

## MADAGASCAR DISSERTATION/THESIS PROJECT

## MAD-T09 - Avian behavioural ecology in a Malagasy dry forest

For more information contact:

Dr Tom Martin | Head of Research | tom.martin@opwall.ac.uk

Understanding behaviour is critical with respect to understanding a species ecology and therefore being able to develop conservation strategies to protect them. However, the behaviour of many tropical species remain very poorly know — even for birds, which are an otherwise relatively well-studied group.

Malagasy dry forest ecosystems remain particularly poorly studied with respect to the behavioural ecology of the species that live within them. Despite supporting diverse bird communities with high rates of endemism, virtually no avian behavioural research have been published from these dry forest ecosystems to date. This project gives students the opportunity to a undertake a highly novel research project examining the behavioural ecology of birds in the Mahamavo forests.

Students taking this option have various options with respect to developing a behavioural ecology project. Projects could potentially focus on play-back experiments, examining the territoriality of key species (e.g. Malagasy Paradise Flycatcher *Terpsiphone mutata*), and how they defend these territories from other bird species. There are also options to study the phenomenon of mixed-species flocks on insectivorous birds in Mahamavo, establishing how common these are and what factors influence their creation. Either of these options would shed new light on the complex, yet poorly-known, behavioural dynamics of Malagasy dry forest bird communities.

Projects are likely to employ a mix of standardized point count data and targeted behavioural surveys of focal species. There is also the option of using mist-netting data from our long-standing bird ringing project if appropriate.

Overall, students taking this dissertation option will be able to generate highly novel datasets investigate key research questions relating to the behavioural ecology of select focal species within the Mahamavo's highly-endemic yet poorly-studied avifaunal communities.

## **Suggested Reading**

Bibby, C.J., Burgess, N.D., Hill, D.A. & Mustoe, S.H. (2002). *Bird Census Techniques (Second edition)*. Academic Press, London.

Eguchi, K., Yamagishi, S. & Randrianasol, V. (2008). The composition and foraging behaviour of mixed-species flocks of forest-living birds in Madagascar. *Ibis* **135**, 91-96.

Goodale E. & Kotagama S.W., Response to conspecific and heterospecific alarm calls in mixed-species bird flocks of a Sri Lankan rainforest, *Behavioral Ecology*, **19**, 887–894,

Hutfluss, A., Rohr, V.A., Scheidt, S., Steinbichl, L., Bermúdez-Cuamatzin, E., Slabbekoorn, H., Dingemanse, N.J. (2021). Does song overlap signal aggressiveness? An experimental study with repeated measures in free-ranging great tits. *Animal Behaviour* **179**, 199-211,

Long, P. (2013). Biodiversity surveys of Mariarano and Matsedroy tropical dry forests and associated wetlands, Western Madagascar. Operation Wallacea report. Accessible from <a href="http://opwall.com/wp-content/uploads/Mahamavo-2013">http://opwall.com/wp-content/uploads/Mahamavo-2013</a> report Final-Compil-Sam-2.pdf

Myers, N., Mittermeier, R.A., Mittermeier, C.G., da Fonseca, G.A.B. & Kent, J. (2000). Biodiversity hotspots for conservation priorities. *Nature* **403**: 853-858.

Sinclair, I. (2004). *Birds of the Indian Ocean Islands: Madagascar, Mauritius, Réunion, Rodrigues, Seychelles and the Comoros*. Struik Publishers, London.