

Sarah E. Lester

Associate Professor, Department of Biological Science
 Florida State University, Tallahassee, FL 32306
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EDUCATION**University of California, Santa Barbara**

Ph.D., Department of Ecology, Evolution, and Marine Biology, 2007.

Dissertation: *Marine biogeography: the effect of dispersal ability and reproductive output on marine species' geographic distributions*; Advisor: Dr. Steven D. Gaines.

University of North Carolina at Chapel Hill

Bachelor of Science, School of Public Health, 1998. Major: Environmental Science and Engineering.

ACADEMIC POSITIONS

2022- Associate Professor, *Department of Biological Science*, Florida State University
present

2021- Associate Professor, *Department of Geography*, Florida State University
2022

2016- Assistant Professor, *Department of Geography*, Florida State University
2021

2008- Research and Program Manager, *Sustainable Fisheries Group*, Marine Science Institute /
2015 Bren School of Environmental Science & Management, University of California, Santa Barbara.
 Managed research team, supervised staff, mentored graduate students, wrote research papers and grant proposals, managed donor relations and reporting, led external communications, managed the budget (~ \$1M/year), and led strategic planning.

2011 Researcher, *Ocean Health Index project*, National Center for Ecological Analysis and Synthesis, University of California, Santa Barbara.
 Led development of Livelihoods & Economies subgoal of the Ocean Health Index. oceanhealthindex.org

2007- Project Manager, *California Current Ecosystem-Based Management initiative*,
2008 Communication Partnership for Science and the Sea (COMPASS) and University of California, Santa Cruz.
 Managed initiative to advance the natural and social science required to support comprehensive ecosystem-based management on the US west coast.

2006 Researcher, *Partnership for Interdisciplinary Studies of Coastal Oceans*, University of California, Santa Barbara.

PUBLICATIONS – PEER REVIEWED (Lester mentored * post-doc, ** graduate student)**Under Review**

Guthrie, A.**, N. Barbour, S.E. Cannon, S.E. Marriott, P. Racine, R. Young, A. Bae, S.E Lester, A. Michaelis. Assessing socio-environmental suitability and social license of proposed offshore aquaculture development: a Florida case study. *In revision* at Journal of the World Aquaculture Society.

McHenry, J.***, A. Rassweiler, **S.E. Lester**. Spatial patterns and associations among multiple ecosystem services from seagrass beds. *In revision* at Ecosystem Services.

2023

1. McHenry, J.***, A. Rassweiler, G. Hernan, A.K. Dubel, C. Curtin, J. Barzak, N. Varias, **S.E. Lester**. 2023. Geographic variation organic carbon storage by seagrass beds. *Limnology & Oceanography*. DOI: 10.1002/lno.12343.
2. Burns, E., C. Lopazanski, J. Flower, L. Thomas, D. Bradley, **S.E. Lester**. 2023. Finding harmony in MPA design guidelines. *Conservation Science and Practice*. DOI: 10.1111/csp2.12946.
3. Gentry, R.R.*, A. Rassweiler, **S.E. Lester**. 2023. Global pathways of innovation and spread of marine aquaculture species. *One Earth*. DOI: 10.1016/j.oneear.2022.12.007.

2022

4. Sullivan-Stack, J. et al. (including **S.E. Lester**). 2022. A scientific synthesis of marine protected areas in the United States: status and recommendations. *Frontiers in Marine Science*. DOI: 10.3389/fmars.2022.849927.
5. Ruff, E.O.***, T. McCreary, **S.E. Lester**. 2022. Existing foundations, emerging discourses, and unexplored potential for a maricultural geography. *Geoforum*. DOI: 10.1016/j.geoforum.2022.02.006.
6. Froehlich, H.E., R.R. Gentry*, **S.E. Lester**, M. Rennick, H. Lemoine**, S. Tapia-Lewin, L. Gardner. 2022. Piecing together the data of the US marine aquaculture puzzle. *Journal of Environmental Management*. DOI: 10.1016/j.jenvman.2022.114623.
7. Rassweiler, A., S. Miller, S.J. Holbrook, M. Lauer, M.A. Strother, **S.E. Lester**, T.C. Adam, J. Wencelius, R.J. Schmitt. 2022. How do fisher responses to macroalgal overgrowth influence the resilience of coral reefs? *Limnology & Oceanography*. DOI: 10.1002/lno.11921.
8. **Lester, S.E.**, R.R. Gentry*, H. Lemoine**, H.E. Froehlich, L. Gardner, M. Rennick, E.O. Ruff**, K. Thompson. 2022. Diverse state-level marine aquaculture policy in the United States: opportunities and barriers for industry development. *Reviews in Aquaculture*. DOI: 10.1111/raq.12631.
9. Holbrook, S., J. Wencelius, A. Dubel, T.C. Adam, D.C. Cook, M. Lauer, **S.E. Lester**, S. Miller, A. Rassweiler, R.J. Schmitt. 2022. Spatial co-variation in nutrient enrichment and fishing of herbivores in an oceanic coral reef ecosystem. *Ecological Applications*. DOI: 10.1002/eap.2515.

2021

10. Flower, J., A. Estep, K. James, R. Ramdeen, C.A. Runge, L. Thomas, **S.E. Lester**. 2021. An experimental evaluation of the effect of escape gaps on the quantity, diversity, and size of fish caught in traps in Montserrat. *PLoS One*. DOI: 10.1371/journal.pone.0261119.
11. Grorud-Colvert, K., et al. (including **S.E. Lester**). 2021. The MPA Guide: A framework to achieve global goals for the ocean. *Science*. **373**. DOI: 10.1126/science.abf0861.
12. McHenry, J.***, A. Rassweiler, A.K. Dubel, G. Hernan, C.K. Uejio, S. Pau, **S.E. Lester**. 2021. Modeling the biodiversity enhancement value of seagrass beds. *Diversity and Distributions*. **27**: 2036-2049. DOI: 10.1111/ddi.13379.

13. Froehlich, H.E., R.R. Gentry*, **S.E. Lester**, R.S. Cottrell, G. Fay, T.A. Branch, J.A. Gephart, E.R. White, and J.K. Baum. 2021. Securing a sustainable future for US seafood in the wake of a global crisis. *Marine Policy*. **124**: 104328. DOI: 10.1016/j.marpol.2020.104328.

2020

14. **Lester, S.E.**, A. Rassweiler, S.J. McCoy, M.K. Donovan, A.K. Dubel, M.W. Miller, S.D. Miller, B.I. Ruttenberg, J.F. Samhuri, M.E. Hay. 2020. Caribbean reefs of the Anthropocene: variance in ecosystem metrics indicate bright spots on coral depauperate reefs. *Global Change Biology*. DOI: 10.1111/gcb.15253.
15. Ruff, E.O.***, R.R. Gentry*, **S.E. Lester**. 2020. Understanding the role of socioeconomic and governance conditions in country-level marine aquaculture production. *Environmental Research Letters*. **15**: 1040a8. DOI: 10.1088/1748-9326/abb908.
16. Ojea, E., **S.E. Lester** and D. Salgueiro-Otero. 2020. Adaptation of fishing communities to climate driven shifts in target species. *One Earth*. **2**: 544-556. DOI: 10.1016/j.oneear.2020.05.012.
17. **Lester, S.E.**, A.K. Dubel, G. Hernan, J. McHenry**, A. Rassweiler. 2020. Spatial planning principles for marine ecosystem restoration. *Frontiers in Marine Science*. DOI:10.3389/fmars.2020.00328.
18. Rassweiler, A., A.K. Dubel, G. Hernan, D.J. Kushner, J. Caselle, J.L. Sprague, L. Kui, T. Lamy, **S.E. Lester**, R.J. Miller. 2020. The utility of roving diver fish counts which standardize both time and area simultaneously. *Frontiers in Marine Science*. DOI:10.3389/fmars.2020.00272.
19. Flower, J., R. Ramdeen, A. Estep, L.R. Thomas, S. Francis, G. Goldberg, A. Johnson, W. McClintock, S. Mendes, K. Mengerink, M. O'Garro, L. Rogers, U. Zischka, **S.E. Lester**. 2020. Marine spatial planning on the Caribbean island of Montserrat: lessons for data-limited small islands. *Conservation Science and Practice*. DOI: 10.1111/csp2.158.
20. Rassweiler, A., M. Lauer, **S.E. Lester**, S.J. Holbrook, R.J. Schmitt, R.M. Moussa, K.S. Munsterman, H.S. Lenihan, A.J. Brooks, J. Wencélius, J. Claudet. 2019. Perceptions and responses of Pacific Island fishers to changing coral reefs. *Ambio*. **49**: 130-143.

2019

21. Gentry, R.R.* , S.D. Gaines, J.S. Gabe, **S.E. Lester**. 2019. Looking to aquatic species for conservation farming success. *Conservation Letters*. **12**: e12681.
22. Gentry, R.R.* , E.O. Ruff**, **S.E. Lester**. 2019. Temporal patterns of adoption of mariculture innovation globally. *Nature Sustainability*. **2**: 949-956.
23. McHenry, J.***, H. Welch, **S.E. Lester**, V. Saba. 2019. Projecting marine species range shifts from only temperature can mask climate vulnerability. *Global Change Biology*. **25**: 4208-4221.
24. Ruff, E.O.***, R.R. Gentry*, T. Clavelle, L.R. Thomas, **S.E. Lester**. 2019. Governance and mariculture in the Caribbean. *Marine Policy*. **107**: 103565.
25. Cabral, R.B., B.S. Halpern, **S.E. Lester**, C. White, S.D. Gaines, C. Costello. 2019. Designing MPAs for food security in open-access fisheries. *Scientific Reports*. **9**: 8033.

26. Miller, S., A. Rassweiler, L. Dee, K.M. Kleisner, T. Mangin, R. Oliveros-Ramos, R., J. Tam, F.P. Chavez, M. Ñiquen, **S.E. Lester**, M. Burden, 2019. Optimal harvest responses to environmental forecasts depend on resource knowledge and how it can be used. *Canadian Journal of Fisheries and Aquatic Sciences*. **76**: 1495-1502.
27. Clavelle, T., **S.E. Lester**, R.R. Gentry*, H.E. Froehlich. 2019. Interactions and management for the future of marine aquaculture and capture fisheries. *Fish and Fisheries*. **20**: 368-388.
28. Siegel, K.J.***, R.B. Cabral, J. McHenry**, E. Ojea, B. Owashi, **S.E. Lester**. 2019. Sovereign states in the Caribbean have lower social-ecological vulnerability to coral bleaching than overseas territories. *Proceedings of the Royal Society B*. **286**: 20182365.
29. Lombard, A. T., N.C. Ban, J.L. Smith, S.A. Wood, **S.E. Lester**, K.J. Sink, A.L. Jacob, Z. Kyriazi, R. Tingey, H.E. Sims. 2019. Practical approaches and advances in spatial tools to achieve multi-objective marine spatial planning. *Frontiers in Marine Science*. **6**: 166.
30. Thomas, L.R., T. Clavelle, D.H. Klinger, **S.E. Lester**. 2019. The ecological and economic potential for offshore mariculture in the Caribbean. *Nature Sustainability*. **2**: 62-70.

2018

31. **Lester, S.E.**, R.R. Gentry, C.V. Kappel, C. White, S.D. Gaines. 2018. Opinion: Offshore aquaculture in the United States: untapped potential in need of smart policy. *Proceedings of the National Academy of Sciences, USA*. **115**: 7163-7165.
32. **Lester, S.E.**, J. Stevens, R.R. Gentry, C.V. Kappel, T.W. Bell, C.J. Costello, S.D. Gaines, D.A. Kiefer, C.C. Maue, J.E. Rensel, R.D. Simons, L. Washburn, C. White. 2018. Marine spatial planning makes room for offshore aquaculture in crowded coastal waters. *Nature Communications*. **9**: 945.
33. Stevens, J.***, **S.E. Lester**, C. White. Methods and utility of ecosystem service trade-off analysis for guiding marine planning of offshore energy. *In* Yates, K.L. and Bradshaw, C., editors. 2018. *Offshore Energy and Marine Spatial Planning*. Routledge. Earthscan Oceans Series.

2017

34. **Lester, S.E.**, E.O. Ruff**, K. Mayall, J. McHenry**. 2017. Exploring stakeholder perceptions of marine management in Bermuda. *Marine Policy*. **84**: 235-243.
35. Mascia, M.B., et al. (including **S.E. Lester**). 2017. A novel framework for analyzing conservation impacts: evaluation, theory and marine protected areas. *Annals of the New York Academy of Sciences*. **1399**: 93-115.
36. Gill, D.A., M.B. Mascia, G.N. Ahmadi, L. Glew, **S.E. Lester**....& H.E. Fox. 2017. Capacity shortfalls hinder the performance of marine protected areas globally. *Nature*. **543**: 665-669.
37. Ojea, E., I. Pearlman, S.D. Gaines, **S.E. Lester**. 2017. Fisheries regulatory regimes and resilience to climate change. *Ambio*. **46**: 399-412.
38. **Lester, S.E.**, G. McDonald, M. Clemence, D.T. Dougherty, C.S. Szuwalski. 2017. Impacts of TURFs and marine reserves on fisheries and conservation goals: theory, empirical evidence, and modeling. *Bulletin of Marine Science*. **93**: 173-198.

39. Gentry R**, **S.E. Lester**, C.V. Kappel, C. White, T.W. Bell, J. Stevens, S.D. Gaines. 2017. Offshore aquaculture: spatial planning principles for sustainable development. *Ecology and Evolution*. **7**: 733-743.

2016

40. **Lester, S.E.**, C. White, K. Mayall, R.K. Walter. 2016. Environmental and economic implications of alternative cruise ship pathways in Bermuda. *Ocean & Coastal Management*. **132**: 70-79.
41. Dee, L.E.** S.J. Miller, L.E. Peavey, D. Bradley, R.R. Gentry, R. Startz, S.D. Gaines, **S.E. Lester**. 2016. Functional diversity of catch mitigates negative effects of temperature variability on fisheries yields. *Proceedings of the Royal Society B*. **283**: 20161435.

2015

42. Needles, L.A.** **S.E. Lester**, R. Ambrose, A. Andren, M. Beyeler, M.S. Connor, J.E. Eckman, B.A. Costa-Pierce, S.D. Gaines, K.D. Lafferty, H.S. Lenihan, J. Parrish, M.S. Peterson, A.E. Scaroni, J.S. Weis, D.E. Wendt. 2015. Managing bay and estuarine systems for multiple services. *Estuaries and Coasts*. **38**: 35-48.
43. B. I. Ruttenberg and **S.E. Lester**. Patterns and processes in range size. *In Mora, C.*, editor. 2015. *Ecology and conservation of fishes on coral reefs*. University of Hawaii Press.

2014

44. Afflerbach, J.** **S.E. Lester**, D. T. Dougherty, and S.E. Poon. 2014. A global survey of “TURF-reserves,” Territorial Use Rights Fisheries coupled with no-take marine reserves. *Global Ecology and Conservation*. **2**: 97-106.
45. Grorud-Colvert, K. et al. (including **S.E. Lester**). 2014. Marine protected area networks: Assessing whether the whole is greater than the sum of its parts. *PLOS One*. DOI: 10.1371/journal.pone.0102298.
46. Micheli, F., et al. (including **S.E. Lester**). 2014. A system-wide approach to supporting improvement in seafood production practices and outcomes. *Frontiers in Ecology and the Environment*. **12**: 297-305.
47. Jacobsen, K.** **S.E. Lester**, B.S. Halpern. 2014. A global synthesis of the economic multiplier effects of marine sectors. *Marine Policy*. **44**: 273-278.

2013

48. **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*. **11**: e1001730.
49. **Lester, S.E.**, C. Costello, S.D. Gaines, B.S. Halpern, C. White, J.A. Barth. 2013. Evaluating tradeoffs among ecosystem services to inform marine spatial planning. *Marine Policy*. **38**:80-89.
50. Ovando, D.A., R.T. Deacon, **S.E. Lester**, C. Costello, T. Van Leuvan, C. McIlwain, K. Strauss, M. Arbuckle, R. Fujita, S. Gelcich, H. Uchida. 2013. Conservation incentives and collective choices in cooperative fisheries. *Marine Policy*. **37**: 132-140.

2012

51. Costello, C., D. Ovando, R. Hilborn, S.D. Gaines, O. Deschenes, **S.E. Lester**. 2012. Status and solutions for the world's unassessed fisheries. *Science*. **338**: 517-520.
52. Halpern, B.S., C. Longo, D. Hardy, K. McLeod, J.F. Samhouri, S.K. Katona, K. Kleisner, **S.E. Lester**, et al. 2012. An index to assess the health and benefits of the global ocean. *Nature*. **488**: 615-622.
53. Samhouri, J.F., **S. E. Lester**, E.R. Selig, B.S. Halpern, M.J. Fogarty, C. Longo, K.L. McLeod. 2012. Sea sick? Setting targets to assess ocean health and ecosystem services. *Ecosphere*. **35**: Article 41.
54. Fenberg, P.B.*, J. Caselle, J. Claudet, M. Clemence, S. Gaines, A. Garcia-Charton, E. Goncalves, K. Grorud-Colvert, P. Guidetti, S. Jenkins, P.J.S. Jones, **S.E. Lester**, et al. 2012. The science of European marine reserves: status, efficacy, and future needs. *Marine Policy*. **36**:1012-1021.
55. Fox, H.E., M.B. Mascia, X. Basurto, A. Costa, L.Glew, D. Heinemann, L.B. Karrer, **S.E. Lester**, et al. 2012. Reexamining the science of marine protected areas: linking knowledge to action. *Conservation Letters*. **5**:1-10.
56. Guerry, A.D., et al. (including **S.E. Lester**). 2012. Modeling benefits from nature: using ecosystem services to inform coastal and marine spatial planning. *International Journal of Biodiversity Science, Ecosystem Services & Management*. **8**: 107-121.
57. Halpern, B.S., et. al. (including **S.E. Lester**). 2012. Near-term priorities for the science, policy and practice of Coastal and Marine Spatial Planning (CMSP). *Marine Policy*. **36**: 198-205.
58. Tallis, H., **S.E. Lester**, et al. 2012. New metrics for managing and sustaining the ocean's bounty. *Marine Policy*. **36**:303-306.

2011

59. Grorud-Colvert, K., et al. (including **S.E. Lester**). 2011. The assessment of marine reserve networks: guidelines for ecological evaluation. *In* Claudet, J., editor. 2011. *Marine protected areas: a multidisciplinary approach*. Cambridge University Press: Cambridge, UK.
60. Halpern, B.S., C. White, **S.E. Lester**, C. Costello, and S.D. Gaines. 2011. Using portfolio theory to assess tradeoffs between return from natural capital and social equity across space. *Biological Conservation*. **144**:1499–1507.

2010

61. Costello, C., J. Lynham, **S.E. Lester**, S.D. Gaines. 2010. Economic incentives and global fisheries sustainability. *Annual Reviews in Resource Economics*. **2**:299-318.
62. Gaines, S.D., **S.E. Lester**, K. Grorud-Colvert, C. Costello, R. Pollnac. 2010. Evolving science of marine reserves: New developments and emerging research frontiers. *Proceedings of the National Academy of Sciences, USA*. **107**:18251-18255.
63. Grorud-Colvert, K., **S.E. Lester**, S. Airamé, E. Neeley, S.D. Gaines. 2010. Communicating marine reserve science to diverse audiences. *Proceedings of the National Academy of Science, USA*. **107**:18306–18311.

64. Halpern, B.S., **S.E. Lester**, K.L. McLeod. 2010. Placing marine protected areas onto the ecosystem-based management seascape. *Proceedings of the National Academy of Science, USA*. **107**:18312-18317.
65. Halpern, B.S., **S.E. Lester**, J. Kellner. 2010. Spillover from marine reserves and the replenishment of fished stocks. *Environmental Conservation*. **36**:268-276.
66. **Lester, S.E.**, K.L. McLeod, H. Tallis, M. Ruckelshaus, B.S. Halpern, P.S. Levin, F. Chavez, C. Pomeroy, B.J. McCay, C. Costello, S.D. Gaines, A.J. Mace, J.A. Barth, D.L. Fluharty, J.K. Parrish. 2010. Science in support of ecosystem-based management for the US West Coast and beyond. *Biological Conservation*. **143**: 576-587.
67. Tallis, H., P.S. Levin, M. Ruckelshaus, **S.E. Lester**, K.L. McLeod, D.L. Fluharty, B.S. Halpern. 2010. The many faces of ecosystem-based management: making the process work today in real places. *Marine Policy*. **34**: 340-348.

2009

68. Stewart, G.B., M.J. Kaiser, I.M. Côté, B.S. Halpern, **S.E. Lester**, H.R. Bayliss, A.S. Pullin. 2009. Temperate marine reserves: global ecological effects and guidelines for future networks. *Conservation Letters*. **2**: 243-253.
69. Gaines, S. D., **S.E. Lester**, G.L. Eckert, B.P. Kinlan, R.D. Sagarin, B. Gaylord. Dispersal and geographic ranges in the sea. *In* Witman, J. and K. Roy, editors. 2009. *Marine macroecology*. University of Chicago Press.
70. **Lester, S.E.**, B.S. Halpern, K. Grorud-Colvert, J. Lubchenco, B.I. Ruttenberg, S.D. Gaines, S. Airamé, R.R. Warner. 2009. Biological effects within no-take marine reserves: a global synthesis. *Marine Ecology Progress Series*. **384**: 33-46.

2008

71. **Lester, S.E.** and B.S. Halpern. 2008. Biological responses in marine no-take reserves versus partially protected areas. *Marine Ecology Progress Series*. **367**: 49-56.

2007

72. **Lester, S.E.**, S.D. Gaines, B.P. Kinlan. 2007. Reproduction on the edge: large-scale patterns of individual performance in a marine invertebrate. *Ecology*. **88**: 2229-2239.
73. **Lester, S. E.**, B.I. Ruttenberg, S.D. Gaines, B.P. Kinlan. 2007. The relationship between dispersal ability and geographic range size. *Ecology Letters*. **10**:745-758.
74. **Lester, S.E.**, E. Tobin, M.D. Behrens. 2007. Disease dynamics and the potential role of thermal stress in the sea urchin, *Strongylocentrotus purpuratus*. *Canadian Journal of Fisheries and Aquatic Sciences*. **64**: 314-323.
75. O'Connor, M.I., J.F. Bruno, S.D. Gaines, B.S. Halpern, **S.E. Lester**, B.P. Kinlan, J.M. Weiss. 2007. Temperature control of larval dispersal: implications for marine ecology, evolution and conservation. *Proceedings of the National Academy of Science, USA*. **104**:1266-1271.

2006

76. Lowry, D.E. and **S.E. Lester**. 2006. The biogeography of plant reproduction: potential determinants of species' range sizes. *Journal of Biogeography*. **33**: 1975-1982.

2005

77. **Lester, S.E.** and B.I. Ruttenberg. 2005. The relationship between pelagic larval duration and range size in tropical reef fishes: a synthetic analysis. *Proceedings of the Royal Society of London Series B - Biological Sciences*. **272**: 585-591.
78. Kinlan, B.P, S.D. Gaines, **S.E. Lester**. 2005. Propagule dispersal and the scales of marine community process. *Diversity & Distributions*. **11**: 39-148.

2004

79. Kubanek, J., **S.E. Lester**, W.H. Fenical, M.E. Hay. 2004. Ambiguous role of phlorotannins as chemical defenses in the brown alga *Fucus vesiculosus*. *Marine Ecology Progress Series*. **277**: 79-93.

PUBLICATIONS – OTHER

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1. Lorenzen, K., C. Ainsworth, S. Baker, L.R. Barbieri, E. Camp, J. R. Dotson, **S.E. Lester**. 2017. Climate change impacts on Florida's fisheries and aquaculture sectors and options for adaptation. Pages 427-455 *In* E. P. Chassignet, J.W. Jones, V. Misra, and J. Obeysekera, editors. Florida's climate: changes, variations, and impacts. Florida Climate Institute.
 2. **Lester, S.E.** and K. Grorud-Colvert. 2012. Parks and Preserves – Marine. *In* Fredericks, S., L. Shen, S. Thompson and D. Vasey, editors. *The Berkshire Encyclopedia of Sustainability: Vol. 4. Natural Resources and Sustainability*. Berkshire Publishing.
 3. Grorud-Colvert, K. and **S.E. Lester**. 2012. Marine Protected Areas (MPAs). *In* Kundis Craig, R., B. Pardy, J. Copeland Nagle, O. Schmitz and W. Smith, editors. *The Berkshire Encyclopedia of Sustainability: Vol. 5. Ecosystem Management and Sustainability*. Berkshire Publishing.

GRANTS**Current**

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- 2023 Lenfest Ocean Program, Pew Charitable Trust:** “Increasing resilience to climate change and adaptive capacity of Bonaire National Marine Park,” 2023-2025, lead PI (\$393K to FSU, including funds for a subaward to STINAPA Bonaire)
- 2023 Waitt Foundation:** “Sustainable Ocean Solutions” - Renewal, 2023, Co-PI (\$750K to UCSB; \$64K as subaward to FSU as sole PI)
- 2022 Florida Sea Grant:** “Understanding Stakeholder Perceptions of Offshore Aquaculture and the Velella Epsilon Project in the Gulf of Mexico,” 2022-2023, Aquaculture Outreach & Communications Graduate Fellowship supporting PhD Candidate Hayley Lemoine, Co-PI (\$50K)
- 2022 Builders Initiative:** “Develop a living database for state-level US marine aquaculture policy,” 2022-2024, Co-PI (\$350K to University of Mississippi; \$217K as subaward to FSU as sole PI)

2022 Moore Charitable Foundation / Islas Secas Foundation: Gift to Lester Lab for Panama-related marine science research, 2022-, PI (\$19K)

Previous

2017 National Science Foundation – Dynamics of Coupled Natural-Human Systems: “Multiscale dynamics of coral reef fisheries: feedbacks between fishing practices, livelihood strategies, and shifting dominance of coral and algae,” 2017-2023, Senior Personnel/Co-PI on subaward (\$1.6M to UCSB; \$581K to FSU)

2021 Florida State University Council on Research & Creativity – Planning Grant: “Social dimensions of transitions between fishing and farming shellfish in the United States,” 2021-2022, sole PI (\$25K)

2018 National Science Foundation – Geography and Spatial Sciences: “A multidisciplinary analysis of the spatial patterns of marine aquaculture development,” 2018-2022, sole PI (\$377K)

2018 National Academies of Sciences, Engineering and Medicine – Gulf Research Program: “Developing an integrated monitoring and assessment framework for evaluating ecosystem service outcomes from seagrass restoration in the Gulf of Mexico,” 2018-2022, lead PI (\$366K)

2019 NOAA National Sea Grant: “Assessing policy barriers for mariculture in the United States while accounting for fisheries context,” 2019-2021, Co-PI (\$199K to UCSB; \$68K as subaward to FSU as sole PI)

2022 Waitt Foundation: “Sustainable Ocean Solutions” - Renewal, 2022, Co-PI (\$786K to UCSB; \$63K as subaward to FSU as sole PI)

2021 Waitt Foundation: “Sustainable Ocean Solutions” - Renewal, 2021, Co-PI (\$652K to UCSB; \$71K as subaward to FSU as sole PI)

2020 Waitt Foundation: “Sustainable Ocean Solutions” - Renewal, Co-PI (\$675K to UCSB; \$79K as subaward to FSU as sole PI)

2019 Waitt Foundation: “Sustainable Ocean Solutions” - Renewal, Co-PI (\$600K to UCSB; \$75K as subaward to FSU as sole PI)

2018 Waitt Foundation: “Sustainable Ocean Solutions” - Renewal, Co-PI (\$500K to UCSB; \$61K as subaward to FSU as sole PI)

2017 Waitt Foundation: “Sustainable Ocean Solutions” - Renewal, Co-PI (\$500K to UCSB; \$61K as subaward to FSU as sole PI)

2016 Waitt Foundation: “Sustainable Ocean Solutions” - Renewal, Co-PI (\$600K to UCSB; \$56K as subaward to FSU as sole PI)

2015 Waitt Foundation: “Sustainable Ocean Solutions” - Renewal, Co-PI (\$550K).

2014 Waitt Foundation (Subaward via Rare): “Fish Forever,” PI (\$100K).

2014 Waitt Foundation: “Sustainable Ocean Solutions” - Renewal, Co-PI (\$600K).

- 2014 Bloomberg Philanthropies (Subaward via Rare):** “Fish Forever support in Brazil and Philippines,” 2014-2015, PI (\$250K).
- 2013 John D. and Catherine T. MacArthur Foundation (Subaward via Rare):** “Fish Forever: hope for the world’s oceans and those that depend on them,” 2013-2015, PI (\$83K).
- 2013 Waitt Foundation (Subaward via Rare):** “Fish Forever: launching pilot sites in Belize, Philippines, and Indonesia,” Co-PI (\$75K).
- 2013 Waitt Foundation:** “Sustainable Ocean Solutions” - Renewal, Co-PI (\$500K).
- 2012 NOAA Sea Grant:** “Maximizing the value of offshore aquaculture development in the context of multiple ocean uses,” 2012-2014, PI (\$486K; administered through California Sea Grant Project # R/AQ-134)
- 2012 Waitt Foundation:** “Sustainable Ocean Solutions” - Renewal, Co-PI (\$500K).
- 2011 Waitt Foundation:** “Sustainable Ocean Solutions” Co-PI (\$400K).
- 2010 NOAA Sea Grant:** “Working group to identify critical new research directions in marine and coastal ecosystem science research,” 2010-2011, Co-PI (\$50K).

FELLOWSHIPS & AWARDS

NOAA Dr. Nancy Foster Scholarship: 2004 – 2007, graduate fellowship.

Fiona Goodchild Award for Excellence as a Graduate Student Mentor of Undergraduate Research: 2006, University of California, Santa Barbara.

National Science Foundation Graduate Research Fellowship: 2000 – 2003, graduate fellowship.

Environmental Protection Agency STAR Fellowship: 2000 (declined to accept NSF fellowship).

INVITED TALKS (selected)

1. *Spatial variation in marine ecosystems: informing restoration, conservation and aquaculture development.* Florida State University, Department of Biological Science. 2022.
2. *Spatial variation in marine ecosystems: informing restoration, conservation and aquaculture development.* Georgia Institute of Technology, School of Biological Sciences. 2022.
3. *Blue revolution: patterns and drivers of marine aquaculture expansion and the role of spatial planning.* Stanford University, Hopkins Marine Station. 2021.
4. *Blue revolution: patterns and drivers of marine aquaculture expansion and the role of spatial planning.* University of California Davis, Department of Environmental Science & Policy. 2021.
5. *Marine protected areas: an effective tool for ocean conservation?* University of Miami, Abess Center for Ecosystem Science & Policy. 2020.

6. *Offshore aquaculture: spatial dynamics and planning for the 'blue revolution'*. University of Florida, School of Forest Resources and Conservation. 2018.
7. *Solving a sea of problems: biogeography and spatial management approaches*. Duke University Marine Laboratory, Nicholas School of the Environment. 2017.

CONFERENCE PRESENTATIONS – PRESENTING AUTHOR (selected)

1. *Caribbean reefs of the Anthropocene: variance in ecosystem metrics indicates bright spots on low-coral reefs*. Presentation at the Benthic Ecology Meeting, Miami, FL. 2023.
2. *Diverse state-level marine aquaculture policy in the United States: opportunities and barriers for industry development*. Presentation at Annual Meeting of the American Association of Geographers, Virtual meeting. 2022. Co-chaired session.
3. *Sustainable seafood and sustainable seas? Global patterns of mariculture, fisheries, and marine conservation*. Refereed presentation at Ocean Sciences Meeting, AGU, ASLO, and TOS, San Diego, CA. 2020. Co-chaired session.
4. *Caribbean reefs of the Anthropocene: ecosystem service variability and bright spots among low coral reefs*. Keynote presentation at OceanVisions2019: Climate Summit, Georgia Institute of Technology, Atlanta, GA. 2019. <http://oceanvisions.org/oceanvisions19>
5. *Variation in social-ecological vulnerability to climate change-induced coral bleaching across the Caribbean*. Presentation at Annual Meeting of the American Association of Geographers, New Orleans, LA. 2018. Co-chaired session.
6. *Marine spatial planning makes room for offshore aquaculture in crowded coastal waters*. Presentation at the meeting of Western Society of Naturalists, Monterey, CA. 2016.
7. *Marine spatial planning makes room for offshore aquaculture in crowded coastal waters*. Invited presentation at International Marine Conservation Congress, Society of Conservation Biology, St. John's, Canada. 2016.

PRESENTATIONS AND LECTURES – OUTREACH (selected)

1. *First look at results of a study on marine aquaculture data and policy to support sustainable development in the U.S.* Aquarium of the Pacific, Seafood for the Future program. Webinar presenting results from Sea Grant funded research. 2021.
2. *Exploring Sustainable Seafood Virtual Lecture Series: Location, location, location! Can location choices prevent seafood farming catastrophes?* Aquarium of the Pacific, Seafood for the Future program. Expert panel discussion. <https://youtu.be/odWJLVCG53Y>. 2020.
3. *The Blue Revolution: Marine Aquaculture and the Future of Sustainable Food Systems*. FSU College of Social Science & Public Policy - Policy Pub Series. Informal public talk. 2020.

4. *Science in Action: Exploring the Future of U.S. Aquaculture*. Communication Partnership for Science and the Sea (COMPASS). Invited participant and gave presentation, 'Siting marine aquaculture,' to U.S. Congressional and Executive branch staff. 2019.
5. *Marine Protected Areas: An Effective Tool for Ocean Conservation?* FSU Coastal and Marine Laboratory. Public lecture. 2018.
6. *US Offshore Aquaculture: Will We Fish or Cut Bait?* Consortium for Ocean Leadership (COL). Invited panelist at industry and policy forum. 2018.

TEACHING

Instructor, Florida State University, Department of Geography, 2016 – 2022

Courses:

- Marine Conservation: Science, Management and Policy (undergraduate/graduate)
- Environmental Science (undergraduate)
- Biogeography (undergraduate/graduate)
- Professional Development for Careers as Geographers (PhD)

Instructor, University of California, Santa Barbara, Bren School of Environmental Science & Management, Fall 2011 and Winter 2012

Course: Biodiversity in Forest and Ocean Ecosystems – Participating seminar in NSF sponsored Dimensions of Biodiversity Distributed Graduate Seminar

Teaching Assistant, University of California, Santa Barbara, Department of Ecology, Evolution & Marine Biology, Fall 2001, 2002 and 2003; Course: Ecology

MENTORING

Postdoctoral scholar supervisor

- Betsy Mansfield, Coastal and Marine Laboratory, Florida State University. 2022 - ongoing (co-supervising with Andrew Rassweiler and Sandra Brooke).
- Elizabeth Ruff, Department of Geography, Florida State University. 2022 - ongoing.
- Caroline Ferguson, Marine Science Institute, University of California Santa Barbara. 2021-2022 (co-supervised with Darcy Bradley, UCSB).
- Rebecca Gentry, Department of Geography, Florida State University. 2018-2022.

Primary graduate advisor

- Tyler Lynn (MS), Department of Geography, Florida State University. Graduated: 2019.
- Elizabeth Ruff (PhD), Department of Geography, Florida State University. Graduated: 2022.
- Jennifer McHenry (PhD), Department of Geography, Florida State University. Graduated: 2022.
- Hayley Lemoine (PhD candidate), Department of Geography, Florida State University.
- Jenny Bueno (PhD candidate, co-advised), Department of Geography, Florida State University.
- Laurel Field (PhD student), Department of Biological Science, Florida State University.
- Lillian Bradshaw (PhD student), Department of Biological Science, Florida State University.

Graduate committee member

- Jessica Dehn (MS student), Department of Biological Science, Florida State University

- Ian Silver-Gorges (PhD candidate), Department of Earth, Ocean and Atmospheric Sciences, Florida State University
- Amy Holt (PhD student), Department of Earth, Ocean and Atmospheric Sciences, Florida State University
- Luis Aguirre-Lopez (PhD student), Department of Geography, Florida State University
- Shaifali Prajapati (MS student), Department of Geography, Florida State University
- Alexandra Dubel (PhD candidate), Department of Biological Science, Florida State University
- Allison Blanchette (PhD candidate), Department of Biological Science, Florida State University
- Zachary Law (MS), Department of Geography, Florida State University. Graduated: 2022.
- Caitlin Jones (PhD candidate), Department of Geography, Florida State University
- Adam Alfasso (PhD student), Department of Earth, Ocean and Atmospheric Sciences, Florida State University
- Nicole Zampieri (PhD), Department of Geography, Florida State University. Graduated: 2022.
- Zoe Schroder (PhD), Department of Geography, Florida State University. Graduated: 2021.
- Frank Schmitz (PhD), Department of Geography, Florida State University. Graduated: 2021.
- Scott Miller (PhD), Department of Biological Science, Florida State University. Graduated: 2023.
- Kristen Sella (PhD), Department of Earth, Ocean and Atmospheric Sciences, Florida State University. Graduated: 2023.
- Rebecca Gentry (PhD), Bren School of Environmental Science & Management, University of California, Santa Barbara. Graduated: 2017.
- Joel Stevens (MS), Biological Science Department, California Polytechnic State University. Graduated: 2016.

Primary advisor for undergraduate thesis projects

- Elizabeth Grunder, honors thesis, “Analysis of proposed seagrass restoration projects along Florida’s Gulf Coast,” 2018-2019. Florida State University.
- Christina Tanner, honors thesis, “Spatial variation of benthic microalgae on rocky shores of South Africa,” 2005-2006. University of California, Santa Barbara
- Elizabeth Tobin, honors thesis, “Temperature change and the effects on disease dynamics in the sea urchin, *Strongylocentrotus purpuratus*,” 2004-2005. University of California, Santa Barbara

Undergraduate honors thesis committee member

- Ashley Hennessey, Department of Biological Science, Florida State University. 2022.
- Nicole Heim, Department of Biological Science, Florida State University. 2021.
- Alyssa Turner, Department of Biological Science, Florida State University. 2020.
- Emily Dailey, Department of Earth, Ocean & Atmospheric Sciences, Florida State University. 2018.

Faculty Co-Lead, FSU College of Social Science & Public Policy Women Graduate Student Network, 2018 - 2022. Support professional development of women graduate students in the college.

External Project Advisor, UCSB Bren School of Environmental Science & Management - Masters Group Thesis Projects

- *Offshore Wind Energy in the Context of Multiple Ocean Uses on the Bermuda Platform* (2014)
- *Ridge to Reef: Land Use Changes, Sedimentation, and Marine Resource Vulnerability in Raja Ampat, Indonesia* (2013)
- *Sustainability Trajectories to Reform the Coral Reef Wildlife Trade* (2012)
- *Bioeconomics of Aquaculture in Southern Chile: A Social Cost-Benefit Analysis of Natural Resource Use Options* (2012)

- *Spatial Planning and Bioeconomic Analysis for Offshore Shrimp Aquaculture in Northwestern Mexico* (2011)
- *Integrating Tribal Resource Use in California's Marine Life Protection Act Initiative* (2011)

Graduate Student Fellows Group Co-Mentor, 2008 – 2009, UCSB Luce Fellows, “Rebuilding Fisheries Working Group”, UCSB and National Center for Ecological Analysis & Synthesis

Co-Chair of Women in Science & Engineering (WiSE) undergraduate mentoring program 2002-2007, University of California, Santa Barbara.

SERVICE – FLORIDA STATE UNIVERSITY

- Faculty Senate Sustainability Committee, Co-Chair (2021); Chair (2022–2023)
- Biological Science Department, Faculty Evaluation Committee, Member (2023)
- Biological Science Department Faculty Search Committee (Quantitative Genomics), Member (2022-2023)
- Biological Science Department Diversity, Equity and Inclusion Committee, Member (2022–)
- College of Social Science & Public Policy, Diversity, Equity and Inclusion Task Force, Member (2022)
- College of Social Science & Public Policy, Women’s Network, Co-Chair (2021–2022)
- Faculty Senate, Member (2020–2022)
- FSU Diving Control Board, Voting Member (2018–2022)
- Geography Department Diversity, Equity and Inclusion Committee, Chair (2019–2022)
- Geography Department Curriculum Committee, Member (2019–2020)
- Geography Department Graduate Program Committee, Member (2018–2021)
- Geography Department Faculty Search Committee (Environmental GIS), Member (2019)
- Geography Department Colloquium Organizer (2016)
- FSU Coastal and Marine Laboratory Internal Advisory Board, Member (2018–2020)
- FSU Coastal and Marine Laboratory Director Search Committee Member (2019–2020)
- FSU Coastal and Marine Laboratory Research Faculty Search Committee Member (2016; 2021)

SERVICE – TO THE DISCIPLINE (since 2016)

Reviewer for refereed journals

Annals of American Association of Geographers	Marine Ecology Progress Series
Biological Conservation	Marine Policy
Bioscience	Marine Resource Economics
Bulletin of Marine Science	Nature Communications
Conservation Biology	Nature Ecology and Evolution
Conservation Letters	Ocean and Coastal Management
Ecology & Society	One Earth
Estuaries and Coasts	PLoS Biology
Fish and Fisheries	PLoS One
Frontiers in Ecology and the Environment	People and Nature
GeoHealth	Proceedings of the National Academy of Sciences
Global Change Biology	Science
Journal of Animal Ecology	Science Advances

Reviewer for grant applications

- Hawaii Sea Grant, ad-hoc reviewer (2023)
- National Science Foundation, ad-hoc reviewer
 - CAREER proposal - Biological Oceanography, GEO/OCE (2021)
 - Decision, Risk & Management Science program, BSE (2019)
 - Accelerating Research through International Network-to-Network Collaborations (AccelNet) NSF-wide competition (2019)
- National Academies of Science, Engineering and Medicine - Gulf Research Program Early Career Fellowship competition (2018; 2021)
- National Center for Atmospheric Research - Early Career Faculty Innovator Program (2019)
- Harbor Branch Oceanographic Institute Foundation - Specialty License Plate Fund competition (2017–2022)
- National Geographic Society (2017)

WORKING GROUPS & ADVISORY COMMITTEES

Interdisciplinary Assessment of Oregon's Marine Reserves Program, Associate Investigator. Oregon State University (PI: Will White). 2021-2023. Assessment of marine reserves process and outcomes in Oregon for the Oregon Department of Fisheries and Wildlife.

Blue Parks, Science Council member. Marine Conservation Institute. 2017-ongoing. Initiative to incentivize the creation of strongly protected marine protected areas through a nomination and award process. Science council reviews nomination cases and advises on award designation. Blueparks.org

Bermuda Ocean Prosperity Programme (BOPP), Science Committee member. 2019-ongoing. Convened by the Government of Bermuda, Bermuda Institute of Ocean Sciences, and the Waitt Institute to provide scientific guidance for an ocean plan to protect 90,000 km² of Bermuda's waters.

MPA Guide Scientific Working Group, United Nations Environment Programme, International Union for the Conservation of Nature, Oregon State University, National Geographic Society. 2018-2021.

National Socio-Environmental Synthesis Center (SESYNC) working group, *Solving the mystery of marine protected area (MPA) performance: linking governance, conservation, ecosystem services, and human well-being* (PIs: Drs. H. Fox and R. Pomeroy), Invited participant. 2013-2015.

National Center for Ecological Analysis & Synthesis (NCEAS) working group, *A framework to assess ecosystem health in support of ecosystem-based management of coastal-marine systems (EBM)* (PIs: Drs. K. McLeod, L. Crowder, M. Fogarty, and A. Rosenberg), Invited participant. 2011-2012.

National Academies Keck Futures Initiative (NAKFI) conference, *Ecosystem services: Charting a path to sustainability*, Invited participant (competitive application process). November 2011.

Marine Natural Capital Project, Stanford University, Technical Working Group member, 2009-2011.

SYNERGISTIC ACTIVITIES

Collaborator and scientific advisor to the Blue Prosperity Coalition (2019-ongoing), a coalition of NGOs, academic institutions, and foundations that partners with governments to create marine protected areas, develop marine spatial plans, and build sustainable blue economies. Contributions include overseeing monitoring and assessment of fisheries and providing scientific guidance on fisheries regulations, ocean zoning policies, and marine conservation planning. <https://www.blueprosperity.org/>

National Science Foundation 2026 Idea Machine Competition (2019), a NSF competition to set the future U.S. scientific research agenda. Submitted entry, Designing Ecosystems for the Future (co-authors: A. Rassweiler and A.K. Dubel). Finalists submitted creative video pitches, and ours was ranked in the top 14 out of 800 entries. www.nsf.gov/news/special_reports/nsf2026ideamachine/

Management Committee member for the Fish Forever partnership (2013-2014), a partnership between Rare, Environmental Defense Fund, and the Sustainable Fisheries Group at UCSB to help local communities in Indonesia, the Philippines, Brazil, Belize and Mozambique establish spatial property right for their fisheries, or TURFs, coupled with no-take reserves. <http://www.fishforever.org/>

Contributing author and project advisor for educational booklet, *The Science of Marine Reserves*, including editions focused on marine reserves worldwide (2007), in the United States (2007), Latin America and the Caribbean (2008), and Europe (2011). Published by PISCO. <http://www.piscoweb.org/publications/outreach-materials/science-of-marine-reserves>