

## ***Christine Angelini***

Assistant Professor  
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: Dr. Brian R. Silliman

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

### **AREAS OF SPECIALIZATION**

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

### **EXTERNAL FUNDING**

Florida Department of Environmental Protection, 2020, co-PI, \$37,000 (\$17,000 to Angelini)

Florida Sea Grant, Program Development Fund, 2020, co-PI, \$10,000 (\$5,000 to Angelini)

NSF-OCE, Facilities Improvement Grant, 2018-2020, co-PI, \$238,987 (\$0 to Angelini)

Florida Fish & Wildlife Conservation Commission, 2018-2019, PI, \$2,836

Florida Fish & Wildlife Conservation Commission, 2018-2019, PI, \$64,383

NSF LTER Biological Oceanography, co-PI, 2019-2024, \$6,450,000 (\$169,984 to Angelini)

NSF CBET Environmental Engineering REU Supplement Award, 2018, PI, \$6,937

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

NOAA NERR Science Collaborative, 2018-2021, co-PI, \$677,000 (\$53,176 to Angelini)

NOAA NCCOS Grant, 2018-2021, co-PI, \$954,000 (\$57,757 to Angelini)

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

NSF DEB Ecosystem Science REU Supplement, PI, 2016, \$6,000

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

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

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

### **PEER-REVIEWED PUBLICATIONS (Google Scholar H' = 17 on 1/27/20)**

46. Crotty, S.C., [Angelini C.](#) *In press*. Geomorphology and species interactions control facilitation cascade self-organization and strength. **Current Biology (MS#D-19-01728)**.

45. Cardel M., Dhurandhar E., Yaras-Fisher C., Foster M., Hidalgo B., McClure L., Pagoto S., Brown N., Pekmezi D., Sharafeldin N., Willig A., [Angelini C.](#) 2020. Turning chutes into ladders for women faculty: a review and roadmap for equity in academia. **Journal of Women's Health**.

44. Fischman H., Crotty S.M., Angelini C. 2019. Optimizing coastal restoration with the stress-gradient hypothesis. **Proceedings of the Royal Society B: Biological Sciences**. **RSPB20191978**.
43. Walker J., Angelini C., Safak I., Altieri A.H., Osborne T.Z. 2019. Effects of changing vegetation composition on community structure, ecosystem functioning and predator-prey interactions at the saltmarsh-mangrove ecotone. **Diversity** **11(11)**: 208. <http://doi.org/10.3390/d11110208>.
42. Borst A., Angelini C., ten Berge A., Lamers L.P.M., Derksen-Hooijberg M., Van der Heide T. 2019. Food or furniture: Separating trophic and non-trophic effects of Spanish moss to explain its high invertebrate diversity. **Ecosystems** **10(9)**: e02846.
41. Sharp, S.J., Angelini C. 2019. The role of landscape composition and disturbance type in mediating salt marsh resilience to feral hog invasion. **Biological Invasions** 1-13. <https://link.springer.com/article/10.1007/s10530-019-02018-5>.
40. Silliman B.R., He Q., Angelini C., Kirwan M., Renzi J., Smith C., Butler J., Osborne T., van de Koppel J. 2019. 2019. Field experiments and meta-analysis reveal wetland vegetation as a crucial element in the coastal protection paradigm. **Current Biology** **29(11)**: 1800-1806.
39. Gribben P., Angelini C., Altieri A.H., Bishop M., Thomsen M. 2018. Facilitation cascades in marine ecosystems: a synthesis and future directions. **Oceanography and Marine Biology: An Annual Review** **57**:127-168.
38. Chalifour B., Hoogveld J.R.H., Derksen-Hooijberg M., Harris K., Uruena J., Sawyer W.G., van der Heide T., Angelini C. 2019. Simulated drought alters the spatial distribution, grazing activity, and functional morphology of a fungal-farming snail in southeastern US salt marshes. **Marine Ecology Progress Series** **620**:1-13.
37. Marazzi L., Gaiser E., Zhai L., Sah J., Castenada-Moya E., Angelini C. 2019. Why do we need to document and conserve foundation species in oligotrophic wetlands? **Water** **11(2)**: 1-29.
36. Johnson E.E., Medina M.D., Bersosa Hernandez A.C., Kusel G.A., Batzer A.N., Angelini C. 2019. Success of concrete and crab traps in enhancing eastern oyster recruitment and reef growth. **PeerJ** **7**:e6488.
35. Derksen-Hooijberg M., Hoogveld J.R.H., Angelini C., Lamers L.P.M., Borst A., Smolders A., Harpenslager S.F., Govers L.L.<sup>P</sup>, van der Heide T. 2019. Repetitive drought episodes weaken a climate-buffering mutualism in salt marshes. **Journal of Ecology**. DOI:10.1111/1365-2745.13178.
34. Derksen-Hooijberg M., van der Heide T., Lamers L.P.M., Borst A., Smolders A., Govers L.L., Hoogveld J., Angelini C. 2018. Burrowing crabs weaken mutualism between foundation species. **Ecosystems**. <http://doi.org/10.1007/s10021-018-0301-x>.
33. Borst A., Verberk W.C.E.P., Angelini C., Schotanus J., Wolters W., Christianen M.J.A., van der Zee E.M., Derksen-Hooijberg M., van der Heide T. 2018. Foundation species enhance food web complexity through non-trophic facilitation. **PLoS ONE**. <http://doi.org/10.1371/journal.pone.0199152>.
32. Fahey C., Angelini C., Flory S.L. 2018. Interactive effects of grass invasion and chronic drought on plant communities. **Ecology**. <http://doi.org/10/1002/ecy.2536>.
31. Crotty S.M., Sharp S.J., Bersosa A.C., Prince K., Johnson E., Cronk K., Angelini C. 2018. Foundation species patch configuration mediates biodiversity, stability, and multifunctionality. **Ecology Letters**. DOI: 10.1111/ele1316.

30. Berssoza, A.C., 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? 2018. **Frontiers in Ecology and Evolution**. <http://doi.org/10.1002/fee.1935>
29. Herbert D., Astrom E., Berssoza A.C., Batzer A., 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. <sup>G</sup>, He Q. <sup>P</sup>, 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** **187(1): 205-217**.
27. Crotty S.M., 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. , Angelini C., Lamers L.P.M., Borst A. , Hoogveld J.R.H., de Paoli H., 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., Sharp S.J., 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., Crotty S.M., 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** DOI:**10.1007/s10750-017-3197-0**.
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** **7(5): 1442-1452**.
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 J.N., Angelini C., O'Connor M., Silliman B.R. 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.

## SELECT INVITED PRESENTATIONS

1. *Polychlorinated Biphenyl Biomagnification in Coastal Ecosystems*, University of Virginia, Charlottesville, Virginia, August 2019 and University of Groningen, The Netherlands, May 2019
2. *Keystone species enhance salt marsh resilience to climate change*, Department of Biology, University of New Brunswick, Canada, April 2018
3. *Foundation species as drivers of biodiversity and resilience*, Marine Sciences, University of Georgia, February 2017
4. *Interactions among foundation species and their consequences for ecosystem structure, function, and resilience*. Brown University, Providence, RI, November 2015
5. *Drought, mussels, and the resilience of salt marshes*, Department of Aquatic Ecology and Environmental Biology, Radboud University Nijmegen, The Netherlands, 2013

## RECOGNITIONS AND AWARDS

University of Florida Water Institute Early-Career Faculty Fellow, 2019  
Coastal Estuarine Research Federation Cronin Award for Early-Career Investigators, 2019  
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

## MENTORING

Past Undergraduates (H= Honors Thesis): Nicolas Hermann (H), Daniel McCombie (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, Katheryne Cronk (H=Honors thesis), Emily Persico, Audrey Batzer, Greg Kusel, Bridget Chalifour (H), Samuel Hagman, Emma Johnson (H), Wesley Lewis, Gabe Somabarra, Daniel Gallagher, Hallie Fischman (H)

Current Undergraduates: Alexa Cetta, Orlando Cordero, Alexandra Rubin (H), Michelle Taubler, Savannah Peltrau, Jamie Rogers (H)

Former Graduate Students: Sean Sharp (PhD 2018, now a Post-doc at University of Michigan), Ada Bersozza Hernandez (MSc. 2018, high school science teacher, Mexico) Sinead Crotty (PhD, 2019, now Post-doc at Yale University)

Current Graduate Students: Kimberly Prince (PhD, UF), Stefano Barchiesi (PhD, UF), Sydney Williams (PhD, UF), Lauren Brisley (PhD, UF), Collin Ortals (PhD, UF).

Visiting International Students: Marlous Hooyiberg (PhD, Radboud Univ., co-advised), Annieke Borst (PhD, Radboud Univ., co-advised), Jasper Hoogveld (MSc., Radboud Univ., co-advised), Laura Govers (PhD, Radboud Univ., collaborator), Kate Davidson (Swansea Univ., collaborator), Davide Battisti (Swansea Univ., collaborator), Matt Joyce (Swansea Univ., collaborator), Greg Favish (Univ. of Groningen, collaborator), Ralph Temmink (Radboud Univ., collaborator), Valerie Reijers (Post-doctoral Scholar, Univ. of Groningen, collaborator), Clea van de Ven (PhD, Univ. of Groningen, collaborator), Carlijn Lammers (PhD, Univ. of Groningen, collaborator)