

PhD student in insect migration and stable isotopes

Department of Forestry and Natural Resources, Purdue University

The newly established SAiVE Lab at Purdue University is seeking a highly motivated PhD student to join our team in developing innovative tools to trace and understand insect migration across North America. The project will be initially focused on butterflies (monarchs and painted ladies) but could expand to other species. The research will integrate stable isotope analysis, trace element profiling techniques and genomics to address fundamental questions about long-distance insect migration, connectivity, demography, and environmental toxicology across North America.

Research Focus

- Develop and refine isotope- and element-based approaches for tracking insect movement and connectivity across eastern North America.
- Apply novel genomics and microbial techniques to assess migratory drivers.
- Integrate laboratory analyses with environmental data to improve migration models.
- Advance global frameworks for studying insect migration and its ecological roles.
- Participate in Purdue Extension to disseminate research

What We Offer

- Access to state-of-the-art isotope, elemental and genomics analysis facilities
- Interdisciplinary training in ecology, geochemistry, genomics, and advanced modeling.
- A collaborative research and training environment within Purdue's Department of Forestry and Natural Resources with collaborations with entomology and engineering.
- The position is funded by Dr. Bataille start-up include a student stipend, benefits and tuition coverage as required by the Forestry and Natural Resources Department. Applications to competitive fellowships will still be highly encouraged.
- An international team including Dr. Megan Reich (Canada) and Dr. Gerard Talavera (Spain)

Qualifications

- Demonstrated background in any of ecology, entomology, environmental science, geochemistry, or related fields.
- Interest in collaborative and interdisciplinary science.
- Interest in insect ecology and stable isotope applications and/or trace element analysis.
- Experience with laboratory techniques (IRMS, XrD), genomics, data science, GIS and programming (R, Python) are assets.

Application Deadline: Files will be reviewed starting on October 30th 2025

To apply, please send a CV, cover letter, unofficial transcripts and contact information for three references to cbataill@purdue.edu.

Start Date: Flexible, Jan 2026 (preferred) but up to June 2026