

Project Update: January 2021

Results

We expected to sample 36 sites, but two devices were damaged between sites. The vocal activity refers to 1360 recordings in 34 sites, each recording was a 10-minute sample.

The recordings were listened to and analysed for 5 months using stereo sound spectrograms (Figure 1). To aid in species identification was used online resources, such as Xeno-Canto (<http://www.xeno-canto.org>) and the Macaulay Library (<https://www.macaulaylibrary.org>). We have sampled 99 birds in total and 14 endemic birds of the Chaco.

All landowners received a report of the species found in their lands, with photos and a summary about the importance of each sites in the landscape.

As a preliminary result, analysis indicated a relationship between richness of endemic birds and landscape configuration in the Paraguayan Chaco considering samples sites configuration. These results were presented virtually in the 2nd International Conference Conservation Latin America and Caribbean in November 2020.

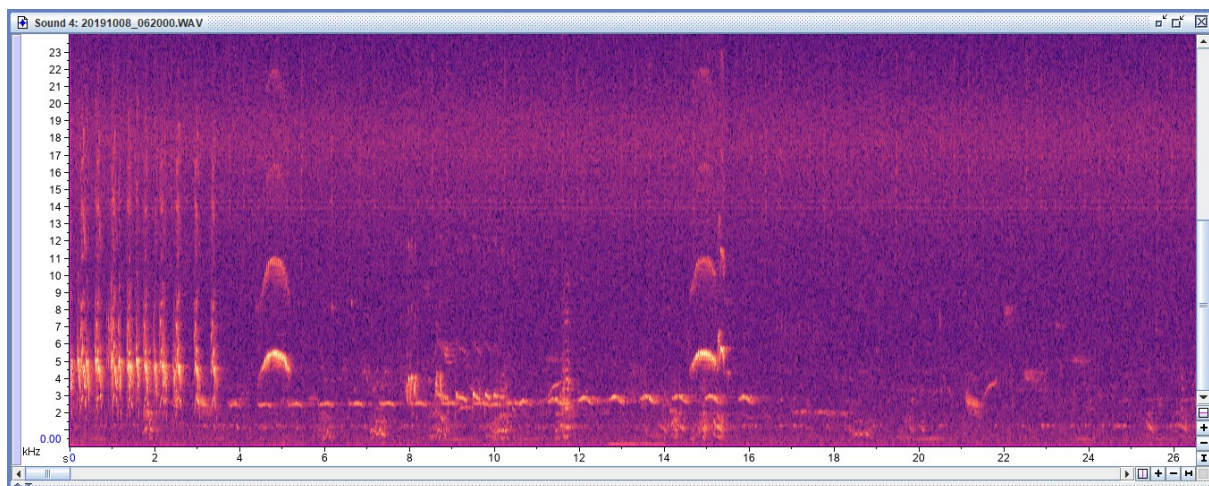


Figure 1. Example of the spectrum analysis to identify bird's species

Continuing with the fieldwork, now is the second part of the project, which correspond to corridors.

Bird survey in corridors

For bird surveys we chose 24 forest corridors between the productivity plots (Figure 2) in private properties with cattle production. We installed acoustic recordings units (ARU) in each corridor, each recorder included 10-minute samples (wave format 48 MHz and 16 bits) from 0500 to 0830 h in the morning and between 1600 to 1900 h in the evening, which coincides with a peak in avian vocal activity.

To identify bird communities in corridors will be used two methodologies, automatic identification of the species using acoustic indexes and manual identification using stereo sound spectrograms.



Figure 2. Working in the forest corridors (left). Forest corridors between the productivity plots (right).