

Mikaela M. Provost

NOAA Fisheries
Southwest Fisheries Science Center
Monterey Laboratory

mmprovost@ucdavis.edu
<https://mmprovost.wordpress.com/>
(202) 368-9096

Education

- 2015-2020 PhD in Ecology, University of California, Davis, CA
Committee: Louis W. Botsford (advisor), Marissa L. Baskett, Alan Hastings
- 2010-2013 MS in Oceanography, Rutgers University, NJ
Committee: Olaf P. Jensen (advisor), Ken Able, Thomas Grothues
- 2007-2009 Teacher certification in secondary-level Biology, Seton Hall University, NJ
Teach for America, 2007 – 2010
- 2003-2007 BS in Biology, minor in Environmental Science, St. Norbert College, WI

Professional Research Experiences

- 12/2021- **Postdoc, NOAA Fisheries, Monterey CA**
Climate vulnerability assessments for 36 species managed by CA Department of Fish and Wildlife
Mentors: Elliott Hazen, Stephen Bograd, Stephanie Brodie
- 2020-2021 **Postdoc, Hopkins Marine Station**
Climate change habitat refugia of abalone off the coast of Baja California, Mexico
Mentors: Giulio De Leo, Fiorenza Micheli, Brock Woodson
- 2016-2020 **NMFS / Sea Grant Population Dynamics Fellowship**
Sensitivities of West Coast fish stocks to environmental variability and management implications
Mentors: Michael O'Farrell, NMFS Santa Cruz, CA
- 2014-2015 **Marine Ecology Research Intern**, World Wildlife Fund, Washington, D.C.
Coral reef monitoring and performance in the Bird's Head Seascape, Indonesia
Mentors: Gabby Ahmadia, Helen Fox
- 2014-2018 **Graduate Pursuit**, National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD
Shifting Fish and Fishers
- 2010-2013 **Graduate Research Assistant**, Rutgers University, New Brunswick, NJ
Tagging study on Black Sea Bass (*Centropristis striata*, captured >3,500 fish). Managed 110 volunteers to work on ocean-going vessels; retrieved tagged fish from NJ, NY, PA, and DE
- 2013 **Project Lead, Antarctica Long Term Ecological Research**, Palmer Station, Antarctica
Measured summer phytoplankton bloom. Supervised radioactive photosynthesis experiments. Ensure integrity of >1,200 water samples during collection, processing, and shipping through Chilean and US customs
- 2012 **NSF International Research Experience for Students Participant**, Mongolia
Designed independent research project to measure morphometric differences between two species of grayling (*Thymallus nigriscens* and *Thymallus arcticus*) in rural Northern Mongolia
- 2011 **University of Iceland Intensive Graduate Program in Fisheries Ecology**, Reykjavik, Iceland
Designed independent research project to assess the impact of demographic effects (truncated age distribution and presence of a strong year class) on calculating age-at-maturity in the Icelandic cod stock

- 2006 **Wildlife Ecology & Conservation**, School for International Training, Tanzania
Designed independent study to measure reef health, surveyed 22 coral reefs in partnership with the Tanga Coastal Zone Conservation and Development Program (an ICUN initiative)
- 2005 **REU Fellowship**, University of Norte Dame Environmental Research Center, Michigan
Largemouth bass diet diversity across a gradient of lake sizes

Teaching & Mentorship

- Spring 2022** **Lead Instructor***, UC Davis, WFC 122 Population Dynamics & Estimation (1 quarter)
*Position accepted in Sept 2021 to teach in Spring 2022
- 2016-2017 **Teaching Assistant**, UC Davis, WFC 122 Population Dynamics & Estimation (2 quarters)
Teaching Assistant, UC Davis, WFC 195 Marine Conservation (1 quarter)
Nominated for a university-wide Teaching Assistant award
- 2011-2013 **Intern Supervisor, NSF REU**, Rutgers University, Tuckerton, NJ
Mentored 3 undergraduate summer research interns; one of whom placed 2nd at poster contest
- 2007-2010 **Biology Teacher** (Teach for America) Newark Public Schools, Newark, NJ
Taught Biology, Human Anatomy, and Environmental Science to >375 9-12th grade students; evaluated as ‘advanced proficient’, the highest rating given to teachers in the school district
- 2009-2010 **Learning Team Leader**, Teach for America, Newark, NJ
Developed professional development curriculum for public school secondary science classes in Biology and Environmental Science; mentored 12 novice high school science teachers
- 2007 **Teaching Assistant**, Limnology, St. Norbert College, De Pere, WI
Field methods in monitoring stream quality, fish, zooplankton, and insect identification

Publications

7. Dubik, B.A., Clark, E.C., Young, T., Zigler, S.B.J., Provost, M.M., Pinsky, M.L., & Martin, K.S. Governing fisheries in the face of change: Social responses to long-term geographic shifts in a US fishery. *Marine Policy* 99 (2019): 243-251.
6. Young, T., Fuller, E., Provost, M.M., Coleman, K., St. Martin, K., McCay, B.J., Pinsky, M.L. Adaptation strategies of coastal fishing communities as species shift poleward. *ICES Journal of Marine Science* 76.1 (2019): 93-103.
5. Provost, M.M., O.P. Jensen, and D.L. Berlinsky. Influence of Size, Age, and Spawning Season on Sex Change in Black Sea Bass. *Marine and Coastal Fisheries* 9.1 (2017): 126-138.
4. Robinson, O.J., Jensen, O.P., Provost, M.M., Huang, S., Fefferman, N. H., Kebir, A., & Lockwood, J. L. Evaluating the impacts of fishing on sex-changing fish: a game-theoretic approach. *ICES Journal of Marine Science* 74.3 (2017): 652-659.
3. Provost, M.M., & Jensen, O.P. (2015). The Impacts of Fishing on Hermaphroditic and Treatment of Sex Change in Stock Assessments. *Fisheries*, 40(11), 536-545.

2. Ahmadi, G.N., Glew, L., Provost, M.M., Gill, D., Hidayat, N.I., Mangubhai, S., & Fox, H.E. (2015). Integrating impact evaluation in the design and implementation of monitoring marine protected areas. *Phil. Trans. R. Soc. B*, 370(1681), 20140275.

1. Provost, M.M. 2013. Tagging Black Sea Bass for Sex Change Data. *Fisheries*. 38:5

Manuscripts submitted and in review

Provost, M.M., Botsford, L.W.(a). “Life history determines population sensitivity to environmental time scales. A comparative analysis of North Atlantic cod populations.” – *revisions in review at Oikos*

Provost, M.M., Botsford, L.W.(b). “Implications of cohort resonance for fisheries in a changing climate” – *in review at ICES Journal of Marine Science*

Pourtois, J., Provost, M.M., Micheli, F., De Leo, G. “Interaction between habitat and fishing heterogeneity determines performance in a TAC-regulated fishery.” – *revisions in review at ICES Journal of Marine Science*

Manuscripts in prep

Provost, M.M., Woodson, B., Micheli, F., Reinhart, C.†, De Leo, G. “Using 10 years of sea-surface temperature to characterize high quality abalone habitat at the 1km spatial scale along the Baja California, Mexico coastline” – *in prep*

Provost, M.M., Koontz, M.J., Lee, S., Mendez-Barrientos, L.E., Ng, J., Rudnick, J., Sturdy, E., Todgham, A.E., Young, D.J.N., Laca, E.A. “Using a mixed effects model to remove reviewer bias and incorporate multiple traits in the review and ranking of graduate school applications” – *in prep*

Provost, M.M., Zigler, S.B.J., Coleman, K., Stoll, J., Dubik, B., Clark, E., Pinsky, M., and St. Martin, K. “Shifting the burden of scale: Grappling with the complexity of multi-scale dynamics in fisheries research on climate-driven shifts.” – *in prep*

† Undergraduate student

Awards & Honors

2018	Best Student Talk Honorable Mention, National American Fisheries Society, Atlantic City, NJ
2017	Outstanding Graduate Teaching Award, Nominated, UC Davis
2012	National Student Writing Contest, 2 nd Place, American Fisheries Society, St. Paul, MN
2011	Best Student Talk, American Fisheries Society, Mid-Atlantic Chapter
2011	Best Poster, U. of Iceland Intensive Graduate Program in Fisheries Ecology, Reykjavik, Iceland

Grants

2019	American Fisheries Society Early Career Travel Award, \$500
2019	ARCS Foundation Scholar, \$11,000
2019	James Paul Micheletti Memorial Fund, \$6,000
2016	NMFS/Sea Grant Population Dynamics Fellowship, \$135,000
2015	Graduate Group in Ecology Fellowship, UC Davis, \$37,000
2014	SESYNC Graduate Pursuit, travel and accommodations funds for 3 years
2011-2013	George Burlew Scholarship, Manasquan River Marlin & Tuna Club, New Jersey, \$4,000
2012-2013	Graduate funding award, Rutgers University Marine Field Station, \$2,000
2010	Teach for America, Education Award, \$10,000
2003-2007	Presidential Scholarship, St. Norbert College, \$72,000
2006	NSF Research Experience for Undergraduates, \$3500

Invited and Contributed Presentations

- 2021 (Invited) Panel Member: *Increasing the impact of your science*, Western Society of Naturalists, Student Workshop
- 2021 (Invited) Talk: *Managing Fisheries in a Changing Climate*. Hopkins Marine Station Seminar Series, Stanford University
- 2021 (Invited) Lecture: *Fishery Management in the US* (Course: Quantitative Methods for Marine Ecology and Conservation). Hopkins Marine Station, Stanford University
- 2020 (Invited) Lecture: *Aging Fish for Fisheries Science* (Course: Introduction to Fisheries Science). Haverford College, Haverford, PA
- 2019 Provost MM, Botsford LW. Talk: *Life-History Effects on Population Responses to Environmental Variability*. American Fisheries Society, Reno, NV
- 2018 Provost MM. Talk: *Differences in Life-History Mediated Temperature Effects on Population Responses to Environmental Variability: Atlantic Cod as an example*. American Fisheries Society, Atlantic City, NJ (awarded Best Student Presentation Honorable Mention)
- 2018 Provost MM. Talk: *Population Responses to Environmental Variability: Atlantic Cod as an Example*. Sea Grant Population Dynamics Symposium. Seattle, WA
- 2017 (Invited) Talk: *The Effect of Variation in Atlantic Cod Life History on Timescales of Variability*. Department of Wildlife, Fish & Conservation Biology. Davis, CA
- 2016 Provost MM. Poster: *Sensitivities of West Coast fish stocks to environmental variability and their use in management*. Population Dynamics Symposium. Beaufort, NC
- 2014 Provost MM, Ahmadia G, Hidayat NI. Talk: *Coral Reef Status in the Bird's Head Seascape, Indonesia*. World Wildlife Fund Bali, Indonesia.
- 2012 Provost MM. Talk: *Fishing and Mating: Effects of Exploitation on Black Sea Bass and Other Sex-Changing Species*. American Fisheries Society, St. Paul, MN
- 2012 Provost MM. Talk: *Morphological variation in Hönsögöl grayling in Lake Hönsögöl, Mongolia*. Mongolia Ecological Research Symposium, Tuckerton, NJ
- 2012 Provost MM, Jensen OP. Talk: *Hermaphrodites and fishing: Selectivity and sex change in black sea bass (*Centropristis striata*)*. Ecology & Evolution Graduate Student Seminar, Rutgers University, New Brunswick, NJ
- 2011 Provost MM, Jensen OP. Talk: *Black Sea Bass Gear Selectivity*. American Fisheries Society – Mid-Atlantic Chapter, Waretown, NJ (awarded Best Student Talk)
- 2011 Provost MM, Mosgaard T. Poster: *Demographic effects on age at maturity*. University of Iceland, Reykjavik, Iceland. (awarded Best Poster)

Outreach

- 2016-2020 UC Davis Graduate Group in Ecology Diversity Committee; *Chair* for 2 years
- 2018-2019 UC Davis Graduate Student Affairs Committee, Coastal Marine Science Institute, *Chair* for 1 year
- 2017 Student Volunteer at Western Naturalist Society, Pasadena, CA 2017
- 2016 Student Volunteer at Western Naturalist Society, Sacramento, CA 2016
- 2015 Undergraduate Job Fair, UC Davis, Davis, CA
- 2013 Lunch n' Learn Series – Tuckerton Seaport Museum, Tuckerton, NJ
Invited talk: *Girls will be Boys: Impact of Sex Reversal and Fishing on the Sustainability of Black Sea Bass*
- 2011-2012 Graduate Program in Oceanography, President, New Brunswick, NJ
- 2010-2012 Research Open House, Rutgers University Marine Field Station, Tuckerton, NJ
(Invited) Talk: *New Jersey Fisheries in a Global Context and Black Sea Bas Tagging Project*
- 2012 Rutgers Science Saturdays: Ocean Science Program, Workshop Leader, New Brunswick, NJ
Designed, executed four lessons on fisheries sustainability and fish aging, 35 8th grade students
- 2012 Manasquan River Marlin & Tuna Club, Annual Spring Kick-Off Gala, Brick, NJ
(Invited) Talk: *Black Sea Bass Tagging Project*
- 2012 Shore Aquatic Dive Club, Brick, NJ (invited talk)
(Invited) Talk: *Black sea bass, sex change, and the effects of fishing*
- 2012 Fish Hawks New Jersey Fishing Club, Forked River, NJ
(Invited) Talk: *Black sea bass, sex change, and the effects of fishing*

Professional Service

- 2019 – *Member*, American Fisheries Society Climate Change Policy Committee
- 2018 *Member*, Student rep. on UC Davis Department of Wildlife, Fish & Conservation Biology hiring committee for Quantitative Fisheries Management faculty position
- 2017-2019 *Member*, UC Davis Graduate Group in Ecology Awards Committee, distributed >\$590,000 for graduate student fellowships
- 2017-2019 *Member*, Student rep. on Graduate Group in Ecology Executive Committee
Reviewer: Ecological Restoration, ICES Journal of Marine Science, Ecological Applications