Project Update: July 2023

We finished 7 months of sampling across our 32 sites in March 2023. We sought to compare the abundance and diversity of amphibians across shade-grown and full-sun cacao plantations with reference forest and abandoned plantation sites.

Support from The Rufford Foundation allowed us to greatly increase the scale of our sampling effort in terms of both the number of sites we sampled at, and the time we spent sampling. We were able to hire an additional field biologist allowing our team of three to perform 189 site visits (three each for each site in both the wet and dry seasons). We found 1,759 individuals of 32 species and still have approximately 40 individuals that we haven't been able to identify in the field. We plan to apply for the next round of Rufford funding when eligible to fund genetic sequencing from tissues collected from these individuals.

We have found several species of conservation concern, including *Leucostethus bilsa*, a critically endangered dart frog only recently described and previously only recorded within a 6 km area of the nearby Bilsa Reserve. Our project found several populations of this species living within the relatively small and private FCAT Reserve.

I'm attaching a few pictures from the fieldwork phase of our project. The next steps of the project will be incorporating the results of a survey on pesticide usage by the landowners of our study plantations and linking this information to Bd (chytrid) prevalence using swabs we have collected from each novel individual we encountered during the study. We have nearly 2,000 of these swabs which are waiting

to be processed by collaborators in Quito. I recently shared the preliminary results of this project during a community event for cacao farmers organised by FCAT. I will continue analysing the data as the first chapter of my PhD dissertation before eventually publishing the results in peer-reviewed scientific literature.