

BENJAMIN L. HLINA, MSc

CONTACT

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benjaminhlina.com
Ottawa, ON

EDUCATION

Doctor of Philosophy (PhD)

Expected spring 2023
Fish spatial ecology, trophic dynamics, and bioenergetics
Teaching assistant
Carleton University, Ottawa, ON
2018 - present

Master of Science (MSc)

Integrative Biology (fish physiology, aquatic toxicology, invasive species management)
Teaching assistant
Wilfrid Laurier University, Waterloo, ON
2013 - 2015

Bachelor of Science (BSc)

Fisheries Management
Research assistant
University of Wisconsin-Stevens Point, Wisconsin, USA
2009 - 2013

SKILLS

- Experience publishing and reviewing peer-reviewed scientific literature;
- Quantitative analysis using R (some experience with python, SQL);
- Introductory knowledge of Bayesian hierarchical models via JAGS and R;
- Fish biotelemetry using acoustic, radio, and RFID telemetry;
- Experience using ESRI ArcPro and QGIS for spatial analyses;
- Fish and aquatic sampling and monitoring methods;
- Laboratory techniques (spectrophotometry, HPLC, ELISA);
- Development of field and laboratory protocol in fisheries and aquatic sciences.

RESEARCH EXPERIENCE

Doctorate dissertation, 2018 – present (expected spring 2023)

Carleton University; Supervisor: Dr. Steven J. Cooke - FECPL.ca
Finalist for Best Student Paper at American Fisheries Society 2022
Recipient of \$25,000 in scholarships

Title: Understanding the drivers behind Lake Trout (*Salvelinus namaycush*) spatial ecology, trophic dynamics, and bioenergetics to inform a multifaceted management strategy

Using acoustic telemetry, growth structures, bioenergetic models, and stable isotopes to evaluate how thermal habitats drive ecological processes for a cold-water fish. Provides insight on how conservation efforts can be improved to protect cold-water fishes as they experience multiple anthropogenic stressors.

Master's thesis, 2013 – 2015

Wilfrid Laurier University; Supervisor: Dr. Michael P. Wilkie
Scholarship recipient (\$5,000)

Title: The influence of abiotic factors on the uptake and elimination of 3-Trifluoromethyl-4-Nitrophenol by larval Sea Lamprey (*Petromyzon marinus*)

Understanding how temperature and pH affect the toxicity of a piscicide used to control invasive sea lamprey in the Great Lakes, using toxicity assays, enzymatic assays, and radiolabeled isotopes. Provides insight on the time of year the piscicide is most effective at controlling sea lamprey populations to improve treatment schedules.

Bachelor's thesis, 2012 – 2013

US-Geological Survey, Hammond Bay Biological Station
University of Wisconsin-Stevens Point; Supervisor: Dr. Nick Johnson

EXPERIENCE

Research Technician, Canada Centre for Inland Waters

Environment and Climate Change Canada, Feb. - 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 for sample collection, steroid extraction, EIA analysis, and data analysis.
- Drafted a report on the findings.

Laboratory Technician

Wilfrid-Laurier University, June 2016 – Jan. 2018

- Assisted graduate students with their research in the lab of Drs. Deborah MacLatchy and Mark Servos including solid phase extraction (SPE) for hormone analysis, EIAs and ELISAs.
- Set up and plumbed aquatic exposures for sewage effluent toxicity analysis.
- Assisted in the biomonitoring and assessment of mines and the impacts of climate change on aquatic ecosystems in the Northwest Territories.

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STRENGTHS

- Taking initiative, self-starting;
- Leadership, interpersonal skills, teamwork;
- Analytical skills and critical thinking;
- Written and oral communication;
- Flexibility, adaptability, comfort working in tough field conditions;
- Problem solving;
- Sound judgment, values and ethics.

INVOLVEMENT

Member, American Fisheries Society (AFS)

2010 - present

Member, Laurentian Society of Environmental Toxicology and Chemistry

2016 - 2020

Member, International Assoc. of Great Lakes Research

2015 - 2018

President, Bio. Grad. Student Assoc.

Wilfrid Laurier University

2013 - 2015

Member, UWSP Chapter of AFS

2009 - 2013

Treasurer from 2011 - 2013

CITIZENSHIP

Canadian citizen

US citizen

REFERENCES

Available upon request

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., Tessier, L.R., Wilkie, M.P. (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., Tix, J.A., **Hlina, B.L.**, Wagner, C.M., Siefkes, M.J., Wang, H., Li, W. (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>

OTHER ACCOMPLISHMENTS

- Author of R package {*ecotox*}
- 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