

# INTERNSHIP/VOLUNTEERING OPPORTUNITY

## Process wildlife camera pictures to ID nest predators

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### Project presentation (February 2025 – July 2025)

I am seeking a **volunteer** to process camera trap pictures to identify nest predators of an Australian burrow-nesting passerine, the Spotted Pardalote (*Pardalotus punctatus*). The volunteer will assist with processing data collected during 2 field seasons (2023-2024 and 2024-2025) as part of my PhD project on the breeding ecology and the parental behaviours of the Spotted Pardalote.

Nest predation significantly affects bird reproductive success, fitness, and population stability. The nest predators of the Spotted Pardalote are not well known.

Nest predator identification data is collected by placing a camera trap in front of the birds' burrow from the first day of laying. The camera traps are set so that they take pictures every fixed interval (1 or 5 minutes depending on the models) and when triggered by the movement of a warm animal. By doing so, I expect to be able to identify both endothermic and exothermic predators. Thus, the methods used to identify nest predators generate large amounts of photo data and require significant processing time. New methods are rapidly emerging in the field of ecology to facilitate data processing, many of which are based on deep learning.

The University is in Geelong, Victoria. The data was collected in Brisbane Ranges National Park (VIC).

### Missions

The selected candidate will:

- Learn to use an AI-based tool to detect animals in game camera pictures
- Identify native Australian and invasive species in game camera pictures
- Organise the data collected

### Requirements to participate

- Positive communication and teamwork skills
- Interest in ornithology, wildlife sciences and/or in behavioural ecology
- Hard work and high motivation
- BSc, Honours or MSc degree in related fields
- Commitment of at least 2 months to the project, candidate willing to commit for longer periods will be favoured

## Compensations

The position is unpaid. However, I offer free shared accommodation and an allowance for groceries (meals) for the volunteer.

## References

Norouzzadeh MS, Morris D, Beery S, Joshi N, Jovic N, Clune J. A deep active learning system for species identification and counting in camera trap images. *Methods Ecol Evol.* 2021;12:150–161. <https://doi.org/10.1111/2041-210X.13504>

Vélez, J., McShea, W., Shamon, H., Castiblanco-Camacho, P. J., Tabak, M. A., Chalmers, C., Fergus, P., & Fieberg, J. (2022). An evaluation of platforms for processing camera-trap data using artificial intelligence. *Methods in Ecology and Evolution*, 00, 1–19. <https://doi.org/10.1111/2041-210X.14044>