Cleistocactus aurantiacus*	M.Lowry	NE		A(iii), B(ii)	53
Cactaceae	*Cleistocactus brookeae*	Cárdenas	LC		B(ii)	30, 32
Cactaceae	*Cleistocactus buchtienii*	Backeb.	LC		B(ii)	26
Cactaceae	*Cleistocactus candelilla*	Cárdenas	LC		B(ii)	23, 26
Cactaceae	*Cleistocactus colademononis*	(Diers & Krahn) Mottram	NE		A(iii), B(ii)	26
Cactaceae	*Cleistocactus dependens*	Cárdenas	NE		A(iii), B(ii)	26
Cactaceae	*Cleistocactus laniceps*	(K.Schum.) Rol.-Goss.	LC		B(ii)	85
Cactaceae	*Cleistocactus luribayensis*	Cárdenas	DD		B(ii)	52
Cactaceae	*Cleistocactus parviflorus*	(K.Schum.) Rol.-Goss.	LC		B(ii)	23, 26
Cactaceae	*Cleistocactus ritteri*	Backeb. ex Guiggi	NE		B(ii)	53
Cactaceae	*Cleistocactus strausii*	(Heese) Backeb.	LC		B(ii)	38
Cactaceae	*Cleistocactus tominensis*	(Weing.) Backeb.	LC		B(ii)	30
Cactaceae	*Corryocactus melanotrichus*	(K.Schum.) Britton & Rose	LC		B(ii)	23, 59, 84
Cactaceae	*Corryocactus pulquinensis*	Cárdenas	EN	B1ab(iii,v)	A(i), B(ii)	23
Cactaceae	*Corryocactus tarijensis*	Cárdenas	EN	B1ab(iii)	A(i), B(ii)	38
Cactaceae	*Cremnocereus albipilosus*	M.Lowry & Winberg	NE		A(iii), B(ii)	30
Cactaceae	*Cumulopuntia flexibilispina*	Hoxey & M.Lowry	NE		A(iii), B(ii)	59

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Cactaceae	*Diplazium exindusiatum*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	84
Cactaceae	*Echinopsis tacaquirensis*	(Vaupel) H.Friedrich & G.D.Rowley	LC		B(ii)	42
Cactaceae	*Frailea chiquitana*	Cárdenas	DD		A(iii), B(ii)	2
Cactaceae	*Gymnocalycium chacoense*	Amerh.	NE/EN*	A3; B2(a); C1	A(ii), A(iii), B(ii)	22
Cactaceae	*Gymnocalycium chiquitanum*	Cárdenas	DD		A(iii), B(ii)	3, 6, 14
Cactaceae	*Harrisia tetracantha*	(Labour.) D.R.Hunt	LC		B(ii)	23, 26, 28, 86
Cactaceae	*Leucostele tunariensis*	(Cárdenas) Schlumpb.	NE		A(iii), B(ii)	85
Cactaceae	*Leucostele werdermanniana*	(Backeb.) Schlumpb.	NE		A(iii), B(ii)	85
Cactaceae	*Lobivia arachnacantha*	Buining & F.Ritter	NE		B(ii)	26
Cactaceae	*Lobivia bridgesii* subsp. *vallegrandensis*	(Cárdenas) Schlumpb.	NE		A(iv), B(ii)	23, 26
Cactaceae	*Lobivia lateritia*	(Gürke) Britton & Rose	NE		B(ii)	42
Cactaceae	*Lobivia mamillosa*	(Gürke) Schlumpb.	NE		B(ii)	37
Cactaceae	*Lobivia maximiliana* subsp. *caespitosa*	(J.A.Purpus) Rausch	NE		A(iii), B(ii)	52
Cactaceae	*Lobivia obrepanda*	(Salm-Dyck) Schlumpb.	NE		B(ii)	26
Cactaceae	*Lobivia sucrensis*	(Cárdenas) Lodé	NE		A(iii), B(ii)	41
Cactaceae	*Lymanbensonia crenata*	(Britton) Doweld	NE		A(iv), B(ii)	53, 56
Cactaceae	*Lymanbensonia incachacana*	(Cárdenas) Barthlott & N.Korotkova	NE		B(ii)	54, 60, 82, 84
Cactaceae	*Neoraimondia herzogiana*	(Backeb.) Buxb. & Krainz	NE/VU*	B1b(iii,iv,v)	A(ii), B(ii)	23, 26, 28, 36
Cactaceae	*Parodia ayopayana*	Cárdenas	LC		B(ii)	87
Cactaceae	*Parodia columnaris*	Cárdenas	NT		B(ii)	23, 26
Cactaceae	*Parodia comarapana*	Cárdenas	LC		B(ii)	23
Cactaceae	*Parodia commutans*	F.Ritter	LC		B(ii)	43
Cactaceae	*Parodia ocampoi*	Cárdenas	LC		B(ii)	29
Cactaceae	*Parodia ritteri*	Buining	LC		B(ii)	42
Cactaceae	*Parodia taratensis*	Cárdenas	LC		B(ii)	26

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Cactaceae	*Pereskia diaz-romeroana*	Cárdenas	LC		B(ii)	23, 26, 28, 86, 87
Cactaceae	*Pereskia weberiana*	K.Schum.	LC		B(ii)	53, 55, 60, 85
Cactaceae	*Pfeiffera asuntapatensis*	(M.Kessler, Ibisch & Barthlott) Ralf Bauer	DD		A(iii), B(ii)	59
Cactaceae	*Pfeiffera boliviana*	(Britton) D.R.Hunt	DD		B(ii)	56, 59, 60
Cactaceae	*Pfeiffera miyagawae*	Barthlott & Rauh	DD		A(iii), B(ii)	55
Cactaceae	*Pfeiffera paranganiensis*	(Cárdenas) P.V.Heath	LC		B(ii)	53, 87
Cactaceae	*Rebutia arenacea*	Cárdenas	NT		B(ii)	87
Cactaceae	*Rebutia canigueralii*	Cárdenas	LC		B(ii)	49
Cactaceae	*Rebutia neocumingii*	(Backeb.) D.R.Hunt	LC		B(ii)	23, 29
Cactaceae	*Rebutia steinbachii*	Werderm.	LC		B(ii)	82
Cactaceae	*Rhipsalis cuneata*	Britton & Rose	LC		B(ii)	25, 59, 82, 84
Cactaceae	*Rhipsalis goebeliana*	Backeb.	NE		B(ii)	25, 84
Cactaceae	*Samaipaticereus corroanus*	Cárdenas	LC		B(ii)	25
Cactaceae	*Soehrensia camarguensis*	(Cárdenas) Schlumpb.	NE		B(ii)	42
Cactaceae	*Soehrensia quadratiumbonata*	(F.Ritter) Schlumpb.	NE		B(ii)	26, 29
Cactaceae	*Soehrensia vasquezii*	(Rausch) Schlumpb.	NE		B(ii)	23
Cactaceae	*Vatricania guentheri*	(Kupper) Backeb.	NE		B(ii)	26, 27
Cactaceae	*Weberbauerocereus madidiensis*	Quispe & A.Fuentes	EN	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	60
Cactaceae	*Weingartia cardenasiana*	(R.Vásquez) F.H.Brandt	NE		A(iii)	86
Cactaceae	*Weingartia neocumingii*	Backeb.	NE		A(iii)	23
Cactaceae	*Weingartia neocumingii* subsp. *pulquinensis*		NE		A(iii)	23
Cactaceae	*Yungasocereus inquisivensis*	(Cárdenas) F.Ritter ex Eggli	LC		B(ii)	54, 87
Calceolariaceae	*Calceolaria amoena*	Molau	NE		A(iii), B(ii)	56
Calceolariaceae	*Calceolaria aquatica*	A.Braun & C.D.Bouché	LC		B(ii)	60, 82, 85
Calceolariaceae	*Calceolaria bartsiifolia*	Wedd.	NE		B(ii)	38, 52, 53, 59, 87

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Calceolariaceae	*Calceolaria crassa*	Molau	NE		A(iv), B(ii)	25, 82
Calceolariaceae	*Calceolaria incachacensis*	Kraenzl.	NE		A(iii), B(ii)	25, 82
Calceolariaceae	*Calceolaria monantha*	Kraenzl.	NE		A(iv), B(ii)	31, 53
Calceolariaceae	*Calceolaria parvifolia* subsp. *guentheri*	(Kraenzl.) Molau	NE		B(ii)	87
Calceolariaceae	*Calceolaria soratensis*	Kraenzl.	NE		B(ii)	26, 87
Calophyllaceae	*Kielmeyera paniculata*	Rusby	# VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	56, 60
Campanulaceae	*Centropogon aquilinus*	E.Wimm.	NE		B(ii)	56, 84
Campanulaceae	*Centropogon bangii*	Zahlbr.	NE/VU*	B1ab(iii)	A(ii), A(iii), B(ii)	58
Campanulaceae	*Centropogon brittonianus*	Zahlbr.	NE		A(iii), B(ii)	56
Campanulaceae	*Centropogon gloriosus*	(Britton) Zahlbr.	EN	B1ab(iii)	A(i), B(ii)	23, 56, 57, 58
Campanulaceae	*Centropogon magnificus*	Zahlbr. & Rech.	NE/VU*	B2ab(iii)	A(ii), A(iv), B(ii)	56, 59, 60
Campanulaceae	*Centropogon unduavensis*	(Britton) Zahlbr.	NE/VU*	B1b(i,iii)	A(ii), B(ii)	56, 60, 82
Campanulaceae	*Siphocampylus ambivalens*	Lammers	NE/VU*	B1ab(iii)	A(ii), A(iv), B(ii)	26
Campanulaceae	*Siphocampylus andinus*	Britton	LC		B(ii)	25, 54, 56, 57, 58, 59, 60, 82, 84
Campanulaceae	*Siphocampylus argutus*	Zahlbr.	NE		A(iii), B(ii)	56
Campanulaceae	*Siphocampylus aureus*	Rusby	NE/VU*	B2ab(ii,iii)	A(ii), B(ii)	26, 31, 35
Campanulaceae	*Siphocampylus ayersiae*	Lammers	NT	B1a	B(ii)	54, 56, 59, 60
Campanulaceae	*Siphocampylus bilabiatus*	Zahlbr.	NE		B(ii)	57, 58, 60
Campanulaceae	*Siphocampylus crenatus*	(E.Wimm.) E.Wimm.	NE		A(iii), B(ii)	59
Campanulaceae	*Siphocampylus dubius*	Zahlbr.	NE/EN*	B1+2ab(i,ii,ii)	A(ii), B(ii)	55, 56, 57, 59, 60
Campanulaceae	*Siphocampylus flagelliformis*	Zahlbr.	NE		B(ii)	56, 59, 60, 84
Campanulaceae	*Siphocampylus membranaceus*	Britton	NE/CR*	B1+2ab(i,ii,iii)	A(ii), A(iv), B(ii)	56, 59, 60
Campanulaceae	*Siphocampylus neurotrichus*	E.Wimm.	NE		A(iv), B(ii)	26, 35
Campanulaceae	*Siphocampylus oblongifolius*	Rusby	NE/EN*	B2ab (i,ii,iii)	A(ii), A(iv), B(ii)	59, 60
Campanulaceae	*Siphocampylus reflexus*	Rusby	NE/EN*	B1ab(i,ii,iii,iv)	A(ii), A(iv), B(ii)	25, 82

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Campanulaceae	*Siphocampylus siberiensis*	Lagom. & D.Santam.	VU	D2	A(i), B(ii)	84
Campanulaceae	*Siphocampylus smilax*	Lammers	NE		B(ii)	24, 25, 26, 60, 61
Campanulaceae	*Siphocampylus sparsipilus*	E.Wimm.	NE		A(iii), B(ii)	56
Campanulaceae	*Siphocampylus subcordatus*	Rusby	NE/VU*	B1+2ab(i,ii,iii)	A(ii), A(iv), B(ii)	60
Campanulaceae	*Siphocampylus tunicatus*	Zahlbr.	NE/CR*	B1ab(i,ii, iii)	A(ii), A(iv), B(ii)	23, 25, 84
Campanulaceae	*Siphocampylus werdermannii*	E.Wimm.	NE/VU*	B1b(i, iii)	A(ii), B(ii)	25, 55, 57, 59, 60, 82, 87
Caprifoliaceae	*Valeriana boliviana*	Britton	NE		B(ii)	25, 53, 56, 57
Caprifoliaceae	*Valeriana mandonii* subsp. *andina*	(Britton) Weberling	NE		B(ii)	40
Caprifoliaceae	*Valeriana rusbyi*	Britton	NE		A(iii), B(ii)	56
Caprifoliaceae	*Valeriana weddelliana*	Rouy	NE		A(iii), B(ii)	55, 59
Caricaceae	*Vasconcellea microcarpa* subsp. *australis*	(V.M.Badillo) V.M.Badillo	NE		B(ii)	56, 60, 66
Caryophyllaceae	*Arenaria andina*	Rohrb.	NE		A(iii), B(ii)	59
Caryophyllaceae	*Arenaria pycnophylla*	Rohrb.	NT	B1b(iii)	B(ii)	57
Caryophyllaceae	*Arenaria stuebelii*	Hieron.	NE		A(iii), B(ii)	59
Caryophyllaceae	*Spergularia pazensis*	(Rusby) Rossbach	NE		B(ii)	23, 56
Celastraceae	*Maytenus tunarina*	Loes.	NE		B(ii)	25, 26, 31, 32, 34, 37, 53, 87
Celastraceae	*Peritassa glabra*	(A.C.Sm.) Lombardi	NE		A(iii), B(ii)	63
Celastraceae	*Schaefferia dietheri*	Herter	NE		B(ii)	26, 37
Chloranthaceae	*Hedyosmum maximum*	(Kuntze) K.Schum.	VU	B1ab(iii)	A(i), B(ii)	56, 58, 79, 82, 84
Chrysobalanaceae	*Hirtella beckii*	Prance	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	56
Chrysobalanaceae	*Moquilea boliviensis*	(Prance) Sothers & Prance	LC		B(ii)	59, 60
Cleomaceae	*Tarenaya werdermannii*	(Alf.Ernst) Soares Neto & Roalson	LC		B(ii)	19, 26, 85
Clethraceae	*Clethra cardenasii*	Sleumer	NT	B2ab(iii)	B(ii)	25, 27, 34, 59, 60, 84
Clethraceae	*Clethra elongata*	Rusby	NT	B1ab(iii)+2ab(iii)	B(ii)	56, 58, 59, 60, 79
Clusiaceae	*Clusia elongata*	Rusby	NT	B1ab(iii)+2ab(iii)	B(ii)	60

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Clusiaceae	*Clusia glauca*	(Rusby) J.E.Nascim. & Bittrich	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	59, 60
Clusiaceae	*Clusia pachamamae*	Zent.-Ruíz & A.Fuentes	NT	B1ab(iii)+2ab(iii)	B(ii)	55, 56, 58, 59, 60
Clusiaceae	*Clusia ramosa*	Rusby	NE		B(ii)	56, 87
Clusiaceae	*Clusia ternstroemioides*	Rusby	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	59, 60
Columelliaceae	*Columellia oblonga* subsp. *serrata*	(Rusby) Brizicky	NE		A(iii), B(ii)	25
Convolvulaceae	*Bonamia boliviana*	O'Donell	# EN	B2ab(iii)	A(i), B(ii)	9, 22
Convolvulaceae	*Bonamia riograndina*	J.R.I.Wood	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	26, 27, 86
Convolvulaceae	*Evolvulus boliviensis*	Ooststr.	NE		A(iv), B(ii)	85
Convolvulaceae	*Ipomoea appendiculata*	J.R.I.Wood & Scotland	EN	B1ab(iii)+2ab(iii);D	A(i), B(ii)	35
Convolvulaceae	*Ipomoea deminuta*	J.R.I.Wood & Scotland	DD		A(iii), B(ii)	11
Convolvulaceae	*Ipomoea densibracteata*	O'Donell	VU	B1ab(iii)	A(i), B(ii)	3, 5, 6, 14, 16, 17, 18, 20, 21, 22
Convolvulaceae	*Ipomoea exserta*	J.R.I.Wood & Scotland	# VU	B2ab(iii)	A(i), B(ii)	26, 27, 31, 35, 36, 37
Convolvulaceae	*Ipomoea gypsophila*	J.R.I.Wood & Scotland	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	38
Convolvulaceae	*Ipomoea huayllae*	J.R.I.Wood & Scotland	DD		A(iii), B(ii)	59, 60
Convolvulaceae	*Ipomoea juliagutierreziae*	J.R.I.Wood & Scotland	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	26, 28, 86
Convolvulaceae	*Ipomoea longibarbis*	J.R.I.Wood & Scotland	NT	B2ab(iii)	B(ii)	20, 23, 26, 27, 35, 36
Convolvulaceae	*Ipomoea mendozae*	J.R.I.Wood & Scotland	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	26
Convolvulaceae	*Ipomoea odontophylla*	J.R.I.Wood & Scotland	# CR	B1ab(iii,v)	A(i), B(ii)	25
Convolvulaceae	*Ipomoea opulifolia*	Rusby	# VU	B2ab(i,ii,iii,iv,v)	A(i), B(ii)	60, 61, 76, 77, 79
Convolvulaceae	*Ipomoea paradae*	J.R.I.Wood & Scotland	EN	B1ab(iii)+B2ab(iii)	A(i), B(ii)	24, 26
Convolvulaceae	*Ipomoea prolifera*	J.R.I.Wood & Scotland	CR	B2ab(iii)	A(i), B(ii)	26
Convolvulaceae	*Ipomoea psammophila*	J.R.I.Wood & Scotland	EN	B1ab(iii,iv,v) +2ab(iii,iv,v);D	A(i), B(ii)	2,10,14, 20
Convolvulaceae	*Ipomoea spinulifera*	J.R.I.Wood & Scotland	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	35, 37, 39
Convolvulaceae	*Ipomoea suburceolata*	O'Donell	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	60
Convolvulaceae	*Ipomoea tarijensis*	O'Donell	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	37, 38

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Convolvulaceae	*Jacquemontia acuminata*	Rusby	# VU	B2ab(iii,v)	A(i), B(ii)	76, 77
Convolvulaceae	*Jacquemontia boliviana*	J.R.I.Wood	EN	B1ab(iii)+B2ab(iii)	A(i), B(ii)	53
Convolvulaceae	*Jacquemontia chuquisacensis*	J.R.I.Wood	EN	B1ab(iii)+B2ab(iii)	A(i), B(ii)	26, 27
Convolvulaceae	*Jacquemontia cuspidata*	J.R.I.Wood	DD		A(iii), B(ii)	28
Convolvulaceae	*Jacquemontia longipedunculata*	J.R.I.Wood	DD		A(iii), B(ii)	60
Convolvulaceae	*Jacquemontia mairae*	J.R.I.Wood & R.Clegg	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	22, 28, 35, 36
Costaceae	*Costus alfredoi*	Maas & H.Maas	NE		A(iii), B(ii)	59
Cucurbitaceae	*Fevillea anomalosperma*	M.Nee	NE		A(iii), B(ii)	60
Cucurbitaceae	*Sicyos kuntzei*	Cogn.	NE		A(iii), B(ii)	56
Cunoniaceae	*Weinmannia davidsonii*	A.Fuentes & Z.S.Rogers	VU	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	56, 59, 60
Cunoniaceae	*Weinmannia epicae*	A.Fuentes	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	56, 59, 60
Cunoniaceae	*Weinmannia lyrata*	Rusby	NE		A(iii), B(ii)	56
Cunoniaceae	*Weinmannia rhoifolia*	Rusby	DD		B(ii)	54, 56
Cunoniaceae	*Weinmannia yungasensis*	A.Fuentes & Z.S.Rogers	VU	B1ab(iii)	A(i), B(ii)	56, 59, 60
Cyatheaceae	*Cyathea bettinae*	Lehnert	NE/VU*	B2b(ii,iii)	A(ii), A(iii), B(ii)	60
Cyatheaceae	*Cyathea herzogii*	Rosenst.	NE		B(ii)	58
Cyatheaceae	*Cyathea zongoensis*	Lehnert	NE/EN*	B1b(i,ii)	A(ii), A(iii), B(ii)	57, 59, 60
Cyclanthaceae	*Asplundia australis*	Harling	NE		B(ii)	25, 59, 60, 84
Cyclanthaceae	*Asplundia cymbispatha*	Harling	NE		B(ii)	60
Cyperaceae	*Bulbostylis boliviana*	Palla	NE		A(iii), B(ii)	2
Cyperaceae	*Carex beckii*	G.A.Wheeler	NE		A(iii), B(ii)	57
Cyperaceae	*Carex lapazensis*	C.B.Clarke	CR	B2ab(iii)	A(i), B(ii)	56, 59, 60
Cyperaceae	*Carex ownbeyi*	G.A.Wheeler	CR	B1ab(iii)	A(i), B(ii)	85
Cyperaceae	*Carex pachamamae*	Jim.-Mejías & Reznicek	NE		A(iii), B(ii)	27
Cyperaceae	*Eleocharis steinbachii*	D.J.Rosen	DD		B(ii)	76, 77, 80

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Cyperaceae	*Rhynchospora melanocarpa*	A.C.Araújo & W.W.Thomas	DD		A(iii), B(ii)	11
Dennstaedtiaceae	*Hypolepis periculosa*	Schwartsb.	NE		A(iii), B(ii)	56
Dennstaedtiaceae	*Hypolepis scandens*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	56, 84
Dennstaedtiaceae	*Hypolepis woodii*	Schwartsb.	NE		A(iii), B(ii)	57
Dioscoreaceae	*Dioscorea calderillensis*	R.Knuth	# EN	B2ab(iii)	A(i), B(ii)	40, 85
Dioscoreaceae	*Dioscorea hastiformis*	R.Knuth	DD		A(iii), B(ii)	37
Dioscoreaceae	*Dioscorea hunzikeri*	Xifreda	# CR	B2ab(iii)	A(i), B(ii)	25
Dioscoreaceae	*Dioscorea irupanensis*	R.Knuth	# EN	B2ab(iii)	A(i), B(ii)	53
Dioscoreaceae	*Dioscorea kuntzei*	Uline ex Kuntze	DD		A(iii), B(ii)	85
Dioscoreaceae	*Dioscorea ovalifolia*	R.Knuth	# EN	B1ab(iii)+B2ab(iii)	A(i), B(ii)	56
Dioscoreaceae	*Dioscorea rusbyi*	Uline	# CR	B1ab(iii)+B2ab(iii)	A(i), B(ii)	59
Dioscoreaceae	*Dioscorea tarijensis*	R.Knuth	# EN	B2ab(iii)	A(i), B(ii)	40
Dryopteridaceae	*Elaphoglossum accedens*	Christ	NE		A(iii), B(ii)	56
Dryopteridaceae	*Elaphoglossum cardioglossum*	Mickel	NE		A(iii), B(ii)	56, 57
Dryopteridaceae	*Elaphoglossum cruzense*	M.Kessler & Mickel	DD		B(ii)	2, 24, 25, 26
Dryopteridaceae	*Euploca riochiquensis*	J.R.I.Wood & P.Muñoz	NE		A(iii), B(ii)	29
Dryopteridaceae	*Polystichum chaparense*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	82
Ebenaceae	*Diospyros yomomo*	B.Walln.	LC		B(ii)	11,12
Ericaceae	*Demosthenesia fabulosa*	(Sleumer) A.C.Sm.	NE		A(iii), B(ii)	57
Ericaceae	*Diogenesia racemosa*	(Herzog) Sleumer	NE/EN*	B1+2ab(iii)	A(ii), A(iv), B(ii)	56, 57, 58, 82
Ericaceae	*Gaultheria × serrulata*	Herzog	NE		A(iii), B(ii)	56, 82
Ericaceae	*Orthaea boliviensis*	B.Fedtsch. & Basil.	NE		B(ii)	57, 58, 60, 84
Ericaceae	*Orthaea constans*	A.C.Sm.	NE		A(iv), B(ii)	56, 60
Ericaceae	*Orthaea madidiensis*	Pedraza & Luteyn	NE		A(iii), B(ii)	60
Ericaceae	*Orthaea rusbyi*	Luteyn	NE/VU*	B2ab(iii)	A(ii), A(iv), B(ii)	59

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Ericaceae	*Polyclita turbinata*	(Kuntze) A.C.Sm.	LC		B(ii)	23, 25, 60, 82, 84, 87
Ericaceae	*Rusbya taxifolia*	Britton	NE		A(iii), B(ii)	58
Ericaceae	*Satyria boliviana*	Luteyn	NE/VU*	B1b(iii)	A(ii), A(iv), B(ii)	25, 54, 84
Ericaceae	*Satyria neglecta*	A.C.Sm.	NE		A(iii), B(ii)	59
Ericaceae	*Siphonandra boliviana*	Luteyn	NE/VU*		A(ii), A(iii), B(ii)	59
Ericaceae	*Sphyrospermum sessiliflorum*	Luteyn	NE		A(iii), B(ii)	56
Ericaceae	*Themistoclesia geniculata*	Pedraza	NE		A(iii), B(ii)	55
Ericaceae	*Themistoclesia tunquiniensis*	Pedraza & Luteyn	NE		A(iii), B(ii)	56
Ericaceae	*Themistoclesia unduavensis*	Luteyn	VU	B1ab(iii)	A(i), B(ii)	56, 59, 60
Ericaceae	*Thibaudia acacioides*	Luteyn	NE/CR*	B1+2b(ii)	A(ii), A(iii), B(ii)	59
Ericaceae	*Thibaudia axillaris*	Rusby	NE/VU*	B2a(ii)	A(ii), A(iii), B(ii)	59
Ericaceae	*Thibaudia cardenasii*	Luteyn	DD		A(iii), B(ii)	87
Ericaceae	*Thibaudia densiflora*	(Herzog) A.C.Sm.	NE/VU*	B2ab(iii)	A(ii), A(iii), B(ii)	82, 84
Ericaceae	*Thibaudia macrocalyx*	J.Rémy	NE		B(ii)	56, 59, 61
Eriocaulaceae	*Eriocaulon huanchacanum*	Hensold	VU	D2	A(i), B(ii)	11
Erythroxylaceae	*Erythroxylum bangii*	Rusby	NE		A(iii), B(ii)	57
Erythroxylaceae	*Erythroxylum pauciflorum*	Rusby	NE/VU*	B1a(i,ii)	A(ii), B(ii)	15, 60
Escalloniaceae	*Escallonia harrisii*	F. Zapata & Villarroel	NE		B(ii)	31
Escalloniaceae	*Escallonia reticulata*	Sleumer	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	23, 25, 26, 32
Euphorbiaceae	*Argythamnia illimaniensis*	Müll.Arg.	NE		A(iii), B(ii)	52
Euphorbiaceae	*Caperonia amarumayu*	J.Külkamp & Cordeiro	NE		A(iii), B(ii)	66
Euphorbiaceae	*Cnidoscolus beckii*	Fern.Casas	NE		A(iv), B(ii)	35
Euphorbiaceae	*Cnidoscolus orientensis*	Fern.Casas	EN	B1ab(iii)	A(i), B(ii)	2, 10, 14, 20
Euphorbiaceae	*Croton abutilifolius*	Croizat	VU	B2ab(iii)	A(i), B(ii)	19, 26, 35, 60
Euphorbiaceae	*Croton avulsus*	Croizat	NE		B(ii)	26, 27, 28, 37, 38
Euphorbiaceae	*Croton bangii*	Rusby	NE		A(iv), B(ii)	52, 56
Euphorbiaceae	*Croton curculiospermus*	Riina	NE		A(iii), B(ii)	86
Euphorbiaceae	*Croton erythrochyloides*	Croizat	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	25
Euphorbiaceae	*Croton herzogianus*	(Pax & K.Hoffm.) Radcl.-Sm. & Govaerts	VU	B1ab(iii)	A(i), B(ii)	2
Euphorbiaceae	*Croton laeticapsulus*	Croizat	NE		A(iii), B(ii)	84
Euphorbiaceae	*Croton soratensis*	Müll.Arg.	NE		B(ii)	26, 60, 87
Euphorbiaceae	*Croton tartonrairoides*	Pax & K.Hoffm.	NE		A(iii), B(ii)	26
Euphorbiaceae	*Croton yungensis*	Croizat	NE		B(ii)	25, 53, 58
Euphorbiaceae	*Euphorbia beckii*	V.W.Steinm.	NE		A(iii), B(ii)	59
Euphorbiaceae	*Euphorbia chenopodiifolia*	Boiss.	NE		A(iii), B(ii)	23
Euphorbiaceae	*Euphorbia duriuscula*	Pax & K.Hoffm. ex Herzog	NE		A(iii), B(ii)	23
Euphorbiaceae	*Euphorbia fuentesii*	V.W.Steinm.	NE		A(iii), B(ii)	22
Euphorbiaceae	*Euphorbia mayfieldii*	V.W.Steinm.	NE		A(iii), B(ii)	23, 24
Euphorbiaceae	*Euphorbia riinae*	V.W.Steinm.	VU	D2	A(i), B(ii)	11
Euphorbiaceae	*Jatropha clavuligera* subsp. *pedatipartita*	(Kuntze) Dehgan	NE		B(ii)	3, 23
Euphorbiaceae	*Jatropha pachypoda*	Pax	NE		B(ii)	34, 37
Euphorbiaceae	*Manihot arenaria*	M.Mend.	EN	B1ab(iii)	A(i), B(ii)	10, 20
Euphorbiaceae	*Manihot boliviana*	Pax & K.Hoffm.	NE		B(ii)	34
Euphorbiaceae	*Manihot condensata*	D.J.Rogers & Appan	VU	B1ab(iii)	A(i), B(ii)	60
Euphorbiaceae	*Manihot fabianae*	M.Mend.	EN	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	2
Euphorbiaceae	*Manihot linearifolia*	Müll.Arg.	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	2, 14
Euphorbiaceae	*Manihot stellata*	M.Mend.	CR	B1ab(i,ii,iii,iv,v) +2ab(i,ii,iii,iv,v)	A(i), B(ii)	5
Euphorbiaceae	*Tetrorchidium dusenii*	Pax & K.Hoffm.	NE		B(ii)	25, 60, 82
Fabaceae	*Amicia micrantha*	Harms	LC		B(ii)	25, 26, 28, 52, 82, 85, 87
Fabaceae	*Amicia micrantha* subsp. *micrantha*		NE		B(ii)	23, 27, 85, 87

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Fabaceae	*Amicia micrantha* subsp. *tarijensis*	Sârkinen	NE		A(iv), B(ii)	37, 40
Fabaceae	*Ancistrotropis subhastata*	(Verdc.) A.Delgado	EN	B2ab(iii)	A(i), B(ii)	1, 12, 16, 17
Fabaceae	*Arachis benensis*	Krapov., W.C.Greg. & C.E.Simpson	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	73
Fabaceae	*Arachis chiquitana*	Krapov., W.C.Greg. & C.E.Simpson	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	2, 14
Fabaceae	*Arachis cruziana*	Krapov., W.C.Greg. & C.E.Simpson	VU	B1ab(iii)	A(i), B(ii)	3, 14, 20
Fabaceae	*Arachis glandulifera*	Stalker	LC		B(ii)	1, 2, 18
Fabaceae	*Arachis herzogii*	Krapov., W.C.Greg. & C.E.Simpson	EN	C2a(i)	A(i), B(ii)	14
Fabaceae	*Arachis hypogaea*	L.	NE		B(ii)	61
Fabaceae	*Arachis inflata*	Seijo, Atahuachi, C.E.Simpson & Krapov.	# VU	B1ab(iii)	A(i), B(ii)	1
Fabaceae	*Arachis ipaensis*	Krapov. & W.C.Greg.	CR	B1ab(ii,iii,v) +2ab(ii,iii,v)	A(i), B(ii)	35
Fabaceae	*Arachis kempff-mercadoi*	Krapov., W.C.Greg. & C.E.Simpson	# NE		B(ii)	1, 5, 8, 9, 17
Fabaceae	*Arachis krapovickasii*	C.E.Simpson, D.E.Williams, Valls & I.G.Vargas	EN	B1ab(iii)	A(i), B(ii)	10, 20
Fabaceae	*Arachis williamsii*	Krapov. & W.C.Greg.	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	74
Fabaceae	*Bauhinia tuichiensis*	Cayola & A.Fuentes	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	60
Fabaceae	*Boliviadendron bolivianum*	(C.E.Hughes & Atahuachi) E.R.Souza & C.E.Hughes	EN	B2ab(iii)	A(i), B(ii)	23, 87
Fabaceae	*Brongniartia ulbrichiana*	Harms.	NE		B(ii)	29, 86
Fabaceae	*Calliandra chulumania*	Barneby	EN	B2ab(iii)	A(i), B(ii)	55, 60
Fabaceae	*Calliandra haematocephala*	Hassk.	LC		B(ii)	15, 19, 25, 56, 60, 61, 63, 73
Fabaceae	*Calliandra haematocephala* var. *boliviana*	(Britton) Barneby	NE		B(ii)	15, 24, 25, 55, 60, 61, 84
Fabaceae	*Canavalia beniensis*	Aymard & Cuello	VU	B2ab(iii)	A(i), B(ii)	56, 60
Fabaceae	*Chamaecrista chiquitana*	Barneby	EN	B1ab(iii)+2ab(iii);D	A(i), B(ii)	1
Fabaceae	*Cojoba arborea* var. *angustifolia*	(Rusby) Barneby & J.W.Grimes	NE		B(ii)	25, 26, 35, 60, 63, 79
Fabaceae	*Cojoba beckii*	Barneby & J.W.Grimes	DD		A(iii), B(ii)	54
Fabaceae	*Crotalaria boliviensis*	Windler & S.G.Skinner	LC		B(ii)	30, 84, 85
Fabaceae	*Dalea carthagenensis* var. *pilocarpa*	(Rusby) Barneby	NE		A(iii), B(ii)	53

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Fabaceae	*Dalea pazensis*	Rusby	NE		B(ii)	53, 85, 87
Fabaceae	*Desmodium yungasense*	Britton	NE		B(ii)	26, 59, 60
Fabaceae	*Hymenaea travassosii*	Kuhlm. ex Paes	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	10, 20, 22
Fabaceae	*Inga amboroensis*	T.D.Penn.	DD		A(iii), B(ii)	25
Fabaceae	*Inga approximata*	T.D.Penn.	# VU	B2ab(iii)	A(i), B(ii)	23, 25, 26, 57, 82, 84
Fabaceae	*Inga expansa*	Rusby	LC		B(ii)	55, 56, 59, 60, 61, 78
Fabaceae	*Inga pallida*	Rusby	NE		B(ii)	84
Fabaceae	*Inga yungasensis*	C.Aparicio & A.Fuentes	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	59, 60, 79
Fabaceae	*Lonchocarpus neei*	M.Sousa	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	24, 25, 26
Fabaceae	*Lonchocarpus riparius*	M.Sousa	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	25, 60
Fabaceae	*Lonchocarpus sericophyllus*	M.Sousa	# VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	60, 64
Fabaceae	*Luetzelburgia andina*	D.B.O.S.Cardoso, L.P.Queiroz & H.C.Lima	VU	B1ab(ii)	A(i), B(ii)	26, 60
Fabaceae	*Lupinus altimontanus*	C.P.Sm.	NE		B(ii)	51, 56, 57
Fabaceae	*Lupinus altiplani*	C.P.Sm.	DD		A(iv), B(ii)	51, 56, 57
Fabaceae	*Lupinus bangii*	Rusby	LC		B(ii)	37
Fabaceae	*Lupinus cardenasianus*	C.P.Sm.	NE		A(iii), B(ii)	82
Fabaceae	*Lupinus guggenheimianus*	Rusby	NE		B(ii)	59
Fabaceae	*Lupinus mandonianus*	C.P.Sm.	NE		A(iii), B(ii)	53
Fabaceae	*Lupinus nubilorum*	C.P.Sm.	NE		A(iii), B(ii)	53, 56
Fabaceae	*Lupinus otto-buchtienii*	C.P.Sm.	NE		A(iii), B(ii)	53
Fabaceae	*Lupinus otto-kuntzeanus*	C.P.Sm.	NE		A(iii), B(ii)	45
Fabaceae	*Lupinus pearceanus*	C.P.Sm.	NE		B(ii)	59
Fabaceae	*Lupinus rusbyanus*	C.P.Sm.	NE		B(ii)	56, 85
Fabaceae	*Lupinus soratensis*	Rusby	NE		B(ii)	59
Fabaceae	*Lupinus tominensis*	Wedd.	LC		B(ii)	56, 57, 60

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Fabaceae	*Machaerium subrhombiforme*	Rudd	EN	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	60
Fabaceae	*Mimosa auriculata*	Benth.	EN	B1ab(iii)	A(i), B(ii)	2
Fabaceae	*Mimosa chiquitaniensis*	Atahuachi & C.E.Hughes	CR	B1ab(i,ii,iii,iv,v)	A(i), B(ii)	2
Fabaceae	*Mimosa chochisensis*	Atahuachi & C.E.Hughes	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	2, 10, 14
Fabaceae	*Mimosa craspedisetosa*	Fortunato & Palese	# EN	B2ab(iii)	A(i), B(ii)	3, 5, 14, 22
Fabaceae	*Mimosa debilis* var. *parapitiensis*	(Burkart) Barneby	NE		A(iv), B(ii)	9
Fabaceae	*Mimosa huanchacae*	Barneby	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	11
Fabaceae	*Mimosa jacobita*	Barneby	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	2, 6, 11, 14
Fabaceae	*Mimosa josephina*	Barneby	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	2, 10, 14
Fabaceae	*Mimosa lepidota*	Herzog	NT	B2ab(i,ii,iii)	B(ii)	25, 26, 28, 30, 31, 32, 37, 86
Fabaceae	*Mimosa orbignyana*	Barneby	DD		B(ii)	11, 14
Fabaceae	*Mimosa rusbyana*	Barneby & Fortunato	EN	B2ab(ii,iii)	A(i), B(ii)	53, 54, 55, 60
Fabaceae	*Mimosa suberosa*	Atahuachi & C.E.Hughes	VU	D2	A(i), B(ii)	11
Fabaceae	*Mimosa woodii*	Atahuachi & C.E.Hughes	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	87
Fabaceae	*Piptadenia boliviana*	Benth.	VU	B2ab(iii)	A(i), B(ii)	23, 25, 26, 27, 29, 34, 49, 86
Fabaceae	*Piptadenia buchtienii*	Barneby	VU	B2ab(iii)	A(i), B(ii)	9, 25, 26, 35, 53, 54, 55, 60
Fabaceae	*Pseudosenegalia feddeana*	(Harms) Seigler & Ebinger	EN	B2ab(iii)	A(i), B(ii)	41, 42, 43
Fabaceae	*Pseudosenegalia riograndensis*	(Atahuachi & L.Rico) Seigler & Ebinger	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	86
Fabaceae	*Punjuba centiflora*	(Barneby & J.W.Grimes) M.V.B. Soares, M.P.Morim & Iganci	EN	B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	A(i), B(ii)	84
Fabaceae	*Senna aymara*	H.S.Irwin & Barneby	LC		B(ii)	25, 41, 43, 48, 52, 59, 79, 82, 84
Fabaceae	*Senna birostris* var. *totorae*	H.S.Irwin & Barneby	NE		B(ii)	25, 26, 30, 59, 84
Fabaceae	*Senna coimbrae*	M.Nee & Barneby	# EN	B2ab(iii,v)	A(i), B(ii)	9, 19, 76
Fabaceae	*Senna georgica* var. *bangii*	H.S.Irwin & Barneby	NE		B(ii)	60
Fabaceae	*Senna weddelliana*	H.S.Irwin & Barneby	NT	B2ab(iii)	B(ii)	23, 25, 87
Fabaceae	*Steinbachiella leptoclada*	Harms	VU	D1	A(i), B(ii)	1, 4, 12, 18
Gentianaceae	*Gentiana woodii*	J.S.Pringle	LC		B(ii)	56, 59, 60, 82, 87
Gentianaceae	*Gentianella bangii*	(Gilg) Fabris ex T.N.Ho & S.W.Liu	NE		A(iii), B(ii)	85
Gentianaceae	*Gentianella bockii*	(Gilg) T.N.Ho & S.W.Liu	VU	B1ab(iii)	A(i), B(ii)	56, 82, 85
Gentianaceae	*Gentianella bridgesii*	(Gilg) Fabris ex T.N.Ho & S.W.Liu	DD		A(iii), B(ii)	87
Gentianaceae	*Gentianella briquetiana*	(Gilg) T.N.Ho & S.W.Liu	NE		B(ii)	59, 60, 85
Gentianaceae	*Gentianella chrysantha*	(Gilg) T.N.Ho & S.W.Liu	VU	D2	A(i), B(ii)	56
Gentianaceae	*Gentianella dasythamna*	(Gilg) T.N.Ho & S.W.Liu	NE		A(iii), B(ii)	84
Gentianaceae	*Gentianella dielsiana*	(Gilg) J.S.Pringle	NE		B(ii)	52, 84, 85
Gentianaceae	*Gentianella inaequicalyx*	(Gilg) Fabris ex J.S.Pringle	NE		B(ii)	23, 25, 85
Gentianaceae	*Gentianella kuntzei*	(Gilg) T.N.Ho & S.W.Liu	NE		A(iii), B(ii)	26, 35
Gentianaceae	*Gentianella kusnezowii*	(Gilg) T.N.Ho & S.W.Liu	NE		A(iii), B(ii)	56, 84
Gentianaceae	*Gentianella longipes*	J.S.Pringle	NE		A(iii), B(ii)	26
Gentianaceae	*Gentianella longisepala*	M.Zárate	NE		A(iii), B(ii)	85
Gentianaceae	*Gentianella lythroides*	(Gilg) T.N.Ho & S.W.Liu	NE		A(iii), B(ii)	82, 85
Gentianaceae	*Gentianella neomandonii*	(R.C.Foster) T.N.Ho & S.W.Liu	NE		B(ii)	60
Gentianaceae	*Gentianella palcana*	(Gilg) T.N.Ho & S.W.Liu	EN	B1ab(iii,iv)	A(i), B(ii)	84, 85
Gentianaceae	*Gentianella pilgeriana*	(Gilg) T.N.Ho & S.W.Liu	NE		A(iii), B(ii)	56
Gentianaceae	*Gentianella pluvialis*	J.S.Pringle	NE		A(iv), B(ii)	25, 84
Gentianaceae	*Gentianella pringlei*	M.Zárate	NE		A(iii), B(ii)	82, 85
Gentianaceae	*Gentianella quechuana*	M.Zárate	NE		A(iii), B(ii)	84
Gentianaceae	*Gentianella sancti-mathaeii*	(R.C.Foster) T.N.Ho & S.W.Liu	NE		A(iv), B(ii)	25, 84, 85, 87
Gentianaceae	*Gentianella stenosepala*	(Gilg) T.N.Ho & S.W.Liu	NE		A(iii), B(ii)	60
Gentianaceae	*Gentianella thiosphaera* var. *macroclada*	(Gilg) T.N.Ho	NE		B(ii)	26, 38, 85
Gentianaceae	*Gentianella undulatisepala*	J.S.Pringle	DD		A(iii), B(ii)	59, 85
Gentianaceae	*Halenia herzogii*	Gilg	NE		A(iii), B(ii)	82

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Gentianaceae	*Halenia robusta*	Gilg	NE		A(iii), B(ii)	82, 85
Gentianaceae	*Halenia rusbyi*	Gilg	NE		A(iii), B(ii)	59
Gentianaceae	*Macrocarpaea bangiana*	Gilg	VU	B2ab(iii)	A(i), B(ii)	54, 59, 60, 79
Gentianaceae	*Macrocarpaea cinchonifolia*	(Gilg) Weaver	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	57, 59, 60
Gentianaceae	*Macrocarpaea cochabambensis*	Gilg-Ben.	VU	B2ab(iii)	A(i), B(ii)	56, 59, 60, 82, 84
Gentianaceae	*Macrocarpaea fuentesii*	J.R.Grant	EN	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	59, 60
Gentianaceae	*Symbolanthus australis*	Struwe	VU	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	54, 56, 57, 58
Gentianaceae	*Symbolanthus brittonianus*	Gilg	NE		B(ii)	59, 60, 84
Geraniaceae	*Geranium comarapense*	R.Knuth	NE		A(iii), B(ii)	25
Geraniaceae	*Geranium tablasense*	R.Knuth	NE		A(iv), B(ii)	82, 84
Geraniaceae	*Hypseocharis malpasensis*	R.Knuth	NE		A(iii), B(ii)	30, 41
Gesneriaceae	*Besleria longipedunculata*	Britton ex Rusby	NE		B(ii)	59, 79, 82, 84
Gesneriaceae	*Besleria ovalifolia*	Britton	NE		B(ii)	56, 57
Gesneriaceae	*Columnea hypocyrtantha*	(Wiehler) J.F.Sm. & L.E.Skog	NE/CR*	B1ab(iii)	A(ii), A(iv), B(ii)	25, 84
Gesneriaceae	*Columnea oblongifolia*	Rusby	NE		A(iv), B(ii)	56, 57
Gesneriaceae	*Columnea ultraviolacea*	J.F.Sm. & L.E.Skog	NE/CR*	B1ab(i,iii)	A(ii), A(iv), B(ii)	54, 60
Gesneriaceae	*Diastema purpurascens*	Rusby	NE		A(iii), B(ii)	56
Gesneriaceae	*Diastema williamsii*	Rusby	NE		A(iii), B(ii)	59
Gesneriaceae	*Paradrymonia buchtienii*	(Mansf.) Wiehler	NE		A(iii), B(ii)	59
Gesneriaceae	*Pearcea sprucei* var. *parviflora*	(Rusby) L.P.Kvist & L.E.Skog	NE		B(ii)	54, 56, 58, 59
Gesneriaceae	*Sinningia sulcata*	(Rusby) Wiehler	NE		B(ii)	56, 58
Gleicheniaceae	*Sticherus jacha*	J.Gonzales	NE		A(iv), B(ii)	56, 57, 84
Grossulariaceae	*Ribes steinbachiorum*	Weigend & Binder	NE		A(iv), B(ii)	59, 60, 82
Gunneraceae	*Gunnera boliviana*	Morong	NE		A(iii), B(ii)	25, 52, 56
Humiriaceae	*Vantanea compacta* subsp. *microcarpa*	Cuatrec.	NE		A(iii), B(ii)	60

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Hymenophyllaceae	*Hymenophyllum jimenezii*	A.R.Sm. & M.Kessler	NE		A(iii), B(ii)	60
Hymenophyllaceae	*Hymenophyllum latisorum*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	84
Hymenophyllaceae	*Trichomanes herzogii*	Rosenst.	NE		A(iv), B(ii)	59, 60, 84
Icacinaceae	*Casimirella beckii*	(Fern.Casas) Breteler	EN	B2ab(iii)	A(i), B(ii)	74
Iridaceae	*Cypella boliviana*	Huaylla	DD		A(iii), B(ii)	5
Iridaceae	*Cypella mandonii*	Rusby	NE		A(iv), B(ii)	87
Iridaceae	*Ennealophus boliviensis*	(Baker) Ravenna	NE/VU*	D2	A(ii), A(iii), B(ii)	40
Iridaceae	*Mastigostyla brevicaulis*	(Baker) R.C.Foster	NE		A(iii), B(ii)	56
Iridaceae	*Mastigostyla torotoroensis*	Huaylla & Wilkin	NE		A(iii), B(ii)	49
Iridaceae	*Mastigostyla tunariensis*	(R.C.Foster) Ravenna	NE		A(iii), B(ii)	85
Iridaceae	*Mastigostyla woodii*	Huaylla & Wilkin	NE		A(iii), B(ii)	28
Iridaceae	*Sisyrinchium laterale*	Baker	NE		B(ii)	26
Isoetaceae	*Isoetes afloramientorum*	D.F.Brunt. & J.B.S.Pereira	NE		A(iii), B(ii)	1
Isoetaceae	*Isoetes eshbaughii*	Hickey & H.P.Fuchs	DD		A(iii), B(ii)	84
Isoetaceae	*Isoetes herzogii*	U.Weber	VU	B1ab(iii,v)	A(i), B(ii)	25, 57, 60, 82, 85
Isoetaceae	*Isoetes santacruzensis*	J.B.S.Pereira	NE		A(iii), B(ii)	1
Koeberliniaceae	*Koeberlinia holacantha*	W.C.Holmes, K.L.Yip & Rushing	NE		A(iii), B(ii)	23
Lamiaceae	*Aegiphila buchtienii*	Moldenke	VU	B2ab(ii)	A(i), B(ii)	56, 57, 60, 79
Lamiaceae	*Aegiphila herzogii*	Moldenke	LC		B(ii)	4, 9, 12, 19, 79
Lamiaceae	*Aegiphila steinbachii*	Moldenke	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	9, 18, 19, 25, 26
Lamiaceae	*Clinopodium axillare*	(Rusby) Harley	LC		B(ii)	25, 26, 28, 29, 86
Lamiaceae	*Clinopodium axillare* subsp. *uniflorum*	(Rusby ex Briq.) J.R.I.Wood	NE		B(ii)	28
Lamiaceae	*Clinopodium bolivianum* subsp. *diffusum*	J.R.I.Wood	NE		A(iii), B(ii)	84
Lamiaceae	*Clinopodium pallidum*	(Epling) Govaerts	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	49, 52, 87
Lamiaceae	*Clinopodium pilosum*	J.R.I.Wood	NE		A(iii), B(ii)	40

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Lamiaceae	*Hyptis grisea*	Harley	VU	D2	A(i), B(ii)	11
Lamiaceae	*Hyptis kempffiana*	Harley	VU	D2	A(i), B(ii)	11
Lamiaceae	*Hyptis tuberosa*	Harley	VU	D2	A(i), B(ii)	2
Lamiaceae	*Hyptis woodii*	Harley	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	11
Lamiaceae	*Lepechinia bella*	Epling	NE		B(ii)	23, 26, 28, 86
Lamiaceae	*Lepechinia lancifolia*	(Rusby) Epling	LC		B(ii)	57, 59, 60
Lamiaceae	*Lepechinia nubigena*	J.R.I.Wood & J.M.Mercado	NE		A(iii), B(ii)	23, 25
Lamiaceae	*Minthostachys acutifolia*	Epling	NE		B(ii)	52, 53, 56, 57
Lamiaceae	*Minthostachys andina*	(Britton ex Rusby) Epling	NE		B(ii)	52, 84, 85, 87
Lamiaceae	*Minthostachys diffusa*	Epling	NE		A(iii), B(ii)	56
Lamiaceae	*Minthostachys ovata*	(Briq.) Epling	NE		B(ii)	23, 28, 86
Lamiaceae	*Minthostachys setosa*	(Briq.) Epling	NE		B(ii)	53, 56, 59, 82, 85
Lamiaceae	*Salvia alba*	J.R.I. Wood	NE		A(iii), B(ii)	25
Lamiaceae	*Salvia amplifrons*	Briq.	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	23, 25, 26, 37, 59, 85
Lamiaceae	*Salvia cardenasii*	J.R.I.Wood	EN	B1ab(iii)+2ab(iii);D	A(i), B(ii)	84
Lamiaceae	*Salvia graciliramulosa*	Epling & Játiva	LC		B(ii)	29
Lamiaceae	*Salvia orbignaei*	Benth.	NE		B(ii)	23, 26, 28, 82, 85, 86, 87
Lamiaceae	*Salvia oxyphora*	Briq.	NT	B2ab(iii,v)	B(ii)	25, 26, 55, 82, 83, 84
Lamiaceae	*Salvia raymondii*	J.R.I.Wood	# VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	23
Lamiaceae	*Salvia raymondii* subsp. *mairanae*	J.R.I.Wood	NE		A(iv), B(ii)	25, 84
Lamiaceae	*Salvia raymondii* subsp. *raymondii*		NE		A(iv), B(ii)	23, 25, 84
Lamiaceae	*Salvia retinervia*	Briq.	NE		B(ii)	23, 26, 28, 29, 86
Lamiaceae	*Salvia serranoae*	J.R.I.Wood	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	23
Lamiaceae	*Salvia sophrona*	Briq.	NE		B(ii)	23, 26, 34, 37, 85
Lamiaceae	*Salvia sucrensis*	J.R.I.Wood	NT	B1a+2a	B(ii)	29, 30

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Lamiaceae	*Stachys mandoniana*	Briq.	NE		B(ii)	26, 31, 32, 34, 57, 59
Lauraceae	*Nectandra apiculata*	Rohwer	CR	B2ab(iii)	A(i), B(ii)	25
Lauraceae	*Ocotea comata*	van der Werff	VU	B1ab(iii,v)	A(i), B(ii)	54, 56, 59, 60
Lauraceae	*Ocotea illustris*	Rusby	DD		A(iii), B(ii)	60
Lauraceae	*Ocotea micrantha*	van der Werff	EN	B2ab(ii,iii)	A(i), B(ii)	53, 60
Lauraceae	*Ocotea prunifolia*	Rusby	DD		A(iv), B(ii)	59
Lauraceae	*Ocotea sacculifera*	van der Werff	LC		B(ii)	59, 60
Lauraceae	*Ocotea smithii*	van der Werff	DD		A(iii), B(ii)	54
Lauraceae	*Ocotea solomonii*	van der Werff	EN	B2ab(ii,iii)	A(i), B(ii)	56, 59, 60
Lauraceae	*Ocotea stenophylla*	van der Werff	EN	B2ab(ii,iii)	A(i), B(ii)	60
Lauraceae	*Persea bilocularis*	L.E.Kopp	EN	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	54, 56, 58
Lauraceae	*Persea buchtienii*	O.C.Schmidt	VU	B2ab(ii,iii)	A(i), B(ii)	25, 26, 56, 57, 60, 79
Lauraceae	*Rhodostemonodaphne longiflora*	Madriñán	EN	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	56, 59, 60
Lentibulariaceae	*Pinguicula jarmilae*	Halda & Malina	NE/CR*	B1+2bc(iii,v)	A(ii), A(iii), B(ii)	27
Loasaceae	*Caiophora buraeavii*	Urb. & Gilg	NE		B(ii)	26, 84
Loasaceae	*Caiophora chuquisacana*	Urb. & Gilg	NE		A(iii), B(ii)	85
Loasaceae	*Caiophora pedicularifolia*	Killip	NE		A(iv), B(ii)	56, 60
Loasaceae	*Caiophora rusbyana*	Urb. & Gilg ex Rusby	NE		A(iv), B(ii)	52
Loasaceae	*Mentzelia scabra* subsp. *boliviana*	Weigend	NE		B(ii)	23, 27, 30, 42, 53
Loasaceae	*Nasa herzogii*	(Urb. & Gilg) Weigend	NE/EN*	B1ab(i,iii)	A(ii), A(iii), B(ii)	25
Loranthaceae	*Passovia diffusa*	Kuijt	CR	B2ab(iii)	A(i), B(ii)	12
Loranthaceae	*Tristerix rhodanthus*	Kuijt	NE		A(iii), B(ii)	60
Lycopodiaceae	*Huperzia acuta*	(Rolleri) Rolleri & Deferrari	NE		A(iii), B(ii)	56
Lythraceae	*Cuphea luteola*	S.A.Graham & T.B.Cavalc.	VU	D2	A(i), B(ii)	11
Lythraceae	*Cuphea nivea*	S.A.Graham	NE/CR*	B2a(ii, iii)	A(ii), A(iii), B(ii)	60

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Lythraceae	*Cuphea scaberrima*	Koehne	NE		B(ii)	26, 27, 28, 30, 31, 32, 34, 37, 56, 82
Lythraceae	*Cuphea splendida*	Lourteig	LC		B(ii)	25
Lythraceae	*Cuphea splendida* var. *viridiflava*	S.A.Graham & T.B.Cavalc.	NE		B(ii)	62
Lythraceae	*Cuphea weddelliana*	Koehne	NE		B(ii)	25, 59, 60
Magnoliaceae	*Magnolia boliviana*	(M.Nee) Govaerts	EN	B2ab(iii)	A(i), B(ii)	25, 60, 79, 84
Magnoliaceae	*Magnolia madidiensis*	A.Vázquez	EN	B1ab(iii)	A(i), B(ii)	59, 60
Malpighiaceae	*Heteropterys falcifera*	A.Juss.	EN	B2ab(ii,iii,iv)	A(i), B(ii)	1, 9, 22
Malpighiaceae	*Heteropterys oxenderi*	W.R.Anderson	NE		A(iv), B(ii)	26
Malpighiaceae	*Mascagnia boliviana*	C.E.Anderson	NE		A(iii), B(ii)	73
Malpighiaceae	*Mezia beckii*	W.R.Anderson	NE		A(iii), B(ii)	64
Malpighiaceae	*Stigmaphyllon boliviense*	C.E.Anderson	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	1, 16
Malpighiaceae	*Stigmaphyllon coloratum*	Rusby	NE		B(ii)	3, 4, 60
Malvaceae	*Abutilon fuscicalyx*	Ulbr.	# VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	42, 43
Malvaceae	*Acaulimalva oriastrum*	(Wedd.) Krapov.	VU	B1ab(iii)	A(i), B(ii)	42
Malvaceae	*Andeimalva mandonii*	(Baker f.) J.A.Tate	NE		B(ii)	87
Malvaceae	*Byttneria fontis*	(Cristóbal)	# EN		A(i), B(ii)	3, 4
Malvaceae	*Cienfuegosia angustifolia*	Krapov.	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	4
Malvaceae	*Fuertesimalva woodii*	Krapov.	NE		A(iii), B(ii)	86
Malvaceae	*Gaya cardenasii*	Krapov.	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	23
Malvaceae	*Gaya cruziana*	Krapov.	VU	B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	A(i), B(ii)	19, 23, 26
Malvaceae	*Gaya pilocarpa*	Krapov.	EN	B1ab(iii,iv)+2ab(iii,iv)	A(i), B(ii)	85, 87
Malvaceae	*Gaya rubricaulis*	Rusby	DD		A(iii), B(ii)	85
Malvaceae	*Hibiscus adscensionis*	Fryxell & Krapov.	VU	B2ab(iii)	A(i), B(ii)	62
Malvaceae	*Hibiscus benensis*	Fryxell & Krapov.	# EN		A(i), B(ii)	11, 60, 76, 79
Malvaceae	*Hibiscus commixtus*	Fryxell & Krapov.	DD		A(iii), B(ii)	61

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Malvaceae	*Hibiscus conceptionis*	Fryxell & Krapov.	EN	B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	A(i), B(ii)	11, 16, 17, 18
Malvaceae	*Hibiscus manuripiensis*	Krapov.	DD		A(iii), B(ii)	60, 66
Malvaceae	*Luehea herzogiana*	R.E.Fr.	EN	B2ab(iii)	A(i), B(ii)	24, 26, 34
Malvaceae	*Luehea splendens*	Rusby	NT	B2ab(iii)	B(ii)	55, 56, 60
Malvaceae	*Luehea steinbachii*	Burret	VU	B1ab(ii,iii,v) +2ab(ii,iii,v)	A(i), B(ii)	25, 26
Malvaceae	*Luehea tomentella*	Rusby	DD		B(ii)	1, 25, 26, 56, 84
Malvaceae	*Malvastrum pucarense*	Krapov.	EN	B2a(iii)	A(i), B(ii)	26, 36
Malvaceae	*Malvastrum trifidum*	Krapov.	# EN	B1ab(iii)+2b(iii)	A(i), B(ii)	23, 86
Malvaceae	*Mollia lepidota* subsp. *boliviana*	(Britton) Meijer	NE		B(ii)	59
Malvaceae	*Nototriche agyna*	Krapov.	DD		A(iii), B(ii)	48
Malvaceae	*Nototriche coactilis*	A.W.Hill	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	48
Malvaceae	*Nototriche trollii*	Ulbr.	# CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	48
Malvaceae	*Pachira rurrenabaqueana*	(Rusby) Fern.Alonso	VU	B2ab(iii)	A(i), B(ii)	11, 12, 25, 74
Malvaceae	*Pavonia chiquitensis*	J.R.I.Wood	CR	D	A(i), B(ii)	2
Malvaceae	*Pavonia filiformis*	J.R.I.Wood	DD		A(iii), B(ii)	5
Malvaceae	*Pavonia ionthacarpa*	Krapov.	EN	B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	A(i), B(ii)	26
Malvaceae	*Pavonia yatarendana*	Krapov. & Cristóbal	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	26
Malvaceae	*Peltaea chiquitana*	Krapov. & Cristóbal	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	14
Malvaceae	*Pseudabutilon benense*	(Britton) Fryxell	NE		B(ii)	60, 68
Malvaceae	*Pseudabutilon leucothrix*	Fryxell	DD		A(iii), B(ii)	1
Malvaceae	*Pseudobombax andicola*	A.Robyns	# VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	28, 35, 86
Malvaceae	*Pseudobombax pulchellum*	Carv.-Sobr.	EN	B2ab(iii)	A(i), B(ii)	4, 22
Malvaceae	*Rhynchosida kearneyi*	Fryxell	NE		B(ii)	3, 34
Malvaceae	*Sida albinervia*	Krapov.	NE		A(iii), B(ii)	82
Malvaceae	*Sida beckii*	Krapov.	# CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	84

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Malvaceae	*Sida calva*	Fryxell	# EN	B1ab(i,ii,iii,iv,v) +2ab(i,ii,iii,iv,v)	A(i), B(ii)	25, 61
Malvaceae	*Sida cordifolia* var. *serrata*	Baker f.	NE		A(iii), B(ii)	23
Malvaceae	*Sida gracilipes*	Rusby	VU	B2ab(ii,iii,iv)	A(i), B(ii)	23, 26, 27, 28, 29, 30, 86
Malvaceae	*Sida yungasensis*	Krapov.	# CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	56
Malvaceae	*Tarasa cardenasii*	Krapov.	NE		B(ii)	38, 59, 85
Malvaceae	*Waltheria ladewii*	Rusby	NE		A(iii), B(ii)	59
Malvaceae	*Wissadula andina*	Britton	LC		B(ii)	52
Malvaceae	*Wissadula cardenasii*	Krapov.	# CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	85
Malvaceae	*Wissadula cruziana*	R.E.Fr.	VU	B2ab(iii)	A(i), B(ii)	23, 35, 86
Malvaceae	*Wissadula sordida*	Hochr.	NE		B(ii)	23, 52, 53
Malvaceae	*Woodianthus sotoi*	Krapov.	VU	D2	A(i), B(ii)	12
Marantaceae	*Stromanthe angustifolia*	Rusby	NE		A(iii), B(ii)	57
Melastomataceae	*Axinaea alata*	E.Cotton	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	56, 59
Melastomataceae	*Bellucia gracilis*	(S.S.Renner) Penneys, Michelang., Judd & Almeda	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	60
Melastomataceae	*Chaetogastra adenophora*	(Cogn.) P.J.F.Guim. & Michelang.	NE		B(ii)	26, 56, 59
Melastomataceae	*Chaetogastra aurea*	(Cogn.) P.J.F.Guim. & Michelang.	NE		A(iii), B(ii)	82
Melastomataceae	*Chaetogastra brittoniana*	(Cogn.) P.J.F.Guim. & Michelang.	NE		B(ii)	25, 26, 54, 56, 60, 84
Melastomataceae	*Chaetogastra capitata*	(Naudin) P.J.F.Guim. & Michelang.	NE		A(iv), B(ii)	56, 57, 59
Melastomataceae	*Chaetogastra confertiflora*	(Naudin) P.J.F.Guim. & Michelang.	NE		B(ii)	54, 56, 57, 82, 87
Melastomataceae	*Chaetogastra excoriata*	(Cogn.) P.J.F.Guim. & Michelang.	NE		A(iii), B(ii)	82
Melastomataceae	*Chaetogastra herzogii*	(Cogn.) P.J.F.Guim. & Michelang.	NE		B(ii)	25, 26, 27, 31, 34, 37, 39
Melastomataceae	*Chaetogastra lancifolia*	(Wurdack) P.J.F.Guim. & Michelang.	NE		A(iii), B(ii)	84
Melastomataceae	*Chaetogastra latifolia*	(Naudin) P.J.F.Guim. & Michelang.	NE		A(iii), B(ii)	56
Melastomataceae	*Chaetogastra obtusifolia*	(Cogn.) P.J.F.Guim. & Michelang.	NE		B(ii)	25
Melastomataceae	*Chaetogastra orbignyana*	(Naudin) P.J.F.Guim. & Michelang.	NE		A(iv), B(ii)	53
Melastomataceae	*Chaetogastra panicularis*	Naudin	NE		A(iv), B(ii)	55, 56
Melastomataceae	*Chaetogastra rusbyi*	(Cogn.) P.J.F.Guim. & Michelang.	NE		A(iii), B(ii)	56
Melastomataceae	*Chaetogastra tetrapetala*	(Cogn.) P.J.F.Guim. & Michelang.	NE		A(iv), B(ii)	56, 57
Melastomataceae	*Chaetogastra venosa*	(Gleason) P.J.F.Guim. & Michelang.	NE		A(iv), B(ii)	25, 82, 84
Melastomataceae	*Desmoscelis calcarata*	Triana	NE		A(iv), B(ii)	60
Melastomataceae	*Henriettea boliviensis*	(Cogn.) Penneys, Michelang., Judd & Almeda	VU	B2ab(iii)	A(i), B(ii)	60, 64
Melastomataceae	*Meriania axinaeoides*	Gleason	VU	B2ab(ii,iii)	A(i), B(ii)	56, 57
Melastomataceae	*Meriania boliviensis*	Cogn.	EN	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	54, 58
Melastomataceae	*Meriania brittoniana*	Wurdack	LC		B(ii)	25, 26, 54, 56, 57, 59, 60, 79
Melastomataceae	*Meriania horrida*	C.Ulloa & Achá	NE		A(iv), B(ii)	59, 60
Melastomataceae	*Meriania pulcherrima*	Herzog	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	49, 57, 60
Melastomataceae	*Miconia amabilis*	Cogn.	VU	B2ab(ii,iii)	A(i), B(ii)	25, 57, 60, 84
Melastomataceae	*Miconia amissa*	Wurdack	DD		A(iv), B(ii)	58
Melastomataceae	*Miconia biacuta*	Cogn.	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	56, 58, 59, 60
Melastomataceae	*Miconia boliviensis*	Cogn.	LC		B(ii)	25, 53, 56, 57, 58, 59, 82, 84, 87
Melastomataceae	*Miconia brittonii*	Cogn. ex Britton	NT	B1ab(iii)+2ab(iii)	B(ii)	54, 56, 59, 60
Melastomataceae	*Miconia cinnabarina*	Jan.M.Burke & Michelang.	VU	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	53, 54, 56, 59, 60
Melastomataceae	*Miconia dimorphotheca*	Jan.M.Burke & Michelang.	VU	B2ab(ii,iii)	A(i), B(ii)	59, 60
Melastomataceae	*Miconia dulcis*	Jan.M.Burke, Michelang. & K.Grant	NE		A(iii), B(ii)	25
Melastomataceae	*Miconia galeiformis*	Jan.M.Burke & Michelang.	CR	B2ab(iii)	A(i), B(ii)	82, 84
Melastomataceae	*Miconia glomerulifera*	Cogn.	EN	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	54, 56, 57, 59, 60
Melastomataceae	*Miconia herzogii*	Cogn.	NE		A(iv), B(ii)	25, 84
Melastomataceae	*Miconia incachacana*	Wurdack	VU	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	60, 82, 84
Melastomataceae	*Miconia kuntzei*	Cogn. ex Kuntze	DD		A(iii), B(ii)	84
Melastomataceae	*Miconia longicuspidata*	S.S.Renner & R.Goldenb.	NE		A(iii), B(ii)	25

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Melastomataceae	*Miconia mandonii*	Cogn. ex Britton	VU	B2ab(ii,iii)	A(i), B(ii)	25, 56, 59, 60, 82, 87
Melastomataceae	*Miconia neei*	Jan.M.Burke & Michelang.	VU	B2ab(iii)	A(i), B(ii)	23, 25, 26, 56, 57, 58, 59, 60, 82, 84
Melastomataceae	*Miconia obliqua*	Gleason	NE		A(iv), B(ii)	57, 59
Melastomataceae	*Miconia polygama*	Cogn.	NE		B(ii)	25, 56, 57, 60, 61, 84
Melastomataceae	*Miconia quadrialata*	S.S.Renner & S.Beck	EN	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	56, 59, 60
Melastomataceae	*Miconia recondita*	Wurdack	VU	B1ab(iii)	A(i), B(ii)	56, 57, 59, 60
Melastomataceae	*Miconia rosea*	Gleason	NE		B(ii)	60, 84
Melastomataceae	*Miconia rusbyana*	Cogn.	NE		A(iv), B(ii)	84
Melastomataceae	*Miconia sessilifolia*	Naudin	NE		B(ii)	26, 53, 54, 56, 58, 59, 60
Melastomataceae	*Miconia staphidioides*	(Naudin) Triana	NE		B(ii)	56, 59, 60, 82, 84
Melastomataceae	*Miconia steinbachii*	Markgr.	NE		A(iv), B(ii)	25
Melastomataceae	*Miconia stenocardia*	Cogn.	NE		B(ii)	24, 26
Melastomataceae	*Miconia uvifera*	Naudin	NE		B(ii)	25, 26, 54, 84
Melastomataceae	*Miconia valida*	Cogn.	LC		B(ii)	23, 25, 56, 84
Melastomataceae	*Miconia yungasensis*	R.Goldenb. & Michelang.	NE		A(iii), B(ii)	56, 58
Melastomataceae	*Microlicia woodii*	R.B.Pacifico, Almeda & Fidanza	DD		A(iv), B(ii)	2
Melastomataceae	*Pleroma amoenum*	(Herzog) P.J.F.Guim. & Michelang.	NE		A(iii), B(ii)	2
Melastomataceae	*Poteranthera inopinata*	Almeda & R.B.Pacifico	NE		A(iii), B(ii)	11
Melastomataceae	*Poteranthera leptalea*	(Almeda) M.J.Rocha, P.J.Guim. & R.Romero	VU	D2	A(i), B(ii)	11
Melastomataceae	*Tibouchina bicolor*	(Naudin) Cogn.	NE		B(ii)	53, 54, 56, 57, 59, 60, 82, 84
Meliaceae	*Ruagea beckii*	T.D. Penn.	NE		A(iii), B(ii)	54, 79
Meliaceae	*Trichilia multifoliola*	C.DC.	LC		B(ii)	1, 4, 6, 13, 14, 18, 23, 25, 53, 54, 59, 60, 73, 82, 87
Monimiaceae	*Mollinedia boliviensis*	A.DC.	LC		B(ii)	56, 59, 63, 84
Monimiaceae	*Mollinedia steinbachiana*	Perkins	VU	B2ab(ii,iii)	A(i), B(ii)	23, 25, 26, 60, 84
Moraceae	*Ficus chaparensis*	C.C.Berg & Villav.	CR	B2ab(iii)	A(i), B(ii)	84
Moraceae	*Pseudolmedia boliviana*	C.C.Berg & Villav.	EN	B2ab(ii,iii)	A(i), B(ii)	54, 58, 60
Myrtaceae	*Campomanesia madidiensis*	A. Fuentes & Villarroel	# EN		A(i), B(ii)	60
Myrtaceae	*Eugenia boliviana*	(D.Legrand) Mattos	VU	B1ab(ii,iii,iv) +2ab(ii,iii,iv)	A(i), B(ii)	9, 15
Myrtaceae	*Eugenia cydoniifolia*	O.Berg	VU	B1ab(i,ii,iii,iv,v) +2ab(i,ii,iii,iv,v)	A(i), B(ii)	1, 12, 16, 17
Myrtaceae	*Eugenia lomeroensis*	Villarroel & Bezerra	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	1, 3, 16
Myrtaceae	*Eugenia michaelneei*	Villarroel & Faria	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	2
Myrtaceae	*Eugenia teresa-ruiziana*	Villarroel & Faria	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	1
Myrtaceae	*Myrceugenia linda*	F.C.S. Vieira & Proença	NE		A(iii), B(ii)	25
Myrtaceae	*Myrcia connata*	McVaugh	EN	B1ab(iii)	A(i), B(ii)	55
Myrtaceae	*Myrcia haenkeana*	(O.Berg) Mattos	NE		A(iv), B(ii)	60
Myrtaceae	*Myrcia lignosa*	Villarroel & Proença	LC		B(ii)	11
Myrtaceae	*Myrcia proencana*	Villarroel & Bezerra	VU	D2	A(i), B(ii)	11
Myrtaceae	*Myrcia siberiensis*	(Villarroel, M.Nee & Proença) K.Campbell & E.Lucas	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	25
Myrtaceae	*Myrcia subglabra*	McVaugh	LC		B(ii)	59, 60
Myrtaceae	*Myrciaria coimbrarum*	Villarroel & Lino-Villalba	NE		A(iv), B(ii)	20
Myrtaceae	*Siphoneugena minima*	Loza & A.Fuentes	# VU		A(i), B(ii)	60
Nyctaginaceae	*Bougainvillea berberidifolia*	Heimerl	NT	B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	B(ii)	23, 26, 29, 86
Nyctaginaceae	*Bougainvillea modesta*	Heimerl	LC		B(ii)	1, 2, 5, 19, 24, 31, 32, 60, 73
Nyctaginaceae	*Bougainvillea trollii*	Heimerl	VU	B1a(iii)+2ab(iii)	A(i), B(ii)	26, 27, 36
Nyctaginaceae	*Guapira boliviana*	(Britton) Lundell	LC		B(ii)	13, 60, 79
Nyctaginaceae	*Mirabilis glutinosa*	Kuntze	CR	B1ab(iii)	A(i), B(ii)	85
Nyctaginaceae	*Neea bangii*	Rusby	LC		B(ii)	25, 56, 62
Nyctaginaceae	*Neea boliviana*	Standl.	# EN	B1ab(iii,iv)+2ab(iii,iv)	A(i), B(ii)	82, 84
Nyctaginaceae	*Neea dimorphophylla*	Standl.	# EN	B2ab(i,ii,iii,iv,v)	A(i), B(ii)	60, 68, 76
Nymphaeales	*Victoria boliviana*	Magdalena & L.T.Sm.	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	73, 76

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Ochnaceae	*Ouratea boliviana*	Tiegh.	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	11
Ochnaceae	*Ouratea latifolia*	(Erhard) Tiegh.	DD		B(ii)	2, 11
Ochnaceae	*Ouratea oblongifolia*	Rusby	NE		A(iii), B(ii)	60, 61
Ochnaceae	*Ouratea trollii*	Sleumer	LC		B(ii)	11,12, 60, 62
Onagraceae	*Fuchsia cochabambana*	P.E.Berry	NE/VU*	B1a(i, iii)	A(ii), A(iv), B(ii)	23, 25, 82, 84
Onagraceae	*Fuchsia garleppiana*	Kuntze & Wittm.	NE/EN*	B1ab(iii)	A(ii), A(iv), B(ii)	82, 84, 85, 87
Onagraceae	*Fuchsia nana*	P.E.Berry	NE/VU*	B1ab(i,ii)	A(ii), A(iv), B(ii)	25, 82, 84, 85
Onagraceae	*Oenothera brevipetala*	W.Dietr.	NE		A(iii), B(ii)	85
Onagraceae	*Oenothera pseudoelongata*	W.Dietr.	NE		A(iii), B(ii)	82
Onagraceae	*Oenothera recurva*	W.Dietr.	NE		B(ii)	40
Onagraceae	*Oenothera tarijensis*	W.Dietr.	NE		A(iii), B(ii)	40
Orchidaceae	*Aa trilobulata*	Schltr.	NE		A(iv), B(ii)	60
Orchidaceae	*Acianthera boliviana*	(Rchb.f.) Pridgeon & M.W.Chase	NE		B(ii)	25, 26, 84, 87
Orchidaceae	*Acianthera heliconioides*	(Luer & R.Vásquez) Pridgeon & M.W.Chase	NE		A(iii), B(ii)	82
Orchidaceae	*Acianthera krahnii*	Luer & Vásquez	NE		A(iii), B(ii)	26
Orchidaceae	*Acianthera morenoi*	(Luer) Pridgeon & M.W.Chase	NE		A(iii), B(ii)	26
Orchidaceae	*Acianthera venulosa*	Luer	NE		A(iii), B(ii)	82
Orchidaceae	*Anathallis gracilenta*	(Luer & R.Vásquez) Pridgeon & M.W.Chase	NE		A(iii), B(ii)	60
Orchidaceae	*Andinia ricii*	(Luer & R.Vásquez) Karremans & S.V.Uribe	NE		A(iii), B(ii)	25
Orchidaceae	*Andreettaea ancora*	(Luer & R.Vásquez) A.Doucette	NE		B(ii)	25, 59, 84
Orchidaceae	*Andreettaea cynocephala*	(Luer) A.Doucette	NE		A(iii), B(ii)	84
Orchidaceae	*Andreettaea infinita*	(Luer) A.Doucette	NE		A(iii), B(ii)	56
Orchidaceae	*Barbosella vasquezii*	Luer	NE		A(iii), B(ii)	56
Orchidaceae	*Baskervilla auriculata* var. *yungasensis*	T.Hashim.	NE		A(iii), B(ii)	56
Orchidaceae	*Baskervilla boliviana*	T.Hashim.	NE		A(iii), B(ii)	57

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Orchidaceae	*Brachionidium alpestre*	Luer & R.Vásquez	NE		A(iii), B(ii)	56
Orchidaceae	*Brachionidium lopez-robertsiae*	I.Jiménez	NE		A(iii), B(ii)	56
Orchidaceae	*Brachionidium sulcatum*	I.Jiménez	NE		A(iii), B(ii)	56
Orchidaceae	*Brachionidium uxorium*	Luer & R.Vásquez	NE		A(iii), B(ii)	60
Orchidaceae	*Brachionidium vasquezii*	Luer	NE		A(iii), B(ii)	56
Orchidaceae	*Bulbophyllum bolivianum*	Schltr.	NE		A(iii), B(ii)	60
Orchidaceae	*Bulbophyllum tricolor*	L.B.Sm. & S.K.Harris	NE		A(iii), B(ii)	87
Orchidaceae	*Catasetum interhomesianum*	R.Vásquez & Dodson	NE		A(iii), B(ii)	70
Orchidaceae	*Catasetum justinianum*	R.Vásquez & Dodson	NE		A(iii), B(ii)	11
Orchidaceae	*Catasetum kempfii*	Dodson & R.Vásquez	VU	B1ab(ii)	A(i), B(ii)	24
Orchidaceae	*Catasetum ricii*	R.Vásquez & Dodson	NE		A(iii), B(ii)	12
Orchidaceae	*Chloraea boliviana*	(Rchb.f.) Kraenzl.	NE		A(iii), B(ii)	85
Orchidaceae	*Comparettia splendens*	Schltr.	NE		A(iii), B(ii)	59, 84
Orchidaceae	*Cranichis beckii*	Kolan., Baranow, S.Nowak & A.Fuentes	NE		A(iii), B(ii)	56
Orchidaceae	*Cranichis garayana*	Dodson & R.Vásquez	NE		A(iii), B(ii)	84
Orchidaceae	*Crossoglossa dodsonii*	R.Vásquez	NE		A(iii), B(ii)	82
Orchidaceae	*Cyclopogon bangii*	(Rolfe ex Rusby) Schltr.	NE		A(iii), B(ii)	57
Orchidaceae	*Cyclopogon cochabambae*	(Szlach.) J.M.H.Shaw	NE		A(iii), B(ii)	82
Orchidaceae	*Cyclopogon sillarensis*	Dodson & R.Vásquez	NE		A(iii), B(ii)	82
Orchidaceae	*Cyclopogon williamsii*	Dodson & R.Vásquez	NE		A(iii), B(ii)	82
Orchidaceae	*Cyrtochilum aurantiacum*	(G.Gerlach & T.Franke) Dalström	NE		A(iii), B(ii)	25
Orchidaceae	*Cyrtochilum gracielae*	Dalström	NE		A(iii), B(ii)	60, 82
Orchidaceae	*Cyrtochilum lapacense*	(R.Vásquez & Dalström) Dalström	NE		A(iii), B(ii)	59
Orchidaceae	*Cyrtochilum microxiphium*	(Rchb.f.) Kraenzl.	NE		B(ii)	59, 82, 84
Orchidaceae	*Cyrtochilum vasquezii*	(Christenson) J.M.H.Shaw	NE		A(iii), B(ii)	56

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Orchidaceae	*Dichaea hamata*	Rolfe ex Stapf	NE		A(iv), B(ii)	58, 59, 60
Orchidaceae	*Draconanthes lueriana*	Kolan., S.Nowak & Szlach.	NE		A(iii), B(ii)	82
Orchidaceae	*Dryadella yupanki*	(Luer & R.Vásquez) Karremans	NE		A(iii), B(ii)	26
Orchidaceae	*Elleanthus yungasensis*	Rolfe ex Rusby	NE		A(iii), B(ii)	58
Orchidaceae	*Encyclia steinbachii*	Schltr.	NE		B(ii)	25
Orchidaceae	*Epidendrum adolfomorenoi*	R.Vásquez & Ibisch	NE		A(iii), B(ii)	56
Orchidaceae	*Epidendrum bolivianum*	Schltr.	NE		A(iii), B(ii)	56, 57
Orchidaceae	*Epidendrum buchtienii*	Schltr.	NE		A(iii), B(ii)	84
Orchidaceae	*Epidendrum campylostele*	Hágsater & R.Vásquez	NE		A(iii), B(ii)	82
Orchidaceae	*Epidendrum espiritu-santense*	Dodson & R.Vásquez	EN	B2ab(iii)	A(i), B(ii)	11
Orchidaceae	*Epidendrum larae*	Dodson & R.Vásquez	NE		A(iv), B(ii)	25, 59, 60, 82
Orchidaceae	*Epidendrum lezlieae*	R.Vásquez & Ibisch	NE		A(iii), B(ii)	56, 84
Orchidaceae	*Epidendrum nigricans*	Schltr.	NE		A(iv), B(ii)	23, 25
Orchidaceae	*Epidendrum ophidion*	Dodson & R.Vásquez	NE		A(iii), B(ii)	82, 84
Orchidaceae	*Epidendrum oreonastes*	Rchb.f.	NE		B(ii)	87
Orchidaceae	*Epidendrum panteonense*	Dodson & R.Vásquez	NE		A(iii), B(ii)	84
Orchidaceae	*Epidendrum quinquepartitum*	Schltr.	NE		B(ii)	25, 26, 84
Orchidaceae	*Epidendrum solomonii*	Hágsater & L.Sánchez	NE		A(iii), B(ii)	56
Orchidaceae	*Epidendrum syringodes*	Schltr.	NE		A(iii), B(ii)	2
Orchidaceae	*Epidendrum theodori*	Schltr.	NE		A(iii), B(ii)	26
Orchidaceae	*Epidendrum zongoincomptum*	Hágsater & E.Santiago	NE		A(iii), B(ii)	57
Orchidaceae	*Fernandezia amboroensis*	Ormerod	NE		A(iii), B(ii)	25
Orchidaceae	*Fernandezia angusta*	Ormerod	NE		A(iii), B(ii)	56
Orchidaceae	*Fernandezia barnettiae*	Ormerod	NE		A(iii), B(ii)	25
Orchidaceae	*Fernandezia bilineata*	Ormerod	NE		A(iii), B(ii)	82

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Orchidaceae	*Fernandezia cardenasii*	(L.B.Sm. & S.K.Harris) M.W.Chase	NE		A(iii), B(ii)	87
Orchidaceae	*Fernandezia chaparensis*	Ormerod	NE		A(iii), B(ii)	82
Orchidaceae	*Fernandezia cuneata*	Ormerod	NE		A(iii), B(ii)	56
Orchidaceae	*Fernandezia dorriana*	Ormerod	NE		A(iii), B(ii)	23
Orchidaceae	*Fernandezia herzogii*	(Schltr.) ined.	NE		A(iii), B(ii)	23
Orchidaceae	*Fernandezia jordaniae*	Ormerod	NE		A(iii), B(ii)	25
Orchidaceae	*Fernandezia jordaniae* var. *trullata*	Ormerod	NE		A(iii), B(ii)	25
Orchidaceae	*Fernandezia luerorum*	Ormerod	NE		A(iii), B(ii)	82
Orchidaceae	*Fernandezia minor* var. *breviflora*	Ormerod	NE		A(iii), B(ii)	59
Orchidaceae	*Fernandezia minor* var. *minor*		NE		A(iii), B(ii)	56
Orchidaceae	*Fernandezia pandurata*	Ormerod	NE		A(iii), B(ii)	82
Orchidaceae	*Fernandezia pastinaca*	Ormerod	NE		A(iii), B(ii)	25
Orchidaceae	*Fernandezia quadrangularis*	Ormerod	NE		A(iii), B(ii)	85
Orchidaceae	*Fernandezia shoveliformis*	Ormerod	NE		A(iii), B(ii)	82
Orchidaceae	*Fernandezia shoveliformis* var. *inversa*	Ormerod	NE		A(iii), B(ii)	82
Orchidaceae	*Fernandezia solomonii*	Ormerod	NE		A(iii), B(ii)	56
Orchidaceae	*Fernandezia steinbachii*	Ormerod	NE		A(iii), B(ii)	25
Orchidaceae	*Fernandezia teranii*	Ormerod	NE		A(iii), B(ii)	82
Orchidaceae	*Fernandezia tinquiana*	Ormerod	NE		A(iii), B(ii)	25
Orchidaceae	*Fernandezia unduaviae*	Ormerod	NE		A(iii), B(ii)	56
Orchidaceae	*Gongora guaraya*	G.Gerlach & R.Vásquez	NE		A(iii), B(ii)	13
Orchidaceae	*Gongora ileneana*	G.Gerlach & Heider	NE		A(iii), B(ii)	82
Orchidaceae	*Habenaria bangii*	Schltr.	NE		A(iii), B(ii)	84
Orchidaceae	*Habenaria vasquezii*	Dodson	NE		A(iii), B(ii)	52
Orchidaceae	*Habenaria williamsii*	Schltr.	NE		A(iii), B(ii)	26

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Orchidaceae	*Ixyophora luerorum*	(R.Vásquez & Dodson) P.A.Harding	NE		A(iii), B(ii)	84	Orchidaceae	*Lepanthes puck*	Luer & R.Vásquez	NE		B(ii)	56, 57, 82, 84
Orchidaceae	*Karma gabi-villegasiae*	(I.Jiménez) Karremans	NE		A(iii), B(ii)	56	Orchidaceae	*Lepanthes recurva*	Luer & Hirtz	NE		A(iii), B(ii)	56
Orchidaceae	*Kefersteinia ricii*	R.Vásquez & Dodson	NE		A(iii), B(ii)	23	Orchidaceae	*Lepanthes ringens*	Luer & R.Vásquez	NE		A(iii), B(ii)	56
Orchidaceae	*Lepanthes altamiranoi*	Luer	NE		A(iii), B(ii)	84	Orchidaceae	*Lepanthes schoonenii*	Luer	NE		A(iii), B(ii)	56
Orchidaceae	*Lepanthes barbatula*	Luer & R.Vásquez	NE		A(iii), B(ii)	23	Orchidaceae	*Lepanthes scolops*	Luer & R.Vásquez	NE		B(ii)	56, 82
Orchidaceae	*Lepanthes brevis*	Luer & R.Vásquez	NE		A(iii), B(ii)	82	Orchidaceae	*Lepanthes usitata*	Luer & R.Vásquez	NE		A(iii), B(ii)	25
Orchidaceae	*Lepanthes cochliops*	Luer & R.Vásquez	NE		A(iii), B(ii)	84	Orchidaceae	*Lepanthes versicolor*	Luer & R.Vásquez	NE		A(iv), B(ii)	56, 84
Orchidaceae	*Lepanthes complicata*	Luer & R.Vásquez	NE		A(iv), B(ii)	82	Orchidaceae	*Lepanthes vespa*	Luer & R.Vásquez	NE		A(iv), B(ii)	25
Orchidaceae	*Lepanthes crescentiformis*	Luer	NE		A(iii), B(ii)	82	Orchidaceae	*Lepanthes vogelii*	Luer & R.Vásquez	NE		A(iii), B(ii)	84
Orchidaceae	*Lepanthes crista-piscis*	Luer & R.Vásquez	NE		A(iii), B(ii)	84	Orchidaceae	*Lepanthes zongoensis*	Luer	NE		A(iii), B(ii)	57
Orchidaceae	*Lepanthes croatii*	Luer	NE		A(iii), B(ii)	84	Orchidaceae	*Lepanthopsis trulliformis*	I.Jiménez	NE		A(iii), B(ii)	56
Orchidaceae	*Lepanthes dictyota*	Luer & R.Vásquez	NE		A(iv), B(ii)	82, 84	Orchidaceae	*Macroclinium lueri*	Dodson & R.Vásquez	NE		A(iii), B(ii)	87
Orchidaceae	*Lepanthes echidna*	Luer & R.Vásquez	NE		A(iii), B(ii)	82	Orchidaceae	*Malaxis buchtienii*	(Schltr.) Christenson	NE		A(iv), B(ii)	56, 84
Orchidaceae	*Lepanthes epibator*	Luer & R.Vásquez	NE		A(iii), B(ii)	56	Orchidaceae	*Malaxis mixta*	(Schltr.) R.Vásquez	NE		A(iii), B(ii)	56
Orchidaceae	*Lepanthes fuchsii*	Luer	NE		A(iii), B(ii)	56	Orchidaceae	*Malaxis weddellii*	(Finet) R.Vásquez	NE		A(iii), B(ii)	34, 53
Orchidaceae	*Lepanthes garayi*	T.Hashim.	NE		A(iii), B(ii)	25, 84	Orchidaceae	*Masdevallia boliviensis*	Schltr.	NE		A(iii), B(ii)	56
Orchidaceae	*Lepanthes herzogii*	Luer	NE		A(iii), B(ii)	56, 59	Orchidaceae	*Masdevallia burianii*	Luer & Dalström	NE		A(iii), B(ii)	82
Orchidaceae	*Lepanthes incredibilis*	Luer & R.Vásquez	NE		A(iii), B(ii)	84	Orchidaceae	*Masdevallia chaparensis*	T.Hashim.	NE		A(iv), B(ii)	25, 82
Orchidaceae	*Lepanthes megalocephala*	Luer & R.Vásquez	NE		A(iv), B(ii)	82	Orchidaceae	*Masdevallia chuspipatae*	Luer & Teague	NE		A(iii), B(ii)	56
Orchidaceae	*Lepanthes microphallica*	Luer	NE		A(iii), B(ii)	56	Orchidaceae	*Masdevallia cocapatae*	Luer, Teague & R.Vásquez	NE		A(iii), B(ii)	84
Orchidaceae	*Lepanthes oxyphylla*	Luer & R.Vásquez	NE		A(iv), B(ii)	56, 82, 84	Orchidaceae	*Masdevallia elachys*	Luer	NE		A(iii), B(ii)	25
Orchidaceae	*Lepanthes panisca*	Luer & R.Vásquez	NE		A(iii), B(ii)	84	Orchidaceae	*Masdevallia exquisita*	Luer & Hirtz	NE		A(iii), B(ii)	56, 58
Orchidaceae	*Lepanthes papilio*	Luer & R.Vásquez	NE		A(iv), B(ii)	82, 84	Orchidaceae	*Masdevallia frilehmannii*	Luer & R.Vásquez	NE		A(iii), B(ii)	60
Orchidaceae	*Lepanthes pileata*	Luer & R.Vásquez	NE		A(iii), B(ii)	82	Orchidaceae	*Masdevallia gutierrezii*	Luer	NE		B(ii)	11, 60
Orchidaceae	*Lepanthes ptyxis*	Luer & R.Vásquez	NE		A(iii), B(ii)	56	Orchidaceae	*Masdevallia heideri*	Königer	NE		A(iii), B(ii)	25, 26

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Orchidaceae	*Masdevallia helenae*	Luer	NE		A(iii), B(ii)	25, 82
Orchidaceae	*Masdevallia ishikoi*	Luer	NE		A(iii), B(ii)	57
Orchidaceae	*Masdevallia isos*	Luer	NE		A(iii), B(ii)	56
Orchidaceae	*Masdevallia luziaemariae*	Luer & R.Vásquez	NE		A(iii), B(ii)	56
Orchidaceae	*Masdevallia mascarata*	Luer & R.Vásquez	NE		A(iii), B(ii)	25
Orchidaceae	*Masdevallia nebulina*	Luer	NE		B(ii)	56, 82
Orchidaceae	*Masdevallia nitens*	Luer	NE		A(iii), B(ii)	82, 84
Orchidaceae	*Masdevallia notosibirica*	Maek. & T.Hashim.	VU		A(i), B(ii)	25
Orchidaceae	*Masdevallia omorenoi*	Luer & R.Vásquez	NE		A(iii), B(ii)	60
Orchidaceae	*Masdevallia oreas*	Luer & R.Vásquez	NT	B1ab(iii)	B(ii)	87
Orchidaceae	*Masdevallia phacopsis*	Luer & Dalström	NE		A(iii), B(ii)	25
Orchidaceae	*Masdevallia ricii*	Luer & R.Vásquez	NE		A(iii), B(ii)	25
Orchidaceae	*Masdevallia soennemarkii*	Luer & Dalström	NE		A(iii), B(ii)	25
Orchidaceae	*Masdevallia solomonii*	Luer & R.Vásquez	NE		A(iii), B(ii)	56
Orchidaceae	*Masdevallia tinekeae*	Luer & R.Vásquez	NE		A(iii), B(ii)	82, 84
Orchidaceae	*Masdevallia vasquezii*	Luer	NE		A(iii), B(ii)	84
Orchidaceae	*Masdevallia yungasensis*	T.Hashim.	NE		B(ii)	23, 25, 56, 57, 59
Orchidaceae	*Masdevallia zongoensis*	Luer & Hirtz	NE		A(iii), B(ii)	57
Orchidaceae	*Maxillaria dolichophylla*	Schltr.	NE		A(iii), B(ii)	84
Orchidaceae	*Maxillaria gorbatschowii*	R.Vásquez, Dodson & Ibisch	NE		B(ii)	56, 60, 69, 84
Orchidaceae	*Maxillaria margretiae*	R.Vásquez	NE		A(iii), B(ii)	84
Orchidaceae	*Maxillaria mariaisabeliae*	J.T.Atwood	NE		A(iii), B(ii)	84
Orchidaceae	*Maxillaria mungoschraderi*	R.Vásquez & Ibisch	NE		A(iii), B(ii)	84
Orchidaceae	*Maxillaria polybulbon*	Kraenzl.	NE		B(ii)	60, 87
Orchidaceae	*Maxillaria simacoana*	Schltr.	NE		A(iii), B(ii)	56

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Orchidaceae	*Microchilus cruciformis*	(Ormerod) E.C.Smidt & M.W.Chase	NE		A(iii), B(ii)	25
Orchidaceae	*Microchilus siberianus*	(Ormerod) E.C.Smidt & M.W.Chase	NE		A(iii), B(ii)	23
Orchidaceae	*Microchilus yungasensis*	M.C.Pace	NE		A(iii), B(ii)	56
Orchidaceae	*Mormodes morenoi*	R.Vásquez & Dodson	NE		A(iii), B(ii)	25
Orchidaceae	*Myoxanthus bolivianus*	Karremans, I.Jiménez & M.Zárate	NE		A(iii), B(ii)	84
Orchidaceae	*Myoxanthus chloe*	(Luer & R.Vásquez) Luer	NE		B(ii)	25, 84
Orchidaceae	*Oliveriana simulans*	Dodson & R.Vásquez	NE		A(iii), B(ii)	84
Orchidaceae	*Oncidium dracoceps*	(Dalström) M.W.Chase & N.H.Williams	NE		A(iii), B(ii)	56
Orchidaceae	*Oncidium lykaiosii*	R.Vásquez & Dodson	NE		A(iv), B(ii)	25, 26
Orchidaceae	*Oncidium magnificum*	Senghas	NE		A(iii), B(ii)	56
Orchidaceae	*Oncidium micklowii*	(Dalström) M.W.Chase & N.H.Williams	NE		A(iii), B(ii)	84
Orchidaceae	*Oncidium vierlingii*	(Senghas) M.W.Chase & N.H.Williams	NE		A(iii), B(ii)	59
Orchidaceae	*Ornithocephalus dodsonii*	R.Vásquez & T.Krömer	NE		A(iii), B(ii)	56
Orchidaceae	*Pabstiella glandulipetala*	(Luer & R.Vásquez) Karremans	NE		A(iii), B(ii)	59
Orchidaceae	*Pelexia yungasensis*	(Rolfe) Schltr.	NE		A(iii), B(ii)	58
Orchidaceae	*Pleurothallis amentacea*	Luer & Toscano	NE		A(iii), B(ii)	84
Orchidaceae	*Pleurothallis andina*	(Schltr.) Luer	NE		A(iii), B(ii)	56
Orchidaceae	*Pleurothallis chaparensis*	(Luer & R.Vásquez) J.M.H.Shaw	NE		A(iii), B(ii)	82
Orchidaceae	*Pleurothallis demissa*	Luer & R.Vásquez	NE		A(iii), B(ii)	56
Orchidaceae	*Pleurothallis micklowii*	Luer & R.Vásquez	NE		A(iii), B(ii)	23
Orchidaceae	*Pleurothallis serrisepala*	Kraenzl.	NE		A(iii), B(ii)	26
Orchidaceae	*Pleurothallis solomonii*	(Luer) J.M.H.Shaw	NE		A(iii), B(ii)	56
Orchidaceae	*Pleurothallopsis carnosa*	(Luer & R.Vásquez) Pridgeon & M.W.Chase	NE		A(iii), B(ii)	60
Orchidaceae	*Ponthieva vasquezii*	Dodson	NE		A(iii), B(ii)	84
Orchidaceae	*Prosthechea vasquezii*	Christenson	NE		A(iii), B(ii)	84

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Orchidaceae	*Pterichis fuentesii*	Kolan., Baranow & S.Nowak	NE		A(iii), B(ii)	59	Orchidaceae	*Stelis adelphae*	Luer & R.Vásquez	NE		A(iii), B(ii)	84
Orchidaceae	*Pterichis lunatilabia*	Kolan., Baranow & S.Nowak	NE		A(iii), B(ii)	57, 59	Orchidaceae	*Stelis aligera*	(Luer & R.Vásquez) Pridgeon & M.W.Chase	NE		A(iii), B(ii)	56
Orchidaceae	*Pterichis obcordatilabia*	Kolan., Baranow, S.Nowak & A.Fuentes	NE		A(iii), B(ii)	56, 59	Orchidaceae	*Stelis amethystina*	Luer & R.Vásquez	NE		A(iii), B(ii)	82
Orchidaceae	*Pterichis saxicola*	Schltr.	NE		A(iii), B(ii)	82	Orchidaceae	*Stelis antennata*	Garay	NE		B(ii)	23, 25, 57, 84
Orchidaceae	*Pterichis vasquezii*	Kolan., Baranow, S.Nowak & A.Fuentes	NE		A(iii), B(ii)	59	Orchidaceae	*Stelis aurantiaca*	Luer & R.Vásquez	NE		A(iii), B(ii)	82
Orchidaceae	*Pterichis yungasensis*	Schltr.	NE		A(iii), B(ii)	56	Orchidaceae	*Stelis bacriosa*	Luer & R.Vásquez	NE		A(iii), B(ii)	23
Orchidaceae	*Restrepia vasquezii*	Luer	NE		A(iii), B(ii)	87	Orchidaceae	*Stelis beckii*	Luer & R.Vásquez	NE		A(iii), B(ii)	57
Orchidaceae	*Rodriguezia vasquezii*	Dodson	NE		A(iii), B(ii)	56, 82	Orchidaceae	*Stelis brittoniana*	Rolfe	NE		A(iii), B(ii)	58
Orchidaceae	*Sarcoglottis herzogii*	Schltr.	DD		A(iv), B(ii)	1, 11	Orchidaceae	*Stelis carnosipetala*	Luer & R.Vásquez	NE		A(iii), B(ii)	82
Orchidaceae	*Scelochiloides acebeyae*	R.Vásquez & Dodson	NE		A(iii), B(ii)	56	Orchidaceae	*Stelis cauda-equina*	Luer & R.Vásquez	NE		A(iv), B(ii)	56, 60
Orchidaceae	*Scelochiloides coimbrae*	Dodson & R.Vásquez	NE		A(iii), B(ii)	15, 26	Orchidaceae	*Stelis cavatella*	Luer & R.Vásquez	NE		A(iii), B(ii)	57, 59
Orchidaceae	*Scelochilus amboroensis*	R.Vásquez & Dodson	NE		A(iii), B(ii)	25	Orchidaceae	*Stelis chuspipatensis*	Luer & R.Vásquez	NE		A(iii), B(ii)	56
Orchidaceae	*Scelochilus janeae*	Dodson & R.Vásquez	NE		A(iii), B(ii)	54	Orchidaceae	*Stelis citrinella*	Luer	NE		A(iv), B(ii)	56, 87
Orchidaceae	*Scelochilus kroemeri*	Dodson & R.Vásquez	NE		A(iii), B(ii)	61	Orchidaceae	*Stelis cloesiorum*	Luer	NE		A(iii), B(ii)	82
Orchidaceae	*Scelochilus limatamboensis*	Dodson & R.Vásquez	NE		A(iii), B(ii)	82	Orchidaceae	*Stelis cochabambensis*	Karremans	NE		A(iii), B(ii)	82
Orchidaceae	*Scelochilus neudeckeri*	(Königer) Königer	NE		A(iii), B(ii)	82	Orchidaceae	*Stelis comosa*	Luer & R.Vásquez	NE		A(iii), B(ii)	82
Orchidaceae	*Scelochilus newyorkorum*	R.Vásquez, Ibisch & I.G.Vargas	NE		A(iii), B(ii)	87	Orchidaceae	*Stelis consors*	Luer & R.Vásquez	NE		A(iii), B(ii)	82
Orchidaceae	*Scelochilus pacensium*	Senghas & Leferenz	NE		A(iii), B(ii)	56	Orchidaceae	*Stelis darwinii*	Luer & R.Vásquez	NE		A(iii), B(ii)	82, 87
Orchidaceae	*Scelochilus sillarensis*	Dodson & R.Vásquez	NE		A(iii), B(ii)	82	Orchidaceae	*Stelis dolabrata*	Luer	NE		A(iii), B(ii)	56
Orchidaceae	*Sievekingia trollii*	Mansf.	NE		A(iii), B(ii)	82	Orchidaceae	*Stelis enervis*	Luer	NE		A(iii), B(ii)	54
Orchidaceae	*Sobralia boliviensis*	Schltr.	NE		B(ii)	59, 84	Orchidaceae	*Stelis flexa*	Schltr.	NE		A(iii), B(ii)	82, 84
Orchidaceae	*Sobralia dorbignyana*	Rchb.f.	NE		B(ii)	56, 59, 60	Orchidaceae	*Stelis fuchsii*	Luer & R.Vásquez	NE		A(iii), B(ii)	84
Orchidaceae	*Sobralia herzogii*	Schltr.	NE		A(iii), B(ii)	60	Orchidaceae	*Stelis herzogii*	Schltr.	NE		A(iii), B(ii)	26
Orchidaceae	*Sobralia rupicola*	Kraenzl.	NE		A(iv), B(ii)	25, 26	Orchidaceae	*Stelis ibischiorum*	Luer & R.Vásquez	NE		A(iii), B(ii)	84
Orchidaceae	*Solenocentrum lueri*	Dodson & R.Vásquez	NE		A(iii), B(ii)	84	Orchidaceae	*Stelis iwatsukae*	T.Hashim.	NE		A(iii), B(ii)	56

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Orchidaceae	*Stelis jubata*	Luer & R.Vásquez	NE		A(iii), B(ii)	26	Orchidaceae	*Stelis rosulenta*	Luer & R.Vásquez	NE		A(iii), B(ii)	84, 87
Orchidaceae	*Stelis kilimanjaro*	Luer & R.Vásquez	NE		A(iii), B(ii)	56, 82	Orchidaceae	*Stelis rufescens*	Luer	NE		A(iii), B(ii)	56
Orchidaceae	*Stelis kroemeri*	Luer	NE		A(iii), B(ii)	56	Orchidaceae	*Stelis rutrum*	Luer & R.Vásquez	NE		A(iv), B(ii)	23, 84
Orchidaceae	*Stelis larsenii*	Luer	NE		A(iii), B(ii)	84	Orchidaceae	*Stelis saavedrensis*	Luer & R.Vásquez	NE		A(iii), B(ii)	59
Orchidaceae	*Stelis laxa*	Schltr.	NE		B(ii)	56, 84	Orchidaceae	*Stelis sagittosa*	Luer & R.Vásquez	NE		A(iii), B(ii)	59
Orchidaceae	*Stelis leucantha*	Luer	NE		A(iii), B(ii)	56	Orchidaceae	*Stelis saltatrix*	Luer & R.Vásquez	NE		A(iii), B(ii)	82
Orchidaceae	*Stelis lueri*	Karremans	NE		A(iii), B(ii)	56	Orchidaceae	*Stelis samaipatensis*	Luer & R.Vásquez	NE		A(iii), B(ii)	25, 26
Orchidaceae	*Stelis mandoniana*	Schltr.	NE		A(iii), B(ii)	56	Orchidaceae	*Stelis seriata*	Luer & R.Vásquez	NE		A(iii), B(ii)	84
Orchidaceae	*Stelis mandonii*	(Rchb.f.) Pridgeon & M.W.Chase	NE		B(ii)	84	Orchidaceae	*Stelis setacea*	Lindl.	NE		A(iii), B(ii)	56
Orchidaceae	*Stelis melanostele*	(Luer & R.Vásquez) Pridgeon & M.W.Chase	NE		A(iii), B(ii)	82, 87	Orchidaceae	*Stelis siberica*	Luer & R.Vásquez	NE		A(iii), B(ii)	25
Orchidaceae	*Stelis morenoi*	Luer & R.Vásquez	NE		A(iv), B(ii)	25	Orchidaceae	*Stelis solomonii*	Luer	NE		A(iii), B(ii)	57
Orchidaceae	*Stelis naviculigera*	Schltr.	NE		A(iv), B(ii)	82, 84	Orchidaceae	*Stelis soratana*	(Rchb.f.) Karremans	NE		A(iii), B(ii)	60
Orchidaceae	*Stelis nutationis*	Luer & R.Vásquez	NE		A(iii), B(ii)	56	Orchidaceae	*Stelis strigosa*	Luer & R.Vásquez	NE		A(iii), B(ii)	87
Orchidaceae	*Stelis oligobotrya*	Luer & R.Vásquez	NE		A(iii), B(ii)	56	Orchidaceae	*Stelis succuba*	Luer & R.Vásquez	NE		A(iii), B(ii)	84
Orchidaceae	*Stelis pachyrrhiza*	Luer & R.Vásquez	NE		A(iii), B(ii)	87	Orchidaceae	*Stelis tamboensis*	Luer & R.Vásquez	NE		A(iii), B(ii)	82
Orchidaceae	*Stelis papuligera*	(Schltr.) Karremans	NE		A(iv), B(ii)	23, 25, 56, 84	Orchidaceae	*Stelis tinekae*	Luer & R.Vásquez	NE		A(iii), B(ii)	56
Orchidaceae	*Stelis patzii*	Luer	NE		A(iii), B(ii)	23	Orchidaceae	*Stelis tomentosa*	Luer & R.Vásquez	NE		A(iii), B(ii)	84
Orchidaceae	*Stelis pendens*	Luer & R.Vásquez	NE		A(iii), B(ii)	84	Orchidaceae	*Stelis torrenticola*	Luer & R.Vásquez	NE		A(iii), B(ii)	84
Orchidaceae	*Stelis pertusa*	LJiménez	NE		A(iii), B(ii)	60	Orchidaceae	*Stelis trullifera*	Luer & R.Vásquez	NE		A(iii), B(ii)	84
Orchidaceae	*Stelis phaeomelana*	Schltr.	NE		A(iii), B(ii)	82	Orchidaceae	*Stelis tunariensis*	Luer & R.Vásquez	NE		A(iii), B(ii)	84
Orchidaceae	*Stelis pholeoglossa*	Luer & R.Vásquez	NE		A(iii), B(ii)	84	Orchidaceae	*Stelis unduavica*	(Luer & R.Vásquez) Karremans	NE		A(iii), B(ii)	56
Orchidaceae	*Stelis punchinello*	Luer & R.Vásquez	NE		A(iii), B(ii)	57	Orchidaceae	*Stelis vallata*	Luer	NE		A(iii), B(ii)	84
Orchidaceae	*Stelis purpurina*	Luer & R.Vásquez	NE		A(iii), B(ii)	28	Orchidaceae	*Stelis varicella*	Luer & R.Vásquez	NE		A(iii), B(ii)	57
Orchidaceae	*Stelis pycnochila*	Luer & R.Vásquez	NE		A(iii), B(ii)	56	Orchidaceae	*Stelis vasqueziana*	Karremans	NE		A(iii), B(ii)	56
Orchidaceae	*Stelis ricii*	Luer & R.Vásquez	NE		A(iii), B(ii)	84	Orchidaceae	*Stelis vasquezii*	(Luer) Karremans	NE		A(iii), B(ii)	60

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Orchidaceae	*Stelis zongoensis*	Luer & R.Vásquez	NE		A(iii), B(ii)	57
Orchidaceae	*Stenia nataliana*	R.Vásquez & Nowicki & R.Müll.	NE		A(iii), B(ii)	59
Orchidaceae	*Stenia vasquezii*	Dodson	NE		A(iii), B(ii)	84
Orchidaceae	*Telipogon boliviensis*	(R.Vásquez & Dodson) N.H.Williams & Dressler	NE		A(iii), B(ii)	82, 84
Orchidaceae	*Telipogon calueri*	N.H.Williams & Dressler	NE		A(iii), B(ii)	56
Orchidaceae	*Telipogon cotapatensis*	I.Jiménez	NE		A(iii), B(ii)	55, 56
Orchidaceae	*Telipogon juan-torrezii*	I.Jimenéz	NE		A(iii), B(ii)	56
Orchidaceae	*Telipogon oliganthus*	I.Jimenéz	NE		A(iii), B(ii)	56
Orchidaceae	*Telipogon pampatamboensis*	(Dodson & R.Vásquez) N.H.Williams & Dressler	NE		A(iii), B(ii)	82
Orchidaceae	*Telipogon pubescens*	I.Jimenéz	NE		A(iii), B(ii)	56
Orchidaceae	*Telipogon roberti*	N.H.Williams & Dressler	NE		A(iii), B(ii)	84
Orchidaceae	*Telipogon vasquezii*	Dodson	NE		A(iii), B(ii)	82
Orchidaceae	*Trichocentrum stacyi*	(Garay) M.W.Chase & N.H.Williams	NE		A(iv), B(ii)	25
Orchidaceae	*Trichosalpinx barbelifera*	Luer & R.Vásquez	NE		A(iii), B(ii)	56
Orchidaceae	*Trichosalpinx solomonii*	Luer	NE		A(iii), B(ii)	57
Orchidaceae	*Trichosalpinx tenuiflora*	(Schltr.) Luer	NE		A(iii), B(ii)	59
Orchidaceae	*Vitekorchis vasquezii*	(Christenson) Romowicz & Szlach.	NE		A(iv), B(ii)	26, 60
Orchidaceae	*Warczewiczella palatina*	(Senghas) Dressler	NE		A(iii), B(ii)	84
Orchidaceae	*Zygostates chaparensis*	Toscano & R.Vásquez	NE		A(iii), B(ii)	84
Orchidaceae	*Zygostates morenoi*	Toscano	NE		A(iii), B(ii)	24
Orchidaceae	*Zygostates riefenstahliae*	R.Vásquez & I.G.Vargas	NE		A(iii), B(ii)	87
Orobanchaceae	*Agalinis bangii*	(Kuntze) Barringer	NE		B(ii)	25, 26, 52, 56, 59, 82, 85, 87
Orobanchaceae	*Agalinis brevifolia*	(Rusby) S.Beck	NE		B(ii)	23, 25, 53, 56, 84, 85
Orobanchaceae	*Agalinis chaparensis*	Barringer	NE		B(ii)	60, 82, 84, 85
Orobanchaceae	*Agalinis humilis*	(Diels) D'Arcy	NE		A(iii), B(ii)	40

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Orobanchaceae	*Agalinis reflexidens*	(Herzog) D'Arcy	NE		A(iii), B(ii)	82
Orobanchaceae	*Agalinis scarlatina*	(Herzog) D'Arcy	NE		A(iv), B(ii)	25, 56, 82
Orobanchaceae	*Neobartsia crenata*	(Molau) Uribe-Convers & Tank	NE		B(ii)	60, 82, 85
Oxalidaceae	*Biophytum bolivianum*	R.Knuth	NE		A(iii), B(ii)	60
Oxalidaceae	*Biophytum mapirense*	R.Knuth	NE		A(iv), B(ii)	56, 59, 60
Oxalidaceae	*Oxalis flagellata*	(Rusby) Lourteig	NE		B(ii)	25, 53, 56, 57, 59, 60, 82, 84, 87
Oxalidaceae	*Oxalis lucumayensis* subsp. *subiens*	Lourteig	NE		A(iv), B(ii)	56
Oxalidaceae	*Oxalis oulophora*	Lourteig	NE		B(ii)	56, 57, 58, 87
Oxalidaceae	*Oxalis phaseolifolia*	(Rusby) R.Knuth	NE		A(iii), B(ii)	84
Oxalidaceae	*Oxalis rusbyi*	Lourteig	NE		A(iii), B(ii)	56
Oxalidaceae	*Oxalis solomonii*	Lourteig	NE		A(iv), B(ii)	56, 60
Oxalidaceae	*Oxalis tuberosa* subsp. *unduavensis*	(Rusby) Lourteig	NE		A(iv), B(ii)	25, 56, 57
Oxalidaceae	*Oxalis virgata*	Rusby	NE		A(iv), B(ii)	56, 60
Oxalidaceae	*Oxalis yungasensis*	Rusby	NE		A(iv), B(ii)	57, 58, 60
Passifloraceae	*Passiflora buchtienii*	Killip	# VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	56, 59, 60
Passifloraceae	*Passiflora calicicalyx*	T.Boza & J.M.MacDougal	NE		A(iv), B(ii)	82, 84
Passifloraceae	*Passiflora carrascoensis*	P.Jørg. & R.Vásquez	NE/EN*	B1ab(iii)	A(ii), A(iv), B(ii)	25, 82, 84
Passifloraceae	*Passiflora chaparensis*	R.Vásquez	NE/CR*	B2ab(i,iii)	A(ii), A(iii), B(ii)	82, 84
Passifloraceae	*Passiflora dalechampioides*	Killip	NE		B(ii)	54, 56, 60
Passifloraceae	*Passiflora hastifolia*	Killip	NE		A(iii), B(ii)	56
Passifloraceae	*Passiflora joergenseniana*	T.Boza	NE		A(iii), B(ii)	59
Passifloraceae	*Passiflora macropoda*	Killip	NE/EN*	B1b(i,iii)	A(ii), A(iv), B(ii)	56, 57, 59
Passifloraceae	*Passiflora madidiana*	P.Jørg., Cayola & Araujo-Murak.	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	60
Passifloraceae	*Passiflora mandonii*	(Mast.) Killip	NE		B(ii)	53, 56, 59, 60, 82, 84, 85
Passifloraceae	*Passiflora nigradenia*	Rusby	LC		B(ii)	18, 25, 56, 60, 70, 74, 76, 78, 79

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Passifloraceae	*Passiflora pilosicorona*	Sacco	NE/VU*	B2b(ii,iii)	A(ii), A(iv), B(ii)	23, 25, 26, 84
Passifloraceae	*Passiflora rosacea*	Kuethe & Justiniano	NE		A(iii), B(ii)	24
Passifloraceae	*Passiflora solomonii*	L.K.Escobar	NE		B(ii)	25, 26, 32, 54, 56, 59, 60, 82
Passifloraceae	*Passiflora venosa*	Rusby	NE/VU*	B1ab(iii)	A(ii), B(ii)	60
Passifloraceae	*Passiflora venusta*	R.Vásquez & M.Delanoy	LC		B(ii)	11, 55, 59, 60, 76
Pentaphylacaceae	*Freziera apolobambensis*	D.Santam. & A.Fuentes	CR	B1ab(iii,v)	A(i), B(ii)	59
Pentaphylacaceae	*Freziera caloneura*	Kobuski	NE		B(ii)	82, 84
Pentaphylacaceae	*Freziera erickitae*	A.Fuentes	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	59
Pentaphylacaceae	*Freziera inaequilatera*	Britton	NE		B(ii)	59
Pentaphylacaceae	*Freziera neei*	D.Santam. & A.K.Monro	VU	B1ab(iii)	A(i), B(ii)	26, 31
Pentaphylacaceae	*Freziera subintegrifolia*	(Rusby) Kobuski	NE		B(ii)	58, 59
Pentaphylacaceae	*Ternstroemia polyandra*	Kobuski	VU	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	56, 58, 59, 60
Pentaphylacaceae	*Ternstroemia subserrata*	(Rusby) Melch.	NE		B(ii)	54, 56, 59, 60
Peraceae	*Chaetocarpus pearcei*	Rusby	NE		B(ii)	57, 59, 60, 79
Petiveriaceae	*Seguieria brevithyrsa*	H.Walter	NE		B(ii)	60
Phyllanthaceae	*Phyllanthus bolivianus*	Pax & K.Hoffm.	EN	B1ab(iii)+2ab(ii)	A(i), B(ii)	25, 56
Piperaceae	*Peperomia aceramarcana*	Trel.	NE		B(ii)	56, 59, 60, 82
Piperaceae	*Peperomia adenocarpa*	C.DC.	NE		A(iii), B(ii)	84
Piperaceae	*Peperomia barbaranoides*	Yunck.	NE		A(iv), B(ii)	34
Piperaceae	*Peperomia boliviensis*	C.DC.	NE		B(ii)	59, 60
Piperaceae	*Peperomia bopiana*	Trel.	NE		B(ii)	25, 60
Piperaceae	*Peperomia brevispica*	C.DC.	NE		B(ii)	23, 25, 60, 84
Piperaceae	*Peperomia brittonii*	C.DC.	NE		B(ii)	56, 58, 60
Piperaceae	*Peperomia buchtienii*	Yunck.	NE		B(ii)	56, 57, 59, 60, 82, 84
Piperaceae	*Peperomia carnifolia*	Yunck.	NE		A(iii), B(ii)	84

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Piperaceae	*Peperomia comarapana*	C.DC.	NE		B(ii)	23, 25, 26, 39
Piperaceae	*Peperomia coroicoensis*	Yunck.	NE		B(ii)	11, 57, 60, 84
Piperaceae	*Peperomia herzogii*	C.DC.	NE		B(ii)	54, 56, 60
Piperaceae	*Peperomia kuntzei*	C.DC.	NE		A(iii), B(ii)	12, 60
Piperaceae	*Peperomia magnifoliiflora*	G.Mathieu	NE		A(iii), B(ii)	57
Piperaceae	*Peperomia multifolia*	Yunck.	NE		B(ii)	53, 59, 60
Piperaceae	*Peperomia multispica*	C.DC.	NE		B(ii)	53, 60
Piperaceae	*Peperomia nequejahuirana*	Trel.	NE		B(ii)	25, 56, 59, 60, 84
Piperaceae	*Peperomia nudicaulis*	C.DC.	NE		A(iii), B(ii)	58
Piperaceae	*Peperomia peltifolia*	C.DC.	NE		B(ii)	57, 59, 60
Piperaceae	*Peperomia perlongipes*	C.DC.	NE		B(ii)	25, 56, 60, 79
Piperaceae	*Peperomia pitiguayana*	Trel.	NE		A(iii), B(ii)	56
Piperaceae	*Peperomia pseudocobana*	Yunck.	NE		A(iv), B(ii)	56, 57, 59, 60
Piperaceae	*Peperomia pseudorufescens*	C.DC.	NE		A(iii), B(ii)	85
Piperaceae	*Peperomia pseudoumbilicata*	Yunck.	NE		B(ii)	60, 87
Piperaceae	*Peperomia psilophylla*	C.DC.	NE		B(ii)	25, 59
Piperaceae	*Peperomia purpureonervosa*	G.Mathieu	NE		A(iii), B(ii)	56, 59
Piperaceae	*Peperomia retropuberula*	Yunck.	NE		B(ii)	59, 84, 87
Piperaceae	*Peperomia rhombifolia*	Trel.	NE		A(iii), B(ii)	55
Piperaceae	*Peperomia rusbyi*	C.DC.	NE		B(ii)	56, 59, 60
Piperaceae	*Peperomia saxicola*	C.DC.	NE		B(ii)	53, 59, 60
Piperaceae	*Peperomia scutilimba*	Yunck.	NE		B(ii)	25, 31, 59, 60
Piperaceae	*Peperomia silvarum*	C.DC.	NE		B(ii)	31, 32, 34, 37, 56, 57, 59, 60
Piperaceae	*Peperomia sirupayana*	C.DC.	NE		A(iii), B(ii)	84
Piperaceae	*Peperomia steinbachii*	Yunck.	NE		B(ii)	30, 31, 32, 39, 59, 60, 82

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Piperaceae	*Peperomia stuebelii*	C.DC.	NE		B(ii)	23, 26, 52, 53, 85, 87
Piperaceae	*Peperomia suspensa*	C.DC.	NE		A(iii), B(ii)	56
Piperaceae	*Peperomia tatei*	Yunck.	NE		B(ii)	56, 59, 60, 84
Piperaceae	*Peperomia ticunhuayana*	Trel.	NE		B(ii)	56, 57, 59, 60
Piperaceae	*Peperomia unduavina*	C.DC.	NE		B(ii)	23, 25, 26, 27, 56, 59, 60, 84
Piperaceae	*Peperomia vestita*	C.DC.	NE		B(ii)	26, 60, 87
Piperaceae	*Peperomia williamsii*	C.DC.	NE		A(iv), B(ii)	56, 59, 60
Piperaceae	*Peperomia yanacachiana*	Yunck.	NE		A(iv), B(ii)	56, 57
Piperaceae	*Peperomia yungasana*	C.DC.	NE		B(ii)	25, 56, 57, 59, 60
Piperaceae	*Piper bolivianum*	C.DC.	VU	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	53, 54, 56, 57, 58, 60
Piperaceae	*Piper coriaceilimbum*	C.DC.	NE		A(iv), B(ii)	57
Piperaceae	*Piper mercens*	Yunck.	NE		B(ii)	56, 60
Piperaceae	*Piper microtrichum*	C.DC.	NE		A(iv), B(ii)	60
Piperaceae	*Piper nigriconnectivum*	C.DC.	NE		B(ii)	60, 84
Piperaceae	*Piper oxyphyllum*	C.DC.	NE		B(ii)	59, 60
Piperaceae	*Piper pachyphloium*	C.DC.	NE		B(ii)	82
Piperaceae	*Piper pandoense*	Yunck.	DD		A(iii), B(ii)	13
Piperaceae	*Piper peltilimbum*	Yunck.	VU	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	59, 60
Piperaceae	*Piper percostatum*	Yunck.	NT	B1ab(ii,iii)+2ab(ii,iii)	B(ii)	59, 60
Piperaceae	*Piper praeacutilimbum*	C.DC.	NE		B(ii)	54, 60, 79
Piperaceae	*Piper punctulantherum*	C.DC.	NE		A(iv), B(ii)	59
Piperaceae	*Piper semimetrale*	C.DC.	EN	B2ab(ii,iii)	A(i), B(ii)	56, 59
Piperaceae	*Piper steinbachii*	Yunck.	NE		A(iii), B(ii)	76
Piperaceae	*Piper trichogynum*	C.DC.	NE		B(ii)	59, 60, 82
Piperaceae	*Piper tumupasense*	Yunck.	NE		A(iv), B(ii)	60

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Piperaceae	*Piper villosissimum*	Yunck.	NE		B(ii)	56, 57, 59, 60
Plantaginaceae	*Angelonia chiquitensis*	Herzog	VU	B1ab(iii)	A(i), B(ii)	22
Plantaginaceae	*Boelckea beckii*	Rossow	EN	B2ab(iii)	A(i), B(ii)	11
Plantaginaceae	*Ourisia cotapatensis*	Meudt & S.Beck	VU	D2	A(i), B(ii)	56
Plantaginaceae	*Plantago pyrophila*	Villarroel & J.R.I.Wood	VU	D2	A(i), B(ii)	2
Poaceae	*Anatherostipa coroi*	F.Rojas	EN	B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	A(i), B(ii)	85
Poaceae	*Andropogon cordatus*	Swallen	NE		B(ii)	25, 26, 57
Poaceae	*Andropogon multiflorus*	Renvoize	NE		A(iii), B(ii)	1
Poaceae	*Aristida friesii*	Hack. ex Henrard	LC		B(ii)	2, 38
Poaceae	*Aristida mandoniana*	Henrard	LC		B(ii)	23, 27, 31, 38, 49, 85, 86
Poaceae	*Arthrostylidium canaliculatum*	Renvoize	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	59
Poaceae	*Aulonemia boliviana*	Renvoize	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	56, 58, 59
Poaceae	*Aulonemia bromoides*	Judz. & Shea	# CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	60
Poaceae	*Aulonemia cochabambensis*	Judz. & L.G.Clark	DD		A(iii), B(ii)	84
Poaceae	*Aulonemia fuentesii*	Judz. & Geisth.	DD		A(iii), B(ii)	60
Poaceae	*Aulonemia herzogiana*	(Henrard) McClure	LC		B(ii)	56, 82, 84
Poaceae	*Aulonemia insignis*	Judz. & L.D.Gibbons	DD		A(iv), B(ii)	59, 60
Poaceae	*Aulonemia longipedicellata*	Renvoize	# CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	56
Poaceae	*Aulonemia scripta*	Judz. & Wayda	DD		A(iii), B(ii)	60
Poaceae	*Aulonemia tremula*	Renvoize	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	56
Poaceae	*Axonopus andinus*	G.A.Black	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	56, 57, 59
Poaceae	*Axonopus boliviensis*	Renvoize	DD		B(ii)	2, 18, 25, 72
Poaceae	*Chascolytrum altimontanum*	Essi, Souza-Chies & Longhi-Wagner	VU	B2ab(i,ii,iii,iv)	A(i), B(ii)	23, 26, 49, 85
Poaceae	*Chusquea ovatifolia*	Attigala, A.Fuentes & L.G.Clark	VU	D2	A(i), B(ii)	60
Poaceae	*Chusquea parodii*	A.S.Vega & Rúgolo	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	56, 60

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Poaceae	*Chusquea renvoizei*	L.G.Clark	DD		A(iii), B(ii)	56, 60
Poaceae	*Chusquea yungasensis*	L.G.Clark & A.C.Mota	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	56, 84
Poaceae	*Cinnagrostis ciliata*	(Rúgolo & Villav.) P.M.Peterson, Soreng, Romasch. & Barberá	CR	B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	A(i), B(ii)	27
Poaceae	*Cinnagrostis hirsuta*	(Rúgolo & Villav.) P.M.Peterson, Soreng, Romasch. & Barberá	# EN		A(i), B(ii)	59
Poaceae	*Cortaderia boliviensis*	M.Lyle	# VU		A(i), B(ii)	25, 56, 82, 84, 87
Poaceae	*Digitaria killeenii*	Vega & Rúgolo	DD		A(iii), B(ii)	18
Poaceae	*Festuca boliviana*	E.B.Alexeev	VU	B2ab(i,j,iii,iv)	A(i), B(ii)	41, 43, 85
Poaceae	*Festuca carrascana*	Stancík & Renvoize	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	28, 84
Poaceae	*Festuca cochabambana*	E.B.Alexeev	VU	B2ab(iii)	A(i), B(ii)	23, 26, 82, 85, 87
Poaceae	*Festuca copei*	Renvoize	VU	B2ab(iii)	A(i), B(ii)	41, 48, 52, 57, 85
Poaceae	*Festuca fiebrigii*	Pilg.	NE		B(ii)	40, 53, 56, 57, 59, 85
Poaceae	*Festuca scabrifolia*	Renvoize	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	52, 53, 56
Poaceae	*Festuca soratana*	E.B.Alexeev	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	56
Poaceae	*Festuca stebeckii*	Renvoize	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	87
Poaceae	*Festuca steinbachii*	E.B.Alexeev	DD		A(iii), B(ii)	82
Poaceae	*Festuca trollii*	E.B.Alexeev	EN	B2ab(iii)	A(i), B(ii)	82
Poaceae	*Gerritea pseudopetiolata*	Zuloaga, Morrone & Killeen	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	57
Poaceae	*Guadua chaparensis*	Londoño & Zurita	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	61, 84
Poaceae	*Merostachys nigricans*	LJiménez & Viníc.-Silva	DD		A(iii), B(ii)	58
Poaceae	*Merostachys yungasensis*	Lizarazu	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	60
Poaceae	*Nassella chaparensis*	F.Rojas	CR	B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	A(i), B(ii)	27
Poaceae	*Nassella trachyphylla*	Henrard	DD		A(iii), B(ii)	26
Poaceae	*Olyra buchtienii*	Hack.	NE		A(iv), B(ii)	59
Poaceae	*Otachyrium boliviense*	Renvoize	NT	B1ab(i,ii,iii)	B(ii)	18
Poaceae	*Paspalum buchtienii*	Hack.	NE		B(ii)	56, 60

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Poaceae	*Paspalum crucense*	(Killeen) S.Denham	EN	B1ab(iii)	A(i), B(ii)	1, 16, 17, 18
Poaceae	*Paspalum remotum*	Remy	NE		B(ii)	86
Poaceae	*Paspalum reticulinerve*	Renvoize	NE		B(ii)	2, 11, 12, 60, 62
Poaceae	*Schizachyrium beckii*	Killeen	NE		A(iii), B(ii)	11
Poaceae	*Setaria barbinodis*	R.A.W.Herrm.	VU	B2ab(i,j,iii,iv)	A(i), B(ii)	23, 41, 42, 52
Poaceae	*Sporobolus crucensis*	Renvoize	NT	B1ab(iii)	B(ii)	5, 8, 18
Podostemaceae	*Apinagia fluitans*	P.Royen	DD		A(iii), B(ii)	70
Polygalaceae	*Monnina alatodrupacea*	Kuntze	NE		A(iii), B(ii)	82
Polygalaceae	*Monnina arbutus*	Chodat	NE/EN*	B2b(ii, iii)	A(ii), B(ii)	25, 27, 31, 59, 60, 84
Polygalaceae	*Monnina autraniana*	Chodat	VU	B1ab(iii)	A(i), B(ii)	56
Polygalaceae	*Monnina boliviana*	Chodat	NE		B(ii)	54, 56, 57, 58, 59
Polygalaceae	*Monnina boliviensis*	A.W.Benn.	NE		A(iii), B(ii)	56
Polygalaceae	*Monnina bridgesii*	Chodat	LC		B(ii)	25, 26, 59, 82, 86
Polygalaceae	*Monnina buchtienii*	Rusby	NE		A(iii), B(ii)	56
Polygalaceae	*Monnina herzogii*	Chodat	NE		A(iv), B(ii)	25, 56
Polygalaceae	*Monnina laureola*	Chodat	NE		A(iii), B(ii)	56
Polygalaceae	*Monnina macroclada*	Chodat	NE		B(ii)	53, 56, 57, 59, 82, 84
Polygalaceae	*Monnina weddelliana*	Chodat	NE		A(iv), B(ii)	56
Polygonaceae	*Coccoloba meissneriana*	(Britton) K.Schum.	NT	B2ab(iii)	B(ii)	9, 11, 12, 19, 60
Polygonaceae	*Coccoloba steinbachii*	R.A.Howard	VU	B2ab(iii)	A(i), B(ii)	11, 64, 73, 80
Polygonaceae	*Triplaris efistulifera*	Britton ex Rusby	EN	B2ab(ii,iii)	A(i), B(ii)	60, 64
Polypodiaceae	*Elaphoglossum carrascoense*	M.Kessler & Mickel	NE		A(iii), B(ii)	84
Polypodiaceae	*Elaphoglossum catenatum*	F.B.Matos & R.C.Moran	NE		A(iv), B(ii)	60, 87
Polypodiaceae	*Elaphoglossum choquetangae*	M.Kessler & Mickel	NE		A(iii), B(ii)	56
Polypodiaceae	*Elaphoglossum cotapatense*	M.Kessler & Mickel	NE		A(iii), B(ii)	56, 60

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Polypodiaceae	*Elaphoglossum dannoritzeri*	M.Kessler	NE		B(ii)	56, 57, 59, 84, 87	Polypodiaceae	*Grammitis setosora*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	56, 59
Polypodiaceae	*Elaphoglossum eatonianum*	C.Chr.	NE		B(ii)	25, 56, 59, 60, 61, 84	Polypodiaceae	*Grammitis simacensis*	(Rosenst.) Christenh.	NE		A(iii), B(ii)	59
Polypodiaceae	*Elaphoglossum ellenbergianum*	M.Kessler & Mickel	NE		A(iii), B(ii)	87	Polypodiaceae	*Grammitis similis*	(M.Kessler & A.R.Sm.) Christenh.	NE		A(iii), B(ii)	56
Polypodiaceae	*Elaphoglossum filipes*	Rosenst.	NE		A(iii), B(ii)	60	Polypodiaceae	*Grammitis tunquiniensis*	(M.Kessler & A.R.Sm.) Christenh.	NE		A(iii), B(ii)	56
Polypodiaceae	*Elaphoglossum gonzalesiae*	M.Kessler & Mickel	NE		A(iv), B(ii)	60, 61	Polypodiaceae	*Megalastrum alticola*	M.Kessler & A.R.Sm.	NE		A(iv), B(ii)	56, 84
Polypodiaceae	*Elaphoglossum madidiense*	M.Kessler & Mickel	NE		A(iii), B(ii)	60	Polypodiaceae	*Megalastrum bolivianum*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	56, 84
Polypodiaceae	*Elaphoglossum mandonii*	(Mett.) Christ	NE		A(iii), B(ii)	60	Polypodiaceae	*Megalastrum marginatum*	M.Kessler & A.R.Sm.	NE		B(ii)	84
Polypodiaceae	*Elaphoglossum pulchrum*	M.Kessler & Mickel	NE		B(ii)	56, 60, 84	Polypodiaceae	*Megalastrum villosulum*	(C.Chr.) A.R.Sm. & R.C.Moran	NE		B(ii)	26, 60
Polypodiaceae	*Elaphoglossum solomonii*	A.Rojas	NE		A(iii), B(ii)	57	Polypodiaceae	*Pecluma choquetangensis*	(Rosenst.) M.G.Price	NE		B(ii)	23, 25, 27, 59, 60, 82, 84
Polypodiaceae	*Elaphoglossum sunduei*	M.Kessler & Mickel	NE		A(iii), B(ii)	56	Polypodiaceae	*Pecluma perpinnata*	M.Kessler & A.R.Sm.	NE		B(ii)	56, 60, 84
Polypodiaceae	*Grammitis ayopayana*	(M.Kessler & A.R.Sm.) Christenh.	NE		B(ii)	56, 60, 87	Polypodiaceae	*Pleopeltis ballivianii*	(Rosenst.) A.R.Sm.	NE		B(ii)	56, 57, 59, 60, 82, 84
Polypodiaceae	*Grammitis carrascoensis*	(M.Kessler & A.R.Sm.) Christenh.	NE		A(iv), B(ii)	23, 25, 56, 82, 84	Polypodiaceae	*Polystichum albomarginatum*	M.Kessler & A.R.Sm.	NE		A(iv), B(ii)	59, 60
Polypodiaceae	*Grammitis clathrata*	(Sundue & M.Kessler) Christenh.	NE		A(iii), B(ii)	55	Polypodiaceae	*Polystichum bachii*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	87
Polypodiaceae	*Grammitis comosa*	(L.E.Bishop) Christenh.	NE		A(iv), B(ii)	59, 60	Polypodiaceae	*Polystichum congestum*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	57
Polypodiaceae	*Grammitis contacta*	(Copel.) Christenh.	NE		A(iv), B(ii)	58, 60	Polypodiaceae	*Polystichum lepidotum*	Sundue & M.Kessler	NE		A(iii), B(ii)	56, 60
Polypodiaceae	*Grammitis jimenezii*	(M.Kessler & A.R.Sm.) Christenh.	NE		A(iii), B(ii)	56, 60	Polypodiaceae	*Polystichum maximum*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	57
Polypodiaceae	*Grammitis kalawayae*	(M.Kessler & A.R.Sm.) Christenh.	NE		A(iv), B(ii)	56, 59, 60	Polypodiaceae	*Serpocaulon appressum*	(Copel.) A.R.Sm.	NE		B(ii)	55, 56, 57, 60
Polypodiaceae	*Grammitis kessleri*	Christenh.	NE		A(iii), B(ii)	25, 56	Polypodiaceae	*Serpocaulon silvulae*	(M.Kessler & A.R.Sm.) A.R.Sm.	NE		A(iv), B(ii)	59, 60
Polypodiaceae	*Grammitis labiakii*	Christenh.	NE		A(iii), B(ii)	56, 59	Portulacaceae	*Portulaca gracilis*	Poelln.	NE		A(iii), B(ii)	23
Polypodiaceae	*Grammitis longicaulis*	(Sundue & M.Kessler) Christenh.	NE		A(iii), B(ii)	55	Primulaceae	*Cybianthus buchtienii*	(Pax) G.Agostini	VU	B2ab(iii)	A(i), B(ii)	11, 61
Polypodiaceae	*Grammitis madidiensis*	(M.Kessler & A.R.Sm.) Christenh.	NE		B(ii)	56, 59, 60	Primulaceae	*Geissanthus bangii*	Rusby	DD		B(ii)	25, 56, 57, 60, 84
Polypodiaceae	*Grammitis mnemosyne*	Christenh.	NE		A(iii), B(ii)	56	Primulaceae	*Geissanthus multiflorus*	Mez	DD		A(iii), B(ii)	56
Polypodiaceae	*Grammitis pilipalaea*	(M.Kessler & A.R.Sm.) Christenh.	NE		A(iii), B(ii)	25, 84	Primulaceae	*Parathesis angustifolia*	Lundell	DD		A(iii), B(ii)	57
Polypodiaceae	*Grammitis praeceps*	(Sundue & M.Kessler) Christenh.	NE		A(iii), B(ii)	58	Proteaceae	*Orites fiebrigii*	(Perkins) Diels ex Sleumer	NE		B(ii)	37
Polypodiaceae	*Grammitis pseudotenuicula*	(Labiak) Christenh.	NE		A(iii), B(ii)	26, 39	Proteaceae	*Roupala filiflora*	K.S.Edwards & Prance	VU	B1ab(iii)	A(i), B(ii)	56, 57, 60

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Proteaceae	*Roupala steinbachii*	Sleumer	NE		A(iii), B(ii)	84
Pteridaceae	*Hemionitis glutinosa*	(M.Kessler & A.R.Sm.) Christenh.	NE		B(ii)	57, 59, 60, 84
Pteridaceae	*Jamesonia ascendens*	(A.R.Sm. & M.Kessler) Christenh.	NE		A(iii), B(ii)	56, 84
Pteridaceae	*Jamesonia madidiensis*	(M.Kessler & A.R.Sm.) Christenh.	NE		A(iii), B(ii)	60
Pteridaceae	*Pteris boliviensis*	J.Prado & A.R.Sm.	NE		A(iii), B(ii)	60, 84
Pteridaceae	*Pteris buchtienii*	Rosenst.	NE		A(iii), B(ii)	73
Pteridaceae	*Pteris lellingeri*	A.R.Sm. & J.Prado	NE		A(iii), B(ii)	56
Putranjivaceae	*Drypetes brevipedicellata*	Zent.-Ruíz & A.Fuentes	NT	B2b(iii)	B(ii)	60, 61, 76, 78
Ranunculaceae	*Clematis uruboensis*	Lourteig	VU	B2ab(iii)	A(i), B(ii)	18, 32
Ranunculaceae	*Thalictrum cincinnatum*	B.Boivin	NE		A(iii), B(ii)	79, 82
Rosaceae	*Alchemilla sarmentosa*	L.M.Perry	NE		B(ii)	56, 59, 60
Rosaceae	*Alchemilla williamsii*	L.M.Perry	NE		B(ii)	56, 59, 60
Rosaceae	*Polylepis incanoides*	(M.Kessler) T.Boza & M.Kessler	VU	B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	A(i), B(ii)	84
Rosaceae	*Polylepis neglecta*	M.Kessler	EN	B2ab(i,ii,iii,iv)	A(i), B(ii)	23, 25, 27, 30
Rosaceae	*Polylepis pacensis*	M.Kessler & Schmidt-Leb.	EN	B2ab(i,ii)	A(i), B(ii)	52, 59
Rosaceae	*Polylepis subtusalbida*	(Bitter) M.Kessler & Schmidt-Leb.	EN	B2ab(i,ii,iii,iv)	A(i), B(ii)	85
Rosaceae	*Prunus oleifolia* var. *bangii*	Koehne	NE		B(ii)	26
Rosaceae	*Rubus aenigmaticus*	Focke	NE		A(iii), B(ii)	56
Rosaceae	*Rubus conchyliatus*	Focke	NE		B(ii)	53, 54, 56, 59, 60
Rosaceae	*Rubus herzogii*	Focke	NE		A(iii), B(ii)	84
Rosaceae	*Rubus holtenii*	Kuntze	NE		A(iv), B(ii)	56, 57, 60
Rosaceae	*Rubus ostrinus*	Focke	NE		A(iv), B(ii)	59, 60
Rosaceae	*Rubus rusbyi*	Britton	NE		A(iii), B(ii)	56
Rubiaceae	*Chomelia chiquitensis*	C.M.Taylor	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	5
Rubiaceae	*Chomelia rauwolfioides*	(Standl.) Steyerm.	NT	B2ab(iii,iv)	B(ii)	1, 11, 12, 19, 22, 24, 25
Rubiaceae	*Cinchona anderssonii*	Maldonado	EN	B1ab(iii,v)+2ab(iii,v)	A(i), B(ii)	60
Rubiaceae	*Cinchona asperifolia*	Wedd.	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	60
Rubiaceae	*Coussarea boliviensis*	C.M.Taylor	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	58, 59, 60
Rubiaceae	*Galianthe chiquitosiana*	E.L.Cabral	EN	B1ab(iii)	A(i), B(ii)	2, 10
Rubiaceae	*Galium buchtienii*	Dempster	NE		A(iii), B(ii)	56
Rubiaceae	*Gonzalagunia whitei*	(Rusby) Standl.	NE		A(iii), B(ii)	60, 61
Rubiaceae	*Macrocnemum tortuosum*	Herzog	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	21, 25, 79, 82, 84
Rubiaceae	*Manettia bangii*	(Rusby) Wernham	NE		B(ii)	25, 54, 56, 58, 84
Rubiaceae	*Manettia fiebrigii*	Standl.	NE		B(ii)	23, 25, 56, 82, 84
Rubiaceae	*Manettia tomentosa*	(Jacq.) Forsyth f.	NE		A(iv), B(ii)	56, 57, 60
Rubiaceae	*Mitracarpus bicrucis*	Bacigalupo & E.L.Cabral	VU	B2ab(iii)	A(i), B(ii)	1, 2, 3, 14, 74
Rubiaceae	*Palicourea herzogii*	Standl.	NE		A(iv), B(ii)	24, 25, 26, 86
Rubiaceae	*Palicourea madidiensis*	C.M.Taylor	VU	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	56, 59, 60
Rubiaceae	*Palicourea scabrifolia*	(Rusby) C.M.Taylor	NE/EN*	B1ab(i,iii)	A(ii), A(iv), B(ii)	59
Rubiaceae	*Palicourea steinbachii*	(Standl.) C.M.Taylor	NE		B(ii)	23, 25, 59, 60, 82, 84
Rubiaceae	*Palicourea valida*	(Rusby) C.M.Taylor	NE		A(iii), B(ii)	59
Rubiaceae	*Psychotria cochabambana*	C.M.Taylor	EN	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	84
Rubiaceae	*Richardia boliviensis*	W.H.Lewis & R.L.Oliv.	NE		A(iii), B(ii)	41
Rubiaceae	*Richardia cruciata*	Rusby	NE		A(iii), B(ii)	85
Rubiaceae	*Rudgea viburnifolia*	(Rusby) C.M.Taylor	NE		A(iii), B(ii)	79
Rubiaceae	*Sabicea boliviensis*	Wernham	NE		A(iii), B(ii)	57, 58
Rubiaceae	*Schizocalyx magnorum*	C.M.Taylor	NE		B(ii)	79, 83, 84
Rubiaceae	*Simira fragrans*	(Rusby) Steyerm.	EN	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	60
Rubiaceae	*Spermacoce johnwoodii*	(E.L.Cabral & R.M.Salas) Govaerts	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	11
Rubiaceae	*Spermacoce santacruciana*	(Bacigalupo & E.L.Cabral) ined.	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	11

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Rubiaceae	*Spermacoce siberiana*	(E.L.Cabral & R.M.Salas) Govaerts	NE		B(ii)	23, 25
Rubiaceae	*Spermacoce velascoana*	(E.L.Cabral, R.M.Salas & J.D.Soto) Govaerts	# CR	B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	A(i), B(ii)	12
Rutaceae	*Zanthoxylum aculeatissimum*	Engl.	DD		A(iii), B(ii)	59
Rutaceae	*Zanthoxylum chuquisaquense*	Reynel	DD		A(iv)	31
Rutaceae	*Zanthoxylum comosum*	(Herzog) P.G.Waterman	DD		A(iii), B(ii)	1
Rutaceae	*Zanthoxylum monogynum* subsp. *bolivianum*	Reynel	NE		B(ii)	1, 3, 17, 25, 26, 60, 84
Rutaceae	*Zanthoxylum nebuletorum*	(Herzog) P.G.Waterman	VU	B2ab(ii,iii)	A(i), B(ii)	23, 25, 30, 37, 87
Sabiaceae	*Meliosma caballeroensis*	Cornejo	NE		A(iii), B(ii)	25
Sabiaceae	*Meliosma minutipetala*	Arbeláez	DD		A(iii), B(ii)	57
Sabiaceae	*Meliosma petalodentata*	Arbeláez	NT	B2ab(iii)	B(ii)	57, 58, 59, 60
Salicaceae	*Banara boliviana*	M.Nee	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	25, 26
Salicaceae	*Pineda ovata*	M.H.Alford & Zmarzty	NE		B(ii)	23, 27, 30, 87
Salicaceae	*Xylosma rusbyana*	Sleumer	DD		A(iii), B(ii)	56
Santalaceae	*Acanthosyris asipapote*	M.Nee	# EN	B1ab(iii,iv,v) +B2ab(iii,iv,v)	A(i), B(ii)	15, 19
Santalaceae	*Dendrophthora erythrantha*	Kuijt	NE		A(iii), B(ii)	55
Santalaceae	*Dendrophthora purpurea*	Kuijt	NE		A(iv), B(ii)	56, 60
Santalaceae	*Phoradendron buchtienii*	Kuijt	NE		A(iv), B(ii)	59
Santalaceae	*Phoradendron kuntzei*	Urb.	NE		A(iv), B(ii)	23, 53, 87
Santalaceae	*Phoradendron steinbachii*	Kuijt	NE		A(iii), B(ii)	23
Sapindaceae	*Diplokeleba herzogii*	Radlk.	DD		B(ii)	3, 4, 22, 26, 27
Sapindaceae	*Lophostigma plumosum*	Radlk.	NE		B(ii)	28
Sapindaceae	*Matayba boliviana*	Radlk.	LC		B(ii)	53, 60
Sapindaceae	*Serjania rigida*	Radlk.	NE		A(iv), B(ii)	11
Sapindaceae	*Serjania rubicunda*	Radlk.	NE		A(iii), B(ii)	24
Schoepfiaceae	*Schoepfia tetramera*	Herzog	LC		B(ii)	9, 11, 24, 26, 56

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Scrophulariaceae	*Buddleja anchoensis*	Kuntze	LC		B(ii)	9, 19, 26, 32, 34, 35
Scrophulariaceae	*Buddleja cardenasii*	Standl. ex E.M.Norman	EN	B1ab(iii)	A(i), B(ii)	87
Selaginellaceae	*Selaginella alampeta*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	59
Selaginellaceae	*Selaginella angustifolia*	Valdespino	NE		A(iii), B(ii)	57
Selaginellaceae	*Selaginella bryophila*	M.Kessler & A.R.Sm.	NE		A(iii), B(ii)	60
Selaginellaceae	*Selaginella glossophylla*	Crabbe & Jermy	NE		A(iii), B(ii)	82
Selaginellaceae	*Selaginella solomonii*	Valdespino	NE		A(iii), B(ii)	56
Solanaceae	*Brunfelsia boliviana*	Plowman	LC		B(ii)	25, 26, 27, 31, 86
Solanaceae	*Capsicum caballeroi*	M.Nee	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	23, 25, 26, 32, 84
Solanaceae	*Capsicum cardenasii*	Heiser & P.G.Sm.	NE/EN*	B1+2ab(i,iii)	A(ii), A(iv), B(ii)	52, 56
Solanaceae	*Capsicum ceratocalyx*	M.Nee	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	54, 55, 56
Solanaceae	*Capsicum eshbaughii*	Barboza	EN	B1ab(iii)	A(i), B(ii)	26
Solanaceae	*Capsicum neei*	Barboza & X.Reyes	NE		A(iv), B(ii)	25, 31
Solanaceae	*Fabiana fiebrigii*	Scolnick ex S.C.Arroyo	NE/VU*	B1b(iii)	A(ii), A(iii), B(ii)	41
Solanaceae	*Juanulloa verrucosa*	(Rusby) Hunz. & Subils	LC		B(ii)	19, 23, 25, 54, 59, 79, 82, 83, 84
Solanaceae	*Lycianthes apiculata*	Bitter	NE		A(iii), B(ii)	56
Solanaceae	*Lycianthes reflexa*	Rusby	VU	B2ab(iii)	A(i), B(ii)	54, 56, 59, 84, 87
Solanaceae	*Nicotiana cutleri*	D'Arcy	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	30
Solanaceae	*Nicotiana wigandioides*	K.Koch & Fintelm.	LC		B(ii)	23, 25, 49, 53, 56, 57, 59, 82, 84, 85, 87
Solanaceae	*Protoschwenkia mandonii*	Soler.	NE		B(ii)	53, 55, 56, 87
Solanaceae	*Sessea herzogii*	Dammer	LC		B(ii)	23, 25, 56, 60, 82, 84, 87
Solanaceae	*Solanum albescens*	(Britton) Hunz.	EN	B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	A(i), B(ii)	56
Solanaceae	*Solanum alliariifolium*	M.Nee & Särkinen	NT	B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	B(ii)	25, 26, 27, 84
Solanaceae	*Solanum bolivianum*	Britton ex Rusby	NE		B(ii)	23, 25, 26, 56, 57, 58, 82, 84
Solanaceae	*Solanum bombycinum*	Ochoa	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	60

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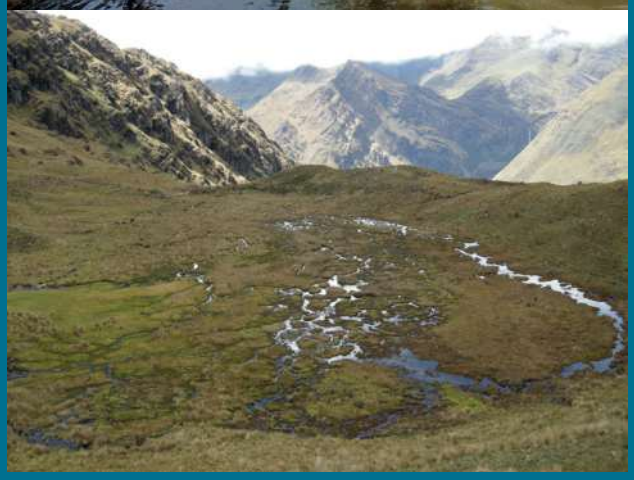
Solanaceae	*Solanum chalmersii*	S.Knapp	EN	B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	A(i), B(ii)	54, 56
Solanaceae	*Solanum comarapanum*	M.Nee	NT	B1a+2a	B(ii)	23, 25, 26, 84, 87
Solanaceae	*Solanum complectens*	M.Nee & G.J.Anderson	LC		B(ii)	23, 25, 26, 27, 59, 84, 87
Solanaceae	*Solanum doddsii*	Correll	# EN	B2ab(iii)	A(i), B(ii)	29
Solanaceae	*Solanum gonyrhachis*	S.Knapp	EN	B2ab(iii)	A(i), B(ii)	56
Solanaceae	*Solanum hibernum*	Bohs	VU	B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	A(i), B(ii)	23, 25
Solanaceae	*Solanum mapiricum*	S.Knapp	EN	B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	A(i), B(ii)	59
Solanaceae	*Solanum maternum*	Bohs	LC		B(ii)	23, 25, 26, 27, 54, 56, 79, 82, 84
Solanaceae	*Solanum monanthemon*	S.Knapp	EN	B2ab(i,ii,iii,iv)	A(i), B(ii)	23, 59, 60, 87
Solanaceae	*Solanum moxosense*	M.Nee	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	4, 73, 76
Solanaceae	*Solanum neocardenasii*	Hawkes & Hjert.	EN	B1ab(iii,v)	A(i), B(ii)	23
Solanaceae	*Solanum rhizomatum*	Särkinen & M.Nee	NT	B2b(iii)	B(ii)	23, 26, 56, 84, 85
Solanaceae	*Solanum saturatum*	M.Nee	NT	B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	B(ii)	25, 26, 84, 87
Solanaceae	*Solanum stellativelutinum*	Bitter	NE		A(iv), B(ii)	87
Solanaceae	*Solanum stipuloideum*	Rusby	NE		B(ii)	23, 25, 26, 52, 53, 84, 85, 87
Solanaceae	*Solanum tunariense*	Kuntze	EN	B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	A(i), B(ii)	53, 87
Solanaceae	*Solanum urticans*	Dunal	NE		B(ii)	19, 82, 83
Solanaceae	*Solanum whalenii*	M.Nee	NT	B2b(iii)	B(ii)	27, 53, 56, 57, 59, 82, 84
Solanaceae	*Trompettia cardenasiana*	(Hunz.) J.Dupin	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	41, 43
Symplocaceae	*Symplocos debilis*	B.Ståhl	VU	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	56, 58, 59, 60
Symplocaceae	*Symplocos neei*	B.Ståhl	VU	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	23, 25, 26
Symplocaceae	*Symplocos quitensis* subsp. *boliviana*	(Brand) B.Ståhl	NE		B(ii)	23, 25, 56, 57, 59, 60, 84
Symplocaceae	*Symplocos robusta*	B.Ståhl	EN	B1ab(iii)	A(i), B(ii)	59, 60
Symplocaceae	*Symplocos subcuneata*	(Herzog) B.Ståhl	LC		B(ii)	23, 25, 26, 34, 56, 57, 59, 60, 84
Thelypteridaceae	*Thelypteris rosulata*	A.R.Sm. & M.Kessler	NE		A(iii), B(ii)	56

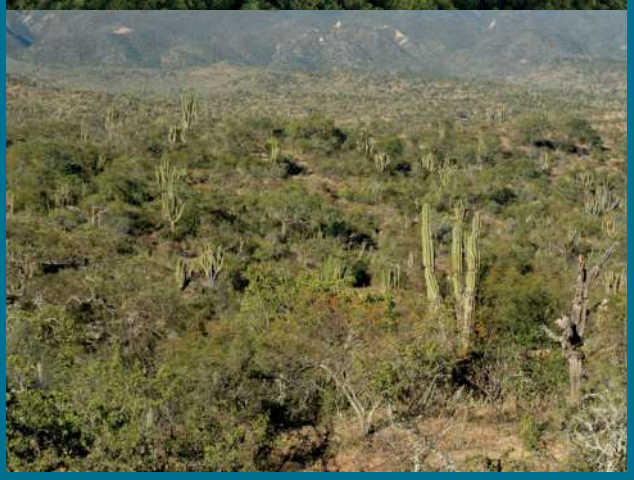
Family	Species - taxon	Author(s)	IUCN category - global and/or national*	IUCN criteria - global and/ or national* criteria	IPA criteria	Presence in IPA sites
Thymelaeaceae	*Daphnopsis boliviana*	Nevling	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	60
Thymelaeaceae	*Ovidia sericea*	Antezana & Z.S.Rogers	LC		B(ii)	28, 48, 49
Tofieldiaceae	*Harperocallis longiflora*	(Rusby) L.M.Campb. & Dorr	NE/VU*	D2	A(ii), A(iii), B(ii)	60
Trigoniaceae	*Trigonia floccosa*	Rusby	NE		B(ii)	55, 59, 64
Tropaeolaceae	*Tropaeolum boliviense*	Loes.	NE		B(ii)	25, 26, 32, 38, 39
Tropaeolaceae	*Tropaeolum elzae*	Sparre	NE		A(iii), B(ii)	82
Tropaeolaceae	*Tropaeolum hirsutum*	Sparre	NE		A(iii), B(ii)	84
Tropaeolaceae	*Tropaeolum kuntzeanum*	Buchenau	LC		B(ii)	25, 26, 56, 82, 84
Tropaeolaceae	*Tropaeolum warmingianum* subsp. *occidentale*	Sparre	NE		B(ii)	59, 82, 87
Urticaceae	*Cecropia elongata*	Rusby	VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	54, 56
Urticaceae	*Coussapoa david-smithii*	C.C.Berg	EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	54
Urticaceae	*Myriocarpa obscura*	Rusby	NE		A(iii), B(ii)	82
Urticaceae	*Phenax flavifolius*	Rusby	NE		A(iii), B(ii)	56
Urticaceae	*Phenax globulifera*	Rusby	NE		A(iii), B(ii)	82
Urticaceae	*Pilea cymbifolia*	Rusby	NE		B(ii)	54, 56, 57, 60, 79, 84
Urticaceae	*Pilea pauciserrata*	Killip	NE		A(iii), B(ii)	56
Urticaceae	*Pilea picta*	Herzog	NE		B(ii)	56, 57, 60, 82, 84
Urticaceae	*Urtica pseudomagellanica*	Geltman	NE		B(ii)	25, 57
Velloziaceae	*Barbaceniopsis boliviensis*	(Baker) L.B.Sm.	NE		B(ii)	23
Velloziaceae	*Vellozia andina*	Ibisch, R.Vásquez & Nowicki	# EN		A(i), B(ii)	26, 27
Verbenaceae	*Duranta benthamii*	Briq.	NE		A(iii), B(ii)	59, 60, 87
Verbenaceae	*Glandularia cochabambensis*	(Moldenke) Liesner	NE		B(ii)	32
Verbenaceae	*Lantana rusbyana*	Moldenke	NE		B(ii)	26, 86, 87
Verbenaceae	*Recordia boliviana*	Moldenke	VU	B1ab(ii,iii)+2ab(ii,iii)	A(i), B(ii)	24, 25, 26, 31
Vitaceae	*Cissus camiriensis*	Lombardi	NE		B(ii)	26, 32, 60

Family	Species - taxon	Author(s)	IUCN category - global and/or national*	IUCN criteria - global and/ or national* criteria	IPA criteria	Presence in IPA sites
Vochysiaceae	*Vochysia caesia*	Stafleu	DD		A(iii), B(ii)	56
Xyridaceae	*Xyris boliviana*	Kral	CR	B2ab(iii)	A(i), B(ii)	11
Xyridaceae	*Xyris crassifunda*	Kral	CR	B2ab(iii)	A(i), B(ii)	11
Xyridaceae	*Xyris guillenii*	Kral	CR	B1ab(iii)+2ab(iii)	A(i), B(ii)	11
Xyridaceae	*Xyris subasperula*	Kral	VU	D2	A(i), B(ii)	11
Xyridaceae	*Xyris submetallica*	Kral	NE		A(iii), B(ii)	11
Zygophyllaceae	*Bulnesia rivas-martinezii*	G.Navarro	# EN	B1ab(iii)+2ab(iii)	A(i), B(ii)	30, 42
Zygophyllaceae	*Guaiacum nellii*	(G.Navarro) Christenh. & Byng	# VU	B1ab(iii)+2ab(iii)	A(i), B(ii)	22
Zygophyllaceae	*Porlieria arida*	Rusby	NE		A(iii), B(ii)	23

APPENDIX 2

Habitats of IPA sites according to the "Vegetation and Ecological Systems Classification of Bolivia" (Navarro & Ferreira 2011, Navarro 2011), grouped according to the IUCN classification and terminology V3.1 (2012)





Habitats of IPA sites according to the "Vegetation and Ecological Systems Classification of Bolivia" (Navarro & Ferreira 2011, Navarro 2011), grouped according to the IUCN classification and terminology V3.1.

IPA Code	IUCN Classification V3.1	Ecological System (Navarro 2011)	Communities (Navarro & Ferreira 2011, Navarro 2011)	km^2 of IPA site	% of community
BOLTIPA019	17. Other	Antrópico	Antrópico	0,28	2
BOLTIPA019	1.6. Subtropical/Tropical Moist Lowland Forest	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	5,75	35
BOLTIPA019	1.5. Subtropical/Tropical Dry Forest	Bosques semidecíduos hidrofíticos y freatofíticos de la Chiquitania	Bosques semidecíduos hidrofíticos y freatofíticos de la Chiquitania	2,27	14
BOLTIPA019	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos semidecíduos de la Chiquitania sobre suelos bien drenados	Bosques subhúmedos semidecíduos de la Chiquitania sobre suelos bien drenados	7,06	43
BOLTIPA019	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos semidecíduos de la Chiquitania sobre suelos bien drenados	Bosque chiquitano sobre arenales de la llanura aluvio-eólica de Santa Cruz: Serie de *Erythrina dominguezii-Astronium urundeuva*	1,23	7
BOLTIPA020	2.2. Moist Savanna	Bosques higrofíticos del Chaco septentrional	Bosque de arroyos estacionales y depresiones inundables del norte del Chaco: Serie de *Coccoloba guaranitica-Geoffroea spinosa*	231,58	2
BOLTIPA020	2.2. Moist Savanna	Bosques higrofíticos del Chaco septentrional	Bosques higrofíticos del Chaco septentrional	41,77	0
BOLTIPA020	2.2. Moist Savanna	Palmares inundables del Chaco septentrional	Palmar de Carandá de baja a media inundación, del norte del Chaco: Serie de *Microlobium faetidus* subsp. *paraguensis-Copernicia alba*	2,39	0
BOLTIPA020	2.2. Moist Savanna	Palmares inundables del Chaco septentrional	Palmar de Carandá de media a alta inundación, en la transición Chaco-Pantanal-Chiquitania: Serie de *Triplaris gardneriana-Copernicia alba*	6,00	0
BOLTIPA020	2.2. Moist Savanna	Palmares inundables del Chaco septentrional	Palmar de Carandá de quebradas, en la transición Chaco-Chiquitania: Serie de *Ruprechtia exploratricis-Copernicia alba*	2,89	0
BOLTIPA020	2.2. Moist Savanna	Palmares inundables del Chaco septentrional	Palmares inundables del Chaco septentrional	2,90	0
BOLTIPA020	2.2. Moist Savanna	Sabanas herbáceas oligotróficas estacionalmente inundadas de la Chiquitania y el Beni	Sabanas herbáceas oligotróficas estacionalmente inundadas de la Chiquitania y el Beni	14,33	0
BOLTIPA020	2.2. Moist Savanna	Sabanas herbáceas oligotróficas inundables de la Chiquitania	Sabanas herbáceas oligotróficas inundables de la Chiquitania	125,18	1
BOLTIPA020	2.2. Moist Savanna	Vegetación de los salares inundables del Chaco septentrional	Palmar de Carandá de las Salinas de San José, San Miguel y Santiago: Serie de *Lophocarpinia aculeatifolia-Copernicia alba*	4,83	0
BOLTIPA020	2.1. Dry Savanna	Bosques chiquitanos bajos sobre suelos pedregosos o arenosos, Cerradão, Pampa-Monte	Bosque bajo sobre suelos arenosos de la Chiquitania transicional al Chaco: Serie preliminar de *Schinopsis cornuta-Aspidosperma tomentosum*	493,37	4
BOLTIPA020	2.1. Dry Savanna	Bosques chiquitanos bajos sobre suelos pedregosos o arenosos, Cerradão, Pampa-Monte	Bosque bajo sobre suelos arenosos de serranías de la Chiquitania sur: Serie de *Pterodon emarginatum-Terminalia argentea*	424,00	4
BOLTIPA020	2.1. Dry Savanna	Chaparrales esclerófilos de la Chiquitania de transición al Chaco sobre arenales-Abayoy	Chaparral de Abayoy sobre sustratos areniscosos: Serie de *Tabebuia selachidentata-Terminalia argentea*	616,99	5
BOLTIPA020	2.1. Dry Savanna	Chaparrales esclerófilos de la Chiquitania de transición al Chaco sobre arenales-Abayoy	Chaparral de Abayoy sobre sustratos calcáreos: Serie de *Sphingiphila tetramera-Terminalia argentea*	2.980,93	25
BOLTIPA020	2.1. Dry Savanna	Chaparrales esclerófilos de la Chiquitania de transición al Chaco sobre arenales-Abayoy	Chaparral esclerófilo de la Chiquitania de transición al Chaco sobre arenales-Abayoy	1.273,34	11
BOLTIPA020	2.1. Dry Savanna	Chaparrales esclerófilos de la Chiquitania de transición al Chaco sobre arenales-Abayoy	Variante pirogénica	315,29	3
BOLTIPA020	2.1. Dry Savanna	Chaparrales esclerófilos de la Chiquitania de transición al Chaco sobre arenales-Abayoy	Variante pirogénica sucesional de zonas quemadas	310,98	3
BOLTIPA020	18. Unknown	No observado	No observado	18,80	0
BOLTIPA020	17. Other	Antrópico	Antrópico	43,46	0
BOLTIPA020	1.8. Subtropical/Tropical Swamp Forest	Bosques chiquitanos de transición al Pantanal y al Chaco sobre suelos mal drenados e inundados	Bosque chiquitano inundable transicional al Chaco de la Chiquitania oriental: Serie de *Peltophorum dubium-Albizia inundata*	10,27	0
BOLTIPA020	1.5. Subtropical/Tropical Dry Forest	Bosque seco chiquitano transicional al Chaco sobre suelos bien drenados	Bosque seco Chiquitano transicional al Chaco sobre suelos bien drenados: Serie de *Athyana weinmannifolia-Acosmium cardenasii*	2.001,22	17

IPA Code	IUCN Classification V3.1	Ecological System (Navarro 2011)	Communities (Navarro & Ferreira 2011, Navarro 2011)	km^2 of IPA site	% of community
BOLTIPA020	1.5. Subtropical/Tropical Dry Forest	Bosques chiquitanos de transición al Chaco sobre suelos bien drenados	Bosque chiquitano de transición al Chaco sobre suelos bien drenados	624,96	5
BOLTIPA020	1.5. Subtropical/Tropical Dry Forest	Bosques chiquitanos de transición al Pantanal y al Chaco sobre suelos mal drenados e inundados	Bosque chiquitano de transición al Pantanal y al Chaco sobre suelos mal drenados e inundados	1.767,48	15
BOLTIPA020	1.5. Subtropical/Tropical Dry Forest	Bosques chiquitanos de transición al Pantanal y al Chaco sobre suelos mal drenados e inundados	Bosque chiquitano transicional al Chaco sobre suelos imperfectamente drenados de la Chiquitania sur y oriental: Serie de *Diplokeleba floribunda-Acosmium cardenasii*	72,09	1
BOLTIPA020	1.5. Subtropical/Tropical Dry Forest	Bosques chiquitanos de transición al Pantanal y al Chaco sobre suelos mal drenados e inundados	Bosque chiquitano transicional al Chaco sobre suelos mal drenados de la Chiquitania: Serie de *Schinopsis brasiliensis-Lonchocarpus nudiflorens*	167,76	1
BOLTIPA020	1.5. Subtropical/Tropical Dry Forest	Bosques chiquitanos de transición al Pantanal y al Chaco sobre suelos mal drenados e inundados	Bosque sobre suelos imperfectamente drenados de la Chiquitania transicional al Chaco: Serie de *Tabebuia nodosa-Acosmium cardenasii*	143,97	1
BOLTIPA020	1.5. Subtropical/Tropical Dry Forest	Bosques semidecíduos hidrofíticos y freatofíticos de la Chiquitania	Bosque hidrofítico de los valles de la Chiquitania central, oriental y occidental: Serie de *Cariniana ianeirensis-Vitex cymosa*	18,61	0
BOLTIPA020	1.5. Subtropical/Tropical Dry Forest	Bosques semidecíduos hidrofíticos y freatofíticos de la Chiquitania	Bosque hidrofítico de los valles de la Chiquitania sur y transicional al Chaco: Serie de *Ruprechtia exploratricis-Lonchocarpus pluvialis*	27,94	0
BOLTIPA020	1.5. Subtropical/Tropical Dry Forest	Bosques sobre suelos mal drenados del Chaco septentrional occidental	Bosque sobre suelos mal drenados con Palma Saó: Serie de *Diplokeleba floribunda-Trithrinax schizophylla*	33,33	0
BOLTIPA020	1.5. Subtropical/Tropical Dry Forest	Bosques sobre suelos mal drenados del Chaco septentrional occidental	Palocruzal de las llanuras aluviales antiguas de los ríos Qimome y Otuquis: Serie de *Tabebuia nodosa-Lonchocarpus nudiflorens*	1,09	0
BOLTIPA020	1.5. Subtropical/Tropical Dry Forest	Bosques transicionales del Chaco septentrional a la Chiquitania, sobre cerros y serranías bajas	Bosque transicional del Chaco a la Chiquitania sobre llanos y lomas onduladas: Serie de *Gochnatia palosanto-Athyana weinmannifolia*	200,32	2
BOLTIPA021	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	45,94	6
BOLTIPA021	2.2. Moist Savanna	Sabanas herbáceas oligotróficas inundables de la Chiquitania	Sabanas herbáceas oligotróficas inundables de la Chiquitania	3,91	1
BOLTIPA021	2.1. Dry Savanna	Sabanas higrofíticas con montículos del Cerrado en la Chiquitania Pampa-termitero o Campo do Murundús	Pampas-termitero de la Chiquitania estacionalmente encharcadas: Serie de *Genipa americana-Tabebuia heptaphylla*	51,93	7
BOLTIPA021	2.1. Dry Savanna	Sabanas higrofíticas con montículos del Cerrado en la Chiquitania Pampa-termitero o Campo do Murundús	Sabanas higrofíticas con montículos del Cerrado en la Chiquitania Pampa-termitero o Campo do Murundús	135,12	19
BOLTIPA021	17. Other	Antrópico	Antrópico	9,06	1
BOLTIPA021	1.5. Subtropical/Tropical Dry Forest	Bosques chiquitanos de transición al Pantanal y al Chaco sobre suelos mal drenados e inundados	Bosque chiquitano de transición al Pantanal y al Chaco sobre suelos mal drenados e inundados	4,93	1
BOLTIPA021	1.5. Subtropical/Tropical Dry Forest	Bosques semidecíduos hidrofíticos y freatofíticos de la Chiquitania	Bosque semidecíduo hidrofítico y freatofítico de la Chiquitania	0,86	0
BOLTIPA021	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos semidecíduos de la Chiquitania sobre suelos bien drenados	Bosque subhúmedo semidecíduo de la Chiquitania sobre suelos bien drenados	1,64	0
BOLTIPA021	1.5. Subtropical/Tropical Dry Forest	Vegetación de los suelos no inundables, bien drenados a excesivamente bien drenados	Bosque subhúmedo semidecíduo de la Chiquitania sobre suelos bien drenados	454,92	64
BOLTIPA022	2.2. Moist Savanna	Bosques higrofíticos del Chaco septentrional	Bosque de arroyos estacionales y depresiones inundables del norte del Chaco: Serie de *Coccoloba guaranitica-Geoffroea spinosa*	1.131,88	3
BOLTIPA022	2.2. Moist Savanna	Bosques higrofíticos del Chaco septentrional	Bosque freatofítico de arroyos estacionales y depresiones anegadizas del norte del Chaco (Paloblancal): Serie de *Maclura tintoria* subsp. *mora-Calycophyllum multiflorum*	32,41	0
BOLTIPA022	2.2. Moist Savanna	Bosques higrofíticos del Chaco septentrional	Bosques higrofíticos del Chaco septentrional	1.022,16	3
BOLTIPA022	2.2. Moist Savanna	Palmares inundables del Chaco septentrional	Palmar de Carandá de baja a media inundación, del norte del Chaco: Serie de *Microlobium faetidus* subsp. *paraguensis-Copernicia alba*	14,48	0
BOLTIPA022	2.2. Moist Savanna	Palmares inundables del Chaco septentrional	Palmar de Carandá de media a baja inundación del Palmar de las Islas: Serie de *Prosopis vinalillo-Copernicia alba*	4,91	0
BOLTIPA022	2.2. Moist Savanna	Palmares inundables del Chaco septentrional	Palmar de Carandá de quebradas, en la transición Chaco-Chiquitania: Serie de *Ruprechtia exploratricis-Copernicia alba*	12,05	0

IPA Code	IUCN Classification V3.1	Ecological System (Navarro 2011)	Communities (Navarro & Ferreira 2011, Navarro 2011)	km^2 of IPA site	% of community
BOLTIPA022	2.2. Moist Savanna	Palmares inundables del Chaco septentrional	Palmares inundables del Chaco septentrional	3,62	0
BOLTIPA022	2.2. Moist Savanna	Vegetación de los salares inundables del Chaco septentrional	Palmar de Carandá de las Salinas de San José, San Miguel y Santiago: Serie de *Lophocarpinia aculeatifolia-Copernicia alba*	66,53	0
BOLTIPA022	2.2. Moist Savanna	Vegetación de los salares inundables del Chaco septentrional	Palmar de Carandá sobre suelos salinos del noroeste del Chaco: Serie de *Prosopis ruscifolia-Copernicia alba*	35,31	0
BOLTIPA022	2.2. Moist Savanna	Vegetación de los salares inundables del Chaco septentrional	Vegetación de los salares inundables del Chaco septentrional	39,56	0
BOLTIPA022	2.1. Dry Savanna	Bosques chiquitanos bajos sobre suelos pedregosos o arenosos, Cerradão, Pampa-Monte	Bosque chiquitano bajo sobre suelos pedregosos o arenosos, Cerradão, Pampa-Monte	5,82	0
BOLTIPA022	2.1. Dry Savanna	Bosques de los arenales del Chaco septentrional occidental	Bosque de Soto sobre arenales del Izozog y Parapetí: Serie de *Acacia emilioana-Schinopsis cornuta*	3.560,45	10
BOLTIPA022	2.1. Dry Savanna	Bosques de los arenales del Chaco septentrional occidental	Bosque de Soto sobre laderas de médanos arenosos del noroeste de Paraguay: Serie de *Piptadeniopsis lomentifera-Schinopsis cornuta*	4,13	0
BOLTIPA022	2.1. Dry Savanna	Bosques de los arenales del Chaco septentrional occidental	Bosque de tres quebrachos de las llanuras aluvio-eólicas del Parapetí y Yanahigua: Serie de *Schinopsis cornuta-Schinopsis heterophylla* (*Schinopsis cornuta* x *Schinopsis quebracho-colorado*)	359,37	1
BOLTIPA022	2.1. Dry Savanna	Bosques de los arenales del Chaco septentrional occidental	Bosque de valles interdunares y llanuras aluvio-eólicas del noroeste de Paraguay: Serie de *Piptadeniopsis lomentifera-Schinopsis heterophylla*	257,62	1
BOLTIPA022	2.1. Dry Savanna	Chaparrales esclerófilos de la Chiquitania de transición al Chaco sobre arenales-Abayoy	Chaparral de Abayoy sobre sustratos areniscosos: Serie de *Tabebuia selachidentata-Terminalia argentea*	60,87	0
BOLTIPA022	2.1. Dry Savanna	Chaparrales esclerófilos de la Chiquitania de transición al Chaco sobre arenales-Abayoy	Chaparral esclerófilo de la Chiquitania de transición al Chaco sobre arenales-Abayoy	785,02	2
BOLTIPA022	2.1. Dry Savanna	Sabanas arboladas de los arenales del Chaco septentrional occidental	Sabanas arboladas de los arenales del Chaco septentrional occidental	395,70	1
BOLTIPA022	18. Unknown	No observado	No observado	196,92	1
BOLTIPA022	17. Other	Antrópico	Antrópico	0,22	0
BOLTIPA022	2.2. Moist Savanna	Sabanas abiertas inundables del norte del Chaco	Sabanas abiertas inundables del norte del Chaco	38,93	0
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosque seco chiquitano transicional al Chaco sobre suelos bien drenados	Bosque seco Chiquitano transicional al Chaco sobre suelos bien drenados: Serie de *Athyana weinmannifolia-Acosmium cardenasii*	2.824,55	8
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques chiquitanos de transición al Pantanal y al Chaco sobre suelos mal drenados e inundados	Bosque sobre suelos imperfectamente drenados de la Chiquitania transicional al Chaco: Serie de *Tabebuia nodosa-Acosmium cardenasii*	808,11	2
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques inundables ribereños y de llanuras aluviales recientes del Chaco	Bosque inundable de los bañados del noroeste del Chaco: Serie de *Crataeva tapia-Albizia inundata*	474,70	1
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques semidecíduos hidrofíticos y freatofíticos de la Chiquitania	Bosque hidrofítico de los valles de la Chiquitania sur y transicional al Chaco: Serie de *Ruprechtia exploratricis-Lonchocarpus pluvialis*	341,71	1
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques sobre suelos mal drenados del Chaco septentrional occidental	Bosque sobre suelos mal drenados con Palma Saó: Serie de *Diplokeleba floribunda-Trithrinax schizophylla*	7.347,08	21
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques sobre suelos mal drenados del Chaco septentrional occidental	Palocruzal o mampuestal de la paleo-llanura aluvial meridional semiárida del Parapetí: Serie de *Cordia bordasii-Tabebuia nodosa*	300,95	1
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques sobre suelos mal drenados del Chaco septentrional occidental	Palocruzal o mampuestall de la paleo-llanura aluvial meridional seca del Parapetí: Serie de *Prosopis elata-Tabebuia nodosa*	613,93	2
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques sobre suelos mal drenados del Chaco septentrional occidental	Palosantal sin Palma Saó del Izozog: Serie de *Aspidosperma triternatum-Bulnesia sarmientoi*	689,96	2
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques sobre suelos mal drenados del Chaco septentrional occidental	Quebrachal de Quebracho Blanco sobre suelos imperfectamente drenados: Serie de *Bulnesia sarmientoi-Aspidosperma quebracho-blanco*	579,84	2
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques sobre suelos mal drenados del Chaco septentrional occidental	Quebrachal de Quebracho Colorado sobre suelos imperfectamente drenados: Serie de *Tabebuia nodosa-Schinopsis quebracho-colorado*	84,30	0

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BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos semidecíduos de la Chiquitania sobre suelos bien drenados	Bosque chiquitano sobre arenales de la llanura aluvio-eólica de Santa Cruz: Serie de *Erythrina dominguezii-Astronium urundeuva*	1,16	0
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos semidecíduos de la Chiquitania sobre suelos bien drenados	Bosque de la Chiquitania norte sobre suelos mesotróficos bien drenados del norte de la Chiquitania: Serie de *Spondias mombim-Centrolobium microchaete*	208,47	1
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos semidecíduos de la Chiquitania sobre suelos bien drenados	Bosque de la Chiquitania norte sobre suelos oligotróficos: serie de *Cariniana estrellensis-Apuleia leiocarpa*	0,09	0
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques transicionales del Chaco septentrional a la Chiquitania, sobre arenales	Bosque transicional del Chaco a la Chiquitania sobre dunas o médanos de arena: Serie de *Lonchocarpus nudiflorens-Schinopsis cornuta*	536,97	2
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques transicionales del Chaco septentrional a la Chiquitania, sobre arenales	Bosques transicionales del Chaco septentrional a la Chiquitania, sobre arenales	228,67	1
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques transicionales del Chaco septentrional a la Chiquitania, sobre cerros y serranías bajas	Bosque transicional del Chaco a la Chiquitania sobre cerros y serranías: Serie de *Pseudobombax argentinum-Astronium urundeuva*	965,05	3
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques transicionales del Chaco septentrional a la Chiquitania, sobre cerros y serranías bajas	Bosque transicional del Chaco a la Chiquitania sobre llanos y lomas onduladas: Serie de *Gochnatia palosanto-Athyana weinmannifolia*	5.463,53	16
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques transicionales del Chaco septentrional a la Chiquitania, sobre cerros y serranías bajas	Bosques transicionales del Chaco Septentrional a la Chiquitania, sobre cerros y serranías bajas	283,03	1
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques transicionales del Chaco septentrional a la Chiquitania, sobre llanura aluvial	Bosque chaqueño transicional de llanura aluvial sobre suelos mediana a imperfectamente drenados: Serie de *Diplokeleba floribunda-Phyllostylon rhamnoides*	2.129,18	6
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques xéricos de las llanuras aluviales antiguas del Chaco septentrional occidental	Bosques xéricos de las llanuras aluviales antiguas del Chaco Septentrional occidental	42,18	0
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques xéricos de las llanuras aluviales antiguas del Chaco septentrional occidental	Quebrachal de Quebracho blanco del Izozog: Serie de *Browningia caineana-Aspidosperma quebracho-blanco*	1.904,05	6
BOLTIPA022	1.5. Subtropical/Tropical Dry Forest	Bosques xéricos de las llanuras aluviales antiguas del Chaco septentrional occidental	Quebrachal de Quebracho Colorado del Chaco noroccidental: Serie de *Acacia emilioana-Schinopsis quebracho-colorado*	307,25	1
BOLTIPA023	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altimontanos y altoandinos Boliviano Tucumanos y Vegetación saxícola altimontana Boliviano-Tucumano	Pajonales y matorrales altimontanos y altoandinos y Vegetación saxícola altimontana Boliviano-Tucumano	71,39	4
BOLTIPA023	17. Other	Antrópico	Antrópico	10,48	1
BOLTIPA023	1.9.Subtropical/Tropical Moist Montane Forest	Bosques de mirtáceas montanos Boliviano-Tucumanos-("sahuintales")	Pinar-sahuintal Boliviano-Tucumano transicional a los Yungas: Serie de *Prumnopitys exigua-Myrcianthes pseudomato*	29,63	2
BOLTIPA023	1.9.Subtropical/Tropical Moist Montane Forest	Bosques montanos pluviestacionales húmedos de los Yungas	Bosque yungueño montano pluviestacional transicional de los Yungas del Amboró: Serie de *Podocarpus parlatorei-Prumnopitys exigua*	2,47	0
BOLTIPA023	1.9.Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviestacionales subhúmedos	Bosque semidecíduo yungueño montano de los Yungas del Cotacajes: Serie de *Leucochloron bolivianum-Erythrina falcata*	160,08	10
BOLTIPA023	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-inferior: Serie de *Vallesia glabra-Prosopis alba*	20,96	1
BOLTIPA023	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos Boliviano-Tucumanos del subandino superior	Bosque subhúmedo de Soto Boliviano-Tucumano septentrional: Serie de *Tipuana tipu-Schinopsis haenkeana*	50,19	3
BOLTIPA023	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos montanos, Boliviano-Tucumanos	Bosque montano semidecíduo, Boliviano-Tucumano de Tipa y Jacarandá: Serie de *Jacaranda mimosifolia-Tipuana tipu*	39,27	2
BOLTIPA023	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque seco interandino de Mara valluna y Soto: Serie de *Cardenasiodendron brachypterum-Schinopsis haenkeana*	553,06	34
BOLTIPA023	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque semiárido interandino de Caparí y Soto: Serie de *Neocardenasia herzogiana-Schinopsis haenkeana*	648,16	40
BOLTIPA023	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque seco interandino Boliviano-Tucumano septentrional: Serie de *Samaipaticereus corroanus-Schinopsis haenkeana*	50,01	3
BOLTIPA024	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverde estacionales subandinos del suroeste de Amazonía	Bosque amazónico pluviestacional del subandino de Santa Cruz: Serie de *Swietenia macrophylla-Terminalia oblonga*	0,53	2
BOLTIPA024	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos semidecíduos de la Chiquitania sobre suelos bien drenados	Bosque chiquitano del subandino inferior norte de Santa Cruz: Serie de *Acanthosyris asipapote-Astronium urundeuva*	31,25	90

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BOLTIPA024	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos semidecíduos de la Chiquitania sobre suelos bien drenados	Bosque chiquitano del subandino inferior sur de Santa Cruz: serie de *Schinopsis haenkeana-Aspidosperma cylindrocarpon*	0,59	2
BOLTIPA024	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos semidecíduos de la Chiquitania sobre suelos bien drenados	Bosque chiquitano del subandino medio de Santa Cruz: Serie de *Pachystroma longifolium-Cariniana estrellensis*	2,19	6
BOLTIPA025	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos edafoxerófilos subandinos Boliviano-Tucumanos	Bosque bajo edafoxerófilo subandino Boliviano-Tucumanos	12,58	0
BOLTIPA025	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altimontanos y altoandinos Boliviano Tucumanos y Vegetación saxícola altimontana Boliviano-Tucumano	Pajonales y matorrales altimontanos y altoandinos y Vegetación saxícola altimontana Boliviano-Tucumano	36,50	1
BOLTIPA025	18. Unknown	No observado	No observado	0,02	0
BOLTIPA025	17. Other	Antrópico	Antrópico	81,27	1
BOLTIPA025	17. Other	Vegetación saxícola subandina bolivano-tucumana	Vegetación saxícola subandina bolivano-tucumana	2,82	0
BOLTIPA025	1.9. Subtropical/Tropical Moist Montane Forest	Bosques altimontanos pluviales de los Yungas	Bosque altimontano pluvial de los Yungas de Coroico: Serie de *Ilex teratopis-Podocarpus rusbyi*	5,35	0
BOLTIPA025	1.9. Subtropical/Tropical Moist Montane Forest	Bosques de mirtáceas montanos Boliviano-Tucumanos-("sahuintales")	Pinar-sahuintal Boliviano-Tucumano transicional a los Yungas: Serie de *Prumnopitys exigua-Myrcianthes pseudomato*	215,78	3
BOLTIPA025	1.9. Subtropical/Tropical Moist Montane Forest	Bosques montanos pluviestacionales húmedos de los Yungas	Bosque yungueño montano pluviestacional de los Yungas de San Mateo: Serie de *Juglans boliviana-Podocarpus oleifolius*	218,69	3
BOLTIPA025	1.9. Subtropical/Tropical Moist Montane Forest	Bosques montanos pluviestacionales húmedos de los Yungas	Bosque yungueño montano pluviestacional transicional de los Yungas del Amboró: Serie de *Podocarpus parlatorei-Prumnopitys exigua*	20,40	0
BOLTIPA025	1.9. Subtropical/Tropical Moist Montane Forest	Bosques y palmerales yungueños pluviales basimontanos	Bosque-Palmar yungueño pluvial basimontano: Serie preliminar de *Protium altsonii-Dictyocaryum lamarckianum*	1.414,04	21
BOLTIPA025	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano pluvial de los Yungas del Amboró: Serie de *Podocarpus rusbyi-Prumnopitys exigua*	495,52	7
BOLTIPA025	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviestacionales subhúmedos	Bosque semidecíduo yungueño montano de los Yungas del Cotacajes: Serie de *Leucochloron bolivianum-Erythrina falcata*	79,21	1
BOLTIPA025	1.9. Subtropical/Tropical Moist Montane Forest	Pinares montanos Boliviano-Tucumano	Pinar montano Boliviano-Tucumano de Pino del Cerro: Serie de *Prunus tucumanensis-Podocarpus parlatorei*	36,69	1
BOLTIPA025	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazónia	4,24	0
BOLTIPA025	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de aguas blancas del Mamoré-Ibare-Bajo Apere	Bosque de aguas blancas del Mamoré-Ibare-Bajo Apere	89,03	1
BOLTIPA025	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques del piedemonte andino del suroeste de la Amazonía	Bosque amazónico del glacis preandino central: Serie de *Eschweilera coriacea-Dipteryx odorata*	17,52	0
BOLTIPA025	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverde estacionales subandinos del suroeste de Amazonía	Bosque amazónico pluviestacional del subandino de Santa Cruz: Serie de *Swietenia macrophylla-Terminalia oblonga*	1.334,62	19
BOLTIPA025	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes subandinos del suroeste de la Amazonía	Bosque amazónico pluvial del Chapare: Serie de *Elaeagia obovata-Talauma boliviana*	855,50	12
BOLTIPA025	1.6. Subtropical/Tropical Moist Lowland Forest	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	32,01	0
BOLTIPA025	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-superior: Serie de *Celtis tala-Prosopis alba*	6,46	0
BOLTIPA025	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos Boliviano-Tucumanos del subandino superior	Bosque Boliviano-Tucumano de Lapacho y Nogal transicional a los Yungas: Serie de *Tabebuia lapacho-Junglans boliviana*	703,04	10
BOLTIPA025	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos Boliviano-Tucumanos del subandino superior	Bosque subhúmedo de Soto Boliviano-Tucumano septentrional: Serie de *Tipuana tipu-Schinopsis haenkeana*	232,77	3
BOLTIPA025	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos Boliviano-Tucumanos transicionales del subandino inferior	Bosque subhúmedo transicional del piso basimontano inferior de la Cuenca del Río Grande: Serie preliminar de *Erythrina dominguezii-Tipuana tipu*	9,66	0

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BOLTIPA025	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos semidecíduos de la Chiquitania sobre suelos bien drenados	Bosque chiquitano del subandino inferior norte de Santa Cruz: Serie de *Acanthosyris asipapote-Astronium urundeuva*	162,16	2
BOLTIPA025	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos semidecíduos de la Chiquitania sobre suelos bien drenados	Bosque chiquitano del subandino medio de Santa Cruz: Serie de *Pachystroma longifolium-Cariniana estrellensis*	521,94	8
BOLTIPA025	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque seco interandino de Mara valluna y Soto: Serie de *Cardenasiodendron brachypterum-Schinopsis haenkeana*	47,42	1
BOLTIPA025	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque seco interandino Boliviano-Tucumano septentrional: Serie de *Samaipaticereus corroanus-Schinopsis haenkeana*	162,59	2
BOLTIPA025	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños pluviestacionales subhúmedos basimontanos	Bosque semidecíduo basimontano inferior de los Yungas de La Paz: Serie de *Cavanillesia umbellata-Aspidosperma cylindrocarpon*	48,52	1
BOLTIPA026	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos edafoxerófilos subandinos Boliviano-Tucumanos	Bosque bajo edafoxerófilo subandino Boliviano-Tucumanos	24,50	0
BOLTIPA026	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques y arbustales xerofíticos Boliviano-Tucumanos montanos prepuneños	Bosque prepuneño superior seco de la Cuenca del Río Grande: Serie de *Escallonia millegrana-Kageneckia lanceolata*	1,83	0
BOLTIPA026	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altimontanos y altoandinos Boliviano Tucumanos y Vegetación saxícola altimontana Boliviano-Tucumano	Pajonales y matorrales altimontanos y altoandinos y Vegetación saxícola altimontana Boliviano-Tucumano	183,08	2
BOLTIPA026	18. Unknown	No observado	No observado	0,00	0
BOLTIPA026	17. Other	Antrópico	Antrópico	85,58	1
BOLTIPA026	1.9.Subtropical/Tropical Moist Montane Forest	Bosques de mirtáceas montanos Boliviano-Tucumanos-("sahuintales")	Pinar-sahuintal Boliviano-Tucumano transicional a los Yungas: Serie de *Prumnopitys exigua-Myrcianthes pseudomato*	5,97	0
BOLTIPA026	1.9.Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos Boliviano-Tucumanos	Khewiñar Boliviano-Tucumano septentrional: Serie de *Berberis chrysacantha-Polylepis neglecta*	17,77	0
BOLTIPA026	1.9.Subtropical/Tropical Moist Montane Forest	Bosques húmedos subandinos Bolivianos-Tucumanos	Bosque de Laurel y Nogal del piso montano superior: Series preliminares de *Cedrela lilloi-Phoebe porphyria* y de *Phoebe porphyria-Juglans australis*	257,27	4
BOLTIPA026	1.9.Subtropical/Tropical Moist Montane Forest	Bosques húmedos y subhúmedos ribereños montanos Boliviano-Tucumanos	Bosque de quebradas Boliviano-Tucumano septentrional del piso montano húmedo: Serie preliminar de *Prumnopitys exigua-Blepharocalyx salicifolius*	122,32	2
BOLTIPA026	1.9.Subtropical/Tropical Moist Montane Forest	Bosques húmedos y subhúmedos ribereños montanos Boliviano-Tucumanos	Bosque ribereño Boliviano-Tucumano del piso montano seco a subhúmedo: Serie de *Acacia visco-Erythrina falcata*	90,91	1
BOLTIPA026	1.9.Subtropical/Tropical Moist Montane Forest	Bosques húmedos y subhúmedos ribereños montanos Boliviano-Tucumanos	Bosque ribereño y umbrófilo, Boliviano-Tucumano, de las quebradas del piso montano xérico: Serie de *Pisonia ambigua-Myroxylon peruiferum*	0,29	0
BOLTIPA026	1.9.Subtropical/Tropical Moist Montane Forest	Pinares montanos Boliviano-Tucumano	Pinar montano Boliviano-Tucumano con Palma Sunkha de Vallegrande: Serie de *Parajubaea sunkha-Podocarpus parlatorei*	16,36	0
BOLTIPA026	1.9.Subtropical/Tropical Moist Montane Forest	Pinares montanos Boliviano-Tucumano	Pinar montano Boliviano-Tucumano de Pino colorado: Serie de *Ilex argentina-Prumnopitys exigua*	225,74	3
BOLTIPA026	1.9.Subtropical/Tropical Moist Montane Forest	Pinares montanos Boliviano-Tucumano	Pinar montano Boliviano-Tucumano de Pino del Cerro: Serie de *Prunus tucumanensis-Podocarpus parlatorei*	648,15	9
BOLTIPA026	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques ribereños subandino-interandinos Boliviano-Tucumanos	Sauceda ribereña del piso basimontano: Serie de *Sapium glandulosum-Salix humboldtiana*	87,91	1
BOLTIPA026	1.6. Subtropical/Tropical Moist Lowland Forest	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	3,53	0
BOLTIPA026	1.5. Subtropical/Tropical Dry Forest	Bosques chiquitanos de transición al Chaco sobre suelos bien drenados	Bosque chiquitano de transición al Chaco del preandino sur Santa Cruz: Serie preliminar de *Aspidosperma cylindrocarpon-Athyana weinmannifolia*	5,53	0
BOLTIPA026	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-inferior: Serie de *Vallesia glabra-Prosopis alba*	81,05	1
BOLTIPA026	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-superior: Serie de *Celtis tala-Prosopis alba*	57,09	1
BOLTIPA026	1.5. Subtropical/Tropical Dry Forest	Bosques semidecíduos Boliviano-Tucumanos subandinos montanos y basimontanos	Bosque Boliviano-Tucumano de Chari y Tipa: Serie de *Parapiptadenia excelsa-Tipuana tipu*	952,56	13

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BOLTIPA026	1.5. Subtropical/Tropical Dry Forest	Bosques semidecíduos hidrofíticos y freatofíticos de la Chiquitania	Bosque mesofítico-freatofítico de los valles del subandino en la transición Chiquitania/Chaco/Boliviano-Tucumano: Serie preliminar de *Albizia niopoides-Diplokeleba floribunda*	5,91	0
BOLTIPA026	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos Boliviano-Tucumanos del subandino superior	Bosque Boliviano-Tucumano de Lapacho y Nogal transicional a los Yungas: Serie de *Tabebuia lapacho-Junglans boliviana*	534,49	7
BOLTIPA026	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos Boliviano-Tucumanos del subandino superior	Bosque subhúmedo de Soto Boliviano-Tucumano septentrional: Serie de *Tipuana tipu-Schinopsis haenkeana*	100,06	1
BOLTIPA026	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos Boliviano-Tucumanos transicionales del subandino inferior	Bosque subhúmedo transicional del piso basimontano inferior de la Cuenca del Río Grande: Serie preliminar de *Erythrina dominguezii-Tipuana tipu*	634,75	9
BOLTIPA026	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos montanos, Boliviano-Tucumanos	Bosque montano semidecíduo, Boliviano-Tucumano de Tipa y Jacarandá: Serie de *Jacaranda mimosifolia-Tipuana tipu*	260,64	4
BOLTIPA026	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos semidecíduos de la Chiquitania sobre suelos bien drenados	Bosque chiquitano del subandino inferior norte de Santa Cruz: Serie de *Acanthosyris asipapote-Astronium urundeuva*	846,67	12
BOLTIPA026	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos semidecíduos de la Chiquitania sobre suelos bien drenados	Bosque chiquitano del subandino medio de Santa Cruz: Serie de *Pachystroma longifolium-Cariniana estrellensis*	104,84	1
BOLTIPA026	1.5. Subtropical/Tropical Dry Forest	Bosques transicionales preandinos del Chaco septentrional occidental	Bosque transicional preandino del Chaco septentrional occidental	1,65	0
BOLTIPA026	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos Boliviano-Tucumanos transicionales del subandino inferior	Bosque seco Boliviano-Tucumano transicional del subandino inferior norte: Serie de *Machaerium scleroxylon-Schinopsis haenkeana*	1.136,47	16
BOLTIPA026	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque seco interandino de Mara valluna y Soto: Serie de *Cardenasiodendron brachypterum-Schinopsis haenkeana*	329,23	4
BOLTIPA026	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque semiárido interandino de Caraparí y Soto: Serie de *Neocardenasia herzogiana-Schinopsis haenkeana*	194,88	3
BOLTIPA026	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque semiárido interandino de Cola de Zorro y Soto: Serie de *Espostoa guentheri-Loxopterygium grisebachii*	195,78	3
BOLTIPA026	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque seco interandino Boliviano-Tucumano septentrional: Serie de *Samaipaticereus corroanus-Schinopsis haenkeana*	34,71	0
BOLTIPA026	1.5. Subtropical/Tropical Dry Forest	Vegetación de los suelos no inundables, bien drenados a excesivamente bien drenados	Bosque subhúmedo semidecíduo de la Chiquitania sobre suelos bien drenados	80,90	1
BOLTIPA027	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altimontanos y altoandinos Boliviano Tucumanos y Vegetación saxícola altimontana Boliviano-Tucumano	Pajonales y matorrales altimontanos y altoandinos y Vegetación saxícola altimontana Boliviano-Tucumano	340,39	27
BOLTIPA027	1.9. Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos Boliviano-Tucumanos	Khewiñar Boliviano-Tucumano septentrional: Serie de *Berberis chrysacantha-Polylepis neglecta*	88,19	7
BOLTIPA027	1.9. Subtropical/Tropical Moist Montane Forest	Pinares montanos Boliviano-Tucumano	Pinar montano boliviano-Tucumano con influencia yungueña del norte de Chuquisaca: Serie de *Weinmannia sorbifolia-Podocarpus parlatorei*	23,35	2
BOLTIPA027	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-superior: Serie de *Celtis tala-Prosopis alba*	79,06	6
BOLTIPA027	1.5. Subtropical/Tropical Dry Forest	Bosques húmedos y subhúmedos ribereños montanos Boliviano-Tucumanos	Bosque ribereño y umbrófilo, Boliviano-Tucumano, de las quebradas del piso montano xérico: Serie de *Pisonia ambigua-Myroxylon peruiferum*	111,73	9
BOLTIPA027	1.5. Subtropical/Tropical Dry Forest	Bosques ribereños subandino-interandinos Boliviano-Tucumanos	Sauceda ribereña del piso basimontano: Serie de *Sapium glandulosum-Salix humboldtiana*	0,34	0
BOLTIPA027	1.5. Subtropical/Tropical Dry Forest	Bosques semidecíduos Boliviano-Tucumanos subandinos montanos y basimontanos	Bosque Boliviano-Tucumano de Chari y Tipa: Serie de *Parapiptadenia excelsa-Tipuana tipu*	4,21	0
BOLTIPA027	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos montanos, Boliviano-Tucumanos	Bosque montano semidecíduo, Boliviano-Tucumano de Tipa y Jacarandá: Serie de *Jacaranda mimosifolia-Tipuana tipu*	126,30	10
BOLTIPA027	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque seco interandino de Mara valluna y Soto: Serie de *Cardenasiodendron brachypterum-Schinopsis haenkeana*	1,74	0
BOLTIPA027	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque semiárido interandino de Caraparí y Soto: Serie de *Neocardenasia herzogiana-Schinopsis haenkeana*	317,35	25
BOLTIPA027	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque semiárido interandino de Cola de Zorro y Soto: Serie de *Espostoa guentheri-Loxopterygium grisebachii*	178,83	14

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BOLTIPA028	18. Unknown	No observado	No observado	0,00	0
BOLTIPA028	1.9.Subtropical/Tropical Moist Montane Forest	Bosques de mirtáceas montanos Boliviano-Tucumanos-("sahuintales")	Pinar-sahuintal Boliviano-Tucumano transicional a los Yungas: Serie de *Prumnopitys exigua-Myrcianthes pseudomato*	144,00	24
BOLTIPA028	1.9.Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos Boliviano-Tucumanos	Khewiñar Boliviano-Tucumano septentrional: Serie de *Berberis chrysacantha-Polylepis neglecta*	0,69	0
BOLTIPA028	1.9.Subtropical/Tropical Moist Montane Forest	Pinares montanos Boliviano-Tucumano	Pinar montano Boliviano-Tucumano de Pino del Cerro: Serie de *Prunus tucumanensis-Podocarpus parlatorei*	57,83	10
BOLTIPA028	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-inferior: Serie de *Vallesia glabra-Prosopis alba*	3,46	1
BOLTIPA028	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos montanos, Boliviano-Tucumanos	Bosque montano semidecíduo, Boliviano-Tucumano de Tipa y Jacarandá: Serie de *Jacaranda mimosifolia-Tipuana tipu*	134,72	22
BOLTIPA028	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque seco interandino de Mara valluna y Soto: Serie de *Cardenasiodendron brachypterum-Schinopsis haenkeana*	93,53	16
BOLTIPA028	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque semiárido interandino de Caraparí y Soto: Serie de *Neocardenasia herzogiana-Schinopsis haenkeana*	152,05	25
BOLTIPA028	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque semiárido interandino de Cola de Zorro y Soto: Serie de *Espostoa guentheri-Loxopterygium grisebachii*	13,32	2
BOLTIPA029	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altimontanos de la Puna Xerofítica central	Bosque puneño de *Polylepis* de la Cordillera oriental central: Serie de *Dasyphyllum hystrix-Polylepis tomentella*	4,11	0
BOLTIPA029	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques y arbustales xerofíticos Boliviano-Tucumanos montanos prepuneños	Bosque prepuneño superior seco de la cuenca del Río Pilcomayo: Serie de *Prosopis andicola-Prosopis ferox*	23,69	2
BOLTIPA029	1.9.Subtropical/Tropical Moist Montane Forest	Bosques húmedos y subhúmedos ribereños montanos Boliviano-Tucumanos	Bosque ribereño Boliviano-Tucumano del piso montano seco a subhúmedo: Serie de *Acacia visco-Erythrina falcata*	2,63	0
BOLTIPA029	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-inferior: Serie de *Vallesia glabra-Prosopis alba*	17,62	2
BOLTIPA029	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos montanos, Boliviano-Tucumanos	Bosque montano semidecíduo, Boliviano-Tucumano de Tipa y Jacarandá: Serie de *Jacaranda mimosifolia-Tipuana tipu*	524,32	49
BOLTIPA029	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque seco interandino de Mara valluna y Soto: Serie de *Cardenasiodendron brachypterum-Schinopsis haenkeana*	381,00	35
BOLTIPA029	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque semiárido interandino de Caraparí y Soto: Serie de *Neocardenasia herzogiana-Schinopsis haenkeana*	125,88	12
BOLTIPA030	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altimontanos de la Puna Xerofítica central	Bosque puneño de *Polylepis* de la Cordillera oriental central: Serie de *Dasyphyllum hystrix-Polylepis tomentella*	56,38	2
BOLTIPA030	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altoandinos de la Puna Xerofítica oriental	Arbustal altoandino de *Polylepis* de la Cordillera Oriental central: Serie de *Azorella compacta-Polylepis tomentella*	36,24	1
BOLTIPA030	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos xerofíticos interandinos de la Prepuna superior oriental	Bosque puneño de Churqui de la Prepuna superior sur: Serie de *Dasyphyllum hystrix-Prosopis ferox*	353,15	13
BOLTIPA030	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques y arbustales xerofíticos Boliviano-Tucumanos montanos prepuneños	Bosque prepuneño inferior seco de la Cuenca del Rio Pilcomayo: Serie de *Jacaranda mimosifolia-Schinopsis haenkeana*	8,11	0
BOLTIPA030	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altimontanos y altoandinos Boliviano Tucumanos y Vegetación saxícola altimontana Boliviano-Tucumano	Pajonales y matorrales altimontanos y altoandinos y Vegetación saxícola altimontana Boliviano-Tucumano	284,41	10
BOLTIPA030	1.9.Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos Boliviano-Tucumanos	Khewiñar Boliviano-Tucumano meridional: Serie de *Escallonia hypoglauca-Polylepis crista-gallii*	3,62	0
BOLTIPA030	1.9.Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos Boliviano-Tucumanos	Khewiñar Boliviano-Tucumano septentrional: Serie de *Berberis chrysacantha-Polylepis neglecta*	671,25	24
BOLTIPA030	1.9.Subtropical/Tropical Moist Montane Forest	Bosques subandinos Boliviano-Tucumanos de mirtáceas	Bosque basimontano de mirtáceas: Serie de *Myrcianthes mato-Siphoneugena occidentalis*	39,40	1
BOLTIPA030	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-superior: Serie de *Celtis tala-Prosopis alba*	206,83	7

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BOLTIPA030	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos montanos, Boliviano-Tucumanos	Bosque montano semidecíduo, Boliviano-Tucumano de Tipa y Jacarandá: Serie de *Jacaranda mimosifolia-Tipuana tipu*	876,07	31
BOLTIPA030	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque seco interandino de Mara valluna y Soto: Serie de *Cardenasiodendron brachypterum-Schinopsis haenkeana*	216,69	8
BOLTIPA030	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque semiárido interandino de Caraparí y Soto: Serie de *Neocardenasia herzogiana-Schinopsis haenkeana*	59,40	2
BOLTIPA031	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altimontanos y altoandinos Boliviano Tucumanos y Vegetación saxícola altimontana Boliviano-Tucumano	Pajonales y matorrales altimontanos y altoandinos y Vegetación saxícola altimontana Boliviano-Tucumano	54,39	2
BOLTIPA031	18. Unknown	No observado	No observado	0,07	0
BOLTIPA031	17. Other	Antrópico	Antrópico	8,34	0
BOLTIPA031	1.9. Subtropical/Tropical Moist Montane Forest	Bosques húmedos subandinos Bolivianos-Tucumanos	Bosque de Laurel y Nogal del piso montano superior: Series preliminares de *Cedrela lilloi-Phoebe porphyria* y de *Phoebe porphyria-Juglans australis*	74,83	3
BOLTIPA031	1.9. Subtropical/Tropical Moist Montane Forest	Bosques húmedos y subhúmedos ribereños montanos Boliviano-Tucumanos	Bosque ribereño y umbrófilo, Boliviano-Tucumano, de las quebradas del piso montano xérico: Serie de *Pisonia ambigua-Myroxylon peruiferum*	65,84	2
BOLTIPA031	1.9. Subtropical/Tropical Moist Montane Forest	Bosques subandinos Boliviano-Tucumanos de mirtáceas	Bosque basimontano de mirtáceas: Serie de *Myrcianthes mato-Siphoneugena occidentalis*	378,93	14
BOLTIPA031	1.9. Subtropical/Tropical Moist Montane Forest	Pinares montanos Boliviano-Tucumano	Pinar montano Boliviano-Tucumano con influencia yungueña del norte de Chuquisaca: Serie de *Weinmannia sorbifolia-Podocarpus parlatorei*	59,06	2
BOLTIPA031	1.9. Subtropical/Tropical Moist Montane Forest	Bosques ribereños subandino-interandinos Boliviano-Tucumanos	Sauceda ribereña del piso basimontano: Serie de *Sapium glandulosum-Salix humboldtiana*	121,00	5
BOLTIPA031	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-inferior: Serie de *Vallesia glabra-Prosopis alba*	13,95	1
BOLTIPA031	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-superior: Serie de *Celtis tala-Prosopis alba*	0,00	0
BOLTIPA031	1.5. Subtropical/Tropical Dry Forest	Bosques semidecíduos Boliviano-Tucumanos subandinos montanos y basimontanos	Bosque Boliviano-Tucumano de Chari y Tipa: Serie de *Parapiptadenia excelsa-Tipuana tipu*	453,15	17
BOLTIPA031	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos Boliviano-Tucumanos del subandino superior	Bosque Boliviano-Tucumano de Lapacho y Nogal transicional a los Yungas: Serie de *Tabebuia lapacho-Junglans boliviana*	318,05	12
BOLTIPA031	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos Boliviano-Tucumanos transicionales del subandino inferior	Bosque subhúmedo transicional basimontano inferior de la Cuenca del Pilcomayo: Serie preliminar de *Eriotheca roseorum-Calycophyllum multiflorum*	123,70	5
BOLTIPA031	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos Boliviano-Tucumanos transicionales del subandino inferior	Bosque seco Boliviano-Tucumano transicional del subandino inferior norte: Serie de *Machaerium scleroxylon-Schinopsis haenkeana*	889,62	34
BOLTIPA031	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque semiárido interandino de Caraparí y Soto: Serie de *Neocardenasia herzogiana-Schinopsis haenkeana*	71,71	3
BOLTIPA031	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque semiárido interandino de Cola de Zorro y Soto: Serie de *Espostoa guentheri-Loxopterygium grisebachii*	1,90	0
BOLTIPA032	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altimontanos y altoandinos Boliviano Tucumanos y Vegetación saxícola altimontana Boliviano-Tucumano	Pajonales y matorrales altimontanos y altoandinos y Vegetación saxícola altimontana Boliviano-Tucumano	62,42	6
BOLTIPA032	17. Other	Antrópico	Antrópico	6,63	1
BOLTIPA032	1.9. Subtropical/Tropical Moist Montane Forest	Bosques húmedos subandinos Bolivianos-Tucumanos	Bosque de Laurel y Nogal del piso montano superior: Series preliminares de *Cedrela lilloi-Phoebe porphyria* y de *Phoebe porphyria-Juglans australis*	204,66	20
BOLTIPA032	1.9. Subtropical/Tropical Moist Montane Forest	Bosques subandinos Boliviano-Tucumanos de mirtáceas	Bosque basimontano de mirtáceas: Serie de *Myrcianthes mato-Siphoneugena occidentalis*	28,04	3
BOLTIPA032	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques ribereños subandino-interandinos Boliviano-Tucumanos	Sauceda ribereña del piso basimontano: Serie de *Sapium glandulosum-Salix humboldtiana*	1,98	0
BOLTIPA032	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-inferior: Serie de *Vallesia glabra-Prosopis alba*	18,18	2

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BOLTIPA032	1.5. Subtropical/Tropical Dry Forest	Bosques semidecíduos Boliviano-Tucumanos subandinos montanos y basimontanos	Bosque Boliviano-Tucumano de Chari y Tipa: Serie de *Parapiptadenia excelsa-Tipuana tipu*	232,89	23
BOLTIPA032	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos Boliviano-Tucumanos transicionales del subandino inferior	Bosque subhúmedo transicional basimontano inferior de la Cuenca del Pilcomayo: Serie preliminar de *Eriotheca roseorum-Calycophyllum multiflorum*	214,01	21
BOLTIPA032	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos Boliviano-Tucumanos transicionales del subandino inferior	Bosque seco Boliviano-Tucumano transicional del subandino inferior norte: Serie de *Machaerium scleroxylon-Schinopsis haenkeana*	117,74	11
BOLTIPA032	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos Boliviano-Tucumanos transicionales del subandino inferior	Bosque seco Boliviano-Tucumano transicional del subandino inferior sur: Serie de *Amburana cearensis-Loxopterygium grisebachi*	133,93	13
BOLTIPA032	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque seco meridional de Cardón y Soto: Serie de *Trichocereus terscheckii-Schinopsis haenkeana*	12,78	1
BOLTIPA033	2.2. Moist Savanna	Bosques higrofíticos del Chaco septentrional	Bosque freatofítico de arroyos estacionales y depresiones anegadizas del norte del Chaco (Paloblancal): Serie de *Maclura tintoria* subsp. *mora-Calycophyllum multiflorum*	5,74	0
BOLTIPA033	2.1. Dry Savanna	Bosques de los arenales del Chaco septentrional occidental	Bosque de Soto sobre laderas de médanos arenosos del noroeste de Paraguay: Serie de *Piptadeniopsis lomentifera-Schinopsis cornuta*	6,01	0
BOLTIPA033	2.1. Dry Savanna	Bosques de los arenales del Chaco septentrional occidental	Bosque de tres quebrachos de las llanuras aluvio-eólicas del Parapetí y Yanahigua: Serie de *Schinopsis cornuta-Schinopsis heterophylla* (*Schinopsis cornuta* x *Schinopsis quebracho-colorado*)	189,82	7
BOLTIPA033	2.1. Dry Savanna	Bosques de los arenales del Chaco septentrional occidental	Bosque de valles interdunares y llanuras aluvio-eólicas del noroeste de Paraguay: Serie de *Piptadeniopsis lomentifera-Schinopsis heterophylla*	13,86	1
BOLTIPA033	18. Unknown	No observado	No observado	0,73	0
BOLTIPA033	1.5. Subtropical/Tropical Dry Forest	Bosques sobre suelos mal drenados del Chaco septentrional occidental	Bosque sobre suelo mal drenado del Chaco septentrional occidental	38,42	1
BOLTIPA033	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos semidecíduos de la Chiquitania sobre suelos bien drenados	Bosque de la Chiquitania norte sobre suelos mesotróficos bien drenados del norte de la Chiquitania: Serie de *Spondias mombim-Centrolobium microchaete*	19,09	1
BOLTIPA033	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos semidecíduos de la Chiquitania sobre suelos bien drenados	Bosque de la Chiquitania norte sobre suelos oligotróficos: serie de *Cariniana estrellensis-Apuleia leiocarpa*	306,32	11
BOLTIPA033	1.5. Subtropical/Tropical Dry Forest	Bosques xéricos de las llanuras aluviales antiguas del Chaco septentrional occidental	Quebrachal de Quebracho Colorado del Chaco noroccidental: Serie de *Acacia emilioana-Schinopsis quebracho-colorado*	2.082,63	78
BOLTIPA034	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altimontanos y altoandinos Boliviano Tucumanos y Vegetación saxícola altimontana Boliviano-Tucumano	Pajonales y matorrales altimontanos y altoandinos y Vegetación saxícola altimontana Boliviano-Tucumano	556,79	21
BOLTIPA034	18. Unknown	No observado	No observado	0,00	0
BOLTIPA034	1.9.Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos Boliviano-Tucumanos	Khewiñar Boliviano-Tucumano meridional: Serie de *Escallonia hypoglauca-Polylepis crista-gallii*	387,05	15
BOLTIPA034	1.9.Subtropical/Tropical Moist Montane Forest	Bosques húmedos y subhúmedos ribereños montanos Boliviano-Tucumanos	Aliseda montana boliviano-tucumana: Serie de *Prunus tucumanensis-Alnus acuminata*	354,23	14
BOLTIPA034	1.9.Subtropical/Tropical Moist Montane Forest	Bosques subandinos Boliviano-Tucumanos de mirtáceas	Bosque basimontano de mirtáceas: Serie de *Myrcianthes mato-Siphoneugena occidentalis*	349,60	13
BOLTIPA034	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques ribereños subandino-interandinos Boliviano-Tucumanos	Sauceda ribereña del piso basimontano: Serie de *Sapium glandulosum-Salix humboldtiana*	10,30	0
BOLTIPA034	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-inferior: Serie de *Vallesia glabra-Prosopis alba*	0,03	0
BOLTIPA034	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-superior: Serie de *Celtis tala-Prosopis alba*	63,09	2
BOLTIPA034	1.5. Subtropical/Tropical Dry Forest	Bosques semidecíduos Boliviano-Tucumanos subandinos montanos y basimontanos	Bosque Boliviano-Tucumano de Chari y Tipa: Serie de *Parapiptadenia excelsa-Tipuana tipu*	192,72	7
BOLTIPA034	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos Boliviano-Tucumanos transicionales del subandino inferior	Bosque subhúmedo transicional basimontano inferior de la Cuenca del Pilcomayo: Serie preliminar de *Eriotheca roseorum-Calycophyllum multiflorum*	505,71	19
BOLTIPA034	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos montanos, Boliviano-Tucumanos	Bosque montano semidecíduo, Boliviano-Tucumano de Tipa y Jacarandá: Serie de *Jacaranda mimosifolia-Tipuana tipu*	63,22	2

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BOLTIPA034	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos Boliviano-Tucumanos transicionales del subandino inferior	Bosque seco Boliviano-Tucumano transicional del subandino inferior sur: Serie de *Amburana cearensis-Loxopterygium grisebachi*	9,33	0
BOLTIPA034	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque seco interandino de Mara valluna y Soto: Serie de *Cardenasiodendron brachypterum-Schinopsis haenkeana*	59,39	2
BOLTIPA034	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque semiárido interandino de Caraparí y Soto: Serie de *Neocardenasia herzogiana-Schinopsis haenkeana*	60,01	2
BOLTIPA035	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos edafoxerófilos subandinos Boliviano-Tucumanos	Bosque bajo edafoxerófilo subandino Boliviano-Tucumanos	18,98	2
BOLTIPA035	18. Unknown	No observado	Río	2,79	0
BOLTIPA035	17. Other	Antrópico	Antrópico	140,88	13
BOLTIPA035	1.5. Subtropical/Tropical Dry Forest	Arbustales y bosques riparios sucesionales del Chaco	Arbustales y bosques riparios sucesionales del Chaco	0,87	0
BOLTIPA035	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-inferior: Serie de *Vallesia glabra-Prosopis alba*	84,71	8
BOLTIPA035	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-superior: Serie de *Celtis tala-Prosopis alba*	4,19	0
BOLTIPA035	1.5. Subtropical/Tropical Dry Forest	Bosques semidecíduos Boliviano-Tucumanos subandinos montanos y basimontanos	Bosque Boliviano-Tucumano de Chari y Tipa: Serie de *Parapiptadenia excelsa-Tipuana tipu*	30,57	3
BOLTIPA035	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos Boliviano-Tucumanos transicionales del subandino inferior	Bosque subhúmedo transicional basimontano inferior de la Cuenca del Bermejo: Serie preliminar de *Gleditsia amorphoides-Calycophyllum multiflorum*	220,62	20
BOLTIPA035	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos Boliviano-Tucumanos transicionales del subandino inferior	Bosque subhúmedo transicional basimontano inferior de la Cuenca del Pilcomayo: Serie preliminar de *Eriotheca roseorum-Calycophyllum multiflorum*	20,40	2
BOLTIPA035	1.5. Subtropical/Tropical Dry Forest	Bosques transicionales preandinos del Chaco septentrional occidental	Bosque chaqueño transicional del preandino seco superior y subhúmedo inferior: Serie de *Calycophyllum multiflorum-Schinopsis quebracho-colorado*	137,12	12
BOLTIPA035	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos Boliviano-Tucumanos transicionales del subandino inferior	Bosque seco Boliviano-Tucumano transicional del subandino inferior sur: Serie de *Amburana cearensis-Loxopterygium grisebachi*	448,39	40
BOLTIPA036	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos edafoxerófilos subandinos Boliviano-Tucumanos	Bosque bajo edafoxerófilo subandino Boliviano-Tucumanos	194,39	15
BOLTIPA036	17. Other	Antrópico	Antrópico	477,76	36
BOLTIPA036	1.9. Subtropical/Tropical Moist Montane Forest	Bosques húmedos subandinos Bolivianos-Tucumanos	Bosque de Laurel y Nogal del piso montano superior: Series preliminares de *Cedrela lilloi-Phoebe porphyria* y de *Phoebe porphyria-Juglans australis*	65,16	5
BOLTIPA036	1.9. Subtropical/Tropical Moist Montane Forest	Pinares montanos Boliviano-Tucumanos	Pinar montano Boliviano-Tucumano de Pino del Cerro: Serie de *Prunus tucumanensis-Podocarpus parlatorei*	0,12	0
BOLTIPA036	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-inferior: Serie de *Vallesia glabra-Prosopis alba*	3,60	0
BOLTIPA036	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-superior: Serie de *Celtis tala-Prosopis alba*	28,14	2
BOLTIPA036	1.5. Subtropical/Tropical Dry Forest	Bosques semidecíduos Boliviano-Tucumanos subandinos montanos y basimontanos	Bosque Boliviano-Tucumano de Chari y Tipa: Serie de *Parapiptadenia excelsa-Tipuana tipu*	149,88	11
BOLTIPA036	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos Boliviano-Tucumanos transicionales del subandino inferior	Bosque subhúmedo transicional basimontano inferior de la Cuenca del Bermejo: Serie preliminar de *Gleditsia amorphoides-Calycophyllum multiflorum*	391,14	30
BOLTIPA037	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos edafoxerófilos subandinos Boliviano-Tucumanos	Bosque bajo edafoxerófilo subandino Boliviano-Tucumanos	18,85	1
BOLTIPA037	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altimontanos y altoandinos Boliviano Tucumanos y Vegetación saxícola altimontana Boliviano-Tucumano	Pajonales y matorrales altimontanos y altoandinos y Vegetación saxícola altimontana Boliviano-Tucumano	282,74	18
BOLTIPA037	17. Other	Antrópico	Antrópico	41,77	3

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BOLTIPA037	1.9.Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos Boliviano-Tucumanos	Khewiñar Boliviano-Tucumano meridional: Serie de *Escallonia hypoglauca-Polylepis crista-gallii*	140,26	9
BOLTIPA037	1.9.Subtropical/Tropical Moist Montane Forest	Bosques húmedos subandinos Bolivianos-Tucumanos	Bosque de Laurel y Nogal del piso montano superior: Series preliminares de *Cedrela lilloi-Phoebe porphyria* y de *Phoebe porphyria-Juglans australis*	50,34	3
BOLTIPA037	1.9.Subtropical/Tropical Moist Montane Forest	Bosques húmedos y subhúmedos ribereños montanos Boliviano-Tucumanos	Aliseda montana boliviano-tucumana: Serie de *Prunus tucumanensis-Alnus acuminata*	380,71	24
BOLTIPA037	1.9.Subtropical/Tropical Moist Montane Forest	Bosques húmedos y subhúmedos ribereños montanos Boliviano-Tucumanos	Bosque ribereño Boliviano-Tucumano del piso montano seco a subhúmedo: Serie de *Acacia visco-Erythrina falcata*	1,06	0
BOLTIPA037	1.9.Subtropical/Tropical Moist Montane Forest	Pinares montanos Boliviano-Tucumanos	Pinar montano Boliviano-Tucumano de Pino del Cerro: Serie de *Prunus tucumanensis-Podocarpus parlatorei*	19,38	1
BOLTIPA037	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-inferior: Serie de *Vallesia glabra-Prosopis alba*	0,58	0
BOLTIPA037	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-superior: *Serie de Celtis tala-Prosopis alba*	88,81	6
BOLTIPA037	1.5. Subtropical/Tropical Dry Forest	Bosques semidecíduos Boliviano-Tucumanos subandinos montanos y basimontanos	Bosque Boliviano-Tucumano de Chari y Tipa: Serie de *Parapiptadenia excelsa-Tipuana tipu*	559,80	35
BOLTIPA037	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos Boliviano-Tucumanos transicionales del subandino inferior	Bosque subhúmedo transicional basimontano inferior de la Cuenca del Bermejo: Serie preliminar de *Gleditsia amorphoides-Calycophyllum multiflorum*	0,01	0
BOLTIPA037	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos Boliviano-Tucumanos transicionales del subandino inferior	Bosque subhúmedo transicional basimontano inferior de la Cuenca del Pilcomayo: Serie preliminar de *Eriotheca roseorum-Calycophyllum multiflorum*	18,15	1
BOLTIPA038	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques y arbustales xerofíticos Boliviano-Tucumanos montanos prepuneños	Bosque prepuneño seco de la Cuenca del Río Tarija-Bermejo: Serie preliminar de *Gochnatia curviflora-Plenckia integerrima*	7,88	1
BOLTIPA038	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altimontanos y altoandinos Boliviano Tucumanos y Vegetación saxícola altimontana Boliviano-Tucumano	Pajonales y matorrales altimontanos y altoandinos y Vegetación saxícola altimontana Boliviano-Tucumano	537,97	52
BOLTIPA038	18. Unknown	No observado	No observado	0,00	0
BOLTIPA038	17. Other	Antrópico	Antrópico	1,37	0
BOLTIPA038	1.9.Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos Boliviano-Tucumanos	Khewiñar Boliviano-Tucumano meridional: Serie de *Escallonia hypoglauca-Polylepis crista-gallii*	156,89	15
BOLTIPA038	1.9.Subtropical/Tropical Moist Montane Forest	Bosques húmedos y subhúmedos ribereños montanos Boliviano-Tucumanos	Aliseda montana boliviano-tucumana: Serie de *Prunus tucumanensis-Alnus acuminata*	0,06	0
BOLTIPA038	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque seco secundario meridional de Churqui: Serie preliminar de *Prosopis alpataco-Acacia caven*	338,61	32
BOLTIPA039	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altimontanos y altoandinos Boliviano Tucumanos y Vegetación saxícola altimontana Boliviano-Tucumano	Pajonales y matorrales altimontanos y altoandinos y Vegetación saxícola altimontana Boliviano-Tucumano	87,25	4
BOLTIPA039	17. Other	Antrópico	Antrópico	16,43	1
BOLTIPA039	1.9.Subtropical/Tropical Moist Montane Forest	Bosques húmedos subandinos Bolivianos-Tucumanos	Bosque de Laurel y Nogal del piso basimontano inferior: Serie preliminar de *Gomidesia barituensis-Phoebe porphyria*	390,11	16
BOLTIPA039	1.9.Subtropical/Tropical Moist Montane Forest	Bosques húmedos subandinos Bolivianos-Tucumanos	Bosque de Laurel y Nogal del piso montano superior: Series preliminares de *Cedrela lilloi-Phoebe porphyria* y de *Phoebe porphyria-Juglans australis*	1.051,70	43
BOLTIPA039	1.9.Subtropical/Tropical Moist Montane Forest	Bosques húmedos y subhúmedos ribereños montanos Boliviano-Tucumanos	Aliseda montana boliviano-tucumana: Serie de *Prunus tucumanensis-Alnus acuminata*	56,12	2
BOLTIPA039	1.9.Subtropical/Tropical Moist Montane Forest	Bosques subandinos Boliviano-Tucumanos de mirtáceas	Bosque basimontano de mirtáceas: Serie de *Myrcianthes mato-Siphoneugena occidentalis*	160,27	6
BOLTIPA039	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-inferior: Serie de *Vallesia glabra-Prosopis alba*	66,37	3
BOLTIPA039	1.5. Subtropical/Tropical Dry Forest	Bosques semidecíduos Boliviano-Tucumanos subandinos montanos y basimontanos	Bosque Boliviano-Tucumano de Chari y Tipa: Serie de *Parapiptadenia excelsa-Tipuana tipu*	126,64	5

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BOLTIPA039	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos Boliviano-Tucumanos transicionales del subandino inferior	Bosque subhúmedo transicional basimontano inferior de la Cuenca del Bermejo: Serie preliminar de *Gleditsia amorphoides-Calycophyllum multiflorum*	518,48	21
BOLTIPA040	4.7. Subtropical/Tropical High Altitude Grassland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tolar de K'oa thola y Kachu chiji del Altiplano centro-norte: Asociación de *Muhlenbergia fastigiata* y *Parastrephia lepidophylla*	17,28	2
BOLTIPA040	4.7. Subtropical/Tropical High Altitude Grassland	Matorrales y herbazales altimontanos y altoandinos de la Puna Xerofítica oriental	Matorrales y herbazales altimontanos y altoandinos de la Puna Xerofítica oriental	188,03	18
BOLTIPA040	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales y matorrales altimontanos y altoandinos Boliviano Tucumanos y Vegetación saxícola altimontana Boliviano-Tucumano	Pajonales y matorrales altimontanos y altoandinos y Vegetación saxícola altimontana Boliviano-Tucumano	67,20	6
BOLTIPA040	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales y matorrales altoandinos de la Puna Xerofítica norte	Pajonales y matorrales altoandinos de la Puna Xerofítica norte	58,03	5
BOLTIPA040	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales y matorrales altoandinos de la Puna Xerofítica sur	Tholar-Pajonal altoandino superior suroriental: Comunidad de *Parastrephia phylliciformis-Festuca* cf. *hypsophila*	31,15	3
BOLTIPA040	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altimontanos de la Puna Xerofítica central	Bosque puneño de *Polylepis* de la Cordillera oriental central: Serie de *Dasyphyllum hystrix-Polylepis tomentella*	108,75	10
BOLTIPA040	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altoandinos de la Puna Xerofítica oriental	Arbustal altoandino de *Polylepis* de la Cordillera Oriental sur: Serie de *Parastrephia phyliciformis-Polylepis tomentella* x *tarapacana*	96,53	9
BOLTIPA040	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos xerofíticos interandinos de la Prepuna superior oriental	Bosque puneño de Churqui de la Prepuna superior sur: Serie de *Dasyphyllum hystrix-Prosopis ferox*	21,74	2
BOLTIPA040	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques y arbustales xerofíticos Boliviano-Tucumanos montanos prepuneños	Bosque prepuneño superior seco de la Cuenca del Río San Juan del Oro: Serie de *Hoffmannseggia pumilio-Prosopis ferox*	0,06	0
BOLTIPA040	17. Other	Antrópico	Antrópico	7,07	1
BOLTIPA040	1.9. Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos Boliviano-Tucumanos	Khewiñar Boliviano-Tucumano meridional: Serie de *Escallonia hypoglauca-Polylepis crista-gallii*	465,27	44
BOLTIPA040	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos montanos, Boliviano-Tucumanos	Bosque montano semidecíduo, Boliviano-Tucumano de Tipa y Jacarandá: Serie de *Jacaranda mimosifolia-Tipuana tipu*	6,72	1
BOLTIPA041	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	Pajonal subnival de la Puna Xerofítica suroriental: Comunidad de *Parastrephia phyliciformis-Deyeuxia cabrerae* var. *aristulata*	158,02	3
BOLTIPA041	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	Vegetación geliturbada subnival de la Puna Xerofítica suroriental	32,28	1
BOLTIPA041	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación de los salares altoandinos de la Puna Xerofítica	Pradera salobre y calcárea del Altiplano semiárido: *Anthobryum triandrium-Distichlis humilis*	41,97	1
BOLTIPA041	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altimontanos de la Puna Xerofítica central	Bosque puneño de *Polylepis* de la Cordillera oriental central: Serie de *Dasyphyllum hystrix-Polylepis tomentella*	950,22	15
BOLTIPA041	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altimontanos de la Puna Xerofítica central	Bosque puneño de *Polylepis* de la Cordillera oriental sur: Serie de *Mutisia friesiana-Polylepis tomentella*	173,08	3
BOLTIPA041	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altoandinos de la Puna Xerofítica oriental	Arbustal altoandino de *Polylepis* de la Cordillera Oriental central: Serie de *Azorella compacta-Polylepis tomentella*	40,70	1
BOLTIPA041	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altoandinos de la Puna Xerofítica oriental	Arbustal altoandino de *Polylepis* de la Cordillera Oriental sur: Serie de *Parastrephia phyliciformis-Polylepis tomentella* x *tarapacana*	77,97	1
BOLTIPA041	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos xerofíticos interandinos de la Prepuna superior oriental	Bosque puneño de Churqui de la Prepuna superior sur: Serie de *Dasyphyllum hystrix-Prosopis ferox*	732,15	12
BOLTIPA041	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques y arbustales xerofíticos Boliviano-Tucumanos montanos prepuneños	Arbustal prepuneños inferior semiárido de la Cuenca del Río San Juan del Oro: Serie de *Hyaloseris camataquiensis-Acacia feddeana*	708,26	11
BOLTIPA041	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques y arbustales xerofíticos Boliviano-Tucumanos montanos prepuneños	Bosque prepuneño superior seco de la Cuenca del Río San Juan del Oro: Serie de *Hoffmannseggia pumilio-Prosopis ferox*	1.378,88	22
BOLTIPA041	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	544,18	9
BOLTIPA041	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altoandinos de la Puna Xerofítica norte	Pajonales y matorrales altoandinos de la Puna Xerofítica norte	1.018,76	16

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BOLTIPA041	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altoandinos de la Puna Xerofítica sur	Tholar-Pajonal altoandino inferior suroriental semiárido: Comunidad de *Parastrephia phyliciformis-Chuquiraga australis*	266,57	4
BOLTIPA041	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altoandinos de la Puna Xerofítica sur	Tholar-Pajonal altoandino superior suroriental: Comunidad de *Parastrephia phyliciformis-Festuca* cf. *hypsophila*	1,02	0
BOLTIPA041	18. Unknown	No observado	No observado	0,00	0
BOLTIPA041	1.9.Subtropical/Tropical Moist Montane Forest	Bosques freatóficos del piso montano xerofítico o Prepuna	Bosque freatófico del piso montano xerofítico o Prepuna	68,61	1
BOLTIPA042	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	Pajonal subnival de la Puna Xerofítica suroriental: Comunidad de *Parastrephia phyliciformis-Deyeuxia cabrerae* var. *aristulata*	13,23	0
BOLTIPA042	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altimontanos de la Puna Xerofítica central	Bosque puneño de *Polylepis* de la Cordillera oriental central: Serie de *Dasyphyllum hystrix-Polylepis tomentella*	1.069,56	29
BOLTIPA042	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altoandinos de la Puna Xerofítica oriental	Arbustal altoandino de *Polylepis* de la Cordillera Oriental sur: Serie de *Parastrephia phyliciformis-Polylepis tomentella* x *tarapacana*	186,84	5
BOLTIPA042	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos xerofíticos interandinos de la Prepuna superior oriental	Bosque puneño de Churqui de la Prepuna superior sur: Serie de *Dasyphyllum hystrix-Prosopis ferox*	723,34	20
BOLTIPA042	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques freatóficos del piso montano xerofítico o Prepuna	Bosque freatófico del piso montano xerofítico o Prepuna	37,93	1
BOLTIPA042	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques y arbustales xerofíticos Boliviano-Tucumanos montanos prepuneños	Arbustal prepuneños inferior semiárido de la Cuenca del Río San Juan del Oro: Serie de *Hyaloseris camataquiensis-Acacia feddeana*	1.000,10	27
BOLTIPA042	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques y arbustales xerofíticos Boliviano-Tucumanos montanos prepuneños	Bosque prepuneño superior seco de la Cuenca del Río San Juan del Oro: Serie de *Hoffmannseggia pumilio-Prosopis ferox*	658,45	18
BOLTIPA043	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	Pajonal subnival de la Puna Xerofítica suroriental: Comunidad de *Parastrephia phyliciformis-Deyeuxia cabrerae* var. *aristulata*	59,99	1
BOLTIPA043	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	Vegetación geliturbada subnival de la Puna Xerofítica suroriental	3,55	0
BOLTIPA043	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altimontanos de la Puna Xerofítica central	Bosque puneño de *Polylepis* de la Cordillera oriental central: Serie de *Dasyphyllum hystrix-Polylepis tomentella*	749,88	12
BOLTIPA043	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altimontanos de la Puna Xerofítica central	Bosque puneño de *Polylepis* de la Cordillera oriental sur: Serie de *Mutisia friesiana-Polylepis tomentella*	299,91	5
BOLTIPA043	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altoandinos de la Puna Xerofítica oriental	Arbustal altoandino de *Polylepis* de la Cordillera Oriental central: Serie de *Azorella compacta-Polylepis tomentella*	93,35	1
BOLTIPA043	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altoandinos de la Puna Xerofítica oriental	Arbustal altoandino de *Polylepis* de la Cordillera Oriental sur: Serie de *Parastrephia phyliciformis-Polylepis tomentella* x *tarapacana*	67,34	1
BOLTIPA043	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altoandinos de la Puna Xerofítica oriental	Arbustal altoandino de *Polylepis* de la Cordillera Oriental sur: Serie provisional de *Parastrephia phyliciformis-Polylepis tomentella* x *tarapacana*	6,46	0
BOLTIPA043	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos xerofíticos interandinos de la Prepuna superior oriental	Bosque puneño de Churqui de la Prepuna superior sur: Serie de *Dasyphyllum hystrix-Prosopis ferox*	567,35	9
BOLTIPA043	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques y arbustales xerofíticos Boliviano-Tucumanos montanos prepuneños	Arbustal prepuneños inferior semiárido de la Cuenca del Río San Juan del Oro: Serie de *Hyaloseris camataquiensis-Acacia feddeana*	1.256,31	20
BOLTIPA043	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques y arbustales xerofíticos Boliviano-Tucumanos montanos prepuneños	Bosque prepuneño superior seco de la Cuenca del Río San Juan del Oro: Serie de *Hoffmannseggia pumilio-Prosopis ferox*	2.229,82	35
BOLTIPA043	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tholar de K'oa Thola y Huari chapi de los glacis del Altiplano centro-este: *Adesmia occulta-Parastrephia lepidophylla*	104,01	2
BOLTIPA043	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tholar de K'oa Thola y Janki del Altiplano centro-sur: *Anthobryum triandrum-Parastrephia lepidophylla*	25,17	0
BOLTIPA043	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales y herbazales altimontanos y altoandinos de la Puna Xerofítica oriental	Tolillar de Tara semiárido del Altiplano sur-oriental: Comunidad de *Opuntia nigrispina-Fabiana densa*	13,49	0
BOLTIPA043	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altoandinos de la Puna Xerofítica norte	Tholar-Pajonal altoandino superior centro-oriental: Comunidad de *Parastrephia lucida-Festuca* cf. *hypsophila*	23,52	0

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BOLTIPA043	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altoandinos de la Puna Xerofítica sur	Tholar-pajonal altoandino inferior suroriental seco: Comunidad de *Parastrephia teretiuscula-Parastrephia phyliciformis*	439,83	7
BOLTIPA043	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altoandinos de la Puna Xerofítica sur	Tholar-Pajonal altoandino superior suroriental: Comunidad de *Parastrephia phyliciformis-Festuca* cf. *hypsophila*	486,67	8
BOLTIPA043	18. Unknown	No observado	No observado	0,00	0
BOLTIPA044	17. Other	Vegetación acuática y palustre altoandina de la Puna Xerofítica	Vegetación acuática y palustre altoandina de la Puna Xerofítica	208,73	1
BOLTIPA044	5.14. Permanent saline, brackish or alkaline lakes	Lagunas saladas	Laguna salada	117,72	1
BOLTIPA044	4.7. Subtropical/Tropical High Altitude Grassland	Bofedales altoandinos de la Puna Xerofítica	Bofedales altoandinos de la Puna Xerofítica	41,98	0
BOLTIPA044	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales higrófilos altoandinos de la Puna Xerofítica	Pajonales higrófilos altoandinos de la Puna Xerofítica	185,95	1
BOLTIPA044	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	Pajonal subnival de la Puna Xerofítica suroriental: Comunidad de *Parastrephia phyliciformis-Deyeuxia cabrerae* var. *aristulata*	434,89	3
BOLTIPA044	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	172,76	1
BOLTIPA044	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	Vegetación geliturbada subnival de la Puna Xerofítica suroriental	390,18	3
BOLTIPA044	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Suroccidental	Pajonal subnival de la Puna Xerofítica suroccidental: Asociación de *Stipa frigida-Senecio puchii*	290,30	2
BOLTIPA044	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Suroccidental	Pajonal subnival de la Puna Xerofítica suroccidental: Asociación de *Stipa frigida-Senecio puchii*	3.714,30	26
BOLTIPA044	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Suroccidental	Pajonal subnival sobre glacis y piedemontes de la Puna Xerofítica suroccidental: Comunidad de *Urbania pappigera* y *Festuca orthophylla*	197,58	1
BOLTIPA044	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Suroccidental	Vegetación geliturbada subnival de la Puna Xerofítica suroccidental: *Nototriche auricoma-Oriastrum sphaeroidale*	1.306,64	9
BOLTIPA044	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación de los salares altoandinos de la Puna Xerofítica	Vegetación de los salares altoandinos de la Puna Xerofítica	365,79	3
BOLTIPA044	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación de los salares altoandinos de la Puna Xerofítica	Pradera salobre del Altiplano Central: Comunidad de *Muhlenbergia fastigiata-Distichlis humilis*	1.250,29	9
BOLTIPA044	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación de los salares altoandinos de la Puna Xerofítica	Pradera salobre y calcárea del Altiplano semiárido: *Anthobryum triandrium-Distichlis humilis*	7,50	0
BOLTIPA044	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación de los salares altoandinos de la Puna Xerofítica	Vegetación de los salares altoandinos de la Puna Xerofítica	235,94	2
BOLTIPA044	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altoandinos de la Puna Xerofítica occidental	Arbustal de *Polylepis* de la Cordillera Occidental sur: Serie de *Adesmia horrida-Polylepis tarapacana*	633,33	4
BOLTIPA044	3.7. Subtropical/Tropical High Altitude Shrubland	Cardonales altoandinos de la Puna Xerofítica occidental	Cardonal semiárido altoandino suroccidental: Serie de *Mutisia lanigera-Trichocereus atacamensis*	51,83	0
BOLTIPA044	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	161,65	1
BOLTIPA044	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tholar de Romero Thola y Janki del Altiplano centro-sur: Asociación de *Anthobryum triandrum-Parastrephia lucida*	201,27	1
BOLTIPA044	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tolar de K'oa Thola y Huari chapi de los glacis del Altiplano centro-este: Comunidad de *Adesmia occulta* y *Parastrephia lepidophylla*	104,02	1
BOLTIPA044	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tolar de K'oa thola y Kachu chiji del Altiplano centro-norte: Asociación de *Muhlenbergia fastigiata* y *Parastrephia lepidophylla*	677,02	5
BOLTIPA044	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tolar de Romerillo Thola y Janki de la Cordillera Suroccidental: Serie *Anthobryum triandrum-Parastrephia phyliciformis*	3.218,03	23

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BOLTIPA044	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altoandinos de la Puna Xerofítica sur	Pajonales y matorrales altoandinos de la Puna Xerofítica sur	157,21	1
BOLTIPA044	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altoandinos de la Puna Xerofítica sur	Tholar-Pajonal altoandino superior suroriental: Comunidad de *Parastrephia phyliciformis-Festuca* cf. *hypsophila*	24,03	0
BOLTIPA044	18. Unknown	No observado	No observado	8,55	0
BOLTIPA045	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales higrófilos altoandinos de la Puna Xerofítica	Pajonales higrófilos altoandinos de la Puna Xerofítica	6,53	1
BOLTIPA045	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada altoandina de la Puna Xerofítica Septentrional y Oriental	Vegetación abierta geliturbada altoandina de la Puna Xerofítica Septentrional y Oriental	29,44	3
BOLTIPA045	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación de los salares altoandinos de la Puna Xerofítica	Pradera salobre y calcárea del Altiplano semiárido: *Anthobryum triandrium-Distichlis humilis*	91,86	9
BOLTIPA045	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación de los salares altoandinos de la Puna Xerofítica	Pradera salobre y calcárea del Altiplano semiárido: Asociacón de *Anthobryum triandrum-Distichlis humilis*	2,88	0
BOLTIPA045	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altoandinos de la Puna Xerofítica oriental	Arbustal altoandino de *Polylepis* de la Cordillera Oriental central: Serie de *Azorella compacta-Polylepis tomentella*	46,72	5
BOLTIPA045	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tholar de K'oa Thola y Huari chapi de los glacis del Altiplano centro-este: *Adesmia occulta-Parastrephia lepidophylla*	16,02	2
BOLTIPA045	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tholar de K'oa Thola y Janki del Altiplano centro-sur: *Anthobryum triandrum-Parastrephia lepidophylla*	112,54	11
BOLTIPA045	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tholar de Romero Thola y Janki del Altiplano centro-sur: Asociación de *Anthobryum triandrum-Parastrephia lucida*	3,61	0
BOLTIPA045	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tolar de K'oa thola y Kachu chiji del Altiplano centro-norte: Asociación de *Muhlenbergia fastigiata* y *Parastrephia lepidophylla*	0,03	0
BOLTIPA045	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales y herbazales altimontanos y altoandinos de la Puna Xerofítica oriental	Tolillar de Rosa semiárido del Altiplano centro-sur: *Gutierrezia gilliesii-Junellia seriphioides*	249,54	25
BOLTIPA045	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales y herbazales altimontanos y altoandinos de la Puna Xerofítica oriental	Tolillar de Tara de los glacis y piedemontes calcáreos del Altiplano central y sur: *Anthobryum triandrum-Fabiana densa*	47,69	5
BOLTIPA045	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altoandinos de la Puna Xerofítica norte	Tholar-Pajonal altoandino superior centro-oriental: Comunidad de *Parastrephia lucida-Festuca* cf. *hypsophila*	390,09	39
BOLTIPA045	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altoandinos de la Puna Xerofítica sur	Pajonales y matorrales altoandinos de la Puna Xerofítica sur	1,75	0
BOLTIPA046	5.14. Permanent saline, brackish or alkaline lakes	Lagunas saladas	Laguna salada	9.702,53	94
BOLTIPA046	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales higrófilos altoandinos de la Puna Xerofítica	Pajonales higrófilos altoandinos de la Puna Xerofítica	1,44	0
BOLTIPA046	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	0,61	0
BOLTIPA046	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación de los salares altoandinos de la Puna Xerofítica	Pradera salobre y calcárea del Altiplano semiárido: *Anthobryum triandrium-Distichlis humilis*	267,33	3
BOLTIPA046	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación de los salares altoandinos de la Puna Xerofítica	Pradera salobre y calcárea del Altiplano semiárido: Asociacón de *Anthobryum triandrum-Distichlis humilis*	93,19	1
BOLTIPA046	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altoandinos de la Puna Xerofítica occidental	Arbustal de *Polylepis* de la Cordillera Occidental sur: Serie de *Adesmia horrida-Polylepis tarapacana*	0,07	0
BOLTIPA046	3.7. Subtropical/Tropical High Altitude Shrubland	Cardonales altoandinos de la Puna Xerofítica occidental	Cardonal semiárido altoandino suroccidental: Serie de *Mutisia lanigera-Trichocereus atacamensis*	28,58	0
BOLTIPA046	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tholar de K'oa Thola y Janki del Altiplano centro-sur: *Anthobryum triandrum-Parastrephia lepidophylla*	199,11	2
BOLTIPA046	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tholar de Romero Thola y Janki del Altiplano centro-sur: Asociación de *Anthobryum triandrum-Parastrephia lucida*	17,27	0

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BOLTIPA046	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tolar de K'oa thola y Kachu chiji del Altiplano centro-norte: Asociación de *Muhlenbergia fastigiata* y *Parastrephia lepidophylla*	7,34	0
BOLTIPA046	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales y herbazales altimontanos y altoandinos de la Puna Xerofítica oriental	Tolillar de Rosa semiárido del Altiplano centro-sur: *Gutierrezia gilliesii-Junellia seriphioides*	0,49	0
BOLTIPA046	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales y herbazales altimontanos y altoandinos de la Puna Xerofítica oriental	Tolillar de Tara de los glacis y piedemontes calcáreos del Altiplano central y sur: *Anthobryum triandrum-Fabiana densa*	3,37	0
BOLTIPA047	5.14. Permanent saline, brackish or alkaline lakes	Lagunas saladas	Laguna salada	25,10	1
BOLTIPA047	4.7. Subtropical/Tropical High Altitude Grassland	Bofedales altoandinos de la Puna Xerofítica	Bofedales altoandinos de la Puna Xerofítica	2,89	0
BOLTIPA047	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales higrófilos altoandinos de la Puna Xerofítica	Pajonales higrófilos altoandinos de la Puna Xerofítica	8,13	0
BOLTIPA047	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	1,90	0
BOLTIPA047	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Suroccidental	Pajonal subnival de la Puna Xerofítica suroccidental: *Stipa frigida-Senecio puchii*	58,36	3
BOLTIPA047	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Suroccidental	Vegetación geliturbada subnival de la Puna Xerofítica suroccidental: *Nototriche auricoma-Oriastrum sphaeroidale*	10,94	0
BOLTIPA047	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación de los salares altoandinos de la Puna Xerofítica	Pradera salobre y calcárea del Altiplano semiárido: *Anthobryum triandrium-Distichlis humilis*	11,74	1
BOLTIPA047	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación de los salares altoandinos de la Puna Xerofítica	Pradera salobre y calcárea del Altiplano semiárido: Asociacón de *Anthobryum triandrum-Distichlis humilis*	140,99	6
BOLTIPA047	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altoandinos de la Puna Xerofítica occidental	Arbustal de *Polylepis* de la Cordillera Occidental sur: Serie de *Adesmia horrida-Polylepis tarapacana*	122,02	5
BOLTIPA047	3.7. Subtropical/Tropical High Altitude Shrubland	Cardonales altoandinos de la Puna Xerofítica occidental	Cardonal semiárido altoandino suroccidental: Serie de *Mutisia lanigera-Trichocereus atacamensis*	1.021,18	44
BOLTIPA047	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tholar de K'oa Thola y Janki del Altiplano centro-sur: *Anthobryum triandrum-Parastrephia lepidophylla*	204,30	9
BOLTIPA047	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tholar de Romero Thola y Janki del Altiplano centro-sur: Asociación de *Anthobryum triandrum-Parastrephia lucida*	328,27	14
BOLTIPA047	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales y herbazales altimontanos y altoandinos de la Puna Xerofítica oriental	Tolillar de Rosa semiárido del Altiplano centro-sur: *Gutierrezia gilliesii-Junellia seriphioides*	283,04	12
BOLTIPA047	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales y herbazales altimontanos y altoandinos de la Puna Xerofítica oriental	Tolillar de Tara de los glacis y piedemontes calcáreos del Altiplano central y sur: *Anthobryum triandrum-Fabiana densa*	45,75	2
BOLTIPA047	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altoandinos de la Puna Xerofítica sur	Pajonales y matorrales altoandinos de la Puna Xerofítica sur	63,03	3
BOLTIPA048	17. Other	Vegetación acuática y palustre altoandina de la Puna Xerofítica	Vegetación acuática y palustre altoandina de la Puna Xerofítica	207,74	3
BOLTIPA048	4.7. Subtropical/Tropical High Altitude Grassland	Bofedales altoandinos de la Puna Xerofítica	Bofedales altoandinos de la Puna Xerofítica	0,51	0
BOLTIPA048	4.7. Subtropical/Tropical High Altitude Grassland	Matorrales altimontanos y altoandinos de la Puna Xerofítica noroccidental	Tolillar de Tara seco del Altiplano noroeste: Asociación de *Parastrephia quadrangularis-Fabiana densa*	166,58	3
BOLTIPA048	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales higrófilos altoandinos de la Puna Xerofítica	Pajonales higrófilos altoandinos de la Puna Xerofítica	165,29	3
BOLTIPA048	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada altoandina de la Puna Xerofítica Septentrional y Oriental	Vegetación abierta geliturbada altoandina de la Puna Xerofítica Septentrional y Oriental	29,53	0
BOLTIPA048	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	0,86	0
BOLTIPA048	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación de los salares altoandinos de la Puna Xerofítica	Pradera salobre y calcárea del Altiplano semiárido: *Anthobryum triandrium-Distichlis humilis*	52,26	1

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BOLTIPA048	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación de los salares altoandinos de la Puna Xerofítica	Pradera salobre y calcárea del Altiplano semiárido: Asociacón de *Anthobryum triandrum-Distichlis humilis*	82,85	1
BOLTIPA048	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación saxícola altimontana de la Puna Xerofítica	Vegetación saxícola altimontana de la Puna Xerofítica	1,09	0
BOLTIPA048	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos y arbustales altimontanos de la Puna húmeda	Bosque puneño de *Polylepis* de la Cordillera de Cochabamba: Serie de *Berberis commutata-Polylepis subtusalbida*	85,71	1
BOLTIPA048	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos y arbustales altimontanos de la Puna húmeda	Bosque puneño de *Polylepis* del sur de la Cordillera de Tiraque: Asociacion de *Mutisia cochabambensis-Polylepis besseri*	1,01	0
BOLTIPA048	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altimontanos de la Puna Xerofítica central	Bosque puneño de *Polylepis* de la Cordillera oriental central: Serie de *Dasyphyllum hystrix-Polylepis tomentella*	1.268,06	21
BOLTIPA048	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altoandinos de la Puna Xerofítica occidental	Bosque altoandino de *Polylepis* de la Cordillera Occidental norte: Serie de *Mutisia lanigera-Polylepis tarapacana*	281,59	5
BOLTIPA048	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos altoandinos de la Puna Xerofítica oriental	Arbustal altoandino de *Polylepis* de la Cordillera Oriental central: Serie de *Azorella compacta-Polylepis tomentella*	1.432,91	24
BOLTIPA048	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques y arbustales xerofíticos Boliviano-Tucumanos montanos prepuneños	Bosque prepuneño superior seco de la Cuenca del Río Grande: Serie de *Escallonia millegrana-Kageneckia lanceolata*	391,80	6
BOLTIPA048	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tholar de Romero Thola y Janki del Altiplano centro-sur: Asociación de *Anthobryum triandrum-Parastrephia lucida*	46,25	1
BOLTIPA048	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tolar de K'oa thola y Kachu chiji del Altiplano centro-norte: Asociación de *Muhlenbergia fastigiata* y *Parastrephia lepidophylla*	382,37	6
BOLTIPA048	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altimontanos y altoandinos Boliviano Tucumanos y Vegetación saxícola altimontana Boliviano-Tucumano	Pajonales y matorrales altimontanos y altoandinos y Vegetación saxícola altimontana Boliviano-Tucumano	16,79	0
BOLTIPA048	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altoandinos de la Puna Xerofítica norte	Pajonales y matorrales altoandinos de la Puna Xerofítica norte	94,57	2
BOLTIPA048	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altoandinos de la Puna Xerofítica norte	Tholar-Pajonal altoandino inferior centro-oriental: Comunidad de *Calceolaria glacialis-Festuca orthophylla*	10,85	0
BOLTIPA048	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altoandinos de la Puna Xerofítica norte	Tholar-Pajonal altoandino superior centro-oriental: Comunidad de *Parastrephia lucida-Festuca* cf. *hypsophila*	234,52	4
BOLTIPA048	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altoandinos de la Puna Xerofítica sur	Pajonales y matorrales altoandinos de la Puna Xerofítica sur	966,69	16
BOLTIPA048	1.9.Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos Boliviano-Tucumanos	Khewiñar Boliviano-Tucumano septentrional: Serie de *Berberis chrysacantha-Polylepis neglecta*	84,89	1
BOLTIPA048	1.9.Subtropical/Tropical Moist Montane Forest	Bosques húmedos y subhúmedos ribereños montanos Boliviano-Tucumanos	Bosque ribereño Boliviano-Tucumano del piso montano seco a subhúmedo: Serie de *Acacia visco-Erythrina falcata*	12,24	0
BOLTIPA048	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos montanos, Boliviano-Tucumanos	Bosque montano semidecíduo, Boliviano-Tucumano de Tipa y Jacarandá: Serie de *Jacaranda mimosifolia-Tipuana tipu*	48,55	1
BOLTIPA049	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altimontanos y altoandinos Boliviano Tucumanos y Vegetación saxícola altimontana Boliviano-Tucumano	Pajonales y matorrales altimontanos y altoandinos y Vegetación saxícola altimontana Boliviano-Tucumano	83,92	50
BOLTIPA049	1.9.Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos Boliviano-Tucumanos	Khewiñar Boliviano-Tucumano septentrional: Serie de *Berberis chrysacantha-Polylepis neglecta*	72,28	43
BOLTIPA049	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque seco interandino de Soto del Río Caine: Serie de *Senna crassiramea-Schinopsis haenkeana*	11,83	7
BOLTIPA050	17. Other	Vegetación acuática y palustre altoandina de la Puna Xerofítica	Vegetación acuática y palustre altoandina de la Puna Xerofítica	1,31	0
BOLTIPA050	4.7. Subtropical/Tropical High Altitude Grassland	Bofedales altoandinos de la Puna Xerofítica	Bofedales altoandinos de la Puna Xerofítica	74,79	8
BOLTIPA050	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales higrófilos altoandinos de la Puna Xerofítica	Pajonales higrófilos altoandinos de la Puna Xerofítica	7,33	1
BOLTIPA050	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	Pajonal subnival de la Puna Xerofítica noroccidental: Asociación de *Deyeuxia crispa-Deyeuxia deserticola*	258,78	27

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BOLTIPA050	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	39,79	4
BOLTIPA050	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	Vegetación geliturbada subnival de la Puna Xerofítica noroccidental: Comunidad de *Senecio scorzoneraefolius-Xenophyllum lycopodioides*	109,68	12
BOLTIPA050	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tholar de K'oa Thola y Janki del Altiplano centro-sur: *Anthobryum triandrum-Parastrephia lepidophylla*	0,29	0
BOLTIPA050	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tholar de Romero Thola y Janki del Altiplano centro-sur: Asociación de *Anthobryum triandrum-Parastrephia lucida*	6,14	1
BOLTIPA050	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altoandinos de la Puna Xerofítica norte	Pajonales y matorrales altoandinos de la Puna Xerofítica norte	51,24	5
BOLTIPA050	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altoandinos de la Puna Xerofítica norte	Tholar-Pajonal altoandino noroccidental: *Diplostephium cinereum-Parastrephia quadrangularis*	400,79	42
BOLTIPA051	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales altoandinos de la Puna húmeda	Pajonal altoandino de la Puna húmeda	260,09	86
BOLTIPA051	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales higrofíticos altoandinos de la Puna húmeda	Pajonal hidrofíticos altoandino de la Puna húmeda	34,70	12
BOLTIPA051	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación geliturbada subnival de la Puna húmeda	Vegetación subnival geliturbada de la Cordillera de La Paz: Comunidad de *Nototriche mandoniana-Xenophyllum dactylophyllum*	6,26	2
BOLTIPA051	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales y herbazales altimontanos y altoandinos de la Puna Xerofítica oriental	Tolillar de Tara seco del Altiplano centro-norte: Asociación *Lobivia pentlandii-Fabiana densa*	0,07	0
BOLTIPA052	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales altoandinos de la Puna húmeda	Pajonales altoandinos de la Puna húmeda	361,26	14
BOLTIPA052	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación abierta geliturbada subnival de la Puna Xerofítica Septentrional y Oriental	Pajonal subnival de la Puna Xerofitica noroccidental: Asociación de *Deyeuxia crispa-Deyeuxia deserticola*	17,07	1
BOLTIPA052	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación geliturbada subnival de la Puna húmeda	Vegetación subnival geliturbada de la Cordillera de La Paz: Comunidad de *Nototriche mandoniana-Xenophyllum dactylophyllum*	111,95	4
BOLTIPA052	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos xerofíticos interandinos de la Prepuna superior oriental	Arbustal-cardonal puneño interandino del sur de La Paz: Serie de *Oreocereus fossulatus-Kageneckia lanceolata*	629,25	24
BOLTIPA052	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques y arbustales montanos xerícos interandinos de los Yungas	Arbustal espinoso xerofítico montano de los Yungas de La Paz: Serie de *Caesalpinia bangii-Prosopis andicola*	566,15	22
BOLTIPA052	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques y arbustales montanos xerícos interandinos de los Yungas	Arbustal espinoso xerofítico montano de los Yungas Luribay: Serie de *Cleistocactus luribayensis-Prosopis andicola*	255,17	10
BOLTIPA052	3.7. Subtropical/Tropical High Altitude Shrubland	Matorrales higrofilos altoandinos de la Puna Xerofítica (Tolares)	Tolar de K'oa thola y Kachu chiji del Altiplano centro-norte: Asociación de *Muhlenbergia fastigiata* y *Parastrephia lepidophylla*	0,49	0
BOLTIPA052	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altoandinos de la Puna Xerofítica norte	Pajonales y matorrales altoandinos de la Puna Xerofítica norte	0,24	0
BOLTIPA052	17. Other	Antrópico	Antrópico	285,88	11
BOLTIPA052	1.9. Subtropical/Tropical Moist Montane Forest	Bosques bajos y arbustales altimontanos de la Puna húmeda	Bosque puneño de *Polylepis* de la Cordillera de Tres Cruces y Real: Comunidad de *Polylepis pacensis*	320,52	12
BOLTIPA052	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños pluviestacionales subhúmedos basimontanos	Bosque semidecíduo basimontano superior de los Yungas de La Paz: Serie de *Cariniana estrellensis-Schinopsis brasiliensis*	80,73	3
BOLTIPA053	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales altoandinos de la Puna húmeda	Pajonales altoandinos de la Puna húmeda	88,56	7
BOLTIPA053	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación geliturbada subnival de la Puna húmeda	Vegetación subnival geliturbada de la Cordillera de La Paz: Comunidad de *Nototriche mandoniana-Xenophyllum dactylophyllum*	71,96	6
BOLTIPA053	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques bajos xerofíticos interandinos de la Prepuna superior oriental	Arbustal-cardonal puneño interandino del sur de La Paz: Serie de *Oreocereus fossulatus-Kageneckia lanceolata*	89,25	7
BOLTIPA053	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques y arbustales montanos xerícos interandinos de los Yungas	Arbustal espinoso xerofítico montano de los Yungas de La Paz: Serie de *Caesalpinia bangii-Prosopis andicola*	111,88	9

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BOLTIPA053	17. Other	Antrópico	Antrópico	4,68	0
BOLTIPA053	1.9.Subtropical/Tropical Moist Montane Forest	Bosques altimontanos pluviales de los Yungas	Bosque altimontano pluvial de los Yungas de Coroico: Serie de *Ilex teratopis-Podocarpus rusbyi*	103,58	9
BOLTIPA053	1.9.Subtropical/Tropical Moist Montane Forest	Bosques altimontanos pluviestacionales de los Yungas	Bosque altimontano inferior pluviestacionales de los Yungas de Cotacajes: Serie de *Blepharocalyx salicifolius-Podocarpus glomeratus*	6,32	1
BOLTIPA053	1.9.Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos pluviestacionales de los Yungas	Bosque de *Polylepis* altimontano húmedo pluviestacional de los Yungas de Inquisivi: Serie de *Berberis edentata-Polylepis pacensis*	12,48	1
BOLTIPA053	1.9.Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altoandinos pluviales de los Yungas	Bosque yungueño altoandino de *Polylepis pepei*: Serie de *Gynoxys asterotricha-Polylepis pepei*	127,69	11
BOLTIPA053	1.9.Subtropical/Tropical Moist Montane Forest	Bosques montanos pluviestacionales húmedos de los Yungas	Bosque yungueño pluviestacional montano de los Yungas del Boopi y Cotacajes: Serie preliminar de *Clethra cuneata-Weinmannia sorbifolia*	33,68	3
BOLTIPA053	1.9.Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano pluviestacional	80,15	7
BOLTIPA053	1.9.Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano-inferior hiperhúmedo de los Yungas de Coroico y Altamachi-Corani: Serie preliminar de *Ocotea jelskii-Podocarpus oleifolius*	214,09	18
BOLTIPA053	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños pluviestacionales subhúmedos basimontanos	Bosque semidecíduo basimontano superior de los Yungas de La Paz: Serie de *Cariniana estrellensis-Schinopsis brasiliensis*	193,97	16
BOLTIPA053	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños xéricos basimontanos	Bosque yungueño xérico basimontano inferior de los Yungas del Boopi: Serie de *Samaipaticereus inquisivensis-Schinopsis brasiliensis*	70,94	6
BOLTIPA054	1.9.Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano-inferior húmedo de los Yungas de Coroico: Serie de *Prumnopitys harmsiana-Weinmannia pinnata*	42,98	35
BOLTIPA054	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños pluviestacionales subhúmedos basimontanos	Bosque semidecíduo basimontano superior de los Yungas de La Paz: Serie de *Cariniana estrellensis-Schinopsis brasiliensis*	71,10	57
BOLTIPA054	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños xéricos basimontanos	Bosque yungueño xérico basimontano inferior de los Yungas del Boopi: Serie de *Samaipaticereus inquisivensis-Schinopsis brasiliensis*	9,73	8
BOLTIPA055	1.9.Subtropical/Tropical Moist Montane Forest	Bosques altimontanos pluviales de los Yungas	Bosque altimontano pluvial de los Yungas de Coroico: Serie de *Ilex teratopis-Podocarpus rusbyi*	12,14	0
BOLTIPA055	1.9.Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos pluviestacionales de los Yungas	Bosque de *Polylepis* altimontano húmedo pluviestacional de los Yungas de Cochabamba: Serie de *Styloceras columnare-Polylepis lanata*	22,30	1
BOLTIPA055	1.9.Subtropical/Tropical Moist Montane Forest	Bosques montanos pluviestacionales húmedos de los Yungas	Bosque yungueño pluviestacional montano de los Yungas del Boopi y Cotacajes: Serie preliminar de *Clethra cuneata-Weinmannia sorbifolia*	239,62	8
BOLTIPA055	1.9.Subtropical/Tropical Moist Montane Forest	Bosques y palmerales yungueños pluviales basimontanos	Bosque-Palmar yungueño pluvial basimontano: Serie preliminar de *Protium altsonii-Dictyocaryum lamarckianum*	408,27	14
BOLTIPA055	1.9.Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano-inferior húmedo de los Yungas de Coroico: Serie de *Prumnopitys harmsiana-Weinmannia pinnata*	426,35	15
BOLTIPA055	1.9.Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano-inferior húmedo de los Yungas de Coroico: Serie de *Weinmannia crenata-Podocarpus ingensis*	159,92	6
BOLTIPA055	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverde estacionales subandinos del suroeste de Amazonía	Bosque amazónico pluviestacional del subandino norte: Serie de *Pentaplaris davidsmithii-Tetragastris altissima*	37,54	1
BOLTIPA055	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques subandinos del suroeste de la Amazonía	Bosque siempreverde subandino del suroeste de la Amazonía	880,23	31
BOLTIPA055	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños pluviestacionales subhúmedos basimontanos	Bosque semidecíduo basimontano inferior de los Yungas de La Paz: Serie de *Cavanillesia umbellata-Aspidosperma cylindrocarpon*	128,74	5
BOLTIPA055	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños pluviestacionales subhúmedos basimontanos	Bosque semidecíduo basimontano superior de los Yungas de La Paz: Serie de *Cariniana estrellensis-Schinopsis brasiliensis*	406,43	14
BOLTIPA055	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños xéricos basimontanos	Bosque yungueño xérico basimontano inferior de los Yungas del Boopi: Serie de *Samaipaticereus inquisivensis-Schinopsis brasiliensis*	99,35	4
BOLTIPA056	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales altoandinos de la Puna húmeda	Pajonales altoandinos de la Puna húmeda	122,25	11

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BOLTIPA056	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación geliturbada subnival de la Puna húmeda	Vegetación subnival geliturbada de la Cordillera de La Paz: Comunidad de *Nototriche mandoniana-Xenophyllum dactylophyllum*	84,44	7
BOLTIPA056	1.9. Subtropical/Tropical Moist Montane Forest	Bosques altimontanos pluviales de los Yungas	Bosque altimontano pluvial de los Yungas de Coroico: Serie de *Ilex teratopis-Podocarpus rusbyi*	196,69	17
BOLTIPA056	1.9. Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altoandinos pluviales de los Yungas	Bosque yungueño altoandino de *Polylepis pepei*: Serie de *Gynoxys asterotricha-Polylepis pepei*	142,80	12
BOLTIPA056	1.9. Subtropical/Tropical Moist Montane Forest	Bosques siempre verde estacionales yungueños basimontanos	Bosque húmedo estacional basimontano de los Yungas: Serie de *Ladenbergia oblongifolia-Juglans boliviana*	97,44	9
BOLTIPA056	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano pluvial	0,00	0
BOLTIPA056	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano pluviestacional	450,10	39
BOLTIPA056	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños pluviestacionales subhúmedos basimontanos	Bosque semidecíduo basimontano inferior de los Yungas de La Paz: Serie de *Cavanillesia umbellata-Aspidosperma cylindrocarpon*	1,21	0
BOLTIPA056	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños pluviestacionales subhúmedos basimontanos	Bosque semidecíduo basimontano superior de los Yungas de La Paz: Serie de *Cariniana estrellensis-Schinopsis brasiliensis*	49,32	4
BOLTIPA057	17. Other	Vegetación acuática y palustre altoandina de la Puna húmeda	Vegetación acuática y palustre altoandina de la Puna húmeda	2,11	0
BOLTIPA057	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales altoandinos de la Puna húmeda	Pajonales altoandinos de la Puna húmeda	101,11	17
BOLTIPA057	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales higrofíticos altoandinos de la Puna húmeda	Pajonal hidrofíticos altoandino de la Puna húmeda	1,81	0
BOLTIPA057	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación geliturbada subnival de la Puna húmeda	Vegetación subnival geliturbada de la Cordillera de La Paz: Comunidad de *Nototriche mandoniana-Xenophyllum dactylophyllum*	119,82	20
BOLTIPA057	1.9. Subtropical/Tropical Moist Montane Forest	Bosques altimontanos pluviales de los Yungas	Bosque altimontano pluvial de los Yungas de Coroico: Serie de *Ilex teratopis-Podocarpus rusbyi*	80,29	13
BOLTIPA057	1.9. Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altoandinos pluviales de los Yungas	Bosque yungueño altoandino de *Polylepis pepei*: Serie de *Gynoxys asterotricha-Polylepis pepei*	97,46	16
BOLTIPA057	1.9. Subtropical/Tropical Moist Montane Forest	Bosques siempre verde estacionales yungueños basimontanos	Bosque húmedo estacional basimontano de los Yungas: Serie de *Ladenbergia oblongifolia-Juglans boliviana*	77,71	13
BOLTIPA057	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano pluvial del Valle del Zongo: Serie preliminar de *Clusia flaviflora-Weinmannia lechleriana*	83,33	14
BOLTIPA057	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano pluviestacional	39,43	6
BOLTIPA057	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques subandinos del suroeste de la Amazonía	Bosque siempreverde subandino del suroeste de la Amazonía	7,82	1
BOLTIPA058	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales altoandinos de la Puna húmeda	Pajonales altoandinos de la Puna húmeda	2,22	0
BOLTIPA058	1.9. Subtropical/Tropical Moist Montane Forest	Bosques altimontanos pluviales de los Yungas	Bosque altimontano pluvial de los Yungas de Coroico: Serie de *Ilex teratopis-Podocarpus rusbyi*	36,48	3
BOLTIPA058	1.9. Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altoandinos pluviales de los Yungas	Bosque yungueño altoandino de *Polylepis pepei*: Serie de *Gynoxys asterotricha-Polylepis pepei*	28,76	3
BOLTIPA058	1.9. Subtropical/Tropical Moist Montane Forest	Bosques siempre verde estacionales yungueños basimontanos	Bosque húmedo estacional basimontano de los Yungas: Serie de *Ladenbergia oblongifolia-Juglans boliviana*	246,52	22
BOLTIPA058	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano pluvial del Valle del Zongo: Serie preliminar de *Clusia flaviflora-Weinmannia lechleriana*	14,96	1
BOLTIPA058	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano pluviestacional	234,42	21
BOLTIPA058	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano-inferior húmedo de los Yungas de Coroico: Serie de *Weinmannia crenata-Podocarpus ingensis*	159,29	14

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BOLTIPA058	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques subandinos del suroeste de la Amazonía	Bosque siempreverde subandino del suroeste de la Amazonía	378,76	34
BOLTIPA058	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños pluviestacionales subhúmedos basimontanos	Bosque semidecíduo basimontano inferior de los Yungas de La Paz: Serie de *Cavanillesia umbellata-Aspidosperma cylindrocarpon*	8,38	1
BOLTIPA059	17. Other	Vegetación acuática y palustre altoandina de la Puna húmeda	Vegetación acuática y palustre altoandina de la Puna húmeda	75,65	2
BOLTIPA059	4.7. Subtropical/Tropical High Altitude Grassland	Bofedales altoandinos de la Puna húmeda	Bofedales altoandinos de la Puna húmeda	155,65	3
BOLTIPA059	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales altoandinos de la Puna húmeda	Facies de *Tetraglochin cristata* degradadas y sobrepastoreadas	20,54	0
BOLTIPA059	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales altoandinos de la Puna húmeda	Pajonales altoandinos de la Puna húmeda	823,91	17
BOLTIPA059	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales higrofíticos altoandinos de la Puna húmeda	Pajonal hidrofíticos altoandino de la Puna húmeda	201,25	4
BOLTIPA059	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación geliturbada subnival de la Puna húmeda	Vegetación subnival geliturbada de la Cordillera de La Paz: Comunidad de *Nototriche mandoniana-Xenophyllum dactylophyllum*	688,17	15
BOLTIPA059	1.9.Subtropical/Tropical Moist Montane Forest	Bosques altimontanos pluviales de los Yungas	Bosque altimontano pluvial de los Yungas de Apolobamba: Serie de *Schefflera trollii-Weinmannia fagaroides*	5,65	0
BOLTIPA059	1.9.Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos pluviales de los Yungas	Bosque yungueño de *Polylepis* altimontano pluvial de los Yungas de Apolobamba: Serie de *Desfontainia spinosa-Polylepis triacontandra*	209,85	4
BOLTIPA059	1.9.Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos pluviestacionales de los Yungas	Bosque de *Polylepis* altimontano húmedo pluviestacional de los Yungas de Muñecas: Serie de *Styloceras columnare-Polylepis triacontandra*	739,04	16
BOLTIPA059	1.9.Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altoandinos pluviales de los Yungas	Bosque yungueño altoandino de *Polylepis pepei*: Serie de *Gynoxys asterotricha-Polylepis pepei*	15,23	0
BOLTIPA059	1.9.Subtropical/Tropical Moist Montane Forest	Bosques montanos pluviestacionales húmedos de los Yungas	Bosque yungueño montano-inferior pluviestacional de los Yungas de Muñecas: Serie de *Citharexylum laurifolium-Weinmannia crassifolia*	140,95	3
BOLTIPA059	1.9.Subtropical/Tropical Moist Montane Forest	Bosques montanos pluviestacionales húmedos de los Yungas	Bosque yungueño montano-superior pluviestacional de los Yungas de Muñecas: Serie de *Citharexylum laurifolium-Styloceras laurifolium*	136,23	3
BOLTIPA059	1.9.Subtropical/Tropical Moist Montane Forest	Bosques siempre verde estacionales yungueños basimontanos	Bosque húmedo estacional basimontano de los Yungas: Serie de *Ladenbergia oblongifolia-Juglans boliviana*	30,36	1
BOLTIPA059	1.9.Subtropical/Tropical Moist Montane Forest	Bosques siempre verde estacionales yungueños basimontanos	Bosque húmedo estacional basimontano superior de los Yungas de Apolobamba: Serie preliminar de *Myroxylon balsamum-Juglans boliviana*	93,70	2
BOLTIPA059	1.9.Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano-inferior húmedo de los Yungas de Coroico: Serie de *Weinmannia crenata-Podocarpus ingensis*	305,09	6
BOLTIPA059	1.9.Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano-inferior pluvial de los Yungas de Apolobamba: Serie de *Clethra elongata-Podocarpus oleifolius*	172,76	4
BOLTIPA059	1.9.Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano-superior pluvial de los Yungas de Apolobamba: Serie de *Styloceras laurifolium-Weinmannia pinnata*	181,56	4
BOLTIPA059	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques subandinos del suroeste de la Amazonía	Bosque siempreverde subandino del suroeste de la Amazonía	688,53	15
BOLTIPA059	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños pluviestacionales subhúmedos basimontanos	Bosque semidecíduo basimontano inferior de los Yungas de La Paz: Serie de *Cavanillesia umbellata-Aspidosperma cylindrocarpon*	39,33	1
BOLTIPA059	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños pluviestacionales subhúmedos basimontanos	Bosque semidecíduo basimontano superior de los Yungas de Muñecas: Serie de *Ceiba boliviana-Astronium urundeuva*	18,21	0
BOLTIPA060	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales altoandinos de la Puna húmeda	Pajonales altoandinos de la Puna húmeda	121,59	1
BOLTIPA060	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación geliturbada subnival de la Puna húmeda	Vegetación subnival geliturbada de la Cordillera de La Paz: Comunidad de *Nototriche mandoniana-Xenophyllum dactylophyllum*	130,62	1
BOLTIPA060	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Herbazal pantanoso amazónico del Heath-Bajo Madidi	23,60	0

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BOLTIPA060	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	5,25	0
BOLTIPA060	2.2. Moist Savanna	Sabanas arboladas y arbustivas de la alta Amazonía sobre suelos anegables	Sabana arbolado-arbustivas anegable del Heath-Bajo-Madidi: Serie de *Cardiopetalum calophyllum-Xylopia aromatica*	332,93	2
BOLTIPA060	18. Unknown	No observado	No observado	0,35	0
BOLTIPA060	1.9. Subtropical/Tropical Moist Montane Forest	Bosques altimontanos pluviales de los Yungas	Bosque altimontano pluvial de los Yungas de Apolobamba: Serie de *Schefflera trollii-Weinmannia fagaroides*	137,11	1
BOLTIPA060	1.9. Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos pluviales de los Yungas	Bosque yungueño de *Polylepis* altimontano pluvial de los Yungas de Apolobamba: Serie de *Desfontainia spinosa-Polylepis triacontandra*	112,76	1
BOLTIPA060	1.9. Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altoandinos pluviales de los Yungas	Bosque yungueño altoandino de *Polylepis pepei*: Serie de *Gynoxys asterotricha-Polylepis pepei*	127,76	1
BOLTIPA060	1.9. Subtropical/Tropical Moist Montane Forest	Bosques siempre verde estacionales yungueños basimontanos	Bosque húmedo estacional basimontano de los Yungas: Serie de *Ladenbergia oblongifolia-Juglans boliviana*	136,61	1
BOLTIPA060	1.9. Subtropical/Tropical Moist Montane Forest	Bosques siempre verde estacionales yungueños basimontanos	Bosque húmedo estacional basimontano superior de los Yungas de Apolobamba: Serie preliminar de *Myroxylon balsamum-Juglans boliviana*	1.295,87	7
BOLTIPA060	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano pluviestacional	701,97	4
BOLTIPA060	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano-inferior húmedo de los Yungas de Coroico: Serie de *Weinmannia crenata-Podocarpus ingensis*	1.851,70	10
BOLTIPA060	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano-inferior pluvial de los Yungas de Apolobamba: Serie de *Clethra elongata-Podocarpus oleifolius*	744,17	4
BOLTIPA060	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano-superior pluvial de los Yungas de Apolobamba: Serie de *Styloceras laurifolium-Weinmannia pinnata*	210,71	1
BOLTIPA060	1.8. Subtropical/Tropical Swamp Forest	Bosque pantanoso de palmas de la llanura aluvial del sur de la Amazonía	Bosque pantanoso de palmas de la llanura aluvial del sur de la Amazonía	36,69	0
BOLTIPA060	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial de aguas negras estancadas del centro-oeste de Pando: Serie de *Qualea wittrockii-Cariniana domestica*	83,49	0
BOLTIPA060	1.8. Subtropical/Tropical Swamp Forest	Bosques bajos de arenas blancas del Centro-Sur de la Amazonía y Bosques de Tierra Firme depresionada del sur de la Amazonía	Bosque de sartenejal de Tierra Firme depresionadas del Heath-Bajo Madidi	29,04	0
BOLTIPA060	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosques y Palmares inundables de arroyos de aguas claras de Pando	41,29	0
BOLTIPA060	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosque inmaduro de Várzea de aguas fluyentes de Pando: Serie de *Guarea guidonia-Ficus insipida*	5,81	0
BOLTIPA060	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosque maduro de Várzea del piedemonte andino norte: Serie de *Gustavia augusta-Manilkara inundata*	431,42	2
BOLTIPA060	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosque aluvial de aguas negras fluyentes del centro-oeste de Pando: Serie de *Eschweilera albiflora-Macrolobium acaciifolium*	15,74	0
BOLTIPA060	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques del piedemonte andino del suroeste de la Amazonía	Bosque amazónico del glacis preandino norte: Serie de *Quararibea wittii-Dipteryx odorata*	1.622,56	9
BOLTIPA060	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverde estacionales subandinos del suroeste de Amazonía	Bosque amazónico pluviestacional del subandino norte: Serie de *Pentaplaris davidsmithii-Tetragastris altissima*	3.450,05	18
BOLTIPA060	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de Castaña del centro-oeste de Pando sobre suelos oligotróficos: Serie de *Apuleia leiocarpa-Bertholletia excelsa*	29,09	0
BOLTIPA060	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de Tierra Firme del Heath-Bajo Madidi	535,15	3
BOLTIPA060	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes subandinos del suroeste de la Amazonía	Bosque amazónico pluvial subandino del Heath-Alto Madidi: Serie de *Caryocar amygdaliforme-Cedrelinga cateniformis*	2.411,07	13
BOLTIPA060	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques subandinos del suroeste de la Amazonía	Bosque siempreverde subandino del suroeste de la Amazonía	2.776,98	15

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BOLTIPA060	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques y vegetación ribereña del Heath-Bajo Madidi	Bosque y vegetación ribereña del Heath-Bajo Madidi	230,02	1
BOLTIPA060	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños pluviestacionales subhúmedos basimontanos	Bosque semidecíduo basimontano superior de los Yungas de La Paz: Serie de *Cariniana estrellensis-Schinopsis brasiliensis*	900,74	5
BOLTIPA060	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños xéricos basimontanos	Bosque yungueño xérico basimontano inferior de los Yungas de Apolobamba: Serie de *Celtis* cf. *loxensis-Trichilia catigua*	282,50	2
BOLTIPA061	17. Other	Antrópico	Antrópico	8,26	0
BOLTIPA061	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano-inferior húmedo de los Yungas de Coroico: Serie de *Weinmannia crenata-Podocarpus ingensis*	11,40	0
BOLTIPA061	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosque maduro de Várzea del piedemonte andino norte: Serie de *Gustavia augusta-Manilkara inundata*	314,08	8
BOLTIPA061	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques del piedemonte andino del suroeste de la Amazonía	Bosque amazónico del glacis preandino norte: Serie de *Quararibea wittii-Dipteryx odorata*	370,35	9
BOLTIPA061	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverde estacionales subandinos del suroeste de Amazonía	Bosque amazónico pluviestacional del subandino norte: Serie de *Pentaplaris davidsmithii-Tetragastris altissima*	2.810,81	72
BOLTIPA061	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques subandinos del suroeste de la Amazonía	Bosque siempreverde subandino del suroeste de la Amazonía	384,17	10
BOLTIPA061	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños pluviestacionales subhúmedos basimontanos	Bosque semidecíduo basimontano inferior de los Yungas de La Paz: Serie de *Cavanillesia umbellata-Aspidosperma cylindrocarpon*	19,41	0
BOLTIPA062	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónica de aguas blancas mesomineralizadas	3,21	0
BOLTIPA062	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónica de aguas no blancas: mixtas, claras y negras hipomineralizadas a no mineralizadas	0,91	0
BOLTIPA062	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Herbazal pantanoso amazónico del Heath-Bajo Madidi	1.015,13	7
BOLTIPA062	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Herbazal pantanoso de la llanura aluvial de la alta Amazonía	3,50	0
BOLTIPA062	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	51,13	0
BOLTIPA062	2.2. Moist Savanna	Sabanas arboladas inundables de los bajíos del Beni	Pampas de Cosorió: Serie de *Machaerium aristulatum-Erythrina fusca*	8,55	0
BOLTIPA062	2.2. Moist Savanna	Sabanas arboladas y arbustivas de la alta Amazonía sobre suelos anegables	Sabana arbolado-arbustiva anegable de Pando oeste: Serie de *Dipteryx alata-Physocalymma scaberrimum*	0,61	0
BOLTIPA062	2.2. Moist Savanna	Sabanas arboladas y arbustivas de la alta Amazonía sobre suelos anegables	Sabana arbolado-arbustivas anegable del Heath-Bajo-Madidi: Serie de *Cardiopetalum calophyllum-Xylopia aromatica*	3.583,25	26
BOLTIPA062	18. Unknown	No observado	No observado	0,02	0
BOLTIPA062	17. Other	Antrópico	Antrópico	7,19	0
BOLTIPA062	1.8. Subtropical/Tropical Swamp Forest	Bosque pantanoso de palmas de la llanura aluvial del sur de la Amazonía	Bosque pantanoso de palmas de la llanura aluvial del sur de la Amazonía	283,19	2
BOLTIPA062	1.8. Subtropical/Tropical Swamp Forest	Bosque pantanoso de palmas de la llanura aluvial del sur de la Amazonía	Palmar amazónico de aguas negras estancadas de Pando y Beni norte: Serie de *Lueheopsis hoehnei-Mauritia flexuosa*	0,51	0
BOLTIPA062	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial de aguas negras estancadas del centro-oeste de Pando: Serie de *Qualea wittrockii-Cariniana domestica*	406,58	3
BOLTIPA062	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque llanura aluvial de aguas negras estancadas del Heath-Bajo Madidi	222,75	2
BOLTIPA062	1.8. Subtropical/Tropical Swamp Forest	Bosques bajos de arenas blancas del Centro-Sur de la Amazonía y Bosques de Tierra Firme depresionada del sur de la Amazonía	Bosque de sartenejal de Tierra Firme depresionadas del Heath-Bajo Madidi	265,60	2

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BOLTIPA062	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosque pantanoso de arroyos de aguas claras del Heath-Bajo Madidi: Serie de *Licania parviflora-Vochysia divergens*	385,70	3
BOLTIPA062	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosques y Palmares inundables de arroyos de aguas claras de Pando	19,71	0
BOLTIPA062	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Grupo de bosques pantanosos, a menudo con presencia importante de palmas (*Mauritia flexuosa*)	303,32	2
BOLTIPA062	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Palmar inundado de arroyos de aguas claras del centro-oeste de Pando: Serie de *Macrolobium acaciifolium-Mauritia flexuosa*	51,05	0
BOLTIPA062	1.8. Subtropical/Tropical Swamp Forest	Bosques de Várzea de los Llanos del Beni	Bosque de Várzea fragmentado de la llanura aluvial antigua del Beni (Islas de bosque)	0,53	0
BOLTIPA062	1.8. Subtropical/Tropical Swamp Forest	Bosques inmaduros del Beni, inundados por aguas corrientes	Bosques inmaduros del Beni, inundados por aguas corrientes	3,67	0
BOLTIPA062	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosque maduro de Várzea del piedemonte andino norte: Serie de *Gustavia augusta-Manilkara inundata*	18,13	0
BOLTIPA062	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazónia	0,01	0
BOLTIPA062	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosque aluvial de aguas negras fluyentes del centro-oeste de Pando: Serie de *Eschweilera albiflora-Macrolobium acaciifolium*	174,36	1
BOLTIPA062	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosque aluvial de aguas negras fluyentes del norte del Beni: Serie de *Sloanea laxiflora-Eschweilera parvifolia*	538,73	4
BOLTIPA062	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosque de aguas negras fluyentes del Heath-Bajo Madidi	112,10	1
BOLTIPA062	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosque ralo y arbustales abiertos de aguas negras de Pando: Serie preliminar de *Bactris riparia-Macrolobium acaciifolium*	7,92	0
BOLTIPA062	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques del piedemonte andino del suroeste de la Amazonía	Bosque amazónico del glacis preandino norte: Serie de *Quararibea wittii-Dipteryx odorata*	356,63	3
BOLTIPA062	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques del Río Beni	Bosques del Río Beni	311,45	2
BOLTIPA062	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de Castaña del centro-oeste de Pando sobre suelos oligotróficos: Serie de *Apuleia leiocarpa-Bertholletia excelsa*	252,83	2
BOLTIPA062	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de colinas arenosas del noroeste de Pando: Serie provisional de *Phytelephas macrocarpa-Tachigali vasquezii*	2.951,94	22
BOLTIPA062	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de Tierra Firme del Heath-Bajo Madidi	1.479,92	11
BOLTIPA062	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques y vegetación ribereña del Heath-Bajo Madidi	Bosque y vegetación ribereña del Heath-Bajo Madidi	846,08	6
BOLTIPA062	1.6. Subtropical/Tropical Moist Lowland Forest	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	1,14	0
BOLTIPA063	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónico de aguas blancas mesomineralizadas: Pantanos flotantes (yomomos)	4,08	0
BOLTIPA063	18. Unknown	No observado	No observado	29,60	1
BOLTIPA063	17. Other	Antrópico	Antrópico	219,18	7
BOLTIPA063	1.8. Subtropical/Tropical Swamp Forest	Bosque pantanoso de palmas de la llanura aluvial del sur de la Amazonía	Palmar amazónico de aguas negras estancadas de Pando y Beni norte: Serie de *Lueheopsis hoehnei-Mauritia flexuosa*	2,91	0
BOLTIPA063	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial de aguas negras estancadas del centro-oeste de Pando: Serie de *Qualea wittrockii-Cariniana domestica*	39,66	1
BOLTIPA063	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosques y Palmares inundables de arroyos de aguas claras de Pando	12,03	0

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BOLTIPA063	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Palmar inundado de arroyos de aguas claras del centro-oeste de Pando: Serie de *Macrolobium acaciifolium-Mauritia flexuosa*	10,46	0
BOLTIPA063	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosques inundables por aguas blancas fluyentes de Pando	131,89	4
BOLTIPA063	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque inmaduro ralo, tacuarales y arbustales de Várzea de aguas estancadas de Pando	20,06	1
BOLTIPA063	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque maduro de Várzea de aguas estancadas del centro-oeste de Pando: *Hura crepitans-Attalea butyracea*	69,89	2
BOLTIPA063	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques inundables y vegetación riparia de aguas mixtas de la Amazonía	Bosque inundable de aguas mixtas del Río Manuripi: Serie preliminar de *Hevea brasiliensis-Manilkara inundata*	64,90	2
BOLTIPA063	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de Castaña del centro-oeste de Pando sobre suelos oligotróficos: Serie de *Apuleia leiocarpa-Bertholletia excelsa*	377,35	12
BOLTIPA063	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de Castaña y Masaranduva de noroeste de Pando sobre suelos mesotróficos: Serie de *Bertholletia excelsa-Manilkara surinamensis*	625,00	20
BOLTIPA063	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de colinas arenosas del noroeste de Pando: Serie provisional de *Phytelephas macrocarpa-Tachigali vasquezii*	1.192,39	39
BOLTIPA063	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de colinas con Tacuara del noroeste de Pando: Serie de *Guadua glomerata-Tetragastris altissima*	251,51	8
BOLTIPA064	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónica de aguas blancas mesomineralizadas	35,16	0
BOLTIPA064	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónica de aguas no blancas: mixtas, claras y negras hipomineralizadas a no mineralizadas	29,81	0
BOLTIPA064	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónico de aguas blancas mesomineralizadas: Pantanos flotantes (yomomos)	9,76	0
BOLTIPA064	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Herbazal pantanoso de la llanura aluvial de la alta Amazonía	18,74	0
BOLTIPA064	18. Unknown	No observado	No observado	5,95	0
BOLTIPA064	17. Other	Antrópico	Antrópico	85,56	1
BOLTIPA064	1.8. Subtropical/Tropical Swamp Forest	Bosque pantanoso de palmas de la llanura aluvial del sur de la Amazonía	Palmar amazónico de aguas negras estancadas de Pando y Beni norte: Serie de *Lueheopsis hoehnei-Mauritia flexuosa*	186,55	3
BOLTIPA064	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial de aguas negras estancadas del centro-oeste de Pando: Serie de *Qualea wittrockii-Cariniana domestica*	524,50	7
BOLTIPA064	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosques y Palmares inundables de arroyos de aguas claras de Pando	77,48	1
BOLTIPA064	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Grupo de bosques pantanosos, a menudo con presencia importante de palmas (*Mauritia flexuosa*)	272,91	4
BOLTIPA064	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Palmar inundado de arroyos de aguas claras del centro-oeste de Pando: Serie de *Macrolobium acaciifolium-Mauritia flexuosa*	239,84	3
BOLTIPA064	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosque inmaduro de Várzea de aguas fluyentes de Pando: Serie de *Guarea guidonia-Ficus insipida*	29,15	0
BOLTIPA064	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosque maduro de Várzea de aguas fluyentes de Pando: Serie de *Manilkara inundata-Pouteria bilocularis*	30,20	0
BOLTIPA064	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosques inundables por aguas blancas fluyentes de Pando	291,91	4
BOLTIPA064	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosque aluvial de aguas negras fluyentes del centro-oeste de Pando: Serie de *Eschweilera albiflora-Macrolobium acaciifolium*	110,62	1
BOLTIPA064	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosque ralo y arbustales abiertos de aguas negras de Pando: Serie preliminar de *Bactris riparia-Macrolobium acaciifolium*	46,97	1

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BOLTIPA064	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Cañuelar ribereño de aguas negras de Pando: Comunidades de *Panicum dichotomiflorum* y de *Hymenachne donacifolia-Oryza grandiglumis*	5,02	0
BOLTIPA064	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque inmaduro ralo, tacuarales y arbustales de Várzea de aguas estancadas de Pando	3,56	0
BOLTIPA064	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque maduro de Várzea de aguas estancadas del centro-oeste de Pando: *Hura crepitans-Attalea butyracea*	624,03	8
BOLTIPA064	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques del piedemonte andino del suroeste de la Amazonía	Bosque amazónico del glacis preandino norte: Serie de *Quararibea wittii-Dipteryx odorata*	2,27	0
BOLTIPA064	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques inundables y vegetación riparia de aguas mixtas de la Amazonía	Bosque inundable de aguas mixtas del Río Manuripi: Serie preliminar de *Hevea brasiliensis-Manilkara inundata*	108,10	1
BOLTIPA064	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de Castaña del centro-oeste de Pando sobre suelos oligotróficos: Serie de *Apuleia leiocarpa-Bertholletia excelsa*	210,38	3
BOLTIPA064	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de colinas arenosas del noroeste de Pando: Serie provisional de *Phytelephas macrocarpa-Tachigali vasquezii*	4.452,80	60
BOLTIPA064	1.6. Subtropical/Tropical Moist Lowland Forest	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	2,51	0
BOLTIPA064	1.6. Subtropical/Tropical Moist Lowland Forest	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	Complejo ripario sucesional de aguas blancas del piedemonte andino norte	0,45	0
BOLTIPA065	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónica de aguas blancas mesomineralizadas	3,63	0
BOLTIPA065	2.2. Moist Savanna	Sabanas arboladas y arbustivas de la alta Amazonía sobre suelos anegables	Sabana arbolado-arbustiva anegable de Pando oeste: Serie de *Dipteryx alata-Physocalymma scaberrimum*	5,30	0
BOLTIPA065	18. Unknown	No observado	No observado	0,28	0
BOLTIPA065	17. Other	Antrópico	Antrópico	200,89	4
BOLTIPA065	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial de aguas negras estancadas del centro-oeste de Pando: Serie de *Qualea wittrockii-Cariniana domestica*	50,12	1
BOLTIPA065	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial de aguas negras estancadas del este de Pando: Serie de *Xylopia spruceana-Lueheopsis althaeiflora*	262,00	6
BOLTIPA065	1.8. Subtropical/Tropical Swamp Forest	Bosques bajos de arenas blancas del Centro-Sur de la Amazonía y Bosques de Tierra Firme depresionada del sur de la Amazonía	Bosque bajo de arenas blancas del Centro-Sur de la Amazonía y Bosques de Tierra Firme depresionada del sur de la Amazonía	486,85	11
BOLTIPA065	1.8. Subtropical/Tropical Swamp Forest	Bosques bajos de arenas blancas del Centro-Sur de la Amazonía y Bosques de Tierra Firme depresionada del sur de la Amazonía	Chaparral de sartenejal sobre arenas blancas de suelos poco profundos, del este de Pando: Serie de *Jacaranda campinae-Qualea albiflora*	20,93	0
BOLTIPA065	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosques y Palmares inundables de arroyos de aguas claras de Pando	120,96	3
BOLTIPA065	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Grupo de bosques pantanosos, a menudo con presencia importante de palmas (*Mauritia flexuosa*)	169,24	4
BOLTIPA065	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Palmar inundado de arroyos de aguas claras del centro-oeste de Pando: Serie de *Macrolobium acaciifolium-Mauritia flexuosa*	129,65	3
BOLTIPA065	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosques inundables por aguas blancas fluyentes de Pando	8,61	0
BOLTIPA065	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosque aluvial de aguas negras fluyentes del noroeste Pando: Serie de *Campsiandra chigo-montero-Couratari tenuicarpa*	100,52	2
BOLTIPA065	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque inmaduro ralo, tacuarales y arbustales de Várzea de aguas estancadas de Pando	0,90	0
BOLTIPA065	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque maduro de Várzea de aguas estancadas del centro-oeste de Pando: *Hura crepitans-Attalea butyracea*	45,14	1
BOLTIPA065	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques inundables y vegetación riparia de aguas mixtas de la Amazonía	Bosque inundable de aguas mixtas de Alto Río Abuná: Serie de *Eschweilera ovalifolia-Dialium guianense*	38,17	1

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BOLTIPA065	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverde estacionales del Centro-Sur de la Amazonía	Bosque amazónico de Cusi y Morado de Pando oriental: *Attalea speciosa-Peltogyne heterophylla*	1,01	0
BOLTIPA065	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de Castaña del centro-oeste de Pando sobre suelos oligotróficos: Serie de *Apuleia leiocarpa-Bertholletia excelsa*	2.548,91	56
BOLTIPA065	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de colinas arenosas del noroeste de Pando: Serie provisional de *Phytelephas macrocarpa-Tachigali vasquezii*	380,65	8
BOLTIPA066	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónica de aguas blancas mesomineralizadas	23,35	1
BOLTIPA066	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónica de aguas no blancas: mixtas, claras y negras hipomineralizadas a no mineralizadas	7,99	0
BOLTIPA066	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Herbazal pantanoso de la llanura aluvial de la alta Amazonía	9,15	0
BOLTIPA066	17. Other	Antrópico	Antrópico	117,80	6
BOLTIPA066	1.8. Subtropical/Tropical Swamp Forest	Bosque pantanoso de palmas de la llanura aluvial del sur de la Amazonía	Palmar amazónico de aguas negras estancadas de Pando y Beni norte: Serie de *Lueheopsis hoehnei-Mauritia flexuosa*	31,39	2
BOLTIPA066	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial de aguas negras estancadas del centro-oeste de Pando: Serie de *Qualea wittrockii-Cariniana domestica*	188,93	9
BOLTIPA066	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosques y Palmares inundables de arroyos de aguas claras de Pando	3,07	0
BOLTIPA066	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Grupo de bosques pantanosos, a menudo con presencia importante de palmas (*Mauritia flexuosa*)	162,14	8
BOLTIPA066	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Palmar inundado de arroyos de aguas claras del centro-oeste de Pando: Serie de *Macrolobium acaciifolium-Mauritia flexuosa*	53,61	3
BOLTIPA066	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosque maduro de Várzea de aguas fluyentes de Pando: Serie de *Manilkara inundata-Pouteria bilocularis*	7,42	0
BOLTIPA066	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosques inundables por aguas blancas fluyentes de Pando	72,60	3
BOLTIPA066	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosque aluvial de aguas negras fluyentes del centro-oeste de Pando: Serie de *Eschweilera albiflora-Macrolobium acaciifolium*	13,08	1
BOLTIPA066	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque inmaduro ralo, tacuarales y arbustales de Várzea de aguas estancadas de Pando	50,85	2
BOLTIPA066	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque maduro de Várzea de aguas estancadas del centro-oeste de Pando: *Hura crepitans-Attalea butyracea*	168,47	8
BOLTIPA066	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques inundables y vegetación riparia de aguas mixtas de la Amazonía	Bosque inundable de aguas mixtas del Río Manuripi: Serie preliminar de *Hevea brasiliensis-Manilkara inundata*	14,80	1
BOLTIPA066	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de Castaña del centro-oeste de Pando sobre suelos oligotróficos: Serie de *Apuleia leiocarpa-Bertholletia excelsa*	36,26	2
BOLTIPA066	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de colinas arenosas del noroeste de Pando: Serie provisional de *Phytelephas macrocarpa-Tachigali vasquezii*	1.116,58	54
BOLTIPA066	1.6. Subtropical/Tropical Moist Lowland Forest	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	0,04	0
BOLTIPA067	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónica de aguas no blancas: mixtas, claras y negras hipomineralizadas a no mineralizadas	1,06	0
BOLTIPA067	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónico de aguas blancas mesomineralizadas: Pantanos flotantes (yomomos)	8,48	0
BOLTIPA067	18. Unknown	No observado	No observado	3,13	0
BOLTIPA067	17. Other	Antrópico	Antrópico	201,73	3

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BOLTIPA067	1.8. Subtropical/Tropical Swamp Forest	Bosque pantanoso de palmas de la llanura aluvial del sur de la Amazonía	Palmar amazónico de aguas negras estancadas de Pando y Beni norte: Serie de *Lueheopsis hoehnei-Mauritia flexuosa*	159,36	3
BOLTIPA067	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial de aguas negras estancadas del centro-oeste de Pando: Serie de *Qualea wittrockii-Cariniana domestica*	429,17	7
BOLTIPA067	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosques y Palmares inundables de arroyos de aguas claras de Pando	150,54	2
BOLTIPA067	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Grupo de bosques pantanosos, a menudo con presencia importante de palmas (*Mauritia flexuosa*)	283,10	4
BOLTIPA067	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Palmar inundado de arroyos de aguas claras del centro-oeste de Pando: Serie de *Macrolobium acaciifolium-Mauritia flexuosa*	0,04	0
BOLTIPA067	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosques inundables por aguas blancas fluyentes de Pando	311,95	5
BOLTIPA067	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosque aluvial de aguas negras fluyentes del centro-oeste de Pando: Serie de *Eschweilera albiflora-Macrolobium acaciifolium*	185,52	3
BOLTIPA067	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosque ralo y arbustales abiertos de aguas negras de Pando: Serie preliminar de *Bactris riparia-Macrolobium acaciifolium*	5,20	0
BOLTIPA067	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque inmaduro ralo, tacuarales y arbustales de Várzea de aguas estancadas de Pando	88,39	1
BOLTIPA067	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque maduro de Várzea de aguas estancadas del centro-oeste de Pando: *Hura crepitans-Attalea butyracea*	64,16	1
BOLTIPA067	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques inundables y vegetación riparia de aguas mixtas de la Amazonía	Bosque inundable de aguas mixtas del Río Manuripi: Serie preliminar de *Hevea brasiliensis-Manilkara inundata*	62,36	1
BOLTIPA067	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de Castaña del centro-oeste de Pando sobre suelos oligotróficos: Serie de *Apuleia leiocarpa-Bertholletia excelsa*	134,94	2
BOLTIPA067	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de colinas arenosas del noroeste de Pando: Serie provisional de *Phytelephas macrocarpa-Tachigali vasquezii*	4.231,35	67
BOLTIPA068	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónica de aguas blancas mesomineralizadas	53,37	3
BOLTIPA068	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónica de aguas no blancas: mixtas, claras y negras hipomineralizadas a no mineralizadas	77,00	4
BOLTIPA068	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónico de aguas blancas mesomineralizadas: Pantanos flotantes (yomomos)	62,01	3
BOLTIPA068	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Herbazal pantanoso de la llanura aluvial de la alta Amazonía	11,72	1
BOLTIPA068	17. Other	Antrópico	Antrópico	51,59	3
BOLTIPA068	1.8. Subtropical/Tropical Swamp Forest	Bosque pantanoso de palmas de la llanura aluvial del sur de la Amazonía	Palmar amazónico de aguas negras estancadas de Pando y Beni norte: Serie de *Lueheopsis hoehnei-Mauritia flexuosa*	8,77	0
BOLTIPA068	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial de aguas negras estancadas del centro-oeste de Pando: Serie de *Qualea wittrockii-Cariniana domestica*	120,80	6
BOLTIPA068	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosques y Palmares inundables de arroyos de aguas claras de Pando	11,43	1
BOLTIPA068	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Grupo de bosques pantanosos, a menudo con presencia importante de palmas (*Mauritia flexuosa*)	20,05	1
BOLTIPA068	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Palmar inundado de arroyos de aguas claras del centro-oeste de Pando: Serie de *Macrolobium acaciifolium-Mauritia flexuosa*	2,89	0
BOLTIPA068	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosque inmaduro de Várzea de aguas fluyentes de Pando: Serie de *Guarea guidonia-Ficus insipida*	98,35	5
BOLTIPA068	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosques inundables por aguas blancas fluyentes de Pando	471,33	23

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BOLTIPA068	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque inmaduro ralo, tacuarales y arbustales de Várzea de aguas estancadas de Pando	155,34	8
BOLTIPA068	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque maduro de Várzea de aguas estancadas del centro-oeste de Pando: *Hura crepitans-Attalea butyracea*	346,66	17
BOLTIPA068	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de Castaña del centro-oeste de Pando sobre suelos oligotróficos: Serie de *Apuleia leiocarpa-Bertholletia excelsa*	16,39	1
BOLTIPA068	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de colinas arenosas del noroeste de Pando: Serie provisional de *Phytelephas macrocarpa-Tachigali vasquezii*	496,98	25
BOLTIPA068	1.6. Subtropical/Tropical Moist Lowland Forest	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	19,90	1
BOLTIPA069	18. Unknown	No observado	No observado	2,47	0
BOLTIPA069	17. Other	Antrópico	Antrópico	29,98	0
BOLTIPA069	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial de aguas negras estancadas del centro-oeste de Pando: Serie de *Qualea wittrockii-Cariniana domestica*	4,39	0
BOLTIPA069	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial de aguas negras estancadas del este de Pando: Serie de *Xylopia spruceana-Lueheopsis althaeiflora*	2.253,24	34
BOLTIPA069	1.8. Subtropical/Tropical Swamp Forest	Bosques bajos de arenas blancas del Centro-Sur de la Amazonía y Bosques de Tierra Firme depresionada del sur de la Amazonía	Bosque bajo de arenas blancas del Centro-Sur de la Amazonía y Bosques de Tierra Firme depresionada del sur de la Amazonía	766,69	12
BOLTIPA069	1.8. Subtropical/Tropical Swamp Forest	Bosques bajos de arenas blancas del Centro-Sur de la Amazonía y Bosques de Tierra Firme depresionada del sur de la Amazonía	Chaparral de sartenejal sobre arenas blancas de suelos poco profundos, del este de Pando: Serie de *Jacaranda campinae-Qualea albiflora*	144,38	2
BOLTIPA069	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosques y Palmares inundables de arroyos de aguas claras de Pando	382,98	6
BOLTIPA069	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Grupo de bosques pantanosos, a menudo con presencia importante de palmas (*Mauritia flexuosa*)	8,79	0
BOLTIPA069	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Palmar inundado de arroyos de aguas claras del centro-oeste de Pando: Serie de *Macrolobium acaciifolium-Mauritia flexuosa*	116,66	2
BOLTIPA069	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosque aluvial de aguas negras fluyentes del noroeste Pando: Serie de *Campsiandra chigo-montero-Couratari tenuicarpa*	169,15	3
BOLTIPA069	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques inundables y vegetación riparia de aguas mixtas de la Amazonía	Bosque inundable de aguas mixtas de Alto Río Abuná: Serie de *Eschweilera ovalifolia-Dialium guianense*	119,89	2
BOLTIPA069	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverde estacionales del Centro-Sur de la Amazonía	Bosque amazónico de Cusi y Morado de Pando oriental: *Attalea speciosa-Peltogyne heterophylla*	2114,97	32
BOLTIPA069	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de Castaña del centro-oeste de Pando sobre suelos oligotróficos: Serie de *Apuleia leiocarpa-Bertholletia excelsa*	492,75	7
BOLTIPA070	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónica de aguas no blancas: mixtas, claras y negras hipomineralizadas a no mineralizadas	11,39	0
BOLTIPA070	18. Unknown	No observado	No observado	33,58	1
BOLTIPA070	17. Other	Antrópico	Antrópico	20,38	1
BOLTIPA070	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial de aguas negras estancadas del este de Pando: Serie de *Xylopia spruceana-Lueheopsis althaeiflora*	719,23	20
BOLTIPA070	1.8. Subtropical/Tropical Swamp Forest	Bosques bajos de arenas blancas del Centro-Sur de la Amazonía y Bosques de Tierra Firme depresionada del sur de la Amazonía	Bosque bajo de arenas blancas del Centro-Sur de la Amazonía y Bosques de Tierra Firme depresionada del sur de la Amazonía	657,23	18
BOLTIPA070	1.8. Subtropical/Tropical Swamp Forest	Bosques bajos de arenas blancas del Centro-Sur de la Amazonía y Bosques de Tierra Firme depresionada del sur de la Amazonía	Chaparral de sartenejal sobre arenas blancas de suelos poco profundos, del este de Pando: Serie de *Jacaranda campinae-Qualea albiflora*	213,95	6
BOLTIPA070	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosques y Palmares inundables de arroyos de aguas claras de Pando	108,67	3

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BOLTIPA070	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Palmar inundado de arroyos de aguas claras del centro-oeste de Pando: Serie de *Macrolobium acaciifolium-Mauritia flexuosa*	31,90	1
BOLTIPA070	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosques inundables por aguas blancas fluyentes de Pando	34,88	1
BOLTIPA070	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosque aluvial de aguas negras fluyentes del noroeste Pando: Serie de *Campsiandra chigo-montero-Couratari tenuicarpa*	144,68	4
BOLTIPA070	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques inundables y vegetación riparia de aguas mixtas de la Amazonía	Bosque inundable de aguas mixtas de Alto Río Abuná: Serie de *Eschweilera ovalifolia-Dialium guianense*	67,59	2
BOLTIPA070	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverde estacionales del Centro-Sur de la Amazonía	Bosque amazónico de Cusi y Morado de Pando oriental: *Attalea speciosa-Peltogyne heterophylla*	1.592,51	44
BOLTIPA070	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de Tierra Firme del Heath-Bajo Madidi	3,49	0
BOLTIPA071	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Curichis y yomomales	Curichis y yomomales	32,72	1
BOLTIPA071	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónica de aguas blancas mesomineralizadas	3,95	0
BOLTIPA071	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónico de aguas blancas mesomineralizadas: Pantanos flotantes (yomomos)	0,00	0
BOLTIPA071	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Herbazal pantanoso de la llanura aluvial de la alta Amazonía	27,11	1
BOLTIPA071	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Colchas de Cañuela Hueca y Cortadera de Yomomo: Comunidad de *Oxycaryum cubense-Paspalum repens*	10,81	0
BOLTIPA071	2.1. Dry Savanna	Cerrado de la Chiquitania y el Beni	Cerrado del Beni noreste: Serie preliminar de *Hirtella gracilipes-Caryocar brasiliensis*	556,18	11
BOLTIPA071	18. Unknown	No observado	No observado	0,03	0
BOLTIPA071	17. Other	Antrópico	Antrópico	18,91	0
BOLTIPA071	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial de aguas negras estancadas del centro-oeste de Pando: Serie de *Qualea wittrockii-Cariniana domestica*	8,28	0
BOLTIPA071	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial de aguas negras estancadas del este de Pando: Serie de *Xylopia spruceana-Lueheopsis althaeiflora*	11,09	0
BOLTIPA071	1.8. Subtropical/Tropical Swamp Forest	Bosques bajos de arenas blancas del Centro-Sur de la Amazonía y Bosques de Tierra Firme depresionada del sur de la Amazonía	Bosque bajo de arenas blancas del Centro-Sur de la Amazonía y Bosques de Tierra Firme depresionada del sur de la Amazonía	986,08	20
BOLTIPA071	1.8. Subtropical/Tropical Swamp Forest	Bosques bajos de arenas blancas del Centro-Sur de la Amazonía y Bosques de Tierra Firme depresionada del sur de la Amazonía	Chaparral de sartenejal sobre arenas blancas de suelos poco profundos, del este de Pando: Serie de *Jacaranda campinae-Qualea albiflora*	13,27	0
BOLTIPA071	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosque de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	61,63	1
BOLTIPA071	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosques y Palmares inundables de arroyos de aguas claras de Pando	43,05	1
BOLTIPA071	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Grupo de bosques pantanosos, a menudo con presencia importante de palmas (*Mauritia flexuosa*)	3,97	0
BOLTIPA071	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas mixtas del Suroeste de la Amazonía	Bosque ribereño de aguas mixtas del Beni noreste: Serie de *Vochysia divergens-Eschweilera parvifolia*	6,91	0
BOLTIPA071	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosque aluvial de aguas negras fluyentes del norte del Beni: Serie de *Sloanea laxiflora-Eschweilera parvifolia*	20,51	0
BOLTIPA071	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	16,74	0
BOLTIPA071	1.8. Subtropical/Tropical Swamp Forest	Bosques pantanosos de palmas de la llanura aluvial del sur de la Amazonía	Palmares pantanosos de Palma Real del Beni norte: Serie de *Lueheopsis hoehnei-Mauritia flexuosa*	0,61	0

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BOLTIPA071	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques inundables y vegetación riparia de aguas mixtas de la Amazonía	Bosque inundable de aguas mixtas del Bajo Río Yata	737,78	15
BOLTIPA071	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de Castaña del centro-oeste de Pando sobre suelos oligotróficos: Serie de *Apuleia leiocarpa-Bertholletia excelsa*	1.101,15	22
BOLTIPA071	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de colinas arenosas del noroeste de Pando: Serie provisional de *Phytelephas macrocarpa-Tachigali vasquezii*	1.257,64	25
BOLTIPA071	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico pluviestacional sin Castaña, del Beni noroeste: Serie preliminar de *Sloanea laxiflora-Apuleia leiocarpa*	67,88	1
BOLTIPA072	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Curichis y yomomales	Curichis y yomomales	1.505,31	18
BOLTIPA072	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Geocomplejo de las sabanas oligotróficas del Beni, transicionales al Cerrado	Geocomplejo de las sabanas oligotróficas del Beni, transicionales al Cerrado	1.081,24	13
BOLTIPA072	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Herbazal pantanoso de la llanura aluvial de la alta Amazonía	3,95	0
BOLTIPA072	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Colchas de Cañuela Hueca y Cortadera de Yomomo: Comunidad de *Oxycaryum cubense-Paspalum repens*	56,37	1
BOLTIPA072	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	78,04	1
BOLTIPA072	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Vegetación de cuerpos de agua libre "Taropales y Sicuanales"	1.222,98	14
BOLTIPA072	2.2. Moist Savanna	Cerradão mal drenado de las semialturas oligotróficas del Beni	Bosque bajo mal drenado del Beni occidental transicional al Cerrado: Serie preliminar de *Myrsine umbellata-Terminalia argentea*	5,68	0
BOLTIPA072	2.2. Moist Savanna	Pantanos (Curichis y Yomomales) del Oeste del Beni	Pantanos (Curichis y Yomomales) del Oeste del Beni	174,00	2
BOLTIPA072	2.2. Moist Savanna	Sabanas arboladas inundables de los bajíos del Beni	Pampa de Guayumequi y Cupesí o Asotocosi: Serie de *Bergeronia sericea-Albizia inundata*	2,68	0
BOLTIPA072	2.2. Moist Savanna	Sabanas herbáceas mesotróficas estacionalmente inundada del Beni	Sabanas herbáceas mesotróficas estacionalmente inundada del Beni	33,04	0
BOLTIPA072	2.2. Moist Savanna	Sabanas herbáceas oligotróficas estacionalmente inundadas de la Chiquitania y el Beni	Pampa de bajío de Paja morada: Comunidad de *Arundinella hispida-Andropogon virgatus*	16,63	0
BOLTIPA072	2.2. Moist Savanna	Sabanas herbáceas oligotróficas estacionalmente inundadas de la Chiquitania y el Beni	Sabanas oligotróficas de bajíos de llanura aluvial	8,22	0
BOLTIPA072	2.2. Moist Savanna	Sabanas herbáceas oligotróficas estacionalmente inundadas de la Chiquitania y el Beni	Sabanas oligrotróficas de bajíos de llanura aluvial	10,36	0
BOLTIPA072	2.1. Dry Savanna	Cerrado de la Chiquitania y el Beni	Cerrado del Beni noreste: Serie de *Hirtella gracilipes-Caryocar brasiliensis*	34,52	0
BOLTIPA072	2.1. Dry Savanna	Cerrado de la Chiquitania y el Beni	Cerrado del Beni noreste: Serie preliminar de *Hirtella gracilipes-Caryocar brasiliensis*	2.524,49	30
BOLTIPA072	2.1. Dry Savanna	Cerrado de la Chiquitania y el Beni	Cerrado del Beni noroeste: Serie de *Cariniana multiflora-Caryocar brasiliensis*	83,07	1
BOLTIPA072	2.1. Dry Savanna	Sabanas abiertas higrofíticas de las semialturas del Beni y la Chiquitania	Sabana herbácea mesotrófica de las semialturas	30,62	0
BOLTIPA072	2.1. Dry Savanna	Sabanas higrofíticas con montículos del Cerrado	Sabana higrofítica con montículos del Cerrado	91,02	1
BOLTIPA072	18. Unknown	No observado	No observado	0,00	0
BOLTIPA072	17. Other	Antrópico	Antrópico	9,36	0
BOLTIPA072	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosque de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	3,02	0

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BOLTIPA072	1.8. Subtropical/Tropical Swamp Forest	Bosques inmaduros del Beni, inundados por aguas corrientes	Bosques inmaduros del Beni, inundados por aguas corrientes	16,32	0
BOLTIPA072	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas mixtas del Suroeste de la Amazonía	Bosque ribereño de aguas mixtas del Beni noreste: Serie de *Vochysia divergens-Eschweilera parvifolia*	247,02	3
BOLTIPA072	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	121,29	1
BOLTIPA072	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque inundado por aguas blancas estancadas del suroeste de la Amazonía	15,88	0
BOLTIPA072	1.8. Subtropical/Tropical Swamp Forest	Bosques pantanosos de palmas de la llanura aluvial del sur de la Amazonía	Palmares pantanosos de Palma Real del Beni norte: Serie de *Lueheopsis hoehnei-Mauritia flexuosa*	804,43	9
BOLTIPA072	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de aguas blancas del Mamoré-Ibare-Bajo Apere	Bosque de aguas blancas del Mamoré-Ibare-Bajo Apere	239,14	3
BOLTIPA072	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de galería de los arroyos del Beni	Bosque de galería de los arroyos del Beni	80,28	1
BOLTIPA072	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico pluviestacional sin Castaña, del Beni noroeste: Serie preliminar de *Sloanea laxiflora-Apuleia leiocarpa*	1,56	0
BOLTIPA072	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos semidecíduos de la Chiquitania y el Beni	Bosque de Aliso y Curupaú de las semialturas del Beni noroeste transicional al Cerrado: Serie de *Vochysia divergens-Anadenanthera colubrina*	14,90	0
BOLTIPA073	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Curichis y yomomales	Curichis y yomomales	176,80	1
BOLTIPA073	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Geocomplejo de las sabanas oligotróficas del Beni, transicionales al Cerrado	Geocomplejo de las sabanas oligotróficas del Beni, transicionales al Cerrado	70,84	0
BOLTIPA073	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónica de aguas blancas mesomineralizadas	1,20	0
BOLTIPA073	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónica de aguas no blancas: mixtas, claras y negras hipomineralizadas a no mineralizadas	8,03	0
BOLTIPA073	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Herbazal pantanoso amazónico del Itenéz-Bajo Paraguá	27,25	0
BOLTIPA073	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Herbazal pantanoso de la llanura aluvial de la alta Amazonía	31,04	0
BOLTIPA073	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Colchas de Cañuela Hueca y Cortadera de Yomomo: Comunidad de *Oxycaryum cubense-Paspalum repens*	22,09	0
BOLTIPA073	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	784,12	5
BOLTIPA073	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Vegetación de cuerpos de agua libre "Taropales y Sicuanales"	280,30	2
BOLTIPA073	2.2. Moist Savanna	Sabanas abiertas higrofíticas de las semialturas del Beni y la Chiquitania	Pampa de semialtura de Gramalote y Paja toruna: Comunidad de *Paspalum plicatulum-Paspalum virgatum*	1,22	0
BOLTIPA073	2.2. Moist Savanna	Sabanas abiertas higrofíticas de las semialturas del Beni y la Chiquitania	Pampa de semialtura de Paja toruna con Tacuarilla: Comunidad de *Panicum tricholaenoides-Paspalum virgatum*	25,18	0
BOLTIPA073	2.2. Moist Savanna	Sabanas abiertas higrofíticas de las semialturas del Beni y la Chiquitania	Sabana herbácea mesotrófica de las semialturas	62,60	0
BOLTIPA073	2.2. Moist Savanna	Sabanas abiertas higrofíticas de las semialturas del Beni y la Chiquitania	Sabanas herbáceas oligrotróficas de las semialturas	30,81	0
BOLTIPA073	2.2. Moist Savanna	Cerradão mal drenado de las semialturas oligotróficas del Beni	Bosque bajo mal drenado del Beni occidental transicional al Cerrado: Serie de *Hymenaea courbaril-Vochysia divergens*	0,15	0
BOLTIPA073	2.2. Moist Savanna	Cerradão mal drenado de las semialturas oligotróficas del Beni	Bosque bajo mal drenado del Beni suroriental: Serie de *Calycophyllum spruceanum-Tabebuia heptaphylla*	0,49	0
BOLTIPA073	2.2. Moist Savanna	Cerradão mal drenado de las semialturas oligotróficas del Beni	Tajibal abierto anegable transicional al Cerrado del Beni: Serie de *Byrsonima orbignyana-Tabebuia heptaphylla*	6,54	0

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BOLTIPA073	2.2. Moist Savanna	Palmares y sabanas arboladas inundables de las semialturas sódico-mesotróficas del Beni	Sabanas de encharcamiento alcalinas	316,08	2
BOLTIPA073	2.2. Moist Savanna	Palmares y sabanas arboladas inundables de las semialturas sódico-mesotróficas del Beni	Tajibar-palmar abierto del Beni central: Serie de *Combretum lanceolatum-Copernicia alba*	92,80	1
BOLTIPA073	2.2. Moist Savanna	Palmares y sabanas arboladas inundables de las semialturas sódico-mesotróficas del Beni	Tajibar-palmar abierto del Beni central: Serie de *Combretum laxum-Copernicia alba*	27,52	0
BOLTIPA073	2.2. Moist Savanna	Pantanos	Pantanos	603,72	4
BOLTIPA073	2.2. Moist Savanna	Pantanos (Curichis y Yomomales) del Oeste del Beni	Pantanos (Curichis y Yomomales) del Oeste del Beni	67,47	0
BOLTIPA073	2.2. Moist Savanna	Sabanas arboladas inundables de los bajíos del Beni	Pampa de Guayumequi y Cupesí o Asotocosi: Serie de *Bergeronia sericea-Albizia inundata*	51,08	0
BOLTIPA073	2.2. Moist Savanna	Sabanas arboladas inundables de los bajíos del Beni	Pampas de Cosorió: Serie de *Machaerium aristulatum-Erythrina fusca*	224,79	1
BOLTIPA073	2.2. Moist Savanna	Sabanas herbáceas mesotróficas estacionalmente inundada del Beni	Cañuelar de bajío de Cañuela Blanca: Comunidad de *Acroceras zizanioides-Paspalum fasciculatum*	133,99	1
BOLTIPA073	2.2. Moist Savanna	Sabanas herbáceas mesotróficas estacionalmente inundada del Beni	Cañuelar de bajío de Cañuela Morada: Comunidad de *Hymenachne amplexicaulis*	6,51	0
BOLTIPA073	2.2. Moist Savanna	Sabanas herbáceas mesotróficas estacionalmente inundada del Beni	Cañuelar de Cañuela bruta y Cortadera: Comunidad de *Rhynchospora corymbosa-Panicum mertensii*	13,56	0
BOLTIPA073	2.2. Moist Savanna	Sabanas herbáceas mesotróficas estacionalmente inundada del Beni	Sabanas herbáceas mesotróficas estacionalmente inundada del Beni	397,39	2
BOLTIPA073	2.2. Moist Savanna	Sabanas herbáceas oligotróficas estacionalmente inundadas de la Chiquitania y el Beni	Pampa de bajío de Paja fila: Comunidad de *Hypogynium virgatum- Saccharum trinii*	2,43	0
BOLTIPA073	2.2. Moist Savanna	Sabanas herbáceas oligotróficas estacionalmente inundadas de la Chiquitania y el Beni	Pampa de Pasto bajío y Cortadera: Comunidad de *Coelorachis aurita-Rhynchospora trispicata*	14,69	0
BOLTIPA073	2.2. Moist Savanna	Sabanas herbáceas oligotróficas estacionalmente inundadas de la Chiquitania y el Beni	Sabanas inundables por aguas mixtas, con sabanas de encharcamiento no alcalinas, del Yacuma-Rapulo	115,07	1
BOLTIPA073	2.2. Moist Savanna	Sabanas herbáceas oligotróficas estacionalmente inundadas de la Chiquitania y el Beni	Sabanas oligotróficas de bajíos de llanura aluvial	2,09	0
BOLTIPA073	2.2. Moist Savanna	Sabanas inundables	Sabanas inundables	3,19	0
BOLTIPA073	2.2. Moist Savanna	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Pantano leñoso: Comunidad de *Ludwigia peruviana-Tabebuia insignis*	3,10	0
BOLTIPA073	2.1. Dry Savanna	Cerrado de la Chiquitania y el Beni	Cerrado del Beni noreste: Serie de *Hirtella gracilipes-Caryocar brasiliensis*	495,23	3
BOLTIPA073	2.1. Dry Savanna	Cerrado de la Chiquitania y el Beni	Cerrado del Beni noreste: Serie preliminar de *Hirtella gracilipes-Caryocar brasiliensis*	770,31	5
BOLTIPA073	2.1. Dry Savanna	Sabanas higrofíticas con montículos del Cerrado	Pampas-termitero arboladas del Beni noreste: Serie de *Phyllanthus sp.-Xylopia sericea*	63,34	0
BOLTIPA073	2.1. Dry Savanna	Sabanas higrofíticas con montículos del Cerrado	Pampas-termitero arboladas del Beni noroeste: Serie de *Licania sclerophylla-Caraipa savannarum*	28,78	0
BOLTIPA073	2.1. Dry Savanna	Sabanas higrofíticas con montículos del Cerrado	Sabana higrofítica con montículos del Cerrado	0,23	0
BOLTIPA073	18. Unknown	No observado	No observado	22,70	0
BOLTIPA073	17. Other	Antrópico	Antrópico	3,57	0
BOLTIPA073	1.8. Subtropical/Tropical Swamp Forest	Bosques bajos de arenas blancas del Centro-Sur de la Amazonía y Bosques de Tierra Firme depresionada del sur de la Amazonía	Bosque bajo de arenas blancas del Centro-Sur de la Amazonía y Bosques de Tierra Firme depresionada del sur de la Amazonía	3,99	0

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BOLTIPA073	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosque de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	36,31	0
BOLTIPA073	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosque pantanoso de arroyos de aguas claras del Bajo Iténez	52,94	0
BOLTIPA073	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosques y Palmares inundables de arroyos de aguas claras de Pando	1,42	0
BOLTIPA073	1.8. Subtropical/Tropical Swamp Forest	Bosques de Várzea de los Llanos del Beni	Bosque de Várzea fragmentado de la llanura aluvial antigua del Beni (Islas de bosque)	19,88	0
BOLTIPA073	1.8. Subtropical/Tropical Swamp Forest	Bosques inmaduros del Beni, inundados por aguas corrientes	Bosques inmaduros del Beni, inundados por aguas corrientes	275,48	2
BOLTIPA073	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazónia	344,94	2
BOLTIPA073	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosque aluvial de aguas negras fluyentes del norte del Beni: Serie de *Sloanea laxiflora-Eschweilera parvifolia*	76,12	0
BOLTIPA073	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosque de aguas negras fluyentes del Heath-Bajo Madidi	53,83	0
BOLTIPA073	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	3,12	0
BOLTIPA073	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque de aguas estancadas de Aceite y Guayabochi: Serie de *Copaifera reticulata-Calycophyllum spruceanum*	258,20	2
BOLTIPA073	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque de pantano de Bibosi y Cosorió: Serie de *Ficus trigona-Erythrina fusca*	53,01	0
BOLTIPA073	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque inundado por aguas blancas estancadas del suroeste de la Amazonía	200,77	1
BOLTIPA073	1.8. Subtropical/Tropical Swamp Forest	Mosaico extenso de bosques de Várzea y de bosques benianos higrofíticos, con manchas de pantanos	Mosaico extenso de bosques de Várzea y de bosques benianos higrofíticos, con manchas de pantanos	2.761,87	17
BOLTIPA073	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de aguas blancas del Mamoré-Ibare-Bajo Apere	Bosque de aguas blancas del Mamoré-Ibare-Bajo Apere	4.636,84	28
BOLTIPA073	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de galería de los arroyos del Beni	Bosque de arroyos de Manguillo y Asotocosi: Serie de *Croton sampatik-Albizia inundata*	91,43	1
BOLTIPA073	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de galería de los arroyos del Beni	Bosque de galería de los arroyos del Beni	1.599,74	10
BOLTIPA073	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques del Isiboro-Secure	Bosques del Isiboro-Secure	33,35	0
BOLTIPA073	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverde estacionales del Centro-Sur de la Amazonía	Bosque amazónico con Castaña del Bajo Iténez: Serie de *Bertholletia excelsa-Qualea paraensis*	777,52	5
BOLTIPA073	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de colinas arenosas del noroeste de Pando: Serie provisional de *Phytelephas macrocarpa-Tachigali vasquezii*	104,20	1
BOLTIPA073	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico pluviestacional sin Castaña, del Beni noroeste: Serie preliminar de *Sloanea laxiflora-Apuleia leiocarpa*	59,29	0
BOLTIPA073	1.6. Subtropical/Tropical Moist Lowland Forest	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	13,79	0
BOLTIPA073	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos semidecíduos de la Chiquitania y el Beni	Bosque de Jorori y Curupaú de las semialturas del Beni: Serie de *Swartzia jorori-Anadenanthera colubrina*	1,26	0
BOLTIPA074	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Curichis y yomomales	Curichis y yomomales	32,82	0
BOLTIPA074	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónica de aguas no blancas: mixtas, claras y negras hipomineralizadas a no mineralizadas	562,22	4
BOLTIPA074	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Herbazal pantanoso amazónico del Heath-Bajo Madidi	151,46	1

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BOLTIPA074	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Herbazal pantanoso amazónico del Itenéz-Bajo Paraguá	2.119,76	15
BOLTIPA074	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Herbazales pantanosos de la llanura aluvial de la alta Amazonía	10,01	0
BOLTIPA074	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	76,15	1
BOLTIPA074	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Vegetación de cuerpos de agua libre "Taropales y Sicuanales"	35,63	0
BOLTIPA074	2.2. Moist Savanna	Sabanas arboladas inundables de los bajíos del Beni	Pampas de Cosorió: Serie de *Machaerium aristulatum-Erythrina fusca*	0,20	0
BOLTIPA074	2.2. Moist Savanna	Sabanas arboladas y arbustivas de la alta Amazonía sobre suelos anegables	Sabana arbolado-arbustiva anegable del Iténez-Bajo Paraguá: Serie de *Mabea paniculata-Byrsonima chrysophylla*	436,00	3
BOLTIPA074	2.2. Moist Savanna	Sabanas arboladas y arbustivas de la alta Amazonía sobre suelos anegables	Sabana arbolado-arbustivas anegable del Heath-Bajo-Madidi: Serie de *Cardiopetalum calophyllum-Xylopia aromatica*	8,48	0
BOLTIPA074	2.2. Moist Savanna	Sabanas herbáceas mesotróficas estacionalmente inundada del Beni	Sabanas herbáceas mesotróficas estacionalmente inundada del Beni	48,65	0
BOLTIPA074	2.2. Moist Savanna	Sabanas herbáceas oligotróficas estacionalmente inundadas de la Chiquitania y el Beni	Pampa de bajío de Paja morada: Comunidad de *Arundinella hispida-Andropogon virgatus*	99,44	1
BOLTIPA074	2.2. Moist Savanna	Sabanas herbáceas oligotróficas estacionalmente inundadas de la Chiquitania y el Beni	Pampa de bajío de Pasto inverno: Comunidad de *Rhynchospora trispicata-Paspalum wrightii*	7,30	0
BOLTIPA074	2.2. Moist Savanna	Sabanas herbáceas oligotróficas estacionalmente inundadas de la Chiquitania y el Beni	Pampa de bajío del Cerrado beniano noreste: Comunidad de *Loudetia flammida-Aristida circinalis*	223,99	2
BOLTIPA074	2.2. Moist Savanna	Sabanas herbáceas oligotróficas estacionalmente inundadas de la Chiquitania y el Beni	Pampa sartenejal sobre arenas del Beni norte: Comunidad de *Andropogon hypogynus-Axonopus hirsutus*	7,80	0
BOLTIPA074	2.1. Dry Savanna	Sabanas abiertas higrofíticas de las semialturas del Beni y la Chiquitania	Sabana herbácea mesotrófica de las semialturas	20,07	0
BOLTIPA074	2.1. Dry Savanna	Sabanas del sur de la Amazonía transicionales a Cerrado	Chaparral esclerófilo sobre serranías y mesetas del Iténez-Bajo Paraguá	6,94	0
BOLTIPA074	18. Unknown	No observado	No observado	67,05	0
BOLTIPA074	17. Other	Antrópico	Antrópico	12,56	0
BOLTIPA074	1.8. Subtropical/Tropical Swamp Forest	Bosque pantanoso de palmas de la llanura aluvial del sur de la Amazonía	Bosque pantanoso de palmas de la llanura aluvial del sur de la Amazonía	291,55	2
BOLTIPA074	1.8. Subtropical/Tropical Swamp Forest	Bosque pantanoso de palmas de la llanura aluvial del sur de la Amazonía	Palmar amazónico de aguas negras estancadas del norte de la Chiquitania: Serie preliminar de *Tabebuia insignis-Mauritia flexuosa*	64,79	0
BOLTIPA074	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial aguas negras estancadas del Iténez-Bajo Paraguá: Serie de *Mauritia flexuosa-Qualea albiflora*	307,41	2
BOLTIPA074	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial de aguas negras estancadas del centro-oeste de Pando: Serie de *Qualea wittrockii-Cariniana domestica*	10,92	0
BOLTIPA074	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosque pantanoso de arroyos de aguas claras del Iténez-Bajo Paraguá: Serie de *Cariniana domestica-Qualea ingens*	186,49	1
BOLTIPA074	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosque pantanoso de arroyos de aguas claras del Norte de la Chiquitana: Serie de *Cariniana domestica-Hevea brasiliensis*	17,35	0
BOLTIPA074	1.8. Subtropical/Tropical Swamp Forest	Bosques pantanosos de palmas de la llanura aluvial del sur de la Amazonía	Palmare pantanoso de Palma Real del oeste del Beni: Comunidad de *Thalia geniculata-Mauritia flexuosa*	4,03	0
BOLTIPA074	1.6. Subtropical/Tropical Moist Lowland Forest	Bosque de sartenejal de Tierra Firme depresionada del bajo Paraguá	Bosque de sartenejal de Tierra Firme depresionada del bajo Paraguá: Serie de *Qualea albiflora-Euterpe precatoria*	1.334,82	10
BOLTIPA074	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques chiquitanos de transición a la Amazonía sobre suelos bien drenados	Bosque chiquitano transicional a la Amazonía sobre suelos oligotróficos bien drenados: Serie preliminar de *Ocotea guianensis-Spondias mombin*	129,72	1

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BOLTIPA074	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de galería de los arroyos del Beni	Bosque de arroyos de Guayabo y Azuquerö: Serie de *Rheedia brasiliensis-Licania parvifolia*	14,30	0
BOLTIPA074	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de serranías aisladas del centro-sur de Amazonía	Bosque amazónico de serranías del Iténez-Bajo Paraguá: Serie preliminar de *Qualea cf. cordata-Tetragastris altissima*	15,72	0
BOLTIPA074	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques inundables y vegetación riparia de aguas mixtas de la Amazonía	Bosque inundable de aguas mixtas del norte de la Chiquitania	209,12	2
BOLTIPA074	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques inundables y vegetación riparia de aguas mixtas de la Amazonía	Bosque inundable de aguas mixtas del Río Bajo Iténez-Baures: Serie preliminar de *Symmeria paniculata-Luehea cymulosa*	998,02	7
BOLTIPA074	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverde estacionales del Centro-Sur de la Amazonía	Bosque amazónico con Castaña del Bajo Iténez: Serie de *Bertholletia excelsa-Qualea paraensis*	5.108,79	37
BOLTIPA074	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverde estacionales del Centro-Sur de la Amazonía	Bosque siempreverde estacional amazónico del Escudo Precámbrico Chiquitano: Serie de Serie de *Qualea paraensis-Erisma uncinatum*	985,39	7
BOLTIPA074	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de Tierra Firme del Heath-Bajo Madidi	35,43	0
BOLTIPA075	6.1. Rocky Areas - Rocky Areas (e.g. inland cliffs, mountain peaks)	Matorrales saxícolas de colinas y serranías del centro-sur de la Amazonía	Campo rupestre sobre serranías areniscosas del Iténez-Bajo Paraguá: Comunidad de *Vellozia variabilis*	193,46	3
BOLTIPA075	6.1. Rocky Areas - Rocky Areas (e.g. inland cliffs, mountain peaks)	Matorrales saxícolas de colinas y serranías del centro-sur de la Amazonía	Matorrales saxícolas de colinas y serranías del centro-sur de la Amazonía	0,51	0
BOLTIPA075	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónica de aguas no blancas: mixtas, claras y negras hipomineralizadas a no mineralizadas	29,47	0
BOLTIPA075	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónico de aguas blancas mesomineralizadas: Pantanos flotantes (yomomos)	0,17	0
BOLTIPA075	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Herbazal pantanoso amazónico del Itenéz-Bajo Paraguá	320,03	5
BOLTIPA075	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Herbazales pantanosos de la llanura aluvial de la alta Amazonía	0,48	0
BOLTIPA075	2.2. Moist Savanna	Sabanas arboladas y arbustivas de la alta Amazonía sobre suelos anegables	Sabana arbolado-arbustiva anegable del Iténez-Bajo Paraguá: Serie de *Mabea paniculata-Byrsonima chrysophylla*	58,05	1
BOLTIPA075	2.1. Dry Savanna	Sabanas del sur de la Amazonía transicionales a Cerrado	Chaparral esclerófilo sobre serranías y mesetas del Iténez-Bajo Paraguá	171,80	3
BOLTIPA075	18. Unknown	No observado	No observado	6,03	0
BOLTIPA075	17. Other	Antrópico	Antrópico	2,51	0
BOLTIPA075	1.8. Subtropical/Tropical Swamp Forest	Bosque pantanoso de palmas de la llanura aluvial del sur de la Amazonía	Bosque pantanoso de palmas de la llanura aluvial del sur de la Amazonía	147,43	2
BOLTIPA075	1.8. Subtropical/Tropical Swamp Forest	Bosque pantanosos de arroyos de aguas claras del Iténez-Bajo Paraguá	Bosque pantanoso de arroyos de aguas claras del Iténez-Bajo Paraguá: Serie de *Cariniana domestica-Qualea ingens*	19,90	0
BOLTIPA075	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial aguas negras estancadas del Iténez-Bajo Paraguá: Serie de *Mauritia flexuosa-Qualea albiflora*	114,52	2
BOLTIPA075	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial de aguas negras estancadas del centro-oeste de Pando: Serie de *Qualea wittrockii-Cariniana domestica*	106,43	2
BOLTIPA075	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial de aguas negras estancadas del Norte de la Chiquitania	57,66	1
BOLTIPA075	1.8. Subtropical/Tropical Swamp Forest	Bosques aluviales de aguas negras estancadas del sur de la Amazonía	Bosque de llanura aluvial de negras del Itenéz-Bajo Paraguá: Serie de *Mauritia flexuosa-Qualea albiflora*	2,10	0
BOLTIPA075	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosque de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	2,38	0
BOLTIPA075	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosque pantanoso de arroyos de aguas claras del Iténez-Bajo Paraguá: Serie de *Cariniana domestica-Qualea ingens*	81,51	1

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BOLTIPA075	1.8. Subtropical/Tropical Swamp Forest	Bosques de arroyos de aguas claras del suroeste y centro-sur de la Amazonía	Bosque pantanoso de arroyos de aguas claras del Norte de la Chiquitana: Serie de *Cariniana domestica-Hevea brasiliensis*	20,71	0
BOLTIPA075	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables y vegetación ribereña de aguas negras del suroeste y del centro de la Amazonía	Bosque aluvial de aguas negras fluyentes del Bajo Paraguá y bajo San Martín: Serie de *Acosmium nitens-Sclerolobium guianense*	13,52	0
BOLTIPA075	1.6. Subtropical/Tropical Moist Lowland Forest	Bosque de sartenejal de Tierra Firme depresionada del bajo Paraguá	Bosque de sartenejal de Tierra Firme depresionada del bajo Paraguá: Serie de *Qualea albiflora-Euterpe precatoria*	1.382,22	23
BOLTIPA075	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de serranías aisladas del centro-sur de Amazonía	Bosque amazónico de mesetas del Iténez-Bajo Paraguá: Serie de *Chaunochiton kappleri-Cariniana multiflora*	12,30	0
BOLTIPA075	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de serranías aisladas del centro-sur de Amazonía	Bosque amazónico de serranías del Iténez-Bajo Paraguá: *Qualea* cf. *cordata-Tetragastris altissima*	40,58	1
BOLTIPA075	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de serranías aisladas del centro-sur de Amazonía	Bosque amazónico de serranías del Iténez-Bajo Paraguá: Serie preliminar de *Qualea* cf. *cordata-Tetragastris altissima*	77,42	1
BOLTIPA075	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques inundables y vegetación riparia de aguas mixtas de la Amazonía	Bosque inundable de aguas mixtas del Río Iténez-Bajo Paraguá: Serie de *Brosimum lactescens-Maquira coriacea*	2,17	0
BOLTIPA075	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques inundables y vegetación riparia de aguas mixtas de la Amazonía	Complejo de vegetación riparia de aguas mixtas del Iténez-Bajo Paraguá	18,55	0
BOLTIPA075	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques inundables y vegetación riparia de aguas mixtas de la Amazonía	Complejo de vegetación riparia de aguas mixtas del Iténez-Bajo Paraguá	1,50	0
BOLTIPA075	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverde estacionales del Centro-Sur de la Amazonía	Bosque siempreverde estacional amazónico del Escudo Precámbrico Chiquitano: Serie de Serie de *Qualea paraensis-Erisma uncinatum*	2.872,76	48
BOLTIPA075	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes estacionales de la penillanura del suroeste de la Amazonía	Bosque amazónico de Tierra Firme del Heath-Bajo Madidi	167,62	3
BOLTIPA076	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Geocomplejo de las sabanas oligotróficas del Beni, transicionales al Cerrado	Geocomplejo de las sabanas oligotróficas del Beni, transicionales al Cerrado	482,88	10
BOLTIPA076	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Colchas de Cañuela Hueca y Cortadera de Yomomo: Comunidad de *Oxycaryum cubense-Paspalum repens*	9,39	0
BOLTIPA076	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Pantanos herbáceos flotantes "Colchas, Yomomales o Embalsados" Alianza *Oxycaryum cubense-Paspalum repens*	21,32	0
BOLTIPA076	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	820,18	18
BOLTIPA076	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Vegetación de cuerpos de agua libre "Taropales y Sicuanales"	10,73	0
BOLTIPA076	2.2. Moist Savanna	Cerradão mal drenado de las semialturas oligotróficas del Beni	Bosque bajo mal drenado del Beni occidental transicional al Cerrado: Serie de *Hymenaea courbaril-Vochysia divergens*	2,64	0
BOLTIPA076	2.2. Moist Savanna	Cerradão mal drenado de las semialturas oligotróficas del Beni	Cerradão mal drenado de las semialturas oligotróficas del Beni	5,00	0
BOLTIPA076	2.2. Moist Savanna	Cerradão mal drenado de las semialturas oligotróficas del Beni	Tajibal abierto anegable del Beni suroccidental: Serie provisional de *Calycophyllum spruceanum-Tabebuia aurea*	16,91	0
BOLTIPA076	2.2. Moist Savanna	Cerradão mal drenado de las semialturas oligotróficas del Beni	Tajibal abierto anegable transicional al Cerrado del Beni: Serie de *Byrsonima orbignyana-Tabebuia heptaphylla*	3,73	0
BOLTIPA076	2.2. Moist Savanna	Palmares y sabanas arboladas inundables de las semialturas sódico-mesotróficas del Beni	Sabanas de encharcamiento alcalinas	2,39	0
BOLTIPA076	2.2. Moist Savanna	Pantanos (Curichis y Yomomales) del Oeste del Beni	Pantanos (Curichis y Yomomales) del Oeste del Beni	779,07	17
BOLTIPA076	2.2. Moist Savanna	Sabanas abiertas higrofíticas de las semialturas del Beni y la Chiquitania	Pampa de semialtura de Paja toruna con Tacuarilla: Comunidad de *Panicum tricholaenoides-Paspalum virgatum*	1,09	0
BOLTIPA076	2.2. Moist Savanna	Sabanas abiertas higrofíticas de las semialturas del Beni y la Chiquitania	Sabana herbácea mesotrófica de las semialturas	6,32	0
BOLTIPA076	2.2. Moist Savanna	Sabanas arboladas inundables de los bajíos del Beni	Pampa de Guayumequi y Cupesí o Asotocosi: Serie de *Bergeronia sericea-Albizia inundata*	75,44	2

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BOLTIPA076	2.2. Moist Savanna	Sabanas arboladas inundables de los bajíos del Beni	Pampa de Negrillo y Leche-Leche: Serie preliminar de *Nectandra amazonum-Sapium pallidum*	2,93	0
BOLTIPA076	2.2. Moist Savanna	Sabanas arboladas inundables de los bajíos del Beni	Pampas de Cosorió: Serie de *Machaerium aristulatum-Erythrina fusca*	187,21	4
BOLTIPA076	2.2. Moist Savanna	Sabanas herbáceas mesotróficas estacionalmente inundada del Beni	Cañuelar de bajío de Cañuela Blanca: Comunidad de *Acroceras zizanioides-Paspalum fasciculatum*	4,23	0
BOLTIPA076	2.2. Moist Savanna	Sabanas herbáceas oligotróficas estacionalmente inundadas de la Chiquitania y el Beni	Sabanas inundables por aguas mixtas, con sabanas de encharcamiento no alcalinas, del Yacuma-Rapulo	87,06	2
BOLTIPA076	2.2. Moist Savanna	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Pantano leñoso: Comunidad de *Ludwigia peruviana-Tabebuia insignis*	13,07	0
BOLTIPA076	18. Unknown	No observado	No observado	0,03	0
BOLTIPA076	17. Other	Antrópico	Antrópico	76,19	2
BOLTIPA076	1.8. Subtropical/Tropical Swamp Forest	Bosques de Várzea de los Llanos del Beni	Bosque de Várzea fragmentado de la llanura aluvial antigua del Beni (Islas de bosque)	2,79	0
BOLTIPA076	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosque de Várzea de bajío, de Piraquina y Ochoó: Serie de *Xylopia ligustrifolia-Hura crepitans*	2,18	0
BOLTIPA076	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosque de Várzea de semialtura, de Isiri o Urupí y Ochoó: Serie de *Clarisia racemosa-Hura crepitans*	14,23	0
BOLTIPA076	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque de aguas estancadas de Aceite y Guayabochi: Serie de *Copaifera reticulata-Calycophyllum spruceanum*	6,83	0
BOLTIPA076	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque de pantano de Bibosi y Cosorió: Serie de *Ficus trigona-Erythrina fusca*	292,24	6
BOLTIPA076	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque inundado por aguas blancas estancadas del suroeste de la Amazonía	14,16	0
BOLTIPA076	1.8. Subtropical/Tropical Swamp Forest	Mosaico extenso de bosques de Várzea y de bosques benianos higrofíticos, con manchas de pantanos	Mosaico extenso de bosques de Várzea y de bosques benianos higrofíticos, con manchas de pantanos	10,02	0
BOLTIPA076	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de aguas blancas del Mamoré-Ibare-Bajo Apere	Bosque de aguas blancas del Mamoré-Ibare-Bajo Apere	482,29	10
BOLTIPA076	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de galería de los arroyos del Beni	Bosque de arroyos de Aliso y Azuqueró: Serie de *Vochysia divergens-Licania parvifolia*	9,21	0
BOLTIPA076	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de galería de los arroyos del Beni	Bosque de arroyos de Manguillo y Asotocosi: Serie de *Croton sampatik-Albizia inundata*	22,13	0
BOLTIPA076	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de galería de los arroyos del Beni	Bosque de arroyos de Maní y Cosorió: Serie de *Pithecellobium corymbosum-Erythrina fusca*	2,15	0
BOLTIPA076	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de galería de los arroyos del Beni	Bosque de galería de los arroyos del Beni	75,84	2
BOLTIPA076	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques higrófilos benianos de la llanura aluvial de ríos de agua blanca	Bosques higrófilos benianos de la llanura aluvial de ríos de agua blanca	1.112,59	24
BOLTIPA076	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos semidecíduos de la Chiquitania y el Beni	Bosque de Jorori y Curupaú de las semialturas del Beni: Serie de *Swartzia jorori-Anadenanthera colubrina*	16,67	0
BOLTIPA077	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	22,11	2
BOLTIPA077	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Vegetación de cuerpos de agua libre "Taropales y Sicuanales"	2,03	0
BOLTIPA077	2.2. Moist Savanna	Cerradão mal drenado de las semialturas oligotróficas del Beni	Bosque bajo mal drenado del Beni suroriental: Serie de *Calycophyllum spruceanum-Tabebuia heptaphylla*	2,85	0
BOLTIPA077	2.2. Moist Savanna	Pantanos (Curichis y Yomomales) del Oeste del Beni	Pantanos (Curichis y Yomomales) del Oeste del Beni	65,36	5

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BOLTIPA077	2.2. Moist Savanna	Sabanas arboladas inundables de los bajíos del Beni	Pampas de Cosorió: Serie de *Machaerium aristulatum-Erythrina fusca*	45,49	3
BOLTIPA077	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque de pantano de Bibosi y Cosorió: Serie de *Ficus trigona-Erythrina fusca*	57,95	4
BOLTIPA077	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques higrófilos benianos de la llanura aluvial de ríos de agua blanca	Bosques higrófilos benianos de la llanura aluvial de ríos de agua blanca	1.152,59	85
BOLTIPA078	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Geocomplejo de las sabanas oligotróficas del Beni, transicionales al Cerrado	Geocomplejo de las sabanas oligotróficas del Beni, transicionales al Cerrado	1,90	0
BOLTIPA078	2.2. Moist Savanna	Pantanos (Curichis y Yomomales) del Oeste del Beni	Pantanos (Curichis y Yomomales) del Oeste del Beni	1,07	0
BOLTIPA078	17. Other	Antrópico	Antrópico	18,69	1
BOLTIPA078	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosque maduro de Várzea del piedemonte andino norte: Serie de *Gustavia augusta-Manilkara inundata*	289,52	11
BOLTIPA078	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques del piedemonte andino del suroeste de la Amazonía	Bosque amazónico del glacis preandino norte: Serie de *Quararibea wittii-Dipteryx odorata*	573,72	23
BOLTIPA078	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques subandinos del suroeste de la Amazonía	Bosque amazónico pluviestacional del subandino norte: Serie de *Pentaplaris davidsmithii-Tetragastris altissima*	1.659,47	65
BOLTIPA079	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Geocomplejo de las sabanas oligotróficas del Beni, transicionales al Cerrado	Geocomplejo de las sabanas oligotróficas del Beni, transicionales al Cerrado	1,49	0
BOLTIPA079	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	91,72	1
BOLTIPA079	2.2. Moist Savanna	Cerradão mal drenado de las semialturas oligotróficas del Beni	Cerradão mal drenado de las semialturas oligotróficas del Beni	0,09	0
BOLTIPA079	2.2. Moist Savanna	Cerradão mal drenado de las semialturas oligotróficas del Beni	Tajibal abierto anegable del Beni suroccidental: Serie provisional de *Calycophyllum spruceanum-Tabebuia aurea*	71,35	1
BOLTIPA079	2.2. Moist Savanna	Pantanos (Curichis y Yomomales) del Oeste del Beni	Pantanos (Curichis y Yomomales) del Oeste del Beni	694,26	5
BOLTIPA079	2.2. Moist Savanna	Sabanas arboladas inundables de los bajíos del Beni	Pampas de Cosorió: Serie de *Machaerium aristulatum-Erythrina fusca*	471,84	4
BOLTIPA079	2.2. Moist Savanna	Sabanas herbáceas mesotróficas estacionalmente inundada del Beni	Cañuelar de bajío de Cañuela Morada: Comunidad de *Hymenachne amplexicaulis*	2,00	0
BOLTIPA079	2.2. Moist Savanna	Sabanas inundables	Sabanas inundables	750,03	6
BOLTIPA079	2.2. Moist Savanna	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Pantano leñoso: Comunidad de *Ludwigia peruviana-Tabebuia insignis*	82,32	1
BOLTIPA079	17. Other	Antrópico	Antrópico	346,86	3
BOLTIPA079	1.9. Subtropical/Tropical Moist Montane Forest	Bosques y palmerales yungueños pluviales basimontanos	Bosque-Palmar yungueño pluvial basimontano: Serie preliminar de *Protium altsonii-Dictyocaryum lamarckianum*	448,68	3
BOLTIPA079	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano-inferior hiperhúmedo de los Yungas de Coroico y Altamachi-Corani: Serie preliminar de *Ocotea jelskii-Podocarpus oleifolius*	8,66	0
BOLTIPA079	1.8. Subtropical/Tropical Swamp Forest	Bosques de Várzea de los Llanos del Beni	Bosque de Várzea fragmentado de la llanura aluvial antigua del Beni (Islas de bosque)	10,67	0
BOLTIPA079	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosque maduro de Várzea del piedemonte andino norte: Serie de *Gustavia augusta-Manilkara inundata*	579,76	4
BOLTIPA079	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque de pantano de Bibosi y Cosorió: Serie de *Ficus trigona-Erythrina fusca*	484,35	4
BOLTIPA079	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque inundado por aguas blancas estancadas del suroeste de la Amazonía	86,80	1

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BOLTIPA079	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de aguas blancas del Mamoré-Ibare-Bajo Apere	Bosque de aguas blancas del Mamoré-Ibare-Bajo Apere	45,35	0
BOLTIPA079	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de galería de los arroyos del Beni	Bosque de arroyos de Maní y Cosorió: Serie de *Pithecellobium corymbosum-Erythrina fusca*	88,16	1
BOLTIPA079	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de galería de los arroyos del Beni	Bosque de galería de los arroyos del Beni	3,50	0
BOLTIPA079	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques del Isiboro-Secure	Bosques del Isiboro-Secure	3.028,38	23
BOLTIPA079	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques del piedemonte andino del suroeste de la Amazonía	Bosque amazónico del glacis preandino central: Serie de *Eschweilera coriacea-Dipteryx odorata*	488,79	4
BOLTIPA079	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques del piedemonte andino del suroeste de la Amazonía	Bosque amazónico del glacis preandino norte: Serie de *Quararibea wittii-Dipteryx odorata*	1.420,49	11
BOLTIPA079	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverde estacionales subandinos del suroeste de Amazonía	Bosque amazónico pluviestacional del subandino norte: Serie de *Pentaplaris davidsmithii-Tetragastris altissima*	4.670,07	36
BOLTIPA079	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes subandinos del suroeste de la Amazonía	Bosque amazónico pluvial del Chapare: Serie de *Elaeagia obovata-Talauma boliviana*	242,21	2
BOLTIPA079	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques subandinos del suroeste de la Amazonía	Bosque siempreverde subandino del suroeste de la Amazonía	895,98	7
BOLTIPA080	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Colchas de Cañuela Hueca y Cortadera de Yomomo: Comunidad de *Oxycaryum cubense-Paspalum repens*	3,29	0,09
BOLTIPA080	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	46,27	1,29
BOLTIPA080	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	5,86	0,16
BOLTIPA080	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	1,58	0,04
BOLTIPA080	2.2. Moist Savanna	Pantanos (Curichis y Yomomales) del Oeste del Beni	Pantanos (Curichis y Yomomales) del Oeste del Beni	318,84	8,89
BOLTIPA080	2.2. Moist Savanna	Sabanas arboladas inundables de los bajíos del Beni	Pampas de Cosorió: Serie de *Machaerium aristulatum-Erythrina fusca*	91,04	2,54
BOLTIPA080	2.2. Moist Savanna	Sabanas arboladas inundadas y bosques ribereños de los bajíos permanentes y casi permanentes del Beni	Sabanas arboladas inundables de los Bajíos del Beni	36,95	1,03
BOLTIPA080	1.8. Subtropical/Tropical Swamp Forest	Bosques de Várzea de los Llanos del Beni	Bosque de Várzea fragmentado de la llanura aluvial antigua del Beni (Islas de bosque)	3,33	0,09
BOLTIPA080	1.8. Subtropical/Tropical Swamp Forest	Bosques de Várzea de los Llanos del Beni	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	505,14	14,08
BOLTIPA080	1.8. Subtropical/Tropical Swamp Forest	Bosques de Várzea de los Llanos del Beni	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	0,12	0
BOLTIPA080	1.8. Subtropical/Tropical Swamp Forest	Bosques inmaduros del Beni, inundados por aguas corrientes	Bosques inmaduros del Beni, inundados por aguas corrientes	115,38	3,22
BOLTIPA080	1.8. Subtropical/Tropical Swamp Forest	Bosques inmaduros del Beni, inundados por aguas corrientes	Bosques inmaduros del Beni, inundados por aguas corrientes	73,51	2,05
BOLTIPA080	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque inundado por aguas blancas estancadas del suroeste de la Amazonía	255,11	7,11
BOLTIPA080	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de aguas blancas del Mamoré-Ibare-Bajo Apere	Bosque de aguas blancas del Mamoré-Ibare-Bajo Apere	1.386,42	38,64
BOLTIPA080	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de aguas blancas del Mamoré-Ibare-Bajo Apere	Bosque de aguas blancas del Mamoré-Ibare-Bajo Apere	20,56	0,57
BOLTIPA080	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de galería de los arroyos del Beni	Bosque de arroyos de Maní y Cosorió: Serie de *Pithecellobium corymbosum-Erythrina fusca*	34,31	0,96

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BOLTIPA080	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques del Isiboro-Secure	Bosques del Isiboro-Secure	281,50	7,85
BOLTIPA080	1.6. Subtropical/Tropical Moist Lowland Forest	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	1,20	0,03
BOLTIPA080	1.6. Subtropical/Tropical Moist Lowland Forest	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	1,03	0,03
BOLTIPA081	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre de la Amazonía	Complejo de vegetación acuática y palustre amazónica de aguas blancas mesomineralizadas	5,69	3
BOLTIPA081	4.6. Subtropical/Tropical Seasonally Wet/Flooded Lowland Grassland	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	Vegetación acuática y palustre neotropical de la Chiquitania y el Beni	0,06	0
BOLTIPA081	2.2. Moist Savanna	Sabanas arboladas inundables de los bajíos del Beni	Pampas de Cosorió: Serie de *Machaerium aristulatum-Erythrina fusca*	16,60	7
BOLTIPA081	1.8. Subtropical/Tropical Swamp Forest	Bosques inmaduros del Beni, inundados por aguas corrientes	Bosques inmaduros del Beni, inundados por aguas corrientes	2,96	1
BOLTIPA081	1.8. Subtropical/Tropical Swamp Forest	Bosques inundados por aguas blancas estancadas del suroeste de la Amazonía	Bosque inundado por aguas blancas estancadas del suroeste de la Amazonía	44,34	20
BOLTIPA081	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de aguas blancas del Mamoré-Ibare-Bajo Apere	Bosque de aguas blancas del Mamoré-Ibare-Bajo Apere	155,17	69
BOLTIPA081	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de galería de los arroyos del Beni	Bosque de galería de los arroyos del Beni	0,57	0
BOLTIPA081	1.6. Subtropical/Tropical Moist Lowland Forest	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	Complejo de vegetación succesional riparia de aguas blancas de la Amazonía	0,04	0
BOLTIPA082	17. Other	Vegetación acuática y palustre altoandina y altimontana yungueña	Vegetación acuática y palustre altoandina y altimontana yungueña	10,69	0
BOLTIPA082	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales altoandinos de la Puna húmeda	Facies de *Tetraglochin cristata* degradadas y sobrepastoreadas	50,69	2
BOLTIPA082	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altimontanos y altoandinos Boliviano Tucumanos y Vegetación saxícola altimontana Boliviano-Tucumano	Pajonales y matorrales altimontanos y altoandinos y Vegetación saxícola altimontana Boliviano-Tucumano	0,01	0
BOLTIPA082	17. Other	Antrópico	Antrópico	42,40	2
BOLTIPA082	1.9. Subtropical/Tropical Moist Montane Forest	Bosques altimontanos pluviales de los Yungas	Bosque altimontano pluvial de los Yungas de Cotacajes y Altamachi: Serie provisional de *Prunus tucumanensis-Hesperomeles ferruginea*	14,35	1
BOLTIPA082	1.9. Subtropical/Tropical Moist Montane Forest	Bosques altimontanos pluviales de los Yungas	Bosque altimontano pluvial de los Yungas del Ichilo: Serie de *Weinmannia bangii-Weinmannia fagaroides*	110,78	4
BOLTIPA082	1.9. Subtropical/Tropical Moist Montane Forest	Bosques bajos y arbustales altimontanos de la Puna húmeda	Bosque puneño de *Polylepis* de la Cordillera de Cochabamba: Serie de *Berberis commutata-Polylepis subtusalbida*	4,45	0
BOLTIPA082	1.9. Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos pluviales de los Yungas	Bosque yungueño de *Polylepis* altimontano pluvial de los Yungas de Cochabamba: Serie de *Ilex mandonii-Polylepis lanata*	167,15	6
BOLTIPA082	1.9. Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos pluviestacionales de los Yungas	Bosque de *Polylepis* altimontano húmedo pluviestacional de los Yungas de Cochabamba: Serie de *Styloceras columnare-Polylepis lanata*	106,70	4
BOLTIPA082	1.9. Subtropical/Tropical Moist Montane Forest	Bosques y palmerales yungueños pluviales basimontanos	Bosque-Palmar yungueño pluvial basimontano: Serie preliminar de *Protium altsonii-Dictyocaryum lamarckianum*	800,68	29
BOLTIPA082	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano pluvial de los Yungas del Espiritu Santo: Serie de *Podocarpus oleifolius-Weinmannia cochabambensis*	181,82	7
BOLTIPA082	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano-inferior hiperhúmedo de los Yungas de Coroico y Altamachi-Corani: Serie preliminar de *Ocotea jelskii-Podocarpus oleifolius*	414,06	15
BOLTIPA082	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosque maduro de Várzea del piedemonte andino norte: Serie de *Gustavia augusta-Manilkara inundata*	11,76	0
BOLTIPA082	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes subandinos del suroeste de la Amazonía	Bosque amazónico pluvial del Chapare: Serie de *Elaeagia obovata-Talauma boliviana*	533,04	19

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BOLTIPA082	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques subandinos del suroeste de la Amazonía	Bosque siempreverde subandino del suroeste de la Amazonía	303,10	11
BOLTIPA083	17. Other	Antrópico	Antrópico	8,45	11
BOLTIPA083	1.8. Subtropical/Tropical Swamp Forest	Bosques inmaduros del Beni, inundados por aguas corrientes	Bosques inmaduros del Beni, inundados por aguas corrientes	0,14	0
BOLTIPA083	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosque maduro de Várzea del piedemonte andino central: Serie de *Xylopia ligustrifolia Hura crepitans*	15,43	20
BOLTIPA083	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques del piedemonte andino del suroeste de la Amazonía	Bosque amazónico del glacis preandino central: Serie de *Eschweilera coriacea-Dipteryx odorata*	42,02	54
BOLTIPA083	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes subandinos del suroeste de la Amazonía	Bosque amazónico pluvial del Chapare: Serie de *Elaeagia obovata-Talauma boliviana*	12,43	16
BOLTIPA084	17. Other	Vegetación acuática y palustre altoandina de la Puna húmeda	Vegetación acuática y palustre altoandina de la Puna húmeda	1,03	0
BOLTIPA084	17. Other	Vegetación acuática y palustre altoandina y altimontana yungueña	Vegetación acuática y palustre altoandina y altimontana yungueña	0,70	0
BOLTIPA084	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales altoandinos de la Puna húmeda	Facies de *Tetraglochin cristata* degradadas y sobrepastoreadas	360,22	5
BOLTIPA084	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales higrofíticos altimontanos de la Puna húmeda	Pajonales higrofíticos altimontanos de la Puna húmeda	0,99	0
BOLTIPA084	17. Other	Antrópico	Antrópico	126,10	2
BOLTIPA084	1.9. Subtropical/Tropical Moist Montane Forest	Bosques altimontanos pluviales de los Yungas	Bosque altimontano pluvial de los Yungas del Ichilo: Serie de *Weinmannia bangii-Weinmannia fagaroides*	121,94	2
BOLTIPA084	1.9. Subtropical/Tropical Moist Montane Forest	Bosques bajos y arbustales altimontanos de la Puna húmeda	Bosque puneño de *Polylepis* de la Cordillera de Cochabamba: Serie de *Berberis commutata-Polylepis subtusalbida*	2,51	0
BOLTIPA084	1.9. Subtropical/Tropical Moist Montane Forest	Bosques bajos y arbustales altimontanos de la Puna húmeda	Bosque puneño de *Polylepis* transicional a los Yungas de Cochabamba: *Citharexylum punctatum-Polylepis lanata*	15,74	0
BOLTIPA084	1.9. Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos Boliviano-Tucumanos	Khewiñar Boliviano-Tucumano transicional a puneño: Serie de *Berberis rariflora-Polylepis tomentella*	71,67	1
BOLTIPA084	1.9. Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos pluviales de los Yungas	Bosque yungueño de *Polylepis* altimontano pluvial de los Yungas de Cochabamba: Serie de *Ilex mandonii-Polylepis lanata*	594,23	9
BOLTIPA084	1.9. Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altoandinos pluviales de los Yungas	Bosque yungueño altoandino de *Polylepis pepei*: Serie de *Gynoxys asterotricha-Polylepis pepei*	118,73	2
BOLTIPA084	1.9. Subtropical/Tropical Moist Montane Forest	Bosques montanos pluviestacionales húmedos de los Yungas	Bosque yungueño montano pluviestacional de los Yungas de San Mateo: Serie de *Juglans boliviana-Podocarpus oleifolius*	78,03	1
BOLTIPA084	1.9. Subtropical/Tropical Moist Montane Forest	Bosques montanos pluviestacionales húmedos de los Yungas	Bosque yungueño montano pluviestacional transicional de los Yungas del Amboró: Serie de *Podocarpus parlatorei-Prumnopitys exigua*	45,96	1
BOLTIPA084	1.9. Subtropical/Tropical Moist Montane Forest	Bosques y palmerales yungueños pluviales basimontanos	Bosque-Palmar yungueño pluvial basimontano: Serie preliminar de *Protium altsonii-Dictyocaryum lamarckianum*	2.489,00	37
BOLTIPA084	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano pluvial de los Yungas del Espiritu Santo: Serie de *Podocarpus oleifolius-Weinmannia cochabambensis*	314,73	5
BOLTIPA084	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano pluviestacional	294,28	4
BOLTIPA084	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano-inferior pluvial de los Yungas de Vandiola-Ivirizu: Serie de *Prumnopitys exigua-Podocarpus oleifolius*	218,18	3
BOLTIPA084	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano-superior pluvial de los Yungas de Vandiola-Ivirizu: Serie de *Persea ruizii-Prumnopitys exigua*	188,33	3
BOLTIPA084	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosque maduro de Várzea del piedemonte andino central: Serie de *Xylopia ligustrifolia-Hura crepitans*	40,23	1

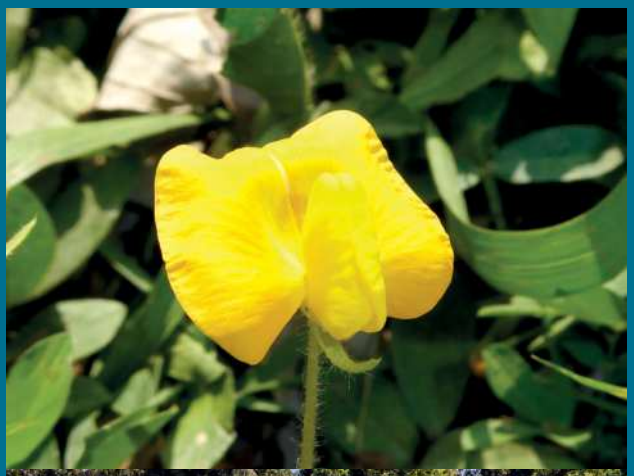
IPA Code	IUCN Classification V3.1	Ecological System (Navarro 2011)	Communities (Navarro & Ferreira 2011, Navarro 2011)	km^2 of IPA site	% of community
BOLTIPA084	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosque maduro de Várzea del piedemonte andino norte: Serie de *Gustavia augusta-Manilkara inundata*	1,14	0
BOLTIPA084	1.8. Subtropical/Tropical Swamp Forest	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazonía	Bosques inundables de la llanura aluvial de ríos de aguas blancas del suroeste y centro-sur de la Amazónia	0,11	0
BOLTIPA084	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques de aguas blancas del Mamoré-Ibare-Bajo Apere	Bosque de aguas blancas del Mamoré-Ibare-Bajo Apere	20,39	0
BOLTIPA084	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques del piedemonte andino del suroeste de la Amazonía	Bosque amazónico del glacis preandino central: Serie de *Eschweilera coriacea-Dipteryx odorata*	36,49	1
BOLTIPA084	1.6. Subtropical/Tropical Moist Lowland Forest	Bosques siempreverdes subandinos del suroeste de la Amazonía	Bosque amazónico pluvial del Chapare: Serie de *Elaeagia obovata-Talauma boliviana*	1.640,55	24
BOLTIPA084	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños pluviestacionales subhúmedos basimontanos	Bosque semidecíduo basimontano inferior de los Yungas de La Paz: Serie de *Cavanillesia umbellata-Aspidosperma cylindrocarpon*	19,69	0
BOLTIPA085	17. Other	Vegetación acuática y palustre altoandina de la Puna húmeda	Vegetación acuática y palustre altoandina de la Puna húmeda	20,22	1
BOLTIPA085	17. Other	Vegetación acuática y palustre altoandina y altimontana yungueña	Vegetación acuática y palustre altoandina y altimontana yungueña	0,18	0
BOLTIPA085	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales altoandinos de la Puna húmeda	Facies de *Tetraglochin cristatum* degradadas y sobrepastoreadas	1.742,72	53
BOLTIPA085	4.7. Subtropical/Tropical High Altitude Grassland	Vegetación geliturbada subnival de la Puna húmeda	Vegetación subnival geliturbada de la Cordillera de Cochabamba: Comunidad de *Nototriche obcuneata-Xenophyllum ciliolatum*	37,94	1
BOLTIPA085	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques y arbustales xerofíticos Boliviano-Tucumanos montanos prepuneños	Bosque prepuneño inferior semiárido de la cuenca del Río Grande: Serie de *Vasconcellea quercifolia-Schinopsis haenkeana*	39,61	1
BOLTIPA085	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques y arbustales xerofíticos Boliviano-Tucumanos montanos prepuneños	Bosque prepuneño superior seco de la Cuenca del Río Grande: Serie de *Escallonia millegrana-Kageneckia lanceolata*	135,89	4
BOLTIPA085	3.7. Subtropical/Tropical High Altitude Shrubland	Bosques y arbustales xerofíticos Boliviano-Tucumanos montanos prepuneños	Bosques y arbustales xerofíticos Bolivano-Tucumanos montanos prepuneños	7,25	0
BOLTIPA085	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altimontanos y altoandinos Boliviano Tucumanos y Vegetación saxícola altimontana Boliviano-Tucumano	Pajonales y matorrales altimontanos y altoandinos y Vegetación saxícola altimontana Boliviano-Tucumano	5,52	0
BOLTIPA085	17. Other	Antrópico	Antrópico	80,55	2
BOLTIPA085	17. Other	Vegetación saxícola boliviana-tucumana del piso montano xérico y prepuna	Vegetación saxícola boliviana-tucumana del piso montano xérico y prepuna	0,85	0
BOLTIPA085	1.9. Subtropical/Tropical Moist Montane Forest	Bosques altimontanos pluviales de los Yungas	Bosque altimontano pluvial de los Yungas de Cotacajes y Altamachi: Serie provisional de *Prunus tucumanensis-Hesperomeles ferruginea*	0,03	0
BOLTIPA085	1.9. Subtropical/Tropical Moist Montane Forest	Bosques altimontanos pluviales de los Yungas	Bosque altimontano pluvial de los Yungas del Ichilo: Serie de *Weinmannia bangii-Weinmannia fagaroides*	0,46	0
BOLTIPA085	1.9. Subtropical/Tropical Moist Montane Forest	Bosques altimontanos pluviestacionales de los Yungas	Bosque altimontano inferior pluviestacionales de los Yungas de Cotacajes: Serie de *Blepharocalyx salicifolius-Podocarpus glomeratus*	56,14	2
BOLTIPA085	1.9. Subtropical/Tropical Moist Montane Forest	Bosques bajos y arbustales altimontanos de la Puna húmeda	Bosque puneño de *Polylepis* de la Cordillera de Cochabamba: Serie de *Berberis commutata-Polylepis subtusalbida*	331,85	10
BOLTIPA085	1.9. Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos pluviales de los Yungas	Bosque yungueño de *Polylepis* altimontano pluvial de los Yungas de Cochabamba: Serie de *Ilex mandonii-Polylepis lanata*	45,51	1
BOLTIPA085	1.9. Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos pluviestacionales de los Yungas	Bosque de *Polylepis* altimontano húmedo pluviestacional de los Yungas de Cochabamba: Serie de *Styloceras columnare-Polylepis lanata*	674,01	21
BOLTIPA085	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviales	Bosque yungueño montano-inferior hiperhúmedo de los Yungas de Coroico y Altamachi-Corani: Serie preliminar de *Ocotea jelskii-Podocarpus oleifolius*	4,07	0
BOLTIPA085	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviestacionales subhúmedos	Bosque semidecíduo yungueño montano de los Yungas del Cotacajes: Serie de *Leucochloron bolivianum-Erythrina falcata*	56,72	2
BOLTIPA085	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños pluviestacionales subhúmedos basimontanos	Bosque semidecíduo basimontano superior de los Yungas de La Paz: Serie de *Cariniana estrellensis-Schinopsis brasiliensis*	33,91	1

IPA Code	IUCN Classification V3.1	Ecological System (Navarro 2011)	Communities (Navarro & Ferreira 2011, Navarro 2011)	km^2 of IPA site	% of community
BOLTIPA085	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños xéricos basimontanos	Bosque yungueño xérico basimontano inferior de los Yungas del Cotacajes: Serie de *Cleistocactus laniceps-Schinopsis haenkeana*	7,94	0
BOLTIPA086	3.7. Subtropical/Tropical High Altitude Shrubland	Pajonales y matorrales altimontanos y altoandinos Boliviano Tucumanos y Vegetación saxícola altimontana Boliviano-Tucumano	Pajonales y matorrales altimontanos y altoandinos y Vegetación saxícola altimontana Boliviano-Tucumano	2,02	0
BOLTIPA086	17. Other	Vegetación acuática y palustre interandina y subandina Boliviano-Tucumana	Vegetación acuática y palustre interandina y subandina Boliviano-Tucumana	3,53	0
BOLTIPA086	1.9. Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos Boliviano-Tucumanos	Khewiñar Boliviano-Tucumano septentrional: Serie de *Berberis chrysacantha-Polylepis neglecta*	11,33	0
BOLTIPA086	1.5. Subtropical/Tropical Dry Forest	Bosques freatófilos subandino-interandinos Boliviano-Tucumanos	Algarrobal freatofítico interandino-inferior: Serie de *Vallesia glabra-Prosopis alba*	9,41	0
BOLTIPA086	1.5. Subtropical/Tropical Dry Forest	Bosques subhúmedos montanos, Boliviano-Tucumanos	Bosque montano semidecíduo, Boliviano-Tucumano de Tipa y Jacarandá: Serie de *Jacaranda mimosifolia-Tipuana tipu*	515,12	22
BOLTIPA086	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque seco interandino de Mara valluna y Soto: Serie de *Cardenasiodendron brachypterum-Schinopsis haenkeana*	876,06	37
BOLTIPA086	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque semiárido interandino de Caraparí y Soto: Serie de *Neocardenasia herzogiana-Schinopsis haenkeana*	766,68	32
BOLTIPA086	1.5. Subtropical/Tropical Dry Forest	Bosques xerofíticos interandinos Boliviano-Tucumanos	Bosque semiárido interandino de Cola de Zorro y Soto: Serie de *Espostoa guentheri-Loxopterygium grisebachii*	210,31	9
BOLTIPA087	4.7. Subtropical/Tropical High Altitude Grassland	Pajonales altoandinos de la Puna húmeda	Facies de *Tetraglochin cristata* degradadas y sobrepastoreadas	173,63	6
BOLTIPA087	1.9. Subtropical/Tropical Moist Montane Forest	Bosques altimontanos pluviestacionales de los Yungas	Bosque altimontano inferior pluviestacionales de los Yungas de Cotacajes: Serie de *Blepharocalyx salicifolius-Podocarpus glomeratus*	347,02	11
BOLTIPA087	1.9. Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos pluviestacionales de los Yungas	Bosque de *Polylepis* altimontano húmedo pluviestacional de los Yungas de Cochabamba: Serie de *Styloceras columnare-Polylepis lanata*	737,79	24
BOLTIPA087	1.9. Subtropical/Tropical Moist Montane Forest	Bosques de *Polylepis* altimontanos pluviestacionales de los Yungas	Bosque de *Polylepis* altimontano húmedo pluviestacional de los Yungas de Inquisivi: Serie de *Berberis edentata-Polylepis pacensis*	383,52	13
BOLTIPA087	1.9. Subtropical/Tropical Moist Montane Forest	Bosques montanos pluviestacionales húmedos de los Yungas	Bosque yungueño pluviestacional montano de los Yungas del Boopi y Cotacajes: Serie preliminar de *Clethra cuneata-Weinmannia sorbifolia*	56,04	2
BOLTIPA087	1.9. Subtropical/Tropical Moist Montane Forest	Bosques siempre verde estacionales yungueños basimontanos	Bosque húmedo estacional basimontano de los Yungas del Cotacajes y Altamachi: Serie preliminar de *Centrolobium* cf. *minus-Juglans boliviana*	20,69	1
BOLTIPA087	1.9. Subtropical/Tropical Moist Montane Forest	Bosques yungueños montanos pluviestacionales subhúmedos	Bosque semidecíduo yungueño montano de los Yungas del Cotacajes: Serie de *Leucochloron bolivianum-Erythrina falcata*	599,10	20
BOLTIPA087	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños pluviestacionales subhúmedos basimontanos	Bosque semidecíduo basimontano superior de los Yungas de La Paz: Serie de *Cariniana estrellensis-Schinopsis brasiliensis*	382,51	13
BOLTIPA087	1.5. Subtropical/Tropical Dry Forest	Bosques yungueños xéricos basimontanos	Bosque yungueño xérico basimontano inferior de los Yungas del Cotacajes: Serie de *Cleistocactus laniceps-Schinopsis haenkeana*	350,28	11

APPENDIX 3

Useful plant species documented in Bolivia: global IUCN category and criteria, and presence in IPA sites.

IUCN category: Not Evaluated (NE), Data Deficient (DD), Least Concern (LC), Near Threatened (NT), Vulnerable (VU), Endangered (EN), Critically Endangered (CR), Extinct in the Wild (EW)
***Endemic species**, # Preliminary global threatened IUCN category (CR, EN, VU)



Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Acanthaceae	*Aphelandra glabrata*	Willd. ex Nees	NE	55, 60, 63
Acanthaceae	*Dianthera laevilinguis*	(Nees) Lindau	NE	5, 11, 12, 19, 76
Acanthaceae	*Dicliptera cochabambensis*	Lindau	NE	28, 86
Acanthaceae	*Dicliptera squarrosa*	Nees	NE	1, 9, 11, 12, 13, 25, 26, 27, 30, 31, 37, 39, 40, 54, 56, 57, 60, 61, 82, 87
Acanthaceae	*Elytraria imbricata*	(Vahl) Pers.	NE	1, 4, 11, 14, 18, 26, 31, 32
Acanthaceae	*Fittonia albivenis*	(Lindl. ex Veitch) Brummitt	NE	60
Acanthaceae	*Hygrophila costata*	Nees	NE	2, 4, 26, 60
Acanthaceae	*Justicia aequilabris*	(Nees) Lindau	LC	1
Acanthaceae	** Justicia consanguinea*	(Lindau) Wassh. & C.Ezcurra	LC	23
Acanthaceae	*Justicia dumetorum*	Morong	NE	1, 22, 33, 76
Acanthaceae	*Justicia goudotii*	V.A.W.Graham	NE	22, 25, 34, 35
Acanthaceae	*Justicia kuntzei*	Lindau	NE	3, 4, 9, 25, 26, 31, 34, 37, 39, 53, 60
Acanthaceae	*Justicia oranensis*	N.De Marco & Ter.Ruiz	NE	22, 25, 26, 31, 34, 35, 39
Acanthaceae	*Justicia ramulosa*	(Morong) C.Ezcurra	NE	1, 15, 25, 26, 31, 60, 61
Acanthaceae	*Justicia squarrosa*	Griseb.	NE	22
Acanthaceae	*Justicia tenuistachys*	(Rusby) Wassh. & J.R.I.Wood	NE	24, 25, 26, 34, 59, 60, 61, 79, 82, 83, 84
Acanthaceae	*Justicia tocantina*	(Nees) V.A.W.Graham	NE	23
Acanthaceae	** Justicia vernalis*	Wassh. & J.R.I.Wood	LC	25, 26, 31
Acanthaceae	*Mendoncia bivalvis*	(L.f.) Merr.	NE	11, 12, 25, 59, 60, 77, 84
Acanthaceae	*Oplonia jujuyensis*	Wassh. & C.Ezcurra	NE	60
Acanthaceae	*Pachystachys azaleiflora*	(Rusby) A.L.A.Côrtes	NE	26, 31, 55, 60
Acanthaceae	*Pachystachys spicata*	(Ruiz & Pav.) Wassh.	NE	58, 59, 60, 63, 64, 70
Acanthaceae	*Pulchranthus adenostachyus*	(Lindau) V.M.Baum, Reveal & Nowicke	NE	84
Acanthaceae	*Ruellia brevifolia*	(Pohl) C.Ezcurra	NE	1, 4, 11, 12, 18, 24, 25, 26, 31, 32, 34, 35, 39, 53, 59, 60, 61, 62, 68, 73, 76, 82, 84
Acanthaceae	*Ruellia ciliatiflora*	Hook.	NE	4, 23, 26, 37, 86
Acanthaceae	*Ruellia geminiflora*	Kunth	NE	5, 11, 12, 18, 31, 60, 61, 72, 76
Acanthaceae	*Ruellia longipedunculata*	Lindau	NE	3, 25, 26, 35
Acanthaceae	*Ruellia macrosolen*	Lillo ex C.Ezcurra	NE	22
Acanthaceae	*Ruellia sanguinea*	Griseb.	NE	25, 26, 31, 34, 82, 84
Acanthaceae	*Ruellia simplex*	C.Wright	NE	4, 22
Acanthaceae	*Stenandrium pohlii*	Nees	NE	2
Acanthaceae	*Thyrsacanthus boliviensis*	(Nees) A.L.A.Côrtes & Rapini	NE	1, 2, 22, 23, 26, 35, 36, 86
Achariaceae	*Carpotroche longifolia*	(Poepp.) Benth.	NE	65
Achariaceae	*Lindackeria paludosa*	(Benth.) Gilg	LC	60, 64
Achariaceae	*Mayna odorata*	Aubl.	LC	60, 61, 64, 67, 79
Achatocarpaceae	*Achatocarpus nigricans*	Triana	LC	1, 9, 14
Achatocarpaceae	*Achatocarpus praecox*	Griseb.	NE	1, 2, 3, 4, 5, 9, 14, 22, 23, 26, 35, 37, 60
Actinidiaceae	*Saurauia peruviana*	Buscal.	NE	53, 54, 56, 59, 60, 79, 84
Alismataceae	*Aquarius grandiflorus*	(Cham. & Schltdl.) Christenh. & Byng	NE	12, 18, 77
Alismataceae	*Aquarius paniculatus*	(Micheli) Christenh. & Byng	NE	5, 11, 12, 18, 26, 60, 76
Alismataceae	*Aquarius subalatus*	(Mart. ex Schult.f.) Christenh. & Byng	NE	5, 11, 12, 13, 79
Alismataceae	*Helanthium bolivianum*	(Rusby) Lehtonen & Myllys	NE	5, 12, 18, 26, 72, 76
Alismataceae	*Helanthium tenellum*	(Mart. ex Schult.f.) J.G.Sm.	NE	11, 14
Alismataceae	*Hydrocleys nymphoides*	(Humb. & Bonpl. ex Willd.) Buchenau	NE	9, 11, 12, 19, 22
Alismataceae	*Hydrocleys parviflora*	Seub.	NE	5, 11, 12
Alismataceae	*Limnocharis flava*	(L.) Buchenau	NE	11, 19, 60
Alismataceae	*Limnocharis laforestii*	Duchass. ex Griseb.	NE	4, 18
Alismataceae	*Sagittaria montevidensis*	Cham. & Schltdl.	NE	37, 76
Alismataceae	*Sagittaria rhombifolia*	Cham.	NE	5, 11, 18, 60, 72, 76
Alstroemeriaceae	*Bomarea dulcis*	(Hook.) Beauverd	NE	30, 48, 51, 52, 57, 59, 60, 85, 86

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Alstroemeriaceae	*Bomarea ovata*	(Cav.) Mirb.	NE	26, 27, 52, 56, 58, 59, 60
Alstroemeriaceae	*Bomarea velascoana*	Vargas	DD	59
Amarantaceae	*Atriplex imbricata*	(Moq.) D. Dietr.	NE	46
Amaranthaceae	*Achyranthes aspera*	L.	NE	1, 4, 26, 60
Amaranthaceae	*Alternanthera ficoidea*	(L.) P.Beauv.	NE	1, 5, 18, 19, 22, 64, 76
Amaranthaceae	*Alternanthera philoxeroides*	(Mart.) Griseb.	NE	5, 61, 79
Amaranthaceae	*Alternanthera pungens*	Kunth	NE	26, 27, 34, 35, 42, 53
Amaranthaceae	*Amaranthus asplundii*	Thell.	NE	87
Amaranthaceae	*Amaranthus cardenasianus*	Hunz.	NE	23
Amaranthaceae	*Amaranthus deflexus*	L.	NE	79, 84, 85
Amaranthaceae	*Amaranthus dubius*	Mart. ex Thell.	NE	2
Amaranthaceae	*Amaranthus hybridus*	L.	NE	23, 26, 36, 56, 58, 84, 85
Amaranthaceae	*Amaranthus muricatus*	(Gillies ex Moq.) Hieron.	NE	23, 79
Amaranthaceae	*Amaranthus spinosus*	L.	NE	31, 60, 76
Amaranthaceae	*Amaranthus viridis*	L.	NE	2, 9, 22, 23, 35, 36, 64, 84
Amaranthaceae	*Atriplex myriophylla*	Phil.	NE	43
Amaranthaceae	*Chamissoa altissima*	(Jacq.) Kunth	NE	1, 23, 25, 26, 31, 34, 39, 56, 60, 64, 76, 82, 84
Amaranthaceae	*Chenopodium petiolare*	Kunth	NE	22, 43, 52, 59
Amaranthaceae	*Chenopodium quinoa*	Willd.	NE	47, 59
Amaranthaceae	*Dysphania ambrosioides*	(L.) Mosyakin & Clemants	NE	9, 25, 28, 39, 51, 52, 53, 57, 58, 59, 60, 61, 87
Amaranthaceae	*Dysphania incisa*	(Poir.) ined.	NE	38
Amaranthaceae	*Gomphrena boliviana*	Moq.	NE	25, 86
Amaranthaceae	* *Gomphrena cardenasii*	Standl. ex E.Holzh.	VU B1ab(i,ii,iii,iv,v) +2ab(i,ii,iii,iv,v)	2
Amaranthaceae	*Gomphrena elegans*	Mart.	NE	9
Amaranthaceae	*Gomphrena haenkeana*	Mart.	NE	22, 26, 36
Amaranthaceae	*Gomphrena mandonii*	R.E.Fr.	NE	52
Amaranthaceae	*Gomphrena martiana*	Gillies ex Moq.	NE	23, 26, 31, 36, 42
Amaranthaceae	*Gomphrena meyeniana*	Walp.	NE	48, 51, 57, 59, 85
Amaranthaceae	*Gomphrena perennis*	L.	NE	6, 23, 35, 42, 84
Amaranthaceae	*Gomphrena vaga*	Mart.	NE	4, 9, 23, 25, 26, 34, 56, 60, 79
Amaranthaceae	*Guilleminea densa*	(Willd. ex Schult.) Moq.	NE	22
Amaranthaceae	*Hebanthe occidentalis*	(R.E.Fr.) Borsch & Pedersen	NE	9, 13, 26, 37, 39, 53, 54, 59, 60, 73, 74
Amaranthaceae	*Iresine angustifolia*	Euphrasén	NE	11
Amaranthaceae	*Iresine diffusa*	Humb. & Bonpl. ex Willd.	NE	1, 9, 22, 25, 26, 27, 30, 31, 32, 34, 35, 37, 39, 54, 56, 59, 60, 63, 82, 84, 85, 86, 87
Amaranthaceae	*Pfaffia glomerata*	(Spreng.) Pedersen	NE	9, 11, 18, 19, 25, 79, 86
Amaranthaceae	*Salicornia neei*	Lag.	NE	43
Anacardiaceae	*Schinus pearcei*	Engl.	NE	56
Anacardiaceae	*Schinus pilifera*	I.M.Johnst.	NE	35
Anacardiaceae	*Schinus polygama*	(Cav.) Cabrera	LC	82
Anacardiaceae	*Spondias mombin*	L.	LC	18, 21, 72, 74
Anacardiaceae	*Tapirira guianensis*	Aubl.	LC	11, 12, 13, 18, 25, 56, 59, 60, 61, 62, 63, 64, 70, 72, 79, 82, 83, 84
Anacardiaceae	*Toxicodendron striatum*	(Ruiz & Pav.) Kuntze	LC	26
Anemiaceae	*Anemia phyllitidis*	(L.) Sw.	NE	24, 26, 31, 34, 37, 59, 60, 86
Annonaceae	*Anaxagorea dolichocarpa*	Sprague & Sandwith	LC	11, 60, 63, 75, 79, 83, 84
Amaranthaceae	*Suaeda divaricata*	Moq.	NE	52
Amaranthaceae	*Suaeda foliosa*	Moq.	NE	46
Amaryllidaceae	*Chlidanthus fragrans*	Herb.	NE	43
Amaryllidaceae	* *Clinanthus chihuanhuayu*	(Cárdenas) Meerow	NE	46
Amaryllidaceae	*Eustephia coccinea*	Cav.	NE	59
Amaryllidaceae	* *Hippeastrum divijulianum*	(Cárdenas) Meerow	# CR	79

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Amaryllidaceae	*Hippeastrum elegans*	(Spreng.) H.E.Moore	NE	4
Amaryllidaceae	* *Hippeastrum fragrantissimum*	(Cárdenas) Meerow	# CR	82
Amaryllidaceae	*Hippeastrum miniatum*	(Ruiz & Pav.) Herb.	NE	57, 59
Amaryllidaceae	*Nothoscordum andicola*	Kunth	NE	85
Amaryllidaceae	*Stenomesson miniatum*	(Herb.) Ravenna	NE	59
Anacardiaceae	*Anacardium humile*	A.St.-Hil.	NE	2, 10, 11
Anacardiaceae	*Anacardium occidentale*	L.	LC	11, 15, 60
Anacardiaceae	*Astronium fraxinifolium*	Schott	LC	1, 2, 5, 9, 11, 12, 18, 21, 25, 35, 60, 61, 72, 73
Anacardiaceae	*Astronium graveolens*	Jacq.	LC	11, 12, 60
Anacardiaceae	*Astronium lecointei*	Ducke	LC	11, 60, 70
Anacardiaceae	* *Cardenasiodendron brachypterum*	(Loes.) F.A.Barkley	NT B1ab(iii)+2ab(iii)	23, 26, 27, 30, 31, 86
Anacardiaceae	*Lithraea molleoides*	(Vell.) Engl.	LC	23, 25, 26, 27, 30, 31, 37, 86
Anacardiaceae	*Loxopterygium grisebachii*	Hieron. & H.Lorentz ex Griseb.	NE	23, 25, 26, 29, 34, 35, 36, 48
Anacardiaceae	*Mauria thaumatophylla*	Loes.	LC	11, 23, 25, 26, 27, 31, 32, 34, 35, 37
Anacardiaceae	*Myracrodruon urundeuva*	Allemão	LC	1, 2, 9, 12, 13, 18, 21, 23, 26, 31, 32, 34, 39, 54, 56, 60
Anacardiaceae	*Schinopsis brasiliensis*	Engl.	LC	1, 2, 5, 10, 14, 20, 23, 60
Anacardiaceae	*Schinopsis cornuta*	Loes.	LC	22
Anacardiaceae	*Schinopsis lorentzii*	(Griseb.) Engl.	NE	22, 23, 25, 26, 27, 31, 36, 86, 87
Anacardiaceae	*Schinus areira*	L.	NE	3, 23, 28, 37, 38, 85, 87
Anacardiaceae	*Schinus fasciculata*	(Griseb.) I.M.Johnst.	LC	23, 25, 26, 36, 86
Anacardiaceae	*Schinus microphylla*	I.M.Johnst.	LC	23, 27, 30, 52, 56, 57, 59, 84, 85, 87
Anacardiaceae	*Schinus myrtifolia*	(Griseb.) Cabrera	LC	23, 25, 26, 27, 30, 31, 32, 34, 40, 84
Anacardiaceae	*Schinus pearcei*	Engl.	NE	56
Anacardiaceae	*Schinus pilifera*	I.M.Johnst.	NE	35
Anacardiaceae	*Schinus polygama*	(Cav.) Cabrera	LC	82

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Anacardiaceae	*Spondias mombin*	L.	LC	18, 21, 72, 74
Anacardiaceae	*Tapirira guianensis*	Aubl.	LC	11, 12, 13, 18, 25, 56, 59, 60, 61, 62, 63, 64, 70, 72, 79, 82, 83, 84
Anacardiaceae	*Toxicodendron striatum*	(Ruiz & Pav.) Kuntze	LC	26
Anemiaceae	*Anemia phyllitidis*	(L.) Sw.	NE	24, 26, 31, 34, 37, 59, 60, 86
Annonaceae	*Anaxagorea dolichocarpa*	Sprague & Sandwith	LC	11, 60, 63, 75, 79, 83, 84
Annonaceae	*Annona ambotay*	Aubl.	LC	63, 64, 65
Annonaceae	* *Annona boliviana*	(R.E.Fr.) H.Rainer	NT B2ab(iii)	57, 59, 60
Annonaceae	*Annona cherimola*	Mill.	LC	60
Annonaceae	*Annona cordifolia*	(Szyszył.) Poepp. ex Maas & Westra	LC	63
Annonaceae	*Annona coriacea*	Mart.	NE	11, 12
Annonaceae	*Annona cornifolia*	A.St.-Hil.	LC	5
Annonaceae	*Annona dioica*	A.St.-Hil.	LC	11, 12, 20, 60, 72
Annonaceae	*Annona emarginata*	(Schltdl.) H.Rainer	LC	31, 34, 37, 39, 60
Annonaceae	*Annona excellens*	R.E.Fr.	LC	12
Annonaceae	*Annona exsucca*	DC.	LC	12
Annonaceae	*Annona herzogii*	(R.E.Fr.) H.Rainer	LC	1, 2, 5, 13, 14, 18, 20, 21, 26, 31, 34, 35, 37, 53, 61, 62, 79, 84
Annonaceae	*Annona hypoglauca*	Mart.	LC	60, 64, 68
Annonaceae	*Annona montana*	Macfad.	NE	3, 8, 11, 60, 61, 76, 79, 83
Annonaceae	*Annona monticola*	Mart.	LC	11, 20
Annonaceae	*Annona muricata*	L.	LC	1, 11, 15, 18, 19, 24, 72, 75, 79, 84
Annonaceae	*Annona nutans*	(R.E.Fr.) R.E.Fr.	LC	1, 2, 5, 20, 23, 25
Annonaceae	*Annona papilionella*	(Diels) H.Rainer	LC	11, 12, 19, 60, 80, 84
Annonaceae	*Annona williamsii*	(Rusby ex R.E.Fr.) H.Rainer	LC	56, 60, 68, 76, 77
Annonaceae	*Bocageopsis mattogrossensis*	(R.E.Fr.) R.E.Fr.	LC	11
Annonaceae	*Cardiopetalum calophyllum*	Schltdl.	LC	11, 12, 62, 72

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Annonaceae	* *Cremastosperma leiophyllum*	R.E.Fr.	LC	3, 12, 25, 59, 60, 64, 67
Annonaceae	*Cymbopetalum brasiliense*	(Vell.) Benth. ex Baill.	NE	11, 62
Annonaceae	*Cymbopetalum longipes*	Benth. ex Diels	LC	12, 60
Annonaceae	*Duguetia furfuracea*	(A.St.-Hil.) Saff.	LC	11, 12, 13
Annonaceae	*Duguetia marcgraviana*	Mart.	LC	1, 11, 12, 13, 18, 75
Annonaceae	*Duguetia phaeoclados*	(Mart.) Maas & Rainer	NE	2, 5, 14, 18
Annonaceae	*Duguetia quitarensis*	Benth.	LC	1, 62, 64, 65, 70
Annonaceae	*Duguetia spixiana*	Mart.	LC	60, 61, 63, 64, 65, 78, 79, 80, 83, 84
Annonaceae	*Ephedranthus boliviensis*	Chatrou & Pirie	VU B2ab(iii)	11
Annonaceae	*Guatteria citriodora*	Ducke	LC	60, 69, 83
Annonaceae	*Guatteria discolor*	R.E.Fr.	LC	60, 64, 70
Annonaceae	*Guatteria foliosa*	Benth.	LC	11, 60
Annonaceae	*Guatteria hirsuta*	Ruiz & Pav.	LC	15, 24, 25, 26, 56, 59, 60, 77, 81, 83, 84
Annonaceae	*Guatteria maypurensis*	Kunth	LC	11, 12, 60
Annonaceae	*Guatteria punctata*	(Aubl.) R.A.Howard	LC	11, 12, 25, 54, 56, 57, 58, 59, 60, 63, 64, 66, 70, 79, 83, 84
Annonaceae	*Guatteria schomburgkiana*	Mart.	LC	11, 60, 64
Annonaceae	*Guatteria scytophylla*	Diels	LC	11, 70
Annonaceae	*Guatteria ucayalina*	Huber	LC	56, 57, 59, 60, 62, 83
Annonaceae	*Onychopetalum periquino*	(Rusby) D.M.Johnson & N.A.Murray	LC	11, 12, 60, 63, 64, 65, 70
Annonaceae	*Oxandra espintana*	(Spruce ex Benth.) Baill.	LC	60
Annonaceae	*Oxandra saxicola*	Maas & Junikka	NT B2ab(iii)	5, 6
Annonaceae	*Porcelia ponderosa*	(Rusby) Rusby	LC	19, 60, 61
Annonaceae	* *Porcelia steinbachii*	(Diels) R.E.Fr.	VU B2ab(iii,v)	24, 25, 26, 62, 67
Annonaceae	*Ruizodendron ovale*	(Ruiz & Pav.) R.E.Fr.	LC	25, 56, 60, 62, 63, 66, 79, 84
Annonaceae	*Unonopsis floribunda*	Diels	LC	59, 60, 61, 62, 63, 77

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Annonaceae	*Unonopsis guatterioides*	(A.DC.) R.E.Fr.	LC	5, 8, 11, 12, 13, 25, 60, 63, 64, 68, 70, 76, 77, 78, 79, 84
Annonaceae	*Xylopia aromatica*	(Lam.) Mart.	LC	2, 5, 10, 11, 12, 60
Annonaceae	*Xylopia benthamii*	R.E.Fr.	LC	5, 11, 12, 13, 25, 59, 60, 64, 65, 66, 69
Annonaceae	*Xylopia calophylla*	R.E.Fr.	NE	11, 64
Annonaceae	*Xylopia frutescens*	Aubl.	LC	11, 12, 60, 75
Annonaceae	*Xylopia peruviana*	R.E.Fr.	VU B2ab(ii)	60
Annonaceae	*Xylopia polyantha*	R.E.Fr.	NE	11, 12, 60, 61, 70, 84
Annonaceae	*Xylopia sericea*	A.St.-Hil.	LC	11, 12, 13, 60, 72
Apiaceae	*Azorella biloba*	(Schltdl.) Wedd.	LC	23, 25, 52, 56, 57, 59, 60, 82, 84, 85, 87
Apiaceae	*Azorella compacta*	Phil.	LC	44, 47, 50, 59
Apiaceae	*Azorella diapensioides*	A.Gray	LC	51, 52, 59
Apiaceae	*Azorella multifida*	(Ruiz & Pav.) Pers.	LC	59, 60, 82, 85
Apiaceae	*Chaerophyllum andicola*	(Kunth) K.F.Chung	NE	56, 57, 59, 60, 82, 84, 85
Apiaceae	*Cyclospermum leptophyllum*	(Pers.) Sprague ex Britton & P.Wilson	NE	22, 26, 27, 35, 59
Apiaceae	*Daucus montanus*	Humb. & Bonpl. ex Schult.	NE	25, 26, 27, 57, 58, 59, 60, 82, 84
Apiaceae	*Eryngium ebracteatum*	Lam.	NE	11, 12, 18, 23, 26, 30, 31, 76
Apiaceae	*Eryngium elegans*	Cham. & Schltdl.	NE	1, 2, 20, 24, 26, 27, 32, 37, 54, 55, 58, 60, 76, 84
Apiaceae	*Eryngium foetidum*	L.	NE	82, 84
Apiaceae	*Mulinum ulicinum*	Gillies & Hook.	NE	40
Apocynaceae	*Allamanda cathartica*	L.	NE	11, 25, 65, 76
Apocynaceae	*Araujia odorata*	(Hook. & Arn.) Fontella & Goyder	NE	22, 23, 25, 26, 29, 31, 32, 34, 35, 37, 39, 52, 53, 86
Apocynaceae	*Asclepias barjoniifolia*	E.Fourn.	NE	26, 27, 37, 39, 42, 58, 85
Apocynaceae	*Asclepias boliviensis*	E.Fourn.	NE	9, 25, 26, 34, 37
Apocynaceae	*Asclepias curassavica*	L.	NE	23, 25, 26, 31, 34, 35, 37, 56, 60, 63, 86
Apocynaceae	*Asclepias mellodora*	A.St.-Hil.	NE	11, 12, 18, 26, 37, 56, 58, 60

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Apocynaceae	*Aspidosperma australe*	Müll.Arg.	LC	9, 19, 20, 24, 26, 86
Apocynaceae	*Aspidosperma carapanauba*	Pichon	NE	69
Apocynaceae	*Aspidosperma cylindrocarpon*	Müll.Arg.	LC	1, 5, 9, 11, 12, 19, 21, 24, 25, 26, 31, 60, 61
Apocynaceae	*Aspidosperma excelsum*	Benth.	LC	11, 59, 60, 70
Apocynaceae	*Aspidosperma macrocarpon*	Mart.	LC	1, 2, 10, 11, 12, 13, 59, 60, 72
Apocynaceae	*Aspidosperma nobile*	Müll.Arg.	NE	11, 18
Apocynaceae	*Aspidosperma parvifolium*	A.DC.	NE	12, 62, 63, 64
Apocynaceae	*Aspidosperma pyrifolium*	Mart.	LC	1, 2, 5, 19, 22, 26
Apocynaceae	*Aspidosperma quebracho-blanco*	Schltdl.	LC	19, 22, 23, 25, 26, 85, 86
Apocynaceae	*Aspidosperma ramiflorum*	Müll.Arg.	LC	61, 64
Apocynaceae	* *Aspidosperma resonans*	H.J.Will. & Goyder	VU B1ab(iii)+2ab(iii)	28, 29, 49, 86
Apocynaceae	*Aspidosperma rigidum*	Rusby	LC	1, 11, 12, 13, 24, 25, 26, 59, 60, 61, 70, 72, 77, 79
Apocynaceae	*Aspidosperma spruceanum*	Benth. ex Müll.Arg.	LC	11, 12, 26, 60, 64, 65, 66, 72
Apocynaceae	*Aspidosperma subincanum*	Mart.	LC	11, 12, 72
Apocynaceae	*Aspidosperma tomentosum*	Mart.	LC	1, 2, 5, 10, 11, 12, 17, 72
Apocynaceae	*Aspidosperma triternatum*	Rojas Acosta	NE	1, 4, 9, 22
Apocynaceae	*Cascabela thevetia*	(L.) Lippold	LC	1, 5, 11, 35, 61
Apocynaceae	*Couma macrocarpa*	Barb.Rodr.	LC	60, 64, 69, 70
Apocynaceae	*Forsteronia acouci*	(Aubl.) A.DC.	NE	3, 11, 12, 56, 65
Apocynaceae	*Forsteronia pubescens*	A.DC.	NE	1, 2, 4, 5, 8, 9, 11, 12, 22, 25, 26, 53, 60
Apocynaceae	*Funastrum clausum*	(Jacq.) Schltr.	NE	5, 9, 11, 12, 13, 73, 79
Apocynaceae	*Funastrum gracile*	(Decne.) Schltr.	NE	23, 26, 86
Apocynaceae	*Geissospermum laeve*	(Vell.) Miers	NE	11
Apocynaceae	*Geissospermum reticulatum*	A.H.Gentry	LC	11, 64
Apocynaceae	*Geissospermum sericeum*	Miers	NE	66

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Apocynaceae	*Hancornia speciosa*	Gomes	LC	11, 12, 21, 72
Apocynaceae	*Himatanthus obovatus*	(Müll.Arg.) Woodson	LC	2, 10, 11, 13, 17, 18, 21, 72
Apocynaceae	*Ibatia boliviensis*	(Schltr.) Morillo	NE	82
Apocynaceae	*Macroscepis grandiflora*	(Mart.) H.A.Keller & Liede	NE	1, 5, 9, 11, 12, 18, 55, 60
Apocynaceae	*Mandevilla laxa*	(Ruiz & Pav.) Woodson	NE	23, 25, 26, 27, 31, 32, 34, 37, 40, 84, 85, 87
Apocynaceae	*Mandevilla longiflora*	(Desf.) Pichon	NE	1, 2, 3, 11, 17, 18, 23, 26, 30, 32
Apocynaceae	*Mandevilla rugellosa*	(Rich.) L.Allorge	NE	11, 12, 24, 56, 58, 59, 60, 64, 75
Apocynaceae	*Mesechites trifidus*	(Jacq.) Müll.Arg.	NE	9, 11, 25, 60, 73, 76, 77, 79, 84
Apocynaceae	*Odontadenia laxiflora*	(Rusby) Woodson	NE	11, 12, 59, 60, 64, 79
Apocynaceae	* *Oxypetalum dactylostelma*	Goyder	# EN	31, 82, 84
Apocynaceae	*Philibertia lysimachioides*	(Wedd.) T.Mey.	NE	25, 53, 59, 84, 85
Apocynaceae	*Prestonia erecta*	J.F.Morales	NE	2, 4, 5, 10, 11, 18, 20
Apocynaceae	*Rauvolfia praecox*	K.Schum. ex Markgr.	LC	11, 25, 60
Apocynaceae	*Rauvolfia schuelii*	Speg.	LC	36
Apocynaceae	*Rauvolfia tetraphylla*	L.	LC	5
Apocynaceae	*Ruehssia macrophylla*	(Humb. & Bonpl. ex Schult.) H.Karst.	NE	1,13, 60, 79
Apocynaceae	*Tabernaemontana catharinensis*	A.DC.	LC	19, 25, 26
Apocynaceae	*Tabernaemontana cuspidata*	Rusby	LC	64, 70
Apocynaceae	*Tabernaemontana cymosa*	Jacq.	LC	1, 11, 13, 18, 19, 24, 25, 26, 55, 59, 60, 61, 63, 64, 67, 68, 72, 76, 77, 83, 84
Apocynaceae	*Tabernaemontana linkii*	A.DC.	LC	66, 68, 72, 75
Apocynaceae	*Tabernaemontana siphilitica*	(L.f.) Leeuwenb.	LC	11, 12, 64, 73, 74, 76, 77
Apocynaceae	*Tabernaemontana vanheurckii*	Müll.Arg.	LC	9, 11, 19, 25, 60, 61, 64, 70, 73, 76, 79
Apocynaceae	*Thevetia amazonica*	Ducke	NE	1, 12, 13, 74
Apocynaceae	*Thevetia bicornuta*	Müll.Arg.	NE	12
Apocynaceae	*Vallesia glabra*	(Cav.) Link	LC	19, 22, 23, 25, 26, 28, 29, 31, 32, 34, 35, 36, 37, 39

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Aquifoliaceae	*Ilex argentina*	Lillo	DD	23, 25, 26, 31, 32, 37, 39, 40, 59	Araceae	*Anthurium triphyllum*	(Willd. ex Schult.) Brongn. ex Schott	NE	56, 60, 79, 84
Araceae	*Adelonema wendlandii*	(Schott) S.Y.Wong & Croat	NE	84	Araceae	*Anthurium uleanum*	Engl.	NE	59
Araceae	*Anthurium acebeyae*	Croat	NE	25, 56, 59, 60, 84	Araceae	*Anthurium versicolor*	Sodiro	NE	84
Araceae	*Anthurium amoenum*	Kunth & C.D.Bouché	NE	52, 56, 57, 59, 60, 82, 84	Araceae	*Anthurium weberbaueri*	Engl.	NE	53, 56, 59
Araceae	*Anthurium atropurpureum*	R.E.Schult. & Maguire	NE	11, 26, 62	Araceae	** Anthurium yungasense*	Croat & Acebey	NE	54, 59, 60
Araceae	** Anthurium beckii*	Croat & Acebey	NE	59, 60, 84	Araceae	*Caladium bicolor*	(Aiton) Vent.	NE	56, 57, 59, 60, 82
Araceae	*Anthurium clavigerum*	Poepp.	NE	11, 55, 60, 61, 63, 64, 67, 69, 79, 84	Araceae	*Dieffenbachia parvifolia*	Engl.	NE	84
Araceae	*Anthurium eminens*	Schott	NE	58, 64, 84	Araceae	*Dieffenbachia williamsii*	Croat	NE	25, 55, 56, 58, 60, 61, 79, 84
Araceae	*Anthurium ernesti*	Engl.	NE	25, 60, 84	Araceae	** Gorgonidium mirabile*	Schott	NE	25, 34, 84, 87
Araceae	*Anthurium flavescens*	Poepp.	NE	52, 56, 57, 59, 60, 79, 82, 84	Araceae	*Gorgonidium vermicidum*	(Speg.) Bogner & Nicolson	NE	26
Araceae	*Anthurium gracile*	(Rudge) Lindl.	NE	11, 25, 56, 59, 60, 61, 64, 66, 70, 79, 82, 84	Araceae	*Incarum pavonii*	(Schott) E.G.Gonç.	NE	54, 56, 57
Araceae	*Anthurium grande*	W.Bull	NE	60, 84	Araceae	*Lemna aequinoctialis*	Welw.	LC	3, 9, 11
Araceae	*Anthurium harlingianum*	Croat	NE	84	Araceae	*Lemna valdiviana*	Phil.	LC	82
Araceae	*Anthurium kunthii*	Poepp.	NE	11, 25, 60, 61, 64, 79, 84	Araceae	*Monstera adansonii*	Schott	NE	60, 79, 84
Araceae	*Anthurium lechlerianum*	Schott	NE	56, 59, 60, 84	Araceae	*Monstera boliviana*	Rusby	NE	59, 60, 61, 77, 84
Araceae	*Anthurium macleanii*	Schott	NE	56, 57, 59, 60, 79, 84	Araceae	*Monstera dubia*	(Kunth) Engl. & K.Krause	NE	25, 58, 59, 60, 61, 64, 69, 76, 77, 79, 84
Araceae	** Anthurium ottobuchtienii*	Croat	NE	52, 56, 57, 60, 79, 84	Araceae	*Monstera lechleriana*	Schott	NE	25, 59, 60, 62, 63, 69, 79, 84
Araceae	*Anthurium ottonis*	K.Krause	NE	26, 56, 59, 60, 79, 87	Araceae	*Monstera obliqua*	Miq.	NE	11, 12, 13, 18, 24, 25, 55, 56, 60, 61, 63, 64, 69, 77, 79, 82, 84
Araceae	*Anthurium oxycarpum*	Poepp.	NE	56, 58, 59, 60, 61	Araceae	*Monstera spruceana*	(Schott) Engl.	NE	60, 63, 64, 67
Araceae	*Anthurium paraguayense*	Engl.	NE	1, 4, 17, 25, 26, 56, 57, 59, 60, 61, 62, 64, 72, 79, 84	Araceae	*Monstera subpinnata*	(Schott) Engl.	NE	59, 60, 61, 62, 79, 84
Araceae	*Anthurium pentaphyllum*	(Aubl.) G.Don	NE	60, 62, 63, 84	Araceae	*Philodendron bipinnatifidum*	Schott ex Endl.	NE	12, 18
Araceae	*Anthurium polydactylum*	Madison	NE	55	Araceae	*Philodendron brandtianum*	K.Krause	NE	56, 59, 60, 65, 84
Araceae	*Anthurium scandens*	(Aubl.) Engl.	NE	25, 53, 56, 57, 59, 60, 79, 82, 84	Araceae	*Philodendron camposportoanum*	G.M.Barroso	NE	1, 11, 12, 18, 25, 26, 55, 56, 59, 60, 61, 62, 69, 77, 79, 84
Araceae	*Anthurium soukupii*	Croat	NE	54, 56, 59, 60, 82	Araceae	*Philodendron cotapatense*	Croat & Acebey	NE	56
Araceae	*Anthurium stephanii*	Croat & Acebey	NE	56, 60, 85, 87	Araceae	*Philodendron deltoideum*	Poepp.	NE	56, 57, 58, 59, 60

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Araceae	*Philodendron divaricatum*	K.Krause	NE	60
Araceae	*Philodendron hederaceum*	(Jacq.) Schott	NE	59, 60
Araceae	*Philodendron heterophyllum*	Poepp.	NE	25, 59, 60, 79, 84
Araceae	*Philodendron imbe*	Schott ex Kunth	NE	2, 11, 12
Araceae	*Philodendron kroemeri*	Croat	NE	56, 60, 84
Araceae	*Philodendron lechlerianum*	Schott	NE	25, 56, 57, 60, 79, 84
Araceae	*Philodendron maximum*	K.Krause	NE	11, 13, 25, 60, 73
Araceae	*Philodendron megalophyllum*	Schott	NE	55, 58, 59, 60, 61, 77, 79, 84
Araceae	*Philodendron ornatum*	Schott	NE	25, 54, 56, 57, 59, 60, 61, 79, 84
Araceae	*Philodendron ruizii*	Schott	NE	55, 56, 84
Araceae	*Philodendron undulatum*	Engl.	NE	1, 26, 34, 37, 62
Araceae	*Pistia stratiotes*	L.	LC	5, 11, 12, 18, 63, 64
Araceae	*Rhodospatha brachypoda*	G.S.Bunting	NE	60
Araceae	*Rhodospatha latifolia*	Poepp.	NE	25, 58, 59, 60, 62, 63, 82, 84
Araceae	*Rhodospatha mukuntakia*	Croat	NE	58, 84
Araceae	*Spathantheum orbignyanum*	Schott	NE	11, 23, 25, 26, 27, 37, 56, 57, 59, 60, 82, 84, 85, 87
Araceae	** Stenospermation dictyoneurum*	Croat & Acebey	NE	56
Araceae	*Stenospermation flavescens*	Engl.	NE	57, 59
Araceae	*Stenospermation rusbyi*	N.E.Br.	NE	56, 57, 59, 60, 79, 82, 84
Araceae	*Stenospermation zeacarpium*	Madison	NE	54, 56, 59, 60, 79, 82, 84
Araceae	*Synandrospadix vermitoxicus*	(Griseb.) Engl.	NE	23, 26, 35, 36
Araceae	*Syngonium podophyllum*	Schott	NE	11, 13, 24, 25, 55, 59, 60, 61, 62, 63, 64, 69, 77, 79, 84
Araceae	*Syngonium yurimaguense*	Engl.	NE	60, 62, 63, 84
Araceae	*Taccarum weddellianum*	Brongn. ex Schott	NE	1, 9, 13, 14, 18, 25, 26, 87
Araceae	*Urospatha sagittifolia*	(Rudge) Schott	NE	11
Araceae	*Wolffiella lingulata*	(Hegelm.) Hegelm.	NE	4
Araceae	*Xanthosoma hylaeae*	Engl. & K.Krause	LC	59, 60, 79, 84
Araceae	*Xanthosoma poeppigii*	Schott	LC	25, 26
Araceae	** Xanthosoma puberulum*	Croat	NE	54, 56
Araceae	** Xanthosoma seideliae*	Croat	NE	36, 76
Araceae	*Xanthosoma striatipes*	(Kunth & C.D.Bouché) Madison	LC	1, 18, 23, 62
Araliaceae	*Aralia soratensis*	Marchal	NE	8, 23, 25, 26, 60, 86
Araliaceae	*Aralia warmingiana*	(Marchal) J.Wen	LC	14, 19
Araliaceae	*Dendropanax arboreus*	(L.) Decne. & Planch.	LC	26, 60, 83
Araliaceae	*Dendropanax cuneatus*	(DC.) Decne. & Planch.	LC	11, 25, 26
Araliaceae	*Didymopanax morototoni*	(Aubl.) Decne. & Planch.	LC	11, 12, 13, 15, 19, 59, 60, 63, 64, 79, 84
Araliaceae	*Hydrocotyle ranunculoides*	L.f.	LC	5, 12, 13, 18, 26, 35, 64, 73, 85
Araliaceae	*Oreopanax kuntzei*	Harms	NE	23, 25, 59, 60, 82, 84
Arecaceae	*Acrocomia totai*	Mart.	LC	9, 11, 15, 21, 26
Arecaceae	*Aiphanes horrida*	(Jacq.) Burret	LC	25, 26, 59, 60, 63, 67, 84
Arecaceae	** Aiphanes truncata*	(Brongn. ex Mart.) H.Wendl.	LC	15, 25, 26, 56, 57, 59, 60, 66, 79, 82, 84
Arecaceae	*Allagoptera leucocalyx*	(Drude) Kuntze	NE	1, 2, 8, 11, 12, 15, 26, 62, 72, 76
Arecaceae	*Astrocaryum aculeatum*	G.Mey.	LC	11, 13, 60, 63, 65, 70
Arecaceae	*Astrocaryum campestre*	Mart.	NE	11
Arecaceae	*Astrocaryum chonta*	Mart.	LC	25
Arecaceae	*Astrocaryum gratum*	F.Kahn & B.Millán	LC	60, 76
Arecaceae	*Astrocaryum huaimi*	Mart.	LC	11, 12, 60, 62, 73
Arecaceae	*Astrocaryum ulei*	Burret	NE	63
Arecaceae	*Attalea butyracea*	(Mutis ex L.f.) Wess.Boer	LC	60, 63, 73, 76, 79
Arecaceae	*Attalea cephalotus*	Poepp. ex Mart.	NE	63

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Arecaceae	*Attalea eichleri*	(Drude) A.J.Hend.	LC	5, 12	Arecaceae	*Dictyocaryum lamarckianum*	(Mart.) H.Wendl.	LC	54
Arecaceae	*Attalea maripa*	(Aubl.) Mart.	LC	11, 12, 13, 60, 63	Arecaceae	*Euterpe precatoria*	Mart.	LC	11, 12, 13, 59, 60, 62, 63, 64, 65, 66, 68, 69, 70, 74, 80
Arecaceae	*Attalea phalerata*	Mart. ex Spreng.	LC	11, 18, 26, 62, 63, 67, 72, 76, 80	Arecaceae	*Geonoma brongniartii*	Mart.	LC	60, 61, 79, 84
Arecaceae	*Attalea speciosa*	Mart.	LC	18, 21, 70, 72	Arecaceae	*Geonoma deversa*	(Poit.) Kunth	LC	11, 60, 61, 62, 63, 64, 65, 70, 79
Arecaceae	*Bactris acanthocarpa*	Mart.	LC	60, 63, 64, 65, 69, 70	Arecaceae	*Geonoma euspatha*	Burret	NE	60
Arecaceae	*Bactris brongniartii*	Mart.	LC	12, 13, 62	Arecaceae	*Geonoma macrostachys*	Mart.	LC	25, 60, 63, 64, 67, 79, 83, 84
Arecaceae	*Bactris chaveziae*	A.J.Hend.	NE	62	Arecaceae	*Geonoma maxima*	(Poit.) Kunth	LC	11, 60, 63, 67, 70
Arecaceae	*Bactris concinna*	Mart.	LC	60, 62, 63, 64, 70	Arecaceae	*Geonoma occidentalis*	(A.J.Hend.) A.J.Hend.	LC	59, 60, 61, 63, 64, 67, 84
Arecaceae	*Bactris corossilla*	H.Karst.	LC	70	Arecaceae	*Geonoma orbignyana*	Mart.	LC	25, 54, 57, 59, 60, 61, 84
Arecaceae	* *Bactris faucium*	Mart.	EN B2ab(ii,iii)	25, 60, 79, 82, 84	Arecaceae	*Geonoma pohliana*	Mart.	LC	11, 60, 79, 83
Arecaceae	*Bactris gasipaes*	Kunth	LC	60, 80, 83	Arecaceae	*Geonoma stricta*	(Poit.) Kunth	LC	25, 60, 63, 64, 70, 83, 84
Arecaceae	*Bactris glaucescens*	Drude	LC	11, 12, 62, 73	Arecaceae	*Geonoma undata*	Klotzsch	LC	60
Arecaceae	*Bactris hirta*	Mart.	LC	60, 63, 64, 70, 76, 79	Arecaceae	*Hyospathe elegans*	Mart.	LC	25, 59, 63, 79, 83, 84
Arecaceae	*Bactris major*	Jacq.	LC	79	Arecaceae	*Iriartea deltoidea*	Ruiz & Pav.	LC	11, 25, 59, 60, 63, 64, 80
Arecaceae	* *Bactris major* var. *socialis*	(Mart.) Drude	NE	25, 26, 64	Arecaceae	*Mauritia flexuosa*	L. f.	LC	11, 18, 60, 62, 63, 64, 66, 68, 69, 70, 72, 74, 79
Arecaceae	*Bactris maraja*	Mart.	LC	63	Arecaceae	*Mauritiella armata*	(Mart.) Burret	LC	11, 12, 62, 70, 72
Arecaceae	*Bactris riparia*	Mart.	LC	12, 13, 62	Arecaceae	*Oenocarpus balickii*	F.Kahn	NE	63
Arecaceae	*Ceroxylon parvifrons*	(Engel) H.Wendl.	NE	25, 31, 56, 59, 60	Arecaceae	*Oenocarpus bataua*	Mart.	LC	25, 59, 60, 62, 63, 64, 65, 68, 69, 70, 79, 80, 83
Arecaceae	*Ceroxylon pityrophyllum*	(Mart.) Mart. ex H.Wendl.	LC	25, 26, 30, 31, 53, 59, 60	Arecaceae	*Oenocarpus distichus*	Mart.	LC	12, 13, 64, 66
Arecaceae	*Chamaedorea angustisecta*	Burret	NE	12, 60, 61, 63, 73, 77	Arecaceae	*Oenocarpus mapora*	H.Karst.	LC	60, 62, 64, 65, 66, 67, 69, 77
Arecaceae	*Chamaedorea linearis*	(Ruiz & Pav.) Mart.	LC	60, 61, 82, 84	Arecaceae	* *Parajubaea sunkha*	M.Moraes	EN B1ab(iii) c(iv)+2ab(ii)c(iv)	26
Arecaceae	*Chamaedorea pinnatifrons*	(Jacq.) Oerst.	LC	11, 24, 25, 26, 59, 60, 63, 79, 82, 84	Arecaceae	* *Parajubaea torallyi*	(Mart.) Burret	EN B1ab(iii) +2ab(iii)	28, 29, 30
Arecaceae	*Chelyocarpus chuco*	(Mart.) H.E.Moore	LC	64, 70	Arecaceae	* *Parajubaea torallyi* var. *microcarpa*	M.Moraes	NE	30
Arecaceae	*Copernicia alba*	Morong	LC	5, 22	Arecaceae	* *Parajubaea torallyi* var. *torallyi*		NE	28
Arecaceae	*Desmoncus mitis*	Mart.	NE	60, 62, 70, 84	Arecaceae	*Phytelephas macrocarpa*	Ruiz & Pav.	LC	60, 63

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Arecaceae	*Prestoea acuminata*	(Willd.) H.E.Moore	LC	25, 26, 53, 59, 60, 84
Arecaceae	*Socratea exorrhiza*	(Mart.) H.Wendl.	LC	11, 13, 59, 60, 62, 63, 72
Arecaceae	* *Syagrus cardenasii*	Glassman	LC	24, 25, 26, 30, 31, 32, 34
Arecaceae	*Syagrus comosa*	(Mart.) Mart.	LC	11, 21
Arecaceae	* *Syagrus elata*	(L.R.Moreno & O.I.Moreno) Noblick	NE	11, 12
Arecaceae	*Syagrus oleracea*	(Mart.) Becc.	NE	11
Arecaceae	*Syagrus petraea*	(Mart.) Becc.	NE	2, 11, 26
Arecaceae	*Syagrus sancona*	(Kunth) H.Karst.	NE	1, 13, 60, 63, 72
Arecaceae	* *Syagrus yungasensis*	M.Moraes	EN B1ab(iii) +2ab(iii)	53, 55
Arecaceae	*Trithrinax schizophylla*	Drude	NE	4
Arecaceae	*Wettinia augusta*	Poepp. & Endl.	NE	60
Aristolochiaceae	*Aristolochia chiquitensis*	Duch.	LC	2, 14, 60
Aristolochiaceae	*Aristolochia esperanzae*	Kuntze	NE	14, 22, 26
Aristolochiaceae	*Aristolochia odoratissima*	L.	NE	4, 9
Aristolochiaceae	*Aristolochia prostrata*	Duch.	NE	26, 35
Aristolochiaceae	*Euglypha rojasiana*	Chodat & Hassl.	NE	1, 22
Asparagaceae	*Cordyline congesta*	(Sweet) Steud.	NE	25, 26, 27, 34, 39
Asparagaceae	*Furcraea foetida*	(L.) Haw.	NE	54
Asparagaceae	*Herreria montevidensis*	Klotzsch ex Griseb.	NE	1, 9, 14, 22, 23, 25, 26, 36, 60
Aspleniaceae	*Asplenium abscissum*	Willd.	NE	58
Aspleniaceae	*Asplenium serra*	Langsd. & Fisch.	NE	23, 25, 34, 39, 57, 59, 60, 84
Aspleniaceae	*Asplenium triphyllum*	C.Presl	NE	52, 56, 57, 59, 60
Asteraceae	*Acanthospermum australe*	(Loefl.) Kuntze	NE	1, 2, 11, 15, 18, 25, 26, 58, 59, 60, 75
Asteraceae	*Acanthospermum hispidum*	DC.	NE	9, 18, 23, 25, 26, 31, 34, 86
Asteraceae	*Acanthostyles buniifolius*	(Hook. & Arn.) R.M.King & H.Rob.	NE	23, 25, 26, 27, 32, 38, 60, 84
Asteraceae	*Achyrocline alata*	(Kunth) DC.	NE	25, 26, 51, 52, 56, 57, 59, 60, 84, 85, 86, 87
Asteraceae	*Achyrocline flaccida*	(Weinm.) DC.	NE	58
Asteraceae	*Achyrocline ramosissima*	Britton	NE	25, 26, 30, 48, 51, 52, 60, 82, 85
Asteraceae	*Achyrocline saturejoides*	(Lam.) DC.	NE	1, 11, 12, 18, 72
Asteraceae	*Achyrocline tomentosa*	Rusby	NE	25, 27, 37, 52, 55, 56, 84
Asteraceae	*Achyrocline venosa*	Rusby	NE	24, 25, 26, 57, 59, 60
Asteraceae	*Acmella brachyglossa*	Cass.	NE	9, 11, 26, 33, 39, 56, 57
Asteraceae	*Acmella ciliata*	(Kunth) Cass.	NE	26, 39, 56, 57, 60, 63
Asteraceae	*Acmella repens*	(Walter) Rich.	NE	56, 82
Asteraceae	*Ageratina glechonophylla*	(Less.) R.M.King & H.Rob.	NE	25, 26, 34, 51, 56, 57, 82, 84
Asteraceae	*Ageratina gloeoclada*	(B.L.Rob.) R.M.King & H.Rob.	NE	58
Asteraceae	*Ageratina pentlandiana*	(DC.) R.M.King & H.Rob.	NE	56, 59
Asteraceae	*Aldama australis*	(S.F.Blake) E.E.Schill. & Panero	NE	23, 38, 87
Asteraceae	*Aldama helianthoides*	(Rich.) E.E.Schill. & Panero	NE	52, 53, 56, 59, 82, 86
Asteraceae	*Aldama lanceolata*	(Britton) E.E.Schill. & Panero	NE	26, 56
Asteraceae	*Aldama tukumanensis*	(Hook. & Arn.) E.E.Schill. & Panero	NE	34, 37, 38
Asteraceae	*Ambrosia arborescens*	Mill.	NE	59, 85, 86
Asteraceae	*Ambrosia tenuifolia*	Spreng.	NE	76
Asteraceae	*Andicolea thuyoides*	(Lam.) Mayta & Molinari	NE	56
Asteraceae	*Aphyllocladus spartioides*	Wedd.	NE	41, 43, 48
Asteraceae	*Austrobrickellia patens*	(Hook. & Arn.) R.M.King & H.Rob.	NE	23, 26, 29, 42
Asteraceae	*Baccharis alpina*	Kunth	NE	43, 52, 56, 59, 62
Asteraceae	*Baccharis articulata*	Pers.	NE	23, 25, 26, 27, 31, 60
Asteraceae	*Baccharis boliviensis*	(Wedd.) Cabrera	NE	46, 47, 48, 52
Asteraceae	*Baccharis buchtienii*	H.Rob.	LC	23, 24, 25, 26, 56, 57, 58, 59, 60, 82, 84

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Asteraceae	*Baccharis caespitosa*	Pers.	NE	53, 56, 57, 84
Asteraceae	*Baccharis coridifolia*	DC.	NE	25, 26, 27, 37, 61
Asteraceae	*Baccharis darwinii*	Hook. & Arn.	NE	41, 56, 79
Asteraceae	*Baccharis dracunculifolia*	DC.	NE	23, 26, 27, 35, 37, 47, 84
Asteraceae	*Baccharis genistelloides*	(Lam.) Pers.	NE	23, 25, 26, 34, 50, 52, 54, 56, 57, 59, 60, 82, 84, 85, 87
Asteraceae	*Baccharis grisebachii*	Hieron.	NE	41
Asteraceae	*Baccharis juncea*	(Cass.) Desf.	NE	25, 43, 53, 87
Asteraceae	*Baccharis latifolia*	Pers.	LC	23, 25, 26, 27, 31, 37, 51, 52, 53, 56, 57, 59, 60, 82, 84, 85, 87
Asteraceae	*Baccharis linearifolia*	Pers.	NE	25, 26, 27, 32, 34, 40, 53, 56, 58, 59, 85
Asteraceae	*Baccharis nitida*	Pers.	LC	25, 56, 57, 58, 59, 60, 82, 84
Asteraceae	*Baccharis oblongifolia*	Pers.	NE	25, 26, 54, 56, 57, 59, 60, 82, 84
Asteraceae	*Baccharis papillosa*	Rusby	LC	25, 52, 53, 56, 57, 59, 60, 82, 84, 85, 87
Asteraceae	*Baccharis pentlandii*	DC.	NE	25, 37, 40, 48, 56, 57, 59, 60, 82, 84, 85, 87
Asteraceae	*Baccharis pulchella*	Sch.Bip. ex Griseb.	NE	23, 26, 34, 52, 56, 86
Asteraceae	*Baccharis punctulata*	DC.	LC	26
Asteraceae	*Baccharis quitensis*	Kunth	NE	25, 26, 27, 31, 34, 35, 37, 39, 54, 55, 56, 59, 60, 82, 87
Asteraceae	*Baccharis sagittalis*	(Less.) DC.	NE	25, 26
Asteraceae	*Baccharis salicifolia*	(Ruiz & Pav.) Pers.	LC	9, 19, 23, 25, 26, 37, 60
Asteraceae	*Baccharis tola*	Phil.	NE	23, 43, 45, 46, 47, 48, 50, 51, 52, 59
Asteraceae	* *Baccharis torricoi*	Joch.Müll.	NE	41
Asteraceae	*Baccharis trinervis*	Pers.	NE	9, 11, 25, 26, 31, 39, 55, 56, 59, 60, 64, 72
Asteraceae	*Baccharis ulicina*	Hook. & Arn.	NE	23, 84
Asteraceae	* *Baccharis yungensis*	(Joch.Müll.) G.Heiden	NE	53, 56, 87
Asteraceae	* *Barnadesia macrocephala*	Kuntze	NE	82
Asteraceae	*Barnadesia odorata*	Griseb.	NE	26, 27, 30, 31, 37, 38, 54, 58, 84

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Asteraceae	*Barnadesia polyacantha*	Wedd.	LC	23, 25, 26, 56, 57, 58, 59, 60, 84, 87
Asteraceae	*Barnadesia pycnophylla*	Muschl.	NE	26, 52, 53, 57, 59, 60, 84, 87
Asteraceae	*Belloa erythractis*	(Wedd.) Cabrera	NE	52, 53, 56, 57
Asteraceae	*Bidens alba*	(L.) DC.	NE	57
Asteraceae	*Bidens andicola*	Kunth	NE	25, 26, 27, 30, 31, 34, 38, 40, 42, 52, 56, 57, 59, 60, 82, 84, 85, 87
Asteraceae	*Bidens cynapiifolia*	Kunth	NE	1, 11, 39, 59, 62, 63
Asteraceae	*Bidens gardneri*	Baker	NE	5
Asteraceae	*Bidens mandonii*	(Sherff) Cabrera	NE	27, 38
Asteraceae	*Bidens pilosa*	L.	NE	9, 25, 26, 31, 37, 56, 57, 59, 60, 82
Asteraceae	*Bidens pseudocosmos*	Sherff	NE	52
Asteraceae	*Bidens subalternans*	DC.	NE	9, 11, 15, 19
Asteraceae	*Bidens triplinervia*	Kunth	NE	51, 52, 56, 57, 60, 82, 85
Asteraceae	*Brickellia diffusa*	(Vahl) A.Gray	NE	26, 31, 35
Asteraceae	*Campovassouria cruciata*	(Vell.) R.M.King & H.Rob.	NE	23, 25, 26, 27, 30, 34, 59, 60
Asteraceae	*Chaptalia integerrima*	(Vell.) Burkart	NE	2, 8, 25, 26, 37
Asteraceae	*Chaptalia nutans*	(L.) Pol.	NE	8, 25, 26, 27, 28, 30, 34, 37, 39, 54, 56, 59, 60, 87
Asteraceae	*Chersodoma candida*	Phil.	NE	44, 46, 50, 51
Asteraceae	*Chersodoma jodopappa*	(Sch. Bip.) Cabrera	NE	46, 51
Asteraceae	*Chromolaena arnottiana*	(Griseb.) R.M.King & H.Rob.	NE	11, 37
Asteraceae	*Chromolaena hookeriana*	(Griseb.) R.M.King & H.Rob.	NE	26, 27, 30, 31, 34, 37
Asteraceae	*Chromolaena laevigata*	(Lam.) R.M.King & H.Rob.	NE	11, 15, 22, 25, 26, 27, 31, 37, 39, 56, 59, 60, 72, 76, 86
Asteraceae	*Chromolaena squalida*	(DC.) R.M.King & H.Rob.	NE	2, 5, 11, 12, 15, 18, 26, 59, 60, 62
Asteraceae	* *Chromolaena tunariensis*	(Hieron.) R.M.King & H.Rob.	NE	23, 25, 26, 37, 40, 87
Asteraceae	*Chuquiraga acanthophylla*	Wedd.	NE	40
Asteraceae	*Chuquiraga atacamensis*	Kuntze	NE	45, 46

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Asteraceae	*Chuquiraga parviflora*	Hieron.	NE	30, 49, 52, 86	Asteraceae	*Erigeron bonariensis*	L.	NE	25, 33, 53, 56, 57, 58, 59, 60, 63, 82, 83
Asteraceae	*Chuquiraga spinosa*	D. Don	NE	46	Asteraceae	*Erigeron pazensis*	Sch.Bip.	NE	51
Asteraceae	*Clibadium peruvianum*	Poepp. ex DC.	NE	60, 84	Asteraceae	*Facelis lasiocarpa*	(Griseb.) Cabrera	NE	37, 59
Asteraceae	*Clibadium remotiflorum*	O.E.Schulz	NE	25, 57, 82	Asteraceae	*Flaveria bidentis*	(L.) Kuntze	NE	22, 23, 26, 85, 87
Asteraceae	*Clibadium surinamense*	L.	LC	25, 57	Asteraceae	*Flourensia fiebrigii*	S.F.Blake	NE	41
Asteraceae	*Cnicothamnus azafran*	Cabrera	LC	23, 24, 26, 84, 86	Asteraceae	*Flourensia riparia*	Griseb.	NE	23, 38
Asteraceae	*Cnicothamnus lorentzii*	Griseb.	LC	23, 24, 25, 26, 31, 32, 34, 35, 38, 86	Asteraceae	*Galinsoga quadriradiata*	Ruiz & Pav.	NE	25, 26, 27, 31, 32, 34, 38, 39, 56, 57, 58, 59, 60, 82, 84
Asteraceae	*Coreopsis pickeringii*	A.Gray	NE	52	Asteraceae	*Gamochaeta americana*	(Mill.) Wedd.	NE	25, 26, 27, 37, 39, 54, 56, 57, 59, 60, 67, 82, 84, 87
Asteraceae	*Cosmos peucedanifolius*	Wedd.	NE	25, 26, 56, 57, 59, 82, 84, 85	Asteraceae	*Gamochaeta purpurea*	(L.) Cabrera	NE	59, 82
Asteraceae	*Critonia morifolia*	(Mill.) R.M.King & H.Rob.	LC	9, 11, 13, 26, 31, 34, 39, 60	Asteraceae	*Gamochaeta simplicicaulis*	(Willd. ex Spreng.) Cabrera	NE	51, 56, 57, 59, 60, 82
Asteraceae	*Critoniopsis boliviana*	(Britton) H.Rob.	NE	54, 56, 57, 58, 59, 60, 79	Asteraceae	*Gamochaeta sphacelata*	(Kunth) Cabrera	NE	56, 60
Asteraceae	*Culcitium canescens*	Bonpl.	NE	56, 57, 59, 60	Asteraceae	* *Gochnatia boliviana*	S.F.Blake	# VU	23, 24, 25, 26, 27, 28, 29, 30, 31, 85, 86
Asteraceae	*Cyrtocymura cincta*	(Griseb.) H.Rob.	NE	9, 23, 26, 30, 56, 60, 82, 84	Asteraceae	*Gochnatia cardenasii*	S.F.Blake	NE	40, 41
Asteraceae	*Cyrtocymura scorpioides*	(Lam.) H.Rob.	NE	2, 9, 26, 30, 54, 56, 57, 58, 59, 60, 82, 84, 87	Asteraceae	*Gochnatia palosanto*	Cabrera	LC	22, 23, 26
Asteraceae	*Dasyphyllum brasiliense*	(Spreng.) Cabrera	LC	9, 11, 19, 25, 26, 34, 37, 59, 60, 87	Asteraceae	*Grindelia boliviana*	Rusby	NE	84
Asteraceae	*Dasyphyllum ferox*	(Wedd.) Cabrera	NE	23, 52	Asteraceae	*Gutierrezia gilliesii*	Griseb.	NE	46
Asteraceae	*Dasyphyllum hystrix*	(Wedd.) Cabrera	NE	40	Asteraceae	*Gymnocoronis spilanthoides*	DC.	NE	11, 64, 76
Asteraceae	*Dendrophorbium cabrerae*	(Cuatrec.) C.Jeffrey	NE	25, 26, 56, 57, 59, 60, 84	Asteraceae	* *Gynoxys psilophylla*	Klatt	NE	25, 30, 55, 79, 82, 84, 85, 87
Asteraceae	*Diplostephium cinereum*	Cuatrec.	EN B2ab(iii,iv,v)	50, 60	Asteraceae	*Haplopappus rigidus*	Phil.	NE	46
Asteraceae	*Diplostephium haenkei*	Wedd.	NE	25, 56, 59, 60, 82	Asteraceae	*Hebeclinium macrophyllum*	(L.) DC.	NE	11, 25, 55, 56, 60, 61
Asteraceae	*Eclipta prostrata*	(L.) L.	LC	4, 5, 12, 18, 22, 26, 31, 37, 56, 60, 73, 74, 76, 82	Asteraceae	*Helogyne straminea*	B.L.Rob.	NE	43
Asteraceae	*Egletes viscosa*	(L.) Less.	NE	5, 73	Asteraceae	*Heterosperma tenuisectum*	(Griseb.) Cabrera	NE	23, 38
Asteraceae	*Eirmocephala megaphylla*	(Hieron.) H.Rob.	LC	19, 25, 59, 60, 62, 82, 84	Asteraceae	*Hyaloseris catamaquiensis*	Hieron. ex Fiebrig	NE	42, 43
Asteraceae	*Elephantopus mollis*	Kunth	NE	11, 12, 26, 30, 31, 34, 37, 39, 56, 57, 58, 59, 60, 62, 63, 82, 86	Asteraceae	* *Hyaloseris quadriflora*	J.Kost.	NE	23, 29
Asteraceae	*Erechtites hieraciifolius*	(L.) Raf. ex DC.	NE	4, 11, 12, 26, 39, 56, 59, 60, 73, 74, 76, 85	Asteraceae	*Hypochaeris elata*	Griseb.	NE	25, 26, 37, 40, 51, 59, 85

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Asteraceae	*Hypochaeris meyeniana*	(Walp.) Benth. & Hook.f. ex Griseb.	NE	51, 52, 56, 57, 60, 85	Asteraceae	*Onoseris hastata*	Wedd.	NE	27
Asteraceae	*Hypochaeris taraxacoides*	Ball	NE	52, 56, 57, 60, 82, 85	Asteraceae	*Ophryosporus charua*	Hieron.	NE	82
Asteraceae	*Idiothamnus lilloi*	(B.L.Rob.) R.M.King & H.Rob.	NE	26, 55	Asteraceae	*Ophryosporus heptanthus*	(Sch.Bip. ex Wedd.) R.M.King & H.Rob.	NE	52, 59, 60
Asteraceae	*Jungia polita*	Griseb.	NE	23, 25, 26, 27, 31, 32, 34, 35, 37, 39, 85, 87	Asteraceae	*Ophryosporus piquerioides*	(DC.) Benth. ex Baker	NE	25, 26, 30, 54, 56, 57, 59, 60
Asteraceae	*Kaunia endyta*	(B.L.Rob.) R.M.King & H.Rob.	NE	56, 60	Asteraceae	*Orthopappus angustifolius*	(Sw.) Gleason	NE	8, 11, 26, 37, 60, 76, 77, 79
Asteraceae	*Kaunia lasiophthalma*	(Griseb.) R.M.King & H.Rob.	LC	25, 26, 34, 37, 60, 82	Asteraceae	*Pacourina edulis*	Aubl.	NE	66, 72, 73
Asteraceae	*Kaunia longipetiolata*	(Sch.Bip. ex Rusby) R.M.King & H.Rob.	NE	26, 27, 57, 82, 84	Asteraceae	*Paranephelius ovatus*	Wedd.	NE	52, 56, 57, 59, 60, 61, 82, 87
Asteraceae	*Lessingianthus saltensis*	(Hieron.) H.Rob.	NE	5, 20, 23, 30, 31, 36, 37	Asteraceae	*Parastrephia lepidophylla*	(Wedd.) Cabrera	NE	46, 47, 50
Asteraceae	*Lophopappus cuneatus*	R.E. Fr.	NE	27, 40, 46	Asteraceae	*Parastrephia lucida*	(Meyen) Cabrera	NE	43, 44, 46
Asteraceae	*Mikania banisteriae*	DC.	NE	11, 25, 56, 57, 58, 59, 60	Asteraceae	*Parastrephia quadrangularis*	(Meyen) Cabrera	LC	40, 43, 46, 50, 51
Asteraceae	*Mikania congesta*	DC.	NE	11, 12, 13, 73, 77	Asteraceae	*Parthenium hysterophorus*	L.	NE	9, 19, 27, 87
Asteraceae	*Mikania cordifolia*	(L.f.) Willd.	NE	5, 9, 23, 25, 26, 27, 30, 31, 35, 55, 56, 60, 69, 72, 76, 84	Asteraceae	*Perezia multiflora*	(Bonpl.) Less.	NE	51, 60
Asteraceae	*Mikania micrantha*	Kunth	NE	11, 12, 18, 23, 25, 26, 37, 56, 57, 58, 59, 60, 72, 76, 77, 84, 85	Asteraceae	*Pluchea sagittalis*	(Lam.) Cabrera	NE	9, 25, 26, 30, 31, 39, 61
Asteraceae	*Mikania psilostachya*	DC.	NE	11, 24, 56, 59, 60, 73, 79	Asteraceae	*Porophyllum ruderale*	(Jacq.) Cass.	NE	1, 2, 5, 9, 11, 12, 18, 26, 28, 60, 87
Asteraceae	* *Moquiniastrum bolivianum*	(Rusby) G.Sancho	NE	2, 11, 25, 26, 53, 59, 60	Asteraceae	*Proustia cuneifolia*	D.Don	NE	23, 30
Asteraceae	*Munnozia hastifolia*	(Poepp.) H.Rob. & Brettell	NE	25, 26, 54, 56, 57, 58, 59, 60, 82, 84	Asteraceae	*Pseudelephantopus spiralis*	(Less.) Cronquist	NE	18, 25, 26, 31, 38, 39, 56, 57, 58, 59, 60, 84
Asteraceae	*Mutisia acuminata*	Ruiz & Pav.	NE	26, 27, 34, 52, 59, 85	Asteraceae	*Pseudognaphalium cheiranthifolium*	(Lam.) Hilliard & B.L.Burtt	NE	25, 37, 59, 60
Asteraceae	*Mutisia hamata*	Reiche	NE	46	Asteraceae	*Pseudognaphalium dysodes*	(Spreng.) S.E.Freire, N.Bayón & C.Monti	NE	56, 57, 59, 60, 82, 85
Asteraceae	*Mutisia lanata*	Ruiz & Pav.	NE	23, 25, 26, 27, 30, 34, 37, 56, 57, 59, 60, 82, 84, 87	Asteraceae	*Pseudognaphalium gaudichaudianum*	(DC.) Anderb.	NE	23, 38, 40, 51, 56, 57
Asteraceae	*Mutisia mandoniana*	Wedd. ex Cabrera	NE	57, 59, 60, 82	Asteraceae	*Pseudognaphalium lanuginosum*	(Kunth) Anderb.	NE	57, 85
Asteraceae	*Mutisia orbignyana*	Wedd.	NE	23, 51, 52, 53, 84	Asteraceae	*Pseudognaphalium viravira*	(Molina) Anderb.	NE	25, 51
Asteraceae	* *Nordenstamia repanda*	(Wedd.) Lundin	NT	58	Asteraceae	*Quasiantennaria linearifolia*	(Wedd.) R.J.Bayer & M.O.Dillon	NE	34, 56, 59, 60
Asteraceae	*Novenia tunariensis*	(Kuntze) S.E.Freire	NE	48, 56	Asteraceae	*Quechualia fulta*	(Griseb.) H.Rob.	NE	24, 25, 26, 34, 54, 57, 59, 60, 79, 82, 84
Asteraceae	*Onoseris alata*	Rusby	NE	25, 26, 30, 31, 35, 38, 39, 52, 84, 87	Asteraceae	*Rockhausenia nubigena*	(Kunth) D.J.N.Hind	NE	56, 57, 59, 60, 82, 84, 85, 87
Asteraceae	*Onoseris gnaphalioides*	Muschl.	NE	87	Asteraceae	*Rockhausenia pinnatifida*	(J.Rémy) D.J.N.Hind	NE	57, 59, 82

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Asteraceae	*Rockhausenia villosa*	(A.Gray) D.J.N.Hind	NE	40, 52, 55, 56, 57, 59, 60
Asteraceae	*Salmea scandens*	(L.) DC.	NE	27, 55, 60
Asteraceae	*Schkuhria pinnata*	(Lam.) Kuntze ex Thell.	NE	23, 26, 30, 87
Asteraceae	*Senecio candollei*	Wedd.	NE	50, 56, 57, 59, 60
Asteraceae	*Senecio canescens*	Bernh. ex DC.	LC	57, 59, 60
Asteraceae	*Senecio clivicola*	Wedd.	NE	25, 27, 51, 52, 56, 82, 84
Asteraceae	*Senecio dryophyllus*	Meyen & Walp.	NE	50
Asteraceae	*Senecio expansus*	Wedd.	NE	59
Asteraceae	*Senecio hieronymi*	Griseb.	NE	25, 26, 37, 39, 82
Asteraceae	*Senecio humillimus*	Sch.Bip.	NE	40, 52, 59
Asteraceae	*Senecio nutans*	Sch.Bip.	NE	44, 48, 50, 51
Asteraceae	*Senecio rudbeckiifolius*	Meyen & Walp.	NE	25, 37, 38, 59
Asteraceae	*Senecio rufescens*	DC.	NE	60
Asteraceae	*Senecio smithioides*	Cabrera	NE	52
Asteraceae	*Senecio spinosus*	DC.	NE	59
Asteraceae	*Senecio tephrosioides*	Turcz.	NE	56, 59, 60
Asteraceae	*Sigesbeckia jorullensis*	Kunth	NE	23, 25, 26, 53, 56, 57, 58, 59, 60, 85
Asteraceae	*Solidago chilensis*	Meyen	NE	2, 9
Asteraceae	* *Stevia cardiatica*	Perkins	CR B1ab(iii) +2ab(iii)	43
Asteraceae	*Stevia minor*	Griseb.	NE	40, 52
Asteraceae	*Synedrellopsis grisebachii*	Hieron. & Kuntze	NE	9, 22, 25, 26
Asteraceae	*Tagetes filifolia*	Lag.	NE	23, 25, 26, 28, 37, 39, 57, 59, 82
Asteraceae	*Tagetes laxa*	Cabrera	NE	87
Asteraceae	* *Tagetes mandonii*	Sch.Bip. ex Klatt	NE	52, 53, 56, 59, 60
Asteraceae	*Tagetes minuta*	L.	NE	1, 19, 23, 25, 26, 30, 35, 37
Asteraceae	*Tagetes multiflora*	Kunth	NE	25, 28, 41, 51, 59
Asteraceae	*Tagetes terniflora*	Kunth	NE	23, 25, 26, 28, 37, 56, 59, 87
Asteraceae	*Tessaria dodonaeifolia*	(Hook. & Arn.) Cabrera	NE	42
Asteraceae	*Tessaria fastigiata*	(Griseb.) Cabrera	NE	23, 26, 39, 42, 87
Asteraceae	*Tessaria integrifolia*	Ruiz & Pav.	LC	9, 13, 19, 23, 25, 26, 31, 34, 56, 60, 61, 68, 73
Asteraceae	*Tilesia baccata*	(L.) Pruski	NE	12, 59, 60
Asteraceae	*Trichocline reptans*	B.L.Rob.	NE	26
Asteraceae	*Trixis divaricata*	(Kunth) Spreng.	NE	30, 56, 84
Asteraceae	*Trixis grisebachii*	Kuntze	NE	38
Asteraceae	*Verbesina allophylla*	S.F.Blake	NE	9, 25, 26, 37, 38, 39, 60, 84
Asteraceae	*Vernonanthura ferruginea*	(Less.) H.Rob.	LC	11, 12, 18, 26, 34, 76
Asteraceae	*Vernonanthura patens*	(Kunth) H.Rob.	LC	9, 11, 19, 25, 26, 54, 56, 58, 59, 60, 73, 76, 82, 83, 84
Asteraceae	*Vernonanthura squamulosa*	(Hook. & Arn.) H.Rob.	NE	23, 25, 26, 28, 35, 37, 38, 39, 40
Asteraceae	*Villanova oppositifolia*	Lag.	NE	59
Asteraceae	*Wedelia aurantiaca*	(Griseb.) B.L.Turner	NE	22, 37, 60
Asteraceae	*Werneria ciliolata*	A.Gray	NE	59
Asteraceae	*Werneria dactylophylla*	Sch.Bip.	NE	57, 58, 59, 85
Asteraceae	*Werneria poposa*	Phil.	NE	48, 50
Asteraceae	*Werneria pygmaea*	Gillies ex Hook. & Arn.	NE	48, 59, 60, 82, 85
Asteraceae	*Werneria weddellii*	Phil.	NE	50
Asteraceae	*Xanthium spinosum*	L.	NE	19, 23, 26, 59, 85
Asteraceae	*Zinnia peruviana*	(L.) L.	NE	1, 9, 23, 25, 26, 27, 29, 30, 31, 33, 37, 38, 42, 54, 85
Balanophoraceae	*Ombrophytum subterraneum*	(Aspl.) B.Hansen	NE	47
Basellaceae	*Anredera cordifolia*	(Ten.) Steenis	NE	9, 23, 25, 26, 35, 60, 87
Basellaceae	*Anredera tucumanensis*	(Lillo & Hauman) Sperling	NE	25, 26, 39, 59, 60, 84

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Basellaceae	*Ullucus tuberosus*	Caldas	NE	25, 26, 53, 56, 57, 59, 82, 85
Begoniaceae	*Begonia altoperuviana*	A.DC.	NE	56, 58, 60, 82
Begoniaceae	*Begonia boliviensis*	A.DC.	NE	26, 30, 31, 32, 34, 37, 39
Begoniaceae	*Begonia cinnabarina*	Hook.	NE	26, 27, 31, 32, 34, 37
Begoniaceae	*Begonia parviflora*	Poepp. & Endl.	NE	26, 54, 56, 57, 58, 59, 60, 79, 82, 84, 87
Begoniaceae	*Begonia pleiopetala*	A.DC.	NE	56, 57, 59
Begoniaceae	*Begonia veitchii*	Hook.f.	NE	26, 60, 85
Berberidaceae	*Berberis boliviana*	Lechl.	NE	23, 25, 40, 48, 85
Berberidaceae	*Berberis bumeliifolia*	C.K.Schneid.	NE	23, 25, 26, 28, 37, 39
Berberidaceae	*Berberis commutata*	Eichler	NE	23, 25, 26, 28, 31, 37, 38, 53, 57, 59, 83, 84, 85
Berberidaceae	*Berberis lutea*	Ruiz & Pav.	LC	56, 57, 60
Berberidaceae	*Berberis rariflora*	Lechl.	LC	56, 57, 82, 84
Betulaceae	*Alnus acuminata*	Kunth	LC	25, 26, 27, 58, 59, 84, 87
Bignoniaceae	*Amphilophium carolinae*	(Lindl.) L.G.Lohmann	NE	3, 22, 33, 34
Bignoniaceae	*Amphilophium crucigerum*	(L.) L.G.Lohmann	NE	1, 8, 9, 12, 22, 25, 26, 32, 37, 60, 76
Bignoniaceae	*Amphilophium paniculatum*	(L.) Kunth	NE	11, 14, 22, 25, 26, 31, 57, 64
Bignoniaceae	*Amphilophium rodriguesii*	(A.H.Gentry) L.G.Lohmann	NE	70
Bignoniaceae	*Amphilophium sandwithii*	Fabris	NE	23, 25, 26, 27, 30, 31, 34, 37, 60, 75, 87
Bignoniaceae	*Anemopaegma arvense*	(Vell.) Stellfeld ex De Souza	NE	2, 8, 10, 11, 18
Bignoniaceae	*Bignonia decora*	(S.Moore) L.G.Lohmann	NE	1, 2, 60
Bignoniaceae	*Bignonia hyacinthina*	(Standl.) L.G.Lohmann	NE	11, 60, 65
Bignoniaceae	*Bignonia nocturna*	(Barb.Rodr.) L.G.Lohmann	NE	11, 12, 60, 61, 75
Bignoniaceae	*Bignonia sciuripabulum*	(Hovel.) L.G.Lohmann	NE	11, 12, 13, 25, 60, 64, 75, 79, 86
Bignoniaceae	*Callichlamys latifolia*	(Rich.) K.Schum.	NE	1, 11, 13, 18, 25, 60, 73, 77
Bignoniaceae	*Cybistax antisyphilitica*	(Mart.) Mart.	LC	1, 2, 11, 18, 19, 22, 26, 54, 60

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Bignoniaceae	*Dolichandra chodatii*	(Hassl.) L.G.Lohmann	NE	2, 3, 13, 24, 26, 31, 34, 37, 60
Bignoniaceae	*Dolichandra quadrivalvis*	(Jacq.) L.G.Lohmann	NE	1, 9, 11, 12, 13, 22, 24, 26, 31, 34, 37, 60
Bignoniaceae	*Dolichandra uncata*	(Andrews) L.G.Lohmann	NE	1, 2, 11, 12, 25, 39, 60, 76
Bignoniaceae	*Dolichandra unguis-cati*	(L.) L.G.Lohmann	NE	1, 2, 4, 9, 11, 12, 22, 23, 25, 26, 30, 31, 34, 36, 37, 39, 60, 76, 79, 84
Bignoniaceae	*Fridericia candicans*	(Rich.) L.G.Lohmann	NE	22, 26, 60, 77
Bignoniaceae	*Fridericia florida*	(DC.) L.G.Lohmann	NE	1, 4, 9, 11, 12, 14, 18, 25, 59, 60, 77
Bignoniaceae	*Fridericia pearcei*	(Rusby) L.G.Lohmann	NE	11, 12, 59, 60, 62, 65
Bignoniaceae	*Fridericia poeppigii*	(DC.) L.G.Lohmann	NE	25, 31, 32, 59, 60, 79, 84
Bignoniaceae	*Fridericia truncata*	(Sprague) L.G.Lohmann	NE	3, 32
Bignoniaceae	*Handroanthus chrysanthus*	(Jacq.) S.O.Grose	NE	11, 18, 60, 76
Bignoniaceae	*Handroanthus heptaphyllus*	(Vell.) Mattos	LC	2, 72, 76, 79
Bignoniaceae	*Handroanthus impetiginosus*	(Mart. ex DC.) Mattos	NT A3cd+4cd	1, 5, 9, 11, 12, 21, 25, 26, 30, 31, 32, 34, 60, 66, 72, 75, 76
Bignoniaceae	*Handroanthus incanus*	(A.H.Gentry) S.O.Grose	VU A3cd+4cd	60
Bignoniaceae	*Handroanthus lapacho*	(K.Schum.) S.O.Grose	NT B2ab(iii)	25, 26, 31, 34, 37, 84
Bignoniaceae	*Handroanthus ochraceus*	(Cham.) Mattos	LC	1, 2, 5, 11, 12, 18, 21, 26, 30, 31, 39, 60, 72, 76
Bignoniaceae	*Handroanthus selachidentatus*	(A.H.Gentry) S.O.Grose	NE	2
Bignoniaceae	*Handroanthus serratifolius*	(Vahl) S.O.Grose	EN A3cd+4cd	1, 11, 12, 13, 60, 63, 65, 72, 73, 76
Bignoniaceae	*Jacaranda copaia*	(Aubl.) D.Don	LC	11, 60, 62, 64, 68, 83, 84
Bignoniaceae	*Jacaranda cuspidifolia*	Mart.	LC	1, 2, 5, 11, 12, 14, 15, 21, 23, 26, 33, 53, 56, 60, 72, 76
Bignoniaceae	*Jacaranda mimosifolia*	D.Don	VU A2cd	25, 26, 30, 34, 79, 85
Bignoniaceae	*Manaosella cordifolia*	(DC.) A.H.Gentry	NE	1, 4, 12, 62, 64, 68
Bignoniaceae	*Mansoa alliacea*	(Lam.) A.H.Gentry	NE	60, 77
Bignoniaceae	*Martinella obovata*	(Kunth) Bureau & K.Schum.	NE	2, 11, 12, 60, 65, 70
Bignoniaceae	*Pleonotoma melioides*	(S.Moore) A.H.Gentry	NE	11, 12, 13, 18, 60, 62, 68
Bignoniaceae	*Pyrostegia venusta*	(Ker Gawl.) Miers	NE	10, 11, 12, 13, 60, 63, 64, 65, 67, 74

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Bignoniaceae	*Sparattosperma leucanthum*	(Vell.) K.Schum.	LC	11, 12, 25, 60, 65, 83
Bignoniaceae	*Tabebuia aurea*	(Silva Manso) Benth. & Hook.f. ex S.Moore	LC	1, 2, 5, 11, 12, 18, 21, 35, 60, 72, 76
Bignoniaceae	*Tabebuia insignis*	(Miq.) Sandwith	NT A3cd+4cd	5, 11, 12, 13, 18, 64, 75
Bignoniaceae	*Tabebuia nodosa*	(Griseb.) Griseb.	LC	9, 19, 22, 26, 33, 35
Bignoniaceae	*Tabebuia roseoalba*	(Ridl.) Sandwith	NT A2cd+3cd	2, 12, 21, 54, 60, 76
Bignoniaceae	*Tanaecium dichotomum*	(Jacq.) Kaehler & L.G.Lohmann	NE	5, 9, 11, 12, 13, 18, 22, 26, 27, 34, 35, 60, 68
Bignoniaceae	*Tanaecium selloi*	(Spreng.) L.G.Lohmann	NE	12, 31, 32, 60
Bignoniaceae	*Tanaecium tetragonolobum*	(Jacq.) L.G.Lohmann	NE	12, 13, 25, 60, 64, 65, 70, 77, 79
Bignoniaceae	*Tecoma fulva*	(Cav.) G.Don	NE	29, 42
Bignoniaceae	*Tecoma stans*	(L.) Juss. ex Kunth	LC	23, 24, 25, 26, 27, 30, 31, 34, 37, 39, 84, 86, 87
Bignoniaceae	*Tecoma tenuiflora*	(DC.) Fabris	LC	23, 24, 25, 26, 27, 29, 32, 35, 37, 40, 86
Bignoniaceae	*Tynanthus schumannianus*	(Kuntze) A.H.Gentry	NE	1, 11, 12, 13, 25, 57, 60, 77
Bignoniaceae	*Zeyheria tuberculosa*	(Vell.) Bureau ex Verl.	NE	1, 2, 5, 8, 12, 15, 26, 31, 72, 84, 86
Bixaceae	*Bixa excelsa*	Gleason & Krukoff	NE	64
Bixaceae	*Bixa orellana*	L.	LC	12, 19, 25, 26, 58, 59, 60, 61, 62, 72, 84
Bixaceae	*Bixa urucurana*	Willd.	NE	11, 12, 13, 26, 56, 60, 73, 79
Bixaceae	*Cochlospermum orinocense*	(Kunth) Steud.	NE	11, 12, 60, 63, 64
Bixaceae	*Cochlospermum regium*	(Schrank) Pilg.	LC	1, 11, 12, 18, 72
Bixaceae	*Cochlospermum tetraporum*	Hallier f.	NE	11, 22, 26, 27, 33, 35, 36
Bixaceae	*Cochlospermum vitifolium*	(Willd.) Spreng.	LC	1, 11, 12, 13, 21, 60, 72, 76, 77
Boraginaceae	*Cordia alliodora*	(Ruiz & Pav.) Oken	LC	1, 2, 9, 11, 12, 13, 19, 21, 24, 25, 26, 34, 35, 55, 59, 60, 61, 64, 70, 72, 73, 76, 86
Boraginaceae	*Cordia americana*	(L.) Gottschling & J.S.Mill.	LC	34, 35, 37, 39
Boraginaceae	*Cordia bicolor*	A.DC.	LC	11, 59, 60, 62, 66, 79, 83
Boraginaceae	*Cordia collococca*	L.	NE	73
Boraginaceae	*Cordia glabrata*	(Mart.) A.DC.	NE	1, 2, 5, 19, 72, 73, 76

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Boraginaceae	*Cordia insignis*	Cham.	LC	5, 11, 18, 21, 23, 75
Boraginaceae	*Cordia nodosa*	Lam.	NE	11, 12, 13, 25, 59, 60, 61, 62, 64, 68, 70, 79, 80, 84
Boraginaceae	*Cordia saccellia*	Gottschling & J.S.Mill.	NE	35
Boraginaceae	*Cordia tetrandra*	Aubl.	LC	12, 13, 25, 26, 55, 60, 84
Boraginaceae	*Cordia trichotoma*	(Vell.) Arráb. ex Steud.	LC	18, 25, 31, 32, 34, 59, 72, 78
Boraginaceae	*Cordia ucayaliensis*	(I.M.Johnst.) I.M.Johnst.	LC	26, 60, 64, 65, 70
Boraginaceae	*Euploca campestris*	(Griseb.) Diane & Hilger	NE	23, 42
Boraginaceae	*Euploca filiformis*	(Lehm.) J.I.M.Melo & Semir	NE	5, 64, 73, 75
Boraginaceae	*Euploca procumbens*	(Mill.) Diane & Hilger	LC	4, 9, 19, 23, 26, 30, 31, 32, 34, 37, 39, 40, 60, 64, 67, 68, 82, 84
Boraginaceae	*Heliotropium amplexicaule*	Vahl	NE	26, 29, 86
Boraginaceae	*Heliotropium indicum*	L.	NE	9, 11, 12, 26, 32, 34, 60, 67, 76
Boraginaceae	*Heliotropium lilloi*	(I.M.Johnst.) Luebert	NE	27, 31, 34, 35, 37, 39, 60, 87
Boraginaceae	*Varronia buddleoides*	(Rusby) J.S.Mill.	NE	11, 13, 25
Boraginaceae	*Varronia curassavica*	Jacq.	NE	9, 26, 30, 32, 34, 53, 56
Boraginaceae	*Varronia cylindristachya*	Ruiz & Pav.	NE	58
Boraginaceae	*Varronia dichotoma*	Ruiz & Pav.	NE	1, 4, 9, 11, 12, 18, 19, 25, 26, 31, 34, 37, 55, 56, 59, 60, 82, 86
Boraginaceae	*Varronia guaranitica*	(Chodat & Hassl.) J.S.Mill.	NE	1, 18
Brassicaceae	*Cardamine bonariensis*	Juss. ex Pers.	NE	52, 57, 82, 85
Brassicaceae	*Lepidium bonariense*	L.	NE	57
Brassicaceae	*Lepidium didymum*	L.	NE	26, 28, 60
Brassicaceae	*Lepidium meyenii*	Walp.	NE	30, 57, 59
Brassicaceae	*Mancoa hispida*	Wedd.	NE	59
Brassicaceae	*Rorippa nana*	(Schltdl.) J.F.Macbr.	NE	59
Bromeliaceae	*Aechmea angustifolia*	Poepp. & Endl.	NE	11, 13, 59, 60, 79
Bromeliaceae	*Aechmea bromelifolia*	(Rudge) Baker ex Benth. & Hook.f.	NE	11, 26, 60

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Bromeliaceae	*Aechmea distichantha*	Lem.	NE	2, 4, 20	Bromeliaceae	*Pitcairnia brittoniana*	(Mez) Mez	NE	58
Bromeliaceae	*Aechmea longicuspis*	Baker	NE	9, 18	Bromeliaceae	* *Pitcairnia heydlauffii*	R.Vásquez & Ibisch	NE	84
Bromeliaceae	* *Aechmea longicuspis* var. *kuntzeana*	(Mez) Gouda	NE	12, 19, 60	Bromeliaceae	*Pitcairnia paniculata*	(Ruiz & Pav.) Ruiz & Pav.	NE	26, 34, 56, 57, 60, 84
Bromeliaceae	*Aechmea setigera*	Mart. ex Schult. & Schult.f.	NE	9, 11, 74	Bromeliaceae	*Pitcairnia riparia*	Mez	NE	56
Bromeliaceae	* *Billbergia cardenasii*	L.B.Sm.	DD	84	Bromeliaceae	*Puya dyckioides*	(Baker) Mez	LC	31, 40
Bromeliaceae	*Billbergia decora*	Poepp. & Endl.	NE	56, 84	Bromeliaceae	*Puya ferruginea*	(Ruiz & Pav.) L.B.Sm.	NE	56, 60, 82
Bromeliaceae	*Billbergia issingiana*	T.Krömer & E.Gross	NE	60	Bromeliaceae	* *Puya herzogii*	Wittm.	LC	59, 82, 84, 87
Bromeliaceae	* *Billbergia microlepis*	L.B.Sm.	NE	60	Bromeliaceae	* *Puya minima*	L.B.Sm.	VU B1ab(iii) +2ab(iii)	26, 37, 40
Bromeliaceae	*Billbergia robert-readii*	E.Gross & Rauh	NE	60	Bromeliaceae	*Puya raimondii*	Harms	EN A2ac+3c	51, 84
Bromeliaceae	*Bromelia balansae*	Mez	NE	1, 11, 12, 13, 72	Bromeliaceae	* *Puya tuberosa*	Mez	NE	26
Bromeliaceae	*Bromelia hieronymi*	Mez	NE	22, 36	Bromeliaceae	* *Puya tunarensis*	Mez	NE	84, 85, 87
Bromeliaceae	*Bromelia serra*	Griseb.	DD	1, 9, 15, 22, 23, 25, 26, 60, 72, 76, 87	Bromeliaceae	*Puya weberbaueri*	Mez	NE	56
Bromeliaceae	* *Deuterocohnia brevispicata*	Rauh & L.Hrom.	LC	30, 31	Bromeliaceae	*Racinaea seemannii*	(Baker) M.A.Spencer & L.B.Sm.	NE	56, 59, 60, 84
Bromeliaceae	*Deuterocohnia longipetala*	(Baker) Mez	NE	4, 12, 17, 22, 23, 26, 37	Bromeliaceae	*Racinaea tetrantha*	(Ruiz & Pav.) M.A.Spencer & L.B.Sm.	NE	56, 60
Bromeliaceae	*Deuterocohnia meziana*	Kuntze ex Mez	NE	1, 2, 12, 23, 26, 86	Bromeliaceae	*Tillandsia aizoides*	Mez	NE	43
Bromeliaceae	*Dyckia leptostachya*	Baker	NE	1, 12, 13, 18, 22	Bromeliaceae	*Tillandsia australis*	Mez	NE	25, 35, 37
Bromeliaceae	*Fosterella albicans*	(Griseb.) L.B.Sm.	NE	25, 26, 31, 34, 56, 60, 79, 84	Bromeliaceae	*Tillandsia biflora*	Ruiz & Pav.	NE	25, 57
Bromeliaceae	*Goudaea chrysostachys*	(É.Morren) W.Till & Barfuss	NE	59	Bromeliaceae	*Tillandsia capillaris*	Ruiz & Pav.	LC	23, 25, 26, 30, 38, 59, 85, 87
Bromeliaceae	*Guzmania gloriosa*	(André) André ex Mez	NE	59, 84	Bromeliaceae	* *Tillandsia cardenasii*	L.B.Sm.	NT	29
Bromeliaceae	*Guzmania lingulata*	(L.) Mez	NE	11, 59	Bromeliaceae	* *Tillandsia comarapaensis*	H.Luther	VU B2ab(iii)	23, 86
Bromeliaceae	*Guzmania marantoidea*	(Rusby) H.Luther	NE	56, 59, 60, 84	Bromeliaceae	*Tillandsia complanata*	Benth.	NE	23, 25, 56, 59, 60, 84, 87
Bromeliaceae	*Guzmania melinonis*	Regel	NE	25, 82, 84	Bromeliaceae	*Tillandsia didisticha*	(É.Morren) Baker	NE	1, 4, 5, 11, 12, 22, 26, 31, 34, 60, 72, 87
Bromeliaceae	*Guzmania morreniana*	(É.Morren) Mez	NE	84	Bromeliaceae	*Tillandsia duratii*	Vis.	NE	2, 4, 9, 23, 26, 53
Bromeliaceae	*Guzmania squarrosa*	(Mez & Sodiro) L.B.Sm. & Pittendr.	NE	25, 84	Bromeliaceae	* *Tillandsia edithae*	Rauh	NE	25, 26
Bromeliaceae	* *Pitcairnia amboroensis*	Ibisch, R.Vásquez, E.Gross & M.Kessler	NE	25	Bromeliaceae	*Tillandsia engleriana*	Wittm.	CR B2ab(iii)	25, 54, 60

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Bromeliaceae	*Tillandsia fendleri*	Griseb.	LC	25, 26, 57, 60, 79, 82, 84
Bromeliaceae	*Tillandsia funebris*	A.Cast.	NE	22
Bromeliaceae	*Tillandsia heliconioides*	Kunth	NE	11, 13, 60, 70, 84
Bromeliaceae	*Tillandsia ionochroma*	André ex Mez	NE	25, 56, 57, 79, 82, 84
Bromeliaceae	*Tillandsia juncea*	(Ruiz & Pav.) Poir.	NE	25, 53, 61, 64, 87
Bromeliaceae	*Tillandsia loliacea*	Mart. ex Schult. & Schult.f.	NE	4, 5, 22, 26, 35, 37, 39, 60, 87
Bromeliaceae	*Tillandsia lorentziana*	Griseb.	NE	9, 23, 60, 87
Bromeliaceae	* *Tillandsia lotteae*	H.Hrom. ex Rauh	VU B2ab(iii)	26, 27, 29, 42
Bromeliaceae	*Tillandsia myosura*	Griseb. ex Baker	NE	41
Bromeliaceae	*Tillandsia paraensis*	Mez	NE	25, 59, 60, 64, 87
Bromeliaceae	*Tillandsia pohliana*	Mez	NE	60
Bromeliaceae	*Tillandsia polystachia*	(L.) L.	NE	60
Bromeliaceae	* *Tillandsia rauschii*	Rauh & H.Lehm.	DD	42
Bromeliaceae	*Tillandsia recurvata*	(L.) L.	NE	12, 23, 25, 26, 72, 87
Bromeliaceae	*Tillandsia reichenbachii*	Baker	LC	1, 4, 22, 23, 26, 31, 60
Bromeliaceae	*Tillandsia rubella*	Baker	NE	25, 56, 59
Bromeliaceae	*Tillandsia rusbyi*	Baker	NE	56, 59, 60
Bromeliaceae	*Tillandsia sphaerocephala*	Baker	NE	25, 59
Bromeliaceae	*Tillandsia streptocarpa*	Baker	NE	1, 2, 5, 12, 20, 22, 23, 25, 26, 30, 53, 60, 87
Bromeliaceae	*Tillandsia tenuifolia*	L.	NE	2, 11, 23, 25, 26, 30, 31, 32, 34, 37, 59, 60, 72, 87
Bromeliaceae	*Tillandsia tricholepis*	Baker	NE	1, 9, 22, 23, 26, 29, 31, 53, 60, 87
Bromeliaceae	*Tillandsia usneoides*	(L.) L.	LC	23, 25, 26, 34, 37, 52, 59, 87
Bromeliaceae	*Tillandsia vernicosa*	Baker	NE	2, 4, 22, 26, 60, 87
Bromeliaceae	*Tillandsia violascens*	Mez	NE	23, 25, 30, 56, 60
Bromeliaceae	*Tillandsia virescens*	Ruiz & Pav.	NE	46

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Bromeliaceae	*Tillandsia walteri*	Mez	NE	57, 87
Bromeliaceae	*Vriesea friburgensis*	Mez	NE	34, 86
Bromeliaceae	*Vriesea incurva*	(Griseb.) Read	NE	59
Bromeliaceae	*Vriesea maxoniana*	(L.B.Sm.) L.B.Sm.	NE	25, 26, 31, 34, 60
Bromeliaceae	*Vriesea platynema*	Gaudich.	NE	59
Brunelliaceae	*Brunellia sibundoya*	Cuatrec.	LC	54, 56, 57
Burseraceae	*Commiphora leptophloeos*	(Mart.) J.B.Gillett	LC	1, 3, 5, 6, 11, 12, 14, 17, 72
Burseraceae	*Protium altissimum*	(Aubl.) Marchand	LC	11, 12, 60, 61, 63, 64, 70, 79
Burseraceae	*Protium amazonicum*	(Cuatrec.) Daly	LC	60, 65, 70
Burseraceae	*Protium carnosum*	A.C.Sm.	LC	60, 83
Burseraceae	*Protium glabrescens*	Swart	LC	11, 21, 60, 62, 64, 65, 78, 79, 83
Burseraceae	*Protium goudotianum*	(Tul.) Byng & Christenh.	NE	11, 12, 13, 75
Burseraceae	*Protium heptaphyllum*	(Aubl.) Marchand	LC	2, 11, 12, 13, 15, 17, 18, 25, 60, 61, 73, 75, 84
Burseraceae	*Protium meridionale*	Swart	NE	59, 60, 62, 63
Burseraceae	*Protium montanum*	Swart	LC	55, 56, 58, 59, 60, 79
Burseraceae	*Protium puncticulatum*	J.F.Macbr.	LC	2, 60, 61, 63, 79, 83
Burseraceae	*Protium rhynchophyllum*	(Rusby) Daly	LC	60, 61, 65, 79
Burseraceae	*Protium sagotianum*	Marchand	LC	11, 13, 60, 61, 65, 76, 79
Burseraceae	*Protium spruceanum*	(Benth.) Engl.	LC	11, 12, 60, 70
Burseraceae	*Protium stevensonii*	(Standl.) Daly	LC	11, 60, 64, 65, 66, 67, 70, 74, 77, 78
Burseraceae	*Protium unifoliolatum*	Engl.	LC	11, 53, 60, 63, 64, 70, 83
Burseraceae	*Trattinnickia rhoifolia*	Willd.	LC	11
Buxaceae	* *Styloceras columnare*	Müll.Arg.	EN B2ab(ii,iii)	56, 59, 60, 87
Cabombaceae	*Cabomba furcata*	Schult. & Schult.f.	NE	5, 11, 12, 18
Cactaceae	*Acanthocalycium rhodotrichum*	(K.Schum.) Schlumpb.	NE	2

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Cactaceae	*Airampoa ayrampo*	(Haenke) Doweld	NE	46
Cactaceae	*Airampoa soehrensii*	(Britton & Rose) Lodé	NE	46
Cactaceae	*Austrocylindropuntia floccosa*	(Salm-Dyck) F.Ritter	LC	59
Cactaceae	*Austrocylindropuntia subulata*	(Muehlenpf.) Backeb.	LC	59
Cactaceae	*Brasiliopuntia brasiliensis*	(Willd.) A.Berger	LC	1, 13, 14, 26, 31, 53, 55, 60
Cactaceae	*Castellanosia caineana*	Cárdenas	LC	22, 26
Cactaceae	*Cereus forbesii*	C.F.Först.	NE	11, 12, 23, 28, 86
Cactaceae	*Cereus phatnospermus*	K.Schum.	NE	1, 2
Cactaceae	*Cereus stenogonus*	K.Schum.	LC	1, 2, 9, 11, 22, 59, 60
Cactaceae	*Cleistocactus baumannii*	(Lem.) Lem.	LC	1, 2, 9, 22, 23, 26, 35
Cactaceae	* *Cleistocactus brookeae*	Cárdenas	LC	30, 32
Cactaceae	* *Cleistocactus buchtienii*	Backeb.	LC	26
Cactaceae	* *Cleistocactus candelilla*	Cárdenas	LC	23, 26
Cactaceae	* *Cleistocactus parviflorus*	(K.Schum.) Rol.-Goss.	LC	23, 26
Cactaceae	*Cleistocactus samaipatanus*	(Cárdenas) D.R.Hunt	LC	25
Cactaceae	* *Cleistocactus tominensis*	(Weing.) Backeb.	LC	30
Cactaceae	* *Corryocactus melanotrichus*	(K.Schum.) Britton & Rose	LC	23, 59, 84
Cactaceae	* *Corryocactus pulquinensis*	Cárdenas	EN B1ab(iii,v)	23
Cactaceae	*Cumulopuntia boliviana*	(Salm-Dyck) F.Ritter	LC	46, 51
Cactaceae	*Echinopsis calochlora*	K.Schum.	LC	1, 2
Cactaceae	*Echinopsis longispina*	(Britton & Rose) Werderm.	NE	46
Cactaceae	*Epiphyllum phyllanthus*	(L.) Haw.	LC	2, 9, 11, 12, 13, 25, 26, 56, 59, 60, 64, 72, 77, 84, 85
Cactaceae	* *Frailea chiquitana*	Cárdenas	DD	2
Cactaceae	* *Gymnocalycium chiquitanum*	Cárdenas	DD	3, 6, 14
Cactaceae	*Gymnocalycium pflanzii*	(Vaupel) Werderm.	LC	23

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Cactaceae	*Harrisia bonplandii*	(J.Parm. ex Pfeiff.) Britton & Rose	NE	3, 60
Cactaceae	*Harrisia pomanensis*	(F.A.C.Weber ex K.Schum.) Britton & Rose	LC	22, 23
Cactaceae	* *Harrisia tetracantha*	(Labour.) D.R.Hunt	LC	23, 26, 28, 86
Cactaceae	*Harrisia tortuosa*	(J.Forbes) Britton & Rose	NE	26
Cactaceae	*Lepismium lorentzianum*	(Griseb.) Barthlott	LC	26, 31, 34, 37, 39
Cactaceae	*Lepismium lumbricoides*	(Lem.) Barthlott	LC	23, 25, 39
Cactaceae	* *Leucostele tunariensis*	(Cárdenas) Schlumpb.	NE	85
Cactaceae	* *Leucostele werdermanniana*	(Backeb.) Schlumpb.	NE	85
Cactaceae	* *Lobivia bridgesii* subsp. *vallegrandensis*	(Cárdenas) Schlumpb.	NE	23, 26
Cactaceae	* *Lobivia obrepanda*	(Salm-Dyck) Schlumpb.	NE	26
Cactaceae	* *Neoraimondia herzogiana*	(Backeb.) Buxb. & Krainz	NE	23, 26, 28, 36
Cactaceae	*Opuntia anacantha*	Speg.	LC	1, 4, 9, 14, 19, 22, 23, 26
Cactaceae	*Opuntia pubescens*	H.L.Wendl. ex Pfeiff.	LC	25, 26
Cactaceae	*Opuntia sulphurea*	G.Don ex Salm-Dyck	LC	26, 42
Cactaceae	* *Pereskia diaz-romeroana*	Cárdenas	LC	23, 26, 28, 86, 87
Cactaceae	* *Pereskia weberiana*	K.Schum.	LC	53, 55, 60, 85
Cactaceae	*Pfeiffera ianthothele*	(Monv. ex Salm-Dyck) F.A.C.Weber	LC	23, 26, 28
Cactaceae	*Praecereus saxicola*	(Morong) N.P.Taylor	LC	2, 9, 18, 22, 26
Cactaceae	*Quiabentia verticillata*	(Vaupel) Borg	LC	22, 23, 25, 26, 35
Cactaceae	* *Rebutia neocumingii*	(Backeb.) D.R.Hunt	LC	23, 29
Cactaceae	*Rhipsalis baccifera*	(J.S.Muell.) Stearn	LC	11, 19, 22, 25, 26, 60, 72
Cactaceae	*Rhipsalis floccosa*	Salm-Dyck ex Pfeiff.	LC	23, 25, 26, 56, 59, 60
Cactaceae	*Rhodocactus sacharosa*	(Griseb.) Backeb.	NE	1, 8, 14, 22, 26, 35, 36
Cactaceae	*Salmonopuntia salmiana*	(J.Parm. ex Pfeiff.) P.V.Heath	NE	23
Cactaceae	* *Samaipaticereus corroanus*	Cárdenas	LC	25

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Cactaceae	*Selenicereus setaceus*	(Salm-Dyck ex DC.) A.Berger ex Werderm.	NE	9, 11, 59, 60
Cactaceae	*Soehrensia tarijensis*	(Vaupel) Schlumpb.	NE	43, 51
Cactaceae	*Stetsonia coryne*	(C.F.Först.) Britton & Rose	LC	22, 26
Cactaceae	*Trichocereus atacamensis*	(Phil.) W.T. Marshall & T.M. Bock	NE	46, 47
Cactaceae	* *Vatricania guentheri*	(Kupper) Backeb.	NE	26, 27
Calceolariaceae	* *Calceolaria aquatica*	A.Braun & C.D.Bouché	LC	60, 82, 85
Calceolariaceae	* *Calceolaria bartsiifolia*	Wedd.	NE	38, 52, 53, 59, 87
Calceolariaceae	*Calceolaria buchtieniana*	Kraenzl.	NE	23, 52, 53, 56, 85, 87
Calceolariaceae	*Calceolaria elatior*	Griseb.	NE	25, 26, 27, 31, 32, 34, 37, 39, 82, 84
Calceolariaceae	*Calceolaria engleriana*	Kraenzl.	NE	25, 79, 84, 85
Calceolariaceae	*Calceolaria lobata*	Cav.	NE	53, 56, 57, 85
Calceolariaceae	* *Calceolaria parvifolia* subsp. *guentheri*	(Kraenzl.) Molau	NE	87
Calceolariaceae	*Calceolaria rivularis*	Kraenzl.	NE	23, 27, 39, 40, 53, 56, 59, 84, 87
Calceolariaceae	*Calceolaria sparsiflora*	Kunze	NE	59, 85
Calceolariaceae	*Calceolaria virgata*	Ruiz & Pav.	NE	85
Calophyllaceae	*Calophyllum brasiliense*	Cambess.	LC	11, 12, 25, 59, 60, 72, 75, 77, 84
Calophyllaceae	*Kielmeyera variabilis*	Mart. & Zucc.	NE	11
Campanulaceae	*Centropogon cornutus*	(L.) Druce	NE	11, 12, 18, 57, 59, 84
Campanulaceae	*Lobelia oligophylla*	(Wedd.) Lammers	NE	50, 52, 57, 59
Campanulaceae	*Lysipomia laciniata*	A.DC.	NE	23, 59, 60
Campanulaceae	* *Siphocampylus bilabiatus*	Zahlbr.	NE	58
Campanulaceae	*Siphocampylus boliviensis*	Zahlbr.	NE	23, 53, 56, 59, 60, 84
Campanulaceae	*Siphocampylus tupaeformis*	Zahlbr.	NE	25, 31, 32, 51, 55, 56, 57, 59, 60, 85
Cannabaceae	*Celtis brasiliensis*	(Gardner) Planch.	LC	1, 2, 9, 11, 12, 14, 18, 19, 20, 21, 24, 25, 26, 27, 31, 32, 34, 39, 53, 56, 59, 60, 63, 64
Cannabaceae	*Celtis chichape*	(Wedd.) Miq.	LC	22, 23, 26, 29, 32
Cannabaceae	*Celtis ehrenbergiana*	(Klotzsch) Liebm.	LC	1, 9, 18, 19, 22, 23, 26, 30, 37, 39, 53, 60
Cannabaceae	*Celtis iguanaea*	(Jacq.) Sarg.	LC	1, 9, 11, 12, 13, 18, 19, 22, 23, 25, 26, 27, 30, 31, 32, 34, 37, 39, 54, 56, 60, 61, 63, 70, 72, 73, 76, 78, 85, 86
Cannabaceae	*Celtis loxensis*	C.C.Berg	NE	60
Cannabaceae	*Celtis schippii*	Standl.	LC	11, 60, 61, 63, 64, 67, 72, 76, 78, 84
Cannabaceae	*Trema micranthum*	(L.) Blume	LC	1, 4, 5, 9, 11, 12, 13, 14, 18, 19, 25, 26, 30, 31, 32, 37, 53, 55, 56, 57, 59, 60, 64, 76, 77, 79, 82, 83
Cannaceae	*Canna bangii*	Kraenzl.	NE	25, 56, 57, 59, 60, 82
Cannaceae	*Canna glauca*	L.	NE	4, 9, 12, 22, 76
Cannaceae	*Canna indica*	L.	NE	25, 31, 57, 84
Cannaceae	*Canna paniculata*	Ruiz & Pav.	NE	11, 25, 26, 56, 57, 60, 87
Capparaceae	*Anisocapparis speciosa*	(Griseb.) Cornejo & Iltis	LC	2, 3, 22, 23, 25, 26, 28, 32, 35, 79, 86
Capparaceae	*Atamisquea emarginata*	Miers ex Hook. & Arn.	NE	23, 28, 30, 42
Capparaceae	*Capparicordis tweediana*	(Eichler) Iltis & Cornejo	NE	2, 4, 9, 14, 22, 23, 28, 35
Capparaceae	*Capparidastrum coimbranum*	(Cornejo & Iltis) Cornejo & Iltis	LC	1, 2, 5, 13, 14, 23, 26, 31, 34, 59, 60
Capparaceae	*Capparidastrum sola*	(J. F. Macbr.) Cornejo & Iltis	NE	59, 60, 63, 65
Capparaceae	*Crateva tapia*	L.	LC	2, 4, 5, 11, 12, 22, 60, 62, 63, 64, 72, 73, 80
Capparaceae	*Cynophalla retusa*	(Griseb.) Cornejo & Iltis	NE	1, 2, 3, 4, 9, 19, 20, 22, 23, 25, 26, 28, 32, 79, 86
Capparaceae	*Sarcotoxicum salicifolium*	(Griseb.) Cornejo & Iltis	NE	22, 35
Caprifoliaceae	*Stangea rhizantha*	(A.Gray) Killip	NE	48
Caprifoliaceae	*Valeriana coarctata*	Ruiz & Pav.	NE	59, 85
Caprifoliaceae	*Valeriana decussata*	Ruiz & Pav.	NE	31, 59
Caprifoliaceae	*Valeriana micropterina*	Wedd.	NE	56, 57, 59
Caprifoliaceae	*Valeriana nivalis*	Wedd.	NE	52, 56, 57, 58, 59, 60
Caricaceae	*Jacaratia corumbensis*	Kuntze	NE	1, 4, 5, 8, 22
Caricaceae	*Jacaratia digitata*	(Poepp. & Endl.) Solms	LC	11, 12, 25, 60, 61, 63, 77, 80, 81, 84
Caricaceae	*Jacaratia spinosa*	(Aubl.) A.DC.	LC	11, 12, 13, 25, 60, 84

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Caricaceae	*Vasconcellea glandulosa*	A.DC.	NE	11, 25, 26, 27, 59, 60, 84, 87
Caricaceae	*Vasconcellea microcarpa*	(Jacq.) A.DC.	LC	60
Caricaceae	*Vasconcellea quercifolia*	A.St.-Hil.	NE	1, 23, 26, 27, 28, 30, 37, 42, 43, 52, 85, 87
Caryocaraceae	*Caryocar brasiliense*	A.St.-Hil.	LC	2, 11, 12, 21, 72
Caryocaraceae	*Caryocar glabrum*	(Aubl.) Pers.	LC	70
Caryocaraceae	*Caryocar microcarpum*	Ducke	LC	60
Caryocaraceae	*Caryocar pallidum*	A.C.Sm.	LC	60
Caryocaraceae	*Caryocar villosum*	(Aubl.) Pers.	LC	66, 67
Caryophyllaceae	*Arenaria digyna*	Willd. ex D.F.K.Schltdl.	NE	59
Caryophyllaceae	*Cardionema ramosissima*	(Weinm.) A.Nelson & J.F.Macbr.	NE	40, 59
Caryophyllaceae	*Cerastium humifusum*	Cambess.	NE	82
Caryophyllaceae	*Cerastium rivulare*	Cambess.	NE	37, 39, 87
Caryophyllaceae	*Cerastium subspicatum*	Wedd.	NE	40, 48, 56
Caryophyllaceae	*Drymaria cordata*	(L.) Willd. ex Schult.	NE	9, 26, 32, 34, 39, 56, 57, 58, 59
Caryophyllaceae	*Pycnophyllum macropetalum*	Mattf.	LC	44
Caryophyllaceae	*Pycnophyllum tetrastichum*	J.Rémy	LC	57
Caryophyllaceae	*Stellaria cuspidata*	Willd. ex D.F.K.Schltdl.	NE	23, 25, 30, 37, 57, 59, 60, 82
Caryophyllaceae	*Stellaria ovata*	Willd. ex D.F.K.Schltdl.	NE	25, 27, 52, 56, 59, 85
Caryophyllaceae	*Stellaria weddellii*	Pedersen	NE	51, 59
Celastraceae	*Anthodon decussatum*	Ruiz & Pav.	LC	11, 13, 18, 60, 64, 79
Celastraceae	*Cheiloclinium cognatum*	(Miers) A.C.Sm.	LC	11, 12, 55, 59, 60, 61, 63, 64, 66, 70, 75, 79
Celastraceae	*Maytenus flagellata*	Rusby	NE	23, 86
Celastraceae	*Maytenus floribunda*	Reissek	NE	1, 9, 11, 13, 24, 25, 26, 31, 32, 54, 59, 60
Celastraceae	*Maytenus ilicifolia*	Mart. ex Reissek	NE	2, 3, 5, 23, 25, 34, 87
Celastraceae	*Maytenus macrocarpa*	(Ruiz & Pav.) Briq.	NE	3, 11, 25, 60

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Celastraceae	*Maytenus spinosa*	(Griseb.) Lourteig & O'Donell	NE	11, 22, 23, 26, 35, 37
Celastraceae	*Maytenus truncata*	(Nees) Reissek	NE	2, 5, 26
Celastraceae	*Pristimera celastroides*	(Kunth) A.C.Sm.	NE	1, 11, 12, 13, 31, 32, 34, 54, 60, 79
Celastraceae	*Salacia cordata*	(Miers) Mennega	LC	11, 60, 64, 65, 71, 76, 77, 79
Celastraceae	*Salacia elliptica*	(Mart.) G.Don	LC	1, 2, 4, 5, 9, 11, 12, 13, 15, 21, 60, 62, 64, 66, 67, 74, 76, 77, 79, 83, 84
Celastraceae	*Salacia impressifolia*	(Miers) A.C.Sm.	LC	11, 12, 25, 60, 83
Celastraceae	*Tontelea passiflora*	(Vell.) Lombardi	LC	25, 61, 64, 66, 79, 84
Chloranthaceae	*Hedyosmum angustifolium*	(Ruiz & Pav.) Solms	LC	25, 56, 59, 60, 79, 82, 84, 87
Chloranthaceae	**Hedyosmum maximum*	(Kuntze) K.Schum.	VU B1ab(iii)	56, 58, 79, 82, 84
Chloranthaceae	*Hedyosmum racemosum*	(Ruiz & Pav.) G.Don	LC	25, 56, 57, 58, 59, 60, 79, 82, 84
Chrysobalanaceae	*Couepia grandiflora*	(Mart. & Zucc.) Benth. ex Hook.f.	NE	11
Chrysobalanaceae	*Couepia paraensis*	(Mart. & Zucc.) Benth.	LC	70
Chrysobalanaceae	*Couepia uiti*	(Mart. & Zucc.) Benth. ex Hook.f.	NE	5
Chrysobalanaceae	*Hirtella bicornis*	Mart. & Zucc.	LC	11, 65, 84
Chrysobalanaceae	*Hirtella bullata*	Benth.	LC	60, 61, 63
Chrysobalanaceae	*Hirtella lightioides*	Rusby	LC	56, 59, 60, 61, 65
Chrysobalanaceae	*Hirtella pilosissima*	Mart. & Zucc.	LC	11, 60, 62, 64, 70, 84
Chrysobalanaceae	*Hirtella racemosa*	Lam.	LC	11, 12, 13, 25, 59, 60, 62, 63, 64, 65, 66, 67, 78, 83, 84
Chrysobalanaceae	*Hirtella triandra*	Sw.	LC	11, 12, 19, 24, 25, 55, 56, 57, 59, 60, 63, 69, 77, 83
Chrysobalanaceae	*Hymenopus oblongifolius*	(Standl.) Sothers & Prance	NE	60
Chrysobalanaceae	*Leptobalanus octandrus*	(Hoffmanns. ex Schult.) Sothers & Prance	NE	60, 62, 65
Chrysobalanaceae	*Licania harlingii*	Prance	LC	11, 60, 84
Chrysobalanaceae	*Licania kunthiana*	Hook.f.	NE	2, 11, 12, 20, 60, 83
Chrysobalanaceae	*Licania micrantha*	Miq.	LC	11, 69
Chrysobalanaceae	*Licania minutiflora*	Cuatrec.	NE	11, 12

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Chrysobalanaceae	*Microdesmia arborea*	(Seem.) Sothers & Prance	LC	64, 83
Chrysobalanaceae	*Moquilea brittoniana*	(Fritsch) Sothers & Prance	LC	11, 12, 60, 61, 64, 68
Chrysobalanaceae	*Parinari excelsa*	Sabine	LC	12, 60
Chrysobalanaceae	*Parinari klugii*	Prance	LC	12, 60
Cleomaceae	*Cleome boliviensis*	Iltis	NE	14, 23, 25, 26, 27, 29, 52, 56, 58, 60, 61, 62, 82, 85, 87
Cleomaceae	*Cleome cordobensis*	Eichler ex Griseb.	NE	26, 27, 29, 34, 40
Cleomaceae	*Cleome gigantea*	L.	NE	22, 31, 34, 37, 39, 56, 58, 60
Cleomaceae	*Cleome parviflora*	Kunth	NE	31, 64, 68, 76
Cleomaceae	*Cleome spinosa*	Jacq.	NE	1, 14, 27, 31
Clethraceae	*Clethra ferruginea*	(Ruiz & Pav.) Link ex Spreng.	NE	58
Clethraceae	*Clethra obovata*	Hook. & Arn.	NE	58
Clethraceae	*Clethra scabra*	Pers.	LC	23, 24, 25, 26, 27, 31, 32, 34, 37, 39, 56, 58, 59, 60, 82, 84
Clusiaceae	*Clusia amazonica*	Planch. & Triana	LC	25, 57, 59, 60, 84
Clusiaceae	*Clusia columnaris*	Engl.	LC	11
Clusiaceae	*Clusia lechleri*	Rusby	LC	24, 25, 26, 54, 57, 59, 60, 79, 82, 84
Clusiaceae	* *Clusia ramosa*	Rusby	NE	56, 87
Clusiaceae	*Clusia sphaerocarpa*	Planch. & Triana	LC	25, 56, 57, 58, 59, 60, 82, 84, 87
Clusiaceae	*Clusia trochiformis*	Vesqne	LC	56, 58, 59, 60
Clusiaceae	*Garcinia gardneriana*	(Planch. & Triana) Zappi	LC	1, 12, 15, 25, 55, 59, 60, 72, 77, 79, 83, 84
Clusiaceae	*Garcinia macrophylla*	Mart.	LC	11, 19, 25, 59, 60, 64, 79, 84
Clusiaceae	*Garcinia madruno*	(Kunth) Hammel	LC	11, 25, 59, 60, 64, 65, 66, 67, 76, 77, 79, 83, 84
Clusiaceae	*Moronobea coccinea*	Aubl.	NE	11, 12
Clusiaceae	*Symphonia globulifera*	L.f.	LC	11, 12, 59, 60, 61, 62, 63, 64, 79, 83, 84
Clusiaceae	*Tovomita schomburgkii*	Planch. & Triana	NE	11, 84
Columelliaceae	*Columellia obovata*	Ruiz & Pav.	NE	28
Combretaceae	*Combretum lanceolatum*	Pohl ex Eichler	NE	2, 4, 11, 12, 13, 64, 76, 79
Combretaceae	*Combretum laxum*	Jacq.	LC	11, 12, 13, 60, 64, 67, 73, 77
Combretaceae	*Combretum leprosum*	Mart.	LC	1, 2, 11, 12, 13, 15, 18, 19, 20, 21, 25, 72, 75
Combretaceae	*Terminalia amazonia*	(J.F.Gmel.) Exell	LC	1, 11, 12, 24, 25, 60, 61, 63, 64, 78
Combretaceae	*Terminalia argentea*	Mart.	LC	1, 2, 5, 10, 11, 12, 14, 15, 17, 18, 21, 23, 24, 25, 26, 60, 72
Combretaceae	*Terminalia corrugata*	(Ducke) Gere & Boatwr.	NE	11, 12, 13, 21, 64
Combretaceae	*Terminalia grandis*	(Ducke) Gere & Boatwr.	NE	11, 12, 59, 60, 64
Combretaceae	*Terminalia oblonga*	(Ruiz & Pav.) Steud.	LC	1, 11, 13, 18, 25, 60, 61, 72, 83, 84
Combretaceae	*Terminalia oxycarpa*	Mart.	LC	5, 11, 24, 56, 59, 60, 64, 66, 73
Combretaceae	*Terminalia tetraphylla*	(Aubl.) Gere & Boatwr.	LC	11, 13, 18, 25, 59, 60, 64
Combretaceae	*Terminalia triflora*	(Griseb.) Lillo	LC	1, 25, 26, 32, 34, 37, 39, 60
Commelinaceae	*Callisia repens*	(Jacq.) L.	NE	25, 26, 60, 87
Commelinaceae	*Commelina diffusa*	Burm.f.	LC	1, 11, 12, 25, 26, 56, 60, 84
Commelinaceae	*Commelina elliptica*	Kunth	NE	25, 26, 37, 59, 82
Commelinaceae	*Commelina erecta*	L.	NE	1, 2, 3, 5, 8, 9, 11
Commelinaceae	*Commelina obliqua*	Vahl	NE	2, 12, 25, 31, 37, 56, 60, 84
Commelinaceae	*Commelina rufipes*	Seub.	NE	11, 12, 60, 63, 77
Commelinaceae	*Commelina tuberosa*	L.	NE	1, 26, 30, 32, 34, 37, 87
Commelinaceae	*Dichorisandra hexandra*	(Aubl.) C.B.Clarke	NE	1, 4, 8, 9, 11, 12, 15, 25, 26, 31, 32, 34, 37, 39, 56, 58, 59, 60, 61, 62, 76, 81, 82, 83, 84
Commelinaceae	*Floscopa peruviana*	Hassk. ex C.B.Clarke	NE	60, 83
Commelinaceae	*Tradescantia zanonia*	(L.) Sw.	NE	24, 26, 59, 60
Connaraceae	*Connarus suberosus*	Planch.	NE	1, 10, 11, 12, 18, 72
Connaraceae	*Rourea camptoneura*	Radlk.	NE	64
Connaraceae	*Rourea induta*	Planch.	NE	11
Convolvulaceae	*Aniseia martinicensis*	(Jacq.) Choisy	LC	2, 5, 11, 12, 74, 79

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Convolvulaceae	*Cuscuta grandiflora*	Kunth	NE	25, 27, 53, 56, 57, 59, 60, 82, 87	Convolvulaceae	*Ipomoea maurandioides*	Meisn.	NE	10, 12, 14, 20
Convolvulaceae	*Dichondra argentea*	Willd.	NE	25, 38, 56	Convolvulaceae	*Ipomoea mauritiana*	Jacq.	NE	66
Convolvulaceae	*Dichondra sericea*	Sw.	NE	11, 26, 35	Convolvulaceae	*Ipomoea muricata*	(L.) Jacq.	NE	11, 34
Convolvulaceae	*Distimake macrocalyx*	(Ruiz & Pav.) A.R.Simões & Staples	NE	11, 12, 25, 54, 55, 56, 59, 60, 64	Convolvulaceae	*Ipomoea neurocephala*	Hallier f.	NE	26, 59
Convolvulaceae	*Evolvulus alsinoides*	(L.) L.	NE	2, 6, 22, 23, 26, 59	Convolvulaceae	*Ipomoea plummerae*	A.Gray	NE	28, 40, 85, 86
Convolvulaceae	*Evolvulus frankenioides*	Moric.	NE	25	Convolvulaceae	*Ipomoea procumbens*	Mart. ex Choisy	NE	11
Convolvulaceae	*Evolvulus pterygophyllus*	Mart.	NE	5, 11	Convolvulaceae	*Ipomoea pubescens*	Lam.	NE	22, 28
Convolvulaceae	*Evolvulus sericeus*	Sw.	NE	3, 5, 20, 42, 60	Convolvulaceae	*Ipomoea ramosissima*	(Poir.) Choisy	LC	11, 12, 24, 55, 60, 73, 76
Convolvulaceae	*Evolvulus villosus*	Ruiz & Pav.	NE	59	Convolvulaceae	*Ipomoea schomburgkii*	Choisy	NE	11
Convolvulaceae	*Ipomoea alba*	L.	LC	1, 11, 12, 26, 58, 82	Convolvulaceae	*Ipomoea schulziana*	O'Donell	NE	14, 26, 28, 31, 34
Convolvulaceae	*Ipomoea amnicola*	Morong	NE	22, 23, 26, 60	Convolvulaceae	*Ipomoea sericosepala*	J.R.I.Wood & Scotland	NE	22, 26, 31, 35
Convolvulaceae	*Ipomoea argentinica*	Peter	NE	12	Convolvulaceae	*Ipomoea squamisepala*	O'Donell	NE	5
Convolvulaceae	*Ipomoea aristolochiifolia*	G.Don	NE	11, 12, 26, 35, 56, 57, 59, 60	Convolvulaceae	*Ipomoea squamosa*	Choisy	NE	11, 70
Convolvulaceae	*Ipomoea bonariensis*	Hook.	NE	1, 11, 22	Convolvulaceae	*Ipomoea subrevoluta*	Choisy	NE	5, 11, 12, 18
Convolvulaceae	*Ipomoea carnea*	Jacq.	NE	9, 11, 12, 72	Convolvulaceae	*Jacquemontia evolvuloides*	(Moric.) Meisn.	NE	3, 26
Convolvulaceae	*Ipomoea cheirophylla*	O'Donell	NE	23, 27, 37	Convolvulaceae	*Operculina codonantha*	(Benth.) Hallier f.	NE	64, 66
Convolvulaceae	*Ipomoea cuneifolia*	Meisn.	NE	11	Costaceae	*Costus arabicus*	L.	NE	1, 5, 11, 12, 24, 60, 62, 75, 79, 83, 84
Convolvulaceae	*Ipomoea cynanchifolia*	Meisn.	LC	11	Costaceae	*Costus beckii*	Maas & H.Maas	NE	79, 82, 84
Convolvulaceae	*Ipomoea dumetorum*	Willd.	NE	23, 26, 30, 38, 56, 57, 59, 60, 82, 85	Costaceae	*Costus scaber*	Ruiz & Pav.	NE	5, 11, 13, 25, 59, 60, 61, 72, 77, 79, 82, 84
Convolvulaceae	*Ipomoea echinocalyx*	Meisn.	NE	25	Costaceae	*Dimerocostus argenteus*	(Ruiz & Pav.) Maas	NE	25, 60, 61, 79
Convolvulaceae	*Ipomoea goyazensis*	Gardner	NE	11	Costaceae	*Dimerocostus strobilaceus*	Kuntze	NE	1
Convolvulaceae	*Ipomoea grandifolia*	(Dammer) O'Donell	LC	12, 72	Crassulaceae	*Echeveria peruviana*	Meyen	NE	25, 85
Convolvulaceae	*Ipomoea haenkeana*	Choisy	NE	1, 5, 15, 18, 61	Cucurbitaceae	*Cayaponia glandulosa*	(Mart.) Cogn.	NE	1, 2, 8, 13, 18, 22, 26, 31, 32, 60, 73, 77
Convolvulaceae	*Ipomoea hederifolia*	L.	NE	12, 56, 58	Cucurbitaceae	*Cucurbitella asperata*	(Gillies ex Hook. & Arn.) Walp.	NE	20, 26, 31, 32, 35, 36, 37
Convolvulaceae	*Ipomoea hieronymi*	(Kuntze) O'Donell	NE	34, 37	Cucurbitaceae	*Cyclanthera brachybotrys*	(Poepp. & Endl.) Cogn.	NE	25, 56, 57, 60, 84

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Cucurbitaceae	*Fevillea pergamentacea*	(Kuntze) Cogn.	NE	13, 25, 26
Cucurbitaceae	*Gurania acuminata*	Cogn.	NE	11, 13, 25, 57, 59, 60, 64, 67, 75, 84
Cucurbitaceae	*Gurania lobata*	(L.) Pruski	NE	1, 11, 12, 13, 25, 26, 31, 56, 58, 59, 60, 64, 82, 84
Cucurbitaceae	*Sicana odorifera*	(Vell.) Naudin	NE	1
Cucurbitaceae	*Sicyos baderoa*	Hook. & Arn.	NE	53, 59, 87
Cucurbitaceae	*Siolmatra brasiliensis*	(Cogn.) Baill.	NE	1, 2, 9, 11, 26, 32, 60, 77
Cunoniaceae	*Weinmannia bangii*	(Rusby) Engl.	NE	25, 56, 58, 59, 60, 84
Cunoniaceae	*Weinmannia boliviensis*	R.E.Fr.	NT B2ab(iii)	36, 37, 40
Cunoniaceae	* *Weinmannia davidsonii*	A.Fuentes & Z.S.Rogers	VU B1ab(ii,iii)+2ab(ii,ii)	56, 59, 60
Cunoniaceae	*Weinmannia fagaroides*	Kunth	LC	25, 56, 57, 59, 60, 82, 84, 87
Cunoniaceae	*Weinmannia microphylla*	Ruiz & Pav.	NE	3, 25, 56
Cunoniaceae	*Weinmannia pinnata*	L.	LC	23, 25, 53, 56, 57, 58, 59, 60, 82, 84, 85
Cunoniaceae	*Weinmannia reticulata*	Ruiz & Pav.	LC	58
Cunoniaceae	*Weinmannia sorbifolia*	Kunth	LC	23, 25, 26, 27, 31, 56, 57, 58, 59, 60, 82, 84, 87
Cyatheaceae	*Alsophila cuspidata*	(Kunze) D.S.Conant	NE	11, 25, 55, 59, 60, 82, 84
Cyatheaceae	*Alsophila minervae*	Lehnert	NE	56
Cyatheaceae	*Cyathea andina*	(H.Karst.) Domin	NE	58
Cyatheaceae	*Cyathea bipinnatifida*	Domin	NE	59, 60, 79
Cyatheaceae	*Cyathea delgadii*	Sternb.	NE	58
Cyatheaceae	* *Cyathea herzogii*	Rosenst.	NE	58
Cyatheaceae	*Cyathea incana*	H.Karst.	NE	23, 25, 26, 31, 32, 34
Cyatheaceae	*Cyathea lechleri*	Mett.	NE	59, 60
Cyatheaceae	*Cyathea leucolepismata*	Alston	NE	25, 60, 61
Cyatheaceae	*Cyathea pungens*	(Willd.) Domin	NE	11, 25, 59, 60, 63, 64, 79, 84
Cyatheaceae	*Cyathea squamipes*	Klotzsch	NE	54, 56, 57, 58, 59, 60, 79, 82, 84
Cyatheaceae	*Lophosoria quadripinnata*	(J.F.Gmel.) C.Chr.	NE	25, 26, 31, 55, 56, 57, 58, 59, 60, 82, 84
Cyclanthaceae	* *Asplundia australis*	Harling	NE	25, 59, 60, 84
Cyclanthaceae	*Carludovica palmata*	Ruiz & Pav.	LC	25, 60
Cyclanthaceae	*Sphaeradenia meridionalis*	R.Erikss.	NE	58
Cyclanthaceae	*Thoracocarpus bissectus*	(Vell.) Harling	NE	59, 60, 61, 64, 78, 79, 83
Cyperaceae	*Bulbostylis juncoides*	(Vahl) Kük. ex Herter	NE	1, 18, 25, 26, 32, 38, 40, 56, 57, 85
Cyperaceae	*Cyperus aggregatus*	(Willd.) Endl.	NE	2, 11, 14, 18, 25, 26, 34, 35, 37, 56, 58, 59, 60, 74, 76, 79
Cyperaceae	*Cyperus blepharoleptos*	Steud.	LC	4, 5, 11, 12, 13, 64, 77
Cyperaceae	*Cyperus brevifolius*	(Rottb.) Hassk.	LC	2, 18, 25, 27, 37, 39, 57, 60, 82
Cyperaceae	*Cyperus chalaranthus*	J.Presl & C.Presl	NE	25, 26, 31, 34, 37, 39, 56, 60, 63, 80, 82, 84
Cyperaceae	*Cyperus digitatus*	Roxb.	LC	9, 12
Cyperaceae	*Cyperus esculentus*	L.	NE	25, 26, 76
Cyperaceae	*Cyperus giganteus*	Vahl	NE	4, 11, 63, 72
Cyperaceae	*Cyperus haspan*	L.	LC	1, 5, 11, 12, 18, 19, 26, 64, 72, 74, 79
Cyperaceae	*Cyperus hermaphroditus*	(Jacq.) Standl.	NE	23, 25, 26, 27, 30, 34, 56, 57, 58, 59, 60, 82
Cyperaceae	*Cyperus laxus*	Lam.	NE	1, 2, 8, 11, 12, 13, 18, 25, 26, 31, 34, 59, 60
Cyperaceae	*Cyperus luzulae*	(L.) Retz.	LC	1, 2, 11, 18, 22, 34, 35, 56, 58, 59, 60, 62, 72, 76, 79, 84
Cyperaceae	*Cyperus surinamensis*	Rottb.	NE	12, 18, 25, 35, 82
Cyperaceae	*Diplasia karatifolia*	Rich.	NE	60, 64, 70, 83
Cyperaceae	*Eleocharis acutangula*	(Roxb.) Schult.	LC	11, 12, 18, 72, 79
Cyperaceae	*Eleocharis confervoides*	(Poir.) Steud.	NE	11, 12, 64
Cyperaceae	*Eleocharis elegans*	(Kunth) Roem. & Schult.	NE	11, 12, 22, 60, 64, 70, 72, 76, 79, 84
Cyperaceae	*Eleocharis filiculmis*	Kunth	NE	11, 12, 13, 14, 18, 24, 25, 26
Cyperaceae	*Eleocharis geniculata*	(L.) Roem. & Schult.	NE	5, 31, 35, 37, 72, 82
Cyperaceae	*Eleocharis interstincta*	(Vahl) Roem. & Schult.	LC	12, 18, 25, 60

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Cyperaceae	*Eleocharis minima*	Kunth	NE	2, 5, 25, 26, 48, 65, 72, 76, 79
Cyperaceae	*Eleocharis mutata*	(L.) Roem. & Schult.	LC	18
Cyperaceae	*Fimbristylis dichotoma*	(L.) Vahl	LC	5, 11, 26, 37, 60, 64
Cyperaceae	*Fuirena umbellata*	Rottb.	LC	5, 11, 12, 18, 19, 72, 79
Cyperaceae	*Phylloscirpus deserticola*	(Phil.) Dhooge & Goetgh.	NE	52, 57, 59
Cyperaceae	*Rhynchospora contracta*	(Nees) J.Raynal	NE	1, 11
Cyperaceae	*Rhynchospora emaciata*	(Nees) Boeckeler	NE	11, 12, 18, 60, 62
Cyperaceae	*Rhynchospora hieronymi*	Boeckeler	NE	57, 82
Cyperaceae	*Rhynchospora nervosa*	(Vahl) Boeckeler	NE	5, 11, 15, 18, 25, 26, 58, 59, 60, 72, 79
Cyperaceae	*Rhynchospora tenuis*	Link	NE	11, 12, 25, 60
Cyperaceae	*Rhynchospora velutina*	(Kunth) Boeckeler	NE	2, 11, 18, 25, 76
Cyperaceae	*Schoenoplectus californicus*	(C.A.Mey.) Soják	NE	52, 85
Cyperaceae	*Scleria distans*	Poir.	LC	12, 18, 59
Cyperaceae	*Scleria secans*	(L.) Urb.	LC	11, 57, 59, 60, 64, 70
Cyperaceae	*Zameioscirpus atacamensis*	(Phil.) Dhooge & Goetgh.	LC	50, 52
Dennstaedtiaceae	*Pteridium esculentum*	(G.Forst.) Cockayne	NE	5, 25, 26, 31, 39, 54, 55, 60, 84, 87
Dilleniaceae	*Curatella americana*	L.	LC	1, 5, 11, 12, 18, 19, 21, 60, 61, 63, 72, 74, 76
Dilleniaceae	*Davilla elliptica*	A.St.-Hil.	NE	2, 11, 18, 72
Dilleniaceae	*Davilla kunthii*	A.St.-Hil.	NE	11, 12, 13, 59, 60, 62, 63, 64
Dilleniaceae	*Davilla nitida*	(Vahl) Kubitzki	NE	11, 12, 13, 24, 25, 60, 61, 62, 64, 75, 76, 77
Dilleniaceae	*Doliocarpus dentatus*	(Aubl.) Standl.	NE	11, 12, 13, 15, 59, 60, 64, 69, 73, 77
Dilleniaceae	*Tetracera parviflora*	(Rusby) Sleumer	LC	1, 4, 13, 18, 19, 24, 25, 55, 60, 64, 76, 77, 84
Dioscoreaceae	*Dioscorea alata*	L.	NE	61
Dioscoreaceae	*Dioscorea dodecaneura*	Vell.	NE	25, 39
Dioscoreaceae	*Dioscorea multispicata*	R.Knuth	NE	2, 26, 34, 60
Dioscoreaceae	*Dioscorea piperifolia*	Humb. & Bonpl. ex Willd.	NE	2, 11, 25, 26, 30, 31, 35, 39, 54, 56, 57, 59, 60, 82, 84, 87
Dioscoreaceae	*Dioscorea polygonoides*	Humb. & Bonpl. ex Willd.	NE	11, 64
Dioscoreaceae	*Dioscorea spectabilis*	R.Knuth	NE	26
Dioscoreaceae	*Dioscorea trifida*	L.f.	NE	4, 13, 59, 61
Dryopteridaceae	*Ctenitis submarginalis*	(Langsd. & Fisch.) Ching	NE	31, 34, 56, 60
Dryopteridaceae	** Elaphoglossum accedens*	Christ	NE	56
Ebenaceae	*Diospyros inconstans*	Jacq.	LC	11, 13, 19, 25, 26, 60
Ebenaceae	*Diospyros lasiocalyx*	(Mart.) B.Walln.	LC	2, 11, 12, 13, 17, 18, 21
Elaeocarpaceae	*Crinodendron tucumanum*	Lillo	NE	23, 25, 26, 27, 28, 34, 84
Elaeocarpaceae	*Sloanea castanocarpa*	Triana & Planch.	NE	63
Elaeocarpaceae	*Sloanea durissima*	Spruce ex Benth.	NE	70
Elaeocarpaceae	*Sloanea eichleri*	K.Schum.	LC	11, 12, 59, 60, 61, 64, 74
Elaeocarpaceae	*Sloanea fragrans*	Rusby	LC	13, 25, 59, 60, 79
Elaeocarpaceae	*Sloanea guianensis*	(Aubl.) Benth.	LC	11, 13, 60, 64, 77, 79, 84
Elaeocarpaceae	*Sloanea laurifolia*	(Benth.) Benth.	NE	77
Elaeocarpaceae	*Sloanea obtusifolia*	(Moric.) K.Schum.	NE	59, 60, 83
Elaeocarpaceae	*Sloanea pubescens*	Benth.	NE	11, 12, 59, 60, 77
Elaeocarpaceae	*Sloanea rufa*	Planch. ex Benth.	LC	13, 60, 62, 74, 79, 83
Elaeocarpaceae	*Sloanea terniflora*	(Moc. & Sessé ex DC.) Standl.	LC	11, 12, 13, 25, 60, 64, 65, 67, 69, 74, 76, 79
Elaeocarpaceae	*Vallea stipularis*	L.f.	LC	23, 25, 26, 27, 34, 37, 53, 56, 57, 59, 60, 82, 84, 85, 87
Ephedraceae	*Ephedra americana*	Humb. & Bonpl. ex Willd.	LC	23, 38, 50, 52, 59, 85, 86
Ephedraceae	*Ephedra breana*	Phil.	LC	46
Ephedraceae	*Ephedra rupestris*	Benth.	LC	40, 57, 59, 85
Ephedraceae	*Ephedra triandra*	Tul.	LC	23, 86
Equisetaceae	*Equisetum arvense*	L.	NE	26

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Equisetaceae	*Equisetum bogotense*	Kunth	NE	25, 26, 31, 34, 39, 56, 57, 58, 59, 60, 82, 84, 85, 86
Equisetaceae	*Equisetum giganteum*	L.	LC	9, 19, 24, 25, 26, 30, 31, 34, 37, 39, 60, 87
Ericaceae	*Agarista boliviensis*	(Sleumer) Judd	NE	23, 25, 26, 31, 34, 35, 60, 86
Ericaceae	*Bejaria aestuans*	Mutis	LC	23, 24, 25, 26, 32, 34, 56, 57, 59, 60, 82, 84
Ericaceae	*Cavendishia bracteata*	(Ruiz & Pav. ex J.St.-Hil.) Hoerold	LC	58
Ericaceae	*Disterigma empetrifolium*	(Kunth) Nied.	LC	59, 60
Ericaceae	*Gaultheria bracteata*	(Cav.) G.Don	LC	23, 25, 56, 57, 59, 60, 61, 82, 84, 87
Ericaceae	*Gaultheria erecta*	Vent.	LC	23, 25, 26, 27, 39, 54, 56, 57, 58, 59, 60, 82, 84, 87
Ericaceae	*Gaultheria glomerata*	(Cav.) Sleumer	LC	23, 53, 56, 57, 59, 60, 82, 84, 87
Ericaceae	*Gaultheria myrsinoides*	Kunth	NE	23, 25, 26, 34, 53, 56, 57, 59, 60, 82, 84, 85, 87
Ericaceae	*Gaultheria vaccinioides*	Griseb. ex Wedd.	NE	23, 25, 26, 56, 57, 58, 59, 60, 82, 84
Ericaceae	*Gaylussacia cardenasii*	A.C.Sm.	NE	25, 26, 27, 28, 32, 34, 37, 84, 86
Ericaceae	*Vaccinium floribundum*	Kunth	LC	23, 25, 28, 56, 57, 58, 59, 60
Erythroxylaceae	*Erythroxylum anguifugum*	Mart.	NE	8, 11, 13, 18, 26, 74, 76
Erythroxylaceae	*Erythroxylum coca*	Lam.	NE	59, 60, 61, 64
Erythroxylaceae	*Erythroxylum cuneifolium*	(Mart.) O.E.Schulz	LC	1, 2, 5, 19, 20, 22, 25, 26, 32, 34, 37, 39
Erythroxylaceae	*Erythroxylum daphnites*	Mart.	LC	1, 2, 11, 12, 18, 70
Erythroxylaceae	*Erythroxylum raimondii*	O.E.Schulz	NE	60
Erythroxylaceae	*Erythroxylum squamatum*	Sw.	LC	4, 11, 12, 13, 15, 60, 71
Erythroxylaceae	*Erythroxylum suberosum*	A.St.-Hil., A.Juss. & Cambess.	LC	2, 8, 11, 20, 21, 72
Erythroxylaceae	*Erythroxylum subracemosum*	Turcz.	LC	11
Escalloniaceae	*Escallonia millegrana*	Griseb.	LC	25, 26, 30, 34, 37, 39, 40, 84, 85, 86
Escalloniaceae	*Escallonia myrtilloides*	L.f.	NE	23, 25, 56, 57, 59, 60, 82, 85
Escalloniaceae	*Escallonia paniculata*	(Ruiz & Pav.) Schult.	LC	25, 54, 56, 57, 58, 59, 60, 82, 84
Escalloniaceae	*Escallonia resinosa*	(Ruiz & Pav.) Pers.	NT A3cd	23, 40, 52, 53, 59, 85, 87
Escalloniaceae	* *Escallonia reticulata*	Sleumer	VU B1ab(iii)+2ab(iii)	23, 25, 26, 32
Escalloniaceae	*Escallonia schreiteri*	Sleumer	NE	23, 26, 37, 40, 56, 82, 85
Escalloniaceae	*Escallonia tucumanensis*	Hosseus	LC	37
Euphorbiaceae	*Acalypha arvensis*	Poepp.	NE	9, 12, 26, 60
Euphorbiaceae	*Acalypha communis*	Müll.Arg.	NE	1, 2, 5, 9, 12, 15, 18, 19, 25, 26, 31, 32, 34, 36, 37, 73, 87
Euphorbiaceae	*Acalypha diversifolia*	Jacq.	LC	25, 56, 57, 58, 60, 61, 63, 67, 77, 82, 84
Euphorbiaceae	*Acalypha lycioides*	Pax & K.Hoffm.	NE	23, 25, 26, 32, 59, 77, 86
Euphorbiaceae	*Acalypha plicata*	Müll.Arg.	NE	23, 25, 26, 27, 30, 31, 37, 39, 84, 85, 87
Euphorbiaceae	*Acalypha scandens*	Benth.	NE	11, 77, 82
Euphorbiaceae	*Acalypha stricta*	Poepp.	NE	15, 24, 25, 26, 32, 34, 54, 55, 56, 58, 59, 60, 61, 63, 64, 66, 68, 79, 82, 84
Euphorbiaceae	*Acalypha villosa*	Jacq.	NE	1, 2, 4, 5, 9, 11, 12, 25, 26, 55, 56, 60, 68, 86
Euphorbiaceae	*Adelia membranifolia*	(Müll.Arg.) Chodat & Hassl.	NT A2c	2, 4, 5, 72
Euphorbiaceae	*Alchornea discolor*	Poepp.	LC	11, 12, 63, 64, 65, 70, 79
Euphorbiaceae	*Alchornea glandulosa*	Poepp.	LC	11, 25, 26, 56, 57, 58, 59, 60, 72, 79, 82, 83, 84
Euphorbiaceae	*Alchornea triplinervia*	(Spreng.) Müll.Arg.	LC	11, 12, 13, 25, 26, 56, 57, 58, 59, 60, 63, 64, 79
Euphorbiaceae	*Aparisthmium cordatum*	(A.Juss.) Baill.	LC	11, 12, 59, 60, 64, 84
Euphorbiaceae	*Caperonia castaneifolia*	(L.) A.St.-Hil.	NE	4, 5, 11, 12, 13, 19, 63, 66, 73, 74, 76
Euphorbiaceae	*Caperonia palustris*	(L.) A.St.-Hil.	NE	9, 12, 13, 18, 19, 22, 79
Euphorbiaceae	*Cnidoscolus cnicodendron*	Griseb.	NE	2, 11, 12, 18, 22, 23, 26, 31
Euphorbiaceae	* *Cnidoscolus orientensis*	Fern.Casas	EN B1ab(iii)	2, 10, 14, 20
Euphorbiaceae	*Cnidoscolus tubulosus*	(Müll.Arg.) I.M.Johnst.	LC	1, 26, 34
Euphorbiaceae	*Cnidoscolus urens*	(L.) Janti	LC	23, 60
Euphorbiaceae	*Croton andinus*	Müll.Arg.	NE	1, 11, 22, 23, 26, 27, 33, 34, 37, 39, 86
Euphorbiaceae	*Croton argenteus*	L.	NE	1, 3, 5
Euphorbiaceae	*Croton charaguensis*	Standl.	NE	3, 25, 26, 31, 37

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Euphorbiaceae	*Croton gracilipes*	Baill.	NE	1, 2, 3, 5, 9, 11, 18, 19, 22, 23, 24, 25, 26, 31, 56
Euphorbiaceae	*Croton lachnostachyus*	Baill.	NE	22, 23, 25, 31, 79
Euphorbiaceae	*Croton lechleri*	Müll.Arg.	NE	11, 25, 39, 56, 60, 79
Euphorbiaceae	*Croton orbignyanus*	Müll.Arg.	NE	23, 26, 32, 86
Euphorbiaceae	*Croton peltophorus*	Müll.Arg.	NE	3, 25, 59
Euphorbiaceae	*Croton pilulifer*	Rusby	NE	23, 25, 26, 27, 31, 34, 35, 37, 39, 52, 54, 56, 57, 58, 60, 82, 84
Euphorbiaceae	*Croton quadrisetosus*	Lam.	NE	38, 53, 87
Euphorbiaceae	*Croton rusbyi*	Britton ex Rusby	NE	59, 60
Euphorbiaceae	*Croton saltensis*	Griseb.	NE	25, 26, 27, 30, 31, 32, 34, 37, 39
Euphorbiaceae	*Croton triqueter*	Lam.	NE	1, 2, 11, 26
Euphorbiaceae	*Dalechampia cissifolia*	Poepp.	NE	8, 60
Euphorbiaceae	*Dalechampia tiliifolia*	Lam.	NE	11, 12, 64
Euphorbiaceae	*Ditaxis breviramea*	(Müll.Arg.) Pax & K.Hoffm.	NE	23
Euphorbiaceae	*Euphorbia guachanca*	Azara	NE	52, 59
Euphorbiaceae	*Euphorbia hirta*	L.	NE	1, 9, 11, 19, 26, 27, 60, 63, 66, 84
Euphorbiaceae	*Euphorbia hypericifolia*	L.	NE	23, 66
Euphorbiaceae	*Euphorbia hyssopifolia*	L.	NE	1, 4, 5, 9, 15, 22, 60, 72, 79
Euphorbiaceae	*Euphorbia lasiocarpa*	Klotzsch	NE	19, 87
Euphorbiaceae	*Euphorbia ophthalmica*	Pers.	NE	29, 34, 85
Euphorbiaceae	*Euphorbia serpens*	Kunth	NE	9, 23, 26, 29, 49
Euphorbiaceae	*Euphorbia thymifolia*	L.	NE	11, 38, 56, 60
Euphorbiaceae	*Hevea brasiliensis*	(Willd. ex A.Juss.) Müll.Arg.	LC	11, 12, 13, 59, 63, 64, 65, 66, 70, 74
Euphorbiaceae	*Hevea guianensis*	Aubl.	LC	11, 59
Euphorbiaceae	*Hura crepitans*	L.	LC	19, 23, 25, 60, 61, 64, 82
Euphorbiaceae	*Jatropha excisa*	Griseb.	NE	12, 22, 23

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Euphorbiaceae	*Jatropha grossidentata*	Pax & K.Hoffm.	NT B2b(iii)	22, 33
Euphorbiaceae	*Jatropha hieronymi*	Kuntze	NE	3, 22, 23, 26, 27, 29, 35
Euphorbiaceae	*Jatropha macrocarpa*	Griseb.	NE	22, 34, 35, 36, 37
Euphorbiaceae	*Mabea fistulifera*	Mart.	NE	11, 12, 13, 60, 64
Euphorbiaceae	*Manihot anisophylla*	(Griseb.) Müll.Arg.	NE	26, 32
Euphorbiaceae	*Manihot anomala*	Pohl	LC	1, 4, 5, 11, 12, 18, 22, 60, 61
Euphorbiaceae	*Manihot brachyloba*	Müll.Arg.	LC	55, 60
Euphorbiaceae	** Manihot condensata*	D.J.Rogers & Appan	VU B1ab(iii)	60
Euphorbiaceae	*Manihot esculenta*	Crantz	NE	11, 12, 13, 55, 59, 60, 62, 63, 64
Euphorbiaceae	*Manihot guaranitica*	Chodat & Hassl.	NE	1, 5, 18, 22, 35
Euphorbiaceae	*Manihot stricta*	Baill.	NE	2
Euphorbiaceae	*Manihot tripartita*	(Spreng.) Müll.Arg.	LC	8,11
Euphorbiaceae	*Microstachys serrulata*	(Mart.) F.Dietr.	NE	2, 3,10,11, 20
Euphorbiaceae	*Omphalea diandra*	L.	NE	1,11, 18, 60, 64
Euphorbiaceae	*Plukenetia volubilis*	L.	NE	11, 24, 25, 60, 84
Euphorbiaceae	*Sapium argutum*	(Müll.Arg.) Huber	LC	1, 4, 12, 17, 26, 60
Euphorbiaceae	*Sapium glandulosum*	(L.) Morong	LC	1, 11, 12, 13, 18, 19, 23, 25, 26, 31, 37, 39, 59, 60, 72, 76, 79, 82, 84
Euphorbiaceae	*Sapium haematospermum*	Müll.Arg.	LC	9, 11, 19, 31, 32, 72, 76, 77
Euphorbiaceae	*Sapium marmieri*	Huber	NE	11, 12, 13, 23, 25, 26, 60, 61, 63, 64, 77, 84
Euphorbiaceae	*Sapium pallidum*	(Müll.Arg.) Huber	NE	11, 12, 18, 73
Euphorbiaceae	*Sebastiania brasiliensis*	Spreng.	LC	1, 4, 8, 12, 14, 19, 20, 22, 25, 26, 30, 31, 34, 35, 37, 39, 60
Euphorbiaceae	*Tragia volubilis*	L.	NE	1, 9, 11, 14, 24, 25, 31, 34, 39, 60
Fabaceae	*Abrus precatorius*	L.	NE	84
Fabaceae	*Acosmium cardenasii*	H.S.Irwin & Arroyo	LC	1, 2, 3, 4, 5, 8, 18, 22, 72
Fabaceae	*Adesmia miraflorensis*	J.Rémy	NE	26, 41, 43, 48, 52, 85

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Fabaceae	*Adesmia polyphylla*	Phil.	NE	46, 47
Fabaceae	*Adesmia spinosissima*	Meyen ex Vogel	NE	41, 47, 51
Fabaceae	*Aeschynomene denticulata*	Rudd	NE	1, 9
Fabaceae	*Aeschynomene fluminensis*	Vell.	NE	11, 12, 18, 72
Fabaceae	*Aeschynomene pratensis*	Small	NE	11, 19
Fabaceae	*Aeschynomene rudis*	Benth.	NE	1, 4
Fabaceae	*Aeschynomene sensitiva*	Sw.	NE	5, 8, 9, 12, 64, 68, 72
Fabaceae	*Albizia polyantha*	(A.Spreng.) G.J.Lewis	NE	3, 4, 77, 80
Fabaceae	*Albizia subdimidiata*	(Splitg.) Barneby & J.W.Grimes	NE	12, 13, 61, 77, 79
Fabaceae	*Amburana acreana*	(Ducke) A.C.Sm.	NE	65
Fabaceae	*Amburana cearensis*	(Allemão) A.C.Sm.	EN A2cd	1, 5, 11, 12, 27, 35, 60
Fabaceae	*Anadenanthera colubrina*	(Vell.) Brenan	LC	1, 2, 5, 8, 9, 10, 11, 12, 17, 18, 19, 21, 22, 23, 25, 26, 27, 31, 32, 34, 35, 36, 37, 39, 53, 59, 60, 72
Fabaceae	*Anadenanthera peregrina*	(L.) Speg.	LC	1, 2, 5, 72
Fabaceae	*Andira humilis*	Mart. ex Benth.	LC	21
Fabaceae	*Andira inermis*	(W.Wright) Kunth ex DC.	LC	1, 11, 12, 17
Fabaceae	*Andira vermifuga*	(Mart.) Benth.	LC	21
Fabaceae	*Apuleia leiocarpa*	(Vogel) J.F.Macbr.	LC	11, 12, 13, 60, 63, 64, 68
Fabaceae	*Arachis batizocoi*	Krapov. & W.C.Greg.	NE	1, 3, 5, 14
Fabaceae	** Arachis benensis*	Krapov., W.C.Greg. & C.E.Simpson	# EN	73
Fabaceae	*Arachis cardenasii*	Krapov. & W.C.Greg.	LC	2, 14, 20
Fabaceae	** Arachis chiquitana*	Krapov., W.C.Greg. & C.E.Simpson	EN B1ab(iii)+2ab(iii)	2, 14
Fabaceae	** Arachis cruziana*	Krapov., W.C.Greg. & C.E.Simpson	VU B1ab(iii)	3, 14, 20
Fabaceae	*Arachis diogoi*	Hoehne	NT B2b(iii)	5
Fabaceae	*Arachis duranensis*	Krapov. & W.C.Greg.	NE	36
Fabaceae	** Arachis glandulifera*	Stalker	LC	1, 2, 18

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Fabaceae	*Arachis gregoryi*	C.E.Simpson, Krapov. & Valls	NE	5
Fabaceae	** Arachis herzogii*	Krapov., W.C.Greg. & C.E.Simpson	EN C2a(i)	14
Fabaceae	** Arachis ipaensis*	Krapov. & W.C.Greg.	CR B1ab(ii,iii,v) +2ab(ii,iii,v)	35
Fabaceae	** Arachis kempff-mercadoi*	Krapov., W.C.Greg. & C.E.Simpson	NE	1, 5, 8, 9, 17
Fabaceae	** Arachis krapovickasii*	C.E.Simpson, D.E.Williams, Valls & I.G.Vargas	EN B1ab(iii)	10, 20
Fabaceae	*Arachis magna*	Krapov., W.C.Greg. & C.E.Simpson	NT B2b(ii,iii,v)	18
Fabaceae	*Arachis matiensis*	Krapov., W.C.Greg. & C.E.Simpson	NT B1ab(iii)+2ab(iii)	5
Fabaceae	*Arachis simpsonii*	Krapov. & W.C.Greg.	# EN	5
Fabaceae	** Arachis williamsii*	Krapov. & W.C.Greg.	# EN	74
Fabaceae	*Astragalus arequipensis*	Vogel	NE	43, 46, 52, 56, 87
Fabaceae	*Astragalus garbancillo*	Cav.	NE	43, 48, 51, 52, 82, 85
Fabaceae	*Astragalus peruvianus*	Vogel	NE	57
Fabaceae	*Astragalus uniflorus*	DC.	NE	85
Fabaceae	*Ateleia guaraya*	Herzog	LC	13,18
Fabaceae	*Barbieria pinnata*	(Pers.) Baill.	LC	11, 12, 55, 64
Fabaceae	*Bauhinia aculeata*	L.	LC	5, 18, 22, 26, 31, 77
Fabaceae	*Bauhinia longicuspis*	Spruce ex Benth.	LC	11, 12, 31, 63, 73, 83
Fabaceae	*Bauhinia mollis*	(Bong.) D.Dietr.	LC	5, 21, 24, 25, 26, 31
Fabaceae	*Bauhinia pentandra*	(Bong.) Vogel ex D.Dietr.	LC	4, 5, 9, 12, 19, 26, 76
Fabaceae	*Bauhinia ungulata*	L.	LC	1, 2, 5, 11, 12, 19, 21, 24, 60, 61, 84
Fabaceae	*Bowdichia virgilioides*	Kunth	LC	1, 5, 11, 18, 21, 60, 72
Fabaceae	*Calliandra angustifolia*	Spruce ex Benth.	LC	60, 82
Fabaceae	** Calliandra haematocephala*	Hassk.	LC	15, 19, 25, 56, 60, 61, 63, 73
Fabaceae	*Calliandra parviflora*	Benth.	NE	5, 18
Fabaceae	*Calliandra trinervia*	Benth.	LC	60

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Fabaceae	*Calopogonium caeruleum*	(Benth.) C.Wright	NE	1, 4, 5, 8, 25, 73
Fabaceae	* *Canavalia beniensis*	Aymard & Cuello	VU B2ab(iii)	56, 60
Fabaceae	*Canavalia bonariensis*	Lindl.	NE	3, 25, 26, 27, 31, 32
Fabaceae	*Canavalia ensiformis*	(L.) DC.	NE	59
Fabaceae	*Canavalia piperi*	Killip & J.F.Macbr.	NE	26, 27, 31
Fabaceae	*Cascaronia astragalina*	Griseb.	LC	19
Fabaceae	*Cedrelinga cateniformis*	(Ducke) Ducke	LC	11, 64
Fabaceae	*Cenostigma pluviosum*	(DC.) Gagnon & G.P.Lewis	NE	1, 3, 21, 26, 31, 60
Fabaceae	*Centrolobium microchaete*	(Mart. ex Benth.) H.C.Lima	LC	1, 25, 60
Fabaceae	*Centrosema vexillatum*	Benth.	NE	3, 12
Fabaceae	*Centrosema virginianum*	(L.) Benth.	NE	11, 12, 26, 30, 31, 37, 39, 56, 58, 59
Fabaceae	*Cerradicola elliptica*	(Desv.) L.P.Queiroz	NE	2, 3, 11, 64
Fabaceae	*Cerradicola praeandina*	(Burkart) L.P.Queiroz	NE	11, 12, 25, 26, 27, 30, 31, 34, 37
Fabaceae	*Chamaecrista fagonioides*	(Vogel) H.S.Irwin & Barneby	NE	11
Fabaceae	*Chamaecrista flexuosa*	(L.) Greene	NE	4, 5, 7, 11, 72
Fabaceae	*Chamaecrista nictitans*	(L.) Moench	NE	1, 2, 4, 5, 9, 11, 17, 18, 23, 26, 60, 72
Fabaceae	*Chamaecrista rotundifolia*	(Pers.) Greene	NE	22
Fabaceae	*Chloroleucon chacoense*	(Burkart) Barneby & J.W.Grimes	LC	22, 33, 36
Fabaceae	*Chloroleucon tenuiflorum*	(Benth.) Barneby & J.W.Grimes	LC	12, 19, 22, 23, 25, 26, 30, 31, 34, 60
Fabaceae	*Clitoria falcata*	Lam.	NE	1
Fabaceae	*Cochliasanthus caracalla*	(L.) Trew	NE	1, 12, 25, 26, 31, 37, 54, 60, 61, 79, 82, 86
Fabaceae	*Cojoba arborea*	(L.) Britton & Rose	LC	18, 25, 26, 60, 63, 76
Fabaceae	* *Cojoba arborea* var. *angustifolia*	(Rusby) Barneby & J.W.Grimes	NE	25, 26, 35, 60, 63, 79
Fabaceae	*Collaea speciosa*	(Loisel.) DC.	LC	25, 27, 30, 32, 34, 37, 55, 56, 57, 58, 59, 60, 82, 87
Fabaceae	*Cologania broussonetii*	(Balb.) DC.	NE	26, 27, 30, 34, 37, 40, 57, 85, 87
Fabaceae	*Condylostylis candida*	(Vell.) A.Delgado	NE	60
Fabaceae	*Copaifera langsdorffii*	Desf.	LC	2, 4, 10, 11, 12, 13, 60, 62, 64
Fabaceae	*Copaifera reticulata*	Ducke	NE	4, 11, 12, 60, 75, 76
Fabaceae	*Coursetia brachyrhachis*	Harms	NE	22, 23, 25, 26, 31, 34, 35, 60, 86, 87
Fabaceae	*Coursetia hassleri*	Chodat	NE	1, 9, 26, 39
Fabaceae	*Cratylia argentea*	(Desv.) Kuntze	NE	11, 12, 70, 72, 84
Fabaceae	*Crotalaria incana*	L.	NE	1, 22, 25, 31, 53, 56, 60, 80, 87
Fabaceae	*Crotalaria maypurensis*	Kunth	NE	26, 27
Fabaceae	*Crotalaria micans*	Link	LC	1, 11, 12, 26, 31, 56, 57, 58, 59, 60
Fabaceae	*Crotalaria nitens*	Kunth	LC	11, 12, 13, 26, 32, 37, 56, 57, 59, 60, 76, 82, 84
Fabaceae	*Crotalaria stipularia*	Desv.	NE	26, 34, 61, 85
Fabaceae	*Ctenodon histrix*	(Poir.) D.B.O.S.Cardoso, P.L.R.Moraes & H.C.Lima	NE	2, 5, 8, 11, 18, 72, 79
Fabaceae	*Ctenodon paniculatus*	(Willd. ex Vogel) D.B.O.S.Cardoso, P.L.R.Moraes & H.C.Lima	NE	1, 5, 11, 12, 62
Fabaceae	*Cyclolobium brasiliense*	Benth.	LC	1, 17, 18, 24
Fabaceae	*Dahlstedtia muehlbergiana*	(Hassl.) M.J.Silva & A.M.G.Azevedo	NE	60
Fabaceae	*Dalbergia frutescens*	(Vell.) Britton	LC	74
Fabaceae	*Dalbergia gracilis*	Benth.	LC	11, 12, 13, 60
Fabaceae	*Dalbergia miscolobium*	Benth.	LC	11
Fabaceae	*Dalbergia riparia*	(Mart. ex Benth.) Benth.	LC	1, 4, 14, 19, 64
Fabaceae	*Dalbergia spruceana*	Benth.	VU A4cd	11, 56, 59, 60, 61
Fabaceae	* *Dalea pazensis*	Rusby	NE	53, 85, 87
Fabaceae	*Deguelia amazonica*	Killip	LC	11, 12, 60, 64
Fabaceae	*Deguelia scandens*	Aubl.	LC	64
Fabaceae	*Desmanthus virgatus*	(L.) Willd.	LC	9, 19, 22, 27
Fabaceae	*Desmodium affine*	Schltdl.	NE	26, 27, 34, 37, 39, 56

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Fabaceae	*Desmodium axillare*	(Sw.) DC.	NE	3, 58, 60, 67, 79	Fabaceae	*Galactia glaucescens*	Kunth	LC	2, 4, 5, 11, 26, 60
Fabaceae	*Desmodium distortum*	(Aubl.) J.F.Macbr.	NE	1, 2, 12, 19	Fabaceae	*Geoffroea decorticans*	(Gillies ex Hook. & Arn.) Burkart	LC	23, 26, 32, 34, 39
Fabaceae	*Desmodium molliculum*	(Kunth) DC.	NE	26, 27, 30, 31, 60	Fabaceae	*Geoffroea spinosa*	Jacq.	LC	19, 22
Fabaceae	*Desmodium uncinatum*	(Jacq.) DC.	NE	30, 31, 39, 56, 82	Fabaceae	*Grona adscendens*	(Sw.) H.Ohashi & K.Ohashi	NE	26, 30, 34, 57, 59, 60, 77, 84
Fabaceae	*Dialium guianense*	(Aubl.) Sandwith	LC	60, 63, 64, 67, 68, 69, 70, 74	Fabaceae	*Grona barbata*	(L.) H.Ohashi & K.Ohashi	NE	5, 8, 11, 18
Fabaceae	*Dimorphandra gardneriana*	Tul.	LC	1, 2, 11, 18, 21, 70, 72	Fabaceae	*Guibourtia chodatiana*	(Hassl.) J.Léonard	NE	1, 2, 5, 72
Fabaceae	*Dimorphandra mollis*	Benth.	LC	11, 20, 64, 70, 72	Fabaceae	*Guibourtia hymenaeifolia*	(Moric.) J.Léonard	NE	1, 2, 5, 14, 17
Fabaceae	*Diplotropis peruviana*	J.F.Macbr.	LC	59, 60	Fabaceae	*Gwilymia fissurata*	(E.M.O.Martins) A.G.Lima, Paula-Souza & Scalon	NE	3, 18
Fabaceae	*Dipteryx alata*	Vogel	VU A2cd+3cd+4cd	1, 2, 5, 6, 11, 12, 15, 18, 21, 24, 62, 72	Fabaceae	*Helicotropis linearis*	(Kunth) A.Delgado	NE	26, 76
Fabaceae	*Dipteryx micrantha*	Harms	DD	13, 60, 64, 79	Fabaceae	*Hoffmannseggia minor*	(Phil.) Ulibarri	NE	46
Fabaceae	*Dipteryx odorata*	(Aubl.) Forsyth f.	NE	11, 60, 64, 65, 70, 79	Fabaceae	*Holocalyx balansae*	Micheli	LC	2, 5, 14, 60, 72
Fabaceae	*Diptychandra aurantiaca*	(Mart.) Tul.	LC	1, 2, 6, 11, 12, 18, 21, 72	Fabaceae	*Hydrochorea pedicellaris*	(DC.) M.V.B.Soares, Iganci & M.P.Morim	NE	59, 60, 83
Fabaceae	*Discolobium pulchellum*	Benth.	NE	1, 5	Fabaceae	*Hymenaea courbaril*	L.	LC	21
Fabaceae	*Dolichopsis ligulata*	(Piper) A.Delgado	NE	60, 76	Fabaceae	*Hymenaea parvifolia*	Huber	LC	5, 64
Fabaceae	*Enterolobium contortisiliquum*	(Vell.) Morong	LC	1, 5, 12, 13, 19, 25, 26, 31, 32, 34, 35, 39, 60, 72, 86, 87	Fabaceae	*Hymenaea stigonocarpa*	Mart. ex Hayne	LC	2, 5, 11, 12, 21, 22, 72
Fabaceae	*Eriosema rufum*	(Kunth) G.Don	NE	2, 18, 58	Fabaceae	** Hymenaea travassosii*	Kuhlm. ex Paes	VU B1ab(iii)+2ab(iii)	10, 20, 22
Fabaceae	*Erythrina amazonica*	Krukoff	LC	4, 60	Fabaceae	*Indigofera asperifolia*	Bong. ex Benth.	LC	35
Fabaceae	*Erythrina falcata*	Benth.	LC	11, 23, 25, 26, 27, 28, 31, 34, 37, 57, 60, 87	Fabaceae	*Indigofera lespedezioides*	Kunth	NE	1, 5, 11, 18, 26, 60, 76, 77
Fabaceae	*Erythrina fusca*	Lour.	LC	25, 72, 73, 74	Fabaceae	*Indigofera suffruticosa*	Mill.	NE	1, 2, 5, 9, 12, 18, 22, 24, 26, 31, 37, 53, 56, 58, 60, 73, 80, 82, 84
Fabaceae	*Erythrina mulungu*	Mart. ex Benth.	NE	3, 9, 11, 13, 18, 19, 26, 82	Fabaceae	*Inga acreana*	Harms	LC	11
Fabaceae	*Erythrina poeppigiana*	(Walp.) O.F.Cook	LC	11, 12, 19, 60, 76	Fabaceae	*Inga adenophylla*	Pittier	LC	25, 26, 31, 34, 56, 57, 58, 59, 60, 79, 82, 84
Fabaceae	*Erythrina rubrinervia*	Kunth	LC	25, 57	Fabaceae	*Inga affinis*	DC.	LC	1, 2, 5, 13, 18, 26, 35, 76
Fabaceae	*Erythrina verna*	Vell.	NE	3, 18	Fabaceae	*Inga alba*	(Sw.) Willd.	LC	59, 60, 79
Fabaceae	*Fiebrigiella gracilis*	Harms	NE	26, 27, 37, 38, 40, 85	Fabaceae	** Inga approximata*	T.D.Penn.	VU B2ab(iii)	23, 25, 26, 57, 82, 84
Fabaceae	*Galactia fiebrigiana*	Burkart	NE	23, 26, 32, 38	Fabaceae	*Inga auristellae*	Harms	NE	63, 67

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Fabaceae	*Inga bourgoni*	(Aubl.) DC.	LC	60, 64, 83
Fabaceae	*Inga capitata*	Desv.	LC	63, 64, 66, 70
Fabaceae	*Inga cayennensis*	Sagot ex Benth.	LC	12
Fabaceae	*Inga chartacea*	Poepp.	LC	11, 63
Fabaceae	*Inga cylindrica*	(Vell.) Mart.	LC	11, 61, 72
Fabaceae	*Inga disticha*	Benth.	LC	11, 12, 64
Fabaceae	*Inga edulis*	Mart.	LC	11, 13, 61, 63, 72, 84
Fabaceae	* *Inga expansa*	Rusby	LC	55, 56, 59, 60, 61, 78
Fabaceae	*Inga fendleriana*	Benth.	LC	56, 57, 58, 84
Fabaceae	*Inga ingoides*	(Rich.) Willd.	LC	11, 12, 62, 63, 64, 67, 84
Fabaceae	*Inga japurensis*	T.D.Penn.	LC	64, 65
Fabaceae	*Inga laevigata*	M.Martens & Galeotti	NE	60, 63, 64, 70
Fabaceae	*Inga macrophylla*	Humb. & Bonpl. ex Willd.	LC	13, 25, 32, 60, 63, 64, 70
Fabaceae	*Inga marginata*	Willd.	LC	1, 11, 12, 19, 25, 26, 31, 32, 34, 59, 60, 67, 73, 78, 79, 82, 84
Fabaceae	*Inga megaphylla*	Poncy & Vester	NE	70
Fabaceae	*Inga nobilis*	Willd.	LC	60, 79
Fabaceae	*Inga pilosula*	(Rich.) J.F.Macbr.	LC	11, 12
Fabaceae	*Inga punctata*	Willd.	LC	19, 24, 60, 62, 63, 64, 67, 70, 73, 76, 77, 82, 84
Fabaceae	*Inga ruiziana*	G.Don	LC	60
Fabaceae	*Inga saltensis*	Burkart	NE	11, 26, 27, 31, 34, 37, 39, 78
Fabaceae	*Inga sertulifera*	DC.	LC	65, 67, 70
Fabaceae	*Inga setosa*	G.Don	LC	25, 56, 59, 60, 82
Fabaceae	*Inga steinbachii*	Harms	LC	11, 60, 61, 79
Fabaceae	*Inga stenopoda*	Pittier	LC	25
Fabaceae	*Inga stenoptera*	Benth.	LC	64, 73, 74, 79

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Fabaceae	*Inga striata*	Benth.	LC	57, 59, 60
Fabaceae	*Inga tenuistipula*	Ducke	LC	11
Fabaceae	*Inga tomentosa*	Benth.	LC	11, 59, 60, 61, 76, 77, 79, 82, 84
Fabaceae	*Inga umbellifera*	(Vahl) Steud.	LC	25, 26, 56, 57, 59, 60, 61, 62, 68, 75, 83, 84
Fabaceae	*Inga umbratica*	Poepp.	LC	70
Fabaceae	*Inga velutina*	Willd.	LC	61
Fabaceae	*Inga vera*	Willd.	LC	2, 11, 12, 13
Fabaceae	*Inga villosissima*	Benth.	NE	11, 12, 25
Fabaceae	*Inga vismiifolia*	Poepp.	LC	70
Fabaceae	*Lachesiodendron viridiflorum*	(Kunth) P.G.Ribeiro, L.P.Queiroz & Luckow	LC	53
Fabaceae	*Lathyrus magellanicus*	Lam.	LC	23, 25, 27, 85, 87
Fabaceae	*Lecointea peruviana*	Standl. ex J.F.Macbr.	LC	60
Fabaceae	*Leptospron adenanthum*	(G.Mey.) A.Delgado	NE	1, 9, 23, 79
Fabaceae	*Libidibia paraguariensis*	(D.Parodi) G.P.Lewis	NE	4, 22, 23, 26, 32, 35, 36
Fabaceae	*Lonchocarpus cultratus*	(Vell.) A.M.G.Azevedo & H.C.Lima	NE	1
Fabaceae	*Lonchocarpus lilloi*	(Hassl.) Burkart	NE	39
Fabaceae	* *Lupinus altimontanus*	C.P.Sm.	NE	51, 56, 57
Fabaceae	*Lupinus ballianus*	C.P.Sm.	LC	59
Fabaceae	*Lupinus bandelierae*	C.P.Sm.	NE	26, 34, 60, 84
Fabaceae	* *Lupinus bangii*	Rusby	LC	37
Fabaceae	*Lupinus bogotensis*	Benth.	LC	53
Fabaceae	*Lupinus breviscapus*	Ulbr.	NE	48, 50, 57
Fabaceae	*Lupinus buchtienii*	Rusby	NE	59, 82
Fabaceae	*Lupinus eriocladus*	Ulbr.	NE	52
Fabaceae	*Lupinus microphyllus*	Desr.	LC	52, 56, 57

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Fabaceae	*Lupinus pasachoensis*	C.P.Sm.	NE	57	Fabaceae	**Mimosa lepidota*	Herzog	NT B2ab(i,ii,iii)	25, 26, 28, 30, 31, 32, 37, 86
Fabaceae	*Lupinus perissophytus*	C.P.Sm.	NE	25, 56	Fabaceae	*Mimosa pudica*	L.	LC	60, 72
Fabaceae	**Lupinus rusbyanus*	C.P.Sm.	NE	56, 85	Fabaceae	*Mimosa revoluta*	Benth.	LC	56, 58, 87
Fabaceae	**Lupinus soratensis*	Rusby	NE	59	Fabaceae	*Mimosa xanthocentra*	Mart.	LC	1, 3, 8, 11, 12, 19, 22, 25, 26
Fabaceae	**Lupinus tominensis*	Wedd.	LC	56, 57, 60	Fabaceae	*Mimozyganthus carinatus*	(Griseb.) Burkart	NE	22, 26, 35
Fabaceae	*Machaerium aculeatum*	Raddi	NE	14, 18, 31	Fabaceae	*Mucuna rostrata*	Benth.	NE	60, 82, 84
Fabaceae	*Machaerium acutifolium*	Vogel	LC	1, 2, 11, 12, 13, 15, 18, 20, 21, 25, 26, 60, 62, 64, 72, 86	Fabaceae	*Muellera fluvialis*	(Lindm.) Burkart	NE	1, 4, 22
Fabaceae	*Machaerium amplum*	Benth.	LC	1, 2, 13, 60	Fabaceae	*Muellera nudiflorens*	(Burkart) M.J.Silva & A.M.G.Azevedo	NE	2, 4, 22
Fabaceae	*Machaerium aristulatum*	(Spruce ex Benth.) Ducke	LC	11, 12,13, 64, 67, 79	Fabaceae	*Muellera sericea*	(Micheli) M.J.Silva & A.M.G.Azevedo	LC	4, 5
Fabaceae	*Machaerium biovulatum*	Micheli	LC	11, 60, 72	Fabaceae	*Myrocarpus emarginatus*	A.L.B.Sartori & A.M.G.Azevedo	EN B2ab(iii)	26, 35, 86
Fabaceae	*Machaerium eriocarpum*	Benth.	LC	9	Fabaceae	*Myrocarpus frondosus*	Allemão	NE	59, 60, 67
Fabaceae	*Machaerium hirtum*	(Vell.) Stellfeld	LC	1, 2, 4, 5, 9, 11, 19, 20, 25, 26, 59, 60, 76, 79	Fabaceae	*Myroxylon balsamum*	(L.) Harms	LC	60, 61
Fabaceae	*Machaerium inundatum*	(Mart. ex Benth.) Ducke	LC	11, 12, 60	Fabaceae	*Myroxylon peruiferum*	L.f.	LC	5, 25, 26, 27, 31, 32, 34, 39, 60, 84, 86
Fabaceae	*Machaerium isadelphum*	(E.Mey.) Amshoff	LC	5, 9, 11, 12, 18, 19, 20, 25, 26, 31, 59, 60, 76, 79	Fabaceae	*Nanogalactia heterophylla*	(Gillies ex Hook.) L.P.Queiroz	NE	26, 27, 37, 38, 86
Fabaceae	*Machaerium multifoliolatum*	Ducke	LC	11, 59	Fabaceae	*Neltuma affinis*	(Spreng.) C.E.Hughes & G.P.Lewis	NE	22, 35
Fabaceae	*Machaerium nyctitans*	(Vell.) Benth.	LC	60	Fabaceae	*Neltuma alba*	(Griseb.) C.E.Hughes & G.P.Lewis	NE	42
Fabaceae	*Machaerium scleroxylon*	Tul.	LC	1,12, 18, 25, 26, 31, 60	Fabaceae	*Neltuma chilensis*	(Molina) C.E.Hughes & G.P.Lewis	LC	9, 19, 22, 40
Fabaceae	*Machaerium villosum*	Vogel	NE	1, 10, 12, 18, 19, 21, 25, 26	Fabaceae	*Neltuma elata*	(Burkart) C.E.Hughes & G.P.Lewis	NE	22
Fabaceae	*Macrolobium acaciifolium*	(Benth.) Benth.	LC	11, 12, 13, 64, 74	Fabaceae	*Neltuma flexuosa*	(DC.) C.E.Hughes & G.P.Lewis	LC	42
Fabaceae	*Macropsychanthus glaber*	(Benth.) L.P.Queiroz & Snak	NE	11, 12,13, 60	Fabaceae	*Neltuma kuntzei*	(Harms) C.E.Hughes & G.P.Lewis	LC	23, 26, 86
Fabaceae	*Macropsychanthus latifolius*	(Benth.) L.P.Queiroz & Snak	NE	2	Fabaceae	*Neptunia oleracea*	Lour.	LC	5, 72
Fabaceae	*Macroptilium lathyroides*	(L.) Urb.	NE	1, 19, 22, 33	Fabaceae	*Nissolia fruticosa*	Jacq.	NE	25, 26, 27, 34, 60
Fabaceae	*Mimosa boliviana*	Benth.	NE	23, 25, 56, 57, 58, 59, 60, 82, 84	Fabaceae	*Ormosia bolivarensis*	(Rudd) C.H.Stirt.	NE	25, 60
Fabaceae	*Mimosa debilis*	Humb. & Bonpl. ex Willd.	NE	1, 2, 4, 8, 11, 22, 24, 25, 26, 31, 72, 76, 86	Fabaceae	*Ormosia coarctata*	Jacks.	LC	11, 12, 13, 60
Fabaceae	*Mimosa detinens*	Benth.	LC	22, 86	Fabaceae	*Ormosia coccinea*	(Aubl.) Jacks.	LC	60, 62, 70, 80

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Fabaceae	*Ormosia macrocalyx*	Ducke	LC	13, 64	Fabaceae	*Poeppigia procera*	(Poepp. ex Spreng.) C.Presl	LC	1, 4, 11, 12, 13, 63, 64, 73
Fabaceae	*Otholobium pubescens*	(Poir.) J.W.Grimes	NE	23, 25, 26, 52, 53, 59	Fabaceae	*Poissonia heterantha*	(Griseb.) Lavin	NE	3, 26, 41, 42
Fabaceae	*Parapiptadenia excelsa*	(Griseb.) Burkart	LC	23, 24, 25, 26, 30, 34, 36, 37, 39, 53, 60, 86, 87	Fabaceae	*Pseudalbizzia niopoides*	(Spruce ex Benth.) E.J.M.Koenen & Duno	LC	1, 2, 5, 9, 11, 13, 19
Fabaceae	*Parapiptadenia rigida*	(Benth.) Brenan	LC	2, 4, 25	Fabaceae	** Pseudosenegalia feddeana*	(Harms) Seigler & Ebinger	# EN	41, 42, 43
Fabaceae	*Parasenegalia rurrenabaqueana*	(Rusby) Seigler & Ebinger	LC	60, 61	Fabaceae	*Pterocarpus amazonum*	(Mart. ex Benth.) Amshoff	LC	60, 61, 63, 64, 67
Fabaceae	*Parasenegalia visco*	(Lorentz ex Griseb.) Seigler & Ebinger	NE	23, 26	Fabaceae	*Pterocarpus santalinoides*	L'Hér. ex DC.	LC	11, 12, 60
Fabaceae	*Parkia nitida*	Miq.	LC	59, 60, 63, 64	Fabaceae	*Pterocarpus steinbachianus*	Harms	VU B2ab(iii)	11, 12, 60, 64
Fabaceae	*Parkia pendula*	(Willd.) Benth. ex Walp.	LC	11, 60, 63, 64, 67, 68, 70	Fabaceae	*Pterocarpus violaceus*	Vogel	LC	83
Fabaceae	*Parkinsonia aculeata*	L.	LC	23	Fabaceae	*Pterodon emarginatus*	Vogel	LC	2, 10, 11, 12, 20, 69, 72, 75
Fabaceae	*Parkinsonia andicola*	(Griseb.) Varjão & Mansano	NE	40, 41, 42	Fabaceae	*Pterogyne nitens*	Tul.	NE	1, 5, 11, 14, 22, 26, 31, 35, 37, 39, 60, 72
Fabaceae	*Parkinsonia praecox*	(Ruiz & Pav.) Hawkins	LC	22, 23, 26, 27	Fabaceae	*Rhynchosia minima*	(L.) DC.	LC	5, 9, 26, 60
Fabaceae	*Peltogyne confertiflora*	(Mart. ex Hayne) Benth.	NE	1, 11, 12	Fabaceae	*Robrichia schomburgkii*	(Benth.) A.R.M.Luz & E.R.Souza	NE	11, 13, 64
Fabaceae	*Peltogyne heterophylla*	M.F.Silva	NE	70	Fabaceae	*Samanea tubulosa*	(Benth.) Barneby & J.W.Grimes	LC	1, 2, 5, 9, 11, 12, 13, 18, 19, 22, 25, 26, 56, 60, 63, 72, 75
Fabaceae	*Peltophorum dubium*	(Spreng.) Taub.	LC	19	Fabaceae	*Schizolobium parahyba*	(Vell.) S.F.Blake	LC	11, 13, 64, 83
Fabaceae	*Phaseolus augusti*	Harms	NE	84, 85	Fabaceae	*Schnella glabra*	(Jacq.) Dugand	NE	1, 11, 12, 60, 73
Fabaceae	*Phaseolus vulgaris*	L.	LC	39, 40	Fabaceae	*Schnella guianensis*	(Aubl.) Wunderlin	NE	1, 11, 60, 62, 64, 70
Fabaceae	** Piptadenia boliviana*	Benth.	# VU	23, 25, 26, 27, 29, 34, 49, 86	Fabaceae	*Senegalia etilis*	(Speg.) Seigler & Ebinger	NE	32, 34, 35, 64
Fabaceae	** Piptadenia buchtienii*	Barneby	# VU	9, 25, 26, 35, 53, 54, 55, 60	Fabaceae	*Senegalia fiebrigii*	(Hassl.) Seigler & Ebinger	NE	26, 31, 41, 60, 86
Fabaceae	*Piptadenia gonoacantha*	(Mart.) J.F.Macbr.	LC	2, 11, 12, 25, 26, 59, 60, 61, 72, 77	Fabaceae	*Senegalia gilliesii*	(Steud.) Seigler & Ebinger	LC	22, 23, 26, 29
Fabaceae	*Piptadenia peruviana*	(J.F.Macbr.) Barneby	NE	60, 64	Fabaceae	*Senegalia langsdorffii*	(Benth.) Bocage & L.P.Queiroz	NE	10
Fabaceae	*Piptadenia robusta*	Pittier	LC	19, 60, 77	Fabaceae	*Senegalia loretensis*	(J.F.Macbr.) Seigler & Ebinger	NE	1, 2, 9, 11, 12, 13, 23, 25, 26, 31, 60, 65, 70, 84
Fabaceae	*Plathymenia reticulata*	Benth.	LC	1, 5, 8, 11, 15, 19, 21, 22, 24, 26, 60, 72	Fabaceae	*Senegalia martii*	(Benth.) Seigler & Ebinger	LC	1, 11
Fabaceae	*Platymiscium pinnatum*	(Jacq.) Dugand	LC	1, 4, 9, 11, 12, 13, 19, 60, 69, 71	Fabaceae	*Senegalia polyphylla*	(DC.) Britton & Rose	LC	1, 2, 5, 9, 11, 12, 18, 19, 21, 23, 25, 26, 60, 61, 64, 79
Fabaceae	*Platymiscium pubescens*	Micheli	LC	1, 2, 9	Fabaceae	*Senegalia praecox*	(Griseb.) Seigler & Ebinger	LC	9, 19, 22, 23, 25, 26, 86
Fabaceae	*Platypodium elegans*	Vogel	LC	1, 2, 10, 11, 18, 20, 21, 72	Fabaceae	*Senegalia rhytidocarpa*	(L.Rico) Seigler & Ebinger	LC	25, 60, 62

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Fabaceae	*Senegalia riparia*	(Kunth) Britton & Rose	LC	2, 11, 12, 26, 33, 35, 37, 39, 59, 60, 63, 72
Fabaceae	*Senegalia tenuifolia*	(L.) Britton & Rose	LC	1, 3, 11, 13, 22, 60, 61, 62, 63, 64, 77
Fabaceae	*Senegalia tucumanensis*	(Griseb.) Seigler & Ebinger	NE	25, 26, 31, 32, 34, 35, 36, 37, 39, 53, 60
Fabaceae	*Senna affinis*	(Benth.) H.S.Irwin & Barneby	NE	4, 11, 12
Fabaceae	*Senna alata*	(L.) Roxb.	NE	11, 72
Fabaceae	* *Senna aymara*	H.S.Irwin & Barneby	LC	25, 41, 43, 48, 52, 59, 79, 82, 84
Fabaceae	*Senna birostris*	(Dombey ex Vogel) H.S.Irwin & Barneby	NE	23, 25, 34, 41, 52, 59, 84
Fabaceae	* *Senna birostris* var. *totorae*	H.S.Irwin & Barneby	NE	25, 26, 30, 59, 84
Fabaceae	*Senna burkartiana*	(Villa) H.S.Irwin & Barneby	NE	25
Fabaceae	*Senna chloroclada*	(Harms) H.S.Irwin & Barneby	NE	22, 33
Fabaceae	*Senna crassiramea*	(Benth.) H.S.Irwin & Barneby	NE	26, 41, 42
Fabaceae	*Senna herzogii*	(Harms) H.S.Irwin & Barneby	LC	25, 26, 60, 61
Fabaceae	*Senna hirsuta*	(L.) H.S.Irwin & Barneby	NE	3, 9, 30, 31, 34, 37, 59, 60, 86
Fabaceae	*Senna macrophylla*	(Kunth) H.S.Irwin & Barneby	LC	60, 63, 64, 65, 66, 71, 76
Fabaceae	*Senna morongii*	(Britton) H.S.Irwin & Barneby	NE	23, 26, 29, 33, 82, 86
Fabaceae	*Senna multiglandulosa*	(Jacq.) H.S.Irwin & Barneby	LC	57, 59
Fabaceae	*Senna multijuga*	(Rich.) H.S.Irwin & Barneby	LC	26, 60
Fabaceae	*Senna obtusifolia*	(L.) H.S.Irwin & Barneby	LC	11, 12, 13, 19, 25, 26, 31, 60, 64, 72
Fabaceae	*Senna occidentalis*	(L.) Link	LC	1, 5, 11, 14, 19, 23, 26, 31, 34, 39, 59, 60, 63, 72, 76
Fabaceae	*Senna pendula*	(Humb. & Bonpl. ex Willd.) H.S.Irwin & Barneby	LC	23, 26, 31, 39, 53, 57, 60, 86
Fabaceae	*Senna pilifera*	(Vogel) H.S.Irwin & Barneby	NE	2, 5, 12
Fabaceae	*Senna reticulata*	(Willd.) H.S.Irwin & Barneby	LC	11, 25, 60
Fabaceae	*Senna silvestris*	(Vell.) H.S.Irwin & Barneby	LC	5, 11, 18, 60, 61, 62, 63, 64, 66, 70, 82, 84
Fabaceae	*Senna spectabilis*	(DC.) H.S.Irwin & Barneby	LC	1, 5, 9, 14, 18, 19, 21, 22, 23, 25, 26, 31, 34, 35, 37, 60
Fabaceae	*Senna splendida*	(Vogel) H.S.Irwin & Barneby	NE	5, 12, 26
Fabaceae	* *Senna weddelliana*	H.S.Irwin & Barneby	NT B2ab(iii)	23, 25, 87
Fabaceae	*Sesbania virgata*	(Cav.) Poir.	NE	22
Fabaceae	*Strombocarpa ferox*	(Griseb.) C.E.Hughes & G.P.Lewis	NE	40, 42, 43
Fabaceae	*Stryphnodendron glandulosum*	(Forero) Scalon	NE	1, 11, 18, 59, 60, 83
Fabaceae	*Stryphnodendron pulcherrimum*	(Willd.) Hochr.	LC	11, 60, 63
Fabaceae	*Stryphnodendron rotundifolium*	Mart.	NE	2, 4, 11, 18
Fabaceae	*Stylosanthes capitata*	Vogel	NE	2, 22
Fabaceae	*Stylosanthes guianensis*	(Aubl.) Sw.	NE	1, 2, 8, 11, 18, 57, 59, 72, 79
Fabaceae	*Stylosanthes humilis*	Kunth	NE	14
Fabaceae	*Stylosanthes scabra*	Vogel	NE	26, 30
Fabaceae	*Stylosanthes viscosa*	(L.) Sw.	NE	18, 60, 72
Fabaceae	*Swartzia acreana*	R.S.Cowan	NE	11, 12, 13, 60
Fabaceae	*Swartzia costata*	(Rusby) R.S.Cowan	VU B2ab(iii)	70
Fabaceae	*Swartzia jorori*	Harms	NE	9, 11, 19, 24, 25, 59, 60, 72, 73, 76, 77, 79, 84
Fabaceae	*Sweetia fruticosa*	Spreng.	LC	1, 11, 13, 21, 60
Fabaceae	*Tachigali aurea*	Tul.	NE	3, 4, 8, 11, 17, 18
Fabaceae	*Tachigali chrysaloides*	van der Werff	NE	65
Fabaceae	*Tachigali guianensis*	(Benth.) Zarucchi & Herend.	NE	3, 11, 63, 64
Fabaceae	*Tachigali paniculata*	Aubl.	LC	64, 70
Fabaceae	*Tachigali setifera*	(Ducke) Zarucchi & Herend.	NE	3, 11, 64
Fabaceae	*Tara spinosa*	(Molina) Britton & Rose	LC	25, 56, 57
Fabaceae	*Tephrosia adunca*	Benth.	NE	26
Fabaceae	*Tephrosia cinerea*	(L.) Pers.	NE	18
Fabaceae	*Tephrosia nitens*	Benth.	NE	11
Fabaceae	*Tephrosia sessiliflora*	(Poir.) Hassl.	NE	11, 76

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Fabaceae	*Tephrosia sinapou*	(Buc'hoz) A.Chev.	NE	60, 61, 62
Fabaceae	*Tipuana tipu*	(Benth.) Kuntze	LC	19, 23, 25, 26, 27, 30, 31, 34, 39, 86
Fabaceae	*Trifolium amabile*	Kunth	LC	26, 27, 51, 52, 56, 59, 60, 84, 85
Fabaceae	*Vachellia albicorticata*	(Burkart) Seigler & Ebinger	LC	1, 9, 19, 25, 26, 31
Fabaceae	*Vachellia aroma*	(Gillies ex Hook. & Arn.) Seigler & Ebinger	NE	19, 22, 23, 25, 26, 28, 30, 31, 32, 34, 39, 42, 57, 86, 87
Fabaceae	*Vachellia caven*	(Molina) Seigler & Ebinger	LC	22, 27, 35, 38, 42
Fabaceae	*Vachellia farnesiana*	(L.) Wight & Arn.	LC	23, 60
Fabaceae	*Vachellia macracantha*	(Humb. & Bonpl. ex Willd.) Seigler & Ebinger	LC	20, 27, 86
Fabaceae	*Vatairea macrocarpa*	(Benth.) Ducke	LC	2, 5, 11, 18, 21, 62, 72
Fabaceae	*Vataireopsis speciosa*	Ducke	LC	60
Fabaceae	*Vicia andicola*	Kunth	NE	26
Fabaceae	*Vicia graminea*	Sm.	NE	85
Fabaceae	*Vigna longifolia*	(Benth.) Verdc.	NE	11
Fabaceae	*Vigna vexillata*	(L.) A.Rich.	NE	72, 73
Fabaceae	*Zornia contorta*	Mohlenbr.	NE	26, 27, 30, 37, 38, 86
Fabaceae	*Zornia latifolia*	Sm.	NE	8, 11, 56, 59
Fabaceae	*Zornia reticulata*	Sm.	NE	8
Francoaceae	*Balbisia meyeniana*	Klotzsch	NE	43
Frankeniaceae	*Frankenia triandra*	J. Rémy	NE	40, 43, 46, 47, 51, 59
Gentianaceae	*Curtia tenuifolia*	(Aubl.) Knobl.	NE	2, 11, 18
Gentianaceae	*Gentiana sedifolia*	Kunth	NE	25, 57, 59, 60, 82, 85
Gentianaceae	* *Gentianella briquetiana*	(Gilg) T.N.Ho & S.W.Liu	NE	59, 60, 85
Gentianaceae	*Gentianella primuloides*	(Gilg) J.S.Pringle	NE	59, 85
Gentianaceae	*Gentianella punicea*	(Wedd.) Holub	NE	56, 57, 58, 59, 60, 82, 85, 87
Gentianaceae	*Potalia resinifera*	Mart.	LC	11, 12, 60, 62

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Geraniaceae	*Geranium fallax*	Steud.	NE	23, 25, 26, 39, 40, 42, 52, 53, 56, 57, 59, 82, 84, 85, 87
Geraniaceae	*Geranium sessiliflorum*	Cav.	NE	28, 40, 48, 49, 51, 52, 53, 55, 56, 57, 59, 60, 82, 84, 85, 87
Geraniaceae	*Geranium weddellii*	Briq.	NE	53, 57, 59, 85
Gesneriaceae	*Codonanthopsis calcarata*	(Miq.) Chautems & Mat.Perret	NE	25, 60
Gesneriaceae	*Codonanthopsis uleana*	(Fritsch) Chautems & Mat.Perret	NE	60
Gesneriaceae	*Drymonia candida*	Hanst.	NE	57, 60, 79
Gesneriaceae	*Drymonia doratostyla*	(Leeuwenb.) Wiehler	NE	25, 59, 60, 79, 82, 84
Gesneriaceae	*Drymonia semicordata*	(Poepp.) Wiehler	NE	11, 59, 60, 63, 64, 67, 82
Gesneriaceae	*Nautilocalyx whitei*	Rusby	NE	13, 79, 82, 84
Gesneriaceae	*Seemannia purpurascens*	Rusby	NE	1, 25, 34, 56, 58, 60, 82, 84
Gesneriaceae	*Seemannia sylvatica*	(Kunth) Hanst.	NE	24, 25, 26, 31, 56, 60, 82, 84
Gleicheniaceae	*Gleichenella pectinata*	(Willd.) Ching	NE	54, 57, 59, 60, 84
Gleicheniaceae	*Sticherus bifidus*	(Willd.) Ching	NE	11, 25, 26, 32, 54, 55, 57, 59, 60, 82, 84
Goupiaceae	*Goupia glabra*	Aubl.	LC	64, 70
Grossulariaceae	*Ribes brachybotrys*	(Wedd.) Jancz.	NE	84
Grossulariaceae	*Ribes sucheziense*	Jancz.	NE	52, 57, 59, 60, 82
Gunneraceae	*Gunnera apiculata*	Schindl.	NE	25, 28, 57
Gunneraceae	*Gunnera magellanica*	Lam.	NE	53, 56, 57, 59, 60, 84
Haloragaceae	*Myriophyllum quitense*	Kunth	LC	58, 59, 84, 85
Heliconiaceae	*Heliconia episcopalis*	Vell.	NE	11, 25, 60, 67, 79, 80
Heliconiaceae	*Heliconia hirsuta*	L.f.	NE	1, 9, 11, 12, 13, 25, 60, 66, 83, 84
Heliconiaceae	*Heliconia lingulata*	Ruiz & Pav.	NE	25, 60
Heliconiaceae	*Heliconia marginata*	(Griggs) Pittier	NE	3, 13, 25, 67, 79
Heliconiaceae	*Heliconia psittacorum*	L.f.	NE	3, 5, 11, 12, 60, 84
Heliconiaceae	*Heliconia rostrata*	Ruiz & Pav.	NE	11, 12, 13, 25, 59, 60, 67

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites	Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Heliconiaceae	*Heliconia stricta*	Huber	NE	9, 11, 13, 60, 64, 77, 83	Juncaceae	*Juncus ebracteatus*	E.Mey.	NE	37, 40, 49, 51, 52, 82, 85
Heliconiaceae	*Heliconia subulata*	Ruiz & Pav.	NE	11, 25, 26, 54, 56, 58, 60, 84	Juncaceae	*Juncus effusus*	L.	LC	25, 26, 56, 60, 82, 84
Hernandiaceae	*Sparattanthelium amazonum*	Mart.	NE	11, 12, 13, 60, 75	Juncaceae	*Juncus microcephalus*	Kunth	NE	23, 25, 26, 27, 60, 82, 85
Hernandiaceae	*Sparattanthelium burchellii*	Rusby	NE	11, 55, 60, 64	Juncaceae	*Luzula racemosa*	Desv.	NE	52, 56, 57, 59, 60
Humiriaceae	*Endopleura uchi*	(Huber) Cuatrec.	LC	65, 70	Juncaceae	*Oxychloe andina*	Phil.	NE	52, 56, 57
Humiriaceae	*Humiria balsamifera*	Aubl.	LC	11	Juncaceae	*Patosia clandestina*	(Phil.) Buchenau	NE	51
Hydrocharitaceae	*Elodea potamogeton*	(Bertero) Espinosa	NE	48, 52, 59	Juncaginaceae	*Triglochin maritima*	L.	NE	51
Hydrophyllaceae	*Phacelia secunda*	J.F.Gmel.	NE	38, 39, 40, 52, 53, 57, 59, 87	Krameriaceae	*Krameria lappacea*	(Dombey) Burdet & B.B. Simpson	NE	3, 26, 46
Hymenophyllaceae	*Trichomanes pinnatum*	Hedw.	NE	2, 11, 13, 59, 60, 62, 64, 84	Lacistemataceae	*Lacistema aggregatum*	(P.J.Bergius) Rusby	LC	11, 12, 13, 19, 24, 25, 59, 60, 62, 63, 64, 65, 66, 67, 69, 71, 72, 73, 74, 76, 77, 79, 80, 82, 84
Hypericaceae	*Vismia gracilis*	Hieron.	LC	11, 56, 57, 59, 60, 82, 84	Lacistemataceae	*Lacistema nena*	J.F.Macbr.	NE	12, 63, 83
Hypericaceae	*Vismia rusbyi*	Ewan	LC	58	Lamiaceae	*Aegiphila boliviana*	Moldenke	LC	12, 19, 64
Icacinaceae	*Casimirella ampla*	(Miers) R.A.Howard	NE	11, 77	Lamiaceae	*Aegiphila integrifolia*	(Jacq.) B.D.Jacks.	LC	2, 5, 11, 12, 25, 26, 56, 60, 62, 64, 72, 76, 79, 84
Iridaceae	*Cipura paludosa*	Aubl.	NE	11, 12, 18, 26, 37, 59	Lamiaceae	*Cantinoa americana*	(Aubl.) Harley & J.F.B.Pastore	NE	1, 11, 12
Iridaceae	*Eleutherine bulbosa*	(Mill.) Urb.	NE	1, 2, 5, 11, 61	Lamiaceae	*Cantinoa carpinifolia*	(Benth.) Harley & J.F.B.Pastore	NE	1, 3, 18, 60, 76
Iridaceae	** Ennealophus boliviensis*	(Baker) Ravenna	NE	40	Lamiaceae	*Cantinoa mutabilis*	(Rich.) Harley & J.F.B.Pastore	NE	1, 5, 9, 11, 12, 13, 18, 23, 25, 26, 27, 30, 31, 34, 35, 38, 39, 56, 57, 58, 59, 60, 62, 76, 82, 84, 86, 87
Iridaceae	*Ennealophus tucumanensis*	Huaylla	NE	34	Lamiaceae	** Clinopodium axillare*	(Rusby) Harley	LC	25, 26, 28, 29, 86
Iridaceae	*Sisyrinchium chilense*	Hook.	NE	26, 27, 32	Lamiaceae	** Clinopodium axillare* subsp. *uniflorum*	(Rusby ex Briq.) J.R.I.Wood	NE	28
Iridaceae	*Sisyrinchium trinerve*	Baker	NE	48, 56, 57	Lamiaceae	*Clinopodium bolivianum*	(Benth.) Kuntze	NE	23, 25, 26, 27, 28, 34, 37, 40, 56, 57, 59, 82, 84, 85, 87
Isoetaceae	*Isoetes andicola*	(Amstutz) L.D.Gómez	NE	59, 60	Lamiaceae	*Condea tafallae*	(Benth.) Harley & J.F.B.Pastore	LC	26, 31, 34, 39, 56, 60, 82, 84
Isoetaceae	** Isoetes herzogii*	U.Weber	VU B1ab(iii,v)	25, 57, 60, 82, 85	Lamiaceae	*Hedeoma mandoniana*	Wedd.	NE	51, 52, 57, 59, 60
Isoetaceae	*Isoetes lechleri*	Mett.	LC	56, 59, 60, 85	Lamiaceae	*Hyptis brevipes*	Poit.	NE	5, 11, 59, 60, 64, 72, 79, 80
Juglandaceae	*Juglans australis*	Griseb.	NE	26, 27, 31, 32, 34, 37, 39	Lamiaceae	** Lepechinia bella*	Epling	NE	23, 26, 28, 86
Juglandaceae	*Juglans boliviana*	Dode	NE	25, 26, 31, 56, 60, 84	Lamiaceae	*Lepechinia floribunda*	(Benth.) Epling	NE	26
Juncaceae	*Distichia filamentosa*	Buchenau	NE	56, 57, 59, 60	Lamiaceae	*Lepechinia graveolens*	(Regel) Epling	NE	23, 25, 26, 34, 39, 40, 58, 59, 82, 84, 85
Juncaceae	*Distichia muscoides*	Nees & Meyen	NE	50, 52, 56, 57, 59	Lamiaceae	*Lepechinia meyenii*	(Walp.) Epling	NE	26, 40, 48, 51, 53, 56, 57, 59, 85, 87

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Lamiaceae	*Mesosphaerum suaveolens*	(L.) Kuntze	NE	5, 8, 11, 24, 26, 75
Lamiaceae	* *Minthostachys acutifolia*	Epling	NE	52, 53, 56, 57
Lamiaceae	* *Minthostachys andina*	(Britton ex Rusby) Epling	NE	52, 84, 85, 87
Lamiaceae	* *Minthostachys diffusa*	Epling	NE	56
Lamiaceae	*Minthostachys mollis*	(Benth.) Griseb.	NE	84
Lamiaceae	*Minthostachys mollis* var. *mandoniana*	(Briq.) Schmidt-Leb.	NE	58
Lamiaceae	* *Minthostachys ovata*	(Briq.) Epling	NE	23, 28, 86
Lamiaceae	*Ocimum campechianum*	Mill.	NE	9, 22, 23, 25, 26, 56, 59, 60, 61, 63
Lamiaceae	* *Salvia amplifrons*	Briq.	# EN	23, 25, 26, 37, 59, 85
Lamiaceae	*Salvia dombeyi*	Epling	NE	57, 59, 60
Lamiaceae	*Salvia haenkei*	Benth.	NE	28, 52, 59, 85, 87
Lamiaceae	* *Salvia orbignaei*	Benth.	NE	23, 26, 28, 82, 85, 86, 87
Lamiaceae	*Stachys pusilla*	(Wedd.) Briq.	NE	56
Lamiaceae	*Vitex cymosa*	Bertero ex Spreng.	LC	1, 4, 5, 9, 11, 12, 25, 60, 64, 70, 71, 72, 73, 80
Lamiaceae	*Vitex megapotamica*	(Spreng.) Moldenke	NE	11, 12
Lamiaceae	*Vitex pseudolea*	Rusby	NE	9, 11, 25, 26, 61
Lauraceae	*Aiouea montana*	(Sw.) R.Rohde	LC	60
Lauraceae	*Aiouea trinervis*	Meisn.	LC	2, 11, 60
Lauraceae	*Aniba canelilla*	(Kunth) Mez	NE	11, 60, 62, 63, 64, 65, 66, 67
Lauraceae	*Aniba coto*	(Rusby) Kosterm.	LC	53, 60
Lauraceae	*Aniba cylindriflora*	Kosterm.	LC	11, 13
Lauraceae	*Aniba guianensis*	Aubl.	LC	25, 59, 60, 73, 84
Lauraceae	*Aniba muca*	(Ruiz & Pav.) Mez	LC	57, 59, 60
Lauraceae	*Aniba panurensis*	(Meisn.) Mez	LC	12, 60, 64
Lauraceae	*Aniba puchury-minor*	(Mart.) Mez	LC	63, 64

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Lauraceae	*Beilschmiedia tovarensis*	(Klotzsch & H.Karst. ex Meisn.) Sachiko Nishida	LC	59, 60, 62
Lauraceae	*Cassytha filiformis*	L.	NE	2, 5, 11, 12
Lauraceae	*Endlicheria anomala*	(Nees) Mez	LC	11, 12, 64, 66
Lauraceae	*Endlicheria aurea*	Chanderb.	NE	59
Lauraceae	*Endlicheria canescens*	Chanderbali	LC	59, 60
Lauraceae	*Endlicheria dysodantha*	(Ruiz & Pav.) Mez	LC	25, 60, 79, 83, 84
Lauraceae	*Endlicheria levelii*	C.K.Allen	NE	11, 12
Lauraceae	*Endlicheria paniculata*	(Spreng.) J.F.Macbr.	LC	2, 11, 12, 13, 25, 57, 60, 76, 79, 82, 83, 84
Lauraceae	*Licaria armeniaca*	(Nees) Kosterm.	LC	1, 9, 11, 12, 60, 64, 65, 71, 73, 74, 76, 77
Lauraceae	*Licaria guianensis*	Aubl.	LC	11, 12, 25, 60, 64, 67, 70, 83
Lauraceae	*Licaria triandra*	(Sw.) Kosterm.	LC	11, 13, 15, 18, 25, 26, 59, 60, 61
Lauraceae	*Mezilaurus ita-uba*	(Meisn.) Taub. ex Mez	VU A2cd+4cd	59, 60, 63, 64
Lauraceae	*Nectandra acutifolia*	(Ruiz & Pav.) Mez	LC	25, 54, 59, 60, 82
Lauraceae	*Nectandra amazonum*	Nees	LC	11, 12
Lauraceae	*Nectandra angusta*	Rohwer	LC	25, 26, 30, 31, 32, 34, 39, 82, 84
Lauraceae	*Nectandra angustifolia*	(Schrad.) Nees & Mart.	NE	5, 9, 19, 26, 60
Lauraceae	* *Nectandra apiculata*	Rohwer	CR B2ab(iii)	25
Lauraceae	*Nectandra cissiflora*	Nees	LC	11, 25, 56, 59, 60
Lauraceae	*Nectandra cuneatocordata*	Mez	LC	60, 63, 64, 77
Lauraceae	*Nectandra cuspidata*	Nees & Mart.	LC	11, 12, 25, 26, 56, 59, 60, 61, 63, 65, 68, 83, 84
Lauraceae	*Nectandra dasystyla*	Rohwer	VU B2ab(i,ii,iii)	63
Lauraceae	*Nectandra hihua*	(Ruiz & Pav.) Rohwer	LC	13, 15, 25, 26, 60, 79
Lauraceae	*Nectandra latissima*	Rohwer	LC	11, 60, 63, 64, 76
Lauraceae	*Nectandra laurel*	Klotzsch ex Nees	LC	25, 26, 53, 56, 57, 59, 60
Lauraceae	*Nectandra longifolia*	(Ruiz & Pav.) Nees	NE	13, 15, 24, 25, 26, 53, 55, 60, 61, 63, 64, 77, 84

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Lauraceae	*Nectandra membranacea*	(Sw.) Griseb.	LC	13, 25, 60, 61, 84
Lauraceae	*Nectandra pearcei*	Mez	LC	60
Lauraceae	*Nectandra pulverulenta*	Nees	LC	60, 64, 79
Lauraceae	*Nectandra riparia*	Rohwer	LC	12
Lauraceae	*Ocotea aciphylla*	(Nees & Mart.) Mez	LC	11, 12, 56, 59, 60, 70, 79, 83
Lauraceae	*Ocotea aurantiodora*	(Ruiz & Pav.) Mez	NE	25, 60, 62, 63, 64, 65, 84
Lauraceae	*Ocotea bofo*	Kunth	LC	60, 61, 78
Lauraceae	*Ocotea corymbosa*	(Meisn.) Mez	LC	13, 59, 60, 76
Lauraceae	*Ocotea diospyrifolia*	(Meisn.) Mez	LC	11, 13, 18, 66, 73, 76
Lauraceae	*Ocotea floribunda*	(Sw.) Mez	LC	11, 59, 60, 63, 64
Lauraceae	*Ocotea gracilis*	(Meisn.) Mez	LC	11, 60
Lauraceae	*Ocotea guianensis*	Aubl.	LC	11, 12, 13, 60, 64, 73
Lauraceae	*Ocotea leptobotra*	(Ruiz & Pav.) Mez	LC	1, 5, 11, 12, 18, 56, 59, 60
Lauraceae	*Ocotea matogrossensis*	Vattimo-Gil	LC	11
Lauraceae	*Ocotea minarum*	(Nees & Mart.) Mez	NE	2, 11, 14, 26, 37, 56, 59, 60, 83
Lauraceae	*Ocotea oblonga*	(Meisn.) Mez	LC	11, 13, 25, 59, 60, 62, 63, 79, 83, 84
Lauraceae	*Ocotea pauciflora*	(Nees) Mez	LC	11, 12, 64, 65, 67, 70
Lauraceae	*Ocotea porphyria*	(Griseb.) van der Werff	NE	26, 27, 31, 34, 37, 39
Lauraceae	*Ocotea puberula*	(Rich.) Nees	LC	2, 19, 25, 26, 31, 32, 34, 54, 56, 59, 60
Lauraceae	*Ocotea spixiana*	(Nees) Mez	NE	2, 11
Lauraceae	*Persea areolatocostae*	(C.K.Allen) van der Werff	LC	56, 59, 60, 79
Lauraceae	** Persea bilocularis*	L.E.Kopp	EN B1ab(ii,iii) +2ab(ii,iii)	54, 56, 58
Lauraceae	*Persea caerulea*	(Ruiz & Pav.) Mez	LC	15, 25, 26, 31, 53, 58, 59, 60, 76, 79
Lauraceae	*Persea peruviana*	Nees	LC	59, 60
Lauraceae	*Pleurothyrium cuneifolium*	Nees	LC	60, 79

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Lauraceae	*Rhodostemonodaphne kunthiana*	(Nees) Rohwer	LC	25, 59, 60, 83, 84
Lecythidaceae	*Bertholletia excelsa*	Bonpl.	NE	60, 62, 63, 64, 65, 66, 68, 69, 70, 74
Lecythidaceae	*Cariniana domestica*	(Mart.) Miers	NE	11, 12, 13, 17, 26, 60, 62, 64, 65, 66
Lecythidaceae	*Cariniana estrellensis*	(Raddi) Kuntze	NE	1, 11, 13, 25, 26, 31, 60, 64, 75
Lecythidaceae	*Cariniana ianeirensis*	R.Knuth	NE	60
Lecythidaceae	*Cariniana micrantha*	Ducke	NE	11
Lecythidaceae	*Couratari guianensis*	Aubl.	LC	11, 60, 62, 63, 64, 65, 68, 70
Lecythidaceae	*Couratari macrosperma*	A.C.Sm.	NE	64
Lecythidaceae	*Couroupita guianensis*	Aubl.	LC	66, 67
Lecythidaceae	*Eschweilera albiflora*	(DC.) Miers	LC	11, 62, 64
Lecythidaceae	*Eschweilera andina*	(Rusby) J.F.Macbr.	LC	59, 60, 70
Lecythidaceae	*Eschweilera coriacea*	(DC.) S.A.Mori	LC	59, 60, 64, 65, 66, 68, 70, 79, 83, 84
Lecythidaceae	*Eschweilera parvifolia*	Mart. ex DC.	LC	11, 66
Lecythidaceae	*Gustavia augusta*	L.	LC	64, 70
Lecythidaceae	*Gustavia hexapetala*	(Aubl.) Sm.	LC	60, 62, 63, 64, 65, 68
Loasaceae	*Caiophora andina*	Urb. & Gilg	LC	43, 48, 59
Loasaceae	*Caiophora canarinoides*	(Lennē & K.Koch) Urb. & Gilg	NE	23, 26, 56, 57, 59, 60, 84, 87
Loasaceae	*Caiophora chuquitensis*	(Meyen) Urb. & Gilg	NE	40, 43, 46, 48, 51, 56, 85
Loasaceae	*Mentzelia scabra*	Kunth	NE	29
Loganiaceae	*Antonia ovata*	Pohl	LC	11, 12, 60, 75
Loganiaceae	*Strychnos asperula*	Sprague & Sandwith	NE	60, 64
Loganiaceae	*Strychnos brachiata*	Ruiz & Pav.	NE	59, 60
Loganiaceae	*Strychnos brasiliensis*	(Spreng.) Mart.	LC	12
Loganiaceae	*Strychnos cogens*	Benth.	NE	11, 12
Loganiaceae	*Strychnos darienensis*	Seem.	NE	12, 60, 79

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Loganiaceae	*Strychnos erichsonii*	R.H.Schomb. ex Progel	NE	11
Loganiaceae	*Strychnos gardneri*	A.DC.	NE	12
Loganiaceae	*Strychnos guianensis*	(Aubl.) Mart.	NE	2, 11, 12, 70
Loganiaceae	*Strychnos mattogrossensis*	S.Moore	LC	11, 12, 13, 25, 76
Loganiaceae	*Strychnos mitscherlichii*	M.R.Schomb.	NE	60, 70
Loganiaceae	*Strychnos nigricans*	Progel	NE	13, 26
Loganiaceae	*Strychnos parvifolia*	A.DC.	NE	1, 22
Loganiaceae	*Strychnos peckii*	B.L.Rob.	NE	59
Loganiaceae	*Strychnos poeppigii*	Progel	NE	11, 13, 60
Loganiaceae	*Strychnos pseudoquina*	A.St.-Hil.	NE	11, 21
Loganiaceae	*Strychnos rondeletioides*	Spruce ex Benth.	LC	11
Loganiaceae	*Strychnos rubiginosa*	A.DC.	LC	1, 4
Loganiaceae	*Strychnos solimoesana*	Krukoff	LC	60
Loganiaceae	*Strychnos tarapotensis*	Sprague & Sandwith	LC	13, 60, 64
Loganiaceae	*Strychnos toxifera*	R.H.Schomb. ex Lindl.	NE	60
Loranthaceae	*Gaiadendron punctatum*	(Ruiz & Pav.) G.Don	LC	58
Loranthaceae	*Ligaria cuneifolia*	(Ruiz & Pav.) Tiegh.	NE	23, 25, 26, 27, 30, 38, 83
Loranthaceae	*Oryctanthus spicatus*	(Jacq.) Eichler	NE	11, 64
Loranthaceae	*Passovia pedunculata*	(Jacq.) Kuijt	NE	5, 11, 12, 18, 25, 34, 76
Loranthaceae	*Psittacanthus acinarius*	(Mart.) Mart.	NE	11
Loranthaceae	*Psittacanthus cordatus*	(Hoffmanns. ex Schult. & Schult.f.) G.Don	NE	4, 5, 73
Loranthaceae	*Psittacanthus cucullaris*	(Lam.) G.Don	NE	11, 12, 13, 25
Loranthaceae	*Struthanthus acuminatus*	(Ruiz & Pav.) Blume ex J.F.Macbr.	NE	11, 12, 18, 22, 23, 25, 26, 36, 54, 56, 57, 58, 59, 60, 62, 79, 82, 84, 86
Loranthaceae	*Tripodanthus acutifolius*	(Ruiz & Pav.) Tiegh.	LC	23, 25, 26, 27, 34, 59, 86, 87
Loranthaceae	*Tristerix penduliflorus*	Kuijt	NE	23, 25, 26, 27, 30, 39, 52, 59, 84, 85, 87

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Loranthaceae	*Tristerix verticillatus*	(Ruiz & Pav.) Barlow & Wiens	NE	23, 25, 87
Lycopodiaceae	*Phlegmariurus reflexus*	(Lam.) B.Øllg.	NE	56, 59, 60
Lycopodiaceae	*Phlegmariurus saururus*	(Lam.) B.Øllg.	NE	25, 59
Lythraceae	*Adenaria floribunda*	Kunth	LC	2, 4, 19, 25, 26, 27, 31, 39, 56, 57, 58, 59, 60, 76, 82, 84, 87
Lythraceae	*Cuphea melvilla*	Lindl.	LC	11, 12, 13, 60, 76
Lythraceae	*Cuphea repens*	Koehne	NE	11, 12, 60
Lythraceae	** Cuphea scaberrima*	Koehne	NE	26, 27, 28, 30, 31, 32, 34, 37, 56, 82
Lythraceae	*Heimia salicifolia*	Link	NE	23, 26, 30, 31, 32, 34, 37, 86
Lythraceae	*Lafoensia acuminata*	(Ruiz & Pav.) DC.	LC	11, 26
Lythraceae	*Lafoensia punicifolia*	DC.	LC	5, 60
Lythraceae	*Lafoensia vandelliana*	DC. ex Cham. & Schltdl.	LC	1, 2, 5, 11, 12, 26, 31, 57, 60, 82
Lythraceae	*Lourtella resinosa*	S.A.Graham, Baas & Tobe	NE	23, 26, 86
Lythraceae	*Physocalymma scaberrimum*	Pohl	LC	1, 5, 11, 12, 13, 59, 60, 62, 63, 64, 72
Malpighiaceae	*Banisteriopsis caapi*	(Spruce ex Griseb.) C.V.Morton	NE	11, 60
Malpighiaceae	*Banisteriopsis muricata*	(Cav.) Cuatrec.	NE	1, 8, 9, 11, 12, 13, 15, 22, 24, 25, 26, 34, 54, 56, 59, 60, 61, 72, 76, 77, 84
Malpighiaceae	*Bunchosia armeniaca*	(Cav.) DC.	LC	25, 54, 55, 59, 60
Malpighiaceae	*Bunchosia hookeriana*	A.Juss.	LC	60
Malpighiaceae	*Bunchosia paraguariensis*	Nied.	NE	14, 60
Malpighiaceae	*Byrsonima chrysophylla*	Kunth	NE	2, 11, 12, 18, 21, 65, 74
Malpighiaceae	*Byrsonima coccolobifolia*	Kunth	LC	1, 2, 10, 11, 17, 18, 21, 60, 72
Malpighiaceae	*Byrsonima crassifolia*	(L.) Kunth	LC	2, 11, 12, 25, 56, 59, 60, 84
Malpighiaceae	*Byrsonima crispa*	A.Juss.	LC	11, 12
Malpighiaceae	*Byrsonima cydoniifolia*	A.Juss.	LC	2, 8, 11, 12, 15, 18, 19, 25, 74
Malpighiaceae	*Byrsonima spicata*	(Cav.) Rich. ex Kunth	LC	11, 12, 15, 21, 24, 25, 59, 60, 61, 62, 76
Malpighiaceae	*Byrsonima verbascifolia*	(L.) DC.	LC	11

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Malpighiaceae	*Diplopterys lutea*	(Ruiz ex Griseb.) W.R.Anderson & C.Davis	NE	1, 11, 18, 25, 26, 27, 34, 39, 59, 60, 74	Malvaceae	*Cienfuegosia affinis*	(Kunth) Hochr.	NE	18, 80
Malpighiaceae	*Galphimia australis*	Chodat	NE	1, 2, 4, 5, 9, 18, 22, 25	Malvaceae	*Cienfuegosia drummondii*	(A.Gray) Lewton	NE	4
Malpighiaceae	*Glicophyllum ambiguum*	(A.Juss.) R.F.Almeida	NE	4, 5, 10, 11, 22, 60	Malvaceae	*Corchorus hirtus*	L.	NE	14, 18, 26, 56, 58, 60
Malpighiaceae	*Glicophyllum racemulosum*	(A.Juss.) R.F.Almeida	NE	1	Malvaceae	*Corchorus orinocensis*	Kunth	NE	1, 9, 11, 12, 60, 63, 76, 79
Malpighiaceae	*Janusia guaranitica*	(A.St.-Hil.) A.Juss.	NE	2, 3, 14, 22, 25, 26, 30, 31, 32, 36	Malvaceae	*Eriotheca globosa*	(Aubl.) A.Robyns	LC	11, 12, 60
Malpighiaceae	*Mascagnia brevifolia*	Griseb.	NE	22, 26, 31, 34	Malvaceae	*Eriotheca roseorum*	(Cuatrec.) A.Robyns	NE	1, 4, 5, 11, 12, 26
Malpighiaceae	*Mascagnia divaricata*	(Kunth) Nied.	NE	25, 26, 31, 60	Malvaceae	*Gaya tarijensis*	R.E.Fr.	NE	22, 87
Malpighiaceae	*Niedenzuella stannea*	(Griseb.) W.R.Anderson	NE	1, 11, 12, 15, 25, 60, 70	Malvaceae	*Guazuma crinita*	Mart.	LC	60, 63
Malpighiaceae	*Tetrapterys crispa*	A.Juss.	NE	14, 24, 25, 52, 59, 60, 64, 76, 79	Malvaceae	*Helicteres guazumifolia*	Kunth	NE	5, 11, 13, 72, 74, 76
Malvaceae	*Abutilon herzogianum*	R.E.Fr.	LC	31, 33	Malvaceae	*Helicteres lhotzkyana*	(Schott & Endl.) K.Schum.	NE	1, 2, 5, 6, 8, 11, 12, 14, 15, 25, 26, 37, 60, 76
Malvaceae	*Anoda cristata*	(L.) Schltdl.	NE	26, 38, 40	Malvaceae	*Helicteres pentandra*	L.	LC	12, 60, 64
Malvaceae	*Apeiba membranacea*	Spruce ex Benth.	LC	60, 63, 64	Malvaceae	*Heliocarpus americanus*	L.	LC	11, 18, 24, 25, 26, 34, 56, 63, 64, 76, 78, 82, 84
Malvaceae	*Apeiba tibourbou*	Aubl.	LC	11, 12, 13, 15, 18, 21, 25, 60, 61, 63, 64, 72, 75, 76, 84	Malvaceae	*Herrania nycterodendron*	R.E.Schult.	LC	60, 62, 64
Malvaceae	*Ayenia filipes*	(Mart. ex K.Schum.) Christenh. & Byng	NE	3, 5, 9, 20	Malvaceae	*Huberodendron swietenioides*	(Gleason) Ducke	LC	11, 60
Malvaceae	*Ayenia genistella*	(Triana & Planch.) Christenh. & Byng	NE	11, 12	Malvaceae	*Luehea fiebrigii*	Burret	NE	26, 27, 31, 34, 37, 59
Malvaceae	*Ayenia hirsuta*	(Ruiz & Pav.) Christenh. & Byng	NE	3, 25, 58, 59, 60, 84	Malvaceae	*Luehea paniculata*	Mart.	LC	1, 13, 18, 19, 21, 25, 26, 54, 59, 60, 61, 70, 75, 76
Malvaceae	*Ayenia odonellii*	Cristóbal	NE	26	Malvaceae	* *Luehea splendens*	Rusby	NT B2ab(iii)	55, 56, 60
Malvaceae	*Ayenia schumanniana*	Kuntze	NE	86	Malvaceae	* *Luehea steinbachii*	Burret	VU B1ab(ii,iii,v) +2ab(ii,iii,v)	25, 26
Malvaceae	*Cavanillesia hylogeiton*	Ulbr.	LC	13, 25, 60, 63, 64	Malvaceae	* *Luehea tomentella*	Rusby	DD	1, 25, 26, 56, 84
Malvaceae	*Cavanillesia umbellata*	Ruiz & Pav.	LC	60	Malvaceae	*Malvastrum coromandelianum*	(L.) Garcke	NE	22
Malvaceae	*Ceiba boliviana*	Britten & Baker f.	LC	19, 23, 25, 26, 56, 59, 60, 79, 84, 85, 86	Malvaceae	*Malvastrum interruptum*	K.Schum.	NE	23, 37, 85
Malvaceae	*Ceiba camba*	Drawert, A.A.Angulo & Catari	NE	1, 9, 11, 12, 13, 18, 19, 21, 25, 60, 64, 72	Malvaceae	*Matisia cordata*	Bonpl.	LC	60
Malvaceae	*Ceiba chodatii*	(Hassl.) Ravenna	NE	3, 19, 22, 31, 36	Malvaceae	*Melochia anomala*	Griseb.	NE	5
Malvaceae	*Ceiba pentandra*	(L.) Gaertn.	LC	11, 12, 35, 60, 61, 72	Malvaceae	*Melochia arenosa*	Benth.	NE	5, 11, 12, 66, 72, 79
Malvaceae	*Ceiba samauma*	(Mart.) K.Schum.	LC	1, 5, 9, 11, 12, 13, 21, 22, 60, 64, 72, 76, 84	Malvaceae	*Melochia argentina*	R.E.Fr.	NE	1, 2, 9, 34

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Malvaceae	*Melochia pyramidata*	L.	LC	9, 11, 19, 76	Malvaceae	*Sterculia striata*	A.St.-Hil. & Naudin	LC	1, 11, 12, 20, 26, 72
Malvaceae	*Melochia villosa*	(Mill.) Fawc. & Rendle	NE	1, 11, 18	Malvaceae	*Sterculia tessmannii*	Mildbr.	LC	60, 61
Malvaceae	*Nototriche flabellata*	(Wedd.) A.W.Hill	LC	57, 58, 59, 60, 85	Malvaceae	*Tarasa hornschuchiana*	(Walp.) Krapov.	NE	26, 34
Malvaceae	*Nototriche longirostris*	(Wedd.) A.W.Hill	NE	59, 60	Malvaceae	*Tarasa tenella*	(Cav.) Krapov.	NE	41, 60, 85
Malvaceae	*Nototriche mandoniana*	(Wedd.) A.W.Hill	NE	59, 60, 85	Malvaceae	*Theobroma guianense*	(Aubl.) J.F.Gmel.	NE	65, 70
Malvaceae	*Nototriche obcuneata*	(Baker f.) A.W.Hill	NE	50, 57	Malvaceae	*Theobroma obovatum*	Klotzsch ex Bernoulli	LC	65
Malvaceae	*Ochroma pyramidale*	(Cav. ex Lam.) Urb.	LC	12, 60, 61, 62, 64, 72, 76, 82, 84	Malvaceae	*Theobroma speciosum*	Willd. ex Spreng.	NE	11, 60, 62, 63, 64, 65, 68, 74, 76
Malvaceae	*Pachira aquatica*	Aubl.	LC	59	Malvaceae	*Triumfetta althaeoides*	Lam.	NE	11,12, 13, 26, 59, 60, 62, 84
Malvaceae	*Pachira insignis*	(Sw.) Savigny	LC	11, 70, 84	Malvaceae	*Triumfetta lappula*	L.	LC	12, 60, 62, 63, 84
Malvaceae	*Pavonia sidifolia*	Kunth	NE	1, 2, 3, 9,14, 19, 25, 26, 32, 79	Malvaceae	*Triumfetta semitriloba*	Jacq.	LC	1,12, 24, 25, 26, 27, 31, 34, 53, 56, 57, 58, 59, 60, 86
Malvaceae	*Pentaplaris davidsmithii*	Dorr & C.Bayer	NE	60	Malvaceae	*Waltheria communis*	A.St.-Hil.	NE	2, 11, 18, 26, 34
Malvaceae	*Pseudabutilon virgatum*	(Cav.) Fryxell	NE	22, 35, 40, 42, 87	Malvaceae	*Wissadula amplissima*	(L.) R.E.Fr.	NE	5
Malvaceae	** Pseudobombax andicola*	A.Robyns	# VU	28, 35, 86	Malvaceae	*Wissadula wissadifolia*	(Griseb.) Krapov.	NE	35
Malvaceae	*Pseudobombax longiflorum*	(Mart.) A.Robyns	LC	2, 11, 12, 15, 60, 72, 76	Marantaceae	*Calathea lutea*	(Aubl.) E.Mey. ex Schult.	NE	60
Malvaceae	*Pseudobombax marginatum*	(A.St.-Hil.) A.Robyns	LC	1, 11, 12, 19, 21, 26, 56, 60, 72, 73, 76	Marantaceae	*Ischnosiphon arouma*	(Aubl.) Körn.	NE	68
Malvaceae	*Pterygota amazonica*	L.O.Williams ex Dorr	NE	60	Marantaceae	*Ischnosiphon lasiocoleus*	K.Schum. ex Loes.	NE	70
Malvaceae	*Sida ciliaris*	L.	NE	8, 20, 22, 23, 26, 30, 37	Marantaceae	*Ischnosiphon puberulus*	Loes.	NE	60
Malvaceae	*Sida cordifolia*	L.	NE	1, 3, 11, 18, 22, 23, 26, 34, 37, 59, 60, 75	Marantaceae	*Maranta incrassata*	L.Andersson	NE	1, 12, 26, 37, 56
Malvaceae	*Sida poeppigiana*	(K. Schum.) Fryxell	NE	58	Marantaceae	*Maranta pohliana*	Körn.	NE	1, 2,11, 14
Malvaceae	*Sida rhombifolia*	L.	NE	5, 18, 25, 26, 30, 31, 34, 37, 56, 57, 58, 60, 79	Marantaceae	*Stromanthe boliviana*	K.Schum.	NE	24, 26, 31, 32, 39, 56, 58, 59, 84
Malvaceae	*Sida rodrigoi*	Monteiro	NE	86	Marantaceae	*Thalia geniculata*	L.	LC	9, 12, 18, 66, 72, 76, 77
Malvaceae	*Sida santaremensis*	Monteiro	NE	60	Marcgraviaceae	*Marcgravia flagellaris*	(Poepp. ex Wittm.) Gilg & Werderm.	NE	59, 60, 64, 76, 84
Malvaceae	*Sida setosa*	Mart. ex Colla	NE	11, 60	Marcgraviaceae	*Marcgraviastrum mixtum*	(Triana & Planch.) Bedell	NE	25, 57, 59, 60
Malvaceae	*Sida spinosa*	L.	NE	11, 22, 26	Marcgraviaceae	*Norantea guianensis*	Aubl.	NE	2, 3, 11
Malvaceae	*Sterculia apetala*	(Jacq.) H.Karst.	LC	1, 11, 12, 13, 60, 64, 72, 77, 78	Marcgraviaceae	*Sarcopera oxystylis*	(Baill.) Bedell ex Gir.-Cañas	NE	25, 56, 59, 60, 82, 84

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Martyniaceae	*Craniolaria integrifolia*	Cham.	NE	1, 3, 4, 12, 18, 22, 86
Melastomataceae	*Bellucia acutata*	Pilg.	LC	11, 12
Melastomataceae	*Bellucia aequiloba*	Pilg.	LC	11
Melastomataceae	*Bellucia grossularioides*	(L.) Triana	LC	11, 12, 59, 60, 63, 70, 78, 84
Melastomataceae	*Bellucia pentamera*	Naudin	LC	83, 84
Melastomataceae	*Brachyotum microdon*	(Naudin) Triana	NE	23, 25, 26, 34, 37, 39, 40, 52, 53, 56, 57, 58, 59, 60, 82, 84, 85, 87
Melastomataceae	** Chaetogastra capitata*	(Naudin) P.J.F.Guim. & Michelang.	NE	56, 57, 59
Melastomataceae	*Miconia abbreviata*	Markgr.	NE	63, 84
Melastomataceae	*Miconia affinis*	DC.	LC	12, 25, 56, 59, 60, 63, 64, 79
Melastomataceae	*Miconia albicans*	(Sw.) Steud.	LC	1, 2, 11, 15, 18, 20, 26, 56, 58, 60, 61, 65, 75
Melastomataceae	*Miconia crenata*	(Vahl) Michelang.	NE	11, 12, 13, 53, 60, 63
Melastomataceae	*Miconia dentata*	(D.Don) Michelang.	NE	25, 55, 61, 63, 64, 82, 84
Melastomataceae	*Miconia dependens*	(Pav. ex D.Don) Judd & Majure	NE	11, 15, 57, 59, 60, 63, 84
Melastomataceae	*Miconia dodecandra*	Cogn.	LC	57, 59, 60
Melastomataceae	*Miconia formicojuruensis*	Michelang.	NE	60, 61, 64, 70
Melastomataceae	*Miconia holosericea*	(L.) DC.	LC	11, 62, 71
Melastomataceae	*Miconia klugii*	Gleason	NE	60, 83, 84
Melastomataceae	*Miconia latifolia*	(D.Don) Naudin	LC	56
Melastomataceae	*Miconia leacrenata*	R.Goldenb. & Michelang.	NE	2, 26, 32, 56, 58, 59, 60, 82, 87
Melastomataceae	*Miconia longifolia*	(Aubl.) DC.	LC	11, 13, 60, 76, 82
Melastomataceae	*Miconia longispicata*	Triana	LC	11, 12
Melastomataceae	*Miconia lourteigiana*	Wurdack	LC	12, 60, 64, 70
Melastomataceae	** Miconia mandonii*	Cogn. ex Britton	VU B2ab(ii,iii)	25, 56, 59, 60, 82, 87
Melastomataceae	*Miconia minutiflora*	(Bonpl.) DC.	LC	11, 12, 25, 26, 56, 58, 59, 60, 84
Melastomataceae	*Miconia molybdea*	Naudin	LC	19, 24, 25, 26, 31, 34, 35, 37, 39, 54, 59, 60
Melastomataceae	*Miconia myriantha*	Benth.	LC	11, 59, 60, 64
Melastomataceae	*Miconia nervosa*	(Sm.) Triana	NE	11, 13, 56, 59, 60, 61, 63, 64, 67, 82, 84
Melastomataceae	*Miconia poeppigii*	Triana	LC	11, 12, 59, 60, 63, 82
Melastomataceae	*Miconia prasina*	(Sw.) DC.	LC	11, 12, 13, 25, 56, 60, 61, 76, 77, 84
Melastomataceae	*Miconia punctata*	(Desr.) D.Don ex DC.	LC	11, 25, 59, 60, 64, 65, 70, 83, 84
Melastomataceae	*Miconia serrulata*	(DC.) Naudin	LC	60, 61, 67
Melastomataceae	*Miconia splendens*	(Sw.) Griseb.	LC	11, 12, 56, 59, 60, 74, 79, 84
Melastomataceae	*Miconia stenostachya*	DC.	LC	1, 2, 11, 12, 19, 26, 56, 59, 60, 72, 76, 77
Melastomataceae	*Miconia subciliata*	DC.	NE	11
Melastomataceae	*Miconia sublanata*	(Cogn.) R.Goldenb.	NE	25, 54, 56, 57, 58, 84
Melastomataceae	*Miconia tiliifolia*	Naudin	NE	2, 5, 7, 11, 59, 60, 62
Melastomataceae	*Miconia tococa*	(Desr.) Michelang.	NE	2, 11, 12, 25, 59, 60, 64, 82, 84
Melastomataceae	*Miconia tomentosa*	(Rich.) D.Don	LC	11, 59, 60, 62, 64, 67, 74, 79, 82, 84
Melastomataceae	** Miconia uvifera*	Naudin	NE	25, 26, 54, 84
Melastomataceae	*Mouriri guianensis*	Aubl.	LC	11, 12, 13, 64
Melastomataceae	*Mouriri myrtilloides*	Poir.	LC	11, 25, 59, 60, 61, 63, 67, 79, 84
Melastomataceae	** Tibouchina bicolor*	(Naudin) Cogn.	NE	53, 54, 56, 57, 59, 60, 82, 84
Meliaceae	*Cabralea canjerana*	(Vell.) Mart.	LC	25, 59, 60, 63, 64, 79, 84
Meliaceae	*Cedrela angustifolia*	DC.	VU A2c	23, 25, 26, 34, 39, 84, 87
Meliaceae	*Cedrela fissilis*	Vell.	VU A2cd+3cd	1, 2, 11, 12, 13, 18, 19, 21, 23, 26, 32, 34, 53, 56, 59, 60, 84
Meliaceae	*Cedrela odorata*	L.	VU A3bcd+4bcd	8, 12, 26, 36, 59, 60, 61
Meliaceae	*Cedrela saltensis*	M.A.Zapater & del Castillo	NE	25, 26, 31, 34, 39, 84
Meliaceae	*Guarea guidonia*	(L.) Sleumer	LC	25, 60, 72, 79, 83, 84
Meliaceae	*Guarea kunthiana*	A.Juss.	LC	2, 11, 12, 13, 25, 54, 56, 57, 59, 60, 61, 62, 63, 64, 65, 66, 67, 77, 79, 82, 83, 84
Meliaceae	*Guarea macrophylla*	Vahl	LC	11, 12, 13, 25, 59, 60, 61, 62, 63, 64, 65, 73, 79, 80, 81, 82, 84

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Meliaceae	*Guarea purusana*	C.DC.	LC	60, 63, 79, 83
Meliaceae	*Swietenia macrophylla*	King	EN A2acd	11, 12, 13, 25, 60, 63
Meliaceae	*Trichilia adolfi*	Harms	NE	59, 60, 64
Meliaceae	*Trichilia catigua*	A.Juss.	LC	60
Meliaceae	*Trichilia claussenii*	C.DC.	NE	2, 5, 11, 23, 25, 26, 31, 32, 34, 35, 37, 39, 59, 60, 86
Meliaceae	*Trichilia elegans*	A.Juss.	LC	19, 25
Meliaceae	*Trichilia hirta*	L.	LC	1, 4, 6, 13, 14, 18, 20, 23, 25, 53, 54, 59, 60, 73, 82, 87
Meliaceae	*Trichilia inaequilatera*	T.D.Penn.	LC	11, 12, 60, 61, 79
Meliaceae	*Trichilia micrantha*	Benth.	LC	63, 64, 65
Meliaceae	*Trichilia pallida*	Sw.	LC	1, 5, 11, 12, 13, 25, 56, 60, 61, 62, 63, 64, 67, 75, 76, 77, 79, 84
Meliaceae	*Trichilia pleeana*	(A.Juss.) C.DC.	LC	11, 60, 63, 64, 76
Meliaceae	*Trichilia stellatotomentosa*	Kuntze	NE	1, 5, 9, 18, 73, 76, 77
Menispermaceae	*Abuta grandifolia*	(Mart.) Sandwith	LC	11, 12, 13, 55, 59, 60, 61, 64, 70, 73
Menispermaceae	*Abuta imene*	(Mart.) Eichler	LC	60
Menispermaceae	*Anomospermum reticulatum*	(Mart.) Eichler	NE	64
Menispermaceae	*Chondrodendron tomentosum*	Ruiz & Pav.	LC	60
Menispermaceae	*Cissampelos andromorpha*	DC.	NE	57
Menispermaceae	*Cissampelos pareira*	L.	NE	11, 19, 26, 27, 30, 31, 39, 56, 59, 60, 66, 76
Menispermaceae	*Cissampelos tropaeolifolia*	DC.	NE	1, 3, 11, 26, 31, 32, 56, 60, 61, 63, 75, 82
Menispermaceae	*Disciphania cubijensis*	(R.Knuth) Sandwith	NE	24
Menispermaceae	*Odontocarya diplobotrya*	Diels	NE	25, 60, 61, 84
Menispermaceae	*Orthomene schomburgkii*	(Miers) Barneby & Krukoff	NE	11, 12, 59, 60, 79, 83
Menispermaceae	*Sciadotenia toxifera*	Krukoff & A.C.Sm.	NE	60
Metteniusaceae	*Emmotum nitens*	(Benth.) Miers	NE	11, 12
Molluginaceae	*Mollugo verticillata*	L.	NE	3, 5, 8, 9, 12, 26, 37, 60

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Montiaceae	*Calandrinia acaulis*	Kunth	NE	52, 57, 59, 85
Moraceae	*Batocarpus amazonicus*	(Ducke) Fosberg	LC	11, 13, 19, 60
Moraceae	*Batocarpus costaricensis*	Standl. & L.O.Williams	LC	60, 61
Moraceae	*Brosimum acutifolium*	Huber	LC	11, 12, 13, 63, 64, 67
Moraceae	*Brosimum alicastrum*	Sw.	LC	60
Moraceae	*Brosimum gaudichaudii*	Trécul	NE	1, 2, 5, 8, 11, 12, 18, 21, 60, 72
Moraceae	*Brosimum lactescens*	(S.Moore) C.C.Berg	LC	11, 12, 60, 63, 64, 65, 66, 70, 73, 74, 76, 77
Moraceae	*Brosimum parinarioides*	Ducke	LC	64, 70
Moraceae	*Brosimum utile*	(Kunth) Oken	LC	11, 64, 65, 70
Moraceae	*Castilla ulei*	Warb.	LC	11, 63, 64, 65, 67, 70
Moraceae	*Clarisia biflora*	Ruiz & Pav.	LC	24, 25, 59, 60, 63, 64, 66, 78, 79, 84
Moraceae	*Clarisia racemosa*	Ruiz & Pav.	LC	24, 25, 55, 59, 60, 64, 67, 78, 84
Moraceae	*Dorstenia brasiliensis*	Lam.	NE	1, 2, 3, 5, 9, 14, 24, 26, 60, 61
Moraceae	*Dorstenia cayapia*	Vell.	NE	1, 5, 11, 25
Moraceae	*Ficus adhatodifolia*	Schott	NE	1
Moraceae	*Ficus americana*	Aubl.	LC	11, 12, 57, 59, 60, 74, 75, 79, 84
Moraceae	*Ficus boliviana*	C.C.Berg	NE	11, 60, 84
Moraceae	*Ficus caballina*	Standl.	LC	19, 60, 76
Moraceae	*Ficus calyptroceras*	(Miq.) Miq.	NE	3, 12, 18, 53, 74
Moraceae	*Ficus citrifolia*	Mill.	LC	9, 11, 12, 24, 26, 32, 37, 59, 60
Moraceae	*Ficus coerulescens*	(Rusby) Rossberg	LC	59, 60, 61, 63, 78
Moraceae	*Ficus cuatrecasasiana*	Dugand	LC	26, 32, 34, 56, 60, 79, 82
Moraceae	*Ficus eximia*	Schott	LC	1, 4, 9, 11, 12, 13, 19, 60, 72, 76
Moraceae	*Ficus gomelleira*	Kunth & C.D.Bouché	LC	1, 11, 13, 18, 53, 60, 63, 64, 65, 70, 77, 78
Moraceae	*Ficus insipida*	Willd.	LC	1, 11, 13, 25, 55, 59, 60, 61, 63, 76, 77, 84

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Moraceae	*Ficus maroma*	A.Cast.	NE	26, 39, 53, 59, 60
Moraceae	*Ficus mathewsii*	(Miq.) Miq.	NE	11, 12, 13, 60, 84
Moraceae	*Ficus matiziana*	Dugand	LC	11,12
Moraceae	*Ficus maxima*	Mill.	LC	1, 5, 11, 12, 17, 19, 24, 25, 26, 34, 56, 60, 64, 73, 84
Moraceae	*Ficus nymphaeifolia*	Mill.	LC	64
Moraceae	*Ficus obtusifolia*	Kunth	LC	4, 11, 12, 18, 19, 26, 60, 77
Moraceae	*Ficus pallida*	Vahl	NE	70
Moraceae	*Ficus paraensis*	(Miq.) Miq.	LC	11, 12, 13, 60, 61, 63, 64, 66, 70, 82
Moraceae	*Ficus pertusa*	L.f.	LC	15, 59, 60
Moraceae	*Ficus sphenophylla*	Standl.	LC	11, 64
Moraceae	*Ficus trigona*	L.f.	LC	5, 11, 12, 13, 25, 32, 34, 56, 60, 61, 64, 76, 77, 82
Moraceae	*Helicostylis tomentosa*	(Poepp. & Endl.) Rusby	LC	11, 59, 60, 64, 65, 70, 83, 84
Moraceae	*Maclura tinctoria*	(L.) D.Don ex G.Don	LC	1, 2, 5, 9, 11, 12, 13, 22, 26, 31, 34, 72
Moraceae	*Maquira calophylla*	(Poepp. & Endl.) C.C.Berg	LC	19, 63, 64
Moraceae	*Maquira coriacea*	(H.Karst.) C.C.Berg	LC	11, 12, 64, 67, 69
Moraceae	*Naucleopsis caloneura*	(Huber) Ducke	LC	3
Moraceae	*Naucleopsis concinna*	(Standl.) C.C.Berg	LC	11, 70
Moraceae	*Olmedia aspera*	Ruiz & Pav.	LC	15, 25, 60, 80, 84
Moraceae	*Paratrophis insignis*	(Bureau) E.M.Gardner	LC	25, 26, 34, 37, 56, 57, 58, 59, 60, 82, 84
Moraceae	*Perebea angustifolia*	(Poepp. & Endl.) C.C.Berg	LC	60, 63, 64, 65
Moraceae	*Perebea mollis*	(Poepp. & Endl.) Huber	LC	11, 13, 64, 75
Moraceae	*Poulsenia armata*	(Miq.) Standl.	LC	19, 25, 60, 61, 76, 78, 79, 84
Moraceae	*Pseudolmedia laevigata*	Trécul	LC	2, 11, 12, 13, 25, 59, 60, 62, 63, 64, 65, 66, 67, 69, 70, 74, 76, 77, 84
Moraceae	*Pseudolmedia laevis*	(Ruiz & Pav.) J.F.Macbr.	LC	11, 12, 13, 25, 59, 60, 61, 63, 64, 65, 66, 67, 68, 70, 75, 76, 79, 83, 84
Moraceae	*Pseudolmedia macrophylla*	Trécul	NE	11, 12, 13, 59, 60, 64, 67, 78, 79, 83
Moraceae	*Pseudolmedia rigida*	(Klotzsch & H.Karst.) Cuatrec.	LC	11, 25, 59, 60, 62, 65, 67, 69, 77, 79, 82, 84
Moraceae	*Sorocea guilleminiana*	Gaudich.	LC	11, 12, 25, 60, 61, 64, 66
Moraceae	*Sorocea muriculata*	Miq.	LC	65, 70
Moraceae	*Sorocea sprucei*	(Baill.) J.F.Macbr.	LC	1, 4, 5, 9, 22, 25, 60, 76
Moraceae	*Sorocea steinbachii*	C.C.Berg	LC	11, 25, 59, 60, 63, 67, 70, 75, 79, 83
Myricaceae	*Morella pubescens*	(Humb. & Bonpl. ex Willd.) Wilbur	LC	58
Myricaceae	*Myrica chevalieri*	(Parra-Os.) Christenh. & Byng	NE	23, 25, 26, 27, 30, 32, 34, 37, 60
Myricaceae	*Myrica pubescens*	Humb. & Bonpl. ex Willd.	NE	23, 25, 26, 30, 52, 54, 56, 57, 59, 60, 82, 84, 87
Myristicaceae	*Iryanthera juruensis*	Warb.	LC	11, 12, 60, 61, 62, 63, 64, 65, 66, 68, 79, 84
Myristicaceae	*Iryanthera tessmannii*	Markgr.	LC	60
Myristicaceae	*Otoba parvifolia*	(Markgr.) A.H.Gentry	NE	25, 60, 61, 78, 84
Myristicaceae	*Virola calophylla*	(Spruce) Warb.	LC	11, 12, 60, 63, 64, 70, 79
Myristicaceae	*Virola flexuosa*	A.C.Sm.	LC	25, 60, 61, 64, 84
Myristicaceae	*Virola peruviana*	(A.DC.) Warb.	LC	59, 60, 64, 70, 79, 83, 84
Myristicaceae	*Virola sebifera*	Aubl.	LC	11, 12, 13, 25, 55, 59, 60, 61, 62, 63, 64, 69, 70, 72, 76, 77
Myristicaceae	*Virola surinamensis*	(Rol. ex Rottb.) Warb.	LC	60, 62, 63, 64, 65
Myrtaceae	*Acca macrostema*	(Ruiz & Pav. ex G.Don) McVaugh	EN B2ab(iii)	26
Myrtaceae	*Blepharocalyx salicifolius*	(Kunth) O.Berg	NE	2, 23, 25, 26, 27, 30, 31, 32, 34, 37, 39, 59, 60, 86, 87
Myrtaceae	*Campomanesia aromatica*	(Aubl.) Griseb.	NE	13, 25, 60, 84
Myrtaceae	*Campomanesia guaviroba*	(DC.) Bertoni	NE	11, 72
Myrtaceae	*Campomanesia lineatifolia*	Ruiz & Pav.	LC	60
Myrtaceae	*Campomanesia sessiliflora*	(O.Berg) Mattos	NE	11, 18, 72
Myrtaceae	*Campomanesia xanthocarpa*	(Mart.) O.Berg	NE	13, 25, 60, 73, 84
Myrtaceae	*Eugenia aurata*	O.Berg	NE	1, 2, 11, 24, 72
Myrtaceae	* *Eugenia boliviana*	(D.Legrand) Mattos	VU B1ab(ii,iii,iv) +2ab(ii,iii,iv)	9, 15

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Myrtaceae	*Eugenia chiquitensis*	O.Berg	NE	1, 2, 11, 14
Myrtaceae	*Eugenia dysenterica*	DC.	LC	2, 11, 12, 18, 21, 72
Myrtaceae	*Eugenia egensis*	DC.	LC	1, 2, 4, 11, 13, 19, 24, 25, 26, 56, 60, 61, 64, 76, 77, 79, 84
Myrtaceae	*Eugenia flavescens*	DC.	LC	1, 2, 11, 12, 15, 18, 25, 60, 72, 83
Myrtaceae	*Eugenia florida*	DC.	LC	1, 11, 12, 13, 21, 31, 35, 56, 59, 60, 64, 70, 79
Myrtaceae	*Eugenia gemmiflora*	O.Berg	NE	11
Myrtaceae	*Eugenia involucrata*	DC.	LC	23, 26, 31, 34, 60
Myrtaceae	*Eugenia klotzschiana*	O.Berg	NE	11
Myrtaceae	*Eugenia lambertiana*	DC.	LC	2, 11, 12, 54, 59, 60, 63, 64, 65, 83
Myrtaceae	*Eugenia modesta*	DC.	NE	1, 9, 13, 25, 26, 39, 60, 84
Myrtaceae	*Eugenia myrcianthes*	Nied.	NE	1, 3, 11, 18, 20, 22, 60, 72
Myrtaceae	*Eugenia punicifolia*	(Kunth) DC.	LC	2, 11, 12, 18, 60
Myrtaceae	*Eugenia pyriformis*	Cambess.	NE	6, 8, 14
Myrtaceae	*Eugenia uniflora*	L.	LC	2, 5, 9, 19, 26, 31, 34, 35, 39, 56, 60
Myrtaceae	*Myrcia deflexa*	(Poir.) DC.	NE	12
Myrtaceae	*Myrcia guianensis*	(Aubl.) DC.	LC	1, 2, 5, 8, 11, 12, 17, 18, 20, 21, 25, 56, 58, 59, 60, 63, 64, 68, 70, 72, 79
Myrtaceae	*Myrcia mollis*	(Kunth) DC.	LC	54, 57, 59, 60, 61
Myrtaceae	*Myrcia multiflora*	(Lam.) DC.	LC	23, 25, 26, 31, 32, 52, 59, 60, 64, 87
Myrtaceae	*Myrcia neospeciosa*	A.R.Lourenço & E.Lucas	LC	60, 61
Myrtaceae	*Myrcia paivae*	O.Berg	LC	11, 25, 26, 56, 57, 58, 59, 60, 65
Myrtaceae	*Myrcia splendens*	(Sw.) DC.	LC	5, 11, 13, 26, 53, 54, 56, 57, 58, 59, 60, 79, 82, 83
Myrtaceae	*Myrcia tomentosa*	(Aubl.) DC.	LC	11, 12, 17, 18, 60
Myrtaceae	*Myrcianthes callicoma*	McVaugh	NE	23, 25, 26, 27, 39, 87
Myrtaceae	*Myrcianthes mato*	(Griseb.) McVaugh	LC	25, 26, 34, 39, 60, 86
Myrtaceae	*Myrcianthes osteomeloides*	(Rusby) McVaugh	LC	23, 25, 26, 28, 84, 86, 87
Myrtaceae	*Myrcianthes pseudomato*	(D.Legrand) McVaugh	NE	23, 25, 26, 27, 28, 30, 31, 32, 34, 37, 39, 40, 59, 60
Myrtaceae	*Myrcianthes pungens*	(O.Berg) D.Legrand	NE	26, 31, 32, 35, 39, 60, 86
Myrtaceae	*Myrciaria cuspidata*	O.Berg	NE	2
Myrtaceae	*Myrciaria delicatula*	(DC.) O.Berg	LC	22, 31, 37, 39
Myrtaceae	*Myrciaria dubia*	(Kunth) McVaugh	LC	13, 20, 60, 64, 79
Myrtaceae	*Myrciaria floribunda*	(H.West ex Willd.) O.Berg	LC	1, 11, 12, 20, 25, 31, 34, 37, 59, 60, 61, 84
Myrtaceae	*Myrciaria tenella*	(DC.) O.Berg	LC	2, 5, 22, 26, 60
Myrtaceae	*Plinia cauliflora*	(Mart.) Kausel	NE	1, 5, 9, 26
Myrtaceae	*Psidium acutangulum*	DC.	LC	11, 12, 13
Myrtaceae	*Psidium australe*	Cambess.	LC	11
Myrtaceae	*Psidium friedrichsthalianum*	(O.Berg) Nied.	NE	70
Myrtaceae	*Psidium grandifolium*	Mart. ex DC.	LC	2
Myrtaceae	*Psidium guajava*	L.	LC	1, 2, 5, 12, 23, 25, 26, 28, 31, 37, 58, 59, 60, 70, 76, 77, 82, 83
Myrtaceae	*Psidium guineense*	Sw.	LC	1, 2, 11, 12, 15, 18, 20, 23, 25, 26, 31, 34, 39, 56, 58, 59, 60, 72, 76, 85
Myrtaceae	*Psidium kennedyanum*	Morong	NE	2
Myrtaceae	*Psidium laruotteanum*	Cambess.	NE	2, 11, 32
Myrtaceae	*Psidium myrsinites*	DC.	NE	5
Myrtaceae	*Psidium nutans*	O.Berg	NE	11, 12
Myrtaceae	*Psidium oligospermum*	Mart. ex DC.	LC	11, 12, 25, 55, 60, 72, 78
Myrtaceae	*Psidium salutare*	(Kunth) O.Berg	LC	2, 10, 11, 18, 37
Myrtaceae	*Psidium striatulum*	DC.	NE	11
Myrtaceae	*Siphoneugena occidentalis*	D.Legrand	NE	11, 12, 13, 25, 26, 31, 32, 34, 59, 60, 86
Nyctaginaceae	*Boerhavia coccinea*	Mill.	NE	56
Nyctaginaceae	*Boerhavia diffusa*	L.	NE	9, 22, 23, 26, 37, 60
Nyctaginaceae	*Boerhavia erecta*	L.	NE	38

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Nyctaginaceae	* *Bougainvillea berberidifolia*	Heimerl	NT B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	23, 26, 29, 86
Nyctaginaceae	*Bougainvillea campanulata*	Heimerl	NE	22, 23, 26, 27, 35, 86
Nyctaginaceae	* *Bougainvillea modesta*	Heimerl	LC	1, 2, 5, 19, 24, 31, 32, 60, 73
Nyctaginaceae	*Bougainvillea praecox*	Griseb.	NE	22, 23
Nyctaginaceae	*Bougainvillea stipitata*	Griseb.	NE	23, 25, 26, 31, 34, 35, 60, 85, 86
Nyctaginaceae	*Mirabilis expansa*	(Ruiz & Pav.) Standl.	NE	52, 59
Nyctaginaceae	* *Neea boliviana*	Standl.	# EN	82, 84
Nyctaginaceae	*Neea hirsuta*	Poepp. & Endl.	NE	79
Nyctaginaceae	*Neea ovalifolia*	Spruce ex J.A.Schmidt	NE	11, 13, 14, 59, 60, 61, 70, 79
Nyctaginaceae	*Pisonia aculeata*	L.	LC	13, 25, 60
Nyctaginaceae	*Pisonia ambigua*	Heimerl	NE	25, 30, 31, 32, 34, 84, 86
Nyctaginaceae	*Pisonia zapallo*	Griseb.	LC	1, 4, 5, 9, 12, 22, 25, 26, 31, 34, 60
Nymphaeaceae	*Nymphaea amazonum*	Mart. & Zucc.	NE	5, 11, 12, 18
Nymphaeaceae	*Nymphaea gardneriana*	Planch.	NE	11, 12
Nymphaeaceae	*Victoria amazonica*	(Poepp.) Klotzsch	NE	5, 68, 72, 76
Ochnaceae	*Ouratea iquitosensis*	J.F.Macbr.	LC	11, 12, 25, 60, 68, 79
Ochnaceae	*Quiina florida*	Tul.	LC	11, 12, 13, 59, 60, 63, 64, 65, 73, 79, 83
Ochnaceae	*Sauvagesia erecta*	L.	LC	11, 12, 25, 59, 60, 62, 82, 84
Olacaceae	*Heisteria nitida*	Engl.	NE	11, 12, 59, 60, 61, 70, 73
Olacaceae	*Heisteria spruceana*	Engl.	LC	11, 12, 63, 64, 65
Olacaceae	*Minquartia guianensis*	Aubl.	LC	11, 12, 60, 63, 65
Olacaceae	*Minquartia guianensis*	Aubl.	LC	11, 12, 60, 63, 65
Olacaceae	*Ximenia americana*	L.	LC	1, 4, 9, 10, 11, 12, 14, 18, 19, 22, 24, 25, 26, 28, 31, 34, 55, 60, 68
Oleaceae	*Menodora integrifolia*	(Cham. & Schltdl.) Steud.	NE	23, 26, 38, 57, 84
Oleaceae	*Priogymnanthus hasslerianus*	(Chodat) P.S.Green	NE	1, 2, 18, 21
Onagraceae	*Epilobium denticulatum*	Ruiz & Pav.	NE	48, 52, 53, 56, 57, 59, 82, 84, 85
Onagraceae	*Fuchsia boliviana*	Carrière	LC	23, 25, 26, 27, 30, 31, 32, 34, 37, 39, 53, 54, 56, 57, 58, 59, 60, 82, 84, 85, 87
Onagraceae	*Fuchsia denticulata*	Ruiz & Pav.	LC	53, 56, 57, 58, 59, 60, 82, 84, 85
Onagraceae	*Fuchsia salicifolia*	Hemsl.	NE	56, 57
Onagraceae	*Ludwigia leptocarpa*	(Nutt.) H.Hara	LC	11, 12, 13, 18, 19
Onagraceae	*Ludwigia nervosa*	(Poir.) H.Hara	LC	11, 12, 15, 18, 60, 62, 76
Onagraceae	*Ludwigia octovalvis*	(Jacq.) P.H.Raven	LC	5, 11, 12, 18, 19
Onagraceae	*Oenothera multicaulis*	Ruiz & Pav.	NE	57
Onagraceae	*Oenothera nana*	Griseb.	NE	47
Onagraceae	*Oenothera rosea*	L'Hér. ex Aiton	NE	57, 58, 82
Onagraceae	*Oenothera versicolor*	Lehm.	NE	37, 40, 52, 53, 56, 57, 59
Opiliaceae	*Agonandra brasiliensis*	Benth. & Hook.f.	LC	1, 2, 4, 5, 11, 13, 14, 18, 21, 25, 60, 72
Opiliaceae	*Agonandra excelsa*	Griseb.	LC	9, 11, 17, 22, 31, 60, 73
Orchidaceae	*Acianthera herzogii*	(Schltr.) Baumbach	NE	26
Orchidaceae	*Bulbophyllum incarum*	Kraenzl.	NE	60
Orchidaceae	*Cyrtopodium virescens*	Rchb.f. & Warm.	NE	18
Orchidaceae	*Epidendrum secundum*	Jacq.	NE	20, 25, 26, 56, 57, 59, 60, 82, 87
Orchidaceae	*Gomesa bifolia*	(Sims) M.W.Chase & N.H.Williams	NE	26, 37, 39
Orchidaceae	*Gomesa macropetala*	(Lindl.) M.W.Chase & N.H.Williams	NE	5, 9
Orchidaceae	*Govenia tingens*	Poepp. & Endl.	NE	26, 58, 84
Orchidaceae	*Myrosmodes paludosa*	(Rchb.f.) P.Ortiz	LC	57
Orchidaceae	*Nemaconia striata*	(Lindl.) Van den Berg, Salazar & Soto Arenas	NE	26, 60
Orchidaceae	*Sobralia liliastrum*	Lindl.	NE	25, 26
Orchidaceae	* *Sobralia rupicola*	Kraenzl.	NE	25, 26
Orchidaceae	*Sobralia violacea*	Linden ex Lindl.	NE	58

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Orchidaceae	*Vanilla chamissonis*	Klotzsch	NE	77
Orchidaceae	*Vanilla odorata*	C.Presl	NE	13
Orchidaceae	*Vanilla pompona*	Schiede	NE	60
Orobanchaceae	* *Agalinis bangii*	(Kuntze) Barringer	NE	25, 26, 52, 56, 59, 82, 85, 87
Orobanchaceae	*Agalinis lanceolata*	(Ruiz & Pav.) D'Arcy	NE	23, 25, 26, 52, 54, 56, 57, 58, 59, 60, 84, 85, 87
Orobanchaceae	*Castilleja pumila*	(Benth.) Wedd.	NE	39, 40, 52, 57, 58, 59, 84, 85
Orobanchaceae	*Escobedia grandiflora*	(L.f.) Kuntze	NE	24, 26, 57, 59
Oxalidaceae	*Oxalis andina*	Britton	NE	54, 56, 57, 59, 60
Oxalidaceae	*Oxalis barrelieri*	L.	NE	11, 12, 56, 60, 77
Oxalidaceae	*Oxalis conorrhiza*	Jacq.	NE	37, 39
Oxalidaceae	*Oxalis erosa*	R.Knuth	NE	1, 2, 18
Oxalidaceae	* *Oxalis flagellata*	(Rusby) Lourteig	NE	25, 53, 56, 57, 59, 60, 82, 84, 87
Oxalidaceae	*Oxalis frutescens*	L.	NE	1
Oxalidaceae	*Oxalis grisea*	A.St.-Hil. & Naudin	NE	1, 5, 14, 17, 18
Oxalidaceae	*Oxalis hedysarifolia*	Raddi	NE	11
Oxalidaceae	*Oxalis juruensis*	Diels	NE	11, 60
Oxalidaceae	*Oxalis longissima*	(Kuntze) K.Schum.	NE	23, 25, 26, 56, 57, 59, 60, 82, 84
Oxalidaceae	*Oxalis lucumayensis*	R.Knuth	NE	56
Oxalidaceae	*Oxalis mollissima*	(Rusby) R.Knuth	NE	26, 30, 31, 39, 53, 54, 56, 57, 59, 87
Oxalidaceae	*Oxalis nubigena*	Walp.	NE	48, 52, 53, 56, 59, 60
Oxalidaceae	* *Oxalis oulophora*	Lourteig	NE	56, 57, 58, 87
Oxalidaceae	*Oxalis pachyrrhiza*	Wedd.	NE	52
Oxalidaceae	*Oxalis peduncularis*	Kunth	NE	59
Oxalidaceae	*Oxalis psoraleoides*	Kunth	NE	9,19
Oxalidaceae	*Oxalis pyrenea*	Taub.	NE	11

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Oxalidaceae	*Oxalis renifolia*	R.Knuth	NE	2, 18
Oxalidaceae	* *Oxalis solomonii*	Lourteig	NE	56, 60
Oxalidaceae	*Oxalis spiralis*	Ruiz & Pav. ex G.Don	NE	23, 25, 26, 27, 56, 57, 59, 60, 84
Oxalidaceae	*Oxalis triangularis*	A.St.-Hil.	NE	1, 2, 5, 23, 26, 34, 56, 60
Oxalidaceae	*Oxalis tuberosa*	Molina	NE	25, 56, 84
Oxalidaceae	* *Oxalis tuberosa* subsp. *unduavensis*	(Rusby) Lourteig	NE	25, 56, 57
Oxalidaceae	* *Oxalis virgata*	Rusby	NE	56, 60
Oxalidaceae	* *Oxalis yungasensis*	Rusby	NE	57, 58, 60
Papaveraceae	*Argemone subfusiformis*	Ownbey	NE	23, 26, 32, 37, 38
Papaveraceae	*Bocconia integrifolia*	Bonpl.	NE	23, 25, 26, 27, 31, 32, 34, 35, 37, 39, 55, 56, 57, 59, 60, 84, 85, 87
Passifloraceae	*Passiflora amethystina*	J.C.Mikan	NE	4, 23, 25, 54, 55, 56, 57, 60, 82, 84
Passifloraceae	*Passiflora candollei*	Triana & Planch.	LC	25, 61, 82
Passifloraceae	*Passiflora capsularis*	L.	NE	1, 2, 18, 67
Passifloraceae	* *Passiflora carrascoensis*	P.Jørg. & R.Vásquez	LC	25, 82, 84
Passifloraceae	*Passiflora chrysophylla*	Chodat	NE	2, 15, 26
Passifloraceae	*Passiflora cincinnata*	Mast.	NE	1, 9, 18, 23, 25, 26, 31, 32, 37, 39, 72, 86, 87
Passifloraceae	*Passiflora cisnana*	Harms	NE	24, 25, 26, 31, 32, 34, 53, 54, 55, 56, 60, 84
Passifloraceae	*Passiflora foetida*	L.	NE	1, 5, 9, 18, 22, 23, 25, 26, 28, 31, 58, 60, 73, 82, 84, 86
Passifloraceae	*Passiflora inca*	P. Jørg.	NE	58
Passifloraceae	*Passiflora ligularis*	Juss.	NE	56, 57, 82, 84
Passifloraceae	* *Passiflora mandonii*	(Mast.) Killip	NE	53, 56, 59, 60, 82, 84, 85
Passifloraceae	*Passiflora menispermifolia*	Kunth	NE	25, 60, 61
Passifloraceae	*Passiflora miniata*	Vanderpl.	NE	11, 12, 13, 24, 25, 26, 54, 55, 56, 58, 59, 60, 63, 70, 74, 75, 76, 79, 80, 82, 84
Passifloraceae	*Passiflora misera*	Kunth	NE	4, 11, 12, 13, 18, 22, 60, 64, 76, 79
Passifloraceae	*Passiflora mixta*	L.f.	NE	52, 53, 60, 87

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Passifloraceae	*Passiflora morifolia*	Mast.	NE	1, 23, 25, 26, 27, 30, 35, 37, 39, 54, 56, 60, 61, 84
Passifloraceae	* *Passiflora nigradenia*	Rusby	LC	18, 25, 56, 60, 70, 74, 76, 78, 79
Passifloraceae	*Passiflora nitida*	Kunth	NE	11, 12, 13, 60, 80, 83
Passifloraceae	* *Passiflora pilosicorona*	Sacco	NE	23, 25, 26, 84
Passifloraceae	*Passiflora pinnatistipula*	Cav.	NE	52, 53, 59, 79, 82, 84, 85, 87
Passifloraceae	*Passiflora pohlii*	Mast.	NE	2, 18, 26, 84
Passifloraceae	*Passiflora quadriglandulosa*	Rodschied	NE	11, 62, 73, 77
Passifloraceae	*Passiflora riparia*	Mart. ex Mast.	NE	62, 63, 77
Passifloraceae	*Passiflora serratodigitata*	L.	NE	1, 59, 60, 61
Passifloraceae	*Passiflora tatei*	Killip & Rusby	NE	53, 54, 56, 57, 59, 60, 78, 85, 87
Passifloraceae	*Passiflora tenuifila*	Killip	NE	12, 25, 26, 28, 31, 39, 53, 54, 59
Passifloraceae	*Passiflora tricuspis*	Mast.	NE	9, 18, 19, 25, 26, 49, 55, 56, 59, 82
Passifloraceae	*Passiflora triloba*	Ruiz & Pav. ex DC.	NE	13, 25, 55, 59, 60, 82
Passifloraceae	*Passiflora tripartita* var. *mollissima*	(Kunth) Holm-Niels. & P. Jørg.	NE	58
Passifloraceae	*Passiflora umbilicata*	(Griseb.) Harms	NE	23, 25, 26, 28, 30, 40, 59, 82, 84, 85
Passifloraceae	* *Passiflora venusta*	R.Vásquez & M.Delanoy	LC	11, 55, 59, 60, 76
Passifloraceae	*Passiflora vespertilio*	L.	NE	11, 60, 76, 77
Passifloraceae	*Passiflora vitifolia*	Kunth	NE	11, 72, 73, 77, 79
Passifloraceae	*Turnera orientalis*	(Urb.) Arbo	NE	1, 13, 17
Passifloraceae	*Turnera weddelliana*	Urb. & Rolfe	NE	1, 5, 8, 9, 14, 15, 24, 25, 26, 53, 55, 60
Pentaphylacaceae	*Ternstroemia asymmetrica*	Rusby	LC	23, 25, 26, 31, 32, 34, 57, 58, 59, 60, 86
Peraceae	*Chaetocarpus echinocarpus*	(Baill.) Ducke	LC	11, 12
Petiveriaceae	*Gallesia integrifolia*	(Spreng.) Harms	NE	1, 2, 9, 13, 22, 25, 26, 27, 31, 60, 77
Petiveriaceae	*Rivina humilis*	L.	NE	1, 9, 19, 20, 26, 31, 34, 37, 39, 53, 56, 58, 60
Petiveriaceae	*Seguieria aculeata*	Jacq.	NE	1, 2, 9, 22, 26, 60
Phrymaceae	*Erythranthe geyeri*	(Torr.) G.L.Nesom	NE	25, 26, 27, 37, 39, 52, 57, 82, 85
Phyllanthaceae	*Hieronyma alchorneoides*	Allemão	LC	11, 13, 57, 60, 61, 76, 79, 84
Phyllanthaceae	*Hieronyma fendleri*	Briq.	LC	56, 57, 59, 60, 79, 82
Phyllanthaceae	*Margaritaria nobilis*	L.f.	LC	24, 60, 75, 84
Phyllanthaceae	*Phyllanthus acuminatus*	Vahl	LC	9, 11, 13, 18, 25, 26, 31, 32, 37, 72
Phyllanthaceae	*Phyllanthus brasiliensis*	(Aubl.) Poir.	NE	25, 26, 86
Phyllanthaceae	*Phyllanthus chacoensis*	Morong	NE	3, 4
Phyllanthaceae	*Richeria grandis*	Vahl	NE	11, 59, 60, 70, 78, 79, 83, 84
Phytolaccaceae	*Petiveria alliacea*	L.	NE	1, 4, 5, 9, 11, 18
Phytolaccaceae	*Phytolacca bogotensis*	Kunth	NE	25, 30, 34, 40, 56, 57, 59, 60, 82
Phytolaccaceae	*Phytolacca rivinoides*	Kunth & C.D.Bouché	NE	26, 56, 58, 59, 60, 63, 64, 79, 82, 83, 84
Picramniaceae	*Picramnia latifolia*	Tul.	LC	11, 12, 13, 23, 25, 60, 63, 64, 76, 77, 79
Picramniaceae	*Picramnia sellowii*	Planch.	LC	11, 12, 13, 25, 26, 56, 59, 60, 62, 64, 66, 79, 82, 84
Piperaceae	*Peperomia circinnata*	Link	NE	11, 13, 25, 31, 59, 60, 64, 76
Piperaceae	* *Peperomia steinbachii*	Yunck.	NE	30, 31, 32, 39, 59, 60, 82
Piperaceae	*Peperomia tominana*	C.DC.	NE	23, 25, 26, 27, 30, 31, 32, 34, 37, 39, 49, 60, 82, 84, 87
Piperaceae	*Piper acutifolium*	Ruiz & Pav.	LC	26, 34, 55, 57, 58, 59, 60, 82, 84, 87
Piperaceae	*Piper aduncum*	L.	LC	1, 9, 12, 13, 15, 18, 19, 25, 26, 31, 32, 34, 35, 39, 54, 57, 59, 60, 61, 72, 76, 79, 82, 84, 87
Piperaceae	*Piper amalago*	L.	LC	1, 4, 9, 11, 12, 13, 14, 15, 18, 19, 25, 26, 34, 35, 53, 60
Piperaceae	*Piper callosum*	Ruiz & Pav.	NE	11, 12, 13, 18, 19, 24, 25, 26, 55, 60, 63, 68, 70, 84
Piperaceae	*Piper consanguineum*	(Kunth) Steud.	NE	70
Piperaceae	*Piper dumosum*	Rudge	NE	62, 63, 64, 70
Piperaceae	*Piper elongatum*	Vahl	NE	9, 25, 26, 31, 32, 34, 35, 39, 54, 57, 58, 59, 60, 82, 84, 87
Piperaceae	*Piper gaudichaudianum*	(Kunth) Kunth ex Steud.	NE	26, 27, 56, 60, 82
Piperaceae	*Piper hieronymi*	C.DC.	NE	27, 31, 34, 37, 39, 59, 60

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Piperaceae	*Piper tuberculatum*	Jacq.	LC	1, 5, 60, 73	Poaceae	*Andropogon glaziovii*	Hack.	NE	18
Piperaceae	*Piper tucumanum*	C.DC.	LC	31, 34, 60	Poaceae	*Andropogon hypogynus*	Hack.	NE	11, 72, 74
Plantaginaceae	*Ourisia chamaedrifolia*	Benth.	NE	56, 59, 60	Poaceae	*Andropogon lateralis*	Nees	NE	11, 12, 26
Plantaginaceae	*Plantago australis*	Lam.	NE	25, 26, 27, 31, 34, 53, 60, 82, 84, 85	Poaceae	*Andropogon leucostachyus*	Kunth	NE	2, 5, 11, 18, 25, 32, 57, 59, 60, 72, 76
Plantaginaceae	*Plantago lamprophylla*	Pilg.	NE	59	Poaceae	*Andropogon selloanus*	(Hack.) Hack.	NE	11, 18, 22, 25, 39, 60, 77
Plantaginaceae	*Plantago sericea*	Ruiz & Pav.	NE	59, 60, 82, 85	Poaceae	*Andropogon tener*	(Nees) Kunth	NE	11, 18, 26, 40, 56, 60
Plantaginaceae	*Plantago tomentosa*	Lam.	NE	23, 25, 26, 31, 37, 82, 86	Poaceae	*Andropogon ternatus*	(Spreng.) Nees	NE	1, 18
Plantaginaceae	*Plantago tubulosa*	Decne.	NE	25, 52, 57, 59	Poaceae	*Andropogon virgatus*	Desv.	NE	2, 11, 12, 18, 60, 62, 72, 74
Plantaginaceae	*Scoparia dulcis*	L.	NE	1, 2, 11, 12, 20, 23, 26, 34, 56, 59, 60, 68, 76	Poaceae	*Anthenantia lanata*	(Kunth) Benth.	NE	1, 2, 11, 12, 18, 25, 60, 76
Plantaginaceae	*Scoparia ericacea*	Cham. & Schltdl.	NE	11, 26, 27, 37, 39	Poaceae	*Aristida circinalis*	Lindm.	NE	2, 18, 25, 74
Plantaginaceae	*Scoparia montevidensis*	(Spreng.) R.E.Fr.	NE	5	Poaceae	*Aristida hassleri*	Hack.	NE	86
Plantaginaceae	*Scoparia plebeja*	Cham. & Schltdl.	NE	27	Poaceae	** Aristida mandoniana*	Henrard	LC	23, 27, 31, 38, 49, 85, 86
Plantaginaceae	*Veronica peregrina*	L.	LC	59, 82	Poaceae	*Aristida mendocina*	Phil.	NE	10, 14, 22
Poaceae	*Aciachne pulvinata*	Benth.	NE	52, 56, 57, 59	Poaceae	*Arthropogon villosus*	Nees	NE	11, 18
Poaceae	*Acroceras excavatum*	(Henrard) Zuloaga & Morrone	NE	1, 11, 18, 60	Poaceae	*Arundinella hispida*	(Kunth ex Willd.) Kuntze	NE	1, 5, 18, 62
Poaceae	*Acroceras fluminense*	(Hack.) Zuloaga & Morrone	NE	11, 12	Poaceae	** Aulonemia herzogiana*	(Henrard) McClure	LC	56, 82, 84
Poaceae	*Acroceras zizanioides*	(Kunth) Dandy	LC	1, 12, 18, 25, 60, 72, 83, 84	Poaceae	*Aulonemia hirtula*	(Pilg.) McClure	NE	56, 58, 59, 60
Poaceae	*Actinocladum verticillatum*	(Nees) McClure ex Soderstr.	NE	11	Poaceae	*Axonopus aureus*	P.Beauv.	NE	2, 5, 8, 11, 18, 24, 26, 54, 56, 57, 60, 72
Poaceae	*Agenium villosum*	(Nees) Pilg.	NE	5, 15, 18	Poaceae	** Axonopus boliviensis*	Renvoize	DD	2, 18, 25, 72
Poaceae	*Agrostis montevidensis*	Spreng. ex Nees	NE	25, 37	Poaceae	*Axonopus brasiliensis*	(Spreng.) Kuhlm.	NE	2, 11, 72
Poaceae	*Agrostis perennans*	(Walter) Tuck.	LC	25, 56, 82	Poaceae	*Axonopus chrysoblepharis*	(Lag.) Chase	NE	5, 11, 18, 62, 76
Poaceae	*Amphibromus scabrivalvis*	(Trin.) Swallen	NE	52	Poaceae	*Axonopus compressus*	(Sw.) P.Beauv.	LC	11, 18, 26, 31, 33, 34, 56, 60, 72
Poaceae	*Andropogon angustatus*	(J.Presl) Steud.	NE	18	Poaceae	*Axonopus cuatrecasasii*	G.A.Black	NE	2, 14
Poaceae	*Andropogon bicornis*	L.	NE	1, 5, 8, 9, 11, 12, 18, 19, 54, 56, 57, 59, 60, 64, 72, 76, 82	Poaceae	*Axonopus fissifolius*	(Raddi) Kuhlm.	NE	2, 5, 11, 18, 26, 59
Poaceae	*Andropogon carinatus*	Nees	NE	2, 11	Poaceae	*Axonopus herzogii*	(Hack.) Hitchc.	NE	2, 11, 60

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Poaceae	*Axonopus leptostachyus*	(Flüggé) Hitchc.	NE	18, 74	Poaceae	** Cinnagrostis hirsuta*	(Rúgolo & Villav.) P.M.Peterson, Soreng, Romasch. & Barberá	# EN	59
Poaceae	*Axonopus marginatus*	(Trin.) Chase ex Hitchc.	NE	2, 5, 7, 11, 14, 18, 60	Poaceae	*Cinnagrostis rigescens*	(J.Presl) P.M.Peterson, Soreng, Romasch. & Barberá	NE	52, 56
Poaceae	*Axonopus pressus*	(Nees ex Steud.) Parodi	NE	2, 5, 8, 11	Poaceae	*Cinnagrostis rigida*	(Kunth) P.M.Peterson, Soreng, Romasch. & Barberá	NE	52, 56, 57, 85
Poaceae	*Axonopus purpusii*	(Mez) Chase	NE	11, 18, 60	Poaceae	*Cinnagrostis tarmensis*	(Pilg.) P.M.Peterson, Soreng, Romasch. & Barberá	NE	56, 85
Poaceae	*Axonopus scoparius*	(Flüggé) Kuhlm.	LC	58	Poaceae	*Cinnagrostis vicunarum*	(Wedd.) P.M.Peterson, Soreng, Romasch. & Barberá	NE	40, 52, 56, 57, 59, 84
Poaceae	*Axonopus siccus*	(Nees) Kuhlm.	NE	2, 4, 5, 11, 12, 18, 25, 26, 39, 56, 57, 60, 76, 86	Poaceae	*Coleataenia scabrida*	(Döll) Zuloaga	NE	63, 79
Poaceae	*Bouteloua americana*	(L.) Scribn.	NE	5	Poaceae	*Coleataenia stenodes*	(Griseb.) Soreng	NE	11, 12, 18
Poaceae	*Bouteloua aristidoides*	(Kunth) Griseb.	NE	26, 29	Poaceae	*Cortaderia hieronymi*	(Kuntze) N.P.Barker & H.P.Linder	NE	25, 26, 31, 37, 49, 52
Poaceae	*Bouteloua curtipendula*	(Michx.) Torr.	NE	5, 38, 42, 43	Poaceae	*Cortaderia jubata*	(Lemoine) Stapf	NE	25, 27, 48, 56, 82
Poaceae	*Bouteloua simplex*	Lag.	NE	29, 41, 48	Poaceae	*Cortaderia rudiuscula*	Stapf	NE	41, 43, 52, 54
Poaceae	*Bromus catharticus*	Vahl	NE	47, 56, 57, 59, 82, 85	Poaceae	*Cortaderia selloana*	(Schult. & Schult.f.) Asch. & Graebn.	NE	25, 26, 85
Poaceae	*Bromus lanatus*	Kunth	NE	52, 53, 57, 59, 82	Poaceae	*Ctenium brevispicatum*	J.G.Sm.	NE	11
Poaceae	*Cenchrus chilensis*	(É.Desv.) Morrone	NE	41, 42, 43, 52	Poaceae	*Ctenium chapadense*	(Trin.) Döll	NE	2, 11
Poaceae	*Cenchrus echinatus*	L.	LC	9, 23, 26	Poaceae	*Danthonia annableae*	P.M.Peterson & Rúgolo	NE	41
Poaceae	*Cenchrus myosuroides*	Kunth	NE	38, 42, 53	Poaceae	*Diectomis fastigiata*	(Sw.) P.Beauv.	NE	1, 2, 4, 5, 11, 18
Poaceae	*Cenchrus tristachyus*	(Kunth) Kuntze	NE	26, 30, 35, 37	Poaceae	*Digitaria californica*	(Benth.) Henrard	NE	31, 33, 37
Poaceae	*Chloris halophila*	Parodi	NE	38, 41	Poaceae	*Digitaria ciliaris*	(Retz.) Koeler	NE	1, 2, 14, 18, 56, 57, 68, 84
Poaceae	*Chloris virgata*	Sw.	NE	23, 26, 38	Poaceae	*Digitaria dioica*	Killeen & Rúgolo	LC	2, 11, 18
Poaceae	*Chusquea delicatula*	Hitchc.	NE	56, 59, 60	Poaceae	*Digitaria fragilis*	(Steud.) Luces	LC	1, 5, 18
Poaceae	*Chusquea lorentziana*	Griseb.	NE	25, 26, 39, 84	Poaceae	*Digitaria horizontalis*	Willd.	LC	9
Poaceae	*Chusquea picta*	Pilg.	NE	25	Poaceae	*Digitaria insularis*	(L.) Mez ex Ekman	LC	9, 10, 14, 18, 22, 26, 34, 60, 64
Poaceae	*Chusquea ramosissima*	Lindm.	NE	1	Poaceae	** Digitaria killeenii*	Vega & Rúgolo	DD	18
Poaceae	*Chusquea scandens*	Kunth	NE	25, 56, 57, 58, 59, 60, 84	Poaceae	*Digitaria lanuginosa*	(Nees) Henrard	NE	27, 37
Poaceae	*Cinnagrostis curvula*	(Wedd.) P.M.Peterson, Soreng, Romasch. & Barberá	NE	48, 51, 82	Poaceae	*Distichlis humilis*	Phil.	NE	46, 47, 48
Poaceae	*Cinnagrostis heterophylla*	(Wedd.) P.M.Peterson, Soreng, Romasch. & Barberá	NE	56, 57, 60, 82	Poaceae	*Distichlis spicata*	(L.) Greene	LC	41

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Poaceae	*Echinochloa crus-pavonis*	(Kunth) Schult.	LC	64, 68, 76
Poaceae	*Echinochloa polystachya*	(Kunth) Hitchc.	LC	5, 11, 68, 79
Poaceae	*Echinolaena gracilis*	Swallen	NE	11, 12, 18
Poaceae	*Echinolaena inflexa*	(Poir.) Chase	NE	2, 11, 62
Poaceae	*Eleusine tristachya*	(Lam.) Lam.	LC	72, 79
Poaceae	*Elionurus muticus*	(Spreng.) Kuntze	NE	1, 2, 9, 11, 12, 18, 23, 25, 26, 37, 60, 76, 84
Poaceae	*Eragrostis acutiflora*	(Kunth) Nees	NE	76
Poaceae	*Eragrostis bahiensis*	Schult.	NE	1, 18, 84
Poaceae	*Eragrostis ciliaris*	(L.) R.Br.	NE	1, 18, 25, 60
Poaceae	*Eragrostis hypnoides*	(Lam.) Britton, Sterns & Poggenb.	LC	18, 59, 64, 68, 70, 73
Poaceae	*Eragrostis lugens*	Nees	NE	26, 60
Poaceae	*Eragrostis nigricans*	(Kunth) Steud.	NE	41, 43, 48, 52
Poaceae	*Eragrostis orthoclada*	Hack.	LC	3, 22, 33, 35
Poaceae	*Eragrostis pastoensis*	(Kunth) Trin.	NE	28, 39, 40, 56, 57
Poaceae	*Eragrostis virescens*	J.Presl	NE	41
Poaceae	*Eremocaulon capitatum*	(Trin.) Londoño	NE	11
Poaceae	*Eriochloa distachya*	Kunth	NE	11, 18, 76
Poaceae	*Eriochloa grandiflora*	(Trin.) Benth.	NE	5, 18
Poaceae	*Eriochloa punctata*	(L.) Ham.	NE	4, 5, 9, 12, 14, 18, 73
Poaceae	** Festuca boliviana*	E.B.Alexeev	VU B2ab(i,ii,iii,iv)	41, 43, 85
Poaceae	*Festuca chrysophylla*	Phil.	NE	40, 43, 48, 50, 51
Poaceae	** Festuca cochabambana*	E.B.Alexeev	VU B2ab(iii)	23, 26, 82, 85, 87
Poaceae	*Festuca dolichophylla*	J.Presl	NE	25, 48, 51, 52, 56, 82, 85, 87
Poaceae	** Festuca fiebrigii*	Pilg.	NE	40, 53, 56, 57, 59, 85
Poaceae	*Festuca hieronymi*	Hack.	NE	48, 49, 85

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Poaceae	*Festuca humilior*	Nees & Meyen	NE	40, 52
Poaceae	*Festuca procera*	Kunth	NE	56, 57, 59, 60
Poaceae	** Festuca soratana*	E.B.Alexeev	EN B1ab(ii) +2ab(ii)	56
Poaceae	** Festuca trollii*	E.B.Alexeev	EN B2ab(ii)	82
Poaceae	** Gerritea pseudopetiolata*	Zuloaga, Morrone & Killeen	# EN	57
Poaceae	*Guadua chacoensis*	(Rojas Acosta) Londoño & P.M.Peterson	NE	25
Poaceae	*Guadua paniculata*	Munro	LC	1, 2, 11, 18, 67
Poaceae	*Guadua refracta*	Munro	NE	1, 2
Poaceae	*Guadua weberbaueri*	Pilg.	LC	9, 60, 63
Poaceae	*Gymnopogon fastigiatus*	Nees	NE	11, 18, 60, 76
Poaceae	*Gymnopogon spicatus*	(Spreng.) Kuntze	NE	2, 5, 11, 18
Poaceae	*Gynerium sagittatum*	(Aubl.) P.Beauv.	NE	26, 56, 60, 85
Poaceae	*Heteropogon contortus*	(L.) P.Beauv. ex Roem. & Schult.	NE	23, 25, 53
Poaceae	*Homolepis aturensis*	(Kunth) Chase	LC	11, 12, 19, 60
Poaceae	*Homolepis glutinosa*	(Sw.) Zuloaga & Soderstr.	NE	37, 57, 59, 60
Poaceae	*Hordeum muticum*	J.Presl	LC	40, 41, 52
Poaceae	*Hymenachne amplexicaulis*	(Rudge) Nees	NE	4, 5, 11, 12, 13, 18, 60, 72, 73, 79, 82
Poaceae	*Hymenachne donacifolia*	(Raddi) Chase	NE	11, 12, 18, 19, 60, 64, 72, 79
Poaceae	*Ichnanthus inconstans*	(Trin. ex Nees) Döll	NE	1, 2, 8, 11, 14, 16, 17, 60
Poaceae	*Ichnanthus ruprechtii*	Döll	NE	11, 12, 13, 18, 26, 39, 56, 57, 59, 60, 70
Poaceae	*Ichnanthus tenuis*	(J.Presl) Hitchc. & Chase	NE	11, 31, 39, 57, 60
Poaceae	*Imperata brasiliensis*	Trin.	NE	1, 2, 5, 11, 12, 18, 76, 79
Poaceae	*Imperata contracta*	Hitchc.	NE	79
Poaceae	*Imperata minutiflora*	Hack.	NE	18, 25, 60
Poaceae	*Imperata tenuis*	Hack.	NE	5, 9, 18, 76

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Poaceae	*Isachne polygonoides*	(Lam.) Döll	NE	11, 12
Poaceae	*Jarava ichu*	Ruiz & Pav.	NE	23, 25, 26, 37, 41, 47, 48, 52, 56, 85, 87
Poaceae	*Lasiacis anomala*	Hitchc.	NE	26, 32
Poaceae	*Lasiacis ligulata*	Hitchc. & Chase	NE	11, 12, 13, 18, 25, 59, 60, 62, 63, 65, 76
Poaceae	*Leersia hexandra*	Sw.	LC	5, 11, 12, 18, 19, 22, 25, 72, 76, 77, 79
Poaceae	*Leptochloa mucronata*	(Michx.) Kunth	LC	60
Poaceae	*Leptochloa pluriflora*	(E.Fourn.) P.M.Peterson & N.Snow	NE	23
Poaceae	*Leptochloa virgata*	(L.) P.Beauv.	NE	1, 14, 18, 25, 31, 60, 67, 68
Poaceae	*Loudetia flammida*	(Trin.) C.E.Hubb.	NE	11, 15, 18, 76
Poaceae	*Loudetiopsis chrysothrix*	(Nees) Conert	NE	2, 11, 26
Poaceae	*Louisiella elephantipes*	(Nees ex Trin.) Zuloaga	NE	1, 5, 63, 73, 79
Poaceae	*Luziola bahiensis*	(Steud.) Hitchc.	NE	12, 18
Poaceae	*Luziola peruviana*	J.F.Gmel.	NE	1, 18, 25, 79
Poaceae	*Luziola subintegra*	Swallen	NE	11, 12
Poaceae	*Mesosetum cayennense*	Steud.	NE	1, 2, 5, 11
Poaceae	*Mesosetum chaseae*	Luces	NE	2
Poaceae	*Microchloa indica*	(L.f.) P.Beauv.	NE	1, 18, 22, 85
Poaceae	*Muhlenbergia fastigiata*	(J.Presl) Henrard	NE	85
Poaceae	*Muhlenbergia ligularis*	(Hack.) Hitchc.	NE	56, 57
Poaceae	*Muhlenbergia peruviana*	(P.Beauv.) Steud.	NE	25, 26, 28, 56, 57, 59, 82, 85
Poaceae	*Muhlenbergia rigida*	(Kunth) Kunth	NE	23, 41, 85, 86
Poaceae	*Nassella arcuata*	(R.E.Fr.) Torres	NE	46
Poaceae	*Nassella brachyphylla*	(Hitchc.) Barkworth	NE	40, 46, 51, 52, 57
Poaceae	*Nassella inconspicua*	(J.Presl) Barkworth	NE	41, 48, 56, 57, 85
Poaceae	*Nassella meyeniana*	(Trin. & Rupr.) Parodi	NE	31, 48, 59
Poaceae	*Nassella mucronata*	(Kunth) R.W.Pohl	NE	52, 85
Poaceae	*Nassella nardoides*	(Phil.) Barkworth	LC	43, 44
Poaceae	*Nassella pubiflora*	(Trin. & Rupr.) É.Desv.	NE	41, 52, 56
Poaceae	*Oedochloa minarum*	(Nees) C.Silva & R.P.Oliveira	NE	17, 30, 53, 56, 59, 87
Poaceae	*Oedochloa procurrens*	(Nees ex Trin.) C.Silva & R.P.Oliveira	NE	2, 11, 12, 15, 18, 25, 76, 79
Poaceae	*Olyra latifolia*	L.	NE	1, 11, 12, 25, 33, 59, 60, 62, 63, 64, 70
Poaceae	*Oplismenus hirtellus*	(L.) P.Beauv.	NE	1, 4, 11, 18, 25, 26, 30, 31, 34, 37, 39, 56, 57, 59, 60, 62, 63, 70, 77
Poaceae	*Oryza grandiglumis*	(Döll) Prodoehl	LC	1, 11, 12, 18, 73
Poaceae	*Oryza latifolia*	Desv.	LC	1, 5, 18, 22
Poaceae	*Otachyrium versicolor*	(Döll) Henrard	NE	3, 4, 14, 18, 76, 77
Poaceae	*Panicum bergii*	Arechav.	NE	9
Poaceae	*Panicum cayennense*	Lam.	NE	1, 2, 4, 11, 25
Poaceae	*Panicum dichotomiflorum*	Michx.	NE	2, 5, 18, 63, 76, 79
Poaceae	*Panicum exiguum*	Mez	NE	1, 5, 8, 14, 20
Poaceae	*Panicum millegrana*	Poir.	LC	5, 18, 57
Poaceae	*Panicum olyroides*	Kunth	NE	2, 8, 11, 18, 26, 62
Poaceae	*Panicum peladoense*	Henrard	NE	9, 28
Poaceae	*Panicum quadriglume*	(Döll) Hitchc.	NE	2, 18, 25
Poaceae	*Panicum rudgei*	Roem. & Schult.	NE	11, 18, 59, 60, 62, 74
Poaceae	*Panicum sellowii*	Nees	NE	2, 11, 14, 26, 37, 56, 84
Poaceae	*Panicum trichanthum*	Nees	NE	1, 9, 11, 18, 25, 26, 35, 39, 56, 60
Poaceae	*Panicum trichoides*	Sw.	LC	1, 18, 34, 35, 60
Poaceae	*Panicum tricholaenoides*	Steud.	NE	11, 12, 18, 74, 76, 79
Poaceae	*Pappophorum caespitosum*	R.E.Fr.	NE	13, 23, 44
Poaceae	*Paspalum acuminatum*	Raddi	NE	56, 72

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Poaceae	*Paspalum ammodes*	Trin.	NE	2, 11	Poaceae	*Paspalum millegranum*	Schrad.	NE	14, 18, 76
Poaceae	*Paspalum atratum*	Swallen	NE	5, 11, 18, 56	Poaceae	*Paspalum multicaule*	Poir.	NE	1, 11, 18
Poaceae	*Paspalum carinatum*	Flüggé	NE	2, 11	Poaceae	*Paspalum notatum*	Flüggé	NE	18, 26, 39
Poaceae	*Paspalum ceresia*	(Kuntze) Chase	NE	25, 26, 27, 30, 31, 37, 60	Poaceae	*Paspalum pallens*	Swallen	NE	1, 18
Poaceae	*Paspalum cinerascens*	(Döll) A.G.Burm. & M.Bastos	NE	11	Poaceae	*Paspalum paniculatum*	L.	LC	18, 26, 37, 56, 57, 59, 60, 79, 84
Poaceae	*Paspalum compressifolium*	Swallen	NE	1, 18	Poaceae	*Paspalum parviflorum*	Rhode ex Flüggé	NE	2, 11, 18
Poaceae	*Paspalum conjugatum*	P.J.Bergius	NE	1, 11, 18, 26, 34, 35, 39, 56, 57, 59, 60, 62, 79, 84	Poaceae	*Paspalum pectinatum*	Nees	NE	2, 11, 60
Poaceae	*Paspalum crispatum*	Hack.	NE	2	Poaceae	*Paspalum pictum*	Ekman	NE	1, 18
Poaceae	* *Paspalum crucense*	(Killeen) S.Denham	EN B1ab(iii)	1, 16, 17, 18	Poaceae	*Paspalum pilosum*	Lam.	NE	1, 11
Poaceae	*Paspalum delicatum*	Swallen	NE	11	Poaceae	*Paspalum plicatulum*	Michx.	LC	1, 5, 11, 14, 18, 19, 20, 25, 32, 37, 63, 72, 76, 79, 82
Poaceae	*Paspalum densum*	Poir.	LC	11, 18, 25, 72, 76, 79	Poaceae	*Paspalum polyphyllum*	Nees ex Trin.	NE	2, 11
Poaceae	*Paspalum distichum*	L.	LC	1, 26, 41, 79	Poaceae	*Paspalum repens*	P.J.Bergius	LC	5, 11, 12, 64, 68, 72, 79
Poaceae	*Paspalum ekmanianum*	Henrard	NE	2, 11, 18, 25, 26, 30, 39, 40	Poaceae	* *Paspalum reticulinerve*	Renvoize	NE	2, 11, 12, 60, 62
Poaceae	*Paspalum erianthum*	Nees ex Trin.	NE	2, 5, 11, 18, 25	Poaceae	*Paspalum stagnophilum*	Morrone & Zuloaga	NE	11
Poaceae	*Paspalum fasciculatum*	Willd. ex Flüggé	NE	79	Poaceae	*Paspalum stellatum*	Flüggé	LC	5, 11, 18, 25, 26, 60
Poaceae	*Paspalum foliiforme*	S.Denham	NE	11, 12, 14, 18	Poaceae	*Paspalum trichophyllum*	Henrard	NE	12, 18, 72
Poaceae	*Paspalum gardnerianum*	Nees	NE	11, 18, 60	Poaceae	*Paspalum virgatum*	L.	NE	1, 9, 11, 14, 18, 19, 56, 60, 72, 79
Poaceae	*Paspalum geminiflorum*	Steud.	NE	11, 18	Poaceae	*Paspalum wrightii*	Hitchc. & Chase	NE	18, 72, 74
Poaceae	*Paspalum guenoarum*	Arechav.	NE	5, 16, 18	Poaceae	*Pharus lappulaceus*	Aubl.	NE	1, 9, 12, 31, 34, 37, 39, 59, 60
Poaceae	*Paspalum inaequivalve*	Raddi	NE	18, 39	Poaceae	*Poa adusta*	J.Presl	NE	52, 56, 57
Poaceae	*Paspalum lanciflorum*	Trin.	NE	11	Poaceae	*Poa calchaquiensis*	Hack.	NE	25, 48, 51, 52, 85
Poaceae	*Paspalum lineare*	Trin.	LC	2, 11, 12, 14, 18	Poaceae	*Poa calycina*	(J.Presl) Kunth	NE	56, 57
Poaceae	*Paspalum maculosum*	Trin.	LC	18	Poaceae	*Poa macusaniensis*	(E.H.L.Krause) Refulio	NE	48, 57
Poaceae	*Paspalum malacophyllum*	Trin.	NE	2, 5, 11, 12, 17, 18, 37, 38	Poaceae	*Poa trollii*	(Pilg.) Refulio	NE	52, 57
Poaceae	*Paspalum malmeanum*	Ekman	NE	2, 11, 18	Poaceae	*Pseudechinolaena polystachya*	(Kunth) Stapf	NE	25, 26, 27, 31, 32, 34, 39, 56, 57, 59, 84

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Poaceae	*Rhipidocladum harmonicum*	(Parodi) McClure	NE	56, 57, 60, 84
Poaceae	*Rhipidocladum neumannii*	Sulekic, Rúgolo & L.G.Clark	NE	18, 25, 26, 39, 60
Poaceae	*Rhipidocladum parviflorum*	(Trin.) McClure	NE	11, 13, 18
Poaceae	*Rhipidocladum racemiflorum*	(Steud.) McClure	NE	11, 12, 13, 18, 25, 39, 60, 84
Poaceae	*Rosengurttia monandra*	(Hack.) L.N.Silva	NE	27, 37, 55, 56, 84
Poaceae	*Sacciolepis angustissima*	(Hochst. ex Steud.) Kuhlm.	LC	11, 18, 62
Poaceae	*Sacciolepis myuros*	(Lam.) Chase	NE	11, 12, 18, 76
Poaceae	*Sacciolepis otachyrioides*	Judz.	NE	11
Poaceae	*Schizachyrium condensatum*	(Kunth) Nees	NE	2,11, 15, 26, 30, 40, 60
Poaceae	*Schizachyrium microstachyum*	(Desv.) Roseng., B.R.Arrill. & Izag.	NE	2, 5, 8, 10, 11, 18, 22, 24, 26, 31, 39, 56, 57, 60, 76, 84
Poaceae	*Schizachyrium sanguineum*	(Retz.) Alston	NE	2, 4, 11, 18, 30, 60, 62, 72
Poaceae	*Setaria fiebrigii*	R.A.W.Herrm.	NE	8, 14, 31, 39
Poaceae	*Setaria geminata*	(Forssk.) Veldkamp	NE	22, 79
Poaceae	*Setaria lachnea*	(Nees) Kunth	NE	1, 23, 40, 87
Poaceae	*Setaria parviflora*	(Poir.) Kerguélen	LC	1, 2, 9, 11, 12, 14,17, 18, 19, 23, 25, 26, 31, 37, 56, 57, 60, 72, 76, 79, 84
Poaceae	*Setaria sulcata*	Raddi	NE	1, 18, 56, 60, 73
Poaceae	*Sorghastrum minarum*	(Nees) Hitchc.	NE	5, 11, 18, 26
Poaceae	*Sorghastrum setosum*	(Griseb.) Hitchc.	NE	5, 18, 25, 72, 76, 79
Poaceae	*Sorghastrum stipoides*	(Kunth) Nash	LC	26, 37, 77
Poaceae	* *Sporobolus crucensis*	Renvoize	NT B1ab(iii)	5, 8, 18
Poaceae	*Sporobolus cubensis*	Hitchc.	NE	2, 11, 60
Poaceae	*Sporobolus indicus*	(L.) R.Br.	LC	26, 27, 31, 56, 59, 60
Poaceae	*Sporobolus monandrus*	Roseng., B.R.Arrill. & Izag.	NE	1, 8, 17, 18
Poaceae	*Sporobolus pyramidatus*	(Lam.) Hitchc.	NE	23, 86
Poaceae	*Stapfochloa elata*	(Desv.) P.M.Peterson	NE	22, 76
Poaceae	*Steinchisma hians*	(Elliott) Nash	NE	19, 76
Poaceae	*Steinchisma laxum*	(Sw.) Zuloaga	NE	1, 5, 9, 11, 12, 14, 18, 25, 31, 37, 39, 55, 56, 57, 59, 60, 62, 64, 67, 74, 76, 79, 82
Poaceae	*Stephostachys mertensii*	(Roth) Zuloaga & Morrone	NE	11, 12, 13, 84
Poaceae	*Stipa hans-meyeri*	Pilg.	NE	52, 56, 57, 82
Poaceae	*Stipa obtusa*	(Nees & Meyen) Hitchc.	NE	48, 51, 52, 85
Poaceae	*Streptogyna americana*	C.E.Hubb.	NE	11, 60, 62, 64
Poaceae	*Taquara micrantha*	(Kunth) I.L.C.Oliveira & R.P.Oliveira	NE	25, 56, 59, 60, 63, 64, 67, 82
Poaceae	*Trachypogon spicatus*	(L.f.) Kuntze	NE	5, 11, 18, 23, 26, 60, 62, 72
Poaceae	*Tragus berteronianus*	Schult.	NE	26
Poaceae	*Trichanthecium parvifolium*	(Lam.) Zuloaga & Morrone	LC	1, 11, 12, 18
Poaceae	*Trichanthecium pyrularium*	(Hitchc. & Chase) Zuloaga & Morrone	NE	3, 11
Poaceae	*Trichanthecium schwackeanum*	(Mez) Zuloaga & Morrone	NE	11, 18, 19
Poaceae	*Tripogonella spicata*	(Nees) P.M.Peterson & Romasch.	NE	1, 8, 12, 17
Poaceae	*Tripsacum australe*	Cutler & E.S.Anderson	NE	1, 11, 17
Poaceae	*Urochloa adspersa*	(Trin.) R.D.Webster	NE	9, 14, 22
Poaceae	*Urochloa lorentziana*	(Mez) Morrone & Zuloaga	NE	1, 23
Poaceae	*Urochloa paucispicata*	(Morong) Morrone & Zuloaga	NE	2, 14, 19, 22
Poaceae	*Urochloa reptans*	(L.) Stapf	NE	5
Podocarpaceae	*Pectinopitys exigua*	(de Laub.) C.N.Page	NE	23, 25, 26, 27, 84
Podocarpaceae	*Pectinopitys harmsiana*	(Pilg.) C.N.Page	NE	54, 60, 62
Podocarpaceae	*Podocarpus celatus*	de Laub.	LC	59, 60
Podocarpaceae	*Podocarpus glomeratus*	D.Don	NT	23, 25, 86, 87
Podocarpaceae	*Podocarpus oleifolius*	D.Don	LC	25, 56, 58, 59, 60, 79, 84
Podocarpaceae	*Podocarpus parlatorei*	Pilg.	NT	23, 25, 26, 27, 28, 30, 34, 37, 39, 40
Podocarpaceae	*Podocarpus rusbyi*	J.Buchholz & N.E.Gray	VU B2ab(ii,iii,v)	23, 25, 56, 59, 79, 82, 84

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Podocarpaceae	*Podocarpus sellowii*	Klotzsch ex Endl.	NE	2
Podocarpaceae	*Retrophyllum rospigliosii*	(Pilg.) C.N.Page	VU A2acd	60
Polemoniaceae	*Cantua buxifolia*	Juss. ex Lam.	LC	59, 60
Polemoniaceae	*Cantua flexuosa*	(Ruiz & Pav.) Pers.	NE	58, 85, 87
Polygalaceae	*Bredemeyera floribunda*	Willd.	LC	1, 5, 11, 12, 13, 19, 20, 26, 55, 60, 72
Polygalaceae	*Monnina salicifolia*	Ruiz & Pav.	LC	56, 59, 84, 85
Polygalaceae	*Polygala acuminata*	Willd. ex Chodat	NE	63
Polygalaceae	*Securidaca divaricata*	Nees & Mart.	NE	12, 64, 72
Polygonaceae	*Coccoloba cordata*	Cham.	NE	2, 14
Polygonaceae	*Coccoloba cujabensis*	Wedd.	NE	76
Polygonaceae	*Coccoloba spinescens*	Morong	LC	14, 22, 34
Polygonaceae	*Coccoloba tiliacea*	Lindau	NE	23, 26, 31, 32, 34, 35, 39
Polygonaceae	*Muehlenbeckia fruticulosa*	(Walp.) Standl.	NE	52, 56
Polygonaceae	*Muehlenbeckia sagittifolia*	(Ortega) Meisn.	NE	23, 26
Polygonaceae	*Muehlenbeckia tamnifolia*	(Kunth) Meisn.	NE	23, 25, 38, 40, 56, 57, 59, 60, 82, 84
Polygonaceae	*Muehlenbeckia tiliifolia*	Wedd.	NE	87
Polygonaceae	*Muehlenbeckia volcanica*	(Benth.) Endl.	NE	52, 56, 57, 59, 60, 82, 84
Polygonaceae	*Persicaria hydropiperoides*	(Michx.) Small	LC	12, 25, 26, 37, 40, 82, 83
Polygonaceae	*Polygonum punctatum*	Raf.	LC	4, 9, 18, 19
Polygonaceae	*Ruprechtia apetala*	Wedd.	NE	11, 22, 23, 25, 26, 31, 34, 35, 36, 53, 54, 60, 86
Polygonaceae	*Ruprechtia laxiflora*	Meisn.	LC	1, 2, 4, 14, 60
Polygonaceae	*Salta triflora*	(Griseb.) Adr.Sanchez	NT A2c	2, 4, 22, 23, 25, 26, 27, 35, 36, 84
Polygonaceae	*Triplaris americana*	L.	LC	1, 11, 12, 19, 24, 25, 26, 31, 60, 62, 63, 64, 67, 68, 72, 82, 84
Polygonaceae	*Triplaris gardneriana*	Wedd.	NE	1, 2, 5, 60, 72
Polygonaceae	*Triplaris poeppigiana*	Wedd.	LC	25, 60, 61, 79, 80, 82, 84

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Polygonaceae	*Triplaris setosa*	Rusby	NE	55, 60
Polypodiaceae	*Campyloneurum angustifolium*	(Sw.) Fée	NE	23, 24, 25, 26, 54, 60, 87
Polypodiaceae	*Campyloneurum fuscosquamatum*	Lellinger	NE	25, 59, 60, 61, 79, 82, 84
Polypodiaceae	*Campyloneurum phyllitidis*	(L.) C.Presl	NE	26, 34, 39, 56, 59, 60, 62, 63, 67, 82
Polypodiaceae	*Dryopteris wallichiana*	(Spreng.) Hyl.	NE	23, 25, 26, 27, 31, 34, 39, 56, 57, 59, 60, 84, 87
Polypodiaceae	*Elaphoglossum piloselloides*	(C.Presl) T.Moore	NE	25, 26, 27, 30, 37, 39, 40, 56, 57, 59
Polypodiaceae	*Microgramma megalophylla*	(Desv.) de la Sota	NE	11
Polypodiaceae	*Microgramma squamulosa*	(Kaulf.) de la Sota	NE	23, 24, 25, 26, 27, 30, 31, 32, 34, 37, 39, 60, 84, 86, 87
Polypodiaceae	*Niphidium albopunctatissimum*	Lellinger	NE	58
Polypodiaceae	*Niphidium anocarpo*	(Kunze) Lellinger	NE	58
Polypodiaceae	*Niphidium crassifolium*	(L.) Lellinger	NE	11, 12, 13, 23, 25, 26, 30, 31, 34, 56, 57, 59, 60, 82, 84
Polypodiaceae	*Platycerium andinum*	Baker	NE	60
Polypodiaceae	*Pleopeltis pycnocarpa*	(C.Chr.) A.R.Sm.	NE	25, 26, 34, 37, 53, 59, 60, 84, 87
Polypodiaceae	*Polystichum cochleatum*	Hieron.	NE	59, 60, 84
Polypodiaceae	*Serpocaulon levigatum*	(Cav.) A.R.Sm.	NE	25, 54, 55, 57, 58, 59, 60, 82, 84
Pontederiaceae	*Heteranthera limosa*	(Sw.) Willd.	NE	1, 18, 26, 30
Pontederiaceae	*Pontederia azurea*	Sw.	NE	5, 11, 12, 13, 19, 64, 79
Pontederiaceae	*Pontederia cordata*	L.	NE	5, 11, 17, 18, 62, 79
Pontederiaceae	*Pontederia crassipes*	Mart.	NE	5, 12, 13, 64
Pontederiaceae	*Pontederia rotundifolia*	L.f.	NE	5, 11, 60, 64, 72, 79
Pontederiaceae	*Pontederia subovata*	(Seub.) Lowden	NE	5, 11, 19, 60, 72
Portulacaceae	*Portulaca eruca*	Hauman	NE	8
Portulacaceae	*Portulaca grandiflora*	Hook.	NE	22
Primulaceae	*Clavija lancifolia*	Desf.	NE	1, 11, 13
Primulaceae	*Clavija nutans*	(Vell.) B.Ståhl	NE	9, 24, 26, 60, 78, 84

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Primulaceae	*Clavija tarapotana*	Mez	LC	11, 60, 64
Primulaceae	*Clavija weberbaueri*	Mez	LC	25, 60, 79, 84
Primulaceae	*Geissanthus ambiguus*	(Mart.) G.Agostini	NE	56, 79, 84
Primulaceae	*Myrsine coriacea*	(Sw.) R.Br. ex Roem. & Schult.	LC	56, 59
Primulaceae	*Myrsine laetevirens*	(Mez) Arechav.	NE	34, 54, 56, 58, 59, 60
Primulaceae	*Myrsine oligophylla*	Zahlbr.	NE	56, 60
Primulaceae	*Myrsine pearcei*	(Mez) Pipoly	NE	23, 56, 59, 60, 84
Primulaceae	*Myrsine umbellata*	Mart.	LC	11, 18, 19, 23, 25, 26, 31, 56, 60, 62, 76
Primulaceae	*Stylogyne ardisioides*	(Kunth) Mez	LC	59, 60, 61, 62, 78, 79, 84
Primulaceae	*Stylogyne cauliflora*	(Mart. & Miq.) Mez	NE	62
Proteaceae	*Panopsis yungasensis*	K.S.Edwards & R.T.Penn.	LC	56, 59
Proteaceae	*Roupala montana*	Aubl.	LC	11, 21, 26
Pteridaceae	*Adiantum glaucescens*	Klotzsch	NE	62
Pteridaceae	*Adiantum latifolium*	Lam.	NE	1, 11, 12, 13, 25, 60, 61, 63, 79, 84
Pteridaceae	*Adiantum lorentzii*	Hieron.	NE	25, 26, 27, 30, 31, 32, 34, 35, 37, 39, 58, 60
Pteridaceae	*Adiantum lucidum*	(Cav.) Sw.	NE	11, 61
Pteridaceae	*Adiantum obliquum*	Willd.	NE	60, 76
Pteridaceae	*Adiantum orbignyanum*	Mett.	NE	52, 59, 60, 84, 87
Pteridaceae	*Adiantum poiretii*	Wikstr.	NE	23, 25, 26, 55, 84
Pteridaceae	*Adiantum raddianum*	C.Presl	NE	23, 24, 25, 26, 30, 31, 37, 39, 56, 58, 59, 60, 84
Pteridaceae	*Adiantum terminatum*	Kunze ex Miq.	NE	11, 59, 60, 67, 68
Pteridaceae	*Adiantum tetraphyllum*	Humb. & Bonpl. ex Willd.	NE	1, 4, 11, 12, 13, 24, 25, 59, 60, 61, 62, 67, 84
Pteridaceae	*Ceratopteris pteridoides*	(Hook.) Hieron.	NE	5, 11, 12, 13, 64, 83
Pteridaceae	*Cheilanthes incarum*	Maxon	NE	59, 60
Pteridaceae	*Cheilanthes pilosa*	(Poir.) Tardieu	NE	41, 57, 58, 59, 60, 85
Pteridaceae	*Cheilanthes scariosa*	M.Martens & Galeotti	NE	85
Pteridaceae	*Hemionitis bonariensis*	(Willd.) Christenh.	NE	25, 26, 27, 30, 37, 38, 39, 40, 53, 56, 58, 59, 60, 84, 85, 87
Pteridaceae	*Hemionitis marginata*	(Kunth) Christenh.	NE	27, 39, 59
Pteridaceae	*Hemionitis myriophylla*	(Desv.) Christenh.	NE	25, 26, 27, 30, 32, 39, 85, 87
Pteridaceae	*Hemionitis nivea*	(Poir.) Christenh.	NE	23, 26, 30, 37, 52, 53, 59, 86
Pteridaceae	*Hemionitis pruinata*	(Kaulf.) Christenh.	NE	27, 30, 46, 52, 59, 84, 85
Pteridaceae	*Hemionitis sulphurea*	(Cav.) Christenh.	NE	49
Pteridaceae	*Hemionitis ternifolia*	(Cav.) Christenh.	NE	46
Pteridaceae	*Pteris deflexa*	Link	NE	24, 25, 26, 31, 32, 34, 37, 39, 56, 57, 59, 60, 84
Ranunculaceae	*Anemone decapetala*	Ard.	NE	59
Ranunculaceae	*Clematis campestris*	A.St.-Hil.	NE	22, 23, 26, 30, 32, 35, 37
Ranunculaceae	*Clematis dioica*	L.	NE	60
Ranunculaceae	*Clematis haenkeana*	C.Presl	NE	23, 25, 26, 27, 31, 37, 54, 57, 59, 82, 84, 87
Ranunculaceae	*Clematis millefoliolata*	Eichler	NE	52
Ranunculaceae	*Ranunculus praemorsus*	Humb., Bonpl. & Kunth ex DC.	NE	25, 26, 27, 37, 39, 52, 57, 82
Rhamnaceae	*Colletia spinosissima*	J.F.Gmel.	LC	23, 26, 38, 52, 59, 84
Rhamnaceae	*Frangula sphaerosperma*	(Sw.) Kartesz & Gandhi	NE	54, 56, 57, 58, 59
Rhamnaceae	*Kentrothamnus weddellianus*	(Miers) M.C.Johnst.	NE	26, 43, 48, 85
Rhamnaceae	*Rhamnidium elaeocarpum*	Reissek	LC	1, 2, 9, 10, 11, 12, 13, 14, 18, 19, 20, 21, 25, 26, 31, 32, 60, 61, 72, 75, 76, 78
Rhamnaceae	*Sageretia elegans*	(Kunth) Brongn.	NE	26, 86
Rhamnaceae	*Sarcomphalus joazeiro*	(Mart.) Hauenschild	NE	1, 2, 4, 9, 22, 25
Rhamnaceae	*Sarcomphalus mistol*	(Griseb.) Hauenschild	NE	2, 9, 22, 23, 25, 26, 28, 34, 35
Rhamnaceae	*Scutia buxifolia*	Reissek	LC	23, 25, 26, 37, 60, 75, 84
Rosaceae	*Acaena cylindristachya*	Ruiz & Pav.	NE	41, 56, 57, 59, 60
Rosaceae	*Acaena ovalifolia*	Ruiz & Pav.	NE	25, 56, 57, 59, 60, 82, 84

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Rosaceae	*Alchemilla andina*	(L.M.Perry) J.F.Macbr.	NE	23, 56, 57, 59, 60
Rosaceae	*Alchemilla orbiculata*	Ruiz & Pav.	NE	56, 57
Rosaceae	*Alchemilla pinnata*	Ruiz & Pav.	NE	23, 25, 26, 40, 51, 52, 56, 57, 59, 60, 82, 84, 85
Rosaceae	*Fragaria chiloensis*	(L.) Mill.	NE	56, 59
Rosaceae	*Hesperomeles ferruginea*	(Juss. ex Pers.) Benth.	LC	23, 25, 26, 56, 57, 58, 59, 60, 84, 86
Rosaceae	*Kageneckia lanceolata*	Ruiz & Pav.	NE	23, 26, 27, 35, 37, 41, 52, 85, 86
Rosaceae	*Margyricarpus pinnatus*	(Lam.) Kuntze	NE	23, 25, 26, 28, 37, 59, 84, 87
Rosaceae	*Polylepis besseri*	Hieron.	VU B2ab(i,ii,iii)	27, 30, 84, 85
Rosaceae	*Polylepis crista-galli*	Bitter	VU C1	27, 30, 34, 37, 38, 40
Rosaceae	*Polylepis hieronymi*	Pilg.	EN B2ab(i,ii,iii)	25, 26, 27, 37, 48
Rosaceae	* *Polylepis incanoides*	(M.Kessler) T.Boza & M.Kessler	VU B1ab(i,ii,iii,iv) +2ab(i,ii,iii,iv)	84
Rosaceae	*Polylepis lanata*	(Kuntze) M.Kessler & Schmidt-Leb.	EN B2ab(i,ii,iii,iv)	53, 82, 84, 85, 87
Rosaceae	* *Polylepis neglecta*	M.Kessler	EN B2ab(i,ii,iii,iv)	23, 25, 27, 30
Rosaceae	* *Polylepis pacensis*	M.Kessler & Schmidt-Leb.	EN B2ab(i,ii)	52, 59
Rosaceae	*Polylepis pepei*	B.B.Simpson	EN B2ab(i,ii,iii)	56, 57, 59, 60, 82
Rosaceae	*Polylepis racemosa*	Ruiz & Pav.	NE	82
Rosaceae	* *Polylepis subtusalbida*	(Bitter) M.Kessler & Schmidt-Leb.	EN B2ab(i,ii,iii,iv)	85
Rosaceae	*Polylepis tarapacana*	Phil.	NT B2b(i,ii,iii)	44, 45, 47, 50
Rosaceae	*Polylepis tomentella*	Wedd.	NT B2b(i,ii,iii)	26, 41, 42, 43, 48, 84
Rosaceae	*Polylepis triacontandra*	Bitter	EN B2ab(i,ii,iii,iv)	59, 60
Rosaceae	*Prunus amplifolia*	Pilg.	LC	59, 60, 64
Rosaceae	*Prunus integrifolia*	(C.Presl) Walp.	LC	25, 34, 35, 39, 54, 56, 57, 59, 60
Rosaceae	*Prunus tucumanensis*	Lillo	LC	25, 26, 27, 30, 34, 37, 39, 60
Rosaceae	*Rubus adenothallus*	Focke	NE	59
Rosaceae	* *Rubus aenigmaticus*	Focke	NE	56
Rosaceae	*Rubus bogotensis*	Kunth	NE	23, 25, 26, 28, 53, 56, 57, 58, 84
Rosaceae	*Rubus boliviensis*	Focke	NE	25, 26, 27, 28, 30, 31, 32, 34, 37, 39, 54, 56, 57, 59, 60, 84
Rosaceae	*Rubus briareus*	Focke	NE	25, 56, 57, 59, 60
Rosaceae	*Rubus buchtienii*	Focke	NE	56
Rosaceae	*Rubus bullatus*	Rusby	NE	56, 57, 59, 60
Rosaceae	*Rubus coriaceus*	Poir.	NE	54
Rosaceae	*Rubus floribundus*	Kunth	NE	25, 37, 57, 58, 59, 60, 84
Rosaceae	*Rubus glabratus*	Kunth	NE	25, 60
Rosaceae	*Rubus glaucus*	Benth.	NE	56, 60
Rosaceae	* *Rubus holtenii*	Kuntze	NE	56, 57, 60
Rosaceae	*Rubus imperialis*	Cham. & Schltdl.	NE	26, 30
Rosaceae	*Rubus loxensis*	Benth.	NE	59
Rosaceae	*Rubus megalococcus*	Focke	NE	25, 53, 56, 57, 59, 60, 84
Rosaceae	*Rubus nubigenus*	Kunth	NE	25, 56, 59, 60, 82
Rosaceae	* *Rubus ostrinus*	Focke	NE	59, 60
Rosaceae	*Rubus peruvianus*	Fritsch	NE	25, 59
Rosaceae	*Rubus roseus*	Poir.	NE	23, 25, 56, 57, 59, 60, 84
Rosaceae	* *Rubus rusbyi*	Britton	NE	56
Rosaceae	*Rubus urticifolius*	Poir.	NE	25, 82
Rosaceae	*Rubus weberbaueri*	Focke	NE	56, 59, 60
Rosaceae	*Tetraglochin cristata*	(Britton) Rothm.	NE	52, 59
Rubiaceae	*Alibertia edulis*	(Rich.) A.Rich. ex DC.	LC	2,10, 11, 12, 13, 25, 55, 60, 61, 62, 72
Rubiaceae	*Amaioua guianensis*	Aubl.	LC	11, 12, 13, 59, 60, 62, 63, 64, 75, 83, 84
Rubiaceae	*Bathysa australis*	(A.St.-Hil.) K.Schum.	NE	54, 55, 56, 59, 60, 82, 83
Rubiaceae	*Bertiera guianensis*	Aubl.	LC	11, 13, 59, 60, 62, 63, 64, 67, 69, 75, 79, 83

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Rubiaceae	*Calycophyllum megistocaulum*	(K.Krause) C.M.Taylor	LC	60, 61, 63
Rubiaceae	*Calycophyllum multiflorum*	Griseb.	NE	1, 2, 4, 11, 22, 23, 26, 31, 36, 39, 72
Rubiaceae	*Calycophyllum spruceanum*	(Benth.) Hook.f. ex K.Schum.	LC	1, 2, 9, 13, 18, 25, 63, 77
Rubiaceae	*Capirona macrophylla*	(Poepp.) Delprete	NE	11, 13, 60, 62, 63, 64
Rubiaceae	*Chiococca alba*	(L.) Hitchc.	LC	9, 15, 24, 25, 26, 31, 37, 54, 55, 60, 61, 84
Rubiaceae	* *Cinchona asperifolia*	Wedd.	EN B1ab(iii) +2ab(iii)	60
Rubiaceae	*Cinchona calisaya*	Wedd.	LC	26, 54, 55, 56, 58, 59, 60, 61, 82, 84
Rubiaceae	*Cinchona pubescens*	Vahl	LC	25, 56, 57, 59, 60, 79, 82, 84, 85
Rubiaceae	*Cinchona villosa*	Pav. ex Lindl.	NE	79
Rubiaceae	*Cordiera concolor*	(Cham.) Kuntze	NE	11, 72
Rubiaceae	*Cordiera humilis*	(K.Schum.) Kuntze	NE	11, 14
Rubiaceae	*Cordiera macrophylla*	(K.Schum.) Kuntze	LC	11, 12, 21, 60
Rubiaceae	*Cordiera pilosa*	(K.Krause) C.H.Perss. & Delprete	LC	25, 60, 61, 62, 70, 72, 77, 78, 79
Rubiaceae	*Cordiera sessilis*	(Vell.) Kuntze	NE	1, 2, 8, 11, 12, 13, 18, 21, 60, 61, 72
Rubiaceae	*Cordiera triflora*	A.Rich. ex DC.	LC	1, 2, 5, 11, 13, 14, 18, 19, 25, 60, 77
Rubiaceae	*Coussarea hydrangeifolia*	(Benth.) Benth. & Hook.f. ex Müll.Arg.	LC	2, 11, 12, 25, 62, 73, 74
Rubiaceae	*Coussarea platyphylla*	Müll.Arg.	LC	11, 12, 13, 60, 63, 64, 65
Rubiaceae	*Coutarea hexandra*	(Jacq.) K.Schum.	LC	5, 11, 13, 14, 20, 22, 26, 34, 35, 37, 39, 55, 60
Rubiaceae	*Elaeagia mariae*	Wedd.	LC	56, 57, 59, 60, 79
Rubiaceae	*Faramea capillipes*	Müll.Arg.	LC	11, 12, 13, 59, 70, 75, 77, 79
Rubiaceae	*Faramea glandulosa*	Poepp.	LC	59, 60
Rubiaceae	*Faramea multiflora*	A.Rich. ex DC.	LC	25, 59, 60
Rubiaceae	*Galium corymbosum*	Ruiz & Pav.	NE	27, 49, 51, 53, 56, 57, 59, 60, 84, 85
Rubiaceae	*Galium hypocarpium*	(L.) Endl. ex Griseb.	NE	23, 25, 26, 27, 30, 31, 56, 57, 58, 59, 60, 82, 84, 85
Rubiaceae	*Genipa americana*	L.	LC	1, 5, 11, 12, 13, 19, 25, 26, 60, 62, 63, 66, 72, 75, 76, 77, 79

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Rubiaceae	*Geophila cordifolia*	Miq.	NE	11
Rubiaceae	*Geophila macropoda*	(Ruiz & Pav.) DC.	NE	3, 59, 60, 76, 79
Rubiaceae	*Geophila repens*	(L.) I.M.Johnst.	NE	1, 5, 11, 12, 24, 60, 79, 84
Rubiaceae	*Gonzalagunia bunchosioides*	Standl.	NE	25, 60, 79, 82, 84
Rubiaceae	*Guettarda pohliana*	Müll.Arg.	LC	11, 12, 24, 25, 56, 60
Rubiaceae	*Guettarda uruguensis*	Cham. & Schltdl.	LC	1, 4, 26, 60
Rubiaceae	*Guettarda viburnoides*	Cham. & Schltdl.	NE	1, 2, 5, 11, 14, 18, 21, 60, 72, 77
Rubiaceae	*Hamelia patens*	Jacq.	LC	1, 9, 11, 12, 14, 19, 26, 31, 32, 34, 56, 59, 60, 61, 86
Rubiaceae	*Heterophyllaea lycioides*	(Rusby) Sandwith	NE	18, 49, 86, 87
Rubiaceae	*Isertia reticulata*	Britton ex Rusby	LC	58
Rubiaceae	*Manettia veronicoides*	Standl.	NE	56, 57, 59, 60
Rubiaceae	*Notopleura leucantha*	(K.Krause) C.M.Taylor	NE	79, 84
Rubiaceae	*Palicourea deflexa*	(DC.) Borhidi	NE	12, 24, 25, 59, 60, 62, 64, 79, 84
Rubiaceae	*Palicourea justiciifolia*	(Rudge) Delprete & J.H.Kirkbr.	NE	11, 12, 13, 60, 67, 70, 75, 77
Rubiaceae	*Palicourea microbotrys*	(Ruiz ex Standl.) Delprete & J.H.Kirkbr.	LC	60, 63, 84
Rubiaceae	*Palicourea prunifolia*	(Kunth) Borhidi	NE	2, 11, 60, 62, 73
Rubiaceae	*Palicourea racemosa*	(Aubl.) G.Nicholson	LC	11, 12, 13, 24, 25, 59, 60, 62, 64, 79, 82, 84
Rubiaceae	*Palicourea reticulata*	(Ruiz & Pav.) C.M. Taylor	NE	58
Rubiaceae	*Palicourea tomentosa*	(Aubl.) Borhidi	NE	11, 12, 13, 55, 58, 59, 60, 61, 62, 64, 67, 75, 79, 83, 84
Rubiaceae	*Palicourea trichophora*	(Müll.Arg.) Delprete & J.H.Kirkbr.	NE	3, 75
Rubiaceae	*Pogonopus tubulosus*	(A.Rich. ex DC.) K.Schum.	LC	1, 2, 11, 19, 26, 31, 32, 34, 35, 37, 39, 55, 60, 86
Rubiaceae	*Psychotria carthagenensis*	Jacq.	LC	1, 5, 9, 11, 12, 13, 15, 18, 19, 24, 25, 26, 31, 34, 39, 52, 56, 57, 58, 59, 60, 73, 75, 76, 77, 82, 84
Rubiaceae	*Psychotria herzogii*	S.Moore	NE	11, 23, 25, 60, 62, 66, 77, 79, 82, 84
Rubiaceae	*Psychotria viridis*	Ruiz & Pav.	LC	25, 60, 61, 63, 79, 82, 84
Rubiaceae	*Randia boliviana*	Rusby	NE	23, 25, 26, 56, 57, 59, 82

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Rubiaceae	*Randia calycina*	Cham.	NE	26, 60
Rubiaceae	*Richardia brasiliensis*	Gomes	NE	2, 15, 18, 23, 24, 25, 26, 31, 34, 37, 56, 57, 59, 76
Rubiaceae	*Ronabea emetica*	(L.f.) A.Rich.	NE	60, 79, 84
Rubiaceae	*Rudgea palicoureoides*	(Mart.) Müll.Arg.	NE	3, 11, 25, 60, 61, 75, 79, 83
Rubiaceae	*Rudgea viburnoides*	(Cham.) Benth.	NE	2, 11, 12, 21, 60, 62, 72
Rubiaceae	*Sabicea erecta*	Rusby	NE	15, 60, 61, 79, 82, 84
Rubiaceae	*Sabicea villosa*	Willd. ex Schult.	NE	11, 60, 61, 79, 82, 84
Rubiaceae	*Simira macrocrater*	(K.Schum.) Steyerm.	NE	1, 9, 59, 60
Rubiaceae	*Simira pikia*	(K.Schum.) Steyerm.	NE	11, 12, 21
Rubiaceae	*Simira rubescens*	(Benth.) Bremek. ex Steyerm.	LC	1, 11, 12, 13, 60, 64, 72
Rubiaceae	*Spermacoce latifolia*	Aubl.	NE	11, 18, 25, 59, 62, 74, 79
Rubiaceae	*Spermacoce quadrifaria*	(E.L.Cabral) Govaerts	NE	9, 11, 15, 18, 26, 60
Rubiaceae	*Spermacoce remota*	Lam.	LC	60, 82, 84
Rubiaceae	*Spermacoce tenuior*	L.	NE	53, 57, 76
Rubiaceae	*Staelia virgata*	(Willd.) K.Schum.	NE	1, 8, 14, 18, 23, 26, 27, 37, 86
Rubiaceae	*Tocoyena foetida*	Poepp.	NE	11
Rubiaceae	*Tocoyena formosa*	(Cham. & Schltdl.) K.Schum.	NE	1, 2, 5, 8, 11, 12, 14, 17, 72
Rubiaceae	*Tocoyena pittieri*	(Standl.) Standl.	NE	3, 8, 11
Rubiaceae	*Uncaria guianensis*	(Aubl.) J.F.Gmel.	NE	11, 12, 13, 25, 59, 60, 62, 64, 76, 79, 83
Rubiaceae	*Uncaria tomentosa*	(Willd. ex Schult.) DC.	NE	25, 60
Ruppiaceae	*Ruppia filifolia*	(Phil.) Skottsb.	NE	85
Rutaceae	*Angostura longiflora*	(K.Krause) Kallunki	NE	3, 13, 60, 61, 76
Rutaceae	*Dictyoloma vandellianum*	A.Juss.	LC	1, 2, 11, 15, 19, 23, 26, 56, 60, 61, 77, 84
Rutaceae	*Erythrochiton fallax*	Kallunki	LC	12, 15, 25, 59, 60, 61, 84
Rutaceae	*Esenbeckia almawillia*	Kaastra	LC	1, 2, 5, 11, 20, 22, 60, 63, 64, 67
Rutaceae	*Esenbeckia kallunkiae*	Pirani	NE	12, 13
Rutaceae	*Esenbeckia pilocarpoides*	Kunth	LC	11
Rutaceae	*Esenbeckia pumila*	Pohl	NE	11
Rutaceae	*Esenbeckia scrotiformis*	Kaastra	NE	3, 11, 24, 25, 60
Rutaceae	*Galipea trifoliata*	Aubl.	LC	1, 11, 60, 63, 64, 65
Rutaceae	*Metrodorea flavida*	K.Krause	LC	3, 11, 12, 13, 60, 61, 63, 64, 65, 66, 67, 70, 75
Rutaceae	*Ticorea tubiflora*	(A.C.Sm.) Gereau	LC	11, 25, 75, 84
Rutaceae	** Zanthoxylum aculeatissimum*	Engl.	DD	59
Rutaceae	*Zanthoxylum caribaeum*	Lam.	LC	1, 19, 21, 60, 76
Rutaceae	*Zanthoxylum coco*	Gillies ex Hook. & Arn.	LC	1, 23, 25, 26, 27, 37, 39, 84, 85, 86, 87
Rutaceae	*Zanthoxylum fagara*	(L.) Sarg.	LC	1, 2, 9, 11, 14, 19, 22, 25, 26, 31, 34, 60
Rutaceae	*Zanthoxylum monogynum*	A.St.-Hil.	LC	1, 2, 17, 19, 26, 60, 84
Rutaceae	*Zanthoxylum petiolare*	A.St.-Hil. & Tul.	LC	1, 2, 5, 9, 22, 31, 39
Rutaceae	*Zanthoxylum rhoifolium*	Lam.	LC	1, 2, 9, 11, 12, 18, 25, 26, 31, 32, 34, 37, 53, 58, 59, 65, 72, 73, 75, 84
Rutaceae	*Zanthoxylum sprucei*	Engl.	LC	13, 15, 24, 25, 60, 61, 64, 67, 72
Sabiaceae	*Meliosma herbertii*	Rolfe	LC	11, 25, 59, 60, 61, 70, 84
Sabiaceae	** Meliosma petalodentata*	Arbeláez	NT B2ab(iii)	58
Salicaceae	*Abatia spicata*	(Turcz.) Sleumer	VU B2ab(iii)	87
Salicaceae	*Abatia stellata*	Lillo	NE	25, 26, 37, 39, 49, 57, 59, 82, 87
Salicaceae	*Azara salicifolia*	Griseb.	LC	23, 25, 30, 84
Salicaceae	*Banara arguta*	Briq.	LC	5, 73
Salicaceae	*Casearia americana*	(L.) T.Samar. & M.H.Alford	LC	1, 4, 9, 13, 22, 73
Salicaceae	*Casearia arborea*	(Rich.) Urb.	LC	11, 12, 55, 56, 57, 59, 60, 64, 72, 79, 83, 84
Salicaceae	*Casearia bicolor*	Urb.	LC	11, 13, 60, 64, 65, 67
Salicaceae	*Casearia decandra*	Jacq.	LC	11, 12, 26, 31, 60, 64, 76, 77, 79, 84

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Salicaceae	*Casearia gossypiosperma*	Briq.	LC	1, 2, 5, 9, 11, 12, 13, 21, 22, 26, 55, 59, 60, 61, 63, 64, 77	Sapindaceae	*Cardiospermum corindum*	L.	NE	22, 23, 25, 26, 33, 36
Salicaceae	*Casearia mariquitensis*	Kunth	LC	11, 12, 13, 60, 65, 66, 67	Sapindaceae	*Cardiospermum grandiflorum*	Sw.	NE	2, 5, 8, 11, 14, 18, 19, 25, 59, 60
Salicaceae	*Casearia nigricolor*	Sleumer	NE	54, 59	Sapindaceae	*Cardiospermum halicacabum*	L.	LC	19, 33, 42, 56, 76, 79
Salicaceae	*Casearia pitumba*	Sleumer	LC	13, 60, 70, 83	Sapindaceae	*Cupania castaneifolia*	Mart.	NE	11, 67, 76
Salicaceae	*Casearia sylvestris*	Sw.	LC	1, 2, 4, 5, 8, 9, 11, 12, 13, 15, 18, 19, 21, 24, 25, 26, 31, 34, 39, 59, 60, 61, 63, 72, 73, 76, 77, 79, 84, 85, 86	Sapindaceae	*Cupania cinerea*	Poepp.	LC	11, 12, 13, 19, 25, 26, 59, 60, 70, 76
Salicaceae	*Lunania parviflora*	Spruce ex Benth.	LC	5, 13, 25, 60, 61, 63, 64, 66, 67, 76, 79, 82, 83	Sapindaceae	*Cupania vernalis*	Cambess.	LC	2, 11, 12, 18, 26, 31, 34, 37, 39, 72, 86
Salicaceae	*Piparea multiflora*	C.F.Gaertn.	LC	11, 60, 70, 74, 84	Sapindaceae	*Diatenopteryx sorbifolia*	Radlk.	NE	5, 31, 37, 39
Salicaceae	*Prockia crucis*	P.Browne ex L.	LC	1, 18, 24, 25, 26, 32, 34, 36, 37, 55, 59, 60, 63, 67, 82, 84	Sapindaceae	*Dilodendron bipinnatum*	Radlk.	LC	1, 2, 5, 9, 10, 11, 12, 18, 20, 25, 60, 72
Salicaceae	*Salix humboldtiana*	Willd.	LC	26	Sapindaceae	*Diplokeleba floribunda*	N.E.Br.	NT A2c	4, 5, 9, 11, 19, 22, 26
Salicaceae	*Tetrathylacium macrophyllum*	Poepp.	LC	60	Sapindaceae	** Diplokeleba herzogii*	Radlk.	DD	3, 4, 22, 26, 27
Salicaceae	*Xylosma longipetiolata*	Legname	LC	26, 83	Sapindaceae	*Dodonaea viscosa*	Jacq.	LC	23, 25, 26, 30, 34, 35, 37, 42, 57, 58, 59, 60, 85, 87
Salicaceae	*Xylosma velutina*	(Tul.) Triana & Planch.	LC	60	Sapindaceae	*Llagunoa nitida*	Ruiz & Pav.	LC	52, 53, 87
Salviniaceae	*Azolla filiculoides*	Lam.	NE	5, 52	Sapindaceae	*Magonia pubescens*	A.St.-Hil.	LC	1, 2, 12, 14, 18, 20, 21, 26, 62, 72
Salviniaceae	*Salvinia auriculata*	Aubl.	LC	4, 5, 11, 12, 64, 73, 76	Sapindaceae	*Matayba guianensis*	Aubl.	LC	4, 11, 12, 17, 18, 19, 59, 60, 72, 79
Santalaceae	** Acanthosyris asipapote*	M.Nee	# EN	15, 19	Sapindaceae	*Matayba scrobiculata*	Radlk.	LC	11, 19, 60, 62, 64
Santalaceae	*Acanthosyris falcata*	Griseb.	NT A2c	19, 22, 36	Sapindaceae	*Melicoccus lepidopetalus*	Radlk.	LC	2, 9, 19
Santalaceae	*Cervantesia bicolor*	Cav.	NE	87	Sapindaceae	*Paullinia alata*	(Ruiz & Pav.) G.Don	NE	1, 25, 56, 60, 70, 77, 79
Santalaceae	*Dendrophthora pearcei*	(Rusby) Kuijt	NE	56, 57, 59	Sapindaceae	*Paullinia clathrata*	Radlk.	NE	25, 60, 79
Santalaceae	*Jodina rhombifolia*	(Hook. & Arn.) Reissek	LC	23	Sapindaceae	*Paullinia elegans*	Cambess.	NE	4, 9, 11, 18
Santalaceae	*Phoradendron argentinum*	Urb.	NE	22	Sapindaceae	*Paullinia pinnata*	L.	NE	2, 4, 5, 18, 60, 63, 76
Santalaceae	*Phoradendron liga*	(Gillies ex Hook. & Arn.) Eichler	NE	2, 23, 42, 60	Sapindaceae	*Paullinia subnuda*	Radlk.	NE	60
Santalaceae	*Phoradendron tucumanense*	Urb.	NE	25, 34	Sapindaceae	*Paullinia tarapotensis*	Radlk.	NE	77
Sapindaceae	*Allophylus edulis*	(A.St.-Hil., A.Juss. & Cambess.) Radlk.	LC	9, 11, 26, 34, 37, 39, 60, 72	Sapindaceae	*Sapindus saponaria*	L.	LC	1, 5, 9, 13, 25, 60, 78
Sapindaceae	*Allophylus pauciflorus*	Radlk.	LC	1, 2, 4, 5, 11, 26, 27, 39, 55, 60	Sapindaceae	*Serjania caracasana*	(Jacq.) Willd.	NE	1, 2, 4, 11, 12, 37, 54, 60, 84
Sapindaceae	*Athyana weinmanniifolia*	(Griseb.) Radlk.	NE	2, 22, 23, 26, 31	Sapindaceae	*Serjania erecta*	Radlk.	NE	5, 11, 12, 18, 25

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Sapindaceae	*Serjania foveata*	Griseb.	NE	23, 25, 26, 37, 60, 63, 84, 86
Sapindaceae	*Serjania glabrata*	Kunth	NE	23, 25, 26, 27, 30, 31, 32, 35, 36, 37, 60, 64
Sapindaceae	*Serjania hebecarpa*	Benth.	NE	1, 4, 11, 14, 18, 19, 24, 26, 60
Sapindaceae	*Serjania lethalis*	A.St.-Hil.	NE	8, 9, 11, 12, 25, 31, 55, 56, 59, 60
Sapindaceae	*Serjania marginata*	Casar.	NE	1, 4, 5, 9, 12, 14, 24, 26, 37, 60
Sapindaceae	*Serjania ovalifolia*	Radlk.	NE	11, 12, 25, 26
Sapindaceae	*Serjania perulacea*	Radlk.	NE	2, 9, 12, 18, 23, 25, 26, 31, 34, 60
Sapindaceae	*Serjania pyramidata*	Radlk.	NE	11, 13, 60
Sapindaceae	*Serjania pyramidata*	Radlk.	NE	11, 13, 60
Sapindaceae	*Serjania reticulata*	Cambess.	NE	11, 12, 18, 22, 25, 26, 56, 58, 59, 60, 62
Sapindaceae	*Serjania tripleuria*	Ferrucci	NE	2, 27, 35, 60
Sapindaceae	*Talisia esculenta*	(A.St.-Hil., A.Juss. & Cambess.) Radlk.	NE	1, 8, 11, 12, 18, 21, 72, 74
Sapindaceae	*Talisia hexaphylla*	Vahl	LC	15, 25, 60, 61, 76
Sapindaceae	*Talisia retusa*	R.S.Cowan	LC	11, 60
Sapindaceae	*Thinouia compressa*	Radlk.	NE	60
Sapindaceae	*Thinouia mucronata*	Radlk.	NE	26, 31, 37
Sapindaceae	*Thinouia paraguaiensis*	(Britton) Radlk.	NE	1, 2, 14
Sapindaceae	*Urvillea chacoensis*	Hunz.	NE	4, 9, 23, 26, 31, 35, 36
Sapotaceae	*Chloroluma gonocarpa*	(Mart. & Eichler) Baill. ex Aubrév.	NE	1, 5, 9, 14, 15, 24, 25, 26, 31, 32, 34, 35, 39, 60
Sapotaceae	*Chrysophyllum lucentifolium*	Cronquist	LC	11, 60, 63, 64, 66
Sapotaceae	*Chrysophyllum marginatum*	(Hook. & Arn.) Radlk.	LC	11, 23, 25, 26, 31, 34, 37, 39, 55, 60, 86
Sapotaceae	*Chrysophyllum sparsiflorum*	Klotzsch ex Miq.	LC	11, 71
Sapotaceae	*Cornuella venezuelanensis*	Pierre	NE	24, 26, 60, 79, 83
Sapotaceae	*Diploon cuspidatum*	(Hoehne) Cronquist	LC	52, 60, 61, 63, 64, 79
Sapotaceae	*Lucuma rivicoa*	C.F.Gaertn.	NE	1, 2, 11, 12, 13, 15, 21, 60, 61, 63, 64, 66, 73
Sapotaceae	*Manilkara bidentata*	(A.DC.) A.Chev.	LC	60, 62, 64, 65, 66, 67, 70
Sapotaceae	*Manilkara inundata*	(Ducke) Ducke	LC	60, 64, 70
Sapotaceae	*Micropholis guyanensis*	(A.DC.) Pierre	LC	11, 59, 62, 63, 64, 71, 79, 83
Sapotaceae	*Pouteria bangii*	(Rusby) T.D.Penn.	LC	11, 12, 59, 60, 61, 64, 79, 83, 84
Sapotaceae	*Pouteria caimito*	(Ruiz & Pav.) Radlk.	LC	11, 12, 13, 59, 60, 63, 71, 73
Sapotaceae	*Pouteria cuspidata*	(A.DC.) Baehni	LC	11, 12, 13, 25, 59, 60, 65, 69, 71, 83
Sapotaceae	*Pouteria elegans*	(A.DC.) Baehni	LC	11
Sapotaceae	*Pouteria gardneri*	(Mart. & Eichler) Baehni	LC	1, 60
Sapotaceae	*Pouteria gardneriana*	(A.DC.) Radlk.	LC	1, 19
Sapotaceae	*Pouteria glomerata*	(Miq.) Radlk.	LC	4, 5, 11, 12, 25, 64, 77
Sapotaceae	*Pouteria guianensis*	Aubl.	LC	2, 59, 60, 84
Sapotaceae	*Pouteria nemorosa*	Baehni	NE	19, 25, 60, 72
Sapotaceae	*Pouteria plicata*	T.D.Penn.	LC	12, 64, 65
Sapotaceae	*Pouteria ramiflora*	(Mart.) Radlk.	LC	2, 5, 10, 11, 12, 18, 21, 59, 60
Sapotaceae	*Pouteria reticulata*	(Engl.) Eyma	LC	11, 60, 63
Sapotaceae	*Pouteria subcaerulea*	Pierre ex Dubard	NE	11
Sapotaceae	*Pouteria torta*	(Mart.) Radlk.	LC	2, 5, 11, 59, 60, 61, 73, 77, 84
Sapotaceae	*Pradosia brevipes*	(Pierre) T.D.Penn.	NE	11
Sapotaceae	*Sideroxylon obtusifolium*	(Roem. & Schult.) T.D.Penn.	LC	9, 19, 22, 60, 72, 87
Saxifragaceae	*Saxifraga magellanica*	Poir.	NE	52, 53, 57, 60
Schizaeaceae	*Anemia herzogii*	Rosenst.	NE	1, 4, 15, 24, 26
Schoepfiaceae	*Quinchamalium chilense*	Molina	NE	48, 52, 58, 59
Scrophulariaceae	*Alonsoa auriculata*	Diels	NE	52, 59, 60, 87
Scrophulariaceae	*Alonsoa meridionalis*	(L.f.) Kuntze	NE	25, 56, 57, 59, 60, 84, 87
Scrophulariaceae	**Buddleja anchoensis*	Kuntze	LC	9, 19, 26, 32, 34, 35

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Scrophulariaceae	*Buddleja aromatica*	J.Rémy	NE	52
Scrophulariaceae	*Buddleja coriacea*	J.Rémy	LC	85
Scrophulariaceae	*Buddleja diffusa*	Ruiz & Pav.	NE	23, 25, 26, 27, 56, 82
Scrophulariaceae	*Buddleja montana*	Britton	NE	56, 57, 58, 59, 60
Scrophulariaceae	*Buddleja stachyoides*	Cham. & Schltdl.	NE	23, 25, 26, 27, 31, 35, 37, 39, 82
Scrophulariaceae	*Buddleja tucumanensis*	Griseb.	NE	23, 25, 26, 27, 30, 32, 35, 37, 38, 42, 84, 85, 87
Scrophulariaceae	*Capraria biflora*	L.	NE	22, 36
Selaginellaceae	*Selaginella haematodes*	(Kunze) Spring	NE	25, 57, 58, 59, 60, 79, 82, 84
Selaginellaceae	*Selaginella peruviana*	(Milde) Hieron.	NE	59, 85
Simaroubaceae	*Castela coccinea*	Griseb.	NE	9, 22, 23, 26, 36
Simaroubaceae	*Simaba orinocensis*	Kunth	LC	11, 12
Simaroubaceae	*Simarouba amara*	Aubl.	LC	1, 2, 11, 12, 13, 15, 18, 59, 60, 72, 75, 78, 79, 84
Simaroubaceae	*Simarouba versicolor*	A.St.-Hil.	LC	1, 5, 19
Siparunaceae	*Siparuna aspera*	(Ruiz & Pav.) A.DC.	LC	56, 58, 59, 60, 84
Siparunaceae	*Siparuna bifida*	(Poepp. & Endl.) A.DC.	NE	11, 13, 25, 59, 60, 61, 63, 78, 79, 82, 83, 84
Siparunaceae	*Siparuna cuspidata*	(Tul.) A.DC.	LC	60, 63, 64
Siparunaceae	*Siparuna decipiens*	(Tul.) A.DC.	LC	25, 60, 62, 63, 64, 65, 70, 79, 84
Siparunaceae	*Siparuna guianensis*	Aubl.	LC	11, 12, 13, 25, 53, 59, 60, 61, 62, 63, 64, 66, 78, 84
Siparunaceae	*Siparuna krukovii*	A.C.Sm.	LC	11, 60, 67, 75
Siparunaceae	*Siparuna thecaphora*	(Poepp. & Endl.) A.DC.	LC	25, 56, 57, 59, 60, 63, 64, 82, 83, 84
Siparunaceae	*Siparuna tomentosa*	(Ruiz & Pav.) A.DC.	LC	24, 25, 26, 54, 56, 57, 59, 60, 62, 82
Smilacaceae	*Smilax campestris*	Griseb.	NE	9, 11, 12, 22, 25, 26, 27, 30, 31, 32, 34, 37, 39, 60, 64, 82, 87
Smilacaceae	*Smilax flavicaulis*	Rusby	NE	1, 59, 60, 61
Smilacaceae	*Smilax fluminensis*	Steud.	NE	2, 9, 11, 12, 13, 15, 19, 26, 57, 60, 62, 72, 74, 76, 77
Smilacaceae	*Smilax purhampuy*	Ruiz	NE	24, 25, 26, 56, 57, 59, 60, 63, 64, 82, 84

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Smilacaceae	*Smilax tomentosa*	Kunth	NE	58
Solanaceae	*Brugmansia arborea*	(L.) Sweet	EW	25, 26, 59, 82, 86, 87
Solanaceae	*Brugmansia sanguinea*	(Ruiz & Pav.) D.Don	EW	57, 59
Solanaceae	** Brunfelsia boliviana*	Plowman	LC	25, 26, 27, 31, 86
Solanaceae	*Brunfelsia grandiflora*	D.Don	LC	9, 12, 18, 60, 61, 77
Solanaceae	*Capsicum baccatum*	L.	NE	1, 15, 26, 34
Solanaceae	** Capsicum caballeroi*	M.Nee	VU B1ab(iii) +2ab(iii)	23, 25, 26, 32, 84
Solanaceae	** Capsicum cardenasii*	Heiser & P.G.Sm.	NE	52, 56
Solanaceae	** Capsicum ceratocalyx*	M.Nee	* EN	54, 55, 56
Solanaceae	*Capsicum chacoense*	Hunz.	NE	1, 2, 23, 26, 27, 28, 35, 36
Solanaceae	*Capsicum coccineum*	(Rusby) Hunz.	NE	25, 60
Solanaceae	** Capsicum eshbaughii*	Barboza	EN B1ab(iii)	26
Solanaceae	*Capsicum eximium*	Hunz.	LC	23, 26, 28, 52, 60, 87
Solanaceae	*Capsicum frutescens*	L.	NE	11, 13, 60
Solanaceae	*Capsicum minutiflorum*	(Rusby) Hunz.	NE	25, 26, 55, 60, 87
Solanaceae	*Capsicum pubescens*	Ruiz & Pav.	NE	25, 54, 57, 58
Solanaceae	*Cestrum mariquitense*	Kunth	LC	9, 23, 24, 25, 26, 60, 76
Solanaceae	*Cestrum racemosum*	Ruiz & Pav.	LC	25, 52, 61
Solanaceae	*Cestrum rigidum*	Rusby	NE	58
Solanaceae	*Cestrum strigilatum*	Ruiz & Pav.	LC	2, 5, 9, 11, 13, 19, 25, 26, 31, 32, 34, 35, 37, 55, 56, 58, 59, 60, 63, 64, 68, 76, 77, 82, 84, 85, 87
Solanaceae	*Cestrum velutinum*	Hiern	NE	26, 30, 37
Solanaceae	*Cuatresia fosteriana*	Hunz.	NE	25, 60, 79, 83
Solanaceae	*Dunalia brachyacantha*	Miers	LC	23, 25, 26, 27, 32, 37, 52, 59, 87
Solanaceae	*Eriolarynx australis*	(Griseb.) J.M.H.Shaw	NE	27, 30, 37, 38, 40
Solanaceae	*Eriolarynx fasciculata*	(Miers) Hunz.	NE	30, 87

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Solanaceae	*Fabiana bryoides*	Phil.	NE	44
Solanaceae	*Fabiana densa*	J.Rémy	NE	45, 48
Solanaceae	*Fabiana deserticola*	Reiche	NE	46
Solanaceae	* *Fabiana fiebrigii*	Scolnick ex S.C.Arroyo	NE	41
Solanaceae	*Fabiana squamata*	Phil.	EN B2ab(iii,v)	44, 46
Solanaceae	*Lycianthes lycioides*	(L.) Hassl.	NE	26, 29, 38, 40, 52, 56, 84, 87
Solanaceae	*Lycianthes pauciflora*	(Vahl) Bitter	NE	13, 25, 54, 58, 59, 84
Solanaceae	*Lycianthes repens*	(Spreng.) Bitter	NE	1, 9, 18, 19, 25, 26, 31, 32, 34, 60, 63
Solanaceae	*Lycium americanum*	Jacq.	NE	22, 23, 29, 33, 42, 86
Solanaceae	*Lycium chanar*	Phil.	NE	46
Solanaceae	*Lycium cuneatum*	Dammer	NE	22, 37
Solanaceae	*Lycium glomeratum*	Sendtn.	NE	23, 35, 37
Solanaceae	*Nicandra physalodes*	(L.) Gaertn.	NE	18, 23, 25, 26, 30, 34, 37, 54, 60, 87
Solanaceae	*Nicotiana glauca*	Graham	LC	23, 25, 26, 29, 30, 31, 34, 35, 36, 41, 42, 82, 85
Solanaceae	*Nicotiana glutinosa*	L.	LC	52
Solanaceae	*Nicotiana otophora*	Griseb.	LC	23, 25, 26, 27, 30, 31, 32, 34, 35, 86, 87
Solanaceae	*Nicotiana plumbaginifolia*	Viv.	NE	2, 9, 26, 27, 31, 37, 60
Solanaceae	*Nicotiana sylvestris*	Speg.	NE	31, 35
Solanaceae	*Nicotiana tabacum*	L.	NE	1, 18, 59, 60, 84
Solanaceae	*Nicotiana tomentosa*	Ruiz & Pav.	LC	54, 55, 56, 59, 60, 87
Solanaceae	*Nicotiana tomentosiformis*	Goodsp.	LC	53, 54, 55, 58, 60, 87
Solanaceae	*Nicotiana undulata*	Ruiz & Pav.	NE	41, 51, 52, 59, 60
Solanaceae	*Physalis angulata*	L.	LC	2, 4, 9, 11, 19, 25, 35, 59, 60, 68, 69, 72, 84
Solanaceae	*Physalis peruviana*	L.	NE	25, 26, 30, 54, 56, 57, 58, 59, 60, 82, 87
Solanaceae	*Physalis pubescens*	L.	NE	15, 26, 31, 32, 59, 60, 61, 64, 68, 73, 87

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Solanaceae	*Physalis viscosa*	L.	NE	9, 23, 25, 26, 28, 37
Solanaceae	*Salpichroa glandulosa*	(Hook.) Miers	NE	57, 58, 59, 60, 84, 85
Solanaceae	*Salpichroa origanifolia*	(Lam.) Baill.	NE	23, 25, 26, 28, 35, 39
Solanaceae	*Salpichroa tristis*	Walp.	NE	23, 26, 40, 85
Solanaceae	*Solanum abutiloides*	Bitter & Lillo	LC	23, 26, 31, 32, 34, 35, 37, 39, 85, 87
Solanaceae	*Solanum acaule*	Bitter	LC	29, 40, 41, 48, 51, 52, 53, 57, 58, 59, 82, 85, 87
Solanaceae	*Solanum aloysiifolium*	Dunal	NE	2, 11, 13, 23, 24, 25, 26, 27, 28, 30, 31, 32, 34, 35, 36, 37, 39, 40, 49, 55, 56, 57, 59, 60, 66, 82, 84, 85, 87
Solanaceae	*Solanum americanum*	Mill.	NE	2, 13, 18, 19, 25, 26, 29, 36, 54, 55, 56, 58, 59, 60, 63, 64, 68, 75, 76, 84, 87
Solanaceae	*Solanum argentinum*	Bitter & Lillo	NE	32, 34, 35, 36, 37, 38
Solanaceae	*Solanum aridum*	Morong	NE	35, 84, 86
Solanaceae	*Solanum barbeyanum*	Huber	LC	79
Solanaceae	*Solanum berthaultii*	Hawkes	NE	25, 26, 29, 30, 38
Solanaceae	*Solanum betaceum*	Cav.	NE	25, 26, 27, 31, 32, 34, 37, 39, 56, 82, 84, 86
Solanaceae	* *Solanum bolivianum*	Britton ex Rusby	NE	23, 25, 26, 56, 57, 58, 82, 84
Solanaceae	*Solanum boliviense*	Dunal	LC	30, 40, 48, 52, 53, 56, 82, 84, 85, 87
Solanaceae	*Solanum brevicaule*	Bitter	LC	23, 26, 29, 30, 41, 42, 43, 46, 48, 52, 56, 60, 82, 84, 85, 87
Solanaceae	*Solanum caricaefolium*	Rusby	NE	9, 11, 24, 25, 26, 56, 60, 64, 76, 82, 84
Solanaceae	*Solanum chacoense*	Bitter	LC	23, 26, 27, 28, 30, 33, 37, 39, 58, 87
Solanaceae	*Solanum chmielewskii*	(C.M.Rick, Kesicki, Fobes & M.Holle) D.M. Spooner, G.J.Anderson & R.K.Jansen	EN B2ab(iii,v)	60
Solanaceae	*Solanum confusum*	C.V.Morton	NE	23, 25, 26, 27, 31, 34, 37, 39, 54, 56, 59, 60, 82, 84, 85, 86, 87
Solanaceae	*Solanum consimile*	C.V.Morton	NE	15, 23, 24, 25, 26, 31, 32, 34, 35, 37, 39, 82, 84, 86
Solanaceae	*Solanum daphnophyllum*	Bitter	VU B2ab(i,ii,iii,iv)	26, 31, 60
Solanaceae	* *Solanum doddsii*	Correll	# EN	29
Solanaceae	*Solanum exiguum*	Bohs	NE	25, 60, 61, 68, 79
Solanaceae	*Solanum glaucophyllum*	Desf.	NE	2, 4, 5, 9, 22, 73

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Solanaceae	*Solanum gomphodes*	Dunal	NE	11, 12, 18, 72
Solanaceae	*Solanum gonocladum*	Dunal	NE	23, 25, 38, 52, 56, 59, 82, 84, 85, 87
Solanaceae	*Solanum goodspeedii*	K.E.Roe	LC	25, 57, 58, 59, 60, 82, 84
Solanaceae	*Solanum hieronymi*	Kuntze	NE	22, 23, 26, 35, 36, 38, 86
Solanaceae	*Solanum infundibuliforme*	Phil.	NE	41
Solanaceae	** Solanum maternum*	Bohs	LC	23, 25, 26, 27, 54, 56, 79, 82, 84
Solanaceae	*Solanum maturecalvans*	Bitter	LC	23, 25, 27, 31, 32, 34, 39, 56, 59, 60, 82, 84, 85, 87
Solanaceae	*Solanum microdontum*	Bitter	NE	23, 26, 27, 37, 40, 84
Solanaceae	*Solanum mite*	Ruiz & Pav.	NE	25, 26, 55, 60, 67, 84
Solanaceae	*Solanum morellifolium*	Bohs	NE	25, 55, 64, 84
Solanaceae	** Solanum neocardenasii*	Hawkes & Hjert.	EN B1ab(iii,v)	23
Solanaceae	*Solanum nitidum*	Ruiz & Pav.	LC	52, 53, 57, 58, 59, 60, 84, 85, 87
Solanaceae	*Solanum okadae*	Hawkes & Hjert.	EN B2ab(iii,v)	42, 84, 85, 87
Solanaceae	*Solanum palinacanthum*	Dunal	NE	1, 2, 13, 18, 19, 23, 26, 27, 30, 36, 49, 76, 86
Solanaceae	*Solanum palitans*	C.V.Morton	NE	23, 25, 26, 30, 38, 52, 53, 58, 59, 84, 85, 87
Solanaceae	*Solanum pendulum*	Ruiz & Pav.	NE	60
Solanaceae	*Solanum placitum*	C.V.Morton	NE	2, 63
Solanaceae	*Solanum probolospermum*	Bitter	NE	57, 59, 60, 82, 85, 87
Solanaceae	*Solanum proteanthum*	Bohs	LC	11, 12, 13, 70, 73
Solanaceae	*Solanum pseudocapsicum*	L.	NE	1, 2, 9, 18, 19, 22, 23, 25, 26, 27, 30, 31, 34, 37, 39, 86
Solanaceae	*Solanum radicans*	L.f.	NE	59, 82
Solanaceae	*Solanum riparium*	Pers.	LC	1, 2, 5, 9, 11, 19, 23, 25, 26, 27, 30, 31, 32, 34, 37, 39, 53, 56, 60, 61, 84, 87
Solanaceae	*Solanum roseum*	Bohs	NE	54, 56, 57, 59, 60
Solanaceae	*Solanum sessile*	Ruiz & Pav.	LC	19, 25, 26, 31, 32, 60, 61, 66, 77, 82, 84
Solanaceae	*Solanum sisymbriifolium*	Lam.	NE	22, 23, 25, 26, 27, 28, 30, 31, 34, 37, 38, 58, 59, 60, 64, 68, 79, 84, 86, 87
Solanaceae	** Solanum stipuloideum*	Rusby	NE	23, 25, 26, 52, 53, 84, 85, 87
Solanaceae	*Solanum stuckertii*	Bitter	NE	35, 36, 60
Solanaceae	*Solanum symmetricum*	Rusby	LC	1, 25, 26, 30, 32, 34, 37, 39, 56, 59, 84
Solanaceae	*Solanum tenuisetosum*	(Bitter) Bohs	NE	25, 60, 65
Solanaceae	*Solanum tenuispinum*	Rusby	NE	23, 25, 26, 27, 28, 30, 34, 37, 39, 49, 53, 56, 57, 58, 82, 84, 87
Solanaceae	*Solanum thelopodium*	Sendtn.	LC	25, 60, 61, 73, 77, 79, 84
Solanaceae	*Solanum tripartitum*	Dunal	NE	30, 40, 41, 42, 48, 52, 82
Solanaceae	*Solanum tuberosum*	L.	NE	25, 52
Solanaceae	*Solanum uncinellum*	Lindl.	NE	11, 22, 25, 58, 64, 68, 75, 79
Solanaceae	*Solanum unilobum*	(Rusby) Bohs	VU B2ab(ii,iii,iv)	24, 25, 56, 57, 59, 82, 84
Solanaceae	*Solanum violaceimarmoratum*	Bitter	LC	56, 57, 59, 60, 79, 82, 84
Solanaceae	** Trompettia cardenasiana*	(Hunz.) J.Dupin	VU B1ab(iii) +2ab(iii)	41, 43
Solanaceae	*Vassobia breviflora*	(Sendtn.) Hunz.	LC	23, 25, 26, 27, 28, 30, 31, 34, 35, 37, 39
Solanaceae	*Witheringia solanacea*	L'Hér.	LC	15, 25, 67, 82, 84
Staphyleaceae	*Turpinia occidentalis*	(Sw.) G.Don	LC	11, 13, 19, 25, 34, 57, 59, 60, 64, 65
Styracaceae	*Styrax ferrugineus*	Nees & Mart.	NE	2, 5, 8, 11, 24
Styracaceae	*Styrax guyanensis*	A.DC.	LC	11, 12, 13, 70
Styracaceae	*Styrax pohlii*	A.DC.	LC	11, 60
Styracaceae	*Styrax sieberi*	Perkins	LC	11, 13, 15, 25, 60, 78
Symplocaceae	** Symplocos neei*	B.Ståhl	VU B1ab(ii,iii) +2ab(ii,iii)	23, 25, 26
Talinaceae	*Talinum fruticosum*	(L.) Juss.	NE	1, 9, 14, 18, 25, 30, 32, 34, 35, 56, 60, 86, 87
Talinaceae	*Talinum paniculatum*	(Jacq.) Gaertn.	NE	1, 9, 12, 18, 22, 23, 25, 26, 30, 32, 37, 39, 56, 60, 86, 87
Talinaceae	*Talinum polygaloides*	Gillies ex Arn.	NE	22, 23, 26
Tropaeolaceae	*Tropaeolum peregrinum*	L.	NE	57
Tropaeolaceae	*Tropaeolum tuberosum*	Ruiz & Pav.	NE	56, 59, 60, 87

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Turneraceae	*Turnera melochioides*	Cambess.	NE	5, 11
Typhaceae	*Typha domingensis*	Pers.	NE	5, 9, 18
Ulmaceae	*Ampelocera ruizii*	Klotzsch	LC	11, 12, 13, 18, 24, 25, 60, 61, 73, 76, 77, 79
Ulmaceae	*Phyllostylon rhamnoides*	(J.Poiss.) Taub.	LC	1, 2, 4, 5, 9, 14, 22, 27, 31, 34, 60, 72
Urticaceae	*Boehmeria caudata*	Sw.	LC	25, 26, 27, 31, 32, 34, 39, 56, 57, 58, 59, 60, 82, 84, 87
Urticaceae	*Boehmeria pavonii*	Wedd.	LC	11, 15, 19, 23, 24, 25, 26, 31, 56, 58, 60, 61, 82, 84
Urticaceae	*Cecropia angustifolia*	Trécul	LC	59, 60
Urticaceae	*Cecropia concolor*	Willd.	LC	1, 9, 11, 12, 13, 60, 67, 72, 73, 76
Urticaceae	*Cecropia distachya*	Huber	LC	1, 11, 60
Urticaceae	*Cecropia engleriana*	Snethl.	LC	60, 63, 72
Urticaceae	*Cecropia ficifolia*	Warb. ex Snethl.	LC	64, 66
Urticaceae	*Cecropia membranacea*	Trécul	LC	11, 31, 60, 63, 77
Urticaceae	*Cecropia polystachya*	Trécul	LC	9, 12, 19, 26, 56, 60, 83
Urticaceae	*Cecropia saxatilis*	Snethl.	LC	11
Urticaceae	*Cecropia sciadophylla*	Mart.	LC	60, 63, 64, 67, 70, 84
Urticaceae	*Coussapoa ovalifolia*	Trécul	LC	25, 60, 63, 79
Urticaceae	*Coussapoa villosa*	Poepp. & Endl.	LC	60, 84
Urticaceae	*Myriocarpa stipitata*	Benth.	LC	25, 26, 31, 59, 60, 76, 84
Urticaceae	*Pilea multiflora*	(Poir.) Wedd.	LC	23, 25, 56, 57, 59, 60, 80, 82, 84, 87
Urticaceae	*Pourouma cecropiifolia*	Mart.	LC	11, 13, 25, 59, 60, 61, 63, 65, 70, 72, 79, 83, 84
Urticaceae	*Pourouma guianensis*	Aubl.	LC	5, 11, 12, 13, 60, 63, 64, 65, 67, 70, 75, 79, 83, 84
Urticaceae	*Pourouma minor*	Benoist	LC	11, 59, 60, 63, 64, 65, 70, 75, 79, 84
Urticaceae	*Pourouma tomentosa*	Mart. ex Miq.	LC	59, 60, 84
Urticaceae	*Urera aurantiaca*	Wedd.	NE	11, 13, 19, 26, 32, 39, 60, 66, 76, 79
Urticaceae	*Urera baccifera*	(L.) Gaudich. ex Wedd.	LC	1, 5, 9, 11, 12, 18, 25, 26, 31, 32, 34, 35, 37, 39, 55, 56, 57, 59, 60, 72, 79, 84, 86

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Urticaceae	*Urera capitata*	Wedd.	NE	1, 11, 13, 18, 25, 26, 31, 32, 34, 60, 63, 64, 82, 87
Urticaceae	*Urera laciniata*	Wedd.	LC	25, 60, 82, 84
Urticaceae	*Urera simplex*	Wedd.	LC	25, 26, 31, 32, 34, 55, 56, 57, 58, 59, 60, 61, 82
Urticaceae	*Urtica echinata*	Benth.	NE	50, 51, 52, 59, 60
Urticaceae	*Urtica flabellata*	Kunth	NE	59, 60, 85, 87
Urticaceae	*Urtica magellanica*	Juss. ex Poir.	NE	34, 59
Velloziaceae	** Barbaceniopsis boliviensis*	(Baker) L.B.Sm.	NE	23
Verbenaceae	*Aloysia deserticola*	(Phil.) Lu-Irving & N.O'Leary	NE	46
Verbenaceae	*Aloysia fiebrigii*	(Hayek) Moldenke	NE	41
Verbenaceae	*Aloysia gratissima*	(Gillies & Hook.) Tronc.	NE	23, 26, 28, 30, 82
Verbenaceae	*Aloysia polystachya*	(Griseb.) Moldenke	NE	26
Verbenaceae	*Aloysia virgata*	(Ruiz & Pav.) Juss.	LC	9, 19, 22, 26, 31, 33, 59, 60
Verbenaceae	*Bouchea boliviana*	(Kuntze) Moldenke	NE	25, 26, 34, 59, 60, 61
Verbenaceae	*Duranta erecta*	L.	LC	19, 37, 85, 87
Verbenaceae	*Duranta serratifolia*	(Griseb.) Kuntze	LC	23, 25, 26, 27, 30, 31, 32, 34, 39, 86, 87
Verbenaceae	*Junellia minima*	(Meyen) Moldenke	NE	47, 50, 51, 52
Verbenaceae	*Junellia seriphioides*	(Gillies & Hook.) Moldenke	NE	46
Verbenaceae	*Lampayo castellani*	Moldenke	NE	45, 46, 47
Verbenaceae	*Lantana balansae*	Briq.	NE	25, 52, 85
Verbenaceae	*Lantana camara*	L.	NE	12, 18, 26, 60, 62, 76
Verbenaceae	*Lantana canescens*	Kunth	NE	1, 23, 26, 30, 31, 32
Verbenaceae	*Lantana micrantha*	Briq.	NE	2, 5, 23, 37, 39
Verbenaceae	*Lantana trifolia*	L.	NE	2, 11, 19, 25, 26, 30, 31, 32, 34, 37, 39, 56, 58, 59, 60, 72, 75, 76, 82, 84, 86
Verbenaceae	*Lippia integrifolia*	(Griseb.) Hieron.	NE	85
Verbenaceae	*Pitraea cuneato-ovata*	(Cav.) Caro	NE	52

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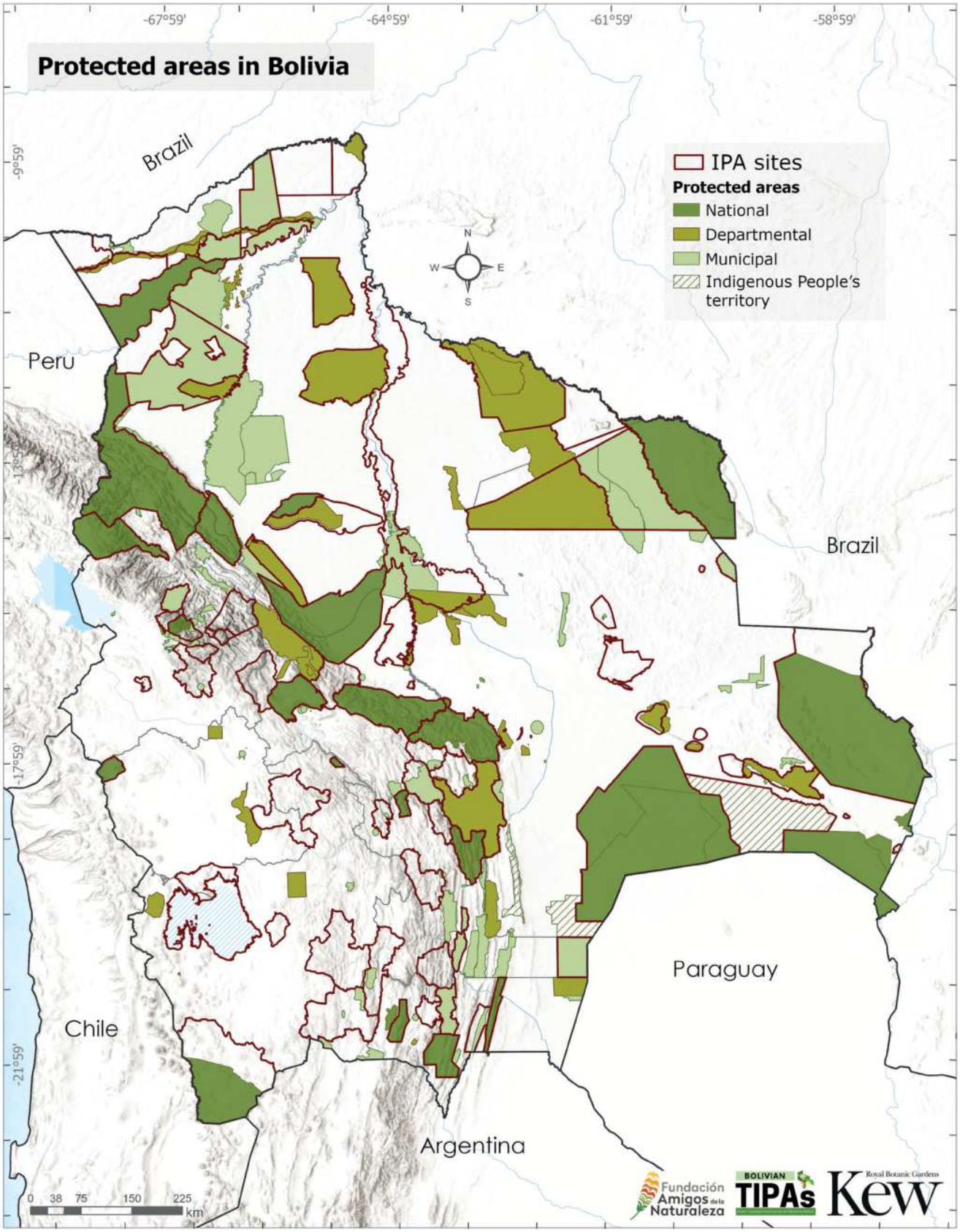
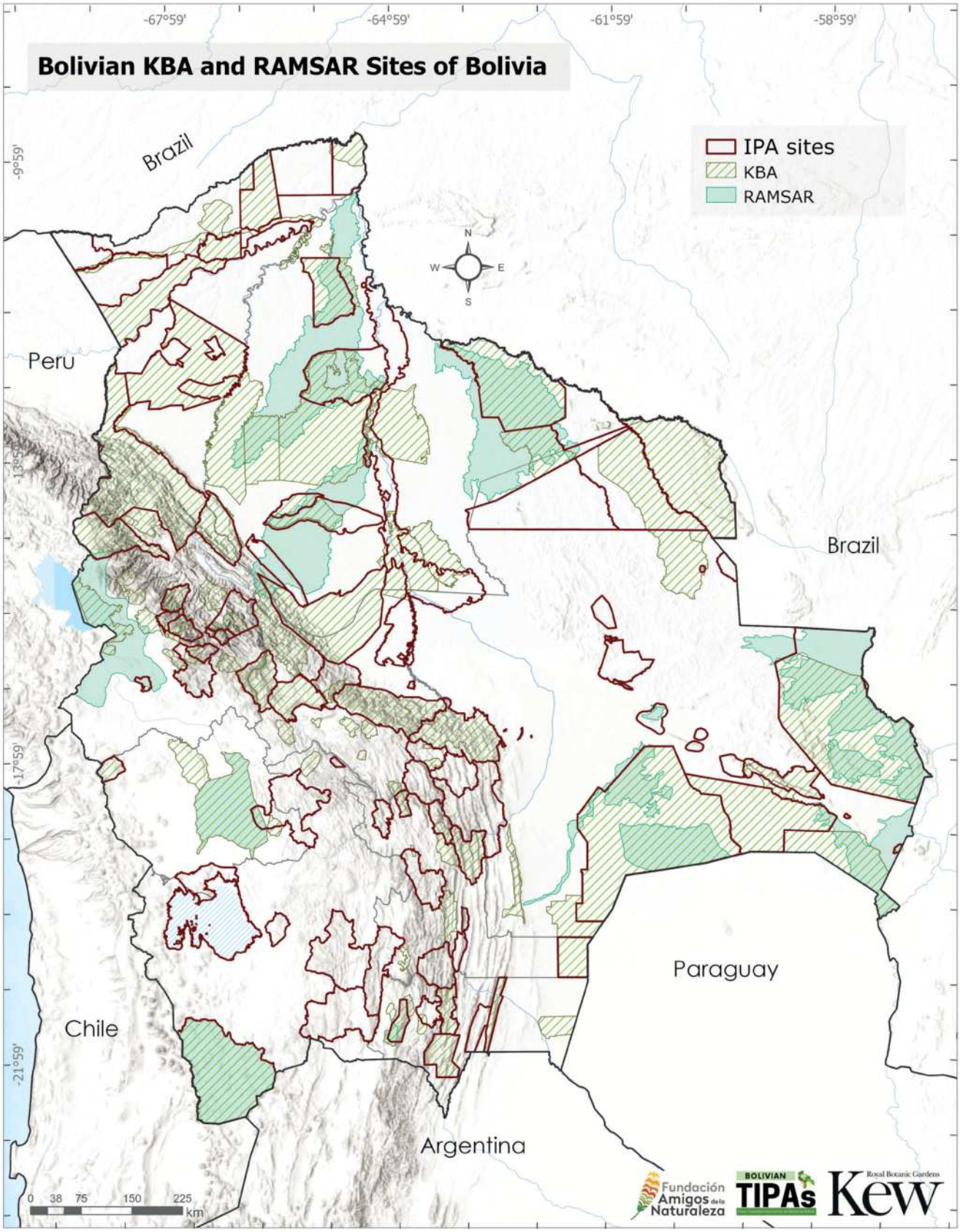
Verbenaceae	*Priva lappulacea*	(L.) Pers.	NE	9, 18, 68, 77, 78, 87	Vochysiaceae	*Callisthene major*	Mart.	NE	2, 72
Verbenaceae	** Recordia boliviana*	Moldenke	VU B1ab(ii,iii) +2ab(ii,iii)	24, 25, 26, 31	Vochysiaceae	*Callisthene microphylla*	Warm.	NE	11
Verbenaceae	*Stachytarpheta cayennensis*	(Rich.) Vahl	NE	1, 5, 8, 11, 18, 25, 26, 31, 56, 58, 59, 60, 63, 64, 82, 84, 86, 87	Vochysiaceae	*Erisma gracile*	Ducke	NE	12
Verbenaceae	*Verbena aristigera*	S.Moore	NE	23, 26, 27, 42, 84, 85	Vochysiaceae	*Erisma uncinatum*	Warm.	LC	11, 12, 64, 74
Verbenaceae	*Verbena dissecta*	Willd. ex Spreng.	NE	23, 30, 31	Vochysiaceae	*Qualea cordata*	Spreng.	LC	2, 4, 5, 11, 20
Verbenaceae	*Verbena hispida*	Ruiz & Pav.	NE	23, 53, 57, 59, 60, 84, 87	Vochysiaceae	*Qualea grandiflora*	Mart.	LC	1, 2, 5, 10, 11, 12, 15, 18, 20, 21, 60, 63, 64, 65, 72
Verbenaceae	*Verbena litoralis*	Kunth	NE	23, 25, 26, 82	Vochysiaceae	*Qualea multiflora*	Mart.	LC	1, 2, 4, 5, 11, 12, 17, 18, 20, 21, 60, 61, 79
Viburnaceae	*Sambucus peruviana*	Kunth	LC	23, 25, 26, 27, 31, 32, 34, 37, 39, 56, 59, 60, 84	Vochysiaceae	*Qualea paraensis*	Ducke	LC	11, 60, 64, 74
Viburnaceae	*Viburnum seemenii*	Graebn.	LC	23, 24, 25, 26, 27, 31, 32, 34, 37, 39, 54, 56, 57, 58, 59, 60, 82, 84, 86, 87	Vochysiaceae	*Qualea parviflora*	Mart.	NE	2, 5, 8, 11, 18, 21, 64, 72
Violaceae	*Leonia crassa*	L.B.Sm. & A.Fernández	LC	59, 60, 61, 65, 70, 79	Vochysiaceae	*Ruizterania albiflora*	(Warm.) Marc.-Berti	LC	64, 70
Violaceae	*Leonia cymosa*	Mart.	LC	64, 65	Vochysiaceae	*Salvertia convallariodora*	A.St.-Hil.	LC	11, 12, 18
Violaceae	*Leonia glycycarpa*	Ruiz & Pav.	LC	11, 25, 57, 60, 63, 64, 65, 66, 67, 69, 70, 71, 73, 74, 76, 77, 79, 80, 84	Vochysiaceae	*Vochysia citrifolia*	Poir.	LC	11, 12, 60
Violaceae	*Leonia ulei*	(Melch.) Byng & Christenh.	NE	11, 60, 62, 63, 64, 65, 75, 83	Vochysiaceae	*Vochysia divergens*	Pohl	NE	11, 12, 18, 64, 72, 74
Violaceae	*Pombalia atropurpurea*	(A.St.-Hil.) Paula-Souza	NE	1, 3, 18, 26, 31, 34, 61	Vochysiaceae	*Vochysia ferruginea*	Mart.	LC	11, 12, 64, 65, 66, 69, 76, 79
Violaceae	*Rinorea lindeniana*	(Tul.) Kuntze	LC	60, 63, 64, 65, 66, 67, 77, 79, 83	Vochysiaceae	*Vochysia haenkeana*	Mart.	LC	11, 12, 18, 20, 24, 60
Violaceae	*Rinorea viridifolia*	Rusby	LC	13, 25, 60, 62, 64, 65, 67, 70, 76, 77, 79, 83, 84	Vochysiaceae	*Vochysia herbacea*	Pohl	NE	5, 11, 18, 72
Vitaceae	*Cissus erosa*	Rich.	NE	1, 4, 5, 11, 12, 13, 17, 18, 26, 56, 57, 60, 72, 73, 74, 76, 79	Vochysiaceae	*Vochysia lanceolata*	Stafleu	DD	11, 25
Vitaceae	*Cissus gongylodes*	(Baker) Burch. ex Baker	NE	12, 15, 25, 55, 60, 61, 64, 76, 77	Vochysiaceae	*Vochysia mapirensis*	Rusby	LC	11, 15, 24, 59, 60, 76, 84
Vitaceae	*Cissus lombardiana*	Kottaim.	NE	11, 63	Vochysiaceae	*Vochysia obidensis*	(Huber) Ducke	NE	11
Vitaceae	*Cissus palmata*	Poir.	NE	3, 4, 19, 68, 73	Vochysiaceae	*Vochysia rufa*	Mart.	LC	5, 11, 12, 18, 21, 72
Vitaceae	*Cissus verticillata*	(L.) Nicolson & C.E.Jarvis	LC	1, 5, 11, 12, 13, 14, 18, 19, 22, 26, 39, 57, 60, 72, 73, 76, 79	Vochysiaceae	*Vochysia tucanorum*	Mart.	LC	2, 11, 72
Vitaceae	*Clematicissus granulosa*	(Ruiz & Pav.) Lombardi	NE	59	Xyridaceae	*Abolboda pulchella*	Bonpl.	NE	11
Vitaceae	*Clematicissus simsiana*	(Roem. & Schult.) Lombardi	NE	5, 9, 12, 25, 26, 35, 60, 79	Zamiaceae	*Zamia boliviana*	(Brongn.) A.DC.	LC	1, 5, 11, 12, 25, 61, 62, 76
Vitaceae	*Clematicissus tweedieana*	(Baker) Lombardi	NE	2, 34, 35	Zingiberaceae	*Renealmia breviscapa*	(Poepp. & Endl.) Poepp. & Endl.	NE	11, 13, 60, 62, 63, 82
Vochysiaceae	*Callisthene fasciculata*	Mart.	LC	1, 4, 5, 6, 11, 12, 18, 21, 72	Zygophyllaceae	** Bulnesia rivas-martinezii*	G.Navarro	# EN	30, 42

Family	Species (taxon)	Author	IUCN category and criteria	Presence in IPA sites
Zygophyllaceae	* *Guaiacum nellii*	(G.Navarro) Christenh. & Byng	# VU	22
Zygophyllaceae	*Kallstroemia boliviana*	Standl.	NE	23, 42, 56, 82
Zygophyllaceae	*Plectrocarpa bonariensis*	(Griseb.) Christenh. & Byng	LC	22, 36
Zygophyllaceae	*Plectrocarpa sarmientoi*	(Lorentz ex Griseb.) Christenh. & Byng	EN A3c+4c	4, 22
Zygophyllaceae	*Porlieria microphylla*	(Baill.) Descole, O'Donell & Lourteig	LC	23, 25, 26


Protected areas in Bolivia
-67°59'
-64°59'
-61°59'
-58°59'
-9°59'
-13°59'
-17°59'
-21°59'
Brazil
Peru
Brazil
Paraguay
Chile
Argentina
IPA sites
Protected areas
National
Departmental
Municipal
Indigenous People's territory
N
W
E
S
0 38 75 150 225 km
Fundación Amigos de la Naturaleza
BOLIVIAN TIPAs
Royal Botanic Gardens Kew


Bolivian KBA and RAMSAR Sites of Bolivia
-67°59'
-64°59'
-61°59'
-58°59'
-9°59'
-13°59'
-17°59'
-21°59'
IPA sites
KBA
RAMSAR
N
W
E
S
Brazil
Peru
Brazil
Paraguay
Chile
Argentina
0 38 75 150 225 km
Fundación Amigos de la Naturaleza
BOLIVIAN TIPAs
Royal Botanic Gardens Kew

Important Plant Areas of Bolivia synthesises our current knowledge regarding the most critical sites for plant diversity and the unique, threatened habitats of Bolivia. Compiled by a team of 36 botanists and conservationists representing 19 Bolivian and British institutions, this volume details the national network of 87 Important Plant Areas (IPAs).

Factsheets for all IPAs outline the significant plant diversity they harbour, the habitats or vegetation types present at each site, and the management and conservation challenges they face. Furthermore, each factsheet is illustrated with examples of the landscapes and the unique plants typical of the site.

The network of IPA sites covers 37% of Bolivia's land area and is home to 1,909 (79%) of the plant species endemic to Bolivia and 3,255 (90%) of the plant species recorded as useful in the country, including 200 wild relatives of crops such as chillies and peppers, beans, potatoes, tomatoes, peanuts, quinoa, and cassava. Whilst highlighting Bolivia's standing as one of the world's megadiverse countries, this volume provides a vital resource for nature conservation, land-use planning, and prioritisation efforts at a national level.

Biographies of the core Bolivia TIPAs team:

Maira T. Martinez-Ugarteche is a Research Associate at the Museo Noel Kempff Mercado, whose research focuses on plant diversity, taxonomy, ecology, and conservation in Bolivia. She is an IUCN Red List assessor and trainer. From 2022 to 2025, she led the Bolivia-based research team for the Royal Botanic Gardens, Kew's Bolivia TIPAs project.

Liliana Arroyo-Herbas holds a bachelor's degree in biology from the Universidad Gabriel René Moreno. She has expertise in botanical studies, ecology, and plant extinction risk assessment. Over the past three years, she has served as a Biodiversity Technician at the Fundación Amigos de la Naturaleza, working on the Bolivia TIPAs project.

Oriana Lino-Villalba holds a bachelor's degree in environmental sciences. In 2021, she served as a curatorial assistant at the Herbario del Oriente Boliviano (USZ). Her primary research interests include geographic information systems (GIS), ecology, and ethnobotany. Since 2022, she has served as a Technician at the Fundación Amigos de la Naturaleza (FAN) for the Bolivia TIPAs project.

Bente B. Klitgaard is a Senior Research Leader at the Royal Botanic Gardens, Kew. She has spent 40 years researching the taxonomy and systematics of the family Fabaceae in the tropics, training graduate and postgraduate students, and leading plant conservation projects across Latin America. Over the past 18 years, her plant conservation research has focused primarily on Bolivia, where she serves as the Principal Investigator for the Bolivia TIPAs project.

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