

## Project Update: June 2021

### Corridors

Fieldwork has finished and now we are focusing on data analysis, working with the acoustic recording units in each corridor. We expected to sample 24 corridors but two devices were damaged. The vocal activity refers to 880 recordings at 22 points, with each recording a 10-minute sample.

To identify bird communities in corridors, we are using two methodologies, automatic identification of the species using Acoustic Indexes (AI) and manual identification using stereo sound spectrograms.

We use automatic identification to perform AI and identify bird communities that responded to habitat configuration in the Chaco. AI represents bird communities using techniques to estimate complexity, diversity, evenness, entropy, abundance, and the normalised difference between anthropic and natural sounds. To understand how AI represents bird communities, we tested the correlation between AI and bird richness identified for the 34 points, which was analysed before (see results in the prior report). As a result, three AI (complexity, diversity, and abundance) were selected to perform it for corridors.



Preparing the automatic recorder units (ARU) in the dry forest to record birds' songs.

To identify bird species manually, we selected the peak time for bird activity based on Romina's experience listening to recordings in prior points analysed (see results in the prior report), which is 0500 to 0630 h for diurnal birds and 1840 h for nocturnal birds (each recording is 10-minutes). Romina is listening to the recordings and is expected to have a list of birds occurring in each corridor in the next months. The next steps include analysing how bird communities responded to environmental variables related to habitat configuration and understanding how bird communities represented by AI are related to environmental variables.

More details about the fieldwork experience and some photos are in Romina's blog: Ojo del Ave <http://ojodelave.blogspot.com/2020/03/birds-of-chaco.html>