

# KAREN M. ALOFS

## CURRICULUM VITAE

[kmalofs@umich.edu](mailto:kmalofs@umich.edu) | <https://sites.google.com/umich.edu/alofs>

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### 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

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### 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

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### 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)

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### 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.

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## PRESENTATIONS

### **INVITED PAPERS & SEMINARS**

- 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 3<sup>rd</sup> Annual EEB/Plant Bio Grad Student Symposium, U Texas Austin, Austin, TX
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## **TEACHING EXPERIENCE**

### **LECTURER**

- 2011- 2013 Course Instructor, *Community Ecology*, U Toronto, 3 fall semesters
- 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- 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)

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### 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

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### PROFESSIONAL AFFILIATIONS AND SERVICE

#### **SOCIETY MEMBERSHIP**

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

#### **JOURNAL & GRANT REFEREEING**

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

#### **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/>

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