

Nicholas Boucher

Phone: (215) 771-6425, Email: Bouche66@MSU.edu Mailing: 608 High Street, H3, Ann Arbor, MI

EDUCATION

University of Michigan School for Environment and Sustainability (SEAS) (Ann Arbor, MI)

- **Master of Science**, Natural Resources and Environment: Conservation Ecology, **GPA:** 3.97/4.0, April 2019
- **Thesis:** Examining the relative effects of nutrient loads and invasive *Dreissena* mussels on Lake Michigan's food web using an ecosystem model
- **Honors and Awards:** Paul S. Welch Limnology Fellowship (March 2016); Academic Leadership Fellowship (Mar 2016), The Professor Ernest A.H. Woodman Award (April, 2019)
- **Leadership:** Student Speaker, Spring Commencement (April 2018); Conservation Ecology Track Leader (Apr 2017-Apr 2018)

Goucher College (Baltimore, MD)

- **Bachelor of Arts**, Environmental Science, with Spanish minor; **GPA:** 3.57/4.0, May 2014
- **Study Abroad:** Marine Biology, January 2013 (Roatán Institute of Marine Sciences)
- **Honors and Awards:** *Cum Laude*, Ariel Singer Prize, Department of Environmental Studies (May 2014); Patrick Kossler Teammate of the Year, Men's Lacrosse Team (May 2014); Landmark Athletic Conference Honor Roll (2011, 2012, 2013, 2014); Chi Alpha Sigma National College Athlete Honor Society (May 2013), Dean's List (2010, 2011, 2012, 2013)

SKILLS SUMMARY

Technical: R programming language | ArcGIS | Stan

Languages: Spanish: speaking and writing (fluent)

Training: FishPath tool for data limited fisheries | Introduction to Bayesian Modeling in Biology | Data Wrangling in R using Tidyverse

Certifications: NAUI Open Water SCUBA Diver (August 2004)

EXPERIENCE

Great Lakes Fishery Commission, Fishery Research Program Associate November 2019–Present
40 Hours Weekly

- Developing an annual portfolio of Great Lakes fishery research by issuing an annual request for proposals, coordinating proposal submission and peer review, negotiating research contracts, and managing the program budget
- Coordinating the Great Lakes Acoustic Telemetry Observation System (glatos.glos.us)
- Working with state, provincial, federal, and academic partners to develop research contracts, cooperative agreements and foster interagency cooperation
- Collaborating with tribal partners to improve the Science Directorate's cultural competency
- Co-chaired a session on bridging between Indigenous ecological knowledge and Western Science at the 2021 meeting of the International Association of Great Lakes Research (IAGLR)

Cooperative Institute for Great Lakes Research, Research Associate January 2018–November 2019
40 Hours Weekly

- Reviewed and updated the Great Lakes Aquatic Non-Indigenous Species Information System (GLANSIS) species profiles and risk assessments
- Prepared species profiles, technical reports, and publications for inclusion on the

GLANSIS database

- Developed ArcGIS maps using GLANSIS records and geospatial data to identify knowledge gaps in invasive species distribution
- Presented current known distribution of invasive crayfish to the Invasive Crayfish Collaborative

Cooperative Institute for Great Lakes Research, Graduate Research Assistant, May 2017–January 2018

30 Hours Weekly

- Planned, implemented, and wrote a Master's thesis to investigate the relative effects of nutrient loads and invasive mussels on Lake Michigan's food web
- Compiled, analyzed, and evaluated environmental data in order to calibrate the Atlantis model for Lake Michigan
- Assisted with surveys to measure physical-chemical-biological properties of Lake Michigan aboard the Research Vessel Laurentian

Charles River Laboratories, Aquatic Specialist (Bethesda, MD) December 2014–June 2015

40 Hours Weekly

- Provided husbandry support for a colony of over 150,000 specimens at the National Institutes of Health in a recirculating system
- Maintained water quality and life support equipment for *Danio rerio*, *Xenopus laevis*, and *Xenopus tropicalis* in a lab with 5,000 tanks
- Collected detailed records concerning colony health, water quality parameters, and animal breeding

National Aquarium, Intern Aquarist (Baltimore, MD) August–December 2013

20 Hours Weekly

- Kept precise records of behavior and diets for six exhibits and more than 50 species
- Performed daily feedings and assessed animal welfare in 15 tanks
- Assisted with tank maintenance including tank cleaning while SCUBA diving

PRESENTATIONS

- **Boucher, N.B.**, M. Kornis, A. Muir, C. Bronte. 2021. A retrospective analysis of coregonine stocking efforts to inform restoration. <https://youtu.be/AAp1hhypjFs>. Coregonine Science Webinar Series.
- Annis, G., M. Herbert, S. Hickel, A. Verdeja, P. Kohn, J. Ross, E. Rutherford, **N. Boucher**, A. Honsey, Y. Kao. 2021. Mapping priority spawning and nursery habitat for Cisco and Lake Whitefish Annual meeting of the International Association of Great Lakes Research.
- **Boucher, N.B.**, R. Sturtevant. 2019. Current distribution of invasive and range expanding crayfish in the Great Lakes Region—examining trends using the GLANSIS map explorer, The Invasive Crayfish Collaborative Webinar, April 2019
- **Boucher, N.B.**, H. Zhang, D. Mason, E. Rutherford. 2018. Investigating the interaction of nutrient loading and Dreissenid mussels in Lake Michigan using the Atlantis Ecosystem Model, NOAA Office of Oceanic and Atmospheric Research Webinar.
- **Boucher, N.B.**, H. Zhang, D. Mason, E. Rutherford. 2018. Investigating the effects of Changing Nutrient Loads in Lake Michigan using the Atlantis Ecosystem Model. Annual meeting of the International Association of Great Lakes Research.
- **Boucher, N.B.**, H. Zhang, D. Mason, E. Rutherford. 2017. Simulations of spatial variability in Lake Michigan food web dynamics using the Lake Michigan Atlantis Ecosystem Model, International

PUBLICATIONS AND ARTICLES

- **Boucher, N.B.**, M. Kornis, A. Muir, C. Bronte. 2023. A retrospective analysis of coregonine stocking efforts to inform restoration efforts in the Great Lakes. *In submission*. Journal of Fish Biology.
- Muir, A.M., J. Bernhardt, N. Boucher, C. Cvitanovic, J. Dettmers, M. Gaden, J. Hinderer, B. Locke, K. Robinson, M. Siefkes, N. Young, S. Cooke. 2023. Confronting a post-pandemic new-normal—threats and opportunities to trust-based relationships in natural resource science and management. Journal of Environmental Management 330: 117-140
- Stirling, K. M., K. Almack, **N. Boucher**, A. Duncan, A. Muir. C. Nonkes, J. Connoy, N. Vojno, R. Lauzon, V. Gagnon, A. Reid. 2022. Experiences and Insights on Bridging Knowledge Systems between Indigenous and non-Indigenous Partners: Learnings from the Laurentian Great Lakes. *In revision*. Journal of Great Lakes Research.
- Musset, K., S. Chiblow, R. Whitlow, R. Lauzon, K. Almack, **N. Boucher**, A. Duncan, A. Reid. 2022. Wise Practices: Indigenous-Settler Relations in Great Lakes Water & Fish Governance and Conservation. *In press*. Journal of Great Lakes Research.
- **Boucher, N.B.**, H. Zhang, D. Mason, E. Rutherford. 2019. Examining the relative effects of nutrient loads and invasive *Dreissena* mussels on Lake Michigan's food web using an ecosystem model. Master's Thesis. University of Michigan School for Environment and Sustainability.
- Sturtevant R.S., E. Lower, **N. Boucher**, P. Alsip, K. Hopper, and S. Lott. 2019. NOAA Technical Memorandum 161b: 2018 Update to an Impact Assessment of Great Lakes Aquatic Nonindigenous Species. Great Lakes Environmental Research Laboratory. Ann Arbor, MI.
- Lower, E., **N. Boucher**, P. Alsip, K. Hopper, A. Davidson, R. and Sturtevant. 2019. NOAA Technical Memorandum 169b: A Risk Assessment of Potential Great Lakes Aquatic Invaders. Great Lakes Environmental Research Laboratory. Ann Arbor, MI

SERVICE

- Conference coordinator: Great Lakes Acoustic Telemetry Observation System Annual Coordination Meeting: 2020, 2021, 2022, 2023
- Session coordinator: Reviewing cisco taxonomy in the Great Lakes and Lake Nipigon. Joint Aquatic Sciences Meeting 2022.
- Session co-chair: Bridging Knowledge Systems between Indigenous and non-Indigenous communities. 2021 International Association of Great Lakes Research Annual Meeting
- Member: International Association of Great Lakes Research Communications and outreach committee: 2021-Present