



How does artificial light at night affect nocturnal pollination networks?

MSc-PhD Pathway Studentship

School of Natural Sciences, Trinity College Dublin, Ireland

Project background:

Artificial light at night is everywhere with light pollution often extending far from its source across urban, agricultural, and wilderness landscapes. This brightening of the night sky has a huge impact on the physiology and behaviour of both nocturnal and diurnal species. In many moths, for example, colour vision is essential for finding, and distinguishing between, different flowers. Light pollution risks disrupting the ease with which moths can recognise flowers and forage effectively. Behaviour that is vital for a wide range of ecologically and economically important pollination networks in both wild and agricultural areas. Yet, how artificial light affects nocturnal pollinator behaviour and how behavioural changes may interact with other anthropogenic stressors, such as pesticides, remains largely unknown.

In this MSc to PhD programme, we will use behaviour experiments in the lab and field, and computational visual modelling, explore how artificial light and floral diversity affects moth foraging behaviour, pollination networks, and pesticide exposure.

Award:

The successful candidate will be initially enrolled in a 2-year (24-month) research MSc programme in the School of Natural Science (Discipline of Zoology) at Trinity College Dublin. **The award includes EU/UK fees and a stipend of €25,000 per annum for two years.** Additional funding will be sought within the first year to convert the initial 2-year MSc programme into a 4-year (48-month) PhD programme.

Application deadline: 17 May 2024, by 23:59 (11:59 pm)

Start date: September 2024

Supervision: Dr James B. Barnett - Zoology, School of Natural Sciences, Trinity College Dublin

<https://www.tcd.ie/Zoology/research/groups/barnett/>

Dr Jessica L. Knapp - Botany, School of Natural Sciences, Trinity College Dublin

<https://www.tcd.ie/Botany/people/knappj/>

For any queries, please contact Dr Jim Barnett via email (jbarnett@tcd.ie)

Candidate requirements:

- BSc degree (confirmed/predicted) in an ecological / environmental science (grade of 2.1 or higher, or equivalent), e.g., zoology, botany, ecology, environmental science, etc.
- Prior experience with field entomology and/or programming in R or MATLAB is desirable.
- A full, clean, Irish/EU driving licence is desirable.
- The award is available to EU/UK candidates only.

Application procedure:

Interested applicants should submit a single PDF file containing:

1. Academic CV (incl. confirmed or projected degree results, research experience, a list of publications (if any), & the contact details of two academic referees).
2. Letter of motivation (max. 1 page) explaining your how your interest and relevant skills/experience relate to the subject.

Please submit completed applications to Dr Jim Barnett via email (jbarnett@tcd.ie)