



Graduate Student Opportunities in Entomology Department of Biological Sciences, University of Alberta

Principal Investigator: Dr. Maya Evenden <https://grad.biology.ualberta.ca/evenden/>

Highly qualified students are invited to apply to the Department of Biological Sciences at the University of Alberta (<https://www.ualberta.ca/biological-sciences>) in the lab of **Dr. Maya Evenden**.

We seek graduate students with an interest in ecology and a passion for entomology. **People who identify with groups underrepresented in STEM fields are encouraged to apply.**

Title: Mountain pine beetle eastern spread risk: Beetle physiology and behaviour as drivers of spread.

Project: This project is part of a large multi-institutional, multi-investigator, interdisciplinary study with the main goal to fill key knowledge gaps of the mountain pine beetle system that limits our ability to monitor, assess, and predict mountain pine beetle (MPB) risk to Canada's forests.

Project 1: The effects of overwintering conditions on MPB adult flight and host colonization traits.

Objectives:

1. Examine the effect of overwintering conditions on adult MPB dispersal capacity and energy usage.
2. Examine the effect of overwintering conditions on adult MPB host colonization and fitness.

Project 2: Interactions between flight and semiochemical response and production in MPB.

Objectives:

1. Determine the effect of natal and colonized host phloem chemistry on beetle pheromone production.
2. Determine the effect of flight and energy usage on MPB response to host selection cues using electrophysiology.

Students will be part of a large and diverse interdisciplinary team with ample opportunity for networking and skill development. Students will have the opportunity to conduct both lab and field work, and will gain experience in a variety of experimental techniques (chemical ecology field experiments, flight mill bioassays, respirometry, electrophysiology, biochemical analyses).

Applicants must have a Bachelor's degree relevant to biology. Research experience in entomology with field work and experience in quantitative analyses would be an asset. Applicants should have a strong academic background and possess excellent written and oral communication skills in English.

The position provides full funding for MSc (2.3 years) and PhD (5 years) to qualified applicants.

Application process:

Applicants must first send a cover letter outlining their relevant background and research interests, their CV, and the names of 2-3 potential references to mevenden@ualberta.ca. Interviews and formal invitations to apply to the graduate program in Biological Sciences may then follow for those who meet the criteria. **Program start date will be January or May 2022.**

For graduate program information see: <https://www.ualberta.ca/biological-sciences/graduate-studies>.