

Sebastian Hachmeyer and Silke Lichtenberg (Eds.)
Music-Making Materials

Center for World Music – Studies in Music

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Natural Resource Use and Sustainability
in Musical Instrument Making

UW Universitätsverlag
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Cassandre Balosso-Bardin

Cassandre Balosso-Bardin is an Assistant Professor of Cultural Musicology at the University of Leuven in Belgium, where she leads the Cultural Musicology research group. Her research specialises in musical instruments, cultural sustainability, music revivals, and the musical instrument-making industry. She has a specialism in bagpipes and is the founding director of the International Bagpipe Organisation, as well as the co-founder of International Bagpipe Day. Cassandre holds a PhD from SOAS, University of London (2016), after which she carried out postdoctoral research at Sorbonne Universités (Geste-Acoustique-Musique project). Her previous appointments include a lectureship at the University of Lincoln (UK), where she was promoted to Associate Professor in 2022. In 2022-23, she was awarded a senior fellowship at the Metropolitan Museum of Art in New York, carrying out the first in-depth study of their bagpipe collection. Cassandre is also a professional musician and plays the bagpipes and recorders in several groups.

Cekouat Elim León-Peralta

Cekouat Elim León-Peralta is a Biologist and paper artist based in Mexico City, working at Orquideario Miguel Angel Soto, UNAM. He specialises in orchid biology, focusing on their evolution, taxonomy, ecology and conservation. As an artist, he is also interested in the use of orchids in the production of different crafts and traditional expressions in Mexico.

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Elizabeth A. Clendinning is Associate Professor of Music at Wake Forest University and founder-director of the university's Balinese performing arts ensemble, Gamelan Giri Murti. She is a graduate of Florida State University (PhD 2013, M.M. 2009) and the University of Chicago (BA 2007). She is the author of *American Gamelan and the Ethnomusicological Imagination* (2020), co-author of *Focus: Gamelan Music of Indonesia*, 3rd edition (with Henry Spiller; 2022), and her writing has appeared in the journals *Ethnomusicology*, *MUSICultures*, *The Journal of Dance Education*, and *The Yearbook for Traditional Music*, among others.

I Gde Made Indra Sadguna

I Gde Made Indra Sadguna is a Balinese music scholar and performer from Denpasar, Indonesia. Raised in a family of traditional artists, he earned his Ph.D. in Musicology from Florida State University in 2022, supported by the Fulbright-DIKTI program. During his studies, he directed the university's Balinese gamelan ensemble, Sekaa Gong Hanuman Agung. Since 2012, Indra has served as a lecturer at the Institut Seni Indonesia (ISI) Denpasar, specialising in Balinese gamelan practice and theory. He has performed internationally across Asia, Australia, and North America, and has held artist residencies at institutions such as the University of Western Australia, Wake Forest University, and Swarthmore College. Indra has presented research at academic forums in Indonesia, the U.S., and beyond. His scholarly interests include Balinese drumming, improvisation, gender in performance, and the organology of gamelan instruments.

Jennifer C. Post

Jennifer C. Post's current research focuses on Central and Inner Asian sonic practices and on musical instruments and their production. Her recent studies with Mongolian Kazakh pastoralists living in the Altai Mountain region address sound, music, climate change, and well-being. In collaboration with ecologists, she also explores sound in social-cultural-ecological systems in wider Mongolia. Her publications have appeared in book collections and journals; her co-edited volume, *Mongolian Sound Worlds*, was published in 2022 and she is completing a book on the impact of global environmental issues on musical instrument production (both University of Illinois Press). She currently teaches ethnomusicology at the University of Arizona.

Julianne Graper

Julianne Graper is an Assistant Professor in Ethnomusicology at Indiana University Bloomington. Her forthcoming book, *Unbecoming Austin* (University of North Carolina Press), addresses the role of non-human imagi-

naries in gentrifying spaces. Graper's writing can be found in *Sound Studies*; *MUSICultures*; *The European Journal of American Studies* and in the edited collections *Sounds, Ecologies, Musics* (2023); *Behind the Mask: Vernacular Culture in the Time of covid* (2023); and *Songs of Social Protest* (2018). Her translation of Alejandro Vera's *The Sweet Penance of Music* (2020) received the Robert M. Stevenson award from the American Musicological Society.

Paul Newton-Jackson

Paul Newton-Jackson is a postdoctoral fellow (2023–2026) in the Department of Musicology at the University of Leuven in Belgium. As part of the Early Music Research Group in Leuven, Paul researches patterns of cultural exchange between Scotland and the Low Countries in the sacred music of the sixteenth century. He completed his PhD at the University of Cambridge in 2022, with a thesis on early modern German-Polish relations, viewed through the lens of music and dance. During the summer of 2023, he was a Centre for Research Collections Fellow at the Institute of Advanced Studies in the Humanities at the University of Edinburgh. While in Edinburgh, he carried out research into the global material histories of eighteenth-century keyboard instruments, working with the Institute Project on Decoloniality.

Robert O. Beahrs

Robert O. Beahrs is an artist, sonic researcher, and ethnomusicologist from Minnesota based in Istanbul. His work explores more-than-human kinship, social and material geographies of voice, and the politics of intoned heritage in postsocialist Inner Asia. Drawing on multispecies ethnography and practice-based research, he seeks to understand the role of musicking in transforming shared consciousness, ecological sensibility, and community wellbeing. Beahrs studied music at Pomona College and earned his MA and PhD in ethnomusicology from U.C. Berkeley. He was a postdoctoral fellow at the University of Pittsburgh before joining the Center for Advanced Studies in Music (MIAM) at Istanbul Technical University. His writing appears in the *Oxford Handbook of Voice Studies* and in *Asian Music*. Since 2015, he has conducted a multimodal project on music and kinship in the Altai and Sayan Mountains, supported by the SSRC and the Wenner-Gren Foundation.

Ruy Guerrero

Ruy Guerrero is a chemical engineer, luthier and cultural manager currently living in Puebla, Mexico. He is the director of PaxChe Puebla, a workshop devoted to the construction, restoration, and documentation of traditional and classical string instruments.

Sebastian Hachmeyer

Sebastian Hachmeyer is a DFG-funded Walter-Benjamin postdoctoral fellow at the Center for World Music (CWM) at the University of Hildesheim. Sebastian is an ethnomusicologist, human ecologist, and environmental geographer who specialises in ecomusicology, music and environmental studies, environmental ethnomusicology, music sustainability, and the anthropology of music and environment. He is currently carrying out a transdisciplinary and applied ecomusicological research project titled “From Native Bamboos to Indigenous Flutes: Applied Ecomusicology and Sustainability in Highland Flute Making in the Bolivian Andes.” He earned his PhD in Music/Ethnomusicology and Environmental Geography at Royal Holloway University of London.

Silke Lichtenberg

Silke Lichtenberg is a researcher with a double master’s degree in Natural Resource Management and Development from TH Köln, Germany, and Environmental Sciences from the Autonomous University of San Luis Potosí, Mexico. In addition to her academic background, she is a professional violinmaker, having graduated from the violinmaking school in Mittenwald, Germany. She is passionate about exploring the complex interrelations between nature, people, culture, music, and traditional craftsmanship. Currently, she is finalising her PhD in Geography at the University of Passau, focusing on “Forest Protection versus Musical Instrument Making: Sustainable Management of Ecosystems to preserve Natural and Cultural Heritage.” As a senior scientific advisor at the Federal Agency for Nature Conservation, in the scientific authority for CITES in Germany, she works on the conservation of internationally traded CITES-listed timber species and conducts species-specific risk assessments related to sustainable forest management.

Introduction: Music-Making Materials

Sebastian Hachmeyer and Silke Lichtenberg

Sustainability in music has become increasingly important in research communities and music cultures, crossing various academic disciplines and fields of study as well as domains of practical and specialised knowledge. Over recent decades, different approaches to music and sustainability have been discussed, linking cultural management practices with ecological viewpoints and concepts such as ecosystem, resilience thinking, adaptive management, and commons research. Ecomusicological scholars, as well as resource managers and environmental geographers, have drawn attention to the fact that important relationships to materiality, natural materials, and natural environments are central to music sustainability. One of the main concerns is the use of natural materials in musical instrument making and the multi-layered social, political, economic, cultural, ecological, biophysical, and species-specific biological dimensions implicated in the sourcing of these materials. Over the last twenty years, studies related to the effects of ecological change on instrument making and the materials used in instrument construction have added a new significant focus to the ecomusicological agenda. Scholars from various disciplines have contributed to an ecological study of musical instruments, linking the study of musical instruments to broader ecological and environmental issues and material sustainability concerns.

This edited volume is the result of ongoing discussions with contributors to an international online conference, which we organised as representatives of the Center for World Music at the University of Hildesheim and the Institute for Technology and Resource Management in the Tropics and Subtropics of the University of Applied Sciences in Cologne. The conference was part of the central activities of Sebastian’s DFG-funded research project “From Native Bamboos to Indigenous Flutes: Applied Ecomusicology and Sustainability in Highland Flute Making in the Bolivian Andes.” The idea