Master2 Internship proposal

Comparative analysis of vertebrate communities
along a gradient of disturbances in the Guianan forest

Key words : Anthropisation - Conservation - Fauna - Tropical forest - Frugivory – French Guiana - Learning machine - Mammals - Birds – Camera-trap.

Type of internship: Master 2 "Research" or final year engineering school internship.

Location : UMR MECADEV - Equipe ECOTROP, 45 rue Buffon, Bâtiment 50, 3ème étage, 75013 Paris.

Date or duration of internship: 5 months (February-June)

Background: The research focuses on the frequency of presence of mammalian and bird vertebrates involved in tree dispersal, and on the diversity of their communities in Guiana's forests. The hypothesis being tested is a decrease in the diversity of large specialist species in favor of small opportunistic species in forest ecosystems most altered by anthropogenic perturbances, particularly silvicultural and hunting pressures, within the most easily accessible sites close to urbanized areas.

This internship is part of the "Anthroposystems and tropical biodiversity: assessment of the state of health and anthropisation of Guiana's forests" project (Labex DRIIHM). The three forest ecosystems studied are classified according to an anthropogenic gradient, from least to most impacted: the National Reserve of Nouragues (CNRS biological station at Saut Pararé, baseline condition), the Montagne Tortue ONF domain (Bonaventure eco-tourism site) and the Regional Natural Park of Guyane (Route Nationale 2 Régina-Saint Georges-de-l'Oyapock site). This internship is the 1st stage of the multi-year (2024-2026) GuyaCam[1] project.

Data were acquired using camera-traps set up in the 3 forests mentioned, in the undergrowth and in the canopy of fruiting *Virola* spp. trees, between January 2019 and June 2023.

Objectives and tasks : The student's goal will be 1) to identify the animal species photographed using camera-traps in 2023; 2) to analyze the images obtained during the previous 2022-2023 missions; 3) to carry out statistical analyses to validate/invalidate our hypothesis and interpret the results.

Profile: We are looking for a Master2 or engineering student interested in the study of wildlife diversity in tropical rainforest ecosystems to analyze images obtained using camera-traps. He or she will preferably have a background in zoology and/or conservation biology. Images can be accessed online via a dedicated database, enabling images to be extracted and analyzed using the appropriate packages. Basic skills in image analysis (camtrapR® under R Studio, iNEXT® package, overlap) are expected.

Remuneration: Monthly ATM internship bonus + partial reimbursement of monthly travel expenses (approx. €550-600/month depending on revised hourly rates in January 2024 and days worked). 1 week unpaid leave possible during spring vacation.

Compensation: Monthly ATM internship bonus + partial reimbursement of a monthly transport ticket (approx. 550-600€/month depending on revised hourly cost in January 2024 and days worked). 1 week unpaid leave possible during spring vacation.

Contact: Candidates are invited to contact Pierre-Michel Forget, PR MNHN (UMR MECADEV, pierre-michel.forget_(a)_mnhn.fr) with a cover letter and CV. The supervisory team will also include Eric Guilbert, MC MNHN HDR (UMR MECADEV) and Christophe Baltzinger, CR INRAE HDR (UR EFNO).

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[1] GuyaCam: Suivi des communautés de vertébrés par pièges photographiques sur un gradient de perturbations en forêt guyanaise" funded by the Office Français de la Biodiversité (2024-2026)