Job Title: Ecotoxicological Laboratory Assistant

The Queen's Experimental Ecology and Ecotoxicology (QE3) research group is looking for two eager and detail-oriented undergraduate students to assist with quantifying microplastics in amphibians.

Project Description:

Plastic pollution has become a global issue as more plastic waste has been found in oceans, on land, and in every continent of the world. Plastics are often classified by size as mega- (>1 m), macro- (2.5-100 cm), meso- (0.05-2.5 cm), and micro- (<0.05 cm) plastics. Studies looking at ingestion have found microplastics are present not only in natural ecosystems, but also in the digestive tracts of many species. However, the majority of studies have focused on the exposure and dispersal of microplastics, especially in marine environments. Few studies have examined the toxicity of microplastics to freshwater species, and fewer have looked at the toxicity to amphibians. Amphibians are highly sensitive and globally declining. There are susceptible to climate change, habitat destruction, and many types of pollution, yet we do not fully understand how they may interact with and be affected by widespread plastic pollution.

The QE3 lab is interested in addressing the question of risk of microplastics to amphibians. We conducted two outdoor experiments that examined the route of microplastic uptake and developmental effects to tadpoles. Our next steps include laboratory and photo analysis to examine microplastic content in tissues, growth, and developmental rate. We are looking for two students who would be interested in helping with these exciting next steps.

Roles and Responsibilities:

Successful applicants will help process samples in the QE3 clean lab to answer questions concerning the fate and effects of microplastics in tadpoles. Students will be trained to characterize microplastics using a microscope and ImageJ, and may participate in tissue digestions and density separations as required. Students will need to complete WHIMIS safety training. Students will work a total of 135 hours (9 hr/week, on average) between November 15th and February 28st a rate of $16.00 per hour.

Qualifications:

- Must be a Queen's undergraduate student.
- Detail-oriented and organized.
- Immediate availability.
- Prior laboratory experience is an asset.
- Interested in biology, toxicology, environmental sciences, and/or related fields.
- Eager to learn and willing to ask questions.

To Apply:

Interested students should email their cover letter, resume, and contact information for 3 references and to Sam Gene (s.gene@queensu.ca). We recognize the diverse backgrounds and circumstances of the Queen's student body. If you require accommodations please let us know. The QE3 Lab is committed to Equity, Diversity, and Inclusion (EDI). Those who wish to include an EDI/values statement are encouraged to do so. Applications will be reviewed as they are received.