PhD opportunity in environmental microbiology and biogeochemistry at Carleton University

Microplastics persist in aquatic and terrestrial ecosystems, posing risks to sensitive ecosystems such as wetlands. Although laboratory studies have identified microorganisms capable of degrading plastics such as polyethylene terephthalate (PET), very little is known about whether these processes occur naturally in complex environmental settings. This collaborative project will investigate the fate of microplastics within wetlands and the potential for microbial biodegradation.

Dr. Allyson Brady (Department of Biology) is seeking a PhD student to explore the potential for natural microbial communities to degrade persistent microplastics in wetland sediments using lipid biomarker and natural-abundance radiocarbon isotope techniques. Students will be part of an interdisciplinary and collaborative team involving Carleton, McGill University and Environment and Climate Change Canada, with opportunity for cross disciplinary research, and close cooperation between positions. Our research group is committed to maintaining a welcoming and respectful environment where all members can succeed. We encourage applications from individuals with diverse backgrounds and are dedicated to fostering equity, inclusion, and equal opportunity for everyone. Students from historically underrepresented groups are strongly encouraged to apply.

Applicants should have a relevant BSc or MSc degree in biology, microbiology, earth sciences, environmental sciences as well as interests in microbial ecology, biogeochemistry, and/or environmental microbiology. Prior experience with mass spectrometry would be considered a strong asset.

Please contact AllysonBrady@cunet.carleton.ca referring to this ad and include a **CV, unofficial transcript,** and **cover letter/description** of how this project builds on your previous experience and fits within your own education or career goals. Ideal start date is Winter 2027 or Spring 2027 and review of applications will continue until the position is filled.