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DEPARTMENT OF BIOLOGY

Funded PhD or MSc position to study overwintering biology of a forest pest

The Toxopeus lab (<https://jantinat toxopeus.com/>) is recruiting a graduate student to study diapause in the eastern spruce budworm, in collaboration with partners at the Great Lakes Forestry Centre (Ontario) and the University of British Columbia.

Program: <https://www.mystfx.ca/biology/graduate-program> - PhD or MSc positions available

Start date: September 2023 preferred, but other start dates are possible

Location: Antigonish, Nova Scotia, Canada, which is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq People

Funding: Minimum stipend of \$25,000 per year for four years (PhD) or two years (MSc)

The Project: Diapause of the [eastern spruce budworm](#) (*Choristoneura fumiferana*)

- Understanding the overwintering biology of eastern spruce budworm is important for predicting its impact as a forest pest.
- Like many insects, spruce budworm overwinter in diapause. Diapause is an important but enigmatic process that we still don't fully understand in this species.
- The core of this project will be using transcriptomics and metabolomics to understand the impact of different temperatures on spruce budworm diapause, and identify genetic or metabolic markers associated with key transitions in the diapause program.
- Some travel to laboratories of collaborators (e.g., for training) is likely.

Qualifications:

- A strong academic background that includes the completion of all requirements for a thesis-based MSc (for PhD applicants) or thesis-based BSc Honours (for MSc applicants) prior to the proposed start date. Applicants with equivalent experience are also encouraged to apply.
- Previous experience with one or more of the following research areas would be an asset, but is not required: bioinformatics, biochemistry, entomology, forestry, or molecular biology.
- Lifelong learner with a curiosity about how life works.
- Strong attention to detail, organization, and time-management skills.
- Ability to work well independently and a commitment to working equitably within diverse teams or groups of people.

To Apply: Assessment of applications will begin on **3 July 2023** and will continue until the position is filled. Informal inquiries are also welcome. To apply, email Jantina Toxopeus (jtoxopeu@stfx.ca) with the subject line "Spruce budworm PhD/MSc" with the following pdf attachments.

- A CV or resume outlining your academic, work, and volunteer experience
- A 1 page cover letter summarizing your qualifications, research interests, and how this graduate position will help you realize your future goals
- Your unofficial university transcripts

We welcome applications from people who identify with groups underrepresented in STEM fields.