

How does life settle into a brand-new river?

PhD in environmental sciences: follow, year after year, the colonization and ecological assembly of three newly created streams in Bécancour.

Ecological trajectory and biodiversity

4 years

of PhD funding through Mitacs Accelerate

3 rivers

built from scratch, full-scale natural laboratories

20 min

from the UQTR campus to the field sites (30 km)

The project

In Bécancour, on the south shore of the St. Lawrence, former agricultural drains are giving way to three entirely new streams. An interdisciplinary UQTR team is tracking their hydrogeomorphological, geochemical and ecological trajectory until 2033, in partnership with the Société du parc industriel et portuaire de Bécancour (SPIPB).

Your thesis in four chapters

- 1 **Initial colonization.** Who arrives, and how fast? Electrofishing, macroinvertebrates and diatoms.
- 2 **Intra- and interspecific diversity.** Characterization of phenotypic reaction norms and epigenetic diversity in dominant species.
- 3 **Aquatic–terrestrial coupling.** Emerging aquatic insects, riparian arthropods (insects and spiders) and riparian vegetation.
- 4 **Assisted colonization.** An exploratory chapter: testing interventions that could speed up the recovery of ecological complexity.

Your supervisory team

Eric Harvey. Meta-ecosystems and aquatic–terrestrial connectivity.

Christelle Leung. Evolutionary ecology, epigenetics and phenotypic plasticity.

Vincent Fugère. Freshwater community ecology and responses to stressors.

What we offer

- A stipend of \$37,000 per year for three years, then \$30,000 in the fourth year
- Three co-supervisors, with weekly meetings
- A summer field season every year and the laboratories of the RIVE research centre
- A time series shared with the geomorphology and water quality themes
- Three first-author papers, and a network reaching the industry partner and government ministries

Who we are looking for

- An undergraduate and/or Master's degree in a relevant field
- A valid driver's licence
- Assets, not required to apply: aquatic ecology, invertebrate sampling and identification, quantitative skills

How to apply

Send your CV, a motivation letter, your transcript and the names of three references to Christelle.Leung@uqtr.ca

Deadline: December 22, 2026 **Start:** Fall 2027 (flexible)