

Christine Angelini

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Environmental Engineering Sciences
University of Florida
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Curriculum Vitae

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PROFESSIONAL APPOINTMENTS

2014-present Assistant Professor, Environmental Engineering Sciences, University of Florida

EDUCATION

Ph.D Biology 2014, University of Florida

Dissertation title: "Foundation Species as Drivers of Ecosystem Structure, Multifunctionality, and Resilience"

Advisor: Brian R. Silliman

B.Sc. Marine Biology, Honors, 2007, Brown University

AREAS OF SPECIALIZATION

Community Ecology, Conservation Biology, Resilience of Coastal Ecosystems to Global Change, Biodiversity and Ecosystem Functioning, Coastal Restoration.

EXTERNAL FUNDING

NSF CBET Environmental Engineering CAREER Award, 2017-2021, \$502,862

NOAA NERR Science Collaborative Grant, co-PI, 2018-2021, \$691,000

NOAA NCCOS Grant, co-PI, 2018-2021, \$954,000

NOAA NERR Science Collaborative Grant, Lead PI, 2016-2018, \$721,477

NSF DEB Ecosystem Science Grant, Lead PI, 2015-2017, \$149,521

NSF REU Supplement to NSF DEB EAGER, Lead PI, 2018, \$6,937

Occidental Chemical Research Award, Lead PI, 2016-2017, \$8,000

NSF Pre-Doctoral Research Fellowship, 2010- 2014, \$126,000

NSF REU BIO-OCE, Co-author, 2012, \$6000

University Scholars, 2011, \$2000

Mote Marine Symposium and Florida State University Travel Grant, 2011, \$200

Sigma XI Graduate Research Grant, 2009, \$800

Ed Stolarz Research Fellowship, 2006, \$1500

NSF REU Fellowship, 2006, \$2500

Rhode Island Surfrider Research Fellowship, 2005, \$1500

Undergraduate Teaching and Research Award, 2005, \$2000

INTERNAL FUNDING

UF Water Institute Graduate Fellows Program, 4 years support for 1 PhD student

UF Graduate Alumni Graduate Research Fellowship. 3 years of PhD support

UF International Center Graduate Student Study Abroad Program, 2013, \$4500

UF Graduate Student Travel Grant, \$300

PEER-REVIEWED PUBLICATIONS

30. Berszoza, A.C. ^G, Brumbaugh R., Grizzle R., Luckenbach M., Peterson C.H., Angelini C. Restoring the Eastern oyster: how much progress has been made in 53 years of effort? *Accepted*, **Frontiers in Ecology and Evolution**.

29. Herbert D. ^G, Astrom E. ^G, Berszoza A.C. ^G, Batzer A. ^U, McGovern P., Angelini C., Wasman S., Dix N., Sheremet A. 2018. Mitigating erosional effects induced by boat wakes with living shorelines. **Sustainability** 10(2):436.

28. Angelini C., van Montfrans S.G., Hensel M.J.S. ^G, He Q. ^P, Silliman B.R. 2018. The importance of an underestimated grazer under climate change: How crab density, consumer competition and physical stress affect salt marsh resilience. **Oecologia**.

27. Crotty S.M. ^G, Angelini C., Bertness M.D. 2017. Multiple stressors and the potential for synergistic loss of New England salt marshes. **PloS ONE** 12 (8), e0183058.

26. Thomsen M., Altieri A.H., Angelini C., Bishop M.J., Gribben P.E., Lear G. He Q., Schiel D.R., Silliman B.R., South P.M., Watson D.M., Wernberg T., Zotz, G. 2018. Secondary foundation species enhance biodiversity. **Nature Ecology and Evolution**. DOI: 10.1038/s

25. Hooijberg-Derksen M. ^G, Angelini C., Lamers L.P.M., Borst A. ^G, Hoogveld J.R.H. ^G, de Paoli H. ^G, van de Koppel J., Silliman B.R., van der Heide T. 2018. Mutualistic interactions amplify salt marsh restoration success. **Journal of Applied Ecology** 1-10. DOI: 10.1111/1365-2664.12960.

24. Persico, E.P. ^U, Sharp S.J. ^G, Angelini C. 2017. Feral hog disturbance alters carbon dynamics in southeastern US salt marshes. **Marine Ecology Progress Series** 580: 57-68.

23. Pettengill T.M. ^U, Crotty S.M. ^G, Angelini C., Bertness M.D. 2017. A natural history model of New England salt marsh die-off. **Oecologia** 186(3): 621-632.

22. Langston, A.G, Angelini C., Kaplan D.L. 2017. Biotic and abiotic controls of the northern range expansion of black mangrove (*Avicenna germinans*). **Hydrobiologia**.

21. Alba C., Fahey C., NeSmith J., Angelini C., Flory SL. 2017. Testing the interactive effects of drought and plant invasions on ecosystem structure and function using complementary common garden and field experiments. **Ecology and Evolution**.

20. Angelini C., Griffin J.N., van de Koppel J., Derksen-Hooijberg M., Lamers L.P.M., Smolders A.J., van der Heide T., Silliman B.R. 2016. A keystone mutualism underpins resilience of a coastal ecosystem to drought. **Nature Communications** 12473, DOI: 10.1038/ncomms 12473.

19. van der Zee E., Angelini C., Govers L.L., Christianen M., Altieri A.H., van der Reijden K., Silliman B.R., van de Koppel J., van der Geest M., van Gils J., van der Veer H., Piersma T., de Ruiter P., Olff H., van der Heide T. 2016. Non-trophic facilitation as a primary driver of food webs. **Proceedings of the Royal Society B** 283: 20152326.

18. Sharp, S.J., Angelini C. 2016. Whether disturbances alter salt marsh soil structure dramatically affects *Spartina alterniflora* recolonization rate. **Ecosphere** 7(11): e01540.

17. Angelini C., van der Heide T., Griffin JN, Morton JP, Derksen-Hooijberg M, Lamers LPM, Smolders AJ, Silliman BR. Foundation species, biodiversity hotspots, and the landscape-scale multifunctionality of a coastal ecosystem. **Proceedings of the Royal Society B**. DOI:10.1098/rspb.2015.0421.

16. Davidson A., Griffin J.N., Angelini C., Coleman F., Atkins R.L., Silliman B.R. 2015. Non-consumptive predator effects intensify grazer-plant interactions by driving vertical habitat shifts. **Marine Ecology Progress Series** 537: 49-58.
15. Angelini C., Briggs K.L. 2015. Spillover of secondary foundation species regulates community structure and accelerates decomposition in oak savannas. **Ecosystems** 18(5): 780-791.
14. Atkins R, Griffin JN, Angelini C., O'Connor M, Silliman BR. 2015. Consumer- plant interaction strength: importance of body size, density and metabolic biomass. **Oikos** 124(10): 1274-1281.
13. Silliman B.R., Modzer T., Angelini C., Brundage J.E., Esselink P., Bakker J.P., Gedan K.B., van de Koppel J., Baldwin A.H. 2014. Livestock as a potential biocontrol agent for an invasive wetland plant. **PeerJ** e567.
12. Angelini C., Silliman B. R. 2014. Secondary foundation species as drivers of biodiversity and trophic structure: evidence from a tree-epiphyte system. **Ecology** 95(1): 185-196.
11. Silliman B. R., McCoy M.D., Angelini C., Griffin J. N., Holt R.D., van de Koppel J. 2013. Consumer fronts, spatial processes and ecosystem structure, stability and resilience. **Annual Review of Ecology, Evolution, and Systematics** 44: 503-538.
10. Altieri A.H., Bertness M.D., Cloverdale T.C., Herrmann N.C., Angelini, C. 2012. A trophic cascade triggers collapse of a salt marsh ecosystem with intensive recreational fishing. **Ecology** 93(6):1402-1410.
9. Silliman B.R., Angelini C. 2012. Trophic cascades in diverse plant ecosystems. **Nature Knowledge and Education** 9(3): 3.
8. Angelini C., Silliman B.R. 2012. Patch size-dependent recovery of salt marshes from massive community die-off. **Ecology** 93 (1): 101-110.
7. Angelini C., Altieri A.H., Silliman B.R., Bertness M.D. 2011. Interactions among foundation species and their consequence for community organization, biodiversity and conservation. **BioScience** 61:782-789.
6. Holdredge C., Bertness M.D. 2010. Litter legacy increases the competitive advantage of *Phragmites australis* in New England wetlands. **Biological Invasions**. DOI 10.1007/s10530-010-9836-2.
5. Holdredge C., Bertness M.D., von Wettberg E.D., Silliman B.R. 2010. Nutrient enrichment enhances hidden differences in phenotype to drive a cryptic plant invasion. **Oikos** 119: 1776-1784.
4. Holdredge C., Bertness M.D., Herrmann N.C., Gedan K.B. 2010. Fiddler crab control of cordgrass primary production in sandy substrates. **Marine Ecology Progress Series** 399: 253-259.
3. Bertness M.D., Holdredge C., Altieri A.H. 2009. Substrate mediates consumer control of cordgrass. **Ecology** 90(8): 2108-2117. 131-139.
2. Holdredge C., Bertness M.D., Altieri A.H. 2009. Role of crab herbivory in die-off of New England salt marshes. **Conservation Biology** 23(3): 672-679.
1. Bertness M.D., Crain C.M., Holdredge C., Sala N. 2007. Eutrophication and consumer control of New England salt marsh primary production. **Conservation Biology** 22(1): 131-139.

BOOK CHAPTERS

1. Bertness, MD, Silliman BR, Holdredge C. Shoreline development and the future of New England salt marsh landscapes. in B. R. Silliman, T. Grosholtz, and M. D. Bertness, editors. 2009. Human Impacts in Salt Marshes: A Global Perspective. UC Press.

INVITED PRESENTATIONS

1. *Drought, mussels, and the resilience of salt marshes*, Department of Aquatic Ecology and Environmental Biology, Radboud University Nijmegen, The Netherlands, 2013.
2. *Patch-dependent recovery of massively disturbed salt marshes*. Georgia Department of Natural Resources, Darien, GA, 2013
3. *Interactions among foundation species and their consequences for ecosystem structure, function, and resilience*. Brown University, Providence, RI, 2015
4. *Foundations species as drivers of biodiversity, multifunctionality, food webs and resilience*. Valdosta State University, Valdosta, GA, 2016.
5. *Foundation species as drivers of biodiversity and resilience*, Marine Sciences, University of Georgia, 2017
6. *Keystone species enhance salt marsh resilience to climate change*, Department of Biology, University of New Brunswick, Canada, 2018
7. *Integrating ecology into restoration engineering*, Civil and Environmental Engineering, University of South Florida, 2018

RECOGNITIONS AND AWARDS

NSF CAREER Award, 2017
Biology Outstanding Graduate Teaching Award, University of Florida, 2013
Biology Graduate Student Best Paper Award, University of Florida, 2012
Biology Graduate Student Service Award, University of Florida, 2011
James Kidwell Prize, Outstanding Research in Biology, Brown University, 2007

TEACHING EXPERIENCE

Ecological Engineering, Lecturer, current Environmental Engineering Sciences, UF
Advanced Environmental Planning and Design, current, Environmental Engineering Sciences, UF
Coastal Systems, Lecturer, current, Environmental Engineering Sciences, UF
Tropical Marine Ecology, Teaching Assistant, 2009-13, Department of Biology, UF
General Ecology, Teaching Assistant 2012, Department of Biology, UF:

MENTORING

Past Undergraduates: Nicolas Hermann (H), Daniel MacCombie (H), Kelsey Lane (H), Timothy Savage (H), Jacqueline Babb (H), Emma Knight, Kristin Briggs (H), Rebecca Atkins (H), Michael Arvin, Eric Monaco, Robert McNulty, Nicole Soomdat (H), Marice Lopez, Kathyne Cronk (H=Honors thesis), Emily Persico, Audrey Batzer, Greg Kusel, Bridget Chalifour (H), Samuel Hagman, Emma Johnson, Wesley Lewis, Gabe Somabarra, Daniel Gallagher
Current Undergraduates: Gillian Palino, Alexa Cetta, Orlando Cordero, Hallie Fischman

Current Graduate Students: Sean Sharp (PhD, UF), Ada Bersozza (PhD, UF), Kimberley Prince (PhD, UF), Sinead Crotty (PhD, UF)

Visiting International Students: Marlous Hooyiberg (PhD, Radboud University, co-advised), Annieke Borst (PhD, Radboud University, co-advised), Jasper Hoogveld (MSc., Radboud University, co-advised), Laura Govers (PhD, Radboud University, collaborator), Kate Davidson (Swansea University, collaborator), Davide Battisti (Swansea University, collaborator), Matt Joyce (Swansea University, collaborator), Greg Favish (University of Groningen, collaborator), Ralph Temmick (Radboud University, collaborator)