

Scott Isaac Large

CHIEF, ECOSYSTEM DYNAMICS AND ASSESSMENT BRANCH

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Education

2011	Ph.D. Marine Biology	Texas A&M University
2008	M.S. Biology	Texas A&M University – Corpus Christi
2006	B.A. Biology	Hendrix College

Employment history

2018–present	Chief , Ecosystem Dynamics and Assessment Branch – Northeast Fisheries Science Center
2014–2018	Professional Officer , Advice Department – International Council for the Exploration of the Sea (ICES)
2011–2014	Postdoctoral Researcher , Integrated Statistics, Inc & Northeast Fisheries Science Center

OTHER POSITIONS

2022–present	Adjunct faculty , Massachusetts Maritime Academy
2019–present	Associate Editor , <i>Frontiers in Marine Science</i>
2017–2017	Stock Assessment Consultant , United Nations Food and Agriculture Organization (FAO)

Publications

PHD THESIS

1. Large, S. I. (2011). *Biogeographic patterns, predator identity, and chemical signals influence the occurrence and magnitude of non-lethal predator effects* [PhD thesis]. Texas A&M University; Texas A&M University.

REFEREED RESEARCH PAPERS

1. Caracappa, J. C., Beet, A., Gaichas, S., Gamble, R. J., Hyde, K. J., Large, S. I., Morse, R. E., Stock, C. A., & Saba, V. S. (2022). A northeast united states atlantis marine ecosystem model with ocean reanalysis and ocean color forcing. *Ecological Modelling*, 471, 110038.
2. Friedland, K. D., Langan, J. A., Large, S. I., Selden, R. L., Link, J. S., Watson, R. A., & Collie, J. S. (2020). Changes in higher trophic level productivity, diversity and niche space in a rapidly warming continental shelf ecosystem. *Science of the Total Environment*, 704, 135270.
3. Bastille, K., Hardison, S., deWitt, L., Brown, J., Samhouri, J., Gaichas, S., Lucey, S., Kearney, K., Best, B., Cross, S., et al. (2020). Improving the IEA approach using principles of open data science. *Coastal Management*, 49(1), 72–89.
4. Samhouri, J. F., Andrews, K. S., Fay, G., Harvey, C. J., Hazen, E. L., Hennessey, S. M., Holsman, K., Hunsicker, M. E., Large, S. I., Marshall, K. N., et al. (2017). Defining ecosystem thresholds for human activities and environmental pressures in the california current. *Ecosphere*, 8(6), e01860.
5. Tam, J. C., Link, J. S., Rossberg, A. G., Rogers, S. I., Levin, P. S., Rochet, M.-J., Bundy, A., Belgrano, A., Libralato, S., Tomczak, M., et al. (2017). Towards ecosystem-based management: Identifying operational food-web indicators for marine ecosystems. *ICES Journal of Marine Science*, 74(7), 2040–2052.
6. Tam, J. C., Link, J. S., Large, S. I., Andrews, K., Friedland, K. D., Gove, J., Hazen, E., Holsman, K., Karnauskas, M., Samhouri, J. F., et al. (2017). Comparing apples to oranges: Common trends and thresholds in anthropogenic and environmental pressures across multiple marine ecosystems. *Frontiers in Marine Science*, 4, 282.
7. Coro, G., Large, S., Magliozzi, C., & Pagano, P. (2016). Analysing and forecasting fisheries time series: Purse seine in indian ocean as a case study. *ICES Journal of Marine Science*, 73(10), 2552–2571.
8. Tam, J., Link, J., Large, S., Bogstad, B., Bundy, A., Cook, A., Dingsør, G., Dolgov, A., Howell, D., Kempf, A., et al. (2016). A trans-atlantic examination of haddock melanogrammus aeglefinus food habits. *Journal of Fish Biology*, 88(6), 2203–2218.
9. Friedland, K. D., Record, N. R., Asch, R. G., Kristiansen, T., Saba, V. S., Drinkwater, K. F., Henson, S., Leaf, R. T., Morse, R. E., Johns, D. G., et al. (2016). Seasonal phytoplankton blooms in the north atlantic linked to the overwintering strategies of copepodsSeasonal plankton blooms and zooplankton that diapause. *Elementa: Science of the Anthropocene*, 4.
10. Coll, M., Shannon, L., Kleisner, K. M., Juan-Jordá, M., Bundy, A., Akoglu, A., Banaru, D., Boldt, J. L., Borges, M., Cook, A., et al. (2016). Ecological indicators to capture the effects of fishing on biodiversity and conservation status of marine ecosystems. *Ecological Indicators*, 60, 947–962.

11. Fu, C., Large, S., Knight, B., Richardson, A. J., Bundy, A., Reygondeau, G., Boldt, J., Van Der Meeren, G. I., Torres, M. A., Sobrino, I., et al. (2015). Relationships among fisheries exploitation, environmental conditions, and ecological indicators across a series of marine ecosystems. *Journal of Marine Systems*, 148, 101–111.
12. Fay, G., Link, J. S., Large, S. I., & Gamble, R. J. (2015). Management performance of ecological indicators in the georges bank finfish fishery. *ICES Journal of Marine Science*, 72(5), 1285–1296.
13. Friedland, K. D., Leaf, R. T., Kane, J., Tommasi, D., Asch, R. G., Rebuck, N., Ji, R., Large, S. I., Stock, C., & Saba, V. S. (2015). Spring bloom dynamics and zooplankton biomass response on the US northeast continental shelf. *Continental Shelf Research*, 102, 47–61.
14. Friedland, K. D., Leaf, R. T., Kristiansen, T., & Large, S. I. (2015). Layered effects of parental condition and larval survival on the recruitment of neighboring haddock stocks. *Canadian Journal of Fisheries and Aquatic Sciences*, 72(11), 1672–1681.
15. Kleisner, K. M., Coll, M., Lynam, C. P., Bundy, A., Shannon, L., Shin, Y.-J., Boldt, J. L., Diallo, I., Fox, C., Gascuel, D., et al. (2015). Evaluating changes in marine communities that provide ecosystem services through comparative assessments of community indicators. *Ecosystem Services*, 16, 413–429.
16. Large, S. I., Fay, G., Friedland, K. D., & Link, J. S. (2015). Critical points in ecosystem responses to fishing and environmental pressures. *Marine Ecology Progress Series*, 521, 1–17.
17. Large, S. I., Fay, G., Friedland, K. D., & Link, J. S. (2015). Quantifying patterns of change in marine ecosystem response to multiple pressures. *PLoS One*.
18. Fay, G., Large, S. I., Link, J. S., & Gamble, R. J. (2013). Testing systemic fishing responses with ecosystem indicators. *Ecological Modelling*, 265, 45–55.
19. Large, S. I., & Smee, D. L. (2013). Biogeographic variation in behavioral and morphological responses to predation risk. *Oecologia*, 171(4), 961–969.
20. Large, S. I., Fay, G., Friedland, K. D., & Link, J. S. (2013). Defining trends and thresholds in responses of ecological indicators to fishing and environmental pressures. *ICES Journal of Marine Science*, 70(4), 755–767.
21. Large, S. I., Torres, P., & Smee, D. L. (2012). Behavior and morphology of nucella lapillus influenced by predator type and predator diet. *Aquatic Biology*, 16(2), 189–196.
22. Large, S. I., Smee, D. L., & Trussell, G. C. (2011). Environmental conditions influence the frequency of prey responses to predation risk. *Marine Ecology Progress Series*, 422, 41–49.
23. Large, S. I., & Smee, D. L. (2010). Type and nature of cues used by nucella lapillus to evaluate predation risk. *Journal of Experimental Marine Biology and Ecology*, 396(1), 10–17.

SOFTWARE (R PACKAGES)

1. Large, S. (2019). *Fedregs: Text analysis of the US code of federal regulations* (Version 1.0.0) [Computer software]. <https://CRAN.R-project.org/package=fedregs>

Presentations

INVITED TALKS

- Invited speaker, *Transitioning basic research into applied fisheries science and management*, Dauphin Island Sea Lab, Dauphin Island, November 2022.
- Workshop leader, *Delineating the Issues of Climate Change and Impacts to Marine Ecosystems: Bridging the Gap Between Research, Assessment, Policy and Management*, IMBER–ClimEco4, Shanghai, June 2014.
- Workshop leader, *Introduction to Generalized Additive Modeling*, RARGOM–Community Learning Series, Woods Hole, April 2013
- Invited speaker, *Quantifying trends and thresholds in responses of ecological indicators to the combined effects of fishing and environmental pressures*, Colorado State University, Fort Collins, March 2013
- Invited speaker, *Delineating ecosystem overfishing via analysis of ecosystem indicator inflection points*, 2nd ICES/PICES conference for early career scientists. Mallorca, April 2012

Awards

2007–2010	Addison E. Verril Award for Marine Biology	\$13,600
2009–2009	TAMU-CC Parents Council Travel Grant	\$1,000
2011–2011	TAMU-CC ELITE Travel Grant	\$2,000
2012–2012	ICES/PICES Early Career Scientist Travel Award	\$500
2020–2020	NEFSC Deputy’s Award	—

Grants

2020–2022	SI Large. “A framework for incorporating ecosystem and socioeconomic information into the fish advice process”. <i>Funding from Magnuson-Stevens Act Implementation Funds</i>	\$260,000
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