

KAREN M. ALOFS

CURRICULUM VITAE

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PROFESSIONAL APPOINTMENTS

- 2018- **Assistant Professor**, School for Environment and Sustainability and Program in the Environment, University of Michigan
2016-2017 **Research Associate**, Dept of Ecology and Evolutionary Biology, University of Toronto
2010-2016 **Postdoctoral Researcher**, Dept of Ecology and Evolutionary Biology, University of Toronto

AFFILIATIONS

- 2020- **Affiliate Faculty**, University of Michigan Museum of Zoology (UMMZ) and Department of Ecology and Evolutionary Biology (EEB)
2020- **Affiliate Faculty**, Michigan Institute for Data Science (MIDAS)
2019-2024 **Research Associate**, Ichthyology Section of the Department of Natural History, Royal Ontario Museum
2015-2019 **Departmental Associate**, Ichthyology Section of the Department of Natural History, Royal Ontario Museum

EDUCATION

- 2010 **PhD**, Ecology, Evolution and Behavior, University of Texas at Austin
2002 **BA**, Biology with Honors, specializing in Ecology and Evolution, University of Chicago

SELECTED GRANTS

(\$1,363,973 in External and \$200,000 in Internal funding since starting at UM)

- 2024-2025 “Incorporating Bioenergetics to Investigate Effects of Dreissenid Mussel Invasions in the Great Lakes on Growth and Diet of Native Larval Fishes” Cooperative Institute for Great Lakes Research Postdoctoral Research Fellowship, (NOAA-CIGLR, with Postdoc Kelly Hoyer, \$90,000)
2023 “INTERN Supplement to EAGER: Using museum specimens to disentangle the impacts of climate change on body-size across species in freshwater fish communities.” National Science Foundation (\$43,131)
2023-2027 “Exploring Past and Present Spawning Habitats for Native Fishes in the Great Lakes to Inform Restoration and Conservation” Opportunity #G23AS00225 Cooperative Agreement for CESU-affiliated Partner with Great Lakes Northern Forests Cooperative Ecosystem Studies Unit (\$96,954 yr1, \$99,997 yr2, \$145,997 yr3; \$146,088 yr4; in collaboration with C. Brant, USGS)
2023-2024 “Fish populations and habitat restoration in the Rouge River” SEAS Sustainability Clinic in Detroit (\$15,000)
2022-2025 “Investigating the role of forest characteristics in mitigating climate change effects on water quality and fish community composition” USDA-Forest Service McIntire-Stennis (\$171,057, PI with R. Wang)
2022-2024 “EAGER: Using museum specimens to disentangle the impacts of climate change on body-size across species in freshwater fish communities.” National Science Foundation (\$208,900)
2022-2023 “Applications of Great Lakes Shoreline Restoration Benchmarks” Cooperative Institute for Great Lakes Research (NOAA-CIGLR) (\$90,439)

- 2020-2022 “Great Lakes Shoreline Restoration Evaluation and Benchmarks” Cooperative Institute for Great Lakes Research (NOAA-CIGLR) (\$174,768; in collaboration with B. Cardinale)
- 2021 “Benchmarks for Great Lakes Fish Habitat Restoration” CIGLR Working Group Funding (\$20,000) collaboration with A. Miller and E. Rutherford)
- 2020-2021 “CHANGES: Collections, Heterogeneous data, and Next Generation Ecological Studies” Michigan Institute for Data Science (MIDAS) Propelling Original Data Science (PODS) Grant (\$90,000; collaboration with H. López-Fernández and A. Thomer)
- 2019 SEAS Conservation and Restoration Theme Funding, (\$20,000; collaboration with H. López-Fernández and A. Cotel)
- 2018-2020 “Impacts of gold mining related habitat destruction on a highly endemic Tropical freshwater fish fauna” University of Michigan M-Cubed (\$60,000; in collaboration with H. López-Fernández and A. Cotel)
- 2018-2019 Instructional Development Fund, University of Michigan Center for Research on Learning and Teaching, 2018 (\$500)
- 2007-2010 Doctoral Dissertation Improvement Grant, National Science Foundation, (\$11,998)

FELLOWSHIPS AND AWARDS

- 2023 Nomination for Outstanding Mentor Award from Undergraduate Research Opportunities Program (UROP)
- 2020 Michigan Sustainability Cases, Gala Impact Case Award
- 2020 Nomination for SEAS Student Government Outstanding Teaching Award, University of Michigan
- 2020 Nomination for Provost’s Teaching Innovation Prize (TIP) for Partnering with Practitioners for Curricular Innovation, University of Michigan
- 2019 Course Development Award, UM Transforming Learning Program (\$500)
- 2011-2013 International Research Fellowship, National Science Foundation, (\$98,500)
- 2008 Strategic Environmental Research and Development Program Student Travel Award, Annual Meeting of the Ecological Society of America, (\$500)
- 2007 Ariel Appleton Fellowship, Research Ranch Foundation, (\$2000)
- 2006-2009 Graduate Research Fellowship, National Science Foundation, (\$121,500 total: \$30,000 stipend and \$10,500 education allowance, per year for 3 years)

University of Texas at Austin: Houston Livestock Show and Rodeo Fellowship, 2010 (\$570); Bennett Fellowship, 2008 (\$7,631); Hartman Graduate Fellowship, 2007 (\$1,140); Bruton Fellowship, 2006, 2007 and 2008 (\$1000 each year); Bennett Fellowship, 2006 (\$700); Frank and Fern Blair Scholarship, 2005 (\$420)

University of Chicago: Sigma Xi Award for Excellence in Science, 2002; Richter Fund Grant, 2001 (\$1,000); Howard Hughes Medical Institute Summer Research Fellowship, 2001 (\$4,000), Kenwood Academy Scholarship

PUBLICATIONS

PEER-REVIEWED (MSc Thesis Student, *PhD Student*, *Postdoctoral Researcher)

Published

Grabda E, *Flood P, *King K, Breck J, Wehrly K, and **KM Alofs**. *In Press*. Mismatch between climate-based bioenergetics model of fish growth and long-term and regional-scale empirical data. *Canadian Journal of Fisheries and Aquatic Sciences*. DOI: [10.1139/cjfas-2024-0266](https://doi.org/10.1139/cjfas-2024-0266)

Alofs KM and KE Wehrly. 2025. Fish mass mortality events in northern temperate lakes happen later in the year than in the past. *Ecosphere*. 16: e70182. DOI: 10.1002/ecs2.70182

Alofs KM, King KBS*, Lenard M, Schell J, Singer R, Wehrly K, López-Fernández H, and A Thomer. 2024. Community science brings together natural history collections and historical survey data to understand changing ecological patterns. *BioScience*. DOI: 10.1093/biosci/biae131

Jackson SA, *Lucas K, Wehrly K and **KM Alofs**. 2024. Intraspecific variation in metabolic responses of a cool water fish to increasing temperatures. *Canadian Journal of Fisheries and Aquatic Science*. DOI: 10.1139/cjfas-2023-0377

Zhou Y, *Liu X, Zhao G, Zuo C, **Alofs KM**, Wang, R. 2024. Pathways linking watershed development and riparian quality to stream water quality and fish communities: Insights from 233 subbasins of the Great Lakes region. *Water Resources*. 261: 121964. DOI: 10.1016/j.watres.2024.121964

King KBS*, Giacomini H, Wehrly K, López-Fernández H, Thomer A, and **KM Alofs**. 2023. Using historical fish catch data to evaluate changes in relative abundance in response to a changing climate. *Ecography*. 8:e06798. DOI: 10.1111/ecog.06798

Marano E, Dieter P, DB Bunnell, and **Alofs KM**. 2023. Evidence for the importance of invasive *Dreissena veligers* as a novel prey item for larval fish in Lake Huron. *Hydrobiologia*. 850:3497-3516. DOI: 10.1007/s10750-023-05250-2

Bunnell DB, Ackiss AS, **Alofs KM**, Brant CO, Bronte CR, Claramunt RM, Dettmers JM, Honsey AE, Mandrak NE, Muir AM, Santucci Jr VJ, Smith DR, Strach RM, Sweka JA, Weidel BC, Mattes WP, Newman KR, and K Schilling. 2023. A bi-national partnership to restore coregonine diversity to the Laurentian Great Lakes. *Environmental Reviews*. doi.org/10.1139/er-2022-0109

Rowe MD, Prendergast S, **Alofs KM**, Bunnell DB, Rutherford ES, and EJ Anderson. 2022. Predicting larval alewife transport in Lake Michigan using hydrodynamic and Lagrangian particle dispersion models. *Limnology and Oceanography*. 67: 2042-2058. DOI: 10.1002/lno.12186

Alofs KM and K Wehrly. 2022. Developing a Resist-Accept-Direct (RAD) Framework for managing freshwater fish species shifting in and out of political jurisdictions. *Fisheries Management and Ecology*. 29: 486-490. DOI: 10.1111/fme.12546 *Top cited article 2021-2022 in FME.

Loewen CJG, Jackson DA, Chu C, **Alofs KM**, Hansen, GJA, Honsey AE, Minns CK and Wehrly KE. 2022. Bioregions are predominantly climatic for fishes of northern lakes. *Global Ecology and Biogeography*. 31: 233-246. DOI: 10.1111/geb.13424

Alofs, KM. 2019. Landscape approaches to understanding invasions in inland lakes: Rainbow Smelt (*Osmerus mordax*) as a case study. Book Chapter in *Advances in Understanding Landscape Influences on Freshwater Habitats and Biological Assemblages*. RM Hughes, DM. Infante, L Wang, K Chen, BF Terra (eds). Symposium 90. American Fisheries Society, Bethesda MD.

Lamothe KA, **Alofs KM**, and C Chu. 2019. Evaluating functional diversity conservation for freshwater fishes resulting from terrestrial protected areas. *Freshwater Biology*. 64: 2057-2070. DOI: 10.1111/fwb.13395

Lamothe KA, **Alofs KM**, Jackson DA, and KM Somers. 2018. Functional diversity and redundancy of freshwater fish communities across biogeographic and environmental gradients. *Diversity & Distributions*. 24: 1612-1626. DOI: 10.1111/ddi.12812

- Alofs KM.** 2016. The influence of variability in species trait data on community level ecological prediction and inference. *Ecology and Evolution*. 6: 6345–6353. DOI: 10.1002/ece3.2385
- Alofs KM** and DA Jackson. 2015. The vulnerability of species to range expansions by predators can be predicted using historical species associations and body size. *Proceedings of the Royal Society B* 282: 20151211. DOI: 10.1098/rspb.2015.1211
- Alofs KM** and DA Jackson. 2015. The role of abiotic and biotic factors in the establishment of predatory fishes at their expanding northern range boundaries in Ontario, Canada. *Global Change Biology* 21: 2227-2237. DOI: 10.1111/gcb.12853
- Melles SJ, Chu C, **Alofs KM** and DA Jackson. 2015. Potential spread of Great Lakes fishes given climate change and proposed dams; an approach using circuit theory to evaluate invasion risk. *Landscape Ecology* 30: 919-935. DOI: 10.1007/s10980-014-0114-z
- Alofs KM** and DA Jackson. 2014. Meta-analysis suggests biotic resistance in freshwater environments is driven by consumption rather than competition. *Ecology* 95: 3259-3270. DOI: 10.1890/14-0060.1
- Alofs KM**, González A and NL Fowler. 2014. Local native plant diversity responds to habitat loss and fragmentation over different time spans and spatial scales. *Plant Ecology* 215: 1139-1151. DOI: 10.1007/s11258-014-0372-5
- Alofs KM**, Jackson DA and N Lester. 2014. Ontario freshwater fish demonstrate differing range-boundary shifts in a warming climate. *Diversity and Distributions* 20: 123-136. DOI: 10.1111/ddi.12130
- Alofs KM**, Liverpool EA, Taphorn DC, Bernard CR and H López-Fernández. 2014. Mind the (information) gap: the importance of exploration and discovery for assessing conservation priorities for freshwater fish. *Diversity and Distributions* 20: 107-113. DOI: 10.1111/ddi.12127
- Alofs KM** and NL Fowler. 2013. Loss of native herbaceous species due to woody plant encroachment facilitates the establishment of an invasive grass. *Ecology* 94: 751-760. DOI: 10.1890/12-0732.1
- Winterbottom R, **Alofs KM** and A Marseu. 2011. Life span, growth and mortality in the western Pacific goby *Trimma benjamini*, and comparisons with *T. nasa*. *Environmental Biology of Fishes* 91: 295-301. DOI: 10.1007/s10641-011-9782-6
- Scott CE, **Alofs KM** and BA Edwards. 2011. Putting dark diversity in the spotlight. *Trends in Ecology and Evolution* 26: 263-264. DOI: 10.1016/j.tree.2011.03.008
- Alofs KM** and NL Fowler. 2010. Habitat fragmentation caused by woody plant encroachment inhibits the spread of an invasive grass. *Journal of Applied Ecology* 47: 338-347. DOI: 10.1111/j.1365-2664.2010.01785.x
- Alofs KM** and KM Polivka. 2004. Microhabitat-scale influences of resources and refuge on habitat selection by an estuarine opportunist fish. *Marine Ecology Progress Series* 271: 297-306. DOI: 10.3354/meps271297

OTHER PUBLICATIONS

Reports

- Brant C, Castiglione C, Doka S, Duncan A, Fielder D, Herbert M, Liskauskus A, Rutherford E, Smith J, Tingley R, Treska T, Turschak B, Chu C, Esselman P, **Alofs KM**. 2023. Gap analysis: a proposed methodology to describe and map historical and contemporary populations and habitats. [online].

https://www.greatlakesciscoes.org/wp-content/uploads/2024/03/gap-analysis_methods.pdf

Miller AD*, Alofs KM, Cardinale BJ. 2022. Great Lakes Shoreline Restoration Evaluation and Benchmarks – Phase I(b). Report to NOAA Restoration Center.

Wehrly KE, Hanshue S, **Alofs KM**, Cooper A, Dowling T, Herbert M, O’Keefe D. 2020. Review of endangered, threatened, special concern, and extirpated fishes of Michigan. Report of the Fish Technical Advisory Committee.

Popular Media

Alofs KM. 2013. Fish on the Move – The ROM is playing a crucial role in assessing the effect of climate change on Ontario’s ecosystems. *Royal Ontario Museum Magazine* Winter 2013.

Case Studies

Alofs KM, Siciliano P, Lisuk J and K Johnson-Lane. 2020. Great Lakes Invasive Species Control. *Michigan Sustainability Cases*. <https://www.learnkala.com/cases/great-lakes-invasive-species>

Alofs KM and Siciliano P. 2020. Great Lakes Nutrient Management. *Michigan Sustainability Cases*. <https://www.learnkala.com/cases/great-lakes-watershed-management>

Seelbach P, Hobrla R, Lisuk J, Siciliano P, K Johnson-Lane and **Alofs KM**. 2020. Great Lakes Areas of Concern. *Michigan Sustainability Cases*. <https://www.learnkala.com/cases/areas-of-concern>

Alofs KM. 2021. Lake Levels Controls. *Michigan Sustainability Cases*. <https://www.learnkala.com/cases/lake-level-controls>

Alofs KM. 2021. Treaty Rights and Fisheries Management. *Michigan Sustainability Cases*. <https://www.learnkala.com/cases/treaty-fishing>

Jackson S, Baker E, Craven D, Roseman E and **Alofs KM**. 2021. Restoring the Living Fossils of the Great Lakes. *Michigan Sustainability Cases*. <https://www.learnkala.com/cases/restoring-sturgeon>

PRESENTATIONS, SYMPOSIA, WORKSHOPS AND WORKING GROUPS

INVITED SYMPOSIA TALKS & SEMINARS

- 2024 School for Environment and Sustainability, University of Michigan
- 2024 Department of Fisheries and Wildlife, Michigan State University
- 2024 Midwest Glacial Lakes Partnership Seminar Series
- 2024 Minnesota Department of Natural Resources Fisheries Research Seminar Series
- 2023 IAGLR Conference on Great Lakes Research, Toronto, ON
- 2022 Department of Biology, Western Michigan University, Kalamazoo, MI
- 2021 American Fisheries Society, Baltimore, MD -*Virtual due to COVID-19*
- 2020 Department of Biological Sciences, University of North Texas, Denton, TX -*Virtual due to COVID-19*
- 2019 Galaxy, University of Michigan, Ann Arbor, MI
- 2018 [Food for Thought](#), University of Michigan, Ann Arbor, MI
- 2018 American Fisheries Society, Atlantic City, NJ
- 2018 Society for Freshwater Science Annual Meeting, Detroit, MI
- 2017 Annual Meeting of the Ecological Society of America, Portland, OR
- 2017 Society for Freshwater Science Annual Meeting, Raleigh, NC
- 2016 Dept of Biological Sciences, University of Pittsburgh, Pittsburgh, PA
- 2016 Dept of Natural Resources, Cornell University, Ithaca, NY
- 2016 School of Natural Resources and Environment, University of Michigan, Ann Arbor, MI
- 2016 Environment Canada and Fisheries and Oceans Canada, Burlington, ON
- 2016 Dept of Ecology and Evolutionary Biology, U Tennessee Knoxville, Knoxville, TN
- 2015 Dept of Integrative Biology, University of Guelph, Guelph, ON
- 2014 ‘ROM Ideas’ Research Colloquium, Royal Ontario Museum, Toronto, ON
- 2014 Life Sciences Seminar Series, Trent U, Peterborough, ON

- 2013 Dept of Ecology and Evolutionary Biology, U Toronto, Toronto, ON
2008 Mini-Symposium: Research at the Balcones Canyonlands National Wildlife Refuge, U Texas Austin, Austin, TX

CONTRIBUTED TALKS as first or presenting author

- 2024 Annual Meeting of the Ecological Society of America, Long Beach, CA
2023 American Fisheries Society, Grand Rapids, MI
2022 Joint Meeting of Ichthyologists and Herpetologists, Spokane, WA
2022 Joint Aquatic Sciences Meeting, Grand Rapids, MI
2021 IAGLR Conference on Great Lakes Research-*Virtual due to COVID-19*
2020 Doris Duke Conservation Scholars Program, University of Michigan, Ann Arbor, MI -*Virtual due to COVID-19*
2020 MIDAS-PODS Launch Meeting, University of Michigan, Ann Arbor, MI
2020 Conservation Ecology Lightning Talks, University of Michigan, Ann Arbor, MI
2019 SEAS [Conservation and Restoration Theme Lightning Talks](#), U Michigan, Ann Arbor, MI
2016 Joint Meeting of Ichthyologists and Herpetologists, New Orleans, LA
2015 Annual Meeting of the Ecological Society of America, Baltimore, MD
2015 Canadian Conference for Fisheries Research, Ottawa, ON
2014 Joint Aquatic Sciences Meeting, Portland, OR
2013 Joint Meeting of Ichthyologists and Herpetologists, Albuquerque, NM
2013 Canadian Conference for Fisheries Research, Windsor, ON
2012 American Fisheries Society, St. Paul, MN
2011 Annual Meeting of the Ecological Society of America, Austin, TX
2011 Canadian Conference for Fisheries Research, Toronto, ON
2010 Dept of Ecology and Evolutionary Biology, U Toronto, Toronto, ON
2010 Annual Meeting of the Ecological Society of America, Pittsburgh, PA
2010 Dept of Ecology, Evolution and Behavior, U Texas Austin, Austin, TX
2009 Annual Meeting of the Ecological Society of America, Albuquerque, NM
2009 Annual Meeting Southwestern Association of Naturalists, Monterrey, México
2008 Annual Meeting of the Ecological Society of America, Milwaukee, WI
2007 Central Texas Ecologists/Earth Scientists Meeting, USDA-ARS, Temple, TX
2007 Texas Invasive Plant Conference, LBJ Wildflower Center, Austin, TX
2007 Ecolunch, U Texas Austin, Austin, TX
2007 Annual Meeting of the Ecological Society of America, San Jose, CA
2007 Texas A&M Univ Ecological Integration Student Symposium, College Station, TX
2006 3rd Annual EEB/Plant Bio Grad Student Symposium, U Texas Austin, Austin, TX

INVITED WORKSHOPS AND WORKING GROUPS

- 2024 Great Lakes Fisheries Commission Ecosystem Based Fisheries Management in Lake Erie, Ann Arbor, MI
2023 Adaptive Capacity for Inland Fishes Workshop, Midwest Climate Adaptation Center, Madison, WI
2021 Climate Change and Vulnerable Inland Lake Fishes Workshop, Midwest Climate Adaptation Center (*Virtual due to COVID-19*)
2018 ‘Great Lakes Region Inland Lake Fish Communities Working Group’, NSERC Canadian Network for Aquatic Ecosystem Services, Toronto Ontario
2016 ‘Comparative Analysis of Fish Community Data from Europe and North America’, NSERC Canadian Network for Aquatic Ecosystem Services, Toronto Ontario
2012 Wildlife Conservation Society Climate Change Adaptation Workshop, Peterborough, ON
2012 ‘Impacts of Climate Change on Limnetic Biodiversity and Fisheries in Ontario and Quebec’ Strategic Grant Workshop, Toronto, ON
2011 Diagnostic Tools for Inland Lakes Workshop, Ministry of Natural Resources, Peterborough, ON

WORKSHOPS AND SYMPOSIA ORGANIZED

- 2023 Using spatial benchmarks in Great Lakes shallow nearshore fish restoration and management, NOAA-GLERL, Ann Arbor, MI
2022 Reeling in historical data: temporal changes in aquatic ecosystems, Joint Aquatic Science Meeting, Grand Rapids MI

- 2022 Benchmarks for Great Lakes Fish Habitat Restoration, Cooperative Institute for Great Lakes Research Working Group, Ann Arbor, MI
2021- SEAS Ecosystem Science and Management Seminar Series, U Michigan, Ann Arbor, MI
2020 SEAS Conservation Ecology Seminar Series, U Michigan, Ann Arbor, MI
2019 SEAS Water Theme Lightening Talks, U Michigan, Ann Arbor, MI

TEACHING EXPERIENCE

At U Michigan

COURSES TAUGHT

- 2024 EAS 554 *Science and Management of the Great Lakes*
2022, 2024 EEB 486 *Field Studies of Freshwater Fishes* (Previously named *Biology and Ecology of Fishes* co-taught at UM BioStation with Dr. Hernán López-Fernández)
2020- 2024 EAS 507 *Interpreting Research in Ecosystem Science and Management*
2018- 2025 EAS 409/ENV 409/EEB 447 *Ecology of Fishes*
2019, 2021 ENVIRON 463 *Michigan Fishes in Changing Environments* (co-taught at UM BioStation
2023 with Dr. Hernán López-Fernández)
2019, 2020 EAS 501.025 *Science and Management of the Great Lakes* (co-taught with Dr. Paul Seelbach and Dr. Jennifer Read)

GUEST LECTURES

- 2018- 2022 ENVIRON 422 *Biology of Fishes*, fall semesters
2019 EEB 410 *EEB Capstone Seminar*, winter semester
2019 EAS 741 *Research Paradigms*, winter semester

UNDERGRADUATE STUDENTS MENTORED

- 2024- Katelyn Klos (Lab assistant, Ecology and Evolutionary Biology), fall/winter semesters
2024- Jake Downy (Lab assistant, Earth and Environmental Science), fall/winter semesters
2024- Sandrine Ponnath (Lab assistant, Ecology and Evolutionary Biology), fall/winter semesters
2024- Jaden French (Lab assistant, Earth and Environmental Science), fall/winter semesters
2024- Tyler Brooks (Lab assistant, Ecology and Evolutionary Biology), fall/winter semesters
2023-2024 Rebecca Barsky (Research assistant, Program in the Environment), fall/winter semesters
2023-2024 Meredith Dirkman (Research assistant, Program in the Environment), fall/winter semesters
2023-2024 Josh Glezman (Research assistant, Ecology and Evolutionary Biology), fall/winter semesters
2023 Kevin Xhelilaj (NSF REU, Wayne State University Student) summer semester
2022-2024 Jaime Jacobs (UROP/UROP Scholar), fall/winter semesters, *Blue Ribbon Award for outstanding poster presentation*
2022-2024 Kaitlin Schiller (UROP/UROP Scholar, Research assistant, Program in the Environment), fall/winter semesters, *Blue Ribbon Award for outstanding oral presentation*
2022-2023 Marissa Reyes (UROP, LSA), fall/winter semesters
2022-2023 Keira Daignault (UROP, Program in the Environment), fall/winter semesters
2022-2023 Lauren Reese (UROP, Earth and Environmental Science), fall/winter semesters
2022 Abigail Radunz (MILE-Michigan Internship Learning Environment, Program in the Environment) summer/fall semesters
2021-2022 Megan Roe (Lab assistant, Work-study, CEE), summer/fall semesters
2019-2022 Kartik Tharwani (UROP, Research assistant, Cellular and Molecular Biomedical Science), fall/winter semesters
2019 Maria Gedris (MIDAS-UROP Scholar, Ecology and Evolutionary Biology), summer semester
2019-2020 Calla Beers (Lab assistant, Program in the Environment), fall/winter semesters

- 2019-2020 Cameron Leitz (Honors Thesis, Program in the Environment), fall/winter semesters, *thesis awarded highest honors*
- 2019 Syed Hussain (Doris Duke Conservation Scholar), summer semester
- 2019 Ryan Dapkus (Doris Duke Conservation Scholar), summer semester
- 2018-2019 Hannah Miller (Lab assistant, Ecology and Evolutionary Biology and Program in the Environment)
- 2018 Erika Perez (Doris Duke Conservation Scholar), summer semester
- 2018-2019 Michael Hostetler (Lab assistant and Independent Study, Ecology and Evolutionary Biology)
- 2018-2019 Maxwell LaCosse (Lab assistant, Civil and Environmental Engineering)
- 2018 Olivia Horwedel (Lab assistant, Program in the Environment), winter semester

GRADUATE STUDENTS MENTORED

MSc Advisees (non-thesis)

- 2024- Daisy Hall (MSc Student)
- 2024- Alexandra Roosevelt (MSc Student)
- 2024- Evyn Ladendorf-Lilly (MSc Student, Work-Study)
- 2024- Brendan Arnold (MSc Student)
- 2024 Lisa Vaiman (MSc Student)
- 2024- Emma Welsh (MSc Student)
- 2023- Ludovico Behrendt (MSc Student)
- 2023- Megan Eakin (MSc Student)
- 2023- Caitlin Maloney (MSc Student)
- 2023- Emily Schultheis (MSc Student)
- 2022-2024 Ilse Hassler (MSc Student)
- 2022-2024 Hira Ahmad (MSc Student)
- 2022-2023 Laramie Jeude (MSc Student)
- 2021-2023 Ashley Jones (MSc Student, Work-study)
- 2021-2023 Sagen Fuller (MSc Student)
- 2020-2022 Megan Livingston (MSc Student)
- 2020-2022 Hadijah ‘Dede’ Lawal (MSc Student)
- 2020-2022 Alyssa Rausch (MSc Student, Work-study)
- 2020-2022 Hannah DeHetre (MSc Student)
- 2020 Lee Largaespada (MSc Student, Work-study)
- 2020-2022 Nicholas Hansen (MSc Student, Work-study)
- 2020-2022 Justin Huber (MSc Student)
- 2019 Michael Hostetler (MSc Student)
- 2019-2021 Emily Rau (MSc Student)
- 2018-2020 Seamus Harrison (MSc Student)
- 2018-2020 Sarah Brannon (MSc Student)
- 2018-2020 Matthew Sens (MSc Student)

MSc Practicum Students

- 2025- Cale Colony (MSc, Co-chair with Dr. Katie Skinner UM Robotics)

MSc Thesis Students

- 2023- Lian Anderson (MSc Thesis Student, Work-study)
“A secondary upstream invasion of Round Goby in the Great Lakes Basin over thirteen years following a dam removal”
- 2022- Evan Hill (MSc Thesis Student, Work-study, Directorate Fellows Program, *Best Student Presentation at 2025 Michigan AFS meeting*)
“Validating the use of museum specimens to examine changes in freshwater fish growth”

- 2021-2023 Olivia Williams (MSc Thesis Student, Work-study, Directorate Fellows Program)
“Evaluating responses to restoration by fish communities in the Rouge River”
(*now Fisheries Biologist at US Fish and Wildlife Service*)
- 2021-2023 David Rose (MSc Thesis Student, Work-study)
“Intraspecific variation in Walleye (*Sander vitreus*) thermal preference”
(*now Technician at Green Lake National Fish Hatchery*)
- 2020-2022 Cameron Leitz (MSc Thesis Student)
“Do traits predict invasion success in stream and lake environments in the Great Lakes?”
(*now Research Technician at Lake Superior State University*)
- 2020-2022 Michael ‘Elise’ Grabda (MSc Thesis Student)
“Temporal variation in environment and growth of Bluegill (*Lepomis macrochirus*)”
(*now PhD Student at UNC Greensboro*)
- 2019-2021 Ellary Marano (MSc Thesis Student, Co-Supervisor Dr. David ‘Bo’ Bunnell, USGS-GLSC)
“Evidence for the importance of invasive *Dreissena veligers* as a novel prey item for larval fishes”
(*now Fish Biologist at US Fish and Wildlife Service, Ashland, Wisconsin*)
- 2018-2021 Jennifer Fuller (MSc Thesis Student, Co-Supervisor Dr. Johannes Foufopoulos; *Michigan Sea Grant Graduate Student Fellowship*)
“Collapse of a black tern colony (*Chidonias niger*) as a result of climate change driven lake-level extremes and anthropogenic habitat alteration”
(*now Project Coordinator at National Audubon Society*)
- 2018-2020 Natalie Madden (MSc Thesis Student, Co-Supervisor with Dr. Neil Carter)
“How traits affect bird responses to anthropogenic noise - a meta-analysis”
(*now Conservation Science and Policy Analyst, Defenders of Wildlife*)
- 2017-2019 Sara Prendergast (MSc Thesis Student, Co-Supervisor with Dr. Mark Rowe, NOAA-GLERL)
“Physical and biological influences on daily growth rate of larval alewife (*Alosa pseudoharengus*) in Lake Michigan”

PhD Students

- 2019-2024 Scott Jackson (PhD Candidate, *Michigan Sea Grant Graduate Student Fellowship*),
“Intraspecific Variation: Sources and Implications for Fishes in a Changing Environment”.
(*now ORISE Fellow with National Climate Adaptation Center*)
- 2024- Hannah Cohen (PhD Student)

MASTERS PROJECTS MENTORED

- 2019-2020 “Planning and implementing monitoring during hydrologic restoration of the Shiawassee Flats floodplain ecosystem” Client: US Fish and Wildlife Service and Shiawassee National Wildlife Refuge; Students: Eliza Lugten, Kate Vogel, Matthew Puz, Matthew Sens, Olivia Mitchinson; Co-advised with Drs. Paul Seelbach and Catherine Riseng
- 2020-2021 “Capturing and communicating the story of Shiawassee National Wildlife Refuge” Client: US Fish and Wildlife Service and Shiawassee National Wildlife Refuge; Students: Julie Dellick, Jon Gorter, Anna Greenberg, Xinmiao Liu, and Maria Salem; Co-advised with Dr. Paul Seelbach

POSTDOCTORAL RESEARCHERS MENTORED

- 2024- Kelly Hoyer, *CIGLR Postdoctoral Fellow*, Co-mentored with Dr. Pothoven (NOAA-GLERL)
- 2023-2024 Dr. Xiaofeng Liu, USDA-Forest Service McIntire-Stennis Water Quality Project, Co-mentored with Dr. Wang

- 2023- Dr. Peter Flood, 2023-2025 NSF-EAGER Project; 2025- Coregonine Restoration Framework, Co-mentored with Dr. Brant (USGS-GLSC)
- 2021-2024 Dr. Katelyn King, 2021-2023 CHANGES Project, Co-mentored with Drs. López-Fernández and Thomer; 2023- Coregonine Restoration Framework, Co-mentored with Dr. Brant (USGS-GLSC) (*now Fishery Research Biologist at Michigan Department of Natural Resources*)
- 2021-2022 Dr. Viviana Astudillo, EEB Postdoc, Co-mentored with Drs. López-Fernández and Cotel
- 2020-2023 Dr. Andrew Miller, CIGLR Shoreline Restoration, Co-mentored with Dr. Cardinale
- 2019-2021 Dr. Kelsey Lucas, *NSF Postdoctoral Fellow in Biology (now Assistant Professor at University of Calgary)*

COMMITTEE MEMBER

- 2024- Siqi Yang (MSc Student, SEAS, Committee Member)
- 2024- Michaela Collins (MSc Student, SEAS, Committee Member)
- 2022-2024 Kunyu Yang (MSc Student, SEAS, Committee Member)
- 2022-2023 Amani Tolin (MSc Student, SEAS, Committee Member)
- 2021-2022 Mingyu Zhang (MSc Student, SEAS, Committee Member)
- 2020-2024 Kaylin Jones (PhD Student, Civil and Environmental Engineering, Committee Member)
- 2020-2022 Samantha Iliff (PhD Student, Ecology and Evolutionary Biology, Committee Member)
- 2019-2023 Thomas Morgan (PhD Student, Ecology and Evolutionary Biology, Committee Member)
- 2019-2023 Susanna Campbell (PhD Candidate, Ecology and Evolutionary Biology, Committee Member)
- 2019-2023 Lais Petri (PhD Candidate SEAS, Committee Member)
- 2018-2020 Sasha Bishop (PhD Candidate, Ecology and Evolutionary Biology, Committee Member)
- 2018-2020 Katherine McLean (PhD Candidate, Ecology and Evolutionary Biology, Committee Member)
- 2018-2019 Kenzo Esquivel (Frontiers MSc Student, Ecology and Evolutionary Biology, Committee Member)

FACULTY DEVELOPMENT

- 2024 “Equity-focused Teaching in Practice: Academic Belonging” CRLT Workshop, University of Michigan
- 2024 “Unconscious Bias in Recruiting and Hiring” Organizational Learning, University of Michigan
- 2023 “Accessibility Practices for Community Engaged Teaching and Learning” Ginsberg Center, University of Michigan
- 2023 “Evidence-based Teaching Practices to Shape your Response to GenAI Writing Tools” CRLT Workshop, University of Michigan
- 2022 “How Do We Begin: A Historical Reckoning with Anti-Black Racism at U-M”, ADVANCE/LSA Workshop, University of Michigan
- 2022 “STRIDE Faculty Recruitment Refresher Workshop” University of Michigan
- 2022 “Effective Group Work” CRLT Workshop, University of Michigan
- 2021 “An Introduction to Equitable Assessment Practices” CRLT Workshop, University of Michigan
- 2021 “Principles and Practices of Anti-Racist Pedagogy” CRLT Workshop, University of Michigan
- 2020 “Designing and Facilitating Group Work for Blended/Online Courses” CRLT Workshop, University of Michigan.
- 2019 “Workshop on Graduate Admissions for Excellence and Diversity” Rackham Graduate School, University of Michigan

- 2018 “STRIDE Faculty Recruitment Workshop” University of Michigan
- 2018 “Teaching Gamefully” CRLT Workshop, University of Michigan
- 2018 “An Introduction to Case-Based Learning in the Classroom and Beyond” Michigan Sustainability Cases, University of Michigan
- 2018 “Facilitating Discussions of Research Literature in STEM Courses” CRLT Workshop, University of Michigan
- 2018 “Leveraging Student Differences in Discussion” Workshop by Center for Research on Learning and Teaching (CRLT), University of Michigan

Outside U Michigan

LECTURER

- 2011- 2013 Course Instructor, *Community Ecology*, U Toronto, 3 fall semesters (co-taught with Dr. Megan Frederickson)
- 2006 Guest Lecturer, *Conservation Biology*, U Texas Austin, spring semester

TEACHING ASSISTANT

- 2005-2006 Teaching Assistant, *Human Biology*, U Texas Austin, fall and spring semesters
- 2005 Teaching Assistant, *Biostatistics*, U Texas Austin, spring semester
- 2004-2005 Teaching Assistant, *Genetics*, U Texas Austin, fall and summer semesters
- 2003 Graduate Student Instructor, *Natural History and Evolution*, U Michigan Biological Station, summer semester

STUDENT MENTORING

- 2021 Anjani Ramdjanamsingh (MSc Student, University of Suriname, Programme in Sustainable Management of Natural Resources, Co-supervisor with Dr. Jan Mol, ‘The effect of increased sedimentation from gold mining on the water quality of the Marowijne River, Suriname’)
- 2016-2017 Dana Berg (undergraduate research student EEB 498, U Toronto), *awarded best Ecology & Behavioral Ecology Poster in Undergraduate Research Fair*
- 2016-2017 Lucy Genua (postgraduate research assistant, U Toronto)
- 2016 Julia Bassi (NSERC Undergraduate Student Research Award, U Toronto)
- 2015-2016 Dana Berg (undergraduate work-study, U Toronto)
- 2015 Zoe Gozum (postgraduate lab assistant, U Toronto)
- 2014- 2017 Krisna Gajapersad (MSc Student, University of Suriname, Programme in Sustainable Management of Natural Resources, Co-supervisor with Dr. Jan Mol, ‘The effect of gold mining activities on the biological characteristics of the Marowijne River in Suriname’)
- 2014-2015 Stephanie Blain (undergraduate work-study, U Toronto)
- 2013 Charise Currier (undergraduate research assistant, U Toronto)
- 2007 Johnathan Rose (undergraduate lab assistant, U Texas Austin)
- 2007 Scott Meadows (undergraduate research student, BIO 377, U Texas Austin)
- 2007 Gabriela Casares (undergraduate summer field assistant, U Texas Austin)
- 2007 Linda Aguilar (undergraduate summer field assistant, U Texas Austin)

ADDITIONAL RESEARCH & FIELD EXPERIENCE

- 2019 Research Expedition to Upper Mazaruni River, Guyana
- 2017 Ichthyology Expedition with Royal Ontario Museum across Uruguay
- 2014 Ichthyology Expedition with Royal Ontario Museum to five river basins across Suriname
- 2005-2010 Field work in Central Texas Hill Country including Pedernales Falls State Park, Balcones Canyonlands National Wildlife Refuge, Freeman Ranch.
- 2009 Graduate Research Assistant, Rare plant habitat requirements, U Texas Austin

- 2004 Student Conservation Association Intern, Rare and invasive plant management, Chattahoochee River National Recreation Area
- 2003 Field Research Assistant, Evolutionary ecology of crop and weed plants, U Michigan Biological Station/Ohio State U
- 2003 Student Conservation Association Intern, Rare plant monitoring, Great Smoky Mountains National Park
- 2000-2001 Field Research Assistant, Population biology of estuarine fish, Big Beef Creek, WA/U Chicago

PROFESSIONAL AFFILIATIONS AND SERVICE

COMMITTEE MEMBERSHIP AND PROFESSIONAL SERVICE

At U Michigan

- 2024-2027 SEAS Grievance Hearing Board Representative
- 2023- Cooperative Institute for Great Lakes Research (CIGLR) Council of Fellows, SEAS Representative
- 2023- UM Biological Station Advisory Board
- 2023 CIGLR Hydrodynamics Research Scientist Search Committee, SEAS representative
- 2023-24 Graduate (PhD) Admission Committee, SEAS
- 2022 Rackham-SEAS Holistic Admissions Review Committee
- 2022 Faculty Marshall Comeback Commencement
- 2022-23 Knight-Wallace Fellow Advisor for Alexandra Talty
- 2021 CIGLR Director Search Committee, SEAS representative
- 2020 COVID-19 Response Team, SEAS
- 2019-20 Graduate (PhD) Admission Committee, SEAS
- 2018 Hydrologist Faculty Search Committee, SEAS representative

Outside U Michigan

- 2022- Monitoring Programs Advisory Committee, Friends of the Rouge
- 2021- [Great Lakes Coregonine Restoration Program](#) Science Team (Co-lead Habitat and Population Gap Analysis Team with Dr. Cory Brant, USGS-GLSC)
- 2019- State of Michigan Fish Technical Advisory Committee for Species of Greatest Conservation Need

SOCIETY MEMBERSHIP

Ecological Society of America (*member since 2005, student section officer in 2009*), Society for Freshwater Science, American Fisheries Society, InFish

TESTIMONY PROVIDED

- 2021 Testimony provided through Earthjustice on behalf of the Bay Mills Indian Community in the Michigan Public Service Commission proceeding regarding the replacement and relocations of the segments of Line 5 crossing the Straits of Mackinac

EDITORIAL BOARDS

- 2023- Associate Editor, Journal of Applied Ecology

JOURNAL REFEREEING

Biological Conservation, Biological Invasions, Canadian Journal of Fisheries and Aquatic Sciences, Canadian Journal of Zoology, Diversity and Distributions, Ecography, Ecological Applications, Ecology, Ecology and Evolution, Ecology of Freshwater Fishes, Ecological Research, Écoscience, Ecosphere, Fisheries Management and Ecology, Freshwater Biology, Global Change Biology, Invasive Plant Science and Management, Nature Scientific Data, Neotropical Ichthyology, Oecologia, Oikos, Plant Ecology,

PLOS Climate, Proceedings of the Royal Society B, Reviews in Fish Biology and Fisheries, Wetlands Ecology and Management

GRANT REFEREEING

Ad Hoc Reviewer U.S. National Science Foundation, Panelist U.S. National Science Foundation BIO Advisory, NERC Highlight Topics, NSERC Discovery Grants, MITACS Elevate Fellowships, MITACS Accelerate Research Grants, Sam Houston State University Internal Grants, U-M International Institute Fellowships, U-M MIDAS PODS Grants, United States Fish and Wildlife Service Great Lakes Fish and Wildlife Restoration Act funding

OUTREACH

- 2024 Demonstration at Summer Open House UM Biological Station, Pellston, MI
- 2022 Presentation to Council of Lake Committees, Great Lakes Fisheries Commission, Detroit, MI
- 2022 Presentations to Lakes Huron, Michigan, Superior Technical Committee Meetings, Great Lakes Fisheries Commission, *Virtual due to COVID-19*
- 2022 Presentation for Regents of the University of Michigan, St. Ignace, MI
- 2021 Career Panel for high school students, Wolverine Pathways, *Virtual due to COVID-19*
- 2021 WeDigBio Q+A on Zooniverse citizen science project
- 2021 Presentation for Society of Les Voyageurs
- 2021 Presentation to Rouge River Advisory Council
- 2021 Presentation for City Nature Challenge Kick-off, U-M Museum of Natural History, *Virtual due to COVID-19*
- 2021-2023 Zooniverse – crowd-sourced citizen-science project; [Angling for data on Michigan Fishes](#) (>2500 volunteers engaged)
- 2020 Presentation for NJAS: New Jersey Aquarium Society, *Virtual due to COVID-19*
- 2020 Engaging Students Remotely with Gala, Presentation and YouTube [Playlist](#)
- 2020 [William R. Farrand Memorial Lecture](#), U-M Museum of Natural History, Lake Sturgeon: Past, present, and future of an ancient fish
- 2019 Two presentations at North East Council of Aquarium Societies, Cromwell, CT
- 2018 - 2021 Panelist for Environmental Science Professionalism Seminar, U Texas at Austin
- 2017 Big Trout Bay Intensive Science BioBlitz, Ontario BioBlitz
- 2015 Research feature in ‘Hands on Biodiversity’ public exhibit at Royal Ontario Museum
- 2014 Research feature in ‘That’s a LOT of Fish! 100 years of collecting’ public exhibit at Royal Ontario Museum
- 2013, 2015 Volunteer Naturalist, Ontario BioBlitz
- 2008 Meeting Mentor, Strategies for Ecological Education, Development and Sustainability (SEEDS) Annual Meeting of the Ecological Society of America, Milwaukee, WI
- 2005 Meeting Mentor, National Science Foundation Undergraduate Mentoring in Environmental Biology (UMEB) Program, Annual Meeting of the Botanical Society of America, Austin, TX
- 2001-2002 Volunteer Instructor, GAIA (High School Environmental Education), U Chicago

MEDIA COVERAGE & RESEARCH FEATURES

Web and Print – [Lakeland Times](#), [Scientific American](#), [Bridge Michigan](#), Stewards Magazine, [Leaders & Best](#), [Michigan News](#), [Vice](#), [Detroit Free Press](#), U of T News, Fishsens Magazine, [Climate News Network](#), Tak Fur the Kaffe, Science World Report, [Phys.org](#), TerraDaily, [ScienceDaily](#), The Fish Site, [two.org](#), ABC Newspapers, [Great Lakes Echo](#), Stabroek News, CBC International

Radio and Television – [NPR Science Friday](#), Stateside on Michigan Radio, CBC Toronto, Here and Now; CBC Halifax, Mainstreet; CBC Calgary, Homestretch; CBC Montreal, Home Run; CBC Saskatchewan, Afternoon Edition; CBC New Brunswick, Shift; CBC St. Johns, On the Go;

CBC Vancouver, On the Coast; CBC Sudbury/Thunder Bay, Up North; CBC Winnipeg, Up to Speed; CBC Edmonton, Radio Active; CBC Ottawa, All in Day; CBC International; [CTV News Toronto](#)