

AUTUMN PEREIRA

EDUCATION

AUGUST 2023 – MAY 2028

MS/PhD Integrative Plant Science (Horticulture), Cornell University

SEPTEMBER 2019 – MAY 2023

BSc. Major Biology and Mathematics, McGill University

- 3.86 CGPA

SKILLS

- Python (5 years)
- R (5 years)
- Bash (2 years)
- In-depth understanding of statistics and hypothesis testing
- Strong academic writing and communication skills

AWARDS

Cornell Fellowship (2023) Cornell University

Dean's Multidisciplinary Undergraduate Research List (2023) McGill University

Undergraduate Student Research Award (2022)
Natural Sciences and Engineering Research Council of Canada

J.W. McConnell Scholarship (2019-2023) McGill University

PUBLICATIONS

Poster Presentations

A.Pereira, N.Tromas, B.Shapiro, S.Sauvé, D.Simon, F.Martínez-Jerónimo, N.Fortin, C.Greer. An investigation into the strain-level dynamics of *Microcystis* and implications for microcystin concentration. Presented at: Interdisciplinary Freshwater Harmful Algal Bloom Workshop, Montreal, QC (2023)

RESEARCH ASSISTANTSHIPS

SEPTEMBER 2022- AUGUST 2023

Undergraduate Thesis, Shapiro and Gregory-Eaves Labs (McGill University)

- Used **whole genome shotgun metagenomics** to investigate strain-level cyanobacterial community composition in bloom-impacted lakes
- Identified communities which have a high capacity to produce microcystin toxin, and environmental conditions which may lead to the assembly of such communities.
- Identified variation in microbial genotypes which correspond with production of different microcystin congeners.

SKILLS DEVELOPED: Metagenomic analysis, bash, multivariate statistics, scientific communication.

MAY 2022 – MAY 2023

Undergraduate Research Project, von Sperber Lab (McGill University)

- Reviewed the literature on phosphatase activity in peatlands to identify knowledge gaps.
- **Quantified the potential phosphatase activity** at the Mer Bleue bog, and identified relationships with seasonal and environmental variables.

SKILLS DEVELOPED: Literature review, soil enzyme assays, field sampling, scientific communication.

FEBRUARY 2020 – MAY 2022

Research Assistant, Green Lab (McGill University)

- **Surveyed a population** of endangered Fowler's toads along Lake Erie
- Assisted in the quantification of phytoplankton biomass using **fluorometry**.
- Examined the impact of various physical and ecological variables on the growth of endangered Fowler's toads using a data set of 6 years
- Identified inter-annual trends in toad development and maturation using **regression analyses**

SKILLS DEVELOPED: Python and R coding languages, data scrutiny, model-fitting, field sampling

EXTRA-CURRICULARS & OUTREACH

SEPTEMBER 2021 – MAY 2023

Editor, McGill Science Undergraduate Research Journal

- **Reviewed and edited undergraduate research articles** published in the seventeenth and eighteenth volumes of the McGill Science Undergraduate Research Journal
- **Managed an editorial team** for a student-run popular science blog The Abstract

SKILLS DEVELOPED: Management and leadership, academic writing and editing, communication of scientific literature to non-specialists

SEPTEMBER 2021 – DECEMBER 2021

Math Tutor, PAJOMA Program

- Met weekly over Zoom with a middle school student in Kianyaga, Kenya to revise math topics

SKILLS DEVELOPED: Clear communication of scientific concepts

SEPTEMBER 2021 – DECEMBER 2021

Undergraduate Course Assistant, McGill University (Department of Mathematics)

- **Graded and provided feedback** on assignments for a second-year analysis course

SKILLS DEVELOPED: Attention to detail, communication of scientific concepts

JANUARY 2021 – APRIL 2021

Undergraduate Teaching Assistant, McGill University (Department of Chemistry)

- **Led drop-in help sessions** for students regarding laboratory material
- Assisted students during virtual laboratory sessions
- Moderated discussion forums and answered questions from students about laboratory content

SKILLS DEVELOPED: Clear communication of scientific concepts