

JONATHAN S. LEFCHECK

Smithsonian Institution
Environmental Research Center
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EDUCATION

- 2015 **Ph.D., Marine Science**
School of Marine Science, Virginia Institute of Marine Science,
The College of William & Mary, Gloucester Point, VA
- 2009 **B.A., Biology**
Colby College, Waterville, ME

EXPERIENCE

- 2018-
present **Tennenbaum Coordinating Scientist**
MarineGEO Network, Smithsonian Institution, Edgewater, MD
- 2017-
2018 **Post-doctoral Researcher**
Bigelow Laboratory for Ocean Sciences, East Boothbay, Maine
- 2015-
2017 **Post-doctoral Researcher**
Virginia Institute of Marine Science,
The College of William & Mary, Gloucester Point, VA

PUBLICATIONS

*Graduate student †Undergraduate student

2021

57. Y.S. Esmaili*, G.N. Corte, H.H. Checon, C.G. Bilatto, **J.S. Lefcheck**, A.C.Z. Amaral, A. Turra. Revealing the drivers of taxonomic and functional diversity of nearshore fish assemblages: implications for conservation priorities. *Diversity and Distributions*. Accepted.
56. **J.S. Lefcheck**, G.J. Edgar, R.D. Stuart-Smith, A.E. Bates, C. Waldock, S.J. Brandl, S. Kinonmonth, S.D. Ling, J.E. Duffy, D.B. Rasher, A.A. Agrawal. Species richness and identity are key determinants of the biomass of global reef fish communities. *Nature Communications*. Accepted.
55. E. Montes, **J.S. Lefcheck**, E.G. Castro, E. Klein, A.C. Mazzuco, G. Bigatti, C. Cordeiro, N. Simoes, E. Macaya, N. Moity, E. Londoño-Cruz, B. Helmuth, E. Soto, B.D. Best, P. Miloslavich, F.E. Muller-Karger. Optimizing large-scale biodiversity sampling effort: towards an unbalanced survey design. *Oceanography* 34(2). [PDF](#)
54. C.J. Ritter, L.M. Harper, **J.S. Lefcheck**, V.J. Paul, R. Whippo, S. Jones, M.B. Ogburn, J.E. Duffy. Patterns of consumption across a Caribbean seascape: Roles of habitat and consumer species composition through time. *Frontiers in Marine Science* 8: 742907. [PDF](#)
53. L. de Pablo†, **J.S. Lefcheck**, L. Harper, V. Paul, S. Jones, R. Whippo, J. Seeman, D. Kline, J.E. Duffy. (2021) A doubling of coral cover on Carrie Bow Cay, Belize from 2014-2019. *Scientific Reports* 11: 19185. [PDF](#)

52. Y.S. Esmaeili*, G.N. Corte, H.H. Checon, T.R.C. Gomes, **J.S. Lefcheck**, A. Turra, A.C.Z. Amaral. Comprehensive estimation of surf zone fish biodiversity requires traditional and newly-developed sampling methods. *Marine Ecology Progress Series* 667: 131-144. [PDF](#)
51. G.N. Corte, H.H. Checon, Y.S. Esmaeili, **J.S. Lefcheck**, A.C.Z. Amaral. Mangrove fragments as key coastal reservoirs of taxonomic and functional biodiversity. *Biodiversity and Conservation* 30: 1573-1593. [PDF](#)
50. I. Cano*, R.I. Sellares, **J.S. Lefcheck**, M. Villalpando, A. Croquer. (2021) Effects of herbivory by the urchin *Diadema antillarum* on the early restoration success of the coral *Acropora cervicornis* in the central Caribbean. *Journal of Experimental Marine Biology and Ecology* 539: 151541. [PDF](#)
49. J.G. Monteiro, J.L. Jiménez, F. Gizzi, P. Přikryl, **J.S. Lefcheck**, R.S. Santos, J. Canning-Clode. (2021) Novel approach to enhance coastal habitat and biotope mapping with drone aerial imagery analysis. *Scientific Reports* 11: 574. [PDF](#)
48. C.E. Murphy†, R.J. Orth, **J.S. Lefcheck**. (2021) Habitat and distance structure seagrass epifaunal communities: A regional scale assessment in Chesapeake Bay. *Estuaries and Coasts* 44(2): 442–452. [PDF](#)
47. **J.S. Lefcheck**, B.W. Pfirmann, F.J. Fodrie, J.H. Grabowski, A.R. Hughes, A.R. Smyth. (2021) Consumption rates vary based on the presence and type of oyster structure: a seasonal and latitudinal comparison. *Journal of Experimental Marine Biology and Ecology* 536: 151501. [PDF](#)
46. A.J. Pinsonneault, P.J. Neale, M. Tzortziou, E.A. Canuel, C.R. Pondell, H. Morrissette, **J.S. Lefcheck**, J.P. Megonigal. (2021) Dissolved organic carbon sorption dynamics in tidal marsh soils. *Limnology and Oceanography* 66(1): 214-225. [PDF](#)

2020

45. K.M. Fraser*, **J.S. Lefcheck**, S.D. Ling, C. Mellin, R.D. Stuart-Smith, G.J. Edgar. (2020) Production of mobile invertebrate communities on shallow reefs from temperate to tropical seas. *Proceedings of the Royal Society B* 287: 20201798. [PDF](#)
44. G.J. Edgar, A. Cooper, S.C. Baker, ..., **J.S. Lefcheck**, ...R.D. Stuart-Smith (and 35 others). (2020) Reef Life Survey: Establishing the ecological basis for conservation of shallow marine life. *Biological Conservation* 252: 108855. [PDF](#)
43. M.A. Whalen, R. Whippo, J.J. Stachowicz, ..., **J.S. Lefcheck**, ...J.E. Duffy (and 61 others). (2020). Climate drives the geography of marine consumption by changing predator communities. *PNAS* 117 (45): 28160-28166. [PDF](#)
42. Y. Hautier, P. Zhang, M. Loreau, ... **J.S. Lefcheck**, ... S. Wang (and 44 others). (2020) General destabilizing effects of eutrophication on grassland productivity at multiple spatial scales. *Nature Communications* 11: 5375. [PDF](#)
41. R.J. Orth, **J.S. Lefcheck**, K.S. McGlathery, L. Aoki, M.L. Luckenbach, K.A. Moore, M.P.J. Oreska, R. Snyder, D.J. Wilcox, B. Lusk. (2020) Restoration of seagrass habitat leads to rapid recovery of coastal ecosystem services. *Science Advances* 6(41): eabc6434. [PDF](#) | [*Science Highlight](#) | [The Conversation](#) | [Le Monde](#) | [Smithsonian Magazine](#) | [Hakai Magazine](#)
40. D.B. Rasher, R.S. Steneck, J. Halfar, K.J. Kroeker, J.B. Ries, M.T. Tinker, P.T.W. Chan, J. Fietzke, N.A. Kamenos, B.H. Konar, **J.S. Lefcheck**, C.J.D. Norley, B.P. Weitzman, I.T. Westfield, J.A. Estes. (2020) Keystone predators govern the pathway and pace of climate impacts in a subarctic marine ecosystem. *Science* 369(6509): 1351-1354. [PDF](#)

39. C. Pimiento, F. Leprieur, D. Silvestro, **J.S. Lefcheck**, C. Albuoy, D.B. Rasher, M. Davis, J.-C. Svenning, J.N. Griffin. (2020) Functional diversity and the fate of marine megafauna in the Anthropocene. *Science Advances* 6(16): eaay7650. [PDF](#)
38. N.M. McLean, H.P. van der Jeugd, C.A.M. Van Turnhout, J.S. Lefcheck, M. van de Pol. (2020) Reduced avian body condition due to global warming has little reproductive or population consequences. *Oikos* 129(5): 714-730. [PDF](#)

2019

37. R.J. Orth, W.C. Dennison, C. Gurbisz, M. Hannam, J. Keisman, J.B. Landry, **J.S. Lefcheck**, K. Moore, R.R. Murphy, C.J. Patrick, J. Testa, D. Weller, D. Wilcox, R. Batiuk. (2019) Long-term annual aerial surveys of submersed aquatic vegetation (SAV) support science, management, and restoration. *Estuaries & Coasts*. [PDF](#)
36. A.E. Bates, R.S.C. Cooke, M.I. Duncan, G.J. Edgar, J. Bruno, L. Benedetti-Cecchi, I.M. Côté, **J.S. Lefcheck**, M.J. Costello, N. Barrett, T.J. Bird, P.B. Fenberg, R.D. Stuart-Smith. (2019) Climate resilience in marine protected areas and the 'Protection Paradox.' *Biological Conservation* 236: 305-314. [PDF](#)
35. S.J. Brandl, D.B. Rasher, I. Côté, J. Casey, E. Darling, **J.S. Lefcheck**, J.E. Duffy. (2019) Functioning coral reefs for the future: eight core processes and the influence of biodiversity. *Frontiers in Ecology and the Environment* 17(80): 445-454. [PDF](#)
34. **J.S. Lefcheck**, B.B. Hughes, A.J. Johnson, B. Pfirrmann, D.B. Rasher, A.R. Smyth, B.L. Williams, M.W. Beck, R.J. Orth. (2019) Are coastal habitats important nurseries? A meta-analysis. *Conservation Letters* 12(4): e12645. [PDF](#) | [Press release](#)
33. **J.S. Lefcheck**, A.A. Innes-Gold†, S.J. Brandl, R.S. Steneck, R. Torres, D.B. Rasher. (2019) Tropical fish diversity enhances coral reef functioning across multiple scales. *Science Advances* 5(3): eaav6420. [PDF](#)
32. B. Gauzens, A. Barnes, D. Giling, J. Hines, M. Jochum, **J.S. Lefcheck**, B. Rosenbaum, S. Wang, U. Brose. (2019) *fluxweb*: A R package to easily estimate energy fluxes in foodwebs. *Methods in Ecology and Evolution* 10(2): 270-279. [PDF](#)

2018

31. J.P. Richardson, **J.S. Lefcheck**, R.J. Orth. (2018) Warming temperatures alter the relative abundance and distribution of two co-occurring foundational seagrasses in Chesapeake Bay, USA. *Marine Ecology Progress Series* 599: 65-74. [PDF](#)
30. J.B. Grace, D.J. Johnson, **J.S. Lefcheck**, J.E. Byrnes. (2018) Standardized effects in ecological models containing binary outcomes. *Ecosphere* 9(6): e02283. [PDF](#)
29. S. Bornbusch†, **J.S. Lefcheck**, J.E. Duffy. (2018) Allometry of individual reproduction and defense in eusocial colonies: A comparative approach to trade-offs in social sponge-dwelling *Synalpheus* shrimps. *PLoS ONE* 13(3): e0193305. [PDF](#) | [National Geographic](#)
28. M. Dornelas, L.H. Antão, F. Moyes, ..., **J.S. Lefcheck**, ..., K. Zawada (and 248 others). (2017) BioTIME: A database of biodiversity time series for the Anthropocene. *Global Ecology and Biogeography* 27:760-786. [PDF](#)
27. **J.S. Lefcheck**, R.J. Orth, W.C. Dennison, D.J. Wilcox, R.R. Murphy, J. Keisman, C. Gurbisz, M. Hannam, J.B. Landry, K. A. Moore, C.J. Patrick, J. Testa, D.E. Weller, R.A. Batiuk. (2018) Long-term nutrient reductions lead to the unprecedented recovery of a temperate coastal region. *PNAS* (115)14: 3658-3662. [PDF](#) | [**Cozzarelli Prize](#) | [Washington Post 1](#), [2](#) | [NPR](#) | [PNAS Commentary](#)

26. A.D. Barnes, M. Jochum, **J.S. Lefcheck**, N. Eisenhauer, C. Scherber, M.I. O'Connor, P. de Ruiter, U. Brose. (2018) Energy flux: the link between multitrophic biodiversity and ecosystem functioning. *Trends in Ecology and Evolution*. 33(3): 186-197 [PDF](#)

2017

25. G.J. Edgar, T.J. Alexander, **J.S. Lefcheck**, A.E. Bates, S.J. Kininmonth, R.J. Thomson, J.E. Duffy, M.J. Costello, R.D. Stuart-Smith. (2017) Abundance and local-scale processes contribute to multi-phyla global marine diversity gradients. *Science Advances* 3(10): e1700419. [PDF](#) | [Press release](#)
24. R.J. Orth, W.C. Dennison, **J.S. Lefcheck**, C. Gurbisz, M. Hannam, J. Keisman, J.B. Landry, K.A. Moore, R.R. Murphy, C.J. Patrick, J. Testa, D.E. Weller, D.J. Wilcox. (2017) Submersed aquatic vegetation in Chesapeake Bay: sentinel species in a changing world. *BioScience* 67(8): 698-712. [PDF](#)
23. R.J. Orth, **J.S. Lefcheck**, D.J. Wilcox. (2017) Boat propeller scarring of seagrass beds in lower Chesapeake Bay, USA: Patterns, causes, recovery, and management. *Estuaries & Coasts* 40(6): 1666-1676. [PDF](#) | [AFS Research Brief](#) | [CESN Newsletter](#)
22. **J.S. Lefcheck**, D.J. Wilcox, R.M. Murphy, S.R. Marion, R.J. Orth. (2017) Multiple stressors threaten a critical foundational habitat, *Zostera marina*, in Chesapeake Bay, USA. *Global Change Biology* 23(9): 3474-3483. [PDF](#) | [Press release](#) | [New York Times](#) | [Chesapeake Bay Journal](#)
21. R.D. Stuart-Smith, G.J. Edgar, N.S. Barrett, ..., **J.S. Lefcheck**, ..., R. Thomson (and 18 others). (2017) Assessing National Biodiversity Trends for Rocky and Coral Reefs through the Integration of Citizen Science and Scientific Monitoring Programs. *BioScience* 67(2): 134-146. *Editor's Choice. [PDF](#)
20. **J.S. Lefcheck**, S.R. Marion, R.J. Orth. (2017) Restored eelgrass (*Zostera marina* L.) as a refuge for epifaunal biodiversity in mid-Western Atlantic coastal bays. *Estuaries & Coasts* 40(1): 200. [PDF](#) | [CESN Newsletter](#)

2016

19. **J.S. Lefcheck**, S.R. Marion, A.V. Lombana, R.J. Orth. (2016) Faunal communities are invariant to fragmentation in experimental seagrass landscapes. *PLoS ONE*. 11(5): e0156550. [PDF](#)
18. J.E. Duffy, **J.S. Lefcheck**, R.D. Stuart-Smith, S.A. Navarette, G.J. Edgar. (2016) Biodiversity enhances reef fish biomass and resistance to climate change. *PNAS*. 113(22): 6230-6235. [PDF](#) | [Press release](#)
17. E. Schmitt, M.W. Luckenbach, **J.S. Lefcheck**, R.J. Orth. (2016) Predator-prey interactions in a restored eelgrass ecosystem: Strategies for maximizing success of a reintroduced species, *Argopecten irradians*. *Restoration Ecology* 24(4): 558-565. [PDF](#)
16. **J.S. Lefcheck**, S.J. Brandl, P.L. Reynolds, A.R. Smyth, S.T. Meyer. (2016) Extending rapid ecosystem function assessments to marine systems. *TRENDS in Ecology and Evolution* 31(4): 251-253. [PDF](#)
15. **J.S. Lefcheck**. (2016) piecewiseSEM: Piecewise structural equation modeling in R for ecology, evolution, and systematics. *Methods in Ecology & Evolution*. 7(5): 573-579. [PDF](#) | [Highly commended, British Ecological Society](#)

2015

14. J.E. Duffy, S.L. Ziegler, J.E. Campbell, P. Bippus[†], **J.S. Lefcheck**. (2015) Squidpops: A simple tool to crowdsource a global map of marine predation intensity. *PLoS ONE* 10(11): e0142994. [PDF](#)
13. **J.S. Lefcheck**, J.E. Duffy. (2015) Multitrophic functional diversity predicts ecosystem functioning in experimental assemblages of estuarine consumers. *Ecology* 96(11): 2973-2983. [PDF](#)
12. J.E. Duffy, P.L. Reynolds, C. Boström, J.A. Coyer, M. Cusson, S. Donadi, J.G. Douglass, J. Eklöf, A. Engelen, B.K. Eriksson, S. Fredriksen, L. Gamfeldt, C. Gustafsson, G. Hoarau, M. Hori, K. Hovel, K. Iken, **J.S. Lefcheck**, P. Moksnes, M. Nakaoka, M.I. O'Connor, J.L. Olsen, J.P. Richardson, J.L. Ruesink, E.E. Sotka, J. Thormar, M.A. Whalen, J.J. Stachowicz. (2015) Biodiversity mediates top-down control in eelgrass ecosystems: A global comparative experiment. *Ecology Letters* 18(7): 696-705. [PDF](#) | [Press release](#)
11. **J.S. Lefcheck**, J.E.K. Byrnes, F. Isbell, L. Gamfeldt, J.H. Griffin, N. Eisenhauer, M.J.H. Hensel, A. Hector, B.J. Cardinale, J.E. Duffy. (2015) Biodiversity enhances ecosystem multifunctionality across trophic levels and habitats. *Nature Communications* 6: 6936. [PDF](#) | [Press release](#)
10. L. Gamfeldt, J.S. Lefcheck, J.E.K. Byrnes, J.E. Duffy, B.J. Cardinale, J.N. Griffin. (2015) Marine biodiversity and ecosystem functioning: what's known and what's next. *Oikos* 124(3): 252-265. *Editor's Choice. [PDF](#) | [Oikos Blog](#)
9. R. Stuart-Smith, A.E. Bates, J.S. Lefcheck, J.E. Duffy, S.C. Baker, R.J. Thomson, J.F. Stuart-Smith, N.A. Hill, S.J. Kininmonth, L. Airoldi, M.A. Becerro, S.J. Campbell, T.P. Dawson, S.A. Navarette, G.A. Soler, E.M.A. Strain, T.J. Willis, G.J. Edgar. (2015) The potential of trait-based approaches to contribute to marine conservation. *Marine Policy* 51: 148-150. [PDF](#)
8. **J.S. Lefcheck**, V.A.G. Bastazini, J.N. Griffin. (2015) Choosing and using traits in functional diversity research. *Environmental Conservation* 42(2): 104-107. *Invited contribution. **Paper of the month. [PDF](#) | [Cambridge Blogs](#)

2014

7. J.E.K. Byrnes, **J.S. Lefcheck**, L. Gamfeldt, J.N. Griffin, F.I. Isbell., A. Hector. (2014) Multifunctionality does not imply that all functions are positively correlated. *PNAS*. 111(51): E5490. [PDF](#)
6. T.J. Bird, A.E. Bates, **J.S. Lefcheck**, N.A. Hill, S. Wotherspoon, M. Krkosek, R. Stuart-Smith, J. Stuart-Smith, G. Pecl, G.J. Edgar, R.J. Thomson, N. Barrett, S. Frusher. (2014) Statistical solutions for error and bias in global citizen science datasets. *Biological Conservation* 173: 144-154. *Invited contribution. [PDF](#)
5. **J.S. Lefcheck**, J. van Montfrans, R.J. Orth, E.L. Schmitt, J.E. Duffy, M. Luckenbach. (2014) Epifaunal invertebrates as predators of juvenile bay scallops (*Argopectin irradians*). *Journal of Experimental Marine Biology and Ecology* 454: 18-25. [PDF](#)
4. J.E.K. Byrnes, L. Gamfeldt, F. Isbell, J.E. Duffy, **J.S. Lefcheck**, J.N. Griffin, A. Hector, B.J. Cardinale, D.U. Hooper, L.E. Dee. (2014) Investigating the relationship between biodiversity and ecosystem multifunctionality: Challenges and solutions. *Methods in Ecology and Evolution* 5(2): 111-124. [PDF](#)
3. **J.S. Lefcheck**, A. Buchheister, K.M. Laumann, M. Stratton, K. Sobocinski, S. Chak, T.R. Clardy, P.L. Reynolds, R.J. Latour, J.E. Duffy. (2014) Dimensions of biodiversity in Chesapeake Bay demersal fishes: Patterns and drivers through space and time. *Ecosphere* 5(2): art14. [PDF](#)

2013

2. R. Stuart-Smith, A.E. Bates, **J.S. Lefcheck**, J.E. Duffy, S.C. Baker, R.J. Thomson, J.F. Stuart-Smith, N.A. Hill, S.J. Kininmonth, L. Airoidi, M.A. Becerro, S.J. Campbell, T.P. Dawson, S.A. Navarette, G.A. Soler, E.M.A. Strain, T.J. Willis, G.J. Edgar. (2013) Integrating abundance and functional traits reveals new global hotspots of fish diversity. *Nature* 501(7468): 539-542. [PDF](#) | [Press release](#)
1. **J.S. Lefcheck**, M.A. Whalen, T.M. Davenport, J.P. Stone, J.E. Duffy. (2013) Physiological effects of dietary mixing on consumer fitness: A meta-analysis. *Ecology* 94(3): 565-527. [PDF](#) | [Press release](#)

IN REVISION

S.J. Brandl, **J.S. Lefcheck**, A.E. Bates, D.B. Rasher, T. Norin. A metabolic framework to examine the assembly and functioning of animal communities.

J. Grinstead, P. Ortiz-Ramirez, X. Carreto-Guadarrama, A. Arrieta-Zamudio, A. Pratt, M. Cantú-Sánchez, **J.S. Lefcheck**, D. Melamad. Piecewise structural equation modeling of linguistic and non-linguistic cognitive predictors of the quantity implicature in child language.

K.J. Haynes, A.M. Liebhold, **J.S. Lefcheck**, R.S. Morin, G. Wang. Climate affects the outbreaks of a forest defoliator indirectly through its tree hosts.

R.S.C. Cooke, W. Gearty, A.S.A. Chapman, J. Dunic, G.J. Edgar, **J.S. Lefcheck**, G. Rilov, C.R. McClain, R.D. Stuart-Smith, S.K. Lyons, A.E. Bates. Humans are disrupting a longstanding trophic-size structure in vertebrates.

IN REVIEW

(PDFs available upon request)

A.P. Ramus*, **J.S. Lefcheck**, Z.T. Long. Foundational biodiversity effects propagate through coastal food webs via multiple pathways.

D. Cottrell*, **J.S. Lefcheck**, B.J. Peterson. Herbivory-induced facilitation increases from low to high stress: an observational and experimental test in seagrass.

[Google Scholar](#) Citations: 5537, h-index: 26, i10-index: 37

GRANTS

2021-2022 *Modelling climate change impacts on Chesapeake Bay SAV*. Chesapeake Bay Trust. Co-lead. (Total subcontract: \$11,231)

2021-2022 *Mangrove and seagrass carbon storage estimates for Belize*. Pew Charitable Trusts. Co-Principal Investigator. (Total award amount: \$226,490)

TEACHING

Instructor

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| 2021 | Instructor, Structural Equation Modeling, PR Statistics, Virtual. |
| 2019 | Instructor, Structural Equation Modeling, Stockholm University, Stockholm, Sweden. |
| 2018 | Instructor, Structural Equation Modeling, PR Statistics, Glasgow, UK. |
| 2017 | Co-instructor, Structural Equation Modeling, PR Statistics, Port Talbot, UK. |
| 2017 | Instructor, Meta-analysis in Ecology (MSCI 698, Spring). Virginia Institute of Marine Science, The College of William & Mary |

- 2017 Instructor, Structural Equation Modeling, Southampton University, UK.
- 2016 Instructor, Structural Equation Modeling. University of Göttingen, Germany.
- 2016 Instructor, Contemporary Topics in Ecology (MSCI 698, Spring). Virginia Institute of Marine Science, The College of William & Mary
- 2015 Instructor, Undergraduate Research (MSCI 490, Fall, Spring). The College of William & Mary
- 2014 Co-instructor, Seagrass Ecosystem Ecology (MSCI 398, Spring), The College & William & Mary. Part of networked class with two other universities. [Press release](#)
- 2012 Co-instructor, Dimensions of Biodiversity Distributed Graduate Seminar (MSCI 698). Virginia Institute of Marine Science. Part of networked class with 13 other universities

Undergraduate and Post-Graduate Mentees

Yasmina Esmaili (2021-2022, PhD Fellow), Paola Granados (2021, NSF REU), Kirsten Johnston (2020-2021), Luis de Pablo (2019-2020, NSF REU), Claire Murphy (2016-2020), Annie Innes-Gold (2017, NSF REU), Nina Lesser (2016-2017), Teddy Noll (2016-2017), Rachael Caron (2016-2017), Casey Maclean (2016-2017), Lauren Herbine (2014-2017, W&M Monroe Scholar), Rachel Wimmer (2014-2016), Paige Bippus (2014, NSF REU), David Godschalk (2014), Danielle Hall (2012-2014), Kyle Belfort (2012-2014), Sally Bornbusch (2012-2013), Katelyn Jenkins (2012-2013)

ORAL PRESENTATIONS

**Presenting author*

- 2021 “The green in the blue: how coastal ecosystems are advancing ecology and saving the planet.” **J.S. Lefcheck.** (2021) [Invited Seminar](#). Brown University, Providence, RI.
- 2021 “Towards a global seagrass observing community for conservation and synthesis.” **J.S. Lefcheck**, M. Portouoglou, L. Weatherdon, S. Pruckner, A. Kornbluth, J.E. Duffy. (2021) CERF 26th Biennial Conference (Virtual).
- 2021 “Marine Science and you can too! The power of global collaborations.” **J.S. Lefcheck.** (2021) [Invited lecturer](#). University of New Hampshire (Virtual).
- 2021 “Towards a Global Seagrass Monitoring Network: The past, present, and future of collaboration.” **J.S. Lefcheck.** (2021) [Invited Seminar](#). International Seagrass Biology Workshop Pre-event Seminar Series (Virtual).
- 2020 “To what extent do seagrass ecosystems support marine good webs? Maldives meadows within a global context.” P. Roe*, **J.S. Lefcheck**, K. Mohamen, H. Nihad. (2020) Third Maldives Marine Science Symposium.
- 2020 “Global trajectories of seagrass ecosystems into the 21st Century” **J.S. Lefcheck.** (2020) [Organized session](#). National Coastal and Estuarine Summit (Virtual).
- 2020 “From sea to sky: What cross-scale observations tell us about the human impacts on underwater grasses.” **J.S. Lefcheck.** (2020) [Invited seminar](#). University of Western Australia, Perth, Australia.
- 2019 “How to design a biodiversity-ecosystem functioning experiment in 2019.” **J.S. Lefcheck.** (2019) [Invited lecturer](#). Brown University, Providence, RI.
- 2019 “Tropicalization of mid-western Atlantic coastal bays by pinfish: a combined ecological and oceanographic perspective.” **J.S. Lefcheck**, F.J. Fodrie, D. Gong, M. Faulkner, R.J. Orth. (2019) CERF 25th Biennial Conference, Mobile, AL.
- 2019 “From micro to macro: the functional role of biodiversity across scales.” **J.S. Lefcheck.** (2019) [Invited seminar](#). Stockholm University, Stockholm, Sweden.

- 2018 "Status and Trends of Submersed Aquatic Vegetation (SAV) in Chesapeake Bay: A Synthesis" W.C. Dennison, **J.S. Lefcheck**, C. Gurbisz, R.J. Orth. (2018) Invited panelist. Chesapeake Research and Modeling Symposium, Annapolis, MD.
- 2018 "Scaling up and digging deep: What new ideas about biodiversity can tell us about the functioning of natural systems." **J.S. Lefcheck**. (2018) Invited Seminar, Smithsonian Environmental Research Center, Edgewater, MD.
- 2018 "High species richness enhances cover of a critical coastal habitat: Insight and mechanisms from 30 years of monitoring in Chesapeake Bay." **J.S. Lefcheck**, C.J. Patrick, D.J. Wilcox, R.R. Murphy, J. Keisman, D.E. Weller, W.C. Dennison, R.J. Orth. (2018) World Conference on Marine Biodiversity, Montreal, Canada.
- 2018 "Scaling up and digging deep: What new ideas about biodiversity can tell us about the functioning of ecosystems." **J.S. Lefcheck**. (2018) Invited Seminar, Duke University, Beaufort, NC.
- 2017 "From the land to the sea: how human activities affect submersed aquatic vegetation in Chesapeake Bay." **J.S. Lefcheck**. (2017) Invited seminar, NOAA, Silver Spring, MD.
- 2017 "Scaling up and digging deep: What new ideas about biodiversity can tell us about the functioning of ecosystems." **J.S. Lefcheck**. (2017) Invited seminar, Wood's Hole Oceanographic Institute, Falmouth, MA.
- 2017 "Nutrient reductions promote Submersed Aquatic Vegetation: Thirty years of change in Chesapeake Bay." **J.S. Lefcheck**, C.J. Patrick*, R.J. Orth, W.C. Dennison, D.J. Wilcox, R.R. Murphy, J. Keisman, C. Gurbisz, M. Hannam, J.B. Landry, K. A. Moore, C.J. Patrick, J. Testa, D.E. Weller, R.A. Batuik. (2017) 24th Coastal and Estuarine Research Federation Biennial Meeting, Providence, RI.
- 2017 "Pinfish incursion: ecosystem consequences for mid-Atlantic seagrass meadows." J.P. Richardson*, R.J. Orth, **J.S. Lefcheck**. (2017) 24th Coastal and Estuarine Research Federation Biennial Meeting, Providence, RI.
- 2017 "Biodiversity in a changing world: from Amphipods to *Zostera*, and everything in between." **J.S. Lefcheck**. (2017) Invited seminar, University of Connecticut, Avery Point, CT.
- 2017 "Reinventing biodiversity: From the very small to the very large." **J.S. Lefcheck**. (2017) Invited seminar, University of North Carolina, Chapel Hill, NC.
- 2017 "Frontiers in biodiversity: New paradigms, challenges, and solutions." **J.S. Lefcheck**. (2017) Invited seminar, University of Virginia, Charlottesville, VA.
- 2016 "Clearing the air about 'multifunctionality': what is it and what does it mean for ecosystem ecology?" **J.S. Lefcheck**. (2016) Invited seminar, University of Lund, Sweden.
- 2016 "Frontiers in biodiversity: From buckets to the biosphere." **J.S. Lefcheck**. (2016) Invited seminar, University of Göttingen, Germany.
- 2015 "The bugs are back in town!" R.J. Orth*, S.R. Marion, **J.S. Lefcheck**. (2015) CERF 23rd Biennial Conference, Portland, OR.
- 2015 "Functional recovery of an epifaunal invertebrate community associated with a restored eelgrass bed." **J.S. Lefcheck**, S.R. Marion, R.J. Orth. (2015) 100th Ecological Society of America Meeting, Baltimore, MD.
- 2015 "Top-down versus bottom-up control of a temperate eelgrass system: insights from a 15-year ecological survey." **J.S. Lefcheck**, J.P. Richardson, J.E. Duffy. (2015) 45th Benthic Ecology Meeting, Quebec, Canada.

- 2014 "The 'new' diversity: global insights into the functional importance of biodiversity." **J.S. Lefcheck**. (2014) Invited seminar, Colby College, Waterville, ME.
- 2014 "Biodiversity drives ecosystem multifunctionality: a meta-analysis." **J.S. Lefcheck**, J.E.K. Byrnes, F. Isbell, L. Gamfeldt, J.N. Griffin, M. Hensel, B.J. Cardinale, D.U. Hooper, J.E. Duffy. (2014) 99th Ecological Society of America Meeting, Sacramento, CA.
- 2014 "Size structure drivers of crustacean grazer epifauna in a Chesapeake Bay *Zostera marina* bed." Richardson, J. P.*, **J. S. Lefcheck**, S. L. Ziegler, J. E. Duffy. (2014) 43rd Benthic Ecology Meeting, Jacksonville, FL.
- 2013 "Functional diversity and richness drive ecosystem functioning in experimental estuarine communities." **J.S. Lefcheck**, & J.E. Duffy. (2013) 42nd Benthic Ecology Meeting, Savannah, GA.
- 2013 "Bay scallop restoration and micropredators." **J.S. Lefcheck**, J. van Montfrans, E. Schmitt, R.J. Orth, J.E. Duffy, M. Luckenbach. (2013) Virginia SeaGrant Symposium, Richmond, VA.
- 2012 "Components of biodiversity in a Chesapeake Bay groundfish assemblage: A high-resolution analysis of patterns and drivers." **J.S. Lefcheck**, A. Buchheister, S. Chak, T. Clardy, K.M. Laumann, P. Reynolds, K. Sobocinski, M. Stratton, J.E. Duffy. (2012) 97th Ecological Society of America Meeting, Portland, OR.
- 2012 "Biodiversity effects on provision of multiple ecosystem functions in marine systems: A meta-analysis." **J.S. Lefcheck**, L. Gamfeldt, J.E.K. Byrnes, J.N. Griffin, M. O'Connor, B.J. Cardinale, J.E. Duffy. (2012) 41st Benthic Ecology Meeting, Norfolk, VA.

POSTERS

*Presenting author † Undergraduate co-author

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- 2019 "Drivers of regional-scale patterns of seagrass epifaunal invertebrates in the Chesapeake Bay, USA." C. Murphy*†, **J.S. Lefcheck**, R.J. Orth. CERF 25th Biennial Conference, Mobile, AL.
- 2015 "Factors affecting trophic control of community structure and ecosystem functioning in experimental seagrass (*Zostera marina* L.) mesocosms." D.R. Godschalk*†, **J.S. Lefcheck**, J.E. Duffy. (2015) 45th Benthic Ecology Meeting, Quebec, Canada.
- 2015 "Changes in faunal community structure after heat induced die-offs in a Chesapeake Bay eelgrass bed (*Zostera marina* L.)." D.K. Hall*†, J.P. Richardson, J.E. Duffy, **J.S. Lefcheck**. (2015) 45th Benthic Ecology Meeting, Quebec, Canada.
- 2014 "Shifts in mesograzer community structure following two major eelgrass die-offs in the Chesapeake Bay." Ziegler S. L.*, **J. S. Lefcheck**, J. P. Richardson and J. E. Duffy. (2014) 43rd Benthic Ecology Meeting, Jacksonville, FL.
- 2013 "BioDiverse Perspectives: blogging to foster communication among graduate students." **J.S. Lefcheck**, V. Bastazini, F. Halliday*, H. Burgess, C. Robinson, R. Sewell-Nesteruk, C. Maranto, J. Parrish. (2013) 98th Ecological Society of America Meeting, Minneapolis, MN.
- 2013 "Eelgrass and bay scallop restoration in Virginia's coastal bays." E.L. Schmitt*, R.J. Orth, M. Luckenbach, K.A. Moore, S.R. Marion, D.J. Wilcox, **J.S. Lefcheck**, J.E. Duffy, D.B. Parrish, S. Bonniwell, A. Curry, S. Fate, P. Smith, J. van Montfrans. (2013) 42nd Benthic Ecology Meeting, Savannah, GA.
- 2008 "Factors affecting trophic control of community structure and ecosystem functioning in experimental seagrass mesocosms." **J.S. Lefcheck**, J.E. Duffy, J.P. Richardson. (2008) 41st American Geophysical Union Fall Meeting, San Francisco, CA.

AWARDS & HONORS

- 2019 Cozzarelli Prize for Scientific Excellence and Originality. Editorial Board of the *Proceedings of National Academy of Sciences*. [Press release](#)
- 2015 Thatcher Prize for Excellence in Graduate and Professional Study. The College of William & Mary. [Press release](#)
- 2013 Matthew Fontaine Maury Fellowship Award. Virginia Institute of Marine Science. Recognizes interdisciplinary achievements in marine and environmental scholarship.
- 2012 VIMS Dean's Fellowship Award. Virginia Institute of Marine Science. Recognizes excellence in research.
- 2011 VIMS Council Fellowship Award. Virginia Institute of Marine Science. Recognizes excellence in research.
- 2010 Kelly Watson Fellowship Award. Virginia Institute of Marine Science. Tuition and stipend awarded for excellent performance in the first year of graduate school. [Press release](#)

SERVICE & MEMBERSHIPS

Reviewer: *Advances in Ecology*, *African Journal of Marine Science*, *American Naturalist*, *Aquatic Ecology*, *Biological Conservation*, *Botanica Marina*, *Conservation Biology*, *Ecological Applications*, *Ecology*, *Ecology Letters*, *Environmental Conservation*, *Estuaries and Coasts*, *Frontiers in Plant Science*, *Functional Ecology*, *Global Ecology and Biogeography*, *Ideas in Ecology and Evolution*, *Journal of Experimental Marine Biology and Ecology*, *Journal of Ecology*, *Journal of Plant Ecology*, *Marine Ecology Progress Series*, *Methods in Ecology & Evolution*, *Nature*, *Nature Climate Change*, *Nature Communications*, *Nature Ecology & Evolution*, *Nature Scientific Reports*, *Oecologia*, *Oikos*, *Proceedings of the National Academy of Sciences*, *Proceedings of the Royal Society B*, *Science Advances* | [Publons Profile](#)

WORKING GROUPS

- 2020- C-GRASS: Coordinated Global Research Assessment of Seagrass Systems. Scientific Committee on Ocean Research, co-lead for Data Synthesis Group. Virtual.
- 2017- sFDvent - A functional trait perspective on the global biodiversity of hydrothermal vent communities. German Center for Integrative Biodiversity Research (iDiv). Halle-Jena-Leipzig, Germany.
- 2016- Submersed Aquatic Vegetation Synthesis Group (SAVSyn), Chesapeake Bay Program (EPA) and University of Maryland Center for Environmental Science. Annapolis, Maryland.
- 2017
- 2013 Summer Institute, National Center for Ecological Analysis and Synthesis (NCEAS). University of California, Santa Barbara.
- 2011- Partner, Zostera Experimental Network (ZEN, www.zenscience.org). Gloucester Point, Virginia.
- 2017
- 2010- Biodiversity and the functioning of ecosystems: Translating results from model experiments into functional reality, National Center for Ecological Analysis and Synthesis (NCEAS). University of California, Santa Barbara.
- 2011

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