Scott Isaac Large

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Education

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

Employment

2011–present **Post-doctoral Researcher - Integrated Statistics, Inc./NOAA–Fisheries**

- Develop quantitative and empirical techniques to identify thresholds in ecosystem response to fishing and environmental pressures.
- Test the performance of ecological thresholds as ecosystem reference points to inform Ecosystem-based Fisheries Management decision criteria.

2006–2011 **Graduate Research Assistant - Texas A&M University–Corpus Christi**

- Designed and implemented field and lab experiments to elucidate how the environment moderates information transfer between predators and prey.
- Quantified how prey perception of predators influences ecosystem processes.

Peer-reviewed Publications

2013 **Large, S. I.**, Fay, G., Friedland, K. D., and Link, J. S. (2013). Defining trends and thresholds in responses of ecological indicators to fishing and environmental pressures. *ICES Journal of Marine Science: Journal du Conseil*, 70(4):755–767

Fay, G., **Large, S. I.**, Link, J. S., and Gamble, R. J. (2013). Testing systemic fishing responses with ecosystem indicators. *Ecological Modelling*, 265:45–55

Large, S. I. and Smee, D. L. (2013). Biogeographic variation in behavioral and morphological responses to predation risk. *Oecologia*, 171(4): 961-969

2012 **Large, S. I.**, Torres, P., and Smee, D. L. (2012). Behavior and morphology of *Nucella lapillus* influenced by predator type and predator diet. *Aquatic Biology*, 16(2):189–196

2011 **Large, S. I.**, Smee, D. L., and Trussell, G. C. (2011). Environmental conditions influence the frequency of prey responses to predation risk. *Marine Ecology Progress Series*, 422:41–49

2010 **Large, S. I.** and 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

In review

Large, S. I., Fay, G., Friedland, K. D., and Link, J. S. Quantifying critical points in ecological indicators' response to the combined effects of fishing and the environmental. Submitted to *Ecological Applications*

Large, S. I., Overath, R. D, Chen, Y. J., Smee, D. L., and Pezold, F. Genetic variation of *Nucella lapillus* across habitat and biogeographic ranges. Submitted to *Journal of Heredity*

Fay, G., Link, J. S., **Large, S. I.**, and Gamble, R. J. Indicator-based control rules for ecosystem-based fisheries management. Submitted to *ICES Journal of Marine Science: Journal du Conseil*

Teaching Experience

Lecturer

Introduction to Generalized Additive Modeling (April 25-26, 2013)
Regional Association for Research on Gulf of Maine- Community Learning Series
Authored and led an interactive two-day workshop for academics and government employees on the application, theory, and analyses of generalized additive models within the R statistical environment.

Professional Skills for Biologists (Fall 2008; Spring 2009)
Texas A&M University–Corpus Christi
Designed and taught course focused on introducing biology majors to oral and written scientific communication, experimental design, and data management.
Instructor of Record

Guest Lecturer

Marine Ecology (Fall 2013)
Mitchell College
Contributed lecture: Beyond smell: How chemicals contribute to the structure and function of marine ecosystems.

Ecosystem-based Fisheries Management (Spring 2013)
University of Massachusetts–Dartmouth
Contributed lectures: Rationale and background of Ecosystem-based management; Theory and applications of ecological indicators.

Senior Seminar: Topics In Biology (Spring 2012)
Adelphi University
Contributed lecture: A snail tale and can our fisheries prevail? Experimental and empirical approaches to marine ecology.

Graduate Assistant

Principles of Ecology (Fall 2007; Spring 2008)
Texas A&M University–Corpus Christi
Assisted with lecture, recitation, and course design. Developed lab and field component of course.

Anatomy and Physiology, Texas A&M University–Corpus Christi (Fall 2006; Spring 2007)
Texas A&M University–Corpus Christi
Led gross organismal dissection and histology portions of anatomical investigation, and developed physiological experiments to supplement and reinforce lecture and anatomy activities.

Invited Seminars

Colorado State University, Fort Collins, CO (March 15, 2013)
Quantifying trends and thresholds in responses of ecological indicators to the combined effects of fishing and environmental pressure

Grants & Awards

Pending	**Large, S. I.**, Gaichas, S., and Miller, T. J. (co-PIs). Evaluating the occurrence of regime shifts in the Northeast Shelf Large Marine Ecosystem: Stock and ecosystem-level implications. ($190,000). NOAA–Fisheries and the Environment (FATE)
2011	TAMU-CC ELITE Travel Grant ($2,000)
2009	TAMU-CC Parents Council Travel Grant ($1,000)
2007–2010	Addison E. Verril Award for Marine Biology ($13,600)

2009	111th Texas Academy of Sciences *Best Graduate Presentation*
	TAMU-CC Graduate Student Symposium *Honorable Mention*

Selected Presentations

2013	Large, S. I., Fay, G., Friedland, K. D., and Link, J. S. (2013). Quantifying critical points in ecological indicators' response to the combined effects of fishing and the environmental. *ICES Annual Science Conference 2013. Reykjavik, Iceland*
	Large, S. I., Fay, G., Friedland, K. D., and Link, J. S. (2013). Quantifying trends and thresholds in responses of ecological indicators to the combined effects of fishing and environmental pressure. *Fisheries and the Environment Annual Meeting / 37^{th} Annual Larval Fish Conference. Miami, FL*
2012	Large, S. I., Fay, G., Friedland, K. D., and Link, J. S. (2012). An empirical approach to calculate indicator thresholds. *ICES Working Group on the Northwest Atlantic Regional Sea, Waquoit, MA*
	Large, S. I., Fay, G., Friedland, K. D., and Link, J. S. (2012). Delineating ecosystem overfishing via analysis of ecosystem indicator inflection points. *2^{nd} ICES/PICES conference for early career scientists. Mallorca, Spain*
	Large, S. I., Demarcq, H., Fu, C., Hoepffner, N., Gurney, L., Knight, B., Richardson, A. J., Yemane, D., and Link, J. S. (2012). Relative effects of fishing and the environment on ecological indicators. *6^{th} World Fisheries Congress, Edinburgh, United Kingdom*
2011	Large, S. I. and Smee D. L. (2011). More patterns in prey anti-predator behavior based upon habitat type and geographic location. *40^{th} Marine Benthic Ecology Meeting, Mobile, AL*
2010	Large, S. I. and Smee D. L. (2010). Patterns in prey anti-predator behavior based upon habitat type and geographic location. *39^{th} Marine Benthic Ecology Meeting,Wilmington, NC*
2009	Large, S. I. and Smee D. L. (2009). Hydrodynamic conditions influence behavioral response of the dogwhelk (*Nucella lapillus*) to a common predator. *20^{th} Biennial Coastal and Estuarine Research Federation, Portland, OR*
2008	Large, S. I. and Smee D. L. (2008). Dogwhelks (*Nucella lapillus*) evaluate risk using chemical cues: Behavioral impact of predator diet and likelihood of predator encounter. *37^{th} Marine Benthic Ecology Meeting, Providence, RI*

Professional Service

2013–	Integrated Marine Biogeochemistry and Ecosystem Research (IMBER),
	Climate and Ecosystem (ClimECO4) workshop faculty
2011–	Working Group on the Northwest Atlantic Regional Seas (WGNARS - ICES)
2011–	IndiSeas Working Group: Climate and Environmental Indicators
2011–	Ecosystem Assessment Program (NOAA/NMFS)
2009– 2011	Marine Science Graduate Student Organization, Vice-President
2008– 2011	Coastal Bend Audubon Society, Conservation Chair

Students Mentored

Undergraduate: Philip Torres (TAMU-CC); James Sanchez (TAMU-CC)

Manuscript Reviewer

PLoS ONE, PeerJ, ICES Journal of Marine Science, Journal of Marine Systems, Marine Biology, Journal of Experimental Marine Biology and Ecology

Last updated: November 8, 2013