



THE UNIVERSITY OF BRITISH COLUMBIA

PHD POSITION: BUTTERFLY ECOLOGY, CONSERVATION, AND MONITORING IN BRITISH COLUMBIA, CANADA

Research Group: Aquatic and Insect Ecology and Evolution lab; PI: Dr. Michelle Tseng, Biodiversity Research Centre, Departments of Botany and Zoology, University of British Columbia

Location: Vancouver, BC, Canada

Start date: September 2025

Duration: 4 years

Number of positions: 2

Description: Butterflies have become model organisms for studying population and community responses to warming temperatures and habitat change. Butterflies are ecologically and culturally significant and landscapes with diverse butterfly communities often support other beneficial wildlife. This PhD position investigates the combined effects of climate change and introduced plants on butterfly ecology and conservation in British Columbia. Data sources will include historical collections, contemporary biodiversity databases, photographs taken by our community science partners, computer vision models, and fieldwork. This project is part of an ongoing partnership with a national environmental non-profit organization. The PhD student will work closely with participants in this organization. The PhD student will be supervised by Dr. Michelle Tseng (UBC). The position is based in Vancouver, BC, Canada.

The PhD student will design field studies and use statistical and data science tools to assess long-term changes in butterfly abundance and phenology throughout several regions in British Columbia. The student will also examine nectar-plant preferences and the role of introduced vs. native plants in shaping butterfly phenology, population dynamics, and community composition. The student will help develop two public-facing butterfly conservation and monitoring tools, participate in annual outreach events, and engage with Indigenous communities.

Preferred qualifications: You have an MSc in ecology, entomology, conservation, or similar discipline or have extensive experience conducting independent research as an undergraduate student. You have experience working on butterfly ecology/taxonomy and are comfortable working in the field. You are comfortable wrangling and analyzing large datasets in R or Python. You have a solid foundation in ecological statistics. A valid class 5 driver's license is an asset. You are self-motivated to answer fundamental and applied questions in butterfly ecology and can meet self-assigned deadlines. You have an in-depth understanding of the importance of equity, diversity, and inclusion in academia and can articulate the value of both Western and Indigenous perspectives to understanding the natural world.

Stipend: The PhD stipend starts at \$40,000 CAN and increases annually for four years. Domestic and International PhD tuition is covered by the UBC Faculty of Science Tuition award for 4 years. Applicants should be competitive for internal or external fellowships (e.g. UBC Four-Year Fellowship, NSERC CGS, Vanier Fellowship). Additional funds are available for travel, outreach, and research expenses.

Include with your application:

- Cover letter: please discuss why your background, education, and research experience make you well-suited for this position;
- Relevant Research Questions: Please describe three research questions you would be personally interested in addressing for your PhD in the context of the information described above. Answers generated using large language models like ChatGPT will not be considered;
- Academic CV, including the name and contact information for two references;
- Unofficial academic transcript

To Apply:

Please email your application in a single PDF with your name and “Butterfly Ecology PhD Position” in the subject line to: Michelle Tseng, tsengm@mail.ubc.ca

Due Dates:

We will begin reviewing applications on December 15, 2024. Applications who wish to be considered for UBC PhD Fellowships for the 2025-2026 academic year will need to submit their UBC application by January 8, 2025 (including references). We will contact you if we would like you to submit the full UBC application. The positions will remain open until suitable candidates are found. Please email Dr. Tseng if you have any questions.

More information about the school and units:

Graduate school at UBC: <https://www.grad.ubc.ca/>

Botany Department: <https://botany.ubc.ca/>

Zoology Department: <http://zoology.ubc.ca/>

UBC Biodiversity Research Centre: <https://biodiversity.ubc.ca/>

Tseng lab website: <https://www.bugsandplankton.com/>