

## **Job Description – Clean Leadership 2019 Program**

### **Summary of the Program**

The Clean Leadership program (formerly Nova Scotia Youth Conservation Corps or Youth Corps) was established in 1989 to provide Nova Scotian youth with training and employment opportunities in the environmental field. This program engages community partners across the province to hire students to carry out work in the summer months that fosters environmental stewardship. The Clean Leadership program provides Nova Scotian youth with green sector work experience, an enhanced appreciation of the environment and their community, and develops skills for life-long learning (including team-building and leadership skills, increased knowledge for future employment and/or education ventures, program evaluation techniques, and the ability to give back to their community and their environment.

### **Job Title - Freshwater environmental DNA research assistant**

**Wage - \$14.50**

### **Summary of Position**

The summer intern will work with researchers in the Biology Department to use eDNA from water samples to determine the presence and abundance of the Brook Floater – an imperiled freshwater mussel - in Cape Breton and other select locations in Nova Scotia. Freshwater mussels provide important ecosystem services to aquatic environments, yet are under threat due to habitat change and introduced species. This project will help to provide much needed spatially-explicit information on the presence and abundance of the Brook Floater – a species listed “of special concern” by the Species at Risk Act.

The community partner for this Summer Student Intern position through the Clean Leadership program will be Cape Breton University - Biology Department, reporting to Dr. Tim Rawlings. The summer intern will be mainly responsible for working with aquatic ecologists to sample freshwater environments for freshwater mussels (streams, rivers, lakes), collect and process water samples for eDNA, and undertake controlled molecular procedures to determine the presence and abundance of Brook Floater in aquatic habitats. The successful candidate needs to enjoy working outdoors in freshwater environments and have an interest in learning molecular tools and techniques commonly applied to ecological questions.

### **Community Partner**

Cape Breton University is a small undergraduate university focused on developing leaders of industry, scientists, researchers, artists, educators, health care professionals and highly skilled business professionals. Its faculty endeavour to provide students with rewarding and productive learning experiences that lead to independence and fulfilment.

### **Duties and Responsibilities**

- Field sampling of freshwater mussels in streams, lakes and rivers
- Identification of freshwater mussels to species
- Collection of and filtration of water samples in the field
- DNA extraction from water samples

- Analysis of eDNA samples using Quantitative PCR and associated molecular techniques
- Data collection and analysis; report writing

## **Requirements/Qualifications**

*These are the qualifications that are necessary for someone to be considered for the position.*

- Must be a Canadian citizen or legally entitled to work in Canada;
- Must be between the ages of 15 and 30;
- Must be a full-time student and intending to return to school in fall 2019;
- Is not a member of immediate family of community partner;
- Have an aptitude for safe work practices and the ability to multi-task in a busy work environment;
- Be able to work productively as part of a team while responding to feedback;
- Be interested in learning new skills and techniques
- Demonstrated interest in future employment in the environmental or 'green' sector is considered an asset;

## **Working Conditions**

A willingness to work outdoors in inclement weather when necessary.

## **Physical Requirements**

Field work can be physically demanding at times.