
Amanda L. Kelley

Curriculum Vitae

School of Fisheries and Ocean Sciences, University of Alaska Fairbanks,

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Appointments

2016	Tenure-track Assistant Professor School of Fisheries and Ocean Sciences University of Alaska Fairbanks
2016	Co-Director, Ocean Acidification Research Center University of Alaska Fairbanks

University Education

2013 – May 2016	Postdoctoral Research Fellow University of California, Santa Barbara (UCSB) Department of Ecology, Evolution and Marine Biology Mentor: Dr. Gretchen Hofmann
2008 - 2013	Ph.D. Ecological Physiology Portland State University Department of Biology Advisor: Dr. Catherine de Rivera
2007	Post-baccalaureate Research Internship University of Washington Friday Harbor Marine Laboratory
2005 - 2007	B. S. Organismal Biology, cum laude Portland State University Department of Biology

Fellowships, Awards and Honors

2013 - 2016	National Science Foundation Polar Regions Research Postdoctoral Fellowship, Program grant number ANT- 1204181 to A.L.K.
2014	Exemplary TRiO Achiever , Portland State University
2014	Carl Storm Fellowship , Gordon Conference on Ocean Global Change Biology
2012 - 2013	National Science Foundation GK - 12 Graduate Research Fellowship, http://www.pdx.edu/soe-gk12/home
2009 - 2012	National Science Foundation Graduate Research Fellowship, Program grant number- 220005 to A.L.K.
2010	Outstanding Abstract Proposal , American Physiological Society Conference (\$250)

2008 - 2009	Keck Research Fellowship Award , Portland State University, Department of Biology
2008	Outstanding McNair Scholar - 2007 cohort, TRiO Award, Portland State University
2007	Research Apprenticeship , University of Washington Friday Harbor Marine Laboratories, Subtidal Marine Ecology
2007	McNair Scholar , Portland State University

Grants in Support of Research

2014	Carl Storm Fellowship , Gordon Conference on Ocean Global Change Biology (\$600)
2013-Present	Polar Regions Research Postdoctoral Fellowship , National Science Foundation Program grant number ANT- 1204181 to A.L.K. (Research funding- \$38,000)
2012-2013	GK-12 Graduate Research Fellowship , National Science Foundation (Research funding- \$10,000)
2013	Travel Award , International Conference on Marine Bio-invasions (\$450)
2013	Travel Award , Society for Integrative and Comparative Biology Conference (\$500)
2010	Outstanding Abstract Proposal , American Physiological Society Conference (\$250)
2009	Outstanding Presentation , Portland State University Alumni event (\$50)
2007	Research Apprenticeship , University of Washington, Friday Harbor Marine Laboratories Sub tidal Marine Ecology (\$2000)
2007	Post-baccalaureate Research Grant , Howard Hughes Medical Institute (\$3,000)
2007	McNair Scholarship , Portland State University (\$5,000)

Publications

- Kapsenberg, L., **Kelley, A.L.**, Francis, L., Raskin, S. (2015) Exploring the complexity of ocean acidification: an ecosystem comparison of coastal pH variability. *Science Scope*, 39(3): 51-60.
- **Kelley, A.L.**, de Rivera, C.E., Grosholz, E.D., Ruiz G.M., and Yamada, S., Gillespie, G. (2015) Thermogeographic variation in body size of *Carcinus maenas*, the European green crab. *Marine Biology*, 162.8 (2015): 1625-1635.
- Kapsenberg, L., **Kelley, A.L.**, Shaw, E.C., Martz, T.R., Hofmann, G.E. (2015) Near-shore Antarctic pH variability has implications for the design of ocean acidification experiments. *Scientific Reports*, 5: 9638 doi:10.1038/srep09638.
- **Kelley, A. L.**, Hanson, P.R., Kelley, S. (2015) Demonstrating the Effects of Ocean Acidification on Marine Organisms to Support Climate Change Understanding. *The American Biology Teacher Journal*. 77, 4: 258-263.
- **Kelley, A. L.** (2014) Review: The role thermal physiology plays in species invasion. *Conservation Physiology*. 2.1: cou045.
- **Kelley, A. L.**, de Rivera, C. E., Buckley, B. A. (2013) Cold tolerance of the invasive *Carcinus maenas* in the east Pacific: molecular mechanisms and implications for range expansion in a changing climate. *Biological Invasions*, 1-11.

- **Kelley, A. L.**, de Rivera, C. E., Buckley, B. A. (2011) Intraspecific variation in thermotolerance and morphology of the invasive European green crab, *Carcinus maenas*, on the west coast of North America. *Journal of Experimental Marine Biology and Ecology*. 409, 70-78.
- **Kelley, A. L.** (2008) Food web Impacts of the invasive New Zealand Mudsail in an estuarine system. *McNair Online Journals*. <https://sites.google.com/site/psumcnairscholars/>.

Manuscripts in Review

- Munoz, L., **Kelley, A. L.**, DeRivera, C.E. The effect of salinity acclimation on the upper thermal tolerance of the invasive crab, *Carcinus maenas*. *Marine Biology*.
- **Kelley, A.L.**, Lunden, J.J. Review: Meta-analysis identifies metabolic sensitivities to ocean acidification. Target journal: *Global Change Biology*.

Manuscripts in Preparation

- **Kelley, A. L.**, Hofmann, G.E. Transcriptomic response of Antarctic sea urchin larvae to present and future pH seascapes. Target journal: *Molecular Ecology*.
- **Kelley, A.L.**, Kapsenberg, L., Sewell, M.A., Hofmann, G.E. The emerging picture: response of Ross Sea biota to future ocean change. Target journal: *Polar Biology*.

Conferences and Presentations of Research

- 2015 **Kelley, A. L.** et al. Presenter- Ocean Science Sequence Summer Professional Development Course, UCSB, NOAA, NSF, Oxnard School District titled, "Science continuum: From data discovery to STEM education."
- 2014 Attended first inter-annual Gordon Research Conference, Ocean Global Change Biology.
- 2013 **Kelley, A. L.** et al. Oral presentation, International Conference on Marine Bio-invasions.
- 2013 **Kelley, A. L.** et al. Oral presentation, Society for Integrative and Comparative Biology.
- 2011 **Kelley, A. L.** Oral presentation, Western Society of Naturalists annual conference.
- 2011 **Kelley, A. L.** et al. Poster presentation, Earth day Portland State University.
- 2010 **Kelley, A. L.** et al. Poster presentation, Inter-annual meeting of the American Physiological Society.
- 2009 **Kelley, A. L.** et al. Oral Presentation, Portland State University Alumni event.
- 2009 **Kelley, A. L.** et al. Poster presentation, Western Society of Naturalists annual conference.
- 2009 **Kelley, A. L.** et al. Poster presentation, International Conference on Marine Bio-invasions.

Teaching and Lecturing

- 2015 **Guest Lecturer**, University of California, Santa Barbara. *Global Change Biology*, "Ecology of species invasion."
- 2014 **Guest Lecturer**, University of California, Santa Barbara. *Introductory Biology*, "Evolution of vertebrates."
- 2013 **NSF GK-12 Biology Instructor**, Liberty High School, Hillsboro, Oregon. I developed and presented curriculum and laboratory experiments relating to the field of global change biology throughout the 2012-2013 school year.
- 2013 **Guest Lecturer**, Introduction to Biology undergraduate course, Environmental Science and Management, Portland State University, titled, "Global change biology: ocean acidification, global warming and invasive species."
- 2013 **Guest Lecturer**, Native American Early College Academy, Portland, Oregon, titled, "Antarctica: ecology and evolution."

- 2012 **Guest Lecturer**, Native American Early College Academy, Portland, Oregon, titled, "Global change biology: Ocean acidification, global warming and invasive species."
- 2012 **Guest Lecturer**, Introduction to Biology undergraduate course, Environmental Science and Management, Portland State University, titled, "The effects of ocean acidification on marine calcifiers."
- 2011 **Guest Lecturer**, Introduction to Biology undergraduate course, Environmental Science and Management, Portland State University, titled, "The effects of global climate change on the biogeography and phenology of marine species."
- 2009 **Laboratory Instructor**, Principles of Biology, Portland State University.

Outreach and Synergistic Activities

- 2016 **Science Fair judge**: Joy Elementary, Fairbanks School District
- 2015 **Research Mentor**: As a NSF Postdoctoral Fellow, I served as a mentor for Lydia Kapsenberg (now NSF Postdoctoral Research Fellow, Ocean Sciences International), and the manifestation of this work has resulted in two manuscripts in which we are coauthors (see references cited). The Antarctica pH data were included additionally included in curriculum developed for middle school students and published in the education journal *Sciences Scope* (Kapsenberg, Kelley, et al. 2015, *Science Scope*).
- 2015 **Lead presenter**: Ocean Science Sequence Summer Professional Development Course, a collaboration between UCSB, NOAA, NSF, Oxnard School District titled, "Science continuum: From data discovery to STEM education".
- 2014 **Lead coordinator**: Ocean acidification GK-12 curriculum development, I collaborated with NOAA Channel Islands National Marine Sanctuary, Naturebridge to produce "Exploring the complexity of ocean acidification: An Ecosystem Comparison of Coastal pH Variability" http://www.cisanctuary.org/ocean-acidification/hands_on_activities.php.
- 2014 **Science Advisor** I served as the Science Advisor for the Channel Coast Watershed Observatory in collaboration with SCCOOS, NOAA Channel Islands National Park, Nature Bridge, Monterey Bay Aquarium, BOEM, JASON learning, middle school STEM coordinators, USA.
- 2013 **Research mentor** for undergraduate student Lauren Munoz, through the National Science Foundation Louis Stokes Alliance for Minority Participation. Lauren conducted several experiments examining the effect of salinity acclimation on the upper thermotolerance of the invasive *Carcinus maenas*. Ms. Munoz is currently writing up this work as paper that will be submitted for peer-reviewed publication (see manuscripts in prep). Through this work, she has applied for, and receive the Ronald McNair Scholarship.
- 2013 **Volunteer**, guest lecturer at the Native America Early College Academy in Portland, Oregon.
- 2011 **Research mentor** for undergraduate student Jess Millar, who was awarded a Ronald McNair Scholarship for her work.
- 2010 **Events coordinator**, Biology Investigation and Outreach, student group at Portland State University.

Professional Service

- Funding agency reviewer: National Science Foundation, Washington Sea Grant, Maryland Sea Grant, Chilean science funding agency- FONDECYT Fondo Nacional de Desarrollo Científico y Tecnológico.

- Reviewer for peer-review journals, *Marine Biology* (3), *Invertebrate Biology*, *Biological Invasions*(2), *Journal of Experimental Marine Biology and Ecology*, and *American Biology Teacher* (2), *Ecology and Evolution*, *Comparative Biochemistry and Physiology*, *Ecological Research*.

Media

- 2016 NOAA Deepwater Exploration of Glacier Bay National Park: Explorers <http://oceanexplorer.noaa.gov/explorations/16glacierbay/background/explorers/explorers.html> 19 Mar. 2016.
- 2016 NOAA Ocean Explorer Program, blog post “Cheechako” <http://oceanexplorer.noaa.gov/explorations/16glacierbay/logs/mar23/mar23.html> 28 Mar. 2016.
- 2014 Antarctic Sun “Thorny problem- Sea urchin larvae show reduction in size from ocean acidification experiments.” <http://antarcticsun.usap.gov/science/contenthandler.cfm?id=2965>, 14 Jan. 2014.
- 2013 NPR “Shutdown’s reach extends to South Pole” <http://www.npr.org/templates/story/story.php?storyId=232622003>, 12 Oct. 2013.
- 2013 Deep Sea News “The slow strangling of marine science careers, as the Government Shutdown drags on” <http://deepseanews.com/2013/10/the-slow-strangling-of-marine-science-careers-as-the-government-shutdown-drags-on/>, 16 Oct. 2013.
- 2013 Nature Comment “Politics: The long shadow of the shutdown” Gretchen E. Hofmann, <http://www.nature.com/news/politics-the-long-shadow-of-the-shutdown-1.13978>, 18 Oct. 2013.
- 2013 Mother Jones “For climate scientists, shutdown casts a long shadow” <http://www.motherjones.com/blue-marble/2013/10/climate-scientists-shutdown-antarctica>. 18 Oct. 2013.
- 2012 National Science Foundation News “Researchers recover recorder from Antarctic waters containing critical baseline on acidification” http://www.nsf.gov/news/news_summ.jsp?cntn_id=125761, 18 Oct. 2012.

Remote Field Research/Research Cruises

- 2016 **Field team member**, NOAA Ocean Exploration research cruise; Deepwater exploration of Glacier Bay National Park, scientific diver
- 2015 **Independent Researcher**, Ocean acidification studies, McMurdo Station, Antarctica
- 2014 **Field team member**, NOAA, Channel Islands research cruise for Acidification studies cruise
- 2014 **Independent Researcher**, Ocean acidification studies, McMurdo Station, Antarctica
- 2013 **Independent Researcher**, Ocean acidification studies, McMurdo Station, Antarctica
- 2012 **Field team member**, CO₂ experimental system tech, for Dr. Gretchen Hofmann, McMurdo Station, Antarctica
- 2010 **Research Assistant**, McMurdo Station, Antarctica

Professional Affiliations and Certifications

SACNAS: Society for the Advancement of Chicanos and Native Americans in Science

SICB: Society for Integrative and Comparative Biology

AAUS: Certified as a scientific diver