

Sound Circles/Inmersión

By Tamara Heartsill Scalley, Research Ecologist
Gerónimo Mercado, Artist

With the field recordings of ARBIMON (Automated Remote Biodiversity Monitoring Network), Tamara Heartsill Scalley and Gerónimo Mercado developed a piece that highlights the noninvasive perception, experience, monitoring, and measurement of wild soundscapes. The piece invites the audience to reflect upon sounds in the metaphoric set/group environment of delineated and layered sound-circle spaces. The audience is invited to engage in exploration of marine, aquatic, terrestrial, and Aeolic wilderness sounds that occur upon active movement among and between sound circles in the installation space.

What do sounds in a small space communicate? What do sounds in a larger space communicate? What sounds are immersive?

Hearing and exploring Sound Circles/Inmersión with an awareness of recently experienced silence is a key element to this piece. The audience must prepare before entering the installation space by using earplugs, which will prompt the recalibration of silence perception and awareness of sound. This simple act of wearing earplugs before entering the installation space heightens the contrasts between the displayed sound circles. This state of refreshed/renewed listening awareness begins to be explored by contrasting the evoked feelings of silence with the earplugs, followed by the immersion into the sound-circle spaces. The initial silence period invites retrospection and sets the stage to heightened sound awareness. In this instance the audience is invited to further explore these feelings evoked by sounds from the juxtaposition of layered sound circles in the tropical wilderness soundscape installation. The installation provides an immersive and stereophonic experience where variations in distance, elevation, and frequencies of sound can be explored by the audience moving about in sound-circle spaces delimited by spectrograms.

Sounds are an integral and essential part of understanding wilderness. Aldo Leopold's contributions to the concept of wilderness, and consequently to the needs for conservation, came from seasonal observations of birds in the context of a river valley. These observations led to seasonal recordings of bird songs and nature sounds along a river in the wilderness. These sounds presented a more subtle and complex perspective of the wilderness. Now the wilderness became not just the landscape and

protected land, but also the sounds and particular daily and seasonal soundscapes in which one must be immersed in, and perhaps converse with, in order to have the full experience of the wild.

A collection of sound recordings (arbimon.net) from wilderness daily and seasonal cycles serves as the main context of the piece. The sounds were recorded via noninvasive, automated remote monitoring networks. The benefit of these automated remote monitoring networks is that they are able to capture sounds without the disturbance effect of behavioral changes that come with human intervention and presence during the recording session. The recordings resulting from this remote technology allow for more realistic and genuine wilderness sound experience.

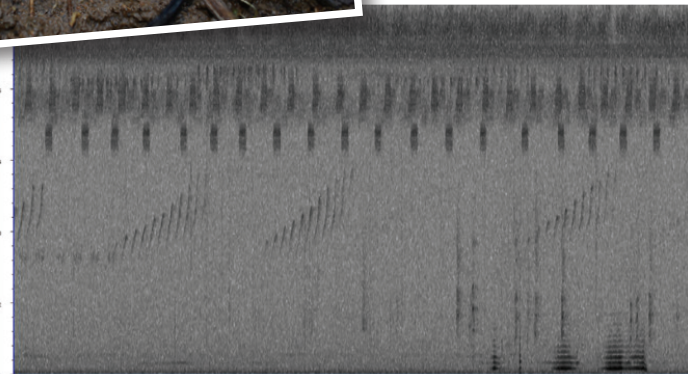
During the Aldo & Leonardo project interdisciplinary collaboration, preliminary discussions of the streams and forest where recorded and heard on site. A discussion of sound as a communication tool and exploration medium was then initiated. The piece explores how the shared listening experience offered by the museum space (in contrast to the contemporary sight of the headphone individual listening) evokes both shared and individual reflection and reaction. The piece begins outside the exhibition hall by invoking initial silence/stillness before entering the piece, the movement through the installation space results in heightened listening delineated in the sound-circle space. Contrasted with inward/personal space, the displayed spectrograms provoke the audience to find in its interior a place for soundscapes and a conversation in/of the wilderness.



Recording forest sounds.



Leptodactylus albilabris
(white-lipped frog).



Spectrogram.



Audience explores
sound circles.

Tamara Heartsill Scalley

Native of Río Piedras, Tamara is a research ecologist at the International Institute of Tropical Forestry. She has a B.A. in geography and M.S. in biology from the University of Puerto Rico, Río Piedras. With a Quinney Natural Resources fellowship, she earned a Ph.D. in ecology at Utah State University and was research faculty at University of Pennsylvania. Seeking broader ways to communicate the experience of immersion into wild landscapes, she collaborates with ARBIMON and meets with sound artist Gerónimo Mercado. Tamara's research has always included her interest in streams and forests. Her current research projects encompass wetlands, urban ecology, and long-term measurements of forests in the Caribbean.

Gerónimo Mercado

After studying with illustrious musicians such as Canals, Figueroa, and Campos Parsi, Gerónimo graduated from Berklee College of Music in Boston where he achieved specialization in composition for film and audio production and engineering. He worked as a music producer, engineer, and sound designer for films such as *Miente* (and representing Puerto Rico at the Oscars), *Broche de Oro* with Jacobo Morales, and *200 Cartas* with Lin-Manuel Miranda. He was commissioned to compose a sound design piece for the Detroit Institute of Arts, inspired Diego Rivera's work, "Detroit Industry Murals." Recent sonic/visual installations have been exhibited in the Poly/Graphic Triennial of 2012 among others. Gerónimo is part of a select group in the world that develops and uses the Reactable, an interactive musical/visual art instrument. He has published in collaboration with the University of Puerto Rico-Fillius Institute the use of interactive audio technology for treatment of autism.

ARBIMON

The Automated Remote Biodiversity Monitoring Network (arbimon.net) is a collaboration among ecologists, environmental scientists, and computer scientists from the University of Puerto Rico, Río Piedras. The major components of the ARBIMON are two web-based solutions for monitoring biodiversity (ARBIMON-acoustic) and land change (ARBIMON-land mapper). The ARBIMON-acoustic component includes a novel combination of hardware and software for automating data acquisition, data management, and identification of multiple species of amphibians, birds, insects, and mammals. The ARBIMON-acoustic web site has more than 1 million recordings from many sites around the world, and anyone with an internet connection is invited to explore these recordings.