

Effect of deforestation on tropical insect diversity and interactions

Application deadline: 28.08.2022

Background and objectives

Deforestation is one of the biggest drivers of insect diversity decline globally. This pressing issue is of special concern in the tropics, where complex old-growth forests that harbor diverse pollinator communities and intricate pollination networks are often reduced to simple environments with impoverished communities and ecosystem processes.

Our research group aims at understanding how diurnal (bees) and nocturnal (moths) pollinators in the tropics and their interactions with plants are affected by deforestation, and how forest regeneration leads to community reassembly. Based on in-situ fieldwork and/or samples already collected in the framework of the Reassembly project plots (<https://www.reassembly.de/>), the project aims to investigate how a regeneration chronosequence in a tropical forest affects insect abundance, diversity, functional traits, and diversity of interactions with plants.



Project activities

- Processing of insect samples from Ecuador: catalog-based identification (moths), or taxonomic key based-identification (bees), insect preparation and morphological measurements, pollen analysis.
- Analyzing insect diversity and functional data according to a forest restoration gradient.
- Possibility of performing fieldwork in the Ecuadorian Chocó (Canandé Reserve), from October 4th to mid-December 2022 for trap installation (use of bow and arrow guaranteed) and data acquisition.

Timeframe

- Start: immediately (or later)
- Ca. 30 hours/week in TUM (flexible). If applicable, intensive fieldwork, sample processing, and data processing in a research station in Ecuador (variable working hours, ca. 40h/week, flexible).
- Data collection and processing may start before thesis registration if desired.

Your profile

- Currently enrolled as Bachelor's or Master's student.
- Interest in community ecology, forest restoration ecology, and insect identification.
- Independent working profile.
- Interested in learning and using community-wide statistical analysis.
- Flexible working hours. Availability for potential extended fieldwork, if desired.
- Suitability for working in tropical conditions, if applicable: yellow fever vaccine, physical fitness, resistance, problem-solving mind, and interest in tropical nature.
- Good command of English. If going on fieldwork, basic Spanish is useful but not strictly necessary.

Contact for applying and questions

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