



Two Master Theses Projects

Community composition and functional diversity of birds and bats across habitat gradients in the Peruvian Amazon

As a part of our research project “ECO-CACAO”, we are offering two Master theses to study birds and bats in the Peruvian Amazon (<https://bdc.univie.ac.at/research/current-projects/eco-cacao/>).

Each of the two master's theses will focus on birds or bats. Point counts (visual/acoustic for birds and acoustic for bats) will be used to record flying vertebrates along a habitat gradient that includes 4-5 pre-defined sites in cacao, citrus, timber and forest habitat. Data will be analysed with focus on community composition (alpha and beta diversity), as well as functional diversity (focus on habitat affiliations and feeding guilds). The main hypotheses to be tested in these theses is whether alpha diversity declines along intensified land use gradients and which functional groups are affected (i.e. if habitat/feeding specialists respond more sensitive and generalists).

Each MSc student will have access to available data from the project (i.e. study area, functional traits and available recording) and is expected to:

- Record birds (using standardized point counts) or bats (using ultrasound recorders) following a pre-defined sampling strategy across 3-4 different habitat types and a total of 15-16 study sites within 30-45 days of field work in Peru (~4h recording per day)
- Recording site-specific variables such as shade tree cover and diversity (~ 2h per study site)
- Participating in other data recording tasks of our research team in Peru to complete available data sets from the study area that are relevant for this thesis (~ 14 days in the field)
- Statistical analysis of the collected data using R
- Writing the thesis, preferably in the form of an English manuscript (~ 15 – 20 pages)

Field work shall be done between March/April and May/June 2023 (3-4 months in total) in our study area nearby the city Juanjui in Peru. Candidates from the University of Vienna will be supported to apply for a travel grant (see “KWA” scheme for short-term grants abroad). The MSc students will be part of a larger research team based in the study area (see @AgroEcoDiv on Twitter). The work requires physical fitness and willingness to do field work in a tropical environment. Prior knowledge of the topics, animal groups, and methods described, as well as Spanish language skills are a plus.

The thesis project is suitable for MSc students in ecology, zoology and conservation biology.

If you are interested, please contact Dr. Bea Maas (bea.maas@univie.ac.at) with a short motivation letter (max. 0.5 page) and an attached CV (max. 2 pages) under the subject “MSc ECO-CACAO”. Interviews of chosen candidates will be taken via Zoom between December 2022 and January 2023.

