

ROBIN ELAHI

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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

2018- 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

PUBLICATIONS

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

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., Airoidi 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 communities 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

GRANTS AND FELLOWSHIPS

- 2020 NSF Research Coordination Network in Undergraduate Biology Education (\$75,000)
- 2014 NSF Postdoctoral Research Fellowship, Intersections of Math and Biology (\$140,000 total)
- 2011, 2008 NSF GK-12 Fellowship (\$60,000 total)
- 2011 University of Washington (UW) Biology Tunnicliffe Writing Fellowship (\$4300)
- 2010 Lerner-Gray Grant for Marine Research (\$1444)
- 2010, 2007 UW Biology-Friday Harbor Labs Awards (\$3150 total)
- 2009 American Association for Underwater Science (\$1500)
- 2009 Contributed to successful NSF Biological Oceanography proposal “*Effects of Marine Preserves and Non-indigenous Species on Rocky Subtidal Communities*” (awarded to PI Ken Sebens; \$718,448)
- 2007-2008 Achievement Rewards for College Scientists Fellowship: (3×; \$9,000 total)
- 2004, 2003 California State University (CSU) Student Projects (\$2,400 total)
- 2004, 2003 CSU Associated Students (\$1,300 total)
- 2003 CSU Graduate Studies (\$400)
- 2003 Project Aware (\$400)
- 2002 Northeastern University (NU) College of Experience Education (\$1,000)

AWARDS

- 2017 Rafe Sagarin Fund for Innovative Ecology, honorable mention (\$250)
- 2006 CSU Outstanding Graduate Research Award
- 2005 NSF Graduate Research Fellowship, honorable mention
- 2003 NU Sears B. Condit Award
- 2002 NU Dr. Carl Muckenhoupt Memorial Scholarship (\$1,600)
- 2002 NU Amelia Peabody Scholarship (\$300)
- 2002, 2001 NU Joseph Arthur Coolidge Achievement Award (\$1,000 total)

TEACHING*Instructor*

- 2021 Statistical Modeling; Invertebrate Zoology; Research in Physiology and Ecology
- 2020 Historical Ecology of Marine Invertebrates; Stats Chat (seminar)
- 2019 Statistical Modeling; Research in Physiology and Ecology; 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

NSF GK-12 teaching fellow

- 2010 Marine Science. Garfield High School, Seattle
- 2008 Biology. Friday Harbor High School, Friday Harbor

Teaching assistant

- 2017 Monterey Bay Aquarium Research Institute
Software Carpentry Workshop in Reproducible Science

- 2007-2011 Friday Harbor Laboratories
Ocean Acidification, Marine Environmental Research, Scientific Diving,
Marine Invertebrate Zoology, Marine Subtidal Ecology, Marine Botany
- 2006-2011 University of Washington
Biology of Algae, Invertebrate Zoology (2×), Evolution and Systematics,
Foundations of Ecology
- 2004-2006 Northeastern University Three Seas Marine Biology Program
Biology of Corals (3×), Tropical Terrestrial Ecology
- 2003-2005 California State University, Northridge
Physiological Ecology, Introductory Biology (2×), Invertebrate Zoology

MENTORING

- 2021 Jamie Leonard (Stanford University undergraduate student)
- 2020 Jamie Leonard (Stanford University undergraduate student)
- 2019 Jamie Leonard (Stanford University undergraduate student)
- 2018 Chloe May, Jamie Fields, Cormac Toler-Scott (University of Washington
undergraduate students). Presented poster *Undergraduate research in historical
ecology: a comparison of invertebrate body size over 45 years* at WSN 2018
- 2016 Jacopo Beccacece (Marche Polytechnic University postgraduate student).
Hopkins Marine Station
- 2014 Will Sano (Brown University undergraduate student). Hopkins Marine Station
- 2012 Jackie O'Mara (masters student). Three Seas East West Marine Biology
Program. Friday Harbor Labs
- 2011 Robin Gropp, Julia Trace (high school students). Friday Harbor Labs
- 2009 Emily Haug, Meghan Rock, Ross Whippo (University of Washington
undergraduate students). Marine Ecology Research Apprenticeship. Friday Harbor
Labs

TALKS AND SEMINARS*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.
- 2018 *Macrocystis*: a foundation for the forest. Hopkins Marine Station, Stanford
University, CA
- 2018 Up close and far away: observations of snails and ship unveil human impacts.
Friday Harbor Labs, University of Washington, WA
- 2017 Benthic ecology in a changing ocean. San Francisco State University, San
Francisco, CA
- 2017 Ecological change in the contemporary ocean: challenges, insights, and
opportunities. University of Connecticut, Avery Point, CT

Contributed talks (last 5 years)

- 2018 Synthesizing snail size shifts: evidence for body size decline over time.
Western Society of Naturalists. Tacoma, WA
- 2017 Proposal for a fisheries restricted area in the Pomo-Jabuka Pit, Adriatic Sea.
Food and Agriculture Organization of the United Nations, General Fisheries

- 2016 Commission for the Mediterranean, Rome, Italy
Decadal-scale changes in body size along an intertidal gradient support the temperature-size rule. Western Society of Naturalists. Monterey, CA
- 2016 Recent trends in coastal biodiversity. American Society of Naturalists. Asilomar, CA

SYNTHETIC ACTIVITIES

- 2019 Open source lessons in graduate and undergraduate statistics
<https://elahi.github.io/biohopk-140h/>
<https://elahi.github.io/xdp/>
- 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×), Ecology (5×), Ecology & Evolution, Ecology Letters (3×), Functional Ecology (2×), Galaxea, Hydrobiologia, Marine Biology, Marine Ecology Progress Series (8×), Oecologia, PLoS ONE

MEDIA COVERAGE

- 2015 Human activities, shifts in local species reshaping coastal biodiversity. Science Daily, 9 July 2015.
<www.sciencedaily.com/releases/2015/07/150709132447.htm>.
- 2013 Safeguarding marine species: a dynamic approach to preservation. International innovation, Research Media Ltd., Bristol, UK, February 2013.
- 2013 Underwater rock walls in the San Juan Islands are healthy and amazingly diverse. San Juan Islander, San Juan Island, WA, September 2013.
<<http://sanjuanislander.com/opinion/columnists/tide-bites/16823>>

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

Basic knowledge of Bayesian hierarchical models (JAGS, STAN), bash, Python
PADI SCUBA Divemaster (>1000 dives)
PFI Freediver
American Academy of Underwater Sciences (AAUS) Scientific Diver (since 2002)
Nitrox, CPR, First Aid, Oxygen Administration, Defibrillation, Hazardous Marine Life
Small boat operator (Washington State boat license)

PROFESSIONAL MEMBERSHIPS

Western Society of Naturalists

LANGUAGES

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

REFERENCES

Peter J. Edmunds

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Mary I. O'Connor

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