

CURRICULUM VITAE

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EDUCATION

- 1992 Ph. D. Biological Sciences, University of South Carolina, Columbia, SC
(*Ecology*) Ecology of Intertidal Benthic Microalgal Communities in North Inlet
Estuary, South Carolina. (*R.G. Zingmark, Advisor*)
- 1987 M. Sci. Biology, College of Charleston, Charleston, SC
(*Marine Biology*) Estuarine Fronts in Charleston Harbor, South Carolina: A Physical and
Biological Description. (*P. Dustan, Advisor*)
- 1983 B. Sci. Biology, College of Charleston, Charleston, SC

EMPLOYMENT

- 2014 - Professor, Marine Science Program and Department of Biological Sciences, University
of South Carolina, Columbia, SC
- 2017 - 22 Director, Baruch Institute for Marine and Coastal Sciences, University of South
Carolina, Columbia, SC
- 2014 - 16 Graduate Program Director, School of the Earth, Ocean, and Environment, University
of South Carolina, Columbia, SC
- 2005 - 13 Associate Professor, Marine Science Program and Department of Biological Sciences,
University of South Carolina, Columbia, SC
- 2004 - 05 Associate Professor, Department of Oceanography, Texas A&M University, College
Station, TX
- 1998 - 04 Assistant Professor, Department of Oceanography, Texas A&M University, College
Station, TX
- 1996 - 98 Graduate Faculty Appointment, Marine Sciences, UNC-Chapel Hill, NC
- 1995 - 98 Research Assistant Professor, Institute of Marine Sciences, UNC-Chapel Hill, NC

- 1993 - 95 US Department of Energy Global Change Distinguished Postdoctoral Fellow and Postdoctoral Research Associate, Institute of Marine Sciences, UNC-Chapel Hill, NC (H. Paerl, Advisor)
- 1990 - 92 Project Manager and Research Associate, Research Planning, Inc., Columbia, SC. Oil spill contingency planning, natural resource damage assessment, and cleanup

PUBLICATIONS

* indicates student author

- Durbin*, H., M. Radek*, C. Schlenker*, S. Bauman*, **J. Pinckney**. Cyanobacterial contribution to annual cycles of phytoplankton in Lake Murray, SC. *Journal of South Carolina Water Resources*. (In Press, Jul 2023)
125. Dunn, R., J. Krask, **J. Pinckney**, E. Smith. 2023. Contrasting trends in water quality between adjacent ocean- and river-dominated estuaries: evidence for marsh porewaters as a source of nutrient enrichment? *Limnology and Oceanography* 68:2040-2058. (<https://doi.org/10.1002/lno.12405>)
124. **Pinckney, J.** 2023. Benthic microalgal community structure, primary productivity, and fiddler crab (*Leptuca pugilator*) grazing in an estuarine salt panne. *Estuaries & Coasts* 46:1316-1325. (<https://doi.org/10.1007/s12237-023-01208-8>)
123. Correa Velez*, K., R. Leighton, A. Decho, **J. Pinckney**, and S. Norman. 2023. Modeling pH and temperature effects as climatic hazards in *Vibrio vulnificus* and *Vibrio parahaemolyticus* planktonic growth and biofilm formation. *GeoHealth* 7, e2022GH000769. (<https://doi.org/10.1029/2022GH000769>).
122. Moore, W.S., J. Vincent*, **J. Pinckney**, A. Wilson. 2022. Predicted episode of submarine groundwater onto the South Carolina, USA, continental shelf and its effect on dissolved oxygen. *Geophysical Research Letters* 49: e2022GL100438 (<https://doi.org/10.1029/2022GL100438>)
121. English*, C., Z. Kitzhaber*, C. Sanim*, R. Kazim*, M. Kalaitzakis*, B. Kosaraju, * **J. Pinckney**, M. Hodgson, N. Vitzilaios, T. Richardson, M. Myrick. 2022. Chlorophyll fluorometer for intelligent water sampling by a small uncrewed aircraft system (sUAS). *Applied Spectroscopy* (<https://doi.org/10.1177/00037028221126748>)
120. Pinckney, J.L., S. Zaunbrecher*, S. Lang, A. Wilson, A. Knapp. 2022. Seasonality of benthic microalgal abundance in shallow shelf waters. *Continental Shelf Research* 244:104797 (doi.org/10.1016/j.csr.2022.104797)
119. *Dearth, N., W. Jones, J. Espinosa, R. Mortensen, **J. Pinckney**, D. Greenfield. 2022. A new sandwich hybridization assay method to identify and quantify *Microcystis* spp. *Limnology and Oceanography Methods* 20:210-221. (<https://doi.org/10.1002/lom3.10481>).
118. Cloern, J., S. Safran, L. Vaughn, A. Robinson, A. Whipple, K. Boyer, J. Drexler, R. Naiman, **J. Pinckney**, E. Howe, E. Canuel, L. Grenier. 2021. On the human appropriation of wetland primary production. *Science of the Total Environment* 785:147097 (doi.org/10.1016/j.scitotenv.2021.147097)

117. *Knotts, E., **J.L. Pinckney**. 2019. Effects of carbonic anhydrase inhibition on biomass and primary production of estuarine benthic microalgal communities. *Journal of Experimental Marine Biology and Ecology* 518:151179 (DOI:10.1016/j.jembe.2019.151179)
116. Pinckney, J.L., *E. Knotts, *K. Kibler, E. Smith. 2020. Nutrient breakpoints for estuarine phytoplankton communities. *Limnology and Oceanography* 65:2999-3016. (DOI:10.1002/lno.11570)
115. Paerl, H.W., M.F. Piehler, L.M. Valdes, J. Dyble, P.H. Moisander, **J.L. Pinckney** & T.F. Steppe. 2005. Determining anthropogenic and climatically-induced change in aquatic ecosystems using microbial indicators: An integrative approach, *Internationale Vereinigung für theoretische und angewandte Limnologie: Verhandlungen* 29:89-113, DOI: 10.1080/03680770.2005.11901977
114. *Butz ,S.V., **J.L. Pinckney**, S. Apte, J.R. Lead. 2019. Uptake and impact of silver nanoparticles on the growth of an estuarine dinoflagellate, *Prorocentrum minimum*. *NanoImpact* 15: (https://doi.org/10.1016/j.impact.2019.100181)
113. *Van Meerssche, E. and **J.L. Pinckney**. 2019. Nutrient loading impacts on estuarine phytoplankton size and community composition: Community-based indicators of eutrophication. *Estuaries and Coasts* 42:504-512.
112. **Pinckney, J.L.** 2018. A mini-review of the contribution of benthic microalgae to the ecology of the continental shelf in the South Atlantic Bight. *Estuaries and Coasts* 41:2070-2078. (DOI 10.1007/s12237-018-0401)
111. *Knotts, E. and **J.L. Pinckney**. 2018. Carbonic anhydrase regulation of plankton community structure in estuarine systems. *Aquatic Microbial Ecology* 82:73-85.(DOI: https://doi.org/10.3354/ame01879)
110. *Van Meerssche, E., D.I. Greenfield, **J.L. Pinckney**. 2018. Coastal eutrophication and freshening: impacts on *Pseudo-nitzschia* abundance and domoic acid allelopathy. *Estuarine Coastal and Shelf Science* 209:70-79. (https://doi.org/10.1016/j.ecss.2018.05.013)
109. Bringué, M., R.C. Thunell, V. Pospelova, **J.L. Pinckney**, O.E. Romero, E.J. Tappa. 2018. Physico-chemical and biological factors influencing dinoflagellate cyst production in the Cariaco Basin. *Biogeosciences* 15:2325-2348. (https://doi.org/10.5194/bg-15-2325-2018)
108. **Pinckney, J.L.**, C.Tomas, K. Reale-Munroe, B. Castillo, Z Hillis-Starr, *E. Van Meerssche, *M. Zimberlin. 2018. Seasonal changes in phytoplankton community structure in a bioluminescent lagoon, St. Croix, USVI. *Aquatic Microbial Ecology* 81:109-124. (https://doi.org/10.3354/ame01865)
107. *Van Meerssche, E., **J.L. Pinckney**. 2017 Salinity effect on domoic acid allelopathy for estuarine phytoplankton communities. *Harmful Algae* 69:65-74. (doi: 10.1016/j.hal.2017.10.003)
106. **Pinckney, J.L.**, *L Thompson, *S Hylton. 2017. Triclosan alterations of estuarine phytoplankton community structure. *Marine Pollution Bulletin* 119:162-168. (https://doi.org/10.1016/j.marpolbul.2017.03.056)
105. **Pinckney, J.L.**, A. Quigg, D. Roelke. 2017. Interannual and seasonal patterns of estuarine phytoplankton diversity in Galveston Bay, Texas, USA. *Estuaries and Coasts* 40:310-316. (DOI 10.1007/s12237-016-0135-8).
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101. Dash, P., J.O. Ikenga, S. Silwal, **J.L. Pinckney**, Z. Arslan, R.E. Lizotte. 2015. Water quality of four major lakes in Mississippi, USA: Impacts on human and aquatic ecosystem health. *Water* **7**:4999-5030.
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94. *Hagenbuch, I.M., **J.L. Pinckney**. 2012. Toxic effect of the combined antibiotics ciprofloxacin, lincomycin, and tylosin on two species of marine diatoms. *Water Research* **46**:5028-5036.
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92. *Gilde, K., **J.L. Pinckney**. 2011. Sublethal effects of crude oil on the community structure of estuarine phytoplankton. *Estuaries and Coasts* **35**:853-861.
91. **Pinckney, J.L.**, D.F. Millie, L. Van Heukelem. 2011. Appendix A. Update on filtration, storage, and extraction solvents. p. 627-635. IN S. Roy, C.A. Llewellyn, E.S. Egeland, G. Johnsen (eds.). *Phytoplankton Pigments: Characterization, Chemotaxonomy, and Applications in Oceanography*. Cambridge University Press, New York.
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89. Dash, P., N.D. Walker, D.R. Mishra, C. Hu, **J.L. Pinckney**, EJ D'Sa. 2011. Estimation of cyanobacterial pigments in a freshwater lake using OCM satellite data. *Remote sensing of the Environment* **115**:3409-3423.
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38. Piehler, M., *J. Swistak, **J.L. Pinckney**, H. Paerl. 1999. Stimulation of diesel fuel biodegradation by indigenous nitrogen fixing bacterial consortia. *Microbial Ecology* **38**:69-78.
37. **Pinckney, J.L.**, H. Paerl, E. Haugen, P. Tester. 2000. Responses of phytoplankton and *Pfiesteria*-like dinoflagellate zoospores to nutrient enrichment in the Neuse River Estuary, NC (USA). *Marine Ecology Progress Series* **192**:65-78.
36. **Pinckney, J.L.**, H. Paerl, *M. Harrington. 1999. Responses of the phytoplankton community growth rate to nutrient pulses in variable estuarine environments. *Journal of Phycology* **35**:1455-1463.

35. Dame, R., M. Alber, D. Allen, M. Mallin, C. Montague, A. Lewitus, A. Chalmers, R. Gardner, C. Gilman, B. Kjerfve, **J.L. Pinckney**, N. Smith. 2000. Estuaries of the South Atlantic Coast of North America: Their geographical signatures. *Estuaries* **23**:793-819.
34. Sandulli, R., **J.L. Pinckney**. 1999. Patch sizes and spatial patterns of meiobenthic copepods and benthic microalgae in sandy sediments: A microscale approach. *Journal of Sea Research* **41**: 179-187.
33. Priscu, J., C. Fritsen, E. Adams, S. Giovannoni, H. Paerl, C. McKay, P. Doran, B. Lanoil, **J.L. Pinckney**. 1998. Perennial Antarctic lake ice: An oasis for life in a polar desert. *Science* **280**:2095-2098.
32. **Pinckney, J.L.**, H. Paerl, *M. Harrington, K. Howe. 1998. Annual cycles of phytoplankton community-structure and bloom dynamics in the Neuse River Estuary, North Carolina. *Marine Biology* **131**:371-382.
31. **Pinckney, J.L.**, *F. Micheli. 1998. Microalgae on seagrass mimics: Does epiphyte community structure differ from live seagrasses? *Journal of Experimental Marine Biology and Ecology* **221**:59-70.
30. Piehler, M., *J. Swistak, **J.L. Pinckney**, H. Paerl. 1997. Sublethal effects of coastal petroleum pollution on *Spartina alterniflora* stem epiphytes. *Chemosphere* **35**:2665-2674.
29. **Pinckney, J.L.**, D. Millie, B. Vinyard, H. Paerl. 1997. Environmental controls of phytoplankton bloom dynamics in the Neuse River Estuary, North Carolina, USA. *Canadian Journal of Fisheries and Aquatic Sciences* **54**:2491-2501.
28. **Pinckney, J.L.**, H. Paerl. 1997. Anoxygenic photosynthesis and nitrogen fixation by a microbial mat community in a Bahamian hypersaline lagoon. *Applied and Environmental Microbiology* **63**:420-426.
27. Paerl, H., J. Willey, M. Go, *B. Peierls, **J.L. Pinckney**, M. Fogel. 1999. Rainfall stimulation of primary production in western Atlantic Ocean waters: Roles of different nitrogen sources and co-limiting nutrients. *Marine Ecology Progress Series* **176**:205-214.
26. **Pinckney, J.L.**, R.P. Reid. 1997. Productivity and community composition of stromatolitic microbial mats in the Exuma Cays, Bahamas. *Facies* **36**:204-207.
25. **Pinckney, J.L.**, D. Millie, K. Howe, H. Paerl, J. Hurley. 1996. Flow scintillation counting of ¹⁴C-labeled microalgal photosynthetic pigments. *Journal of Plankton Research* **18**:1867-1880
24. **Pinckney, J.L.**, H.W. Paerl. 1996. Lake ice algal phototroph community composition and growth rates, Lake Bonney, Dry Valley Lakes, Antarctica. *Antarctic Journal of the US* **31**:215-216.
23. Paerl, H.W., **J.L. Pinckney**. 1996. Ice aggregates as microbial habitat in Lake Bonney, Dry Valley Lakes, Antarctica: Nutrient-rich microzones in an oligotrophic ecosystem. *Antarctic Journal of the US* **31**:220-222.
22. Paerl, H.W., **J.L. Pinckney**. 1996. A mini-review of microbial consortia: their roles in aquatic production and biogeochemical cycling. *Microbial Ecology* **31**:225-247.
21. **Pinckney, J.L.**, H. Paerl, M. Fitzpatrick. 1995. The impacts of seasonality and nutrients on microbial mat community structure and function. *Marine Ecology Progress Series* **123**:207-216.

20. Paerl, H.W., **J.L. Pinckney**, *S. Kucera. 1995. Clarification of the structural and functional roles of heterocysts and anoxic microzones in the control of pelagic nitrogen fixation. *Limnology and Oceanography* **40**:634-638.
19. **Pinckney, J.L.**, H. Paerl, P. Reid, B. Bebout. 1995. Ecophysiology of stromatolitic microbial mats on Stocking Island, Exuma Cays, Bahamas. *Microbial Ecology* **29**:19-37.
18. **Pinckney, J.L.**, B. Bebout, H.W. Paerl. 1995. Salinity control of benthic microbial mat community production in a Bahamian hypersaline lagoon. *Journal of Experimental Marine Biology and Ecology* **187**:223-237.
17. Paerl, H.W., B. Bebout, C. Currin, M. Fitzpatrick, **J.L. Pinckney**. 1994. Nitrogen fixation dynamics in microbial mats, pp. 325 - 337. IN L. Stal & P. Caumette (eds.). *Microbial Mats: Structure, Development, and Environmental Significance*. NATO ASI Series G35, 463 pgs.
16. **Pinckney, J.L.** 1994. Development of an irradiance-based ecophysiological model for intertidal benthic microalgal production, pp. 55-83. IN W. Krumbein, D. Paterson, & L. Stal (eds.). *Biostabilization of Sediments*. Universität Oldenburg, Oldenburg, Germany.
15. **Pinckney, J.L.**, *Y. Piceno, C. Lovell. 1994. Short-term changes in the vertical distribution of benthic microalgal biomass in intertidal, muddy sediments. *Diatom Research* **9**:143-153.
14. **Pinckney, J.L.**, *R. Papa, R. Zingmark. 1994. Comparison of high performance liquid chromatographic, spectrophotometric, and fluorometric methods for determining chlorophyll a concentrations in estuarine sediments. *Journal of Microbiological Methods* **19**:59-66.
13. Sandulli, R., **J.L. Pinckney**. 1994. Modelli spaziali di distribuzione di copepodi meiobentonici e microalghe bentoniche in sedimenti sabbiosi. *Boll. Mus. Ist. Biol. Univ. Genova* **58-59**:153-169.
12. **Pinckney, J.L.**, R. Zingmark. 1993. Modelling the annual production of intertidal benthic microalgae in estuarine ecosystems. *Journal of Phycology* **29**:396-407.
11. **Pinckney, J.L.**, R. Zingmark. 1993. Biomass and production of benthic microalgal communities in estuarine habitats. *Estuaries* **16**:887-897.
10. **Pinckney, J.L.**, R. Zingmark. 1993. Photophysiological responses of intertidal benthic microalgal communities to in situ light environments: methodological considerations. *Limnology and Oceanography* **38**:1373-1383.
9. *Steward, C., **J.L. Pinckney**, *Y. Piceno, C. Lovell. 1992. Bacterial numbers and activity, microalgal biomass and productivity, and meiofaunal distribution in sediments naturally contaminated with biogenic bromophenols. *Marine Ecology Progress Series* **90**:61-72.
8. **Pinckney, J.L.**, R. Zingmark. 1991. The effects of tidal stage and sun angles on intertidal benthic microalgal productivity. *Marine Ecology Progress Series* **76**:81-89.
7. Sandulli, R., **J.L. Pinckney**. 1991. Models of the distribution of meiofauna and microflora of an intertidal beach through spatial autocorrelation analysis. *Riv. Idrobiol.* **30**:263-281.
6. **Pinckney, J.L.** 1990. Correlation analysis of adult female, egg, and hatchling sizes in the loggerhead turtle, *Caretta caretta* (L.), nesting at Kiawah Island, South Carolina, USA. *Bulletin of Marine Science* **47**:670-679.
5. **Pinckney, J.L.**, R. Sandulli. 1990. Spatial autocorrelation analysis of meiofaunal and microalgal populations on an intertidal sandflat: Scale linkage between consumers and resources. *Estuarine and Coastal Shelf Science* **30**:341-353.

4. **Pinckney, J.L.**, P. Dustan. 1990. Ebb-tidal fronts in Charleston Harbor, South Carolina: Physical and biological characteristics. *Estuaries* **13**:1-7.
3. Dustan, P., **J.L. Pinckney**. 1989. Tidally induced estuarine phytoplankton patchiness. *Limnology and Oceanography* **34**:410-419.
2. Collins, M., **J.L. Pinckney**. 1989. Size and age at maturity for vermilion snapper (*Rhomboplites aurorubens*) (Lutjanidae) in the South Atlantic Bight. *Northeast Gulf Science* **10**:51-53.
1. Collins, M., D. Schmidt, W. Waltz, **J.L. Pinckney**. 1989. Age and growth of king mackerel, *Scomberomorus cavalla*, from the Atlantic coast of the United States. *Fishery Bulletin* **87**:49-61.

BOOK CHAPTERS

Kremer, H.H., **J.L. Pinckney** (eds.). 2012. Volume 11. Management of Estuaries and Coasts. In E. Wolanski, D. McLusky (Editors in Chief). *Treatise on Estuarine and Coastal Science*. Elsevier, New York.

Pinckney, J.L. 2003. Estuaries, pp. 37-41. In E.D. Julius (ed.). *Water Science and Issues*, Volume 2. Macmillan Reference USA. New York.

TECHNICAL REPORTS

Author or Co-Author on **16** Technical Reports on oil and hazardous substances pollution incidents: planning and response considerations for major estuaries in the continental US. Bibliography available on request.

Robinson, A. et al. (J.L. Pinckney). 2016. Primary production in the Sacramento-San Joaquin Delta: A science strategy to quantify change and identify future potential. Pub. #781, San Francisco Estuary Institute-Aquatic Science Center, Richmond, CA.

BOOKS REVIEWED

Enger, E.D., B.F. Smith. 2000. *Environmental Science, A Study of Interrelationships* (7th Ed.). McGraw-Hill Co., Inc. NY. 431 p. (*ASB Bulletin* **47**:230-231)

Descy, J-P., C. Reynolds, J. Padisák (eds.). 1996. *Phytoplankton in Turbid Environments: Rivers and Shallow Lakes*. (*European J. Phycol.* **31**:108-110)

Patrick, Ruth. 1995. *Rivers of the United States. Volume II. Chemical and Physical Characteristics*. John Wiley & Sons, Inc. New York. 237 p. (*ASB Bulletin* **42**:214-215).

RESEARCH GRANTS

Years	Title	PI/CoPI	Agency	Award
2023 - 26	The Benthic Microalgal Subsidy in Estuarine Ecosystems	PI	NSF Biological Oceanography	\$1,003,575

2020 - 21	Understanding microalgal biofilm contributions to sediment “blue carbon” in contrasting salt marsh habitats in the U.S. and Europe	CoPI	Royal Society, UK	\$	7,500
2020	Enhancing research and education capacity at the Baruch Marine Field Lab: Expansion of research capabilities	PI	UofSC ASPIRE III	\$	79,496
2018 - 22	Groundwater sources of “new” N for benthic microalgal production in the South Atlantic Bight	PI	NSF Biological Oceanography	\$	993,200
2018 - 20	Development of models for phytoplankton-nutrient responses in support of numeric nutrient criteria for estuarine water quality	PI	NOAA/ South Carolina Sea Grant	\$	128,683
2013 - 16	Assimilation rates of dissolved organic carbon by photomixotrophic estuarine phytoplankton	PI	NSF Biological Oceanography	\$	355,659
2012 - 13	Ecological characterization of bioluminescence in Mangrove Lagoon, Salt River Bay, St. Croix, USVI	PI	National Park Service	\$	124,871
2010 - 11	Anthropogenic pharmaceutical impacts on the structure, function, and antibiotic resistance of estuarine benthic microbial communities	PI	NOAA/ South Carolina Sea Grant	\$	9,996
2008 - 10	Physical controls on benthic fluxes of microalgae and particulate organic matter in estuarine environments	CoPI	NOAA/ South Carolina Sea Grant	\$	126,909
2006 - 08	Collaborative Research-BES: FerryMon, unattended water quality monitoring utilizing advanced environmental sensing	CoPI	NSF Environmental Engineering	\$	237,255
2006 - 08	Determining the potential for algal bloom in Lake Maurepas: Effects of changing nutrient load from freshwater diversion and changes in human population	CoPI	Western Lake Pontchartrain Basin Research Program	\$	22,363
2006 - 07	Effects of sublethal concentrations of agricultural herbicides in the structure and function of estuarine phytoplankton communities	PI	NOAA/ South Carolina Sea Grant	\$	63,276
2005 - 06	Gulf Oyster Industry Initiative: A training workshop on pigment-based detection of the harmful dinoflagellate <i>Karenia brevis</i>	CoPI	NOAA/ South Carolina Sea Grant	\$	29,048
2004 - 06	Use high-resolution spatial mapping to estimate plankton response to freshwater inflows entering to Galveston Bay:	CoPI	Texas Commission on Environmental Quality	\$	132,434

Importance to watershed development
and ecosystem health

2004 - 06	Physical control of nutrient fluxes in Galveston Bay	CoPI	NOAA/Texas Sea Grant	\$ 191,513
2004 - 07	Collaborative Research: Th(IV) and Pa(IV,V) binding to exopolymeric acid polysaccharides in marine environments	CoPI	NSF Chemical Oceanography	\$ 550,000
2004 - 05	<i>Gymnodinium breve</i> in the Gulf of Mexico: Supplement to Research on gyroxanthin-based estimates of carbon-specific growth rates	CoPI	EPA ECOHAB	\$ 37,671
2003 - 04	Biotic responses to reduced freshwater inputs into Texas bays: Hypersalinity effects on benthic microalgal community structure and function	PI	Texas Water Resources Research Institute	\$ 4,182
2002 - 07	Anhydrophilic, halotolerant microbial mats of San Salvador Island, Bahamas	CoPI	NSF Microbial Observatories	\$ 203,035
2001 - 02	Gulf Oyster Industry Initiative: Gyroxanthin-based detection of <i>Gymnodinium breve</i>	CoPI	NOAA National Sea Grant	\$ 42,787
2001 - 03	<i>Gymnodinium breve</i> in the Gulf of Mexico: Gyroxanthin-based estimates of carbon-specific growth rates under varying environmental conditions	CoPI	EPA ECOHAB	\$ 100,400
2000	Utilization of carbon substrates by the estuarine microbial community in Galveston Bay, Texas	PI	Texas A&M Faculty Minigrant	\$ 1,491
1999 - 00	Development of HPLC technology for detection of <i>Gymnodinium breve</i>	PI	NOAA/NMFS Texas Parks & Wildlife	\$ 27,530
1999 - 01	CISNet for the Neuse River Estuary, NC: A program for evaluating nitrogen-driven eutrophication associated with changing land use in a coastal watershed	CoPI	EPA NCERQA	\$ 576,740
1998 - 99	Development of a program to assess the importance of atmospheric deposition of pollutants to near shore waters of the Gulf of Mexico	PI	EPA	\$ 47,400
1998 - 99	Biologically-mediated nitrogen dynamics in eutrophying estuaries: Assessing denitrification and N ₂ fixation responses to proposed N loading reductions in the Neuse River Estuary	CoPI	UNC Water Resources Research Institute	\$ 55,014

1998 - 01	Water stress dynamics in anhydrophilic microbial mats: Assessing the limit of planetary life	CoPI	NSF Life in Extreme Environments	\$ 337,000
1998 - 00	The role of phytoplankton community composition on eutrophication and hypoxia dynamics in the Neuse River Estuary, NC	CoPI	NOAA/NC Sea Grant	\$ 139,336
1998	Acquisition of an HPLC system for diagnostic photopigment detection and characterization of aquatic microalgae	CoPI	USDA NRICGP	\$ 37,210
1997 - 00	Biologically-mediated nitrogen dynamics in eutrophying estuaries: Assessing denitrification and N ₂ fixation responses to proposed N loading reductions in the Neuse River Estuary	CoPI	UNC Water Resources Research Institute	\$ 209,730
1997 - 00	Anthropogenic pollutant effects on aquatic ecosystems: Impacts of atmospheric nitrogen deposition on phytoplankton dynamics and eutrophication	CoPI	US EPA Air Quality	\$ 383,000
1996 - 99	Nitrogen-driven eutrophication of the Neuse River, NC: Phytoplankton ecophysiological responses to changing N-input dynamics	CoPI	USDA NRICGP	\$ 319,000
1996 - 98	Anthropogenic nitrogen sources and coastal eutrophication: Does N composition control phytoplankton biodiversity and water quality?	CoPI	NOAA/NC Sea Grant	\$ 86,000
1996 - 99	Lamination in modern marine stromatolites: A geomicrobiological investigation of processes forming lithified micritic layers	CoPI	NSF Marine Geology & Biological Oceanography	\$ 297,000
1995 - 97	Environmental control of Pfiesteria piscicida outbreaks: The role of anthropogenic nutrient loading	CoPI	NOAA/NC Sea Grant	\$ 114,000
1995 - 98	Carbon fixation and partitioning dynamics in marine microbial mats	CoPI	NSF Biological Oceanography	\$ 295,000
1993 - 96	Coastal eutrophication dynamics: Linking acute and chronic new nitrogen loading to enhanced phytoplankton production and community structure alteration	CoPI	NOAA/NC Sea Grant	\$ 222,000
1993 - 96	Physiological and ecological controls of cyanobacterial bloom dynamics in hypereutrophic waters: Mechanisms and management options	CoPI	USDA NRICGP	\$ 264,000

1990 - 92	Photophysiological adaptations and production periodicities of estuarine benthic microalgae	PI	Sigma Xi, Slocum-Lunz, PSA	\$	4,300
1998 - 90	Biomass, distribution, and productivity of benthic microalgae at North Inlet, South Carolina	PI	Slocum-Lunz Foundation	\$	3,300
1985 - 86	Estuarine fronts of Charleston Harbor, SC	PI	Slocum-Lunz & CCSEF	\$	7,600
TOTAL FUNDING					\$6,866,929

FELLOWSHIPS AND AWARDS

- 2022 Outstanding Reviewer for *Limnology and Oceanography*
- 2022 Carolina Trustee Professor, University of South Carolina
- 2020 Elected American Association for the Advancement of Science (AAAS) Fellow
- 2020 Breakthrough in Research Leadership Award, University of South Carolina
- 2019 ESCO Associate Editor of Distinction Award, *Estuaries and Coasts* Journal, Coastal and Estuarine Research Federation
- 2003 Texas A&M Association of Former Students Distinguished Achievement Award for Teaching (University Level Award), Texas A&M University
- 2003 Outstanding Reviewer for the journal *Limnology and Oceanography*
- 2002 College of Geosciences Distinguished Achievement Award for Faculty Teaching, Texas A&M University
- 2001 Center for Teaching Excellence Scholar Award, Texas A&M University
- 1993 US Department of Energy Global Change Distinguished Postdoctoral Fellowship
- 1991 Gordon Belser Fellowship in Botany
- 1989 Friends of Baruch Predoctoral Fellowship
- 1982 Charleston Naval League Marine Biology Award

SERVICE

- Self-Study External Reviewer, University of North Carolina at Chapel Hill, Institute for Ecosystem Studies (2019)
- Member of the Marine Microbial Ecologist Search Ctte, SEOE (2019)
- SC Sea Grant Advisory Board (2018 -)
- Chair - NOAA Center for Coastal and Marine Ecosystems (CCME) Science Advisory Council (2018)
- Chair – BMFL Director Search (Research Associate Professor)(2018)

Chair – NI-WB NERR Manager Search (Research Associate Professor)(2018)

Member of the Aquatic Ecologist Search Ctte, Biological Sciences, (2018)

Tour Leader for CAS Alumni Weekend (2016, 2017, 2018, 2019)

SC Adopt-A-Stream Advisory Board (2018)

Review Panelist, US Environmental Protection Agency (2017)

Review Panelist, NSF Biological Oceanography (2016)

Session Organizer, Estuarine Research Federation Meeting, Portland, OR (November 2015)

Review Panelist, NSF Ocean Acidification Program (2013)

Editorial Board, *Estuaries and Coasts* (2012-)

Trustee, Slocum-Lunz Foundation (2012-)

Review Panelist, NOAA/Ecology and Oceanography of Harmful Algal Blooms (2011 & 2010)

Associate Editor, *Treatise on Estuarine and Coastal Science*

Expert Panelist, The National Academies, National Research Council, Committee to Review the St. Johns River Cumulative Impact Assessment (2008 - 2010).

Participant, National Aeronautics and Space Administration (NASA), Phytoplankton Pigment Intercalibration Exercise Workgroup, SeaHARRE 4 & 5 (2007-2009)

Participant, United Nations Environment and Scientific Organization (UNESCO) - Scientific Committee on Ocean Research (SCOR), Phytoplankton Pigment Methodology Workshop, Monaco (2006)

Session Organizer, Estuarine Research Federation Meeting, Providence, RI (November 2007)

Session Moderator, Southeastern Estuarine Research Society Meeting, Pine Knoll Shores, NC (March 2007)

Associate Editor, *Estuarine, Coastal and Shelf Science* (2007 - 2020)

Review Editor, *Aquatic Microbial Ecology* (2006 - 2010)

Associate Editor, *Applied and Environmental Microbiology* (2005 - 2011)

Review Panelist, National Oceanic and Atmospheric Administration, Center for Sponsored Coastal Ocean Research, Northern Gulf of Mexico Ecosystem Research Program, Silver Spring, MD, November 2005.

Review Panelist, National Science Foundation, Biological Oceanography Program, Washington, DC, November 2005.

Expert Science Judge, National Ocean Science Bowl, University of South Carolina, Columbia, SC, March 2005, 06, 07, 08, 09

Science Judge, National Ocean Science Bowl, Texas A&M University, College Station, TX, February 2004

Invited Workshop, Committee on Ocean Research and Education (CORE), Ocean Research Interactive Observation Networks (ORION), San Juan, PR, January 2004

Review Panelist, National Science Foundation, Office of Polar Programs, Washington, DC, October 2003

Review Panelist, NOAA/COP/ South Florida Research Program, Key Largo, FL, October 2003

Review Panelist, Florida Sea Grant, Gainesville, FL, September 2001

Review Panelist, Dissertations Initiative for the Advancement of Limnology and Oceanography (DIALOG IV), American Society for Limnology and Oceanography, Washington, DC, July 2001

Review Panelist, Ecology and Oceanography of Harmful Algal Blooms (ECOHAB) Program, National Oceanic and Atmospheric Administration (NOAA), Silver Spring, MD, July 1999

Invited Expert Panel, Ecological Monitoring in the National Estuarine Research Reserve System Workshop, Charleston, SC, October 1998

Organizing Committee, Fourth International Conference on Toxic Cyanobacteria, Beaufort, NC, October 1998

Associate Editor, Journal of Elisha Mitchell Scientific Society, NC Academy of Science

Invited Co-Leader, Workgroup on Options and Research Needs to Address Environmental Issues, Weiss Symposium, Chapel Hill, NC, April 1996.

Invited Participant in NOAA's Estuarine Eutrophication Survey, South Atlantic Regional Workshop, Charleston, SC, February 1996.

Invited Participant in the Coastal Benthic Optical Properties (CoBOP) Workshop sponsored by the Environmental Optics Program of the Office of Naval Research, Washington, DC, January 1996.

Invited Participant in the Dissertations Initiative for the Advancement of Limnology and Oceanography (DIALOG) Symposium, Bermuda Biological Station, Bermuda, December 1994.

Program Chairman and Host for the 16th Annual Meeting of the Southeastern Phycological Colloquy, Duke University Marine Lab, Beaufort, NC, October 1994.

Marine Ecology Summer Course, Marine Biological Laboratory, Woods Hole, MA, Summer 1988.

PRESENTATIONS (Primary Presenter Only – Since 2005)

"The Baruch Marine Field Lab and Seasonality of Shelf Microalgae". USC Beaufort, Bluffton, SC. 21 Oct 22. ***(Invited)***

"Empirical models for estuarine phytoplankton-nutrient responses and community composition". Hobcaw Research Symposium. Hobcaw Barony, Georgetown, SC. 07 Feb. 2020.

"Lethal and sublethal effects of triclosan on estuarine phytoplankton communities". 20th International Symposium on Pollutant Responses In Marine Organisms (PRIMO20), Charleston, SC. 19-22 May 2019

"Three short stories: phytoplankton in bioluminescent lagoons, antimicrobial responses, and long-term trends in North Inlet Estuary". USC-Aiken, Department of Biology and Geology, Aiken, SC. 25 October 2019. ***(Invited)***

"Sublethal effects of crude oil on the community structure of estuarine phytoplankton". Impacts of Oil spills on Estuarine Systems Workshop. Grand Bay National Estuarine Research Reserve, Moss Point, MS. 01 Jul 2019. ***(Invited)***

"Three short stories: phytoplankton in bioluminescent lagoons, antimicrobial responses, and long-term trends in North Inlet Estuary". Fisheries & Aquatic Sciences, School of Forest Resources & Conservation, University of Florida, Gainesville, FL. 12 April 2019 ***(Invited)***

- “Three short stories: phytoplankton in bioluminescent lagoons, antimicrobial responses, and long-term trends in North Inlet Estuary”*. Institute of Marine Sciences, University of North Carolina at Chapel Hill, Morehead City, NC. 26 Sep 2019. **(Invited)**
- “Empirical models for estuarine phytoplankton-nutrient responses and community composition”*. Coastal and Estuarine Research Federation Conference, Mobile, AL. 03 – 07 Nov 2019
- “Three short stories: bioluminescent lagoons, antimicrobials, and North Inlet Estuary”*. Department of Marine Science Seminar, Coastal Carolina University, Conway, SC. 12 April 2018 **(Invited)**
- “Three short stories: bioluminescent lagoons, antimicrobials, and North Inlet Estuary”*. Department of Natural Sciences, University of South Carolina Beaufort, Bluffton, SC. 09 November 2018 **(Invited)**
- Phytoplankton responses to extreme weather events at North Inlet Estuary, SC*, Southeastern Estuarine Research Society, Flagler College, St. Augustine, FL. 08 – 10 March 2018
- “Solving the problem of assessing long-term trends in phytoplankton abundance in tidally varying environments”*, Hobcaw Research Symposium, Georgetown, SC. 09 February 2018
- “Phytoplankton responses to extreme weather events at North Inlet Estuary, SC”*, Southeastern Estuarine Research Society, Flagler College, St. Augustine, FL. 08 – 10 March 2018
- “Solving the problem of assessing long-term trends in phytoplankton abundance in tidally varying environments”*, Hobcaw Research Symposium, Georgetown, SC. 09 February 2018
- “Three short stories: bioluminescent lagoons, antimicrobials, and North Inlet Estuary”*. Department of Marine Science Seminar, Coastal Carolina University, Conway, SC. 12 April 2018
- Triclosan alterations of estuarine phytoplankton community structure*. BEM – SEERS Meeting, 11 – 15 April 2017, Myrtle Beach, SC
- Solving the problem of assessing long-term trends in phytoplankton abundance in tidally varying environments*. Coastal and Estuarine Research Federation Meeting, 9-17 November 2017, Providence, RI.
- Hobcaw Barony and the USC Baruch Marine Field Laboratory*. “Bite of Science” Teacher Enrichment Program, SCETV Conference Room, Columbia, SC. September 2016 **(Invited)**
- Lethal and sublethal effects of triclosan on estuarine phytoplankton communities*. Coastal and Estuarine Research Federation, Portland, OR. November 2015 **(Invited)**
- Ecological Characterization of Bioluminescence in Salt River Bay*, National Park Service, St. Croix, USVI. May 2014, **(Invited)**
- Three case studies of long-term changes in phytoplankton functional diversity*. Department of Biology, College of Charleston, Charleston, SC. October 2012 **(Invited)**
- Phytoplankton photopigment composition as an indicator of community structure, function, and ecosystem health*. Coastal and Estuarine Research Federation, Daytona Beach, FL. November 2011 **(Invited)**
- 3.5 Billion Years and Counting - Survival Strategies of Cyanobacteria*. Department of Biology and Geology, USC Aiken, Aiken, SC. 19 March 2010 **(Invited)**.
- Physical and Biogeochemical Controls of Ecosystem Structure and Spatiotemporal Dynamics in Anthropogenically-impacted Estuaries*. Center for Coastal Physical Oceanography, Old Dominion University, Norfolk, VA. 19 November 2007 **(Invited)**.

Spatiotemporal patterns of subtidal benthic microalgal biomass and community composition in Galveston Bay, TX. Estuarine Research Federation Meeting, Providence, RI. 07 November 2007
(Session Chair).

Benthic microalgal community composition and spatiotemporal dynamics in a shallow, turbid estuary. Southeastern and Atlantic Estuarine Research Society Meeting, Pine Knoll Shores, NC. 17 March 2007.

Untreated urban effluent effects on phytoplankton community structure and function in Lake Pontchartrain, LA. Southeastern Estuarine Research Society Meeting, GTM NEER Environmental Education Center, Ponte Vedra Beach, FL. April 2006.

Biogeochemical and physical controls of estuarine phytoplankton community structure. Department of Marine Sciences, University of Georgia, Athens, GA. March 2006. **(Invited)**

To HAB and HAB Not: Biogeochemical and physical controls of estuarine phytoplankton community structure. Department of Oceanography, Florida State University, Tallahassee, FL. April 2005.
(Invited).

ACADEMICS

* indicates graduation

Graduate Students - Major Advisor

Bauman, Sarah (M.Sci.), Biological Sciences, USC

*Buschur, Jean Marie (M.Sci.), Marine Science, USC (May 2007)

*Butz, Shelby (M.Sci.), Marine Science, USC (August 2015)

*Carruthers, Haley (M.Sci.), Marine Science, USC (May 2020)

*Cotti-Rausch, Bridget (M.Sci.), Marine Science, USC (August 2010)

*DeArmitt, Brittany (M.Sci.), Marine Science, USC (August 2022)

*Gordon, Ana, (M.Sci.), Marine Science, USC (May 2015)

*Gore, Miranda (M.Sci.), Marine Science, USC (May 2015)

*Hagenbuch, Isaac (Ph.D.), Biological Sciences, USC (August 2013)

*Judy, Nicole (M.Sci.), Marine Science, USC (August 2017)

*Knotts, Eilea (Ph.D.), Biological Sciences, USC (December 2019)

*Laccetti, Kristen (M.Sci.), Marine Science, USC (May 2020)

*Lee, Alyce R. (Ph.D.), Oceanography, TAMU (May 2009)

*Lumsden, Elizabeth (M.Sci.), Oceanography, TAMU (May 2003)

*Marshalonis, Daniel (Ph.D.), Biological Sciences, USC (May 2008)

*Muggelberg, Leslie (M.Sci.), Biological Sciences, USC (May 2013)

*Örnólfsdóttir, Erla B. (Ph.D.), Oceanography, TAMU (May 2002)

Powers, Shannon (M.Sci.), Marine Science, USC

*Salazar, Alicia (M. Sci.), Oceanography, TAMU (May 2004)

Schlenker, Catherine (M.Sci.), Biological Sciences, USC

*Siegel, Amy (M.Sci.), Marine Science, USC (May 2010)

Thompson, Makenna (M.Sci.), Marine Science, USC

*Van Meerssche, Elise (Ph.D.), Biological Sciences, USC (May 2018)

*Zaubrecher, Sarah (M.Sci.), Marine Science, USC (August 2020)

*Zimmerlin, Michele (M.Sci.), Marine Science, USC (October 2013)

Lecture Courses Taught at Texas A&M University

Introduction to Oceanography (undergraduate, non-majors)

Ecology of the Continental Shelf: Estuarine and Coastal Ecosystem Processes (graduate, revised course)

Oceanographic Data Collection and Analysis Methods (graduate, new course)

Lecture Courses Taught at University of South Carolina

Data Collection and Analysis Methods in Marine Science (MSCI/BIOL 599/758)

Oceans and Society (MSCI 210)

The Living Ocean (MSCI 102)

Estuarine Oceanography (MSCI/GEOL 581)

Marine Ecology (MSCI/BIOL 575)

Field and Lab Methods in Marine Science (MSCI 460)