

KAREN M. ALOFS

CURRICULUM VITAE

kmalofs@umich.edu | <https://sites.google.com/umich.edu/alofs>

PROFESSIONAL APPOINTMENTS

Jan 2018- **Assistant Professor**, School for Environment and Sustainability, University of Michigan
2016-2017 **Research Associate**, Dept of Ecology and Evolutionary Biology, University of Toronto
2015-2020 **Departmental Associate**, Ichthyology Section of the Department of Natural History, Royal Ontario Museum
2010-2016 **Postdoctoral Research**, Dept of Ecology and Evolutionary Biology, University of Toronto

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

GRANTS, HONORS, AND AWARDS

2011-2013 International Research Fellowship, National Science Foundation, (US \$98,500)
2008 Strategic Environmental Research and Development Program Student Travel Award, Annual Meeting of the Ecological Society of America, (US \$500)
2007-2010 Doctoral Dissertation Improvement Grant, National Science Foundation, (US \$11,998)
2007 Ariel Appleton Fellowship, Research Ranch Foundation, (US \$2000)
2006-2009 Graduate Research Fellowship, National Science Foundation, (US \$121,500 total: US \$30,000 stipend and US \$10,500 education allowance, per year for 3 years)

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

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

PUBLICATIONS

PEER-REVIEWED

Alofs KM. 2016. The influence of variability in species trait data on community level ecological prediction and inference. *Ecology and Evolution*. 6: 6345–6353.

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.

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.

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.

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.

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.

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.

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.

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.

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.

Scott CE, **Alofs KM** and BA Edwards. 2011. Putting dark diversity in the spotlight. *Trends in Ecology and Evolution* 26: 263-264.

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.

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.

PRESENTATIONS

INVITED PAPERS & SEMINARS

- 2018 American Fisheries Society, Atlantic City, NJ (abstract accepted)
- 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
- 2012 Wildlife Conservation Society Climate Change Adaptation Workshop, Peterborough, ON
- 2011 Diagnostic Tools for Inland Lakes Workshop, Ministry of Natural Resources, Peterborough, ON
- 2008 Mini-Symposium: Research at the Balcones Canyonlands National Wildlife Refuge, U Texas Austin, Austin, TX

CONTRIBUTED PAPERS

- 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
2012 'Impacts of Climate Change on Limnetic Biodiversity and Fisheries in Ontario and Quebec' Strategic Grant Workshop, Toronto, ON
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

TEACHING EXPERIENCE

At U Michigan

COURSES TAUGHT

- 2018- EAS 409/ENV 409/EEB 447 Ecology of Fishes
2019- EAS 501.046 Science and Management of the Great Lakes (*anticipated*, to be co-taught with Dr. Paul Seelbach)

STUDENTS MENTORED

- 2017- Sara Prendergast (MSc Thesis Student, Co-Supervisor with Mark Rowe, GLERL)
2018- Katherine McLean (PhD Student, Ecology and Evolutionary Biology, Committee Member)
2018- Kenzo Esquivel (Frontiers MSc Student, Ecology and Evolutionary Biology, Committee Member)
2018- Olivia Horwedel (Undergraduate lab assistant, Program in the Environment)
2018- Michael Hostetler (Undergraduate lab assistant, Ecology and Evolutionary Biology)
2018- Maxwell LaCosse (Undergraduate lab assistant, Civil and Environmental Engineering)

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

- 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

- 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

Hydrologist Search Committee, SEAS representative, U Michigan, winter 2018

SOCIETY MEMBERSHIP

Ecological Society of America (*member since 2005, student section officer in 2009*), Society for Freshwater Science, American Fisheries Society, NSERC Canadian Network for Aquatic Ecosystem Services

JOURNAL REFEREEING

Biological Conservation, Biological Invasions, Canadian Journal of Zoology, Diversity and Distributions, Ecography, Ecological Applications, Ecology and Evolution, Ecology of Freshwater Fishes, Ecological Research, Écoscience, Ecosphere, Global Change Biology, Invasive Plant Science and Management, Neotropical Ichthyology, Oikos, Plant Ecology, Proceedings of the Royal Society B, Nature Scientific Data

GRANT REFEREEING

Ad Hoc Reviewer U.S. National Science Foundation, MITACS Elevate Fellowships, MITACS Accelerate Research Grants, Sam Houston State University Internal Grants

OUTREACH

- 2017 Big Trout Bay Intensive Science BioBlitz, Ontario BioBlitz
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

POPULAR WRITING

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.

MEDIA COVERAGE & RESEARCH FEATURES

Links available at <https://sites.google.com/site/karenalofs/>

Web and Print - U of T News, Fishsens Magazine, Climate News Network, Tak Fur the Kaffe, Science World Report, Phys.org, TerraDaily, ScienceDaily, The Fish Site, tvo.org, ABC Newspapers, Great Lakes Echo, Stabroek News, CBC International

Radio and Television – 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

Museum Exhibits - ‘That’s a Lot of Fish’ & ‘Hands on Biodiversity’ public exhibits at Royal Ontario Museum