BENJAMIN L. HLINA, MSc, PhD Candidate

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Education:

Doctor of Philosophy (PhD), 2018 – Present
Carleton University, Ottawa, Ontario, Canada
Department: **Biology**
Emphasis: **Fish Spatial Ecology, Aquatic Trophic Dynamics, and Fish Bioenergetics**
Thesis: Understanding the drivers behind Lake Trout (*Salvelinus namaycush*) spatial ecology and behaviour to inform a multifaceted management strategy
Supervisor: Dr. Steven J. Cooke – FECPL

Master of Science (MSc), 2015 (Convocation: June 2016)
Wilfrid Laurier University (WLU), Waterloo, Ontario, Canada
Major: **Integrative Biology**
Emphasis: **Fish Physiology, Aquatic Toxicology, and Invasive Species Management**
Thesis: The Influence of Abiotic Factors on the Uptake and Elimination of 3-Trifluoromethyl-4-Nitrophenol by Larval Sea Lamprey (*Petromyzon marinus*)
Supervisor: Dr. Michael P. Wilkie

Bachelor of Science (B.Sc.), 2013
University of Wisconsin-Stevens Point (UWSP), Stevens Point, Wisconsin, USA
Major: **Water Resources & Fisheries Management-Fisheries Management**
Minor: **Biology**

Publications:

- **Hlina, B.L.**, Birceanu, O., Robinson, C.S., Dhiyebi, H., Wilkie, M.P. (2021).The relationship between thermal physiology and lampricide sensitivity in larval sea lamprey (Petromyzon marinus). Journal of Great Lakes Research 47 (Supp. 1): S272-S284. https://doi.org/10.1016/j.jglr.2021.10.002.

- **Hlina, B.L.**, Glassman, D.M., Chhor, A.D., Etherington, B.S., Elvidge, C.K., Diggles, B.K., Cooke, S.J. (2021). Hook retention but not hooking injury is associated with behavioral differences in Bluegill. Fisheries Research 242: 106034. https://doi.org/10.1016/j.fishres.2021.106034.

- Marsden, J.E., Blanchfield, P.J., Brooks J.L., Fernandes, T., Fisk, A.T., Futia, M.H., **Hlina, B.L**., Ivanova S.V., Johnson, T.B., Klinard, N.V., CC Krueger, C.C., Larocque, S.M., Matley, J.K., B McMeans, B., O'Connor, L.M., Raby, G.D., Cooke, S.J. (2021). Using untapped telemetry data to explore the winter biology of freshwater fish. Reviews in Fish Biology and Fisheries 31: 115–134. https://doi.org/10.1007/s11160-021-09634-2.

- Bergman, J.N., Bennett, J.R., Binley, A.D., Cooke, S.J., Fyson, V., **Hlina, B.L.**, Reid, C.H., Vala, M.A., Madliger, C.L. (2019). Scaling from individual physiological measures to population-level demographic change: Case studies and future directions for conservation management. Biological Conservation 238: 108242. https://doi.org/10.1016/j.biocon.2019.108242

- Muhametsafina, A., Birceanu, O., **Hlina, B.L.**, Tessier, L.R., Wilkie, M.P. (2019). Warmer waters increase the larval sea lamprey's (Petromyzon marinus) tolerance to the lampricide 3-trifluoromethyl-4-nitrophenol (TFM). Journal of Great Lakes Research 45(5): 921-933. https://doi.org/10.1016/j.jglr.2019.07.011

- **Hlina, B.L**., L.R. Tessier and M.P. Wilkie. 2017. Effects of water pH on the uptake and elimination of a piscicide, 3-trifluoromethyl-4-nitrophenol (TFM), by larval sea lampreys. Comparative Biochemistry and Physiology C 200: 9 - 16. https://doi.org/10.1016/j.cbpc.2017.05.005

- Johnson, N.S., J.A. Tix., **B.L. Hlina**, C.M. Wagner, M.J. Siefkes, H. Wang, and W. Li. 2015. Sea lamprey (*Petromyzon marinus*) sex pheromone mixture increases trap catch relative to a single synthesized component in specific environments. Journal of Chemical Ecology 41(3): 311 - 321. https://doi.org/10.1007/s10886-015-0561-2

Skills:

- Work in biostatistics and use of R and SPSS with minor experience using python and SQL
- Experience with Bayesian hierarchical models via JAGS and R
- Knowledgeable on acoustic telemetry array design, receiver deployment, tagging, and analysis.
- Experience in fish and aquatic sampling and monitoring methods ranging from gill nets to electrofishing
- Laboratory techniques including applications using HPLC, SPE, ELISAs, and spectrophotometry
- Competent with passive integrated transponder (PIT) systems
- Field and laboratory protocol development in aquatic toxicology and fisheries management.
- Tolerant of adverse working conditions.

Accomplishments:

- Best Student Paper 2022 – Finalist – American Fisheries Society
- Ontario Graduate Scholarship – Carleton University – 2022 ($15,000)
- Queen Elizabeth II Graduate Scholarship – Carleton University – 2020 ($10,000)
- Author and maintainer of the R package {ecotox}
- 2014-2015 President-Biology Graduate Student Association, WLU
- Brule River Sportsman's Club 2014 Scholarship Recipient ($5,000)
- Brule River Sportsman's Club 2012 Scholarship Recipient ($5,000)
- UW-Stevens Point-Chancellor's Leadership Award Recipient 2013
- University of Wisconsin-Stevens Point-University Leadership Award 2010, 2011, and 2012 Recipient

Organizations:

- American Fisheries Society 2010-Present
- President – Biology Graduate Student Association (WLU) 2013-2015
- International Association of Great Lakes Research 2015-2018
- Laurentian-Society of Environmental Toxicology and Chemistry 2016-2020
- American Fisheries Society (UWSP Chapter) 2009-2013
- Segregated University Fee Allocation Committee (UWSP) 2010-2012

Experience:

Teaching Assistant Carleton University, Ottawa, ON, CA Sept 2018 – Present
Biology Department

- Led discussions, facilitated active learning, and exposed students to different aspects of biology.
- Prepared lesson materials for teaching purposes for classes of 25-60 students.
- Taught laboratory sessions for biostatics based in R, introductory level biology courses and introduction to ecology.

Research Technician, Canada Centre for Inland Waters, Environment and Climate Change Canada, Burlington, ON, CA February 2018 – May 2018

- Used EIA and ELISA methods to determine amounts of sex steroids in fish gonads collected from a river near the Alberta Oil Sands.
- Created a standard operating procedure (SOP) for sample collection, steroid extraction, EIA analysis, and data analysis.
- Drafted a report on the findings of sex steroids in fish gonads collected from a river near the Alberta Oil Sands.

Lab Technician, WLU, Waterloo, ON, CA June 2016 – Dec 2017
Biology Department
- Assist graduate students with their research in the lab of Dr. Deborah MacLatchy at Wilfrid Laurier University and Dr. Mark Servos at the University of Waterloo including analyses such as solid phase extraction (SPE) for hormone analysis.
- Set up and plumbed aquatic exposures for sewage effluent toxicity analysis.
- Assist in the biomonitoring and assessment of mines and climate change on aquatic ecosystems in the Northwest Territories.

Teaching Assistant, WLU, Waterloo, ON, CA Sept 2013 – May 2015
Biology Department
- Led discussions, facilitated active learning, and exposed students to different aspects of biology.
- Prepared lesson materials for teaching purposes for classes of 25-45 students.
- Taught laboratory sessions for biostatistics based in R, introductory level biology courses, vertebrate biodiversity and conservation, and physiological adaptations in the environment: animals.

Undergraduate Fisheries Research Assistant, UWSP, WI September 2012 – April 2013
Fish Analysis Center (FAC)
- Assist graduate students with related research to their thesis. Sub-sampled and counted eggs for a largemouth bass fecundity study.
- Diet analysis of largemouth bass and walleyes for a predator-prey study.
- Removing and age estimating otoliths for a largemouth bass growth study.
- Experience with boat electrofishing and seines for fish sampling.

Lead Fisheries Technician, US-Geological Survey, Millersburg, MI March – September 2012
Hammond Bay Biological Station
- Conducted research on the catch efficacy of the male sea lamprey's full mating pheromone compared to synthesized 3-keto-petromyzonol sulfate (3kPZS) at management scale.
- Worked extensively with invasive sea lampreys, passive integrated transponder (PIT) tags and systems (Oregon RFID), trap nets, and peristaltic pumps.
- Collected, compiled, and entered all data with regards to the project.
- Assisted in a one year report of the study which was presented to the Great Lakes Fishery Commission (GLFC) and published in the Journal of Chemical Ecology.

Fisheries Technician (Volunteer), US-Forest Service, Kettle Falls, WA July – August 2011
Colville National Forest-Three Rivers Ranger District
- Surveyed streams to record overall impacts of commercial and recreational uses of the forest.
- Measured streams for bank full events, flood prone width and depth, pool tail crest, large woody debris, substrate, average depth per habitat unit, and maximum depth per habitat unit.
- Observed and collected data of every habitat units' overall condition.
- Conducted Wolman Pebble Counts to sample substrate.
- Backpack electrofished for native trout in remote areas with moderate to difficult terrain.
- Worked long hours in cold and wet conditions.

Additional Experience:

Budget Director, UWSP, Stevens Point, WI Sept 2012 – May 2013
University Recreational Sports (URS)
- Managed the accounts of 30 recreational sport organizations with a budget total of $250,000.
- Processed and recorded documents for travel, registration fees, and organizational supplies.
- Assisted in training organizations' treasurers in the proper ways to be a club's treasurer.
- Drafted the by-laws for URS's budget committee.

Administrative Budget Coordinator, UWSP, WI May 2010 – May 2012
Residence Hall Association (RHA)
- Worked with executive board members to complete projects and events for campus residents.
- Managed RHAs assets and expenses through budgets created in Microsoft Excel.
- Recorded meeting minutes for general assembly and executive board meetings.
- Worked and managed delegates to complete assigned volunteer hours.

Counselor/Naturalist, Amherst Junction, WI Summer 2009 & 2010
Central Wisconsin Environmental Station
- Oversaw participants for week-long camp sessions throughout the summer.
- Led different activities such as canoeing, kayaking, nature hikes, fishing, environmental crafts, orienteering, survival skills, and challenge course.
- Encouraged youth to enjoy the outdoors through games and educational activities.