

ANDREW RASSWEILER

Curriculum Vitae

Florida State University
Department of Biological Science
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Education

- 2008 Ph.D. University of California, Santa Barbara
Department of Ecology, Evolution and Marine Biology
Advisor: Sally J. Holbrook
- 2000 B.A. Princeton University
Department of Ecology and Evolutionary Biology
Advisor: Stephen W. Pacala

Professional Appointments

- 2016- **Assistant Professor:** Department of Biological Science, Florida State University
- 2012- **Assistant Researcher:** Marine Science Institute, University of California, Santa
2015 Barbara
- 2011- **Assistant Project Scientist:** Marine Science Institute, University of California,
2012 Santa Barbara
- 2009- **Post-Doctoral Researcher:** Bren School of Environmental Science &
2011 Management, University of California, Santa Barbara. Supervisors: Steve Gaines
& Chris Costello.

Awards & Grants

- 2016 Florida State University - First year assistant professor award "Fisheries in the Gulf of Mexico and the need for flexibility in spatial management." Role: PI. (\$20,000)
- 2014-2019 NASA, "Demonstrating an effective biodiversity observation network in the Santa Barbara Channel." Role: Co-PI with R. Miller. (\$5,162,041)
- 2014-2018 Bureau of Ocean Energy Management, "DOI Partnership: Distinguishing between human and natural causes of changes in kelp forests using long-term data from DOI monitoring programs." Role: Co-PI with D. Reed. (\$200,000)
- 2014-2018 National Parks Service, "Analysis and publication of long-term Channel Islands National Park kelp forest monitoring data." Role: PI. (\$40,000)
- 2013-2016 National Science Foundation, "Adaptive capacity, resilience, and coral reef state shifts in socio-ecological systems." Role: Co-PI with S. Holbrook. (\$465,593)

- 2013-2016 National Parks Service, “Mediterranean Coast Network kelp forest monitoring: protocol review and data synthesis.” Role: PI. (\$34,000)
- 2012-2018 National Science Foundation, “Santa Barbara Coastal Long Term Ecological Research project.” Role: Contributed to writing. PI: D. Reed. (\$4,860,000)
- 2011-2013 Bureau of Ocean Energy Management, “DOI Partnership: Distinguishing between human and natural causes of changes in kelp forests using long-term data from DOI monitoring programs.” Role: Co-wrote proposal; led research. PI: D. Reed. (\$249,927)
- 2010-2011 Walton Family Foundation, “The Peruvian anchoveta fishery: exploring tradeoffs among economic return, sustainable fishing and higher trophic levels.” Role: Co-wrote proposal; led research. PI: C. Costello. (\$124,551)
- 2006-2012 National Science Foundation, “Santa Barbara Coastal Long Term Ecological Research project.” Role: Contributed to writing. PI: D. Reed. (\$4,820,000)
- 2005 Brython Davis Endowment Graduate Fellowship. (stipend support)
- 2005 Worster Foundation Grant in support of research and mentoring. (\$7,500)
- 2004 Lerner Gray Fund for Marine Research. (\$1,000)
- 2001-2002 University of California Regents Fellowship. (stipend support)

Publications

- Submitted* Lamy, T., D.C. Reed, **A. Rassweiler**, D.A. Siegel, L. Kui, T.W. Bell, R. Simons, R.J. Miller. Scale-specific drivers of kelp forest communities (*submitted to Oecologia*)
- 2016 Krumhansl, K.A., D.K. Okamoto, **A. Rassweiler**, M. Novak, et al. (2016). Global patterns of kelp forest change over the past half-century. *Proceedings of the National Academy of Sciences*, 113: 13785-13790. doi: 10.1073/pnas.1606102113.
- Reed, D.C., L. Washburn, **A. Rassweiler**, R.J. Miller, T. Bell, S.L. Harrer (2016). Extreme warming challenges sentinel status of kelp forests as indicators of climate change. *Nature Communications*, 7.
- Leenhardt, P., M. Lauer, R. Madi Moussa, S.J. Holbrook, **A. Rassweiler**, R.J. Schmitt, J. Claudet (2016). Complexities and uncertainties in transitioning small-scale coral reef fisheries. *Frontiers in Marine Science*, 3:70. doi: 10.3389/fmars.2016.00070.
- 2015 Caselle, J.E., **A. Rassweiler**, S.L. Hamilton, R.R. Warner (2015). Recovery trajectories of kelp forest animals are rapid yet spatially variable across a network of temperate marine protected areas. *Scientific Reports*, 5: 14.
- Reed, D., C.A. Carlson, E.R. Halewood, J.C. Nelson, S.L. Harrer, **A. Rassweiler**, R.J. Miller (2015). Patterns and controls of reef-scale production of dissolved organic carbon by giant kelp *Macrocystis pyrifera*. *Limnology and Oceanography*, 60(6): 1996-2008.

- Berriman, J.S., M.C. Kay, D.C. Reed, **A. Rassweiler**, D.A. Goldstein, W.G. Wright. (2015) Shifts in attack behavior of an important kelp forest predator within marine reserves *Marine Ecology Progress Series*, 522: 193-201.
- Reed, D.C., **A. Rassweiler**, R. Miller, H. Page, S.J. Holbrook (2014). The value of a broad temporal and spatial perspective in understanding dynamics of kelp forest ecosystems. *Marine & Freshwater Research*, 67(1): 14-24.
- Ling S.D., R.E. Scheibling, **A. Rassweiler**, C.R. Johnson, N. Shears, et al. (2015) Global phase-shift dynamics of catastrophic sea urchin overgrazing. *Philosophical Transactions of the Royal Society B.*, 370: 20130269.
- 2014 **Rassweiler A**, C. Costello, R. Hilborn, D.A. Siegel. (2014) Integrating scientific guidance into marine spatial planning. *Proceedings of the Royal Society B*, 281: 20132252.
- White, J.W., **A. Rassweiler**, J.F. Samhouri, A.C. Stier, C. White. (2014) Ecologists should not use statistical significance tests to interpret simulation model results. *Oikos*. 123: 385–388.
- 2013 Lester, S.E., C. Costello, **A. Rassweiler**, S. D. Gaines, R. Deacon. (2013) Encourage sustainability by giving credit for MPAs in seafood certification. *PLoS Biology*, doi: 10.1371/journal.pbio.1001730.
- Kushner, D.J., **A. Rassweiler**, J. McLaughlin, K. Lafferty. (2013) A multi-decade time series of kelp forest community structure at the California Channel Islands. *Ecology*, 94: 2655-2655.
- Kenner, M.C., J.A. Estes, M. T Tinker, J.L. Bodkin, R.K. Cowen, C. Harrold, B.B. Hatfield, M. Novak, **A. Rassweiler**, D.C. Reed. (2013) A multi-decade time series of kelp forest community structure at San Nicolas Island, California. *Ecology*, 94: 2654-2654.
- Brzezinski, M.A., D.C. Reed, S. Harrer, **A. Rassweiler**, J.M. Melack, B. Goodridge, J.E. Dugan. (2013) Multiple sources and forms of nitrogen sustain year-round kelp growth on the inner continental shelf of the Santa Barbara Channel. *Oceanography*, 26: 114–123.
- Rodriguez, G.E., **A. Rassweiler**, D.C. Reed, S.J. Holbrook. (2013) The importance of progressive senescence in the biomass dynamics of giant kelp. *Ecology*, 94: 1848–1858.
- 2012 **Rassweiler, A**, C. Costello, D.A. Siegel. (2012) Marine protected areas and the value of spatially optimized fishery management. *Proceedings of the National Academy of Sciences*, 109: 11884-11889.
- White, J.W., A.J. Scholz, **A. Rassweiler**, C. Steinback, L.W. Botsford, S. Kruse, C. Costello, S. Mitarai, D.A. Siegel, P.T. Drake, C.A. Edwards. (2012) A comparison of approaches used for economic analysis in marine protected area network planning in California. *Ocean & Coastal Management*, 74: 77-89.

- 2011 Bestelmeyer, B.T., A.M. Ellison, W.R. Fraser, K.B. Gorman, S.J. Holbrook, C.M. Laney, M.D. Ohman, D.P.C. Peters, F.C. Pillsbury, **A. Rassweiler**, R.J. Schmitt, S. Sharma (2011) Analysis of abrupt transitions in ecological systems. *Ecosphere*, 2: 129.
- Watson, J.R., D.A. Siegel, B.E. Kendall, S. Mitarai, **A. Rassweiler**, S.D. Gaines (2011) Identifying critical regions in small-world marine metapopulations, *Proceedings of the National Academy of Sciences*, 108: E907–E913.
- Rassweiler, A.**, T. Rassweiler (2011) Does rapid scavenging hide non-predation mortality in coral-reef communities? *Marine and Freshwater Research*, 62: 510-515.
- Reed, D.C., **A. Rassweiler**, M.H. Carr, K.C. Cavanaugh, D.P. Malone, D.A. Siegel (2011) Wave disturbance overwhelms top-down and bottom-up control of primary production in California kelp forests. *Ecology*, 92: 2108-2116.
- 2010 Costello, C., **A. Rassweiler**, D. Siegel, G. De Leo, F. Micheli, A. Rosenberg (2010) The value of spatial information in MPA network design. *Proceedings of the National Academy of Sciences*, 107: 18294-18299.
- Rassweiler, A.**, R.J. Schmitt, S.J. Holbrook (2010) Triggers and maintenance of multiple shifts in the state of a natural community. *Oecologia*, 164: 489–498.
- 2009 Reed, D.C., **A. Rassweiler**, K.K. Arkema (2009) Density derived estimates of standing crop and net primary production in the giant kelp *Macrocystis pyrifera*. *Marine Biology*, 156: 2077-2083.
- 2008 **Rassweiler, A.**, K.K. Arkema, D.C. Reed, R.C. Zimmerman, M.A. Brzezinski (2008) Net primary production, growth and standing crop of *Macrocystis pyrifera* in Southern California. *Ecology*, 89: 2068-2068.
- Reed, D.C., **A. Rassweiler**, K.K. Arkema (2008) Biomass rather than growth rate determines variation in net primary production by giant kelp. *Ecology*, 89: 2493-2505.
- 2007 Buenau, K.E., **A. Rassweiler**, R.M. Nisbet (2007) Space competition and regime shifts on structured landscapes. *Ecology*, 88: 3022-3031.
- Harmon, M.E, D.L. Phillips, J.J. Battles, **A. Rassweiler**, R.O. Hall, W.K. Lauenroth (2007) Quantifying uncertainty in net primary production measurements. In: Fahey T.J and Alan K. Knapp, A.K. (editors). Principles and standards for measuring net primary production in long-term ecological studies.
- 2006 White, E.P., P.B. Adler, W.K. Lauenroth, R.A. Gill, D. Greenberg, D.M. Kaufman, **A. Rassweiler**, J.A. Rusak, M.D. Smith, J.R. Steinbeck, R.B. Waide, and J. Yao (2006) A comparison of the species-time relationship across ecosystems and taxonomic groups. *Oikos*, 112: 185-195.
- 2005 Adler, P.B., E.P. White, W.K. Lauenroth, D.M. Kaufman, **A. Rassweiler**, J.A. Rusak (2005) Evidence for a general species-time-area relationship. *Ecology*, 86: 2032-2039.

In prep **Rassweiler, A.**, D.C. Reed, K. Lafferty, J.A. Estes, M. T Tinker, M. Novak, D.A. Okamoto. BACI outperforms alternative statistical designs but has limitations for spatially unreplicated events in natural systems.

Rassweiler, A., C. Costello, R. Oliveros-Ramos, J. Tam, S.E. Lester, F.P. Chavez, M. Ñiquen. Fishery management responses to environmental forecasts: comparing conservative and aggressive strategies.

Rassweiler, A., E. Ojea, C. Costello. Economic effects of Marine Protected Area re-location under climate change.

Teaching

Instructor of Record:

Conservation Biology. *Florida State University (2016)*

Introduction to Ecology. *University of California, Santa Barbara (2013) Co-taught with R. Nisbet*

Teaching Assistant:

Applied Marine Ecology. *University of California, Santa Barbara (2004, 2005, 2006).*

Introduction to Ecology. *University of California, Santa Barbara (2002, 2003, 2004, 2007).*

Aquatic Biology and Policy. *University of California, Santa Barbara (2002).*

Thesis supervision & mentorship

Graduate Student Committees

Abbey Engleman, (committee member) Ph.D. anticipated 2022. Department of Biological Sciences. Florida State University.

Margaret Vogel, (committee member) Ph.D. anticipated 2021. Department of Biological Sciences. Florida State University.

Rebeca Toseland, (committee member) M.S. 2014, Ecology, Evolution and Marine Biology, University of California Santa Barbara.

External Advisor, Bren School Masters Group Thesis Project,

2012-2013, “Fishmeal vs. Food: Evaluating current and alternative management approaches to increase the human consumption of Peruvian anchoveta.”

Mentor for undergraduate honors theses,

Alia Al-Humaidhi, B.S. 2006, University of California, Santa Barbara

Benjamin Doctor, B.S., 2006, University of California, Santa Barbara

Colloquia and invited talks

- 2015 Florida State University, Departmental Seminar.
- 2014 Temple University, Departmental Seminar.
- 2014 Northwest Fisheries Science Center, NOAA, Monster seminar JAM.
- 2013 California State University Long Beach, Departmental Seminar.
- 2013 Bryn Mawr College, Departmental Seminar.
- 2013 Wake Forest University, Departmental Seminar.
- 2011 Scripps Institution of Oceanography, Departmental Seminar.

Conference Presentations

Oral presentations:

- 2016 Western Society of Naturalists Meeting, Monterey, CA.
- 2016 Ecological Society of America Meeting, Fort Lauderdale, FL.
- 2016 Ocean Sciences Meeting, New Orleans, LA.
- 2014 IDEA Workshop on Moorea Social Ecological Systems, Berkeley, CA.
- 2012 California Islands Symposium, Ventura, CA.
- 2012 Ecological Society of America Meeting, Portland, OR.
- 2010 Fisheries Management in an Ecosystem Context: An exchange between the Humboldt Current and the Eastern Bering Sea, Seattle, WA.
- 2010 American Association for the Advancement of Science Meeting, San Diego, CA.
- 2009 Western Society of Naturalists Meeting, Monterey, CA.
- 2007 Ecological Society of America Meeting, San Jose, CA.
- 2007 Long Term Ecological Research network Science Council Meeting, Portland, OR.
- 2006 International Temperate Reef Symposium, Santa Barbara, CA.
- 2005 Western Society of Naturalists Meeting, Monterey, CA.

Poster presentations:

- 2015 Coastal SEES PI meeting, National Science Foundation, Arlington, VA.
- 2012 Long-Term Ecological Research Network All Scientists Meeting, Estes Park, CO.
- 2009 Long-Term Ecological Research Network All Scientists Meeting, Estes Park, CO.
- 2006 Long-Term Ecological Research Network All Scientists Meeting, Estes Park, CO.
- 2004 Toxic Substances Research and Teaching Program Symposium, San Diego, CA.
- 2003 Long-Term Ecological Research Network All Scientists Meeting, Seattle, WA 2003.
- 2003 Toxic Substances Research and Teaching Program Symposium, Oakland, CA.
- 2000 9th International Coral Reef Symposium. Bali, Indonesia

Professional Experience

Consultant: Southern California Edison, 2008. Supervisor: Dr. Daniel C. Reed.

Graduate Student Research Assistant: University of California, Santa Barbara, 2001-2007.

Research Technician: Department of Neurobiology and Behavior, Cornell University, 2001.

Research Technician: Department of Ecology and Evolutionary Biology, Princeton University, 2000.

Service and Synergistic Activities

Manuscript reviewer for:

American Naturalist, Biological Conservation, Conservation Letters, Conservation Biology, Current Biology, Biological Conservation, Ecological Applications, Ecological Monographs, Ecosphere, Global Ecology and Biogeography, Hydrobiologia, ICES Journal of Marine Science, Journal of Applied Ecology, Journal of Theoretical Biology, Marine Biology, Marine Ecology Progress Series, Oikos, Theoretical Population Biology.

Proposal reviewer for:

National Science Foundation (Dimensions of Biodiversity, Science and Technology Centers, LTER, OCE)

Panelist for:

National Science Foundation (LTER, OCE)

Committee and outreach service:

- 2016- Member - Mote Eminent Scholar Committee, FSU
- 2016- Member - Postdoctoral Teaching Scholar Committee, FSU
- 2016- Member - Yerger Lectureship Committee, FSU
- 2013-2015 Science Team Member – Floating Forests citizen science initiative.
<https://www.floatingforests.org/>
- 2009-2010 Technical Advisor - California Marine Life Protection Act Planning Process.
North Coast Round
- 2008-2009 Technical Advisor - California Marine Life Protection Act Planning Process.
South Coast Round
- 2007-2008 Graduate student representative - Santa Barbara Coastal LTER
- 2007-2007 Participant - Ecological Society of America’s “Strategies for Ecology Education,
Diversity and Sustainability” program
- 2006-2008 Member - Diving Control Board, UCSB
- 2006-2007 Graduate representative - Systems Biology Faculty Search Committee, UCSB