1. Jon D. Witman 2023

Professor of Biology

Department of Ecology and Evolutionary Biology

Brown University

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2. Home Address:

9 University Avenue, Providence, RI 02906

3. Education:

1970-1972 Franklin and Marshall College, Lancaster, PA

1973-1974 University of Otago, New Zealand (Independent study, Geology) thesis: Sedimentological and ecological studies of Blueskin Bay Estuary

1977 B.A., University of New Hampshire, Durham (Zoology)

1982 M.S. University of New Hampshire, Durham (Zoology) thesis: *Disturbance and contrasting patterns of population structure in the brachiopod Terebratulina septentrionalis from two subtidal habitats*

1984 Ph.D, University of New Hampshire, Durham (Zoology) thesis: Ecology of rocky subtidal communities: the role of Modiolus modiolus (L) and the influence of disturbance, competition and mutualism.

4. Professional Appointments:

1985 Instructor, Semester Program in Tropical Ecology, School for Field Studies

1986 - 1992 Assistant Professor of Marine Biology, Northeastern University

1992 - 1993 Visiting Scientist, Department of Marine Science, University of Otago, New Zealand

1992 - 1994 Associate Professor of Biology, Northeastern University

1994 - 2007 Associate Professor of Biology, Department of Ecology and Evolutionary Biology, Brown University

1998 - 2002 Editorial Board, Ecology and Ecological Monographs

2004 – 2014 - Associate Scientist (Brown/MBL Partnership), Marine Biological Laboratory, Woods Hole

2007 – present- Professor of Biology, Department of Ecology and Evolutionary Biology, Brown University

2008- present - Collaborating Scientist, Charles Darwin Foundation, Galapagos Islands

2022- present - Editorial Board, Marine Ecology

2022 – present- member, Institute at Brown for Environment and Society (IBES), Brown University

5. Completed Publications

a. Books/Monographs

Witman, J.D, and K. Roy. 2009 Eds. *Marine Macroecology*. University of Chicago Press (edited volume). 448 pages

Coyer, J., D. Steller and J. Witman. 2011. The Underwater Catalog: a guide to methods in underwater research. 3nd Edition Shoals Marine Laboratory, Cornell Univ., Ithaca, NY

b. Chapters in Books:

1. Suchanek, T.H., R. Carpenter, J.D Witman, C. D. Harvell. 1983. Sponges as important space competitors in deep Caribbean coral reef communities. *NOAA Symposium Series for Undersea Research Reports: Coral Reefs* V1: 55 – 67

- 2. Witman, J. D. and K. P. Sebens. 1988. Benthic community structure at a subtidal rock pinnacle in the central Gulf of Maine. In. I. Babb and M. De Luca Eds *Benthic Productivity and Marine Resources of the Gulf of Maine.* National Undersea Research Program Research Report 88-3: 67-104.
- 3. Sebens, K.P., J.D. Witman, R. Allmon, and E.J. Maney. 1988. Early community development experiments in rocky subtidal habitats (Gulf of Maine, 30 80 m). In. I. Babb and M. De Luca Eds *Benthic Productivity and Marine Resources of the Gulf of Maine*. National Undersea Research Program Research Report 88-3: 45 66.
- 4. Witman, J. D. and K. P. Sebens. 1990. Distribution and ecology of sponges at a subtidal rock ledge in the central Gulf of Maine. Pp. 391-396. In K. Rutzler, Ed, *New Perspectives in Sponge Biology*. Smithsonian Institution Press, Washington, D.C.
- 5. Maney, E.J., Ayers, J., Sebens, K.P., Witman, J.D., 1990. Quantitative techniques for underwater video photography. In: Jaap, W.C. (Ed.), Diving for Science. Proceeding of the Tenth Annual Scientific Diving Symposium. Oct 4–7. American Academy of Underwater Science, Costa Mesa, CA, pp. 255 265.
- 6. Witman, J.D., 1996. Dynamics of Gulf of Maine benthic communities. Pp 51-69 in, D. and E. Braasch Eds. *The health of the Gulf of Maine ecosystem: cumulative impacts of multiple stressors*. RARGOM Report 96-1. Dartmouth College, Hanover, NH.
- 7. Witman, J.D. 1998. Natural disturbance and colonization on subtidal hard substrates in the Gulf of Maine. Pp. 30-37 in. E. M. Dorsey and J. Pederson Eds. *Effects of fishing gear on the sea floor of New England*. MIT Sea Grant Publication 98-4.
- 8. Witman, J.D and P.K. Dayton. 2001 Rocky subtidal communities. Pp 339-366 in Bertness, M.D., S.D. Gaines and M. Hay Eds. *Marine Community Ecology*. Sinauer Press
- 9. Bustamente, R.H., G.M. Wellington, G.M. Branch, G.J. Edgar, P. Martinez, F. Rivera, F. Smith and J.D. Witman 2002. Outstanding marine features of the Galapagos Archipelago. Pp. 60-71 In *A Biodiversity vision for the Galapagos Islands*. Charles Darwin Foundation and World Wildlife Fund, Puerto Ayora, Galapagos.
- 10. Branch, G.M., J.D. Witman, R. Bensted-Smith, R.H. Bustamante, G.M. Wellington, F. Smith and G. Edgar. 2002 Conservation Criteria For The Marine Biome, Pp. 72-79 In *A Biodiversity vision for the Galapagos Islands*. Charles Darwin Foundation and World Wildlife Fund, Puerto Ayora, Galapagos.
- 11. Bensted-Smith, R., T. Allnut, G.M. Branch, R.H. Bustamante, C. Causton, E. Dinerstein, G. Powell, H. Snell, A. Tye, G.M. Wellington and J.D. Witman. 2002. Summary of the Vision For Conservation of Galapagos Biodiversity and the Issues Central to Its Achievement, Pp. 107-115. In *A Biodiversity vision for the Galapagos Islands*. Charles Darwin Foundation and World Wildlife Fund, Puerto Ayora, Galapagos.
- 12. Witman, J.D., M.R. Patterson and S.J. Genovese. 2004 Benthic pelagic linkages in subtidal communities: influence of food subsidy by internal waves. Pp 133-153 in Polis, G.A., M.E. Power and G.R. Huxel Ed. *Food webs at the landscape level*. University of Chicago Press.
- 13. Witman, J.D., J.C. Ellis and W.B. Anderson. 2004 The influence of physical processes, organisms and permeability on cross-ecosystem fluxes. Pp 335-349 in Polis, G.A., M.E. Power and G.R. Huxel Eds. *Food webs at the landscape level*. University of Chicago Press.
- 14. Witman, J.D. 2007 Benthic pelagic coupling. Pp 68-71. In: Encyclopedia of tidepools and

- rocky shores M.W. Denny and S.D. Gaines (eds.) University of California Press, Berkeley, CA
- 15. Witman, J.D. and K. Roy 2009.Introduction. Chapter 1 in *Marine Macroecology*. University of Chicago Press. Pp. vii xv. J.D. Witman and K. Roy editors
- 16. Roy, K.R. and J.D. Witman 2009. Species diversity of shallow marine invertebrates: patterns, processes and prospects. Chapter 4 in *Marine Macroecology* Pp. 101-121. University of Chicago Press. J.D. Witman and K. Roy editors
- 17. Leichter, J.J. and J.D. Witman.2009 Basin-scale oceanographic influences on marine macroecological patterns. Chapter 8 in *Marine Macroecology*. Pp. 203-226. University of Chicago Press. J.D. Witman and K. Roy editors
- 18. Witman, J. D. and K. R. Roy 2009. Experimental marine macroecology. Chapter 13 in *Marine Macroecology*. University of Chicago Press. Pp. 341-356 J.D. Witman and K. Roy editors
- 19. Kotta, J. and J.D. Witman 2009. Regional scale patterns Pp 89-99. In: *Hard Bottom Communities: patterns, scales, functions, shifts.* M. Wahl (Ed), Springer-Verlag, Berlin, Germany
- 20. Weissburg, M. B. Helmuth and J. Witman. 2014. The physical context of marine communities. Pp. 11-36, Chapter 2 *in* Bertness, M. J. Bruno, B. Silliman and J. Stachowicz eds. *Marine Community Ecology and Conservation* Sinauer Press
- 21. Banks, S. and J. D. Witman 2018. Currents and oceanographic climate of the Galapagos Islands, pp 22-25 *in* Atlas de Galapagos: Especies Nativas e Invasoras, World Wildlife Foundation Press http://d2ouvy59p0dg6k.cloudfront.net/downloads/atlas de galapagos ecuador.pdf
- 22. Witman, J. D. 2018. The pencil urchin, *Eucidaris galapagenis*, pp 88-89 *in* Atlas de Galapagos: Especies Nativas e Invasoras, World Wildlife Foundation Press http://d2ouvy59p0dg6k.cloudfront.net/downloads/atlas de galapagos ecuador.pdf

c. Refereed Journal Articles:

- 1. Witman, J.D. and R.A. Cooper. 1983. Disturbance and contrasting patterns of population structure in the brachiopod *Terebratulina septentrionalis* from two subtidal habitats. Journal of Experimental Marine Biology and Ecology. 73: 57-79.
- 2. Witman, J.D. and T.H. Suchanek. 1984. Mussels in flow: drag and dislodgment by epizoans. Marine Ecology Progress Series.16: 259 268.
- 3. Witman, J. D. 1985. Refuges, biological disturbance, and rocky subtidal community structure in New England. Ecological Monographs 55: 421-445.
- 4. Witman, J. D. 1987. Subtidal coexistence: storms, grazing, mutualism, and the zonation of kelps and mussels. Ecological Monographs 57: 167-187.
- Witman, J. D. 1988. Stability of Atlantic kelp forests. Trends in Ecology and Evolution. 3: 285-286.
- 6. Witman, J. D. 1988. Effects of predation by the fireworm *Hermodice carunculata* on milleporid hydrocorals. Bulletin of Marine Science. 42: 446-458.
- 7. Edmunds, P.J and J.D. Witman. 1991. Effect of Hurricane Hugo on the primary framework of a reef along the south shore of St. John, US Virgin Islands. Marine Ecology Progress Series 78:

201-204.

- 8. Witman, J. D. and K. P. Sebens. 1992. Regional variation in fish predation intensity: a historical perspective in the Gulf of Maine. Oecologia 90: 305 315.
- 9. Witman, J. D. 1992. Physical disturbance and community structure of exposed and protected reefs: a case study from St. John, U.S. Virgin Islands. American Zoologist 32: 641-634.
- 10. Dumas, J.V. and J.D. Witman 1993. Predation by gulls on two rocky intertidal crabs, *Cancer irroratus* and *Carcinus maenus*. Journal of Experimental Marine Biology and Ecology 169: 89 101
- 11. Witman, J.D., J.J. Leichter, S.J. Genovese, and D.A. Brooks. 1993 Pulsed phytoplankton supply to the rocky subtidal zone: influence of internal waves. Proceedings of the National Academy of Sciences, USA 90: 1686-1690.
- 12. Sheild, C.J. and J. D. Witman. 1993. The impact of *Henricia sanginolenta* predation on the finger sponges, *Isodictya* spp. Journal of Experimental Marine Biology and Ecology 166: 107 -133.
- 13. Lesser, M.P, J.D. Witman and K.P. Sebens. 1994. Effects of flow and seston availability on scope for growth of benthic suspension feeding invertebrates from the Gulf of Maine. Biological Bulletin. 187:319335
- 14. Andres, N. G. and J.D. Witman 1995. Trends in community structure on a Jamaican reef. Marine Ecology Progress Series. 118: 305-310.
- 15. Pile, A.J., M.R. Patterson and J.D. Witman. 1996. In situ grazing on plankton < 10 um by the boreal sponge *Mycale lingua*. Marine Ecology Progress Series. 141: 95-102
- 16. Bruno, J.F. and J.D.Witman. 1996. Defensive mechanisms of scleractinian cup corals against overgrowth by colonial invertebrates. Journal of Experimental Marine Biology and Ecology. 207: 229-241.
- 17. Leichter, J.J. and J.D. Witman. 1997. Water flow over subtidal rock walls: effects on distribution and growth of suspension feeders. Journal of Experimental Marine Biology and Ecology 209: 293-307.
- 18. Witman, J.D and K.R. Grange. 1998. Links between rain, salinity and predation in a rocky subtidal community. Ecology 79: 2429-2447
- 19. Smith, F. and J.D. Witman. 1999. Species diversity in subtidal landscapes: maintenance by physical processes and larval recruitment. Ecology 80: 51-69
- 20. Genovese, S.J and J.D. Witman. 1999. Interactive effects of flow speed and particle concentration on growth rates of an active suspension feeder. Limnology and Oceanography. 44: 1120- 1131
- 21. Bruno, J.F., C. Siddon, J.D. Witman and P.L. Colin. 2001. El Niño related coral bleaching in Palau, Western Caroline Islands. Coral Reefs. 20: 127-136
- 22. Hill, M.F., J.D. Witman and H. Caswell 2002. Spatio-temporal variation in Markov Chain models of subtidal community succession. Ecology Letters, 5: 665-675
- 23. Lucky, A., T.L. Erwin and J.D. Witman 2002. Temporal and spatial diversity and distribution

- of arboreal Carabidae in a Western Amazonian Rain Forest. Biotropica 34: 376 386.
- 24. Witman, J.D., S.J. Genovese, J. F. Bruno, J. W. McLaughlin and B. I. Pavlin. 2003. Massive prey recruitment and the control of rocky subtidal communities on large spatial scales. Ecological Monographs 73: 441-462
- 25. Witman, J.D and F. Smith. 2003. Rapid community change at a tropical upwelling site in the Galapagos Marine Reserve. Biodiversity and Conservation 12: 25-45
- 26. Farina, J.M., S.Salazar, K.P. Wallem, J.D. Witman and J.C. Ellis. 2003. Nutrient exchanges between marine and terrestrial ecosystems: the case of the Galapagos sea lion *Zalophus wollebaecki*. Journal of Animal Ecology 72: 873-887
- 27. Byrnes, J.E. and J.D. Witman. 2003 Impact assessment of an invasive flatworm, *Convoluta convoluta*, in the Southern Gulf of Maine. Journal of Experimental Marine Biology and Ecology 293: 173-191
- 28. Siddon, C.E. and J.D.Witman. 2003 Influence of chronic, low-level hydrodynamic forces on subtidal community structure. Marine Ecology Progress Series 261: 99-110
- 29. Genovese, S.J. and J.D. Witman 2004. Wind mediated diel variation in flow speed in a Jamaican back reef environment: effects on ecological processes. Bulletin of Marine Science 75: 281-293
- 30. Witman, J.D, R.J. Etter and F. Smith. 2004. The relationship between regional and local species diversity in marine benthic communities: a global perspective. Proceedings of the National Academy of Sciences USA 101: 156644 15669.
- 31. Siddon, C.E and J.D.Witman 2004. Behavioral indirect interactions: multiple predator effects and prey switching in the shallow rocky subtidal. Ecology 85: 2398-2945.
- 32. Hill, M.F, J.D. Witman and H. Caswell 2004. Markov chain analysis of succession in a rocky subtidal community. American Naturalist 164: E46-E61
- 33. Ellis, J.C., Chen, W., O'Keefe, B., Shulman, M.J., and Witman, J.D. 2005. Predation by gulls on crabs in rocky intertidal and shallow subtidal zones of the Gulf of Maine. Journal of Experimental Marine Biology and Ecology 324:31-43.
- 34. Altieri, A.H and J.D. Witman. 2006. Local extinction of a foundation species in a hypoxic estuary: integrating individuals to ecosystem. Ecology 87: 717-730
- 35. Ellis, J.C., Fariña, J.M., and Witman, J.D. 2006. Nutrient transfer from sea to land: the case of gulls and cormorants in the Gulf of Maine. Journal of Animal Ecology.75: 565- 574.
- 36. Lindsey, E, L., Altieri, A.H. and J.D.Witman 2006. Influence of biogenic habitat on the recruitment and distribution of a subtidal xanthid crab. Marine Ecology Progress Series 306: 223-231.
- 37. Shelton, A O., D. A. Woodby, K. Hebert and J. D. Witman 2006. Evaluating age determination and spatial patterns of growth of the red sea urchin (*Strongylocentrotus franciscanus*) in southeast Alaska. Transactions of American Fisheries Society 135: 1670-1680.
- 38. Ellis, J.C., M. J. Shulman, M. Wood, J. D. Witman, and S. Lozyniak 2007. Regulation of intertidal food webs by avian predators on New England rocky shores. Ecology 88: 853-863.

- 39. Witman, J. D., M. Cusson, P. Archambault, A. J. Pershing and N. Mieszkowska. 2008. The relation between productivity and species diversity in temperate Arctic marine ecosystems. Ecology 88: S66S80.
- 40. Irving, A. D. and J.D. Witman 2009. Positive effects of damselfish override negative effects of urchins to prevent a habitat switch. Journal of Ecology 97: 337-347.
- 41. Witman, J.D., M. Brandt and F. Smith 2010. Coupling between subtidal prey and consumers along a mesoscale upwelling gradient in the Galapagos Islands. Ecological Monographs 80: 153-177.
- 42. Lee, D. E., J.H. Robinson, J.D. Witman, S.E. Copeland, F. Smith, E.M. Harper and M. Lamare. 2010. Observations on recruitment, growth and ecology in a diverse living brachiopod community, Doubtful Sound, Fiordland, New Zealand. Special Papers in Paleontology 84:177-191.
- 43. Palardy, J. and J.D. Witman 2011. Water flow drives biodiversity by mediating rarity in marine benthic communities. Ecology Letters 14:63-68
- 44. Brandt, M., J.D. Witman and A. Chiriboga 2012. Influence of a dominant consumer species reverses at increased diversity. Ecology 93: 868-878.
- 45. Dee, L. E, J.D. Witman and M. Brandt. 2012. Refugia and top-down control of the pencil urchin *Eucidaris galapagensis* in the Galapagos Marine Reserve. Journal of Experimental Marine Biology and Ecology. 416-417: 135-143.
- 46. Witman, J.D., P.K. Dayton, S. Arnold, R.S. Steneck and C. Birkeland 2013. Scuba revolutionizes marine science. Pp 3 -11. Smithsonian Contributions to Marine Science no 39., Washington DC
- 47. Witman, J. D. 2013 Are regional effects on local diversity more important in marine than in terrestrial communities? Oikos. 122: 301-305
- 48. Palardy, J. E and J. D. Witman 2014. Flow, recruitment limitation, and the maintenance of diversity in marine benthic communities. Ecology 95: 286-297.
- 49. Altieri, A.H. and J. D. Witman 2014. Modular mobile foundation species as reservoirs of biodiversity. Ecosphere 5(10):124. 1 11. http://dx.doi.org/10.1890/ES14-00018.1
- 50. Witman, J.D., R. W. Lamb and J. E. K. Byrnes. 2015. Towards an integration of scale and complexity in marine ecology. Ecological Monographs 85: 475-504. **DOI:** 10.1890/14-2265.1 (Invited, ESA Centennial Paper)
- 51. Krumhansl, K. A., D. K. Okamoto, A. Rassweiler, M. Novak, J. J. Bolton, K. C. Cavanaugh, S. D. Connell, C. R. Johnson, B. Konar, S. D. Ling, F. Micheli, K. Norderhaug, A. Pérez-Matus, I. Sousa-Pinto, D. C. Reed, A. K. Salomon, N. T. Shears, T. Wernberg, R. J. Anderson, N. S. Barrett, A. H. Buschmann, M. H. Carr, J. E. Caselle, S. Derrien-Courtelu, G. J. Edgar, M. Edwards, J. A. Estes, C. Goodwin, M.C. Kenner, D. J. Kushner, F. E. Moy, J. Nunn, R. S. Steneck, J. Vásquez, J. Watson, J. D. Witman and J. Byrnes. 2016. Global patterns of kelp forest change over the past half century. Proceedings of the National Academy of Sciences. www.pnas.org/cgi/doi/10.1073/pnas.1606102113
- 52. Witman JD, Smith F, Novak M 2017. Experimental demonstration of a trophic cascade in the Galapagos rocky subtidal: Effects of consumer identity and behavior. PLoS ONE 12(4): e0175705. https://doi.org/10.1371/journal.pone.0175705

- 53. Witman JD, Lamb RW 2018 Persistent differences between coastal and offshore kelp forest communities in a warming Gulf of Maine. PLoS ONE 13(1): e0189388. https://doi.org/10.1371/journal.pone.0189388
- 54. Aued AW, Smith F, Quimbayo JP, Cândido DV, Longo GO, Ferreira CEL, Witman JD, Floeter SR, Segal B. et al. 2018. Large-scale patterns of benthic marine communities in the Brazilian Province. PLoS ONE 13(6): e0198452. https://doi.org/10.1371/journal.pone.0198452
- 55. Lamb, R. W., F. Smith, A. W. Aued, P. Salinas-de-León, J. Suarez, M. Gomez-Chiarri, R. Smolowitz, C. Giray, and J. D. Witman. 2018. El Niño drives a widespread ulcerative skin disease outbreak in Galapagos marine fishes. Nature Scientific Reports 8:16602. https://doi.org/10.1038/s41598-018-34929-z
- 56. Beltram, F.L., R.W. Lamb, F. Smith and J.D. Witman. 2019. Rapid proliferation and impacts of cyanobacterial mats on Galapagos rocky reefs during the 2014-2017 El Niño Southern Oscillation. Journal of Experimental Marine Biology and Ecology. 514-515: 18-26. https://doi.org/10.1016/j.jembe.2019.03.007
- 57. Lamb, R.W. F. Smith and J. D. Witman. 2020 Consumer mobility predicts impacts of herbivory across an environmental stress gradient. Ecology DOI: 10.1002/ecy.2910
- 58. Leslie, H.M., M. Ruckleshaus and J.D.Witman 2019. Introduction to the special issue on PISCO: Partnership for Interdisciplinary Studies of Coastal Oceans. Oceanography 32: 32(3): 12-15, https://doi.org/10.5670/oceanog.2019.306
- 59. P. Salinas-de-León, S. Andrade, C. Arnés-Urgellés, J. R. Bermudez, S. Bucaram, S. Buglass, F. Cerutti, W. Cheung, C. De la Hoz, V. Hickey, G. Jíménez-Uzcátegui, I. Keith, J. R. Marín Jarrín, P. Martí-Puig, M. Medina, A. Moya, D. Pauly, D. Orellana, R. Ostergaard-Klem, C. Stock, J. D. Witman and B. Worm 2020. Evolution of Galapagos in the Anthropocene. Nature Climate Change. https://doi.org/10.1038/s41558-020-0761-9
- 60. Castello y Tickell, S., N.H.N. Low, R.W. Lamb, M. Brandt and J.D. Witman. 2022. Distribution and feeding ecology of sea stars in the Galapagos rocky subtidal zone. Journal of Experimental Marine Biology and Ecology. DOI: 10.1016/j.jembe.2022.151754
- 61.Witman, J.D., A.J. Pershing and J.F. Bruno. 2023. Smooth vs spiky: the importance of variability in marine climate change ecology. Annual Review of Ecology, Evolution and Systematics. 54: 129- 149 https://doi.org/10.1146/annurev-ecolsys-022323-082123
- 62. Rhoades, O. K., Brandt, M., & Witman, J. D. 2023. La Niña-related coral death triggers biodiversity loss of associated communities in the Galápagos. Marine Ecology, 44, e12767. https://doi.org/10.1111/maec.12767

ci. Refereed Journal Articles in Review

Lamb, R.W, L. Fontoura, A. Perez Matus, M. Greenhill, C. Munson, F. Smith and J.D. Witman. A multi-species test of the temperature constraint hypothesis across a regional upwelling gradient. *in review* Diversity.

Agarwal, M., R.W. Lamb, F.Smith and J.D. Witman. Distribution and ecology of shallow-water black corals across a depth gradient on Galapagos rocky reefs. *in review* Coral Reefs

5g. Invited Lectures and Papers Presented at Meetings (only presentations by J. Witman since joining the Brown Faculty in 1994)

- 1994 Section of Ecology and Systematics, Cornell University
- 1994 Department of Marine Science, University of Alaska, Fairbanks
- 1994 Population Biologists of New England Annual Meeting, Smith College
- 1994 Hopkins Marine Station, Stanford University, Monterey, CA
- 1994, 1995 Harvard University, Cambridge, MA, Coral Reefs in Marine Biology Course
- 1995 Sigma Xi Invited Speaker, Marine Biological laboratory, Woods Hole, MA
- 1995 Invited Keynote, Regional Association for Research on the Gulf of Maine Workshop, Dartmouth College
- 1995 American Society for Limnology and Oceanography, San Diego, CA
- 1995 Benthic Ecology Meetings, Rutgers University, NJ
- 1996 Fourth International Temperate Reef Symposium, Santiago, Chile
- 1996 Graduate School of Oceanography University of Rhode Island
- 1996 Biology Department, Woods Hole Oceanographic Institution
- 1996 Ecological Society of America Annual Meeting, Providence, RI
- 1997 Benthic Ecology Meetings, Portland ME
- 1997 Workshop on the Effect of Fishing Gear Disturbance on the Sea Floor of New England, MIT
- 1997 Symposium on Biomechanics and Marine Ecology: Is the Marriage Working? Western Society of Naturalists Annual Meeting, Monterey, CA
- 1997 Charles Darwin Research Station, Galapagos Islands
- 1998 Coral Reef Research Foundation, Palau Islands
- 1998 Biology Department, Mt. Holyoke College
- 1999 Workshop on Biodiversity Vision for the Galápagos Islands Eco-Region, sponsored by the World Wildlife Foundation and the Charles Darwin Foundation, Galápagos Islands
- 1998 Workshop on Cross -Ecosystem Exchanges of Nutrients, Prey and Consumers, VII International Congress of Ecology, Florence, Italy
- 2000 Department of Ecology and Evolutionary Biology, University of California, Davis
- 2000 FONDAP Workshop on Marine Macroecology and Conservation: Contrasting Patterns Between Hemispheres, Vina del Mar, Chile
- 2000 Biological Sciences Department, Stanford University
- 2000 School of Marine Science, Virginia Institute of Marine Science
- 2000 Benthic Ecology Meetings, University of North Carolina, Wilmington
- 2001 Biology Department, California State College at Northridge, Northridge, CA
- 2002 Zoology Department, University of Rhode Island
- 2003 Benthic Ecology Meetings, Groton, CT
- 2003 Large scale Ecology Symposium, Ecological Society of America Annual Meeting, Savannah, GA
- 2003 Biology Department, University of Laval, Quebec City, Canada
- 2004 Biology Department, Bowdoin College, Brunswick, ME
- 2004 Department of Marine Science, University of Connecticut, Avery Point Campus
- 2004 Symposium on Geographical Ecology, Ecological Society of America Annual Meeting, Portland, OR
- 2005 Benthic Ecology Meeting, Williamsburg, VA
- 2005 Symposium on Marine Macroecology, Ecological Society of America and International Congress of Ecology Annual Meeting, Montreal, Canada (symposium organizer)
- 2005 Symposium on Cross-Ecosystem Ecology, Western Society of Naturalists Annual Meeting, Monterey, CA (graduate student invited speaker)
- 2005 Leibniz-Institut für Meereswissenschaften IFM-GEOMAR Kiel, Germany
- 2005 Charles Darwin Research Station, Galapagos Islands
- 2006 Environmental Studies Center, Brown University
- 2007 Wake Forest University, Winston Salem, NC
- 2008 Benthic Ecology Meetings, Providence, RI
- 2008 Biology Department, Boston University, MA
- 2009 Gulf of Maine Research Institute, Portland, ME
- 2009 Galapagos Science Symposium, P. Ayora, Galapagos Islands, Ecuador
- 2009 CASEB, Pontificia Universidad Catolica de Chile

- 2010 Benthic Ecology Meetings, University of North Carolina, Wilmington, NC
- 2010 University of Rhode Island, Kingston, RI
- 2010 Symposium Research and Discoveries: Revolution of Science through Scuba, Washington, DC, Sponsored by NSF and Smithsonian Institution
- 2010 Symposium: ENSO in Galapagos: A Model System for Studying Ecological Effects of Climate Change in the Ocean, Ecological Society of America Annual Meeting, Pittsburgh, PA (symposium organizer)
- 2011 CSIRO/Australian University OCE Cutting Edge Science Symposium, Brisbane Australia. Leader of working group on human impacts on marine macroecological patterns
- 2011 Keynote speaker, The 3rd International Symposium for Marine Biology and Biotechnology at the National Museum of Marine Biology, Kenting, Taiwan,
- 2011 School of Life Sciences, Arizona State University, Phoenix, AZ
- 2012 Charles Darwin Foundation, P. Ayora, Galapagos Islands
- 2013 Benthic Ecology Meetings, Savannah, GA
- 2013 Northeastern University, Nahant MA
- 2014 Benthic Ecology Meetings, Jacksonville, FL
- 2014 Charles Darwin Foundation, P. Ayora, Galapagos Islands
- 2014 Invited Keynote, Regional Association for Research on the Gulf of Maine Workshop, Boston University
- 2014 New England Bio Labs, Ipswich, MA
- 2014 Bowdoin College, Brunswick, ME
- 2014 UMASS Boston, Boston, MA
- 2014 Pontificia Universidad Católica de Chile (PUC), Las Cruces Marine Lab, Chile
- 2015 Benthic Ecology Meetings, Quebec City, Canada
- 2015 New England Aquarium, Boston, MA
- 2016 Rhode Island Audubon, Barrington, RI
- 2016 Gloucester Maritime Museum, Gloucester, MA
- 2016 New England Council of Churches, Providence, RI
- 2016 Boston Sea Rovers Symposium, Danvers, MA
- 2016 Benthic Ecology Meetings, Portland, ME
- 2016 Sustaining Biodiversity and Fisheries, Conservation International, Washington, DC
- 2016 13th International Coral Reef Symposium, Honolulu, HI
- 2016 Galapagos National Park, P. Ayora, Galapagos Islands, Ecuador
- 2017 American Society of Limnology and Oceanography, Honolulu, HI
- 2017 Invited Keynote, CMAR (Corredor Marino De Pacifico Este Tropical) International Climate Change Workshop, P. Ayora, Galapagos Islands, Ecuador
- 2017 "Cashes to Galapagos" seminar for Conservation International, Art Club, Providence, RI
- 2017 Oregon Institute of Marine Biology, Charleston, OR
- 2017 Oregon State University, Corvallis, OR
- 2017 Invited Keynote, International Climate Change Workshop for The Galapagos Islands, P. Ayora, Galapagos Islands, Ecuador
- 2018 Invited International Scientist Seminar, ECIM, Pontificia Universidad Catolica de Chile, Santiago, Chile
- 2018 Charles Darwin Foundation, Puerto Ayora, Galapagos Islands
- 2019 Invited Keynote talk, 40th Charles Darwin Festival, Salem State University, Salem MA
- 2019 Benthic Ecology Meetings, St. Johns, Newfoundland
- 2019 Charles Darwin Foundation, Puerto Avora, Galapagos Islands
- 2019 Art and Science Workshop on Sustainable Oceans, Bristol, RI
- 2019 California State University, Northridge, CA
- 2020 Charles Darwin Foundation, Puerto Avora, Galapagos Islands
- 2022 International Congress of Ecology (INTECOL), Geneva Switzerland, Session organizer and speaker
- 2022 Island Systems Integration Consortium (ISIC), NSF sponsored RCN meeting in Galapagos, Invited Plenary talk, Cincinatti, OH
- 2022 Benthic Ecology Meetings, Portsmouth, NH
- 2022 Environment America Webinar on Kelp Ecosystems of Cashes Ledge

2023 Galapagos Corals workshop, Charles Darwin Foundation, Puerto Ayora, Galapagos Islands

5j: Work in Progress (drafts of manuscripts)

Munson, C.J., M. Greenhill, R.W. Lamb, J.D. Witman. An upwelling gradient and consumer access modify benthic community structure in the Galapagos rocky subtidal. *for Diversity and Distributions*

6. Research Grants

6a. Current:

Ruth D. Turner Foundation "Administration of Phase 2 of the Ruth D. Turner Scholarships in Marine Biology" \$29,906 J. Witman PI, 1/1/2022 – 12/31/2023

Ruth D. Turner Foundation "Scientific and logistical support for the 2023 Cashes Ledge expedition" \$17,649 J. Witman PI, 4/15/2023 – 4/14/2024

6b. Completed : (since 1994, only Brown University)

National Science Foundation (Biological Oceanography) *Internal waves in the rocky subtidal zone: effects of pulsed food and larval supply on suspension feeding communities,* 1994 – 1997, Co-PI with M.R. Patterson, \$229,000 to Brown University and 21 days ship time

National Science Foundation (Biological Oceanography), SGER: Effects of an unusual, large scale recruitment of blue mussels in the Gulf of Maine rocky subtidal zone, 1996 – 1997, PI, \$25,000

National Science Foundation, *Development of a Variable Flow Speed Research Flume Facility*, 1995 – 1999, Lead PI with Co-Pl's, G.E.Goslow, M.D.Bertness, and S.Swartz, \$108,000

National Oceanic and Atmospheric Administration's (NOAA) National Undersea Research Program, Sampling a pulsed food and larval supply regime with replicate pumps: variation along depth gradients 1997 – 1998, Co-PI with M.R. Patterson, \$ 16,000 to Brown University ,7 days ship time with NITROX dive support

National Science Foundation (Biological Oceanography), *How important are regional processes in determining the local species richness of marine communities?*, 1998 – 2001, Co-PI with R.Etter, \$217,768 to Brown University

National Science Foundation, Supplement to Development of a Variable Flow Speed Research Flume Facility, 1999, Co-PI with G. E. Goslow, \$43,000

Andrew Mellon Foundation, *The dynamics of marine ecosystems*, 1996 – 2001, Co-PI with M.D. Bertness, \$400,000

National Science Foundation, Research Opportunities at Undergraduate Universities, collaborator on multi-investigator grant submitted by Cornell University for marine research at Shoals Marine Laboratory, 2000 – 2001, *no funds to Brown*; leader of 2 undergraduate research projects per yr., and support for graduate students

National Sea Grant Program (NOAA), Effects of hypoxia on benthic communities of Narragansett Bay, 2003-2005, Co-PI with A. Altieri, graduate student research, \$50,000

Andrew Mellon Foundation, Co-PI with M.D. Bertness, *Marine biogeography and ecology:* contrasting patterns and processes between hemispheres, 2000 – 2002, Co-PI with M.D. Bertness, \$250,000

National Oceanic and Atmospheric Administration, *Monitoring macrobenthic community change in the Stellwagen Bank National Marine Sanctuary*, 2002 – 2003, PI, \$45,000,

National Oceanic and Atmospheric Administration's (NOAA) National Undersea Research Program, Assessing decadal -scale changes in biodiversity at Pigeon Hill, Gulf of Maine, 2000 – 2001, PI, \$35,450, 7 days ship time with NITROX dive support

National Science Foundation (Biological Oceanography), Developing a regional context for rocky subtidal communities: upwelling, biotic interactions and diversity regulation in the Galapagos Marine Reserve, 2002 – 2006, PI, \$480,000

National Science Foundation, *Dissertation Research: Gulls as cross-ecosystem links in New England coastal communities* 2002 – 2004, Co-PI with J.C. Ellis, graduate student research, \$8,800.

National Sea Grant Program (NOAA), Supplement to effects of hypoxia on benthic communities of Narragansett Bay, 2005, Co-Pl with A. Altieri, \$5,500

National Oceanic and Atmospheric Administration's (NOAA) National Undersea Research Program, *Investigating Alaskan epifaunal communities in the context of latitudinal diversity gradients*. 2005 – 2007, PI, \$77,433

Sloan Foundation/ Gulf of Maine Census of Marine Life, *Human impacts on coddominated trophic cascades in the Gulf of Maine*. 2006 – 2007, PI, \$31,999

NOAA National Estuarine Research Program, *The effects of flow on local and regional patterns of diversity and species invasions: an experimental approach,* 2006 – 2008, (20 K continuation): graduate fellowship and research, Co- PI with J. Palardy, graduate student research, \$60,000

National Science Foundation (Biological Oceanography), SGER: Effects of the 2006-2007 El Nino on ecosystem functioning in the Galapagos Marine Reserve: impact and resistance, Jan.1-Aug. 31, 2008 Pl, \$60, 038

National Science Foundation (Global Scientists and Engineers), *International Research Experiences for Students: Biodiversity and ecosystem functioning in the Galapagos Marine Reserve.* March 1, 2007 – March 1, 2010, PI, \$150,000

Conservation International, Inc. *Marine biodiversity in the Galápagos Marine Reserve: effects of conservation protection and oceanographic processes* Dec. 31, 2008 – Dec. 31 2009, PI, \$44,500, funding Margarita Brandt, PhD support

Conservation International, Inc. Support for ESA Symposium on El Nino Southern Oscillation in the Galapagos. May 28 - December 31, 2010, Pl, \$5,000.

The Nature Conservancy, *Influence of El Niños on Long Term Change in the Galapagos Marine Reserve* \$15,000, Jan.1 2011- Jan. 31 2012.

National Science Foundation (Biological Oceanography) *Effects of predator diversity on the strength of trophic cascades in an oceanic benthic ecosystem.* (National Science Foundation, Biological Oceanography), PI, March 15, 2011 – Feb. 28, 2014, \$ 628,000

NSF Biological Oceanography "RAPID: Understanding thresholds and regime shifts in marine ecosystems: effects of the 2014 – 2015 El Niño in the Galapagos rocky subtidal . \$154, 999, J. Witman PI, 7/1/14 – 7/1/15

Ruth D. Turner Foundation "Decadal scale changes in the biodiversity of Gulf of Maine subtidal communities: effects of environmental factors and invasive species", \$26,160, J. Witman PI 12/1/2014 – 12/31/2016

NSF Biological Oceanography "RAPID: Testing the ability of the 2015 – 2016 El Niño Southern Oscillation (ENSO) to drive a community -level regime shift in the Galapagos marine ecosystem \$198,000, J. Witman PI, 2/1/15 – 8/31/17

Galapagos Conservancy "Long-term monitoring of climate oscillations in the Galápagos Marine Reserve" \$40, 000 J. Witman PI, 1/1/2019 – 12/31/2019

Galapagos Conservancy "Long-term monitoring of climate oscillations in the Galápagos Marine Reserve: cumulative ecological impacts and resilience" \$78,000, J. Witman PI, 1/1/18 – 1/1/19

National Science Foundation "RAPID: Illuminating the effects of a COVID-19 elimination of diver disturbance on reef fish behavior, distribution and ecosystem functioning in the Galapagos Marine Reserve". \$200,000 J. Witman, PI, 7/1/2020 – 6/30/2021

Ruth D. Turner Foundation "Effects of rapid ocean warming on the marine life of Cashes Ledge, Gulf of Maine" \$24,000, J. Witman PI, 11/15/2017 – 11/14/2019 extended to January 2022

Ruth D. Turner Foundation "Administration of the Ruth D. Turner Scholarships in Marine Biology "\$39,200 J. Witman PI, 12/15/18 – 12/4/2021

7. Service

i. To the University

2022 -present	Diversity and Inclusion Action Committee (DIAP), EEOB Department
2019 -present	Honorary Degrees Committee
2018, 2019	UTRA Fellowship Review Committee
2018	Climate Change Ecologist Search Committee
2011 – present	Biology Concentration Advisor (typically 3-5 students / yr)
2005 – 2012, 201	0, 2011-2013 First Year Advisor (4 students/yr)
1997- present	Sophomore Biology Advisor (4-5 students/yr, except sabbatical periods)
2011	Advisor to three Brown seniors on Science Education Improvement grant to
	develop animations of population models for Principles of Ecology course
2012	Participant and speaker, Workshop exploring an EEB, Archeology URI –
	IGERT proposal
2010	Lecturer and Panelist, ECI workshop, December
2009 - present	EEB Departmental Faculty Liason for Brown Sheriden Center for Teaching
2008	Symposium Participant, Fishes and Loaves, sponsored by Brown Anthropology
	Department
2006 - 2017	Member, Undergraduate EEB Curriculum Committee
2006 – 2010	Member, Environmental Change Initiative Advisory Board
2006 – 2007	Conservation Biologist Search Committee
	Guest Lecturer, Human Impacts on Ecosystems course (2 lectures/yr)
2004 – present	Student Advisor, International Programs in Biology
2003 - 2004	Morphologist Search Committee
2003 – 2004	Wayland Collegium Environmental of Planet Earth Seminar Series (organized
	speakers with M.D. Bertness)
2000	Forum participant, Post Doctoral opportunities in Science, Brown Graduate
	School
1998	Forum participant, Graduate Programs in Biology, Brown Undergraduate
1000	Program
1998	Brown Staff Day, Guest lecturer, Undersea Life of New England

1996 – 2004	Environmental Science Curriculum Committee
1996 – 1997	Committee on Strategic Planning for Brown University, Facilities Committee
1995 – 1996	Morphology Search Committee
1995 –1996	Environmental Sciences Task Force

ii. To the Profession (selected resume)

multiple years: Panelist, National Science Foundation (Biological Oceanography) multiple years tenure review; UC Davis, Northeastern University, WHOI, Scripps Institution of Oceanography, Temple University, Oregon State University, University of Adelaide, Virginia Institute of Marine Science, UC Santa Cruz, UMASS Boston

2019 -2022 2022	Member, Scientific Steering Committee for 2022 INTECOL Meeting in Geneva Organizer, Symposium on Indirect ecological effects of the COVID 19 pandemic INTECOL Meeting in Geneva
2022 2018 -2020	Reviewer, Millenium Ecosystem Assessment, Santiago, Chile Originated PhD student competition for Ruth Turner Scholarships in Marine Biology, Program Director, 18 scholarships awarded to date
2019	Guest Editor of the Special issue on PISCO: Partnership for Interdisciplinary Studies of Coastal Oceans for journal <i>Oceanography</i> (Co-edited articles with H. Leslie and M. Ruckelshaus)
2017	Participant, Two workshops on Ocean Climate Change in the Eastern Tropical Pacific
2016	Workshop on Biodiversity and Fisheries, Conservation International, Washington, DC
2014 2010	External reviewer/ Panelist FONDECYT, Santiago, Chile Organizer, ENSO in Galapagos Symposium at ESA Annual Meeting, Pittsburgh, PA
2009	Gulf of Maine Biodiversity working group, RARGOM-COML
2009	Panelist FONDECYT, Santiago, Chile
2006	Workshop Participant, Approaches for researching the roles of marine and coastal biodiversity in maintaining ecosystem services, Census of Marine Life/NOAA Washington, DC
2008	Workshop Participant, Biodiversity of the Gulf of Maine, Census of Marine Life
2005-2007	Student Advisor for Henry David Thoreau Foundation
2005	Proposal Review Panelist, West Coast National Undersea Research Program
	(NOAA), Monterey, CA
2005	Organizer, Marine Macroecology Symposium at Ecological Society of America
	(ESA) Annual Meeting, Montreal, Canada
2005	Co-Chair, Working Group on Connectivity, Workshop on Marine Ecosystem
	Based
	Management, Princeton University
2004–2006	Leader, Working Group on Marine Productivity and Species Diversity, CORONA
	meetings in Iceland, France and Portugal
2003-2006	Science Advisory Committee, National Undersea Research Program (NOAA)
2003	Advisor to 1st National Workshop on Census of Marine Life, Salem, MA
2002	External Advisor, CONICYT Foundation, Santiago, Chile

2002	Steering Committee Member, Workshop on Coordinating Research on the North	
	Atlantic CORONA, (NSF funded international research network)	
1999	Proposal Review Panelist, Marine Ecology and Conservation, CONICYT	
	Foundation	
	Santiago, Chile	
1998-2002	Editorial Board, Ecology and Ecological Monographs	
1997, 1999	Proposal Review Panelist, West Coast National Undersea Research Program	
	(NOAA), Monterey, CA	
1995- present	National Science Foundation, Washington, DC. Proposal Review Panelist,	
	Biological Oceanography – 12 panels	
1995-1996	Co - Host (with D. Morse), Ecological Society of America Annual Meeting,	
	Providence, RI	
1994-present	Reviewer for major journals in Ecology and Marine Biology: Nature, Science,	
PNAS, Marine Ecology Progress Series, American Naturalist, Ecology Letters,		
Ecological Monographs, PLOS ONE, Ecology, Coral Reefs, Biological Reviews		
iii. To the Community		
2012 – present	, Lead scientist on effort to achieve permanent conservation protection for Cashes	
Ledge, Gulf of Maine, with Conservation Law Foundation and National Geographic		
2006 – present Advisor to Director and Head of Science, Charles Darwin Foundation, P. Ayora,		
	Galapagos, on research and conservation priorities	

1999–present Advisor to South American research students conducting research at BIOMAR

marine lab, Charles Darwin Research Station, Galapagos

2009 -present Advisor to Conservation Law Foundation, Boston MA on siting of potential marine reserves in the Gulf of Maine (GOM), Testimony to establish Cashes Ledge as a Research Marine Reserve, New England Fisheries Council Meeting, Providence,

RΙ

2009

Member, Working Group on Priorities for Marine Managed Areas in the Eastern

Tropical Pacific, Conservation International, Boston, MA

2000-2006

Member, Science Advisory Board, Conservation Law Foundation, Boston

2003-2004

Appointed to the Governor's Narragansett Bay and Watershed Planning

Commission, Providence, RI

Educational Outreach (media see http://www.witmanlab.com/)

2014 "In a briny preserve, fish and controversy thrive." The Boston Globe, July 13 2014.

2014 "Exploring a unique biodiversity hotspot in the Gulf of Maine" (October 2014), blog by J.Witman and video on Smithsonian Institution's Ocean Portal: http://ocean.si.edu/blog/exploring-unique-biodiversity-hotspot-gulf-maine

2014 Webinar on Cashes Ledge, December 2014. presented a 20 min webinar with CLF which was recorded and posted on the web.

2014 CreatureCast Animation "Tale of two urchins" published in NY Times (January 2014) http://www.nytimes.com/video/science/100000002735051/creaturecast-a-tale-of-two-urchins.html produced by S. Castello y Tickell and R. Lamb (our lab) about our NSF project results in Galapagos

2014 Conservation of Cashes Ledge (4 min video) (August 2014, with Brian Skerry and CLF) http://www.newenglandoceanodyssey.org/special-video-cashes-ledge/

2015 "Researchers study marine ecological changes at Easter Island", Brown Web News Feature, January 2015 in collaboration with Rob Lamb, https://news.brown.edu/articles/2015/01/easter

2015 "Conservationists push for a national undersea monument." NPR News, Oct. 18 2015.

2015 "Obama just announced the first new marine sanctuaries in 15 years." The Washington Post, Oct 4 2015.

2015 "Conservation groups, fishermen divided over NOAA plan for marine national monument." The Providence Journal, Sept. 15 2015.

2015 "Proposal to create 'marine national monument' off New England coast up for discussion in Providence". The Providence Journal, Sept. 13 2015.

2016 <u>"Environmental advocates, fishermen at odds over turning Cashes Ledge into National Monument."</u> WBUR, Boston's NPR radio station, Feb. 2, 2016.

2016 "The wonder down under." Brown Alumni Magazine, Jan. 2016.

2016 "Galapagos waters illustrate ecological drama of climate change" Brown Web News Feature,

December 2016, https://news.brown.edu/articles/2016/12/galapagos

2017 Interviewed on site at Cashes Ledge in National Geographic TV special January 2017 "Sea of hope: America's underwater treasures" http://channel.nationalgeographic.com/sea-of-hope-americas-underwater-treasures/

2017 Featured in the February 2017 issue of National Geographic Magazine about Cashes Ledge in "Saving the seas" article http://www.nationalgeographic.com/magazine/2017/02/saving-our-seas-president-obama-oceans-conservation/

2017 "Galapagos study identifies keystone predator in a complex food web" Brown Web News Feature,

May 2017, https://news.brown.edu/articles/2017/05/trophic

2017 Featured in June 2017 issue of National Geographic Magazine "Life in the balance: a warming planet threatens the Galapagos species that inspired Darwin's theory of natural selection. http://www.nationalgeographic.com/magazine/2017/06/galapagos-climate-change-impacts-iconic-creatures/

2018 Interviewed in December 10, 2018 New York Times Article "As Seas Warm, Galápagos Islands Face a Giant Evolutionary Test"

https://www.nytimes.com/interactive/2018/12/18/climate/galapagos-islands-ocean-warming.html

2018 Interviewed about Cashes Ledge marine conservation and Witman and Lamb (2018) paper on that topic in web-based "Our Daily Planet" on March 2, 2018.

https://mailchi.mp/ourdailyplanet.com/our-daily-planet-chanels-trees-community-soul-ar-paint-it-white-tech-titans-saving-wildlife-sf-sinking-witman-on-cashes-ledge-our-heroines?e=51f303bd33

2018 Featured in the cover story "A lifetime under the waves: Jon Witman and the Witman Lab" in the Summer 2018 Issue of the 41 N Magazine, RI Sea Grant. http://41nmagazine.org/current-issue/

2018 Featured in December 2018 Interview on Galapagos Climate Change, broadcast on the global network of NBC Universal/ Telemundo TV

https://www.youtube.com/watch?v=8AMUza9b FI

2019 On environmental stress and fish herbivory in Galapagos https://www.sciencedaily.com/releases/2019/10/191016124544.htm

2019 On Cashes Ledge Kelp Forest

https://www.pressherald.com/2019/11/16/kelp-forests-of-the-sea-vanishing-from-southern-maine-as-gulf-warms/

2019 Video made by our lab for Worlds Oceans Day 2019 https://www.youtube.com/watch?v=VgsbiNX2ufl&feature=youtu.be

<u>2022 Video animation on El Nino 2022 "The ENSO"</u> https://drive.google.com/file/d/1Uw3MScQU2cV779dflkUXtsRPkmx0a32v/view

2023 Multimedia exhibit exploring the Galapagos marine ecosystem "Ocean Encounters" developed by Witman Lab, on display in Brown University Granoff Center from May 3 – 31st, 20-23

2023 Interviewed by PBS TV about the Cashes Ledge marine ecosystem on site during a research cruise to Cashes Ledge, Gulf of Maine in June for a documentary in 2024

<u>2023 Description of findings from ocean climate change reviewpublishecin AREES in Brown In The News web site</u>

https://www.brown.edu/news/2023-11-15/marine-climate

8. Academic Honors

1983 Best paper in Ecology Award, American Society of Zoologists Annual Meeting

9. Teaching (Brown University)

a. Courses

BIO 0420 Principles of Ecology (undergraduate, enrollment 50 – 173 students/ yr, in last 10 years typically 60-70 students) Semester II 1995, 1996, 1997, 1998, 1999, 2000, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2018, 2019, 2020, 2021, 2022

BIO 1420 Experimental Design in Ecology (undergraduate, graduate enrollment 10- 28 students) Semester I, 1997, 1999, 2001, 2003, 2005, 2007, 2009, 2010, 2011, 2013, 2015, 2017, 2019, 2021

BIO 1440 Coral Reef Ecology, (new course) began September 2023, 25 students

BIO 243, BI 244 Topics in Ecology and Evolutionary Biology (graduate seminar) 1996 Taught as:

Experimental Design (now BI 142), 1996 Co-taught with M. Bertness as: Tropical Ecology 2000 Co-taught with M. Bertness as: Community Ecology of Induced Defenses, 2001 Cotaught with C. Janis as: Macroecology Past and Present 2007, Co-taught with D. Rand as: Neutral Theory in Evolution and Ecology 2009, Co-Taught with Dov Sax as Island Ecology and Evolution 2010, Marine Macroecology 2016

GISP Course in Underwater Research, Principal Instructor 2002

Geo 291 Biodiversity 1994 Co-taught with J. Mustard

BI 1950 - 1960 Independent Study in Biology (Senior Thesis Honors) 1995 – present Directed 37 -undergraduate research projects by: Lucinda Anderson, Glennie LeBaron*, Rebecca Ward-Diorio*, Emilia Dell'Antonio, Karen Robles, Marisa Agarwal*, Calvin Munson*, Maya Greenhill*, Adelaide Dahl, Fiona Beltram*, Camilla Lupi*, Jonathan Ang, Sofia Castello y Tickell*, Natalie Low*, Can Gencler, Leslie Howitt*, Olivia Rhoades*, Laura Dee*, Skylar Bayer, Marc Carrel*, Nicole Travis, Mihir Parikh, Miriam Goldstein*, Emily Lindsey, Jarrett Byrnes*, Erika Brown, Nathan Kraft, Pamela Flanagan, Andrea Lucky (co-advised), Jennifer Kane, Boris Pavlin, Kristen Michaelopoulus, Alison Hartman, Assaf Gordon, Tegan Blaine [co advised], Jennifer Diehl, Janka Flaska, Jon Harrison [co advised]

I brought 14 of these BI 1950-1960 students (*above) to the Galapagos Islands to train them in subtidal marine ecology for weeks –months. I work side by side with these undergraduate independent study and graduate students in the field which is usually underwater.

ES 195 – 196 Independent Study in Environmental Studies 1995 – present, Co – advised or advised 12 student projects, also advised C. Mattison on ES Master's combining science and art

b. PhD Theses Directed (Brown University)

- 1. Christopher Siddon, *Trait and density mediated indirect interactions in the New England rocky subtidal zone*, PhD 2004.
- 2. Julie Ellis, Gulls as cross-ecosystem links in New England coastal communities, PhD 2005.
- 3. Andrew Altieri, *Dynamics of foundation species across estuarine environmental stress gradients*, PhD 2006.
- 4. James Palardy, Flow and neutrality in marine epifaunal communities, PhD 2009.
- Margarita Brandt, Functional roles of biodiversity in the Galapagos Marine Reserve. PhD 2011
- 6. Robert W. Lamb Environmental determinants of reef fish community assembly in the Galapagos Marine Reserve PhD 2019

c. PhD Committee Member (besides own students)

50 students in EEOB Department or IBES Program since 1994

d. Post-Doctoral Students:

- 1. Franz Smith, 2002 2004, 2012-2013
- 2. Jose Miguel Farina, 2001-2003
- 3. Douglas McNaught, 1999 2001
- 4. Salvatore Genovese 1996 1997

Graduate Teaching (other than Brown University)

a. PhD Thesis Directed (Northeastern University)

Salvatore Genovese, Ph.D, 1996

b. Masters Theses Directed (Northeastern University)

John Fiorentino, 1994

Gregory Shellenbarger, 1994

Nina Andres, 1994

James Leichter, 1993

Timothy Loher, 1992

Carolyn Sheild, 1990

Jeanette Dumas 1990

b. External PhD Committee Member

30 students since 1994 at:

University of Sydney, Universite de Laval, University of Tasmania, Woods Hole Oceanographic Institution, University of Massachusetts, Boston, College of William and Mary / Virginia Institute of Marine Science, Northeastern University, University of Melbourne, University of North Carolina, University of Bremen, Dalhousie University, University of Western Australia, University of New Hampshire