

VICTORIA VAN MIERLO

Aquatic Conservation Ecologist, MSc.



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RELEVANT EMPLOYMENT

Wildlife Habitat Biologist BI-02

November 2022 – July 2023

CANADIAN WILDLIFE SERVICE (ONTARIO) - ENVIRONMENT AND CLIMATE CHANGE CANADA

- Lead geospatial and statistical analysis of caribou and wolf monitoring data to estimate baseline predation risk on SARA listed Boreal caribou in the Ring of Fire region of Northern Ontario. Analyses included Bayesian precision analysis, occupancy modeling, and generalized additive modeling.
- Led literature review, synthesis, and writing of a report detailing the anticipated threats to Eastern Migratory Caribou from proposed mining activities in the Ring of Fire Region in Ontario's Far North.
- Lead development of the unit's information and data management plan
- Supported procurement contracting through drafting contracts, soliciting bids, and document management.
- Supported manuscript preparation.
- Lead co-op student hiring and supervision (5 terms/students).

Wildlife Biologist BI-02

June 2022 – October 2022

CANADIAN WILDLIFE SERVICE (ONTARIO) - ENVIRONMENT AND CLIMATE CHANGE CANADA

- Cataloguing, organization and analysis of large geospatial datasets for modeling Boreal bird abundances in the Far North of Ontario.
- Fit generalized additive models (GAMs) to remotely recorded and interpreted Canada Warbler song meter recordings to evaluate the relationships between vocalization occurrence and time of day/year. Results from this work will go on to inform better survey techniques to estimate Canada Warbler abundances.

Research Assistant, Analyst & Writer

January 2022 – January 2023

DR. STEPHANIE GREEN – UNIVERSITY OF ALBERTA, REMOTE

- In-depth advanced statistical analysis of fisheries data, interpretation, and manuscript preparation for publication in scientific journals.

Independent Research Contractor

December 2021 - March 2022

MINISTRY OF NORTHERN DEVELOPMENT, MINES, NATURAL RESOURCES AND FORESTRY, PETERBOROUGH

- Literature review and synthesis of impact summary tables pertaining to the potential impacts of two aquatic invasive species (mosquitofish & red shiner) in Ontario complete with estimated financial impact by socio-economic sector.

Teaching Assistant

January 2020 – April 2020

DEPARTMENT OF RENEWABLE RESOURCES UNIVERSITY OF ALBERTA, EDMONTON

- Supported REN R 376 Fisheries and Wildlife Management course work and lectures. Graded course and written assignments.

Field Research Team Leader

May 2019 – August 2020

FISHERIES & AQUATIC CONSERVATION LAB UNIVERSITY OF ALBERTA, EDMONTON

- Planned and executed two full aquatic field research seasons for the surveying of fish, crayfish, and environmental characteristics across a major Alberta watershed. Skills used included: backpack electrofishing, gill netting, seine netting, temperature logger deployment and retrieval, angling, trailering, boating, fish identification, fish specimen procurement (both lethal and non-lethal), kick-net sampling, and crayfish baited trapping.

PUBLICATIONS, PRESENTATIONS & POPULAR WRITING

Publications

Van Mierlo, V. A., Green, S. J., Emmerton, C. A., Nasr, M., Buendia, C., Wyatt, F. R., Vinebrooke, R.D., Stuparyk, B., & Poesch, M. S. (n.d.) Assessing changes in food web dynamics in freshwater ecosystems after the invasion of Northern crayfish (*Faxonius virilis*) [Manuscript in preparation]. Department of Renewable Resources, University of Alberta.

Van Mierlo, V. A., Green, S. J., Emmerton, C. A., Nasr, M., Buendia, C., Wyatt, F. R., & Poesch, M. S. (2022). Occupancy of invasive Northern Crayfish (*Faxonius virilis*) in northern streams is associated primarily with water temperature. Freshwater Science, 000–000. <https://doi.org/10.1086/722576>

Tahir, Irtaza, Victoria Van Mierlo, Victoria Radauskas, Wayne Yeung, Alastair Tracey, and Rosa da Silva. "Blended Learning in a Biology Classroom: Pre-Pandemic Insights for Post-Pandemic Instructional Strategies." FEBS Open Bio n/a, no. n/a (2022). <https://doi.org/10.1002/2211-5463.13421>

Selected Presentations

Invited speaker: CWS-ON Information Sharing Session – July 16, 2024. Title: A novel method for estimating the minimum number of wolves and packs from ARU recordings. Location: Canadian Center for Inland Waters, Burlington, ON Scientist in the Classroom – June 9, 2022. Title: Rivers, Crayfish and Invasive Species. Location: Dearcroft Montessori School, Oakville ON – Grades 3-5 classes.

Invited Guest Lecture - January 20, 2022. Title: Occupancy and Impacts of the Northern Crayfish (*Faxonius virilis*) in Tributaries of the North Saskatchewan River Basin. Location: McEwan University, Edmonton AB -Invasion Ecology & Management (BIOL 414)

Van Mierlo, V. A., Emmerton, C., Green S., Poesch M., (2021). Occupancy of invasive Northern Crayfish (*Faxonius virilis*) in Tributaries of the North Saskatchewan river watershed. ISCBC 12-minute talk presentation.

Van Mierlo, V. A., Buendia-Fores, C., Green S., Poesch M., (2021). Understanding the impacts of invasive northern crayfish (*Faxonius virilis*) on native fish species in the North Saskatchewan river watershed. ACTWS 12 minute talk presentation.

Van Mierlo, V. A., Buendia-Fores, C., Green S., Poesch M., (2021). Understanding the impacts of invasive northern crayfish (*Faxonius virilis*) on native piscivorous fish species in the North Saskatchewan river watershed. AISC 12-minute talk presentation

Popular Writing

Van Mierlo, V.A. *The Invasive Northern Crayfish: Where are they and what are they doing?* Nature Alberta Magazine, Summer 2022.

EDUCATION



Doctor of Philosophy (Aquatic Invasive Ecology) – Expected Sept 2028

McGill University – Dr. Anthony Ricciardi Lab – Montreal, Quebec

Supervisor: Dr. Anthony Ricciardi

Thesis: Experimental studies of the potential impacts and population control of Marbled Crayfish in the Great Lakes basin



UNIVERSITY OF
ALBERTA

Master of Science (Aquatic Conservation Biology) – 4.0 GPA

University of Alberta – Fisheries and Aquatic Conservation Lab – Edmonton, Alberta

Co-Supervisors: Dr. Stephanie Green & Dr. Mark Poesch

Thesis: Occupancy & Impacts of Northern Crayfish (*Faxonius virilis*) in tributaries of in the North Saskatchewan River Basin

Courses: Environmental Multivariate Statistics – A+ (94%) & Statistical Models in Ecology – A+ (97%)



Honours Bachelor of Science (Biology) - 3.9 GPA

McMaster University – Hamilton, Ontario

Thesis: Interactions of the yellow mealworm (*Tenebrio molitor*) immune system and varying melanin producing strains of entomopathogenic fungi *Cryptococcus neoformans*

VOLUNTEER WORK & ELECTED POSITIONS

Mentor/PenPal

June 2021 – September 2021

AFS HUTTON JUNIOR FISHERIES BIOLOGY PROGRAM

- Exchanged email communications and provided mentor and future direction advice to 11th grade through 1st year undergraduate students in the AFS Hutton Junior Fisheries Biology Program.

Classroom Presenter (K-12)

May 2021 – Present

SKYPE-A-SCIENTIST

- Presented to and fielded questions to classrooms (K-12) through Zoom platform about invasive species. Also provided information about STEM, career routes, and scientific research.

Treasurer

April 2020 – April 2021

AQUATIC CONNECTION EDMONTON

- Founding member and elected Treasurer for University of Alberta graduate student group Aquatic Connection Edmonton (ACE) that aims to create connections between academic, government, and industry professionals and pursue interdisciplinary solutions for aquatic conservation. Duties include creating and balancing yearly and event budgets, writing group grant applications, and organizing group activities, events and meeting with other executive members.

Coach

2016 – 2019 & 2022 - 2023

BURLINGTON GIRLS SOFTBALL ASSOCIATION

- Coached competitive level softball to young women and girls. Primary role was as a pitching coach; fundamentals and mechanics of windmill pitching, game theory, pitching strategy, and pitcher health. Over the course of three seasons, age groups included: Mite (7-9), Squirt (10-12), Novice (13&14), Bantam (16&17), and Midget (18-21).

SCHOLARSHIPS & AWARDS

2024

- Richard H. Tomlinson Doctoral Fellowship (*\$105,000 Value over 3 years*) – McGill University (2024)
- NSERC Canada Graduate Scholarship-Doctoral (CGS D) (*\$105,000 Value over 3 years*) – Government of Canada (2024)

2021

- ALES Graduate Student MSc Outstanding Thesis Award (*\$500 Value*) – University of Alberta (2021)
- Alberta Graduate Excellence Scholarship (*\$12,000 Value*) – University of Alberta (2020-21)

2020

- Margaret (Peg) Brown Award in Environmental Studies & Wildlife Resources (*\$2,700 Value*) – University of Alberta (2020)
- Walter H Johns Graduate Fellowship (*\$5,800 Value*) – University of Alberta (2020)
- Alexander Graham Bell Canada Graduate Scholarship - Master's (NSERC) (*\$17,500 Value*) – Government of Canada (2020)
- ACTWS Student Travel Grant (*\$240 Value*) – Alberta Chapter of the Wildlife Society (2020)
- Clemens-Rigler Travel Award (*\$440 Value*) – Canadian Conference for Fisheries Research (2020)

2019

- Alberta Graduate Excellence Scholarship (*\$12,000 Value*) – University of Alberta (2019-20)
- Renewable Resources Recruitment Scholarship (*\$3,000 Value*) - University of Alberta (2019)

CONFERENCES ATTENDED

2022 & 2023

- ESRI User Conference (online)- 2023
- ESRI User Conference (online)- 2022

2021

- Council of British Columbia Invasive Species Research Conference (ISCBC) - 2021
- Alberta Chapter of the Wildlife Society Conference (ACTWS) - 2021
- Alberta Invasive Species Council Conference (AISC) - 2021
- Canadian Conference for Fisheries Research (CCFFR) – 2021

2020

- 18th Bentley Lecture in Sustainable Agriculture (University of Alberta) - 2020
- Canadian Conference for Fisheries Research (CCFFR) – 2020

CERTIFICATIONS, MEMBERSHIPS, & LICENCES

2024

- Getting Started with Python – ESRI Canada Course

2022

- Spatial Data Science: The New Frontier in Analytics – ESRI MOOC Course

2021

- Golden Key International Honour Society (4.0 GPA)

2020

- University of Alberta Student Group Leader: Treasurer Finances Certification
- University of Alberta Student Group Leader: Essentials Certification
- Alberta Chapter of the Wildlife Society (ACTWS) – Student Member

2019

- Crew Leader II – Backpack Electrofishing Certification
- St. John Ambulance Wilderness Level III First Aid Certification
- CCAC Animal Research: Ethics and Use at University of Alberta Certification
- CCAC Principles of Animal Ethics and Welfare – Fish/Aquatic Amphibians Certification
- TCPS Ethical Conduct for Research Involving Humans CORE Certification
- University of Alberta Graduate Ethics Training Certification
- WHMIS University of Alberta Certification
- University of Alberta ATV Safety Certification
- Bear and Cougar Awareness and Safety Certification
- University of Alberta Defensive Driving Certification
- University of Alberta Field Activities Planning Certification
- Alberta Society of Professional Biologists Biologist in Training (BIT)
- Transport Canada Pleasure Craft Operator Certification
- DAN Oxygen First Aid for Diving Injuries Certification

2018 & Previous

- ACUC Advanced & Rescue Scuba Diver Certifications
- Ontario Class G Diver's Licence
- Red Cross CPR/AED Level C First Aid Certification
- WHMIS Biosafety Level 2 Certification
- PADI Open Water Scuba Certification

SKILLS

Soft Skills

- Collaborative & Personable
- Attention to Detail
- Takes Initiative
- Skilled Problem Solver
- Works well independently and as part of a team
- Professional Conduct
- Exceptional Organization
- Leadership

Hard Skills

- Statistical Software: R & Excel
- Spatial Software: ArcGIS Pro
- Communication Software: Microsoft Suite & G Suite
- Digital & Graphic Design Software: Inkscape, Corel, Photoshop
- Advanced Statistics Knowledge
- Budget generation & auditing
- Structure Mapping and Literature Review
- Scientific Inquiry and Experimental Design
- Professional Writing and Communication
- Presentation Skills
- Highly Organized
- Procurement contracting management
- Excellent Time Management

LINKS

- LinkedIn: <https://www.linkedin.com/in/victoriavanmierlo/>