

Mikaela M. Provost, PhD

Assistant Professor
University of California, Davis
Dept of Wildlife, Fish, and Conservation Biology

mmprovost@ucdavis.edu
<https://mmprovost.wordpress.com/>

Education

- 2015-2020 PhD in Ecology, University of California, Davis, CA
2010-2013 MS in Oceanography, Rutgers University, NJ
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 Experience

- 2023 – **Assistant Professor in Quantitative Fisheries**
Department of Wildlife, Fish and Conservation Biology
University of California, Davis
- 2021-2023 **Postdoc, NOAA Fisheries, Monterey CA**
Climate vulnerability assessments for 36 species managed by CA Department of Fish and Wildlife
- 2020-2021 **Postdoc, Hopkins Marine Station, Stanford University**
Climate change habitat refugia of abalone off the coast of Baja California, Mexico
- 2016-2020 **NMFS / Sea Grant Population Dynamics Fellowship**
Sensitivities of West Coast fish stocks to environmental variability and management implications
- 2014-2018 **Co-Founder of Shifting Fish and Fishers**, National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD
- 2014-2015 **Marine Ecology Research Intern**, World Wildlife Fund, Washington, D.C.
Coral reef monitoring and performance in the Bird's Head Seascape, Indonesia
- 2010-2013 **Graduate Research Assistant (MS)**, 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 nigricens* 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 on calculating age-at-maturity in the Icelandic cod stock
- 2005 **REU Fellowship**, University of North Dame Environmental Research Center, Michigan

Largemouth bass diet diversity across a gradient of lake sizes

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

Funding

2026	Ocean Protection Council. “California Halibut Trawl Bycatch Reduction”, \$290,000 (Lead PI)
2026	Ocean Protection Council. “Identifying Multi-Species Climate Refugia Along the California Coast to Support the 30x30 Initiative”, \$993,048 (co-Lead PI)
2023	California Fifth Climate Change Assessment “Identifying climate change refugia in coastal and pelagic ocean habitats”, \$282,262 (Lead PI)
2023	Center for Watershed Sciences, University of California Davis, \$40,000
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	George Burlew Scholarship, Manasquan River Marlin & Tuna Club, New Jersey, \$4,000
2012	Graduate funding award, Rutgers University Marine Field Station, \$2,000
2010	Teach for America, Education Award, \$10,000
2003	Presidential Scholarship, St. Norbert College, \$72,000
2006	NSF Research Experience for Undergraduates, \$3500

Publications

11. Sanz-Martín, M., Olguín-Jacobson, C., Bolin, J.A., Quiles-Pons, C., Brito-Morales, I., Molinos, J.G., Hidalgo, M., Alabía, I.D., Gissi, E., Provost, M.M. and Micheli, F., 2026. Identifying marine climate refugia to advance climate-smart conservation. *Trends in Ecology & Evolution*.
10. Frawley T, Provost M.M., Bellquist L, Ben-Aderet N, Blondin H, Brodie S, Buil MP, Jacox M, Bograd SJ, Hazen EL, McGonigal H. A collaborative climate vulnerability assessment of California marine fishery species. *PLoS Climate*. 2025 Feb 12;4(2):e0000574.
9. Pourtois, J., Provost, M.M., Micheli, F., De Leo, G. Interaction between habitat and fishing heterogeneity determines performance in a TAC-regulated fishery. *ICES Journal of Marine Science* (2022)5:e08909
8. Provost, M.M., Botsford, L.W. How life history determines time scale sensitivity and extinction risk of age-structured populations. *Oikos* (2022)
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

Preprints

Bolin JA, Buil MP, Ochoa NL, Provost M.M. (2025) R for marine ecologists: wrangling Earth System Model outputs. <https://ecoevortex.org/repository/view/11158/> - in review

Balstad, L.J., Brennan, J., Baskett, M.L., Berglund, M.K., Blundell, M.Z., Bolin, J.A., Briggs, A.A., Fisher, M.C., Heggerud, C.M., Jarvis-Cross, M., Mossman, L., Odell, A., Paige, J., Pelletier, S., Provost, M.M., 2025. 10 simple rules for data-model integration in theoretical ecology. *arXiv preprint arXiv:2511.15721*.

R Packages

Bolin J, Lezama-Ochoa N, Muhling B, Provost M.M. (2025). “abalone: Climate refugia for red abalone.” [doi:10.5281/zenodo.15653690](https://doi.org/10.5281/zenodo.15653690), R package version 0.1.1.

† Undergraduate student

Invited and Contributed Presentations

- | | |
|------|---|
| 2026 | (Invited) Talk: Fisheries in a changing ocean: the environment’s influence on harvested populations and management. UC Berkeley. |
| 2025 | (Invited) Talk: <i>Sensitivity of groundfish to increasing ENSO frequencies: changes in the probability of overfishing</i> . Alaska Fisheries Science Center Groundfish Seminar Series. Postponed due to government shutdown. |
| 2023 | (Invited) Talk: <i>Sensitivity of populations to environmental variability and identifying climate change refugia in coastal ecosystems</i> . UC Davis Bodega Marine Laboratory. |
| 2023 | (Invited) Talk: <i>Sensitivity of populations to environmental variability</i> . Northwest Fisheries Science Center Monster Seminar Jam. |
| 2023 | <u>Provost MM</u> , Botsford LW. Poster: <i>More frequent ENSOs could reduce probability of overfishing in long-lived California Current fishes</i> . Effects of Climate Change on the World’s Oceans. Bergen, Norway |

- 2022 Provost MM, Micheli F, Woodson B, de Leo G. Talk: *Thermal refuges along Baja, Mexico coastline*, Western Society of Naturalists.
- 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 Hövsgöl grayling in Lake Hövsgöl, 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)

Teaching & Mentorship

- 2023 - **Lead Instructor**, UC Davis, WFC 122 Population Dynamics & Estimation
- 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

Outreach

- 2022 Panelist for Western Society of Naturalist. *Increasing the impact of your science.*
- 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

- 2022 - *Member*, Ecological Society of America
- 2019 – *Member*, American Fisheries Society Climate Change Policy Committee
- 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, PNAS