

# NINA MAIKAELA OBIAR

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## EDUCATION

**McGill University, Montréal QC Canada** August 2025

MSc. Biology

GPA: 4.0

**Thesis:** The biogeography and conservation of useful plant species of Canada and beyond

**University of Calgary, Calgary AB Canada** April 2022

BSc. Honours in Plant Biology, Minor in Anthropology

GPA: 3.691

**Thesis:** Conserving at-risk wildflowers from invasive plant species in British Columbia

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## SKILLS AND QUALIFICATIONS

Biological conservation researcher and advocate for collaboration with a Master of Science in Biology and a Bachelor of Science in Plant Biology with a Minor in Anthropology. Experienced in organizing large datasets and documents for visualization, as well as systematic literature synthesis to be translated into accessible outputs for policy and public audiences. Published author in peer-reviewed journals, including *Plants, People, Planet*. Highly skilled in translating complex scientific concepts, managing project logistics, and facilitating clear communication between Indigenous stakeholders, researchers, government, and non-profit organizations. Deeply committed to evidence-based policy, climate justice, and cross-jurisdictional collaboration.

## SOFTWARE PROFICIENCIES:

- Microsoft Office (i.e., Word, PowerPoint, Excel)
- R
- Google Workspace
- Power BI
- MySQL

## PROFESSIONAL EXPERIENCE

**Parks Canada, Montréal, Canada** January 2025-December 2025

Student Employee, Protected Areas Establishment and Conservation (PAEC)

- Principal Investigator: Dr. Karen Richardson
- Collaborated with Indigenous stakeholders to inform biodiversity monitoring protocols for the Hudson Bay - James Bay Lowland (HJBL), Ontario area, contributing to Canada's climate adaptation and conservation planning objectives
- Developed species distribution models for species with the HJBL area to evaluate biodiversity patterns, generating evidence to support federal conservation and land-use policy
- Created technical documentation and visualization guides for non-technical stakeholders and policymakers

**McGill University, Montréal QC Canada** September 2023-December 2024

Department of Biology, Faculty of Science

- Professor: Dr. Laura Pollock
- Facilitated laboratory sessions for first-year undergraduate students enrolled in a Methods in Biology course, providing hands-on instruction and guidance in data analysis techniques and statistical methods
- Assisted students in understanding statistical concepts, software applications, and data interpretation through interactive demonstrations and one-on-one support during lab sessions
- Collaborated with course instructors to develop lab materials, design exercises, and assessments that aligned with course objectives and enhanced students' understanding of statistical principles and their practical applications

**McGill University, Montréal, Canada** January 2022-August 2025

Master's Candidate, Department of Biology

- Principal Investigator: Dr. Laura Pollock
- Published a first-authored research article titled "*Bridging biodiversity and ecosystem services through Canada's useful plants*" in *Plants, People, Planet*
- Conducted a comprehensive estimation of current global plant species sampling coverage to forecast the sampling effort needed for climate-robust species distribution models
- Processed and standardized large-scale global biodiversity datasets (e.g., GBIF) to quantify spatial sampling biases across diverse plant taxa for biodiversity monitoring under climate change

**University of Calgary, Calgary AB Canada** June 2022-August 2022

Research Assistant, Office of Sustainability

- Principal Investigator: Dr. Adela Kincaid
- Collaborated with the Alberta Institute of Wildlife Conservation to analyze the effects of the climate crisis on the Albertan avian population using statistical analyses (i.e., Maxent, ANOVA and linear regression) performed on R

- Projected future Mallard, Black-billed Magpie and American Robin populations in Alberta using Generalized Linear Models (GLMs) to investigate how change in species niche would affect rehabilitation intake
- Disseminated research findings on the effects of climate change on avian rehabilitation success to the general public through social media and newsletters to increase donor engagement
- Linked Western and Indigenous knowledges to create experiential learning activities to increase wildlife conservation awareness

**University of Calgary, Calgary AB Canada** January 2022-April 2022

Course-Based Research Experiences Research Coach, Taylor Institute of Teaching and Learning

- Research Supervisor/Professor: Dr. Adela Kincaid
- Organized contracts and grants between students, the course instructor, project partners (i.e., NGOs) and other stakeholders
- Participated in planning and organizing an interdisciplinary research symposium and organized weekly teaching material
- Interacted with students from a multitude of cultural backgrounds while developing projects and community partnerships
- Worked closely with the professor to present teaching material and provide mentorship throughout the student research journey for the culmination of the conference showcasing the projects

**University of Calgary, Calgary AB Canada** September 2021-April 2022

Undergraduate Research Student, Department of Biological Sciences

- Research Supervisor: Dr. Jana Vamosi
- Investigated competition between at-risk and invasive plant species at the organismal level through species distribution modelling using statistical analyses (i.e., Maxent, ANOVA and linear regression) performed on R
- Performed a qualitative survey on the impact of biotic interactions on plant species ranges
- Presented research results independently on how threatened plant species can be conserved using species distribution models in the annual undergraduate research symposium in the Department of Biological Sciences
- Synthesized a succinct yet efficient project report outlining how the COSEWIC-listed Dwarf Hesperochiron has adapted to certain bioclimatic conditions that could help the species outcompete the Spotted Knapweed if urbanization does not occur in its sites

**University of Calgary, Calgary AB Canada** May 2021-August 2021

Research Assistant, Department of Biological Sciences

- Research Supervisor: Dr. Jana Vamosi
- Adapted to the ongoing pandemic and forest fires in British Columbia that challenged our ability to perform field surveys
- Conducted exploratory literature reviews on species distribution models
- Prepared high-quality research materials using plant identification keys for field surveys of rare plant species
- Corresponded with a graduate student to create a data matrix to outline the characteristics of the specific plant species under analysis

**University of Calgary, Calgary AB Canada** January 2021-April 2021

Undergraduate Research Student, University of Calgary: Global Challenges

- Research Supervisor: Dr. Adela Kincaid
- Explored academic literature from Indigenous authors to understand how land-based learning can be respectfully incorporated into post-secondary institutions
- Engaged in scientific writing that led to the dissemination of the project on a global scale in the World Class Day annual conference
- Created a Land-Based Learning outline for an Indigenous Studies course at the University of Calgary that was successfully implemented in the following term
- Coordinated with students, Indigenous authors, research supervisor and research coach to co-create the knowledge required for a lesson module

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## PEER-REVIEWED JOURNAL PUBLICATIONS

- Eckert, I., **Obiar, N.**, Pollock, L.J. (2025) “Comparing the ability of natural history collections and community science observations to estimate plant niches”. *Botany*. <https://doi.org/10.1139/cjb-2025-0010>
- **Obiar, N.**, Eckert, I., Baker, J., Moerman, D., Pollock, L.J. (2025). “Bridging Biodiversity and Ecosystem Services through Useful Plants”. *Plants, People, Planet*. <https://doi.org/10.1002/ppp3.10642>
- Kincaid, A., Livingstone, S., Li, G., Adeladan, H., **Obiar, N.**, Kumar, S., Tirmizi, S., Anderson, M., Hunt, I., Spence, D. (2022). “Towards Reconciliation: Philanthropy, animal-human relationships, and community-engaged learning”
- **Obiar, N.**, Morales, R.M.U. (2022). “Reconciliation: Implementing Traditional Land-Based Learning in Canadian Universities”

**University of Calgary, Calgary AB Canada** September 2021-December 2021

## Research Coach, Department of Indigenous Studies

- Research Supervisor/Professor: Dr. Adela Kincaid
  - Facilitated land-based learning experiences for students, guided by an Elder
  - Evaluated discipline-based student work
  - Aided student projects during the formation of their hypotheses, experimental planning and troubleshooting of projects
  - Cooperated with a team of research coaches, students and professors resulted in the publication of our work in a peer-reviewed research journal
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## TECHNICAL REPORTS

- “The implementation of land-based learning in an Indigenous Studies class at the University of Calgary” *UNIV 401.32: Research on Global Challenges* (April 2021, Calgary AB)
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## GRANTS

- Work-integrated learning - Experiential Learning Grant 2021-2022
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## HONOURS AND AWARDS

- NSERC CGS-M Award 2024-2025
  - Grad Excellence Award in Biology 2023
  - David Stewart Memorial Fellowship – Biology 2023
  - Best First-Year Talk for McGill Biology’s Department Day 2023
  - First Class Honours 2022
  - Jason Lang Scholarships 2018-2021
  - Victor Nicholas Ruryk Scholarship in Botany 2021
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## CONFERENCE PARTICIPATIONS

- “Turning over a new leaf: the rapidly growing role of natural history collections in modern biodiversity science” *2025 Annual Conference of the Canadian Society for Ecology and Evolution* (July 2025, Canadian Society for Ecology and Evolution)
- “Herbaria and Community Science: Complementary Tools for Informing Biodiversity” *2025 Quebec Centre for Biodiversity Science Annual Symposium* (February 2025, Quebec Centre for Biodiversity Science, Sherbrooke, QC)

- “Bridging Biodiversity and Ecosystem Services through Canada’s Useful Plants” *2024 Quebec Centre for Biodiversity Science Annual Symposium* (February 2024, Quebec Centre for Biodiversity Science, Montreal, QC)
  - “Bridging Biodiversity and Ecosystem Services” *Joint Annual Meeting* (June 2023, Canadian Society for Ecology and Evolution AND Canadian Botanical Association, Winnipeg, MB)
  - “Nature’s Pharmacy, Grocery and Hardware Store: The Vital Importance of Plant Diversity” *Department Day* (April 2023, McGill University, QC)
  - “The Good, the Bad and the Ugly: Making post-secondary internships and service-learning programs work for students **and** community partners” *Congress 2022: ANSER-ARES Conference* (May 2022, Virtual Conference)
  - “Conserving at-risk wildflowers from invasive plant species in British Columbia” *Undergraduate Research Symposium* (April 2022, University of Calgary, AB)
  - “Speaker Series” *Wildlife Conservation Club* (March 2022, Calgary, AB)
  - “The implementation of land-based learning centred in North American Indigenous pedagogy and epistemology” *World Class Day 4* (May 2021, Virtual Conference)
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## PROFESSIONAL ACTIVITIES

Conservation, Ecology, and Evolution Biology Seminars *Montréal QC* 2023 - 2025  
Seminar Representative

- Organized weekly seminars hosting renowned scientists within the realm of ecology and evolution for the Department of Biology at McGill University

Ecology and Evolution Lunches *Montréal QC* 2023  
Seminar Representative

- Organized weekly research talks featuring Department of Biology graduate students at McGill for research dissemination and collaboration among peers

Undergraduate Research Symposium in Indigenous Studies *Calgary AB* 2022  
Research Coach

- Organized a symposium titled “Braiding Indigenous and Interdisciplinary Ways of Knowing” showcasing community-based research projects by undergraduate students
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## LEADERSHIP AND COMMUNITY INVOLVEMENT

**Canadian Botanical Association, Canada** 2023-Current

Student Representative of the Inclusion and Diversity Committee

- Advocating for and promoting inclusivity and diversity within the community of Canadian botanists, and collaborating with other committee members to organize events and initiatives that support these values

**Resilience Montreal, Montreal QC Canada** 2023-Current

General Volunteer

- Preparing and serving meals to clients visiting the shelter, and maintain a clean and organized kitchen space

**Alberta Children's Hospital, Calgary AB Canada** 2018-2022

Inpatient Playroom Activities Assistant

- Anticipated the needs of the patient and think critically to solve problems in an efficient and timely manner

**University of Calgary, Calgary AB Canada** 2020-2022

Science Ambassador

- Facilitated engaging and diverse environment for students and faculty in the scientific community through social media and Faculty of Science hosted events

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## REFEREES

Dr. Laura Pollock, Associate Professor, Research Supervisor

McGill University, Department of Biology

[laura.pollock@mcgill.ca](mailto:laura.pollock@mcgill.ca)

Dr. Karen Richardson, National Science Advisor, Manager

Climate and Conservation Science, Parks Canada

[karen.richardson@pc.gc.ca](mailto:karen.richardson@pc.gc.ca)

Dr. Jana Vamosi, Professor, Research Supervisor

University of Calgary, Department of Biological Sciences

[jvamosi@ucalgary.ca](mailto:jvamosi@ucalgary.ca)