

Project Update May 2025

Rufford I.D.: 39115-1

Update: Sampling was completed across all 9 target areas, with 3 sites in each of the biomes covered by the study — Caatinga, Cerrado, and Atlantic Forest — all within the state of Bahia.

At each site, five consecutive days of mist-netting were conducted. Biological material — feathers, blood, and claws — was collected from all avian individuals captured. Although *Saltator similis* was not recorded during fieldwork, a broader taxonomic framework was adopted through the inclusion of Thraupidae, a group that is both widely distributed across the study area and heavily targeted in Brazil's illegal songbird trade. Because the samples comprise multiple species and span the full geographic extent of the study, the resulting dataset can serve as a reference for inferring the geographic origin of any Thraupidae individuals that may be seized and analyzed in future investigations involving our research area.

A total of 103 Thraupidae individuals were selected, and their samples have already been processed — including cleaning, preparation, and encapsulation. These samples are now undergoing stable isotope analysis for carbon, nitrogen, oxygen, hydrogen, and sulfur. The inclusion of sulfur reflects its growing relevance as a spatial tracer in ecological applications.

In parallel, collaboration with local wildlife authorities allowed for the acquisition of samples from apprehended individuals. Most recently, 15 *Sicalis flaveola* — Brazil's most frequently seized songbird — were sampled after confiscation at a major market in the state. These birds are suspected to have originated from the vicinity of a nearby national park, and our analysis aim to determine whether their isotopic signatures are consistent with environmental conditions of the suspected source area. This comparison will serve as a proof of concept for the geographic assignment framework developed from the Thraupidae reference dataset.

With laboratory analyses in progress, the next phase will involve statistical modeling and geographic assignment through isotopic comparison. The existing framework is expected to be expanded in the future, incorporating new samples and taxa to enhance the resolution and applicability of isotope-based ecological forensics.

I'm attaching some photos of the sample processing stage, as well as the processing of apprehended individuals. Since our last exchange included pictures from the fieldwork, I thought it would be useful to share this part of the workflow as well. Let me know if you need anything else.





