ROBIN ELAHI

Advanced Lecturer, Oceans Department, Stanford University
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EDUCATION

2006-2012 Ph.D. in Biology, University of Washington
2003-2005 M.S. in Biology, California State University, Northridge
1998-2003 B.S. in Biology, Northeastern University

PROFESSIONAL APPOINTMENTS

2023- Advanced Lecturer, Hopkins Marine Station, Stanford University
2018-2023 Lecturer, Hopkins Marine Station, Stanford University
2018 Visiting lecturer, Historical Marine Ecology Research Experience, Friday Harbor Labs, University of Washington
2016-2018 Postdoctoral researcher, Stanford University
2014-2016 National Science Foundation Postdoctoral Fellow, Stanford University and University of British Columbia

TEACHING

2023-2025 Between Pacific Tides: Invertebrate Zoology in Monterey Bay; Topics in Scientific and Statistical Computing; Environmental Change and Marine Biodiversity; Research in Ecology and Ecological Physiology; Kelp Forest Ecology
2022 Historical Ecology at Hopkins Marine Station; Research in Ecology and Ecological Physiology; Experimental Design and Probability; People and Nature of Monterey Bay; Kelp Forest Ecology
2021 Statistical Modeling; Invertebrate Zoology
2020 Historical Ecology of Marine Invertebrates; Topics in Scientific and Statistical Computing
2019 Statistical Modeling; Experimental Design and Probability, Research in Ecology and Ecological Physiology; Kelp Forest Ecology
2018 Carpentry Instructor certification
2013 Ecology; Marine Biology. California State University, Monterey Bay
2006 Introductory Biology for non-majors. Los Angeles City College

MENTORING (LAST 10 YEARS)

2024-2025 Will Johnson (Stanford University graduate)
2024-2025 Meghan Shea (Stanford University graduate)
2023, 2024 Hayden Henry (Stanford University undergraduate)
2022, 2023 Maya Green, Maya Passmore (Stanford University undergraduates)
2022 Clive Potter (Monterey Bay Charter School 8th grade student)
2020, 2022 Jaionna Holmes, Bailey Merritt (Salinas High School students)
2020-2022 Jamie Leonard (Stanford University undergraduate)
2019-2020 Benjamin Burford (Stanford University graduate)

2018 Chloe May, Jamie Fields, Cormac Toler-Scott (University of Washington undergraduates)
2016 Jacopo Beccacece (Marche Polytechnic University postgraduate).

LEADERSHIP AND SERVICE

2024-2025 Stanford Boat Safety Committee
2020-2025 Stanford Dive Control Board
2023 Co-led collaborative research at Hopkins Marine Station (*Species interactions in marine ecosystems through the lens of sex*)
2023 Served on an interview committee for the position of Diving and Boating Safety Officer at Stanford / Hopkins Marine Station
2019-2023 Led an NSF-funded project on broadening participation in marine science

- https://purl.stanford.edu/kv041ng6595
- https://purl.stanford.edu/wp446bg1851

GRANTS AND FELLOWSHIPS (LAST 5 YEARS)

2021 Stanford Digital Learning Initiative seed grant (*Virtual dives and data collection in the kelp forests of Monterey Bay*; $10,800)
2020 NSF Research Coordination Network in Undergraduate Biology Education ($75,000)

PUBLICATIONS

Elahi, R., Micheli, F., and J.M. Watanabe. 2025. Passing the quadrat: inferring biodiversity change over time and across investigators. In review at PeerJ; Biorxiv preprint

Gissi, E., Goodman, M.C., **Elahi, R.,** McDevitt-Irwin, J.M., Arnoldi, N.S., Arafeh-Dalmau, N., Knight, C.J., Olguín-Jacobson, C., Palmisciano, M., Tillman, C.M. and G.A. De Leo. 2024. Sex-specific variation in species interactions matters in ecological communities. In press. *Trends in Ecology and Evolution*. https://doi.org/10.1016/j.tree.2024.07.006

Elahi, R., Edmunds, P.J., Gates, R.D., Kuffner, I.B., Barnes, B.B., Chollett, I., Courtney, T.A., Guest, J.R., Lenz, E.A., Toth, L.T., Viehman, T.S., Williams, I.D. 2022. Scale dependence of coral reef oases and their environmental correlates. *Ecological Applications* 32: e2651

Burford, B.P., Wild, L.A., Schwarz, R., Chenoweth, E.M., Sreenivasan, A., **Elahi, R.**, Carey, N., Hoving H.T., Straley, J.M., and M.W. Denny. 2022. Rapid range expansion of a marine ectotherm reveals the demographic and ecological consequences of short-term variability in seawater temperature and dissolved oxygen. *The American Naturalist*. 199: 523-550.

Elahi, R., Miller, L., and S. Litvin. 2020. Historical comparisons of body size are sensitive to data availability and ecological context. *Ecology* 101: e03101

Micheli, F., Carlton, J., Pearse, J., Selgrath, J., **Elahi, R**., Watanabe, J., Mach, M.E., McDevitt-Irwin, J., Pearse, V., Burnett, N., and C. Baxter. 2020. Field stations as sentinels of change. *Frontiers in Ecology and the Environment* 18: 320-322.

Courtney, T.A., Barnes, B.B., Chollett, I., **Elahi, R**., Gross, K., Guest, J.R., Kuffner, I.B., Lenz, E.A., Nelson, H.R., Rogers, C.S., Toth, L.R., and A. Andersson. 2020. Disturbances drive changes in coral community assemblages and coral calcification capacity. *Ecosphere* 11: e03066

Bowler, D.E., Bjorkman, A.D., Dornelas, M., Myers-Smith, I., O'Connor, M.I., Navarro, L.M., Niamir, A., Supp, S.R., Waldock, C., Vellend, M., Blowes, S.A., Böhning-Gaese, K.,

Bruelheide, H., **Elahi, R**., Antão, L.H., Hines, J., Isbell, F., Jones, H.P., Magurran, A.E., Cabral, J.S., Winter, M., and A.E. Bates. 2020. Mapping human pressures on biodiversity across the planet uncovers anthropogenic threat complexes. *People and Nature* 2: 380-394.

Chase, J., McGill, B., Thompson, P.L., Antao, L., Bates, A., Blowes, A., Dornelas, M., Gonzalez, A., Magurran, A., Supp, S.R., Winter, M., Bjorkman, A., Bruelheide, H., Byrnes, J.E., Cabral, J., **Elahi, R.**, Gomez, C., Guzman, H., Isbell, F., Myers-Smith, I., Jones, H., Hines, J., Vellend, M., Waldock, C., and M.I. O'Connor. 2019. Species richness change across spatial scales. *Oikos* 128: 1079-1091

Elahi, R., Ferretti, F., Bastari, A., Cerrano, C., Colloca, F., Kowalik, J., Ruckelshaus, M., Struck, A., and F. Micheli. 2018. Leveraging vessel traffic data and a temporary fishing closure to inform marine management. *Frontiers in Ecology and the Environment* 16: 440-446

Guest, J.R., Edmunds, P.J., Gates, R., Kufner, I., Andersson, A., Barnes, B., Chollett, I., **Elahi, R**., Courtney, T., Gross, K., Lenz, B., Mitarai, S., Mumby, P., Nelson, H., Parker, B., Putnam, H., Rogers, C., and L. Toth. 2018. A framework for identifying and characterising coral reef "oases" against a backdrop of degradation. *Journal of Applied Ecology* 55: 2865-2875

Dornelas, M., Antao L.H., Moyes, F., et al. including **R. Elahi**. 2018. BioTime: a database of biodiversity time series for the Anthropocene. *Global Ecology and Biogeography* 27: 760-786

O'Leary, J., Micheli, F., Airoldi L., Boch C., De Leo, G., **Elahi, R.**, Ferretti, F., Graham, N.A.J., Litvin, S.Y., Low, N.H., Lummis, S., Nickols, K.J., and J. Wong. 2017. Resilience of marine ecosystems to climatic disturbances. *BioScience* 67: 208-220

Elahi, R., Sebens, K.P., and G.A. De Leo. 2016. Ocean warming and the demography of declines in coral body size. *Marine Ecology Progress Series* 560: 147-158

Elahi, R., O'Connor, M.I., Byrnes, J.E.K., Dunic, J., Eriksson, B.K., Hensel, M.J.S. and P.J. Kearns. 2015. Recent trends in local-scale marine biodiversity reflect community structure and human impacts. *Current Biology* 25:1938-1943

Elahi, R., Dwyer, T.R. and K.P. Sebens. 2014. Mesoscale variability in oceanographic retention sets the abiotic stage for subtidal benthic diversity. *Marine Ecology Progress Series* 498:117-132

Elahi, R. and K.P. Sebens. 2013. Experimental removal and recovery of subtidal grazers highlights the importance of functional redundancy and temporal context. *PLoS One* 8(11):e78969

Elahi, R., C. Birkeland, K.P. Sebens, K.R. Turner and T.R. Dwyer. 2013. Limited change in the diversity and structure of subtidal communites over four decades. *Marine Biology* 160:3209-3219

Elahi, R. and K.P. Sebens. 2012. Consumers mediate natural variation between prey richness and resource use in a benthic marine community. *Marine Ecology Progress Series* 452:131-143

Elahi, R. 2008. Effects of aggregation and species identity on the growth and behavior of mushroom corals. *Coral Reefs* 27:881-885

Edmunds, P.J. and **R. Elahi.** 2007. The demographics of a 15-year decline in cover of the Caribbean reef coral *Montastraea annularis*. *Ecological Monographs* 77:3-18

Elahi, R. and P.J. Edmunds. 2007. Determinate growth and the scaling of photosynthetic energy intake in the solitary coral, *Fungia concinna* (Verrill). *Journal of Experimental Marine Biology and Ecology* 349:183-193

Elahi, R. and P.J. Edmunds. 2007. Tissue age affects calcification in the scleractinian coral, *Madracis mirabilis*. *Biological Bulletin* 212:20-28

Elahi, R. and P.J. Edmunds. 2007. Consequences of fission in the coral *Siderastrea siderea*: growth rates of small colonies and clonal input to population structure. *Coral Reefs* 26:271-276

TALKS AND SEMINARS (LAST 5 YEARS)

Invited talks

2020 Trends in biodiversity and body size on rocky shores over the past century. Oregon Institute of Marine Biology, University of Oregon, OR.

SYNTHETIC ACTIVITIES

2017 Bayesian modeling for ecological and social scientists. National Socio-Environmental Synthesis Center.

2016 Local-scale ecosystem resilience amid global-scale ocean change: the coral reef example. Powell Center for Analysis and Synthesis.

2016 Quantifying biodiversity change through time. German Centre for Integrative Biodiversity Research.

2015 Understanding recent biodiversity change across spatial and temporal scales. Canadian Institute of Ecology and Evolution.

2014 Uncovering bright spots in the resilience of marine ecosystems to climatic disturbances. Hopkins Marine Station.

PROFESSIONAL SERVICE

Grant review

2020 National Science Foundation, Antarctic Programs

2014 National Science Foundation, Biological Oceanography

Peer review

American Naturalist, *BioInvasions, Bulletin of Marine Science*, *Coral Reefs* (2×), *Current Biology, Ecology* (5×), *Ecology & Evolution, Ecology Letters* (3×), *Functional Ecology* (2×), *Galaxea*, *Hydrobiologia*, *Marine Biology*, *Marine Ecology Progress Series* (10×), *Oecologia*, *PLoS ONE*

SKILLS

Proficient in R: programming, statistical analysis, and data visualization (~8000 hours)
Proficient in generalized linear and additive models, multivariate statistics, demographic modeling, experiment design and analysis
Intermediate knowledge of Bayesian hierarchical models (JAGS, STAN)
PADI SCUBA Divemaster (>1000 dives)
PFI Freediver
American Academy of Underwater Sciences (AAUS) Scientific Diver (since 2002)
Wilderness First Aid, CPR, First Aid
Nitrox, Oxygen Administration, Defibrillation, Hazardous Marine Life
Small boat operator (California State boat license)

PROFESSIONAL MEMBERSHIPS
Western Society of Naturalists

COMMUNITY OUTREACH
2023-2024 Coached youth basketball
2021-2022 Mentored local middle and high school students on marine science projects
2015-2019 Participated in Hopkins Marine Station open house

LANGUAGES
Czech Speaking – native; Reading – conversational; Writing – limited
Spanish Speaking – conversational; Reading – limited; Writing – limited