UF | Herbert Wertheim College of Engineering
UNIVERSITY of FLORIDA

OHANIAN
LECTURE SERIES

DECEMBER 7 | 2 P.M.

DISTINGUISHED GUEST LECTURER

Brian Silliman, Ph.D.

RACHEL CARSON DISTINGUISHED PROFESSOR OF MARINE CONSERVATION BIOLOGY, DUKE UNIVERSITY

Brian Silliman is the Rachel Carson Distinguished Professor of Marine Conservation Biology at Duke University. He holds both B.A. and M.S. degrees from the University of Virginia and completed his Ph.D. in Ecology and Evolutionary Biology at Brown University. Dr. Silliman was named a Distinguished Fulbright Chair with CSIRO (2019); an AAAS Fellow (2015); a Visiting Professor with the Royal Netherlands Society of Arts and Sciences (2011); and David H. Smith Conservation Fellow with The Nature Conservancy (2004). He has received several awards, including the Young Investigator Award from the American Society of Naturalists (2006), a Young Investigator Grant Award from the Andrew Mellon Foundation (2007), and an NSF Career Award (2011). Dr. Silliman has published 25 book chapters, over 200 peer-reviewed journal articles, and co-edited five books. His teaching and research are focused on community ecology, conservation and restoration, global change, plant-animal interactions, and evolution and ecological consequences of cooperative behavior.

Harnessing Biological Partnerships and Ecosystem Cultivation to Enhance Ecosystem Restoration

The United Nations has elevated ecosystem restoration as the primary strategy to help the human species meet its sustainability and climate adaptation goals. Most ecosystem restoration attempts, however, either fail or under perform. The ultimate test of ecological theory is whether what we have learned over the past 100 years can help rebuild the world's ecosystems. Multiple reviews, syntheses, and meta-analyses reveal restoration studies focus on suppressing negative effects, rather than incorporating positive species interactions.

In this talk, Dr. Silliman argues for a paradigm expansion in restoration ecology to include systematic inclusion of biological facilitation and partnerships – interactions that were fundamental for initial ecosystem emergence. When positive species interactions are included in ecosystem restoration designs, massive gains in success and resilience are realized. For instance, predators can promote landscape-level watershed recovery, mutualisms can increase seedling growth by 300%, and animals can move tipping points in plant ecosystems. Failure to rapidly expand the restoration paradigm will result in a grave opportunity loss, with deleterious consequences for biodiversity and humans. Conversely, if ecologists rapidly harness and apply the breadth of their theoretical and system-specific understanding to ecosystem restoration, we can more rapidly cultivate ecosystems, expand the coverage of ecosystems across Earth, and help both people and nature adapt to and survive a rapidly changing ecosphere.

Free & Open to All
Thursday, December 7, 2023 | 2 p.m.
Reitz Union, Room 2355
Reception to follow in Room 2365

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