ERIK EDWARD SOTKA

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RESEARCH INTERESTS

Evolutionary ecology – Population genetics – Invasive species – Local adaptation – Plant-herbivore interactions

EDUCATION

University of North Carolina at Chapel Hill. Ph.D. in Biology. 2001

University of Washington. B.S. in Zoology. 1993

POSITIONS

2015-present	Professor of Biology, College of Charleston
2010-2015	Associate Professor of Biology, College of Charleston
2006-2015	Graduate Faculty, Marine Biomedicine and Environmental Sciences, Medical University of South Carolina
2005-2010	Assistant Professor of Biology, College of Charleston
2002-2004	Postdoctoral Fellow, Hopkins Marine Station, Stanford University
2003	Visiting Lecturer, Friday Harbor Laboratories, University of Washington
2001-2002	Postdoctoral Fellow, Harvard University

AWARDS

2018	Distinguished Researcher Award. College of Charleston
2011	Gordon E. Jones Distinguished Achievement Award. School of Science and Mathematics, College of Charleston
2010	Visiting International Researcher Fellow. University of Sydney, Australia.
2010	Fulbright Senior Scholar. Australian-American Fulbright Commission. Hosted by the University of New South Wales, Australia.
2000	Paul Hardin Dissertation Fellowship - Royster Society of Fellows - University of North Carolina at Chapel Hill.

EXTERNAL GRANTS

2021-2024 ***National Park Service.*** "Genotyping corals for restoration and rescue at multiple coral reef parks: BUIS/DRTO/SARI/VICR/VIIS." $301,152

2019-2024 ***National Science Foundation***, Division of Biological Oceanography. "The genetic legacy of an Asian oyster introduction and its disease-causing parasite". PIs: Erik Sotka and Allan Strand. $466,141

2019-2024 ***National Science Foundation***, Division of Biological Oceanography. "Trait differentiation and local adaptation to depth within beds of the foundation seagrass *Zostera marina.*" PIs: Cynthia Hays, Randall Hughes and Erik Sotka. $630,564 ($78,738 to CofC)

2014-2018 ***National Science Foundation,*** Division of Biological Oceanography. "Detecting genetic adaptation during marine invasions." PIs: Erik Sotka, Courtney Murren and Allan Strand. $622,923

2015-2016 ***South Carolina SeaGrant Consortium***. "Genomic signals of local adaptation in the salt marsh plant *Spartina alterniflora."* $9,999

2011-2014 ***National Science Foundation***, Division of Biological Oceanography. "Collaborative Research: Cascading effects of an invasive seaweed on estuarine food webs of the southeastern US." PIs: Drs. Jeb Byers and Erik Sotka. $515,521 ($265,414 to CofC)

2009-2013 ***National Science Foundation***, Division of Systematic Biology and Biodiversity Inventory. "Phylogenetic effect on host use within generalist herbivores: a case study using marine amphipods in the family Ampithoidae (Crustacea: Amphipoda)." $339,999

2010-2011 ***University of New South Wales*** Goldstar Award. "Chemical arms races: the use of pharmacology to explain diet choices and responses to contaminants in marine herbivores". PI: Dr. Alistair Poore; co-PI: Drs. Emma Johnson, Erik Sotka and Jennifer Forbey. $40,000

2006-2010 ***National Science Foundation***, Division of Biological Oceanography. "The evolution of feeding tolerance for chemically-rich seaweeds among herbivore populations: a tropical-temperate contrast". $316,557

2006-2008 ***South Carolina Sea Grant Consortium*** "Genetic estimates of larval dispersal stemming from adult spawning aggregations of Gag Grouper *Myctoperca microlepis* in the southeastern United States". $100,311

2000 ***National Science Foundation***, Dissertation Improvement Grant - Ecological and Evolutionary Physiology. $7,433.

2000 ***American Museum of Natural History*** – Research Grant from the Theodore Roosevelt Memorial Fund. $1,800.

PUBLICATIONS

Links to articles are at Publications. Underlined students are undergraduates. Asterisks indicate shared first authorship.

88) Krueger-Hadfield SA, Oetterer AP, Lees LE, Hoffman JM, Sotka EE, Murren CJ (2023). Phenology and thallus size in a non-native population of *Gracilaria vermiculophylla*. **Journal of Phycology**

87) Lipinska AP, Krueger-Hadfield SA, Godfroy O, et al (2023). The Rhodoexplorer platform for red algal genomics and whole genome assemblies for several *Gracilaria* species. **Genome Biology and Evolution.**

86) Sotka, EE, T. Bell, S. Berke. (2023) Cryptic mtDNA diversity of *Diopatra cuprea* (Onuphidae, Annelida) in the northwestern Atlantic Ocean. **Biology**

85) Duffy, J. E., J. J. Stachowicz, P. L. Reynolds, K. A. Hovel, M. Jahnke, E. E. Sotka, C. Boström, K. E. Boyer, M. Cusson, J. Eklöf, A. H. Engelen, B. K. Eriksson, F. J. Fodrie, J. N. Griffin, C. M. Hereu, M. Hori, A. R. Hughes, M. V. Ivanov, P. Jorgensen, C. Kruschel, K.-S. Lee, J. S. Lefcheck, P.-O. Moksnes, M. Nakaoka, M. I. O'Connor, N. E. O'Connor, R. J. Orth, B. J. Peterson, H. Reiss, K. Reiss, J. P. Richardson, F. Rossi, J. L. Ruesink, S. T. Schultz, J. Thormar, F. Tomas, R. Unsworth, E. Voigt, M. A. Whalen, S. L. Ziegler, and J. L. Olsen (2022) A Pleistocene legacy structures variation in modern seagrass ecosystems. **Proceedings of the National Academy of Sciences** 119:e2121425119

84) Harper, K. E., L. A. Scheinberg, K. E. Boyer, and E. E. Sotka (2022) Global distribution of cryptic native, introduced and hybrid lineages in the widespread estuarine amphipod Ampithoe valida. **Conservation genetics** 23: 791–806

83) Mounger JM, van Riemsdijk I, Boquete MT, Wagemaker CAM, Fatma S, Robertson MH, Voors SA, Oberstaller J, Gawehns F, Hanley TC, Grosse I, Verhoeven KJF, Sotka EE, Gehring CA, Hughes AR, Lewis DB, Schmid MW, Richards CL (2022) Genetic and epigenetic differentiation across intertidal gradients in the foundation plant *Spartina alterniflora*. **Frontiers in Ecology and Evolution** 10: 868826

82) Murren, C.J. S.A. Krueger-Hadfield, A. Clark, B.A. Flanagan, L.E. Lees and E.E. Sotka (2022) Individuals from non-native populations are stronger and bigger than individuals from native populations of a widespread seaweed ***Biological Invasions*** 24: 2169–2180

81) Gross C, J.E. Duffy, K. Hovel Kevin, M. Kardish, P. Reynolds, C. Boström, K. Boyer, M. Cusson, J. Eklöf, A. Engelen, K. Eriksson, J. Fodrie, J. Griffin, C. Hereu, M. Hori, R.A. Hughes, M. Ivanov, P. Jorgensen, C. Kruschel, K-S. Lee, J. Lefcheck, K. McGlathery, P-O. Moksnes, M. Nakaoka, M. O'Connor, N. O'Connor, J.

Olsen, R. Orth, B. Peterson, H. Reiss, F. Rossi, J. Ruesink, EE. Sotka, J. Thormar, F. Tomas, R. Unsworth E. Voigt, M. Whalen, S. Ziegler, J. Stachowicz (2022) The biogeography of community assembly: latitude and predation drive variation in community trait distribution in a guild of epifaunal crustaceans. ***Proceedings of the Royal Society B*** 289: 20211762.

80) Krueger-Hadfield, S.A., J.E. Byers, G. Bonthond, R. Terada, F. Weinberger and E.E. Sotka (2021) Minireview: Intraspecific diversity and genetic structure in the widespread macroalga *Agarophyton vermiculophyllum*. ***Journal of Phycology*** 57:1403-1410

79) Zerebecki, R.A.*, E.E. Sotka*, T.C. Hanley, K.L. Bell, C. Gehring, C.C. Nice, C.L. Richards and A.R. Hughes (2021) Repeated genetic divergence across tidal elevation in a foundation plant species. ***American Naturalist*** 198: E152-E169

78) Hays, C.G., T.C. Hanley; A.R. Hughes, S.B. Truskey, R.A. Zerebecki and E.E. Sotka (2021) Local adaptation in marine foundation species at microgeographic scales ***Biological Bulletin*** 241: 16-29

77) Wares, J.P., A.E. Strand, and E.E. Sotka (2021) Diversity, divergence, and density: How habitat and hybrid zone dynamics maintain a genomic cline in an intertidal barnacle ***Journal of Biogeography*** 48: 2174-2185

76) Bianchi, T.S., R.C. Aller, T.B. Atwood, C.J. Brown, L.A. Buatois, L.A. Levin, J.S. Levinton, J.J. Middelburg, E.S. Morrison, P. Regnier, M.R. Shields, P.V.R. Snelgrove, E.E. Sotka, R.E. Stanley (2021) What global biogeochemical consequences will marine animal–sediment interactions have during climate change? ***Elementa: Science of the Anthropocene*** 9:1

75) Flanagan, B.A. S.A. Krueger-Hadfield, C,J. Murren, C.C. Nice, A.E. Strand, and E.E. Sotka (2021) Founder effects shape linkage disequilibrium and genomic diversity of a partially clonal invader**.** ***Molecular Ecology*** 30: 1962-1978

74) Krueger-Hadfield, S.A., B.A. Flanagan, O. Godfroy, K.M. Hill-Spanik, C.C. Nice, C.J. Murren, A.E. Strand, and E.E. Sotka (2021) Using RAD-seq to develop sex-linked markers in a haplodiplontic alga. ***Journal of Phycology*** 57:279-294

73) von Staats, D., T.C. Hanley, C.G. Hays, S.R. Madden, E.E. Sotka, and A.R. Hughes (2021) Intra-meadow variation in seagrass flowering phenology across depths. ***Estuaries and Coasts*** 44:325-338

72) Haram, L.E., E.E. Sotka, J.E. Byers (2020) Effects of novel, non-native detritus on decomposition and invertebrate community assemblage. ***Marine Ecology Progress Series*** 643:49-61

71) Bortolus, A. and 43 co-authors (2019) Interdisciplinary perspective shows *Spartina* as a distinct solid genus. ***Ecology*** 100: e02863

70) Hughes, A.R. T.C. Hanley, A.F.P. Moore, C. Ramsey-Newton, R.A. Zerebecki, E.E. Sotka (2019) Predicting the sensitivity of marine populations to rising temperature*.* ***Frontiers in Ecology and the Environment*** 17:17-24

69) Byers, J.E. and E.E. Sotka (2019) Promoting invasive species to enhance multifunctionality in a native ecosystem still requires strong(er) scrutiny. ***Biological Invasions*** 21: 277-280 (authorship determined by coin toss)

68) Sotka, E.E. and J.E. Byers (2019) Not so fast: Promoting invasive species to enhance multifunctionality in a native ecosystem requires strong(er) scrutiny. ***Biological Invasions*** 21: 19-25 (authorship determined by coin toss)

67) Machado, G.B.O., F.P.P. Leite, E.E. Sotka (2018) Nutrition of marine mesograzers: integrating feeding behavior, nutrient intake and performance of an herbivorous amphipod. ***PeerJ*** 6:e5929

66) Haram, L.E., K.A. Kinney, E.E. Sotka, and J.E. Byers (2018) Mixed effects of an introduced ecosystem engineer on the foraging behavior and habitat selection of predators. ***Ecology*** 99:2751-2762

65) Lees, L.E., S.A. Krueger-Hadfield, A.J. Clark, E.A. Duermit, E.E. Sotka, C.J. Murren (2018) Tetrasporophytic thalli of the ecosystem engineer *Gracilaria vermiculophylla* are stronger and less nutritious than gametophytic thalli. ***Journal of Phycology*** 54:471-482

64) Bippus, P.M., S.A. Krueger-Hadfield, E.E. Sotka (2018) Palatability of an introduced seaweed does not differ between native and non-native populations. ***Marine Biology*** 165: 39

63) Sotka, E.E., A. Baumgartner, P. Bippus, C. Destombe, E. Duermit, H. Endo, B. Flanagan, M. Kamiya, L. Lees, C.J. Murren, M. Nakaoka, S. Shainker, A.E. Strand, R. Terada, M. Valero, F. Weinberger and S.A. Krueger-Hadfield (2018) Combining niche-shift analysis and population genetics predicts rapid phenotypic evolution during invasion. ***Evolutionary Applications*** 11:781–793

62) Reynolds, P.L., J.J. Stachowicz, K. Hovel, C. Boström, K. Boyer, M. Cusson, J.S. Eklöf, B.K. Eriksson, J. Fodrie, J. Griffin, P. Jorgensen, C. Hereu, M. Hori, R. Hughes, M. Ivanov, C. Kruschel, K-S. Lee, P-O. Moksnes, M. Nakaoka, F.T. Nash, J. Olsen, M. O'Connor, N. O'Connor, R. J. Orth, F. Rossi, J. Ruesink, E.E. Sotka, R. Unsworth, M. Whalen, J.E. Duffy. (2018) Latitude, temperature and habitat complexity predict predation pressure in eelgrass across the Northern Hemisphere. ***Ecology*** 99: 29-35

61) Ruesink, J.L., P.L. Reynolds, C. Boström, M. Cusson, J. Douglass, J. Eklöf, A. H. Engelen, M. Hori, K. Hovel, K. Iken, P.O. Moksnes, M. Nakaoka, M.I. O'Connor, J.L. Olsen, E.E. Sotka, J.J. Stachowicz, M.A. Whalen, J.E. Duffy (2018) Form-function relationships in a marine foundation species depend on scale: a shoot to global perspective from a distributed ecological experiment. ***Oikos*** 127: 364-374

60) Wang, S., F. Weinberger, L. Xiao, M. Nakaoka, G. Wang, S.A. Krueger-Hadfield, E.E. Sotka, D. Bian, M. Lenz (2017) In-situ-common-garden-assays demonstrate increased defense against natural fouling in non-native populations of the red seaweed *Gracilaria vermiculophylla*. ***Marine Biology*** 164: 193

59) Poore, A.G.B., S.T. Ahyong, J.L. Lowry, and E.E. Sotka (2017) An inordinate fondness for plant-feeding Crustaceans. ***Proceedings of the National Academy of Sciences*** 114: 8829–8834

58) Demko, A., C. Amsler, M.E. Hay, J.D. Long, J.B. McClintock, V.J. Paul, E.E. Sotka (2017) Declines in plant palatability from polar to tropical latitudes depend on herbivore and plant identity. ***Ecology*** 98: 2312-2321

57) Heuring, W.L., K.M. Hill-Spanik, E.E. Sotka (2017) Identifying lineages of Alpheus angulosus McClure, 2002 (Caridea: Alpheidae) in South Carolina, USA. ***Journal of Crustacean Biology*** 37: 499-502

56) Krueger-Hadfield, S.A., C.L. Magill, N. Mieszkowska, E.E. Sotka and C.A. Maggs (2017) When invaders go unnoticed: the case of *Gracilaria vermiculophylla* in the British Isles. ***Cryptogamie, Algologie*** 38:379-400

55) Krueger-Hadfield, S.A., N.M. Kollars, A.E. Strand, J.E. Byers, S.J. Shainker, R. Terada, T.W. Greig, M. Hammann, D.C. Murray, F. Weinberger and E.E. Sotka (2017) Genetic identification of source and likely vector of a widespread marine invader. ***Ecology and Evolution*** **7:** 4432–4447

54) Sotka, E.E., T. Bell, L.E. Hughes, J.K. Lowry, A.G.B. Poore (2017) A molecular phylogeny of marine amphipods in the herbivorous family Ampithoidae. ***Zoologica Scripta*** 46:85-95

53) Sotka, E.E., V. Jormalainen, A.G.B. Poore (2017) The evolution of marine herbivores in response to algal secondary metabolites. In M.P. Puglisi, M.A. Becerro and V. Paul (eds.) *Marine chemical ecology: the ecological impacts of marine natural products.* CRC Press.

52) Gerstenmaier, C, S.A. Krueger-Hadfield, E.E. Sotka (2016) Genotypic diversity in a non-native ecosystem engineer has variable impacts on productivity. ***Marine Ecology Progress Series*** 556: 76-89

51) Krueger-Hadfield, S.A., N.M. Kollars, J.E. Byers, T.W. Greig, M. Hammann, D.C. Murray, C.J. Murren, A.E. Strand, R. Terada, F. Weinberger, and E.E. Sotka (2016) Invasion of novel habitats uncouples haplo-diplontic life cycles. ***Molecular Ecology*** 25: 3801-3816

50) Kollars, N, J.E. Byers, E.E. Sotka (2016) Invasive decor: An association between a native decorator worm and a non-native seaweed can be mutualistic. ***Marine Ecology Progress Series*** 545:135-145

49) Kollars, N.M., S.A. Krueger-Hadfield, J.E. Byers, T.W. Greig, A.E. Strand, F. Weinberger and E.E. Sotka (2015) Development and characterization of microsatellite loci for the haploid-diploid red seaweed *Gracilaria vermiculophylla.* ***PeerJ*** 3:e1159

48) Duffy, J.E., P.L Reynolds, C. Boström, J. Coyer, M. Cusson, S. Donadi, J. Douglass, A. Engelen, B.K. Eriksson, S. Fredriksen, L. Gamfeldt, C. Gustafsson, G. Hoarau, M. Hori, K. Hovel, K. Iken, J. Lefcheck, P-O. Moksnes, M. Nakaoka, M. O'Connor, J. Olsen, J.P. Richardson, J. Ruesink, E.E. Sotka, J. Thormar, M. Whalen, and J.J. Stachowicz (2015) Biodiversity mediates top-down control in eelgrass ecosystems: A global comparative-experimental approach. ***Ecology Letters*** 18: 696-705

47) D'Augillo, M.C., I. DeBuron, and E.E. Sotka (2015). New host record (*Gobiosoma bosc,* Teleostei), for *Homalometron* sp. (Digenea: Apocreadiidae) in the Charleston Harbor, South Carolina U.S.A. ***Comparative Parasitology*** 82: 198-203

46) Wright, J.T., J.E. Byers, J.L. DeVore, and E.E. Sotka (2014) Engineering or food? Mechanisms of facilitation by a habitat-forming invasive seaweed. ***Ecology*** 95: 2699–2706

45) Bell, T.M., A.E. Strand, E.E. Sotka (2014) The latitudinal cline in *Ldh* (lactate dehydrogenase) of the killifish *Fundulus heteroclitus* has not changed after 40 years of warming estuaries. ***Journal of Heredity*** 105: 566-571

44) Sotka, E.E. and J. Gantz (2013) Preliminary evidence that the feeding rates of generalist marine herbivores are limited by detoxification rates. ***Chemoecology*** 23: 233-240

43) Manyak-Davis, A., T.M. Bell, and E.E. Sotka. (2013) The relative importance of predation risk and water temperature in maintaining Bergmann's rule in a marine ectotherm. ***American Naturalist*** 182: 347-358

42) Forbey, J.S., M.D. Dearing, E. Gross, C.M. Orians, E.E. Sotka and W.J. Foley (2013) A pharm-ecological perspective of terrestrial and aquatic plant-herbivore interactions. ***Journal of Chemical Ecology*** 39:465-480

41) Craft, J.D., V.J. Paul and E.E. Sotka (2013) Biogeographic and phylogenetic effects on feeding resistance of generalist herbivores toward plant chemical defenses. ***Ecology*** 94: 18-24

40) McCarty, A.T. and E.E. Sotka (2013) Geographic variation in feeding preference of a generalist herbivore: the importance of seaweed chemical defenses ***Oecologia*** 172:1071-1083

39) Strand, A.E., L.M. Williams, M.F. Oleksiak, and E.E. Sotka (2012) Can diversifying selection be distinguished from history in geographic clines? A population genomic study of killifish (*Fundulus heteroclitus*) ***PLoS-ONE*** 7:e45138

38) Poore, A. G. B., A. H. Campbell, R. A. Coleman, G. J. Edgar, V. Jormalainen, P. L. Reynolds, E. E. Sotka, J. J. Stachowicz, R. B. Taylor, M. A. Vanderklift and J. Emmett Duffy (2012) Global patterns in the impact of marine herbivores on benthic primary producers. ***Ecology Letters*** 15:912-922

37) Byers, J.E., P.E. Gribben, C. Yeager and E.E. Sotka (2012) Impacts of an invasive ecosystem engineer within mudflats of the southeastern U.S. coastline. ***Biological Invasions*** 14:2587–2600

36) Sotka, E.E. (2012) Natural selection, larval dispersal and the geography of phenotype in the sea. ***Integrative and Comparative Biology*** 52: 538-545

35) Bell, T.M. and E.E. Sotka (2012) Local adaptation in adult feeding preference and juvenile performance in the generalist herbivore *Idotea balthica*. ***Oecologia*** 170: 383-393

34) Barshis, D.J., E.E. Sotka, R.P. Kelly, A. Sivasundar, B.A. Menge, J. Barth, and S.R. Palumbi (2011). Marine coastal upwelling and sweepstakes recruitment in the acorn barnacle *Balanus glandula.* ***Marine Ecology Progress Series*** 439:139-150

33) Couceiro, L., L. López, E.E. Sotka, J.M. Ruiz, and R. Barreiro (2011) Molecular data delineate cryptic *Nassarius* species and characterize spatial genetic structure of *N. nitidus*. ***Journal of Marine Biological Association of the United Kingdom*** 98: 1175-1182

32) Sotka, E.E. and P.L. Reynolds (2011) Rapid experimental shift in host use traits of a polyphagous marine herbivore reveals fitness costs on alternative hosts. ***Evolutionary Ecology*** 25:1335-1355

31) Reynolds, P.L. and E.E. Sotka (2011) Nonconsumptive predator effects indirectly influence marine plant biomass and palatability. ***Journal of Ecology*** 99:1272-1281

30) Long, J.D. J.L. Mitchell, and E.E. Sotka (2011) Local consumers induce resistance differentially between *Spartina* populations in the field. ***Ecology*** 92:180-188

29) Whalen, K.E., E.E. Sotka, J.V. Goldstone and M.E. Hahn (2010) The role of multixenobiotic transporters in predatory marine molluscs as counter-defense mechanisms against dietary allelochemicals. ***Comparative Biochemistry and Physiology - Part C: Toxicology & Pharmacology*** 152: 288-300

28) Sotka, E.E., A. McCarty and H.B. Giddens (2010) Are tropical herbivores more tolerant of chemically rich seaweeds than are temperate herbivores? A test of seaweed-herbivore coevolution. ***Proceedings of the 11th International Coral Reef Symposium*** 280-284.

27) Cushman, E.L., N.K. Jue, A.E. Strand and E.E. Sotka (2009) Evaluating the demographic significance of genetic homogeneity using a coalescent-based simulation: a case study with gag (*Mycteroperca microlepis*). ***Canadian Journal of Fisheries and Aquatic Sciences*** 66:1821-1830

26) Sotka, E.E. and M.E. Hay (2009) Effects of herbivores, nutrient enrichment, and their interactions on macroalgal proliferation and coral growth. ***Coral Reefs*** 28: 555-568

25) Sotka, E.E., A. McCarty, N. Oakman, E. Monroe and F. Van Dolah (2009) Benthic herbivores are not deterred by brevetoxins produced by the red tide dinoflagellate *Karenia brevis*. ***Journal of Chemical Ecology*** 38:851-859

24) Sotka, E.E.*, J. Forbey, M. Horn, A. Poore, D. Raubenheimer and K. Whalen* (2009) The emerging role of pharmacology in understanding the ecology and evolution of marine and freshwater consumers. ***Integrative and Comparative Biology*** 49: 291-313 [*equal co-authors]

23) Crickenberger, S. and E.E. Sotka (2009) Temporal shifts of fouling communities in Charleston Harbor with reports of *Perna viridis*. ***Journal of the North Carolina Academy of Sciences*** 125:78-84

22) Ayme-Southgate, A, R. Southgate, R. Philipp, E.E. Sotka, and C. Kramp (2009) The myofibrillar protein, projectin, is highly conserved across insect evolution except for its PEVK domain. ***Journal of Molecular Evolution*** 67: 653-669

21) Sotka, E.E. and H.B. Giddens (2009) Seawater temperature alters feeding discrimination by cold-temperate but not subtropical individuals of an ectothermic herbivore. ***Biological Bulletin*** 216:75-84

20) Geller, J.*, Sotka, E.E.*, R. Kado, S.R. Palumbi, and E. Schmidt (2008) Pathways of invasion of a northeastern Pacific acorn barnacle, *Balanus glandula* in Japan and Argentina [* denotes equal co-authors] ***Marine Ecology Progress Series*** 258: 211-218

19) Sotka, E.E. (2008) Clines. In: *Encyclopedia of Ecology*, ed: S.V. Jørgensen. Elsevier.

18) Sotka, E.E. and K.E. Whalen (2008) Herbivore offense in the sea: the detoxification and transport of algal secondary metabolites. Pp. 203-228 In: *Algal Chemical Ecology*, ed. C. Amsler. Springer-Verlag Berlin.

17) Poore, A.G.B., N.A. Hill, and E.E. Sotka (2008) Phylogenetic and geographic variation in host breadth and composition used by herbivorous amphipods in the family Ampithoidae. ***Evolution*** 62: 21-38

16) Couceiro, L., R. Barreiro, J.M. Ruiz and E.E. Sotka (2007) Genetic isolation-by-distance among populations of the netted dog whelk *Nassarius reticulatus* (L.) along the European Atlantic coastline. ***Journal of Heredity*** 98: 603-610

15) Sotka, E.E. (2007) Restricted host use by the herbivorous amphipod *Peramphithoides tea* is motivated by food quality and abiotic refuge. ***Marine Biology*** 151: 1831-1838

14) Brunelle, S.A., S. Hazard, E.E. Sotka, and F.M. Van Dolah (2007) Characterization of a dinoflagellate cryptochrome blue light receptor with a possible role in circadian control of the cell cycle. ***Plant Physiology*** 43: 509-518

13) Wares, J.P., P.H. Barber, J. Ross-Ibarra, E.E. Sotka, and R.J. Toonen (2006) Mitochondrial DNA and population size (Letter to Editor). ***Science*** 314: 1388-1389

12) Sotka, E.E. and S.R. Palumbi (2006) The use of genetic clines to estimate dispersal distances of marine larvae. ***Ecology*** 87:1094-1103

11) Sotka, E.E. (2005) Invited Review: Local adaptation in host use among marine invertebrates. ***Ecology Letters*** 8: 448-459

10) Sotka, E.E. and R.W. Thacker (2005) Do some corals like it hot? ***Trends in Ecology and Evolution*** 20: 59-62

9) Sotka, E.E., J. Hempelmann, and C. Biermann (2005) Genetic signal of historic population expansion in the Puget Sound rockfish *Sebastes emphaeus*. ***Marine Biotechnology*** 7 :223-230

8) Sotka, E.E., J.P. Wares, J.A. Barth, R.K. Grosberg and S.R. Palumbi. (2004) Strong genetic clines and geographical variation in gene flow in the rocky intertidal barnacle *Balanus glandula.* ***Molecular Ecology*** 13: 2143-2156

7) Sotka, E.E., J.P. Wares, and M.E. Hay (2003) Geographic and genetic variation in feeding preferences for chemically-rich seaweeds ***Evolution*** 57: 2262-2276 ****Cover article***

6) Sotka, E.E. (2003) Genetic control of feeding preference in the amphipod *Ampithoe longimana*. ***Marine Ecology Progress Series*** 256:305-310

5) Sotka, E.E. and M.E. Hay (2002) Geographic variation among herbivore populations in tolerance for a chemically-rich seaweed. ***Ecology*** 83: 2721–2735

4) Sotka, E.E.*, R.B. Taylor*, M.E. Hay (2002) Tissue-specific induction of resistance to herbivores in a brown seaweed: the importance of direct grazing versus waterborne signals from grazed neighbors. ***Journal of Experimental Marine Biology and Ecology*** 277: 1-12 [* equal co-authors]

3) Taylor, R.B.*, E.E. Sotka*, and M.E. Hay (2002) Within-plant variation in susceptibility and response to amphipod grazing in the brown seaweed *Sargassum filipendula.* ***Oecologia*** 132:68-76 [* denotes equal co-authors]

2) Sotka, E.E., M.E. Hay, and J.D. Thomas (1999) Host-plant specialization by a non-herbivorous amphipod: advantages for the amphipod and costs for the seaweed. ***Oecologia*** 118:471-482

1) Miller, M.W., M.E. Hay, S.L. Miller, D. Malone, E.E. Sotka, A.M. Szmant (1999) A new method for manipulation of nutrients on coral reefs: effects of nutrients vs. herbivores on reef algae. ***Limnology and Oceanography*** 44: 1847-1861

PUBLICATIONS (NON-PEER REVIEWED)

5) Sotka, E.E. and S.A. Krueger-Hadfield. (2014) Not all algae who wander are lost. ***The Marine Biologist***.

4) Hempelmann, J.A., C.H. Biermann, E.E. Sotka, and D. Halos. (2004) The population structure of Puget Sound Rockfish (*Sebastes emphaeus*) assessed with mtDNA and microsatellites. U.S. Department of Commerce, NOAA Technical Memorandum.

3) Sotka, E.E. (2001) The causes and consequences of intraspecific variation in the feeding preferences of a marine herbivore. Ph.D. Dissertation, University of North Carolina at Chapel Hill.

2) Suchanek, T.H., J. Becker, E.E. Sotka (1994) Final Report for the National Park Service: Intertidal communities of Katmai National Park, Alaska: Assessment of natural resources and disturbance events. NPS Cooperative Agreement 8036-2-0002. 370 pgs.

1) Sotka, E.E. (1993) Female choice and cues of aging in male Pierid butterflies. Honors Thesis. University of Washington

INVITED PRESENTATIONS

American Society of Pharmacognosy, Annual Meeting. Invited speaker, Chemical Ecology session. North Charleston SC (July 2022).

Trent University, Canada – Seminar, Department of Biology (January 2021)

University of Connecticut, Avery Point – Seminar, Department of Marine Sciences (September 2020)

Marine Evolution Session Keynote - *Evolutionary Biology of Marine Invasions*. University of Gothenburg, Sweden (May 2018)

Darwin Week, College of Charleston (February 2018)

University of Lund, Malmo Sweden. GENECO (Graduate Research School in Genomic Ecology; August 2017)

Hokkaido University, Sapporo Campus (August 2016)

San Diego State University – Department of Biology (February 2016)

GEOMAR – Kiel Germany (September 2015)

Hokkaido University - Akkeshi Marine Station, Japan (June 2015)

University of Sendai – Sendai, Japan (May 2015)

International Society of Chemical Ecology – Champagne-Urbana, Illinois (July 2014)

East Carolina University – Center for Biodiversity Symposium (*Biodiversity and climate change: perspectives from the southeastern US*). Greenville, NC (March 2014)

University of Georgia – Odum School of Ecology (October 2013)

University of Tennessee - Department of Biology (September 2013)

10th International Phycology Congress – Symposium on Algal Chemical Ecology. Orlando, FL (August 2013).

University of South Carolina at Beaufort – Departmental lecture (April 2013)

Northeastern University – Marine Science Center (February 2012)

Society for Integrative and Comparative Biology –Dispersal of Marine Organisms Symposium. Charleston, SC (January 2012)

13th Brazilian Congress of Phycology – Plenary lecture; Paraty, Brazil (July 2010)

Texas State University – Department of Biology, San Marcos, TX (April 2010)

University of North Carolina at Wilmington – Department of Biology (January 2010)

College of Charleston, Keynote Speaker – Graduate Student Research Colloquium (September 2009).

Georgia Southern University – Department of Biology (April 2009)

University of New South Wales – Australia Research Center – New Zealand Research Network for Vegetation Function - Mesograzer Impacts on Marine Vegetation – Sydney (March 2009)

Society for Integrative and Comparative Biology – PharmEcology Symposia (January 2009)

Scripps Institute of Oceanography – University of California at San Diego (March 2008)

University of New England – Marine Science Center, Biddeford, Maine (February 2008)

University of North Carolina – Curriculum in Ecology, Chapel Hill (January 2007)

Clemson University – Department of Biological Sciences, South Carolina (October 2006)

Smithsonian Institution – Fort Pierce, Florida (May 2006)

University of New Hampshire – Department of Zoology, Durham, New Hampshire (January 2006)

Fort Johnson Marine Science Seminar Series – Charleston, South Carolina (December 2005)

University of South Carolina – Department of Biology; Columbia, South Carolina (April 2005)

Moss Landing Marine Laboratory – Fall Seminar Series; Moss Landing, California (October 2004)

University of California at Santa Barbara – Departmental Seminar; Ecology, Evolution and Marine Biology (September 2004)

Old Dominion University – Department of Biology, Norfolk, Virginia (March 2004)

College of Charleston – Department of Biology, Charleston, South Carolina (February 2004)

Florida International University – Department of Biology, Miami, Florida (February 2004)

Smithsonian Tropical Research Institute - Panama City, Panama (June 2003)

University of Washington, Friday Harbor Laboratory (April 2003)

University of California at Davis - Bodega Marine Laboratory Seminar Series (March 2003)

International Society of Chemical Ecology - Symposium on Marine Chemical Ecology -Lake Tahoe, NV (July 2001)

Harvard University - Graduate Seminar in Molecular Ecology (February 2001)

OTHER PRESENTATIONS

American Genetic Association - Conservation Genetics Conference 2003 - Front Royal, VA

American Society of Limnology and Oceanography 2008 – Orlando, FL; 2010 – Portland, OR

Benthic Ecology Meeting 1997 – Portland, ME; 1998 – Melbourne, FL; 1999 – Baton Rouge, LA; 2000 – Wilmington, NC; 2001 – Durham, NH; 2005 – Williamsburg, VA; 2006 – Quebec City, Canada; 2007 – Atlanta, GA, 2010 – Wilmington, NC; 2011 – Mobile, AL; 2012 – Norfolk, VA; 2013 – Savannah, GA; 2014 – Jacksonville, FL; 2015 – Quebec; 2017 – Myrtle Beach, SC; 2019 – St. John's New Brunswick, Canada

California Cooperative Oceanic Fisheries Investigations 2003 - Pacific Grove, CA

Ecological Society of America 1997 - Albuquerque, NM; 2000 - Snowbird, UT; 2003 - Savannah, GA; 2004 - Portland, OR

Gordon Conference on Plant-Herbivore Interactions 2001, 2007, 2013 - Ventura, CA

International Coral Reef Symposium 2008 – Melbourne, FL

International Conference on Marine Bioinvasions 2023 – Baltimore MD

Society for Integrative and Comparative Biology 2006 – Orlando, FL

Society for the Study of Evolution 2002 - Champagne-Urbana, IL; 2003 - Chico, CA; 2009 – Moscow, ID; 2014 – Raleigh, NC; 2017 – Portland, OR

Western Society of Naturalists 2000 - Portland; 2002 - Monterey; 2004 - Sonoma; 2012 – Monterey; 2014 – Tacoma; 2016 – Monterey; 2019 – St. Johns Newfoundland

INSTRUCTION

Lecturer, Grice Marine Laboratory and Department of Biology, College of Charleston

- Graduate courses
  - *Marine Molecular Ecology*
  - *Marine Invertebrate Zoology*
  - *Conservation Genetics*
  - *Marine Conservation Genetics*
- Undergraduate courses
  - *Evolution, Form and Function of Organisms*
  - *Introduction to Cell and Molecular Biology* (in class and online)
  - *Biodiversity, Ecology and Conservation Biology*
  - *Marine Biodiversity, Ecology and Conservation Biology*
  - *Conservation Biology*
  - *Marine Conservation Genetics*
- Study-abroad courses
  - *Field Studies in Coral Reef Biology* (British Virgin Islands - Summer 2010, 2011)
  - *Biology of Invertebrates* (San Salvador, Bahamas – Summer 2016, 2017, 2018, 2019)
  - *Conservation Biology* (Trujillo, Spain – Fall 2018)
  - *Natural History of Spain* (Trujillo, Spain – Fall 2018)

Co-Instructor, Friday Harbor Laboratories, University of Washington - *Marine Molecular Ecology* Research Apprenticeship for Undergraduates. In collaboration with Dr. Christiane Biermann (Spring Quarter 2003)

International Summer Course on Integrated Marine Biology and Ecology with Hokkaido University Summer Institute & Learning Satellite. Japan. Co-Taught by Professor Masahiro Nakaoka. *Marine Plant-Herbivore Interactions.* 31 July to 04 August, 2016.

SERVICE – PEER REVIEW

Editorial board:

Ecology, Subject Matter Editor (2017- present)

Ecological Monographs, Subject Matter Editor (2021 – present)

Evolution, Associate Editor (2020 – 2022)

Marine Ecology Progress Series (Review Editor: 2012 – present)

PLoS ONE (2013 – 2018)

***Ad hoc reviewer*:**

American Naturalist; Aquatic Biology; Aquatic Botany; Austral Ecology; Biodiversity and Conservation; Biological Invasions; Biological Bulletin; Biology Letters; Bioscience; Comparative Biochemistry and Physiology; Conservation Genetics; Coral Reefs; Diversity and Distributions; Ecology; Ecology Letters; Evolution; Evolution Letters; Evolutionary Ecology; Functional Ecology; Global Change Biology ICES Journal of Marine Science; *Journal of Chemical Ecology; Journal of Crustacean Biology; Journal of Experimental Marine Biology and Ecology; Journal of Heredity; Journal of the Marine Biological Association of the United Kingdom; Journal of Molluscan Biology; Limnology and Oceanography; Marine Biology; Marine Drugs; Marine Ecology Progress Series; Molecular Ecology; New Zealand Journal of Marine and Freshwater Research; Oecologia*; *Oikos*; *PLoS ONE; Science; Science Advances; South African Journal of Marine Science*

***Ad hoc reviewer – Funding agencies*:**

National Geographic Society; National Science Foundation (Biological Oceanography; CAREER; Division of Environmental Biology; Polar Programs); National Undersea Research Program; Natural Sciences and Engineering Research Council of Canada; Netherlands Organisation for Scientific Research; U.S. Civilian Research And Development Foundation; Georgia Sea Grant

Panelist – Funding agencies

National Science Foundation: Environmental Biology, Organism-Environment Interactions (BIO) – April 2008

National Science Foundation: Biological Oceanography (OCE) - 2011, 2019

National Science Foundation: preproposals - Evolutionary Ecology, Division of Environmental Biology (DEB) – March 2013

National Science Foundation: Organismal Response to Climate Change (ORCC) – January 2023

Fulbright Screening Committee: Science. Denver, CO. December 2013, 2014.

MEMBERSHIPS

Ecological Society of America; Society for the Study of Evolution (current)

Oceanography Society; Sigma Xi; Society for Integrative and Comparative Biology; Western Society of Naturalists (past)

SERVICE – PROFESSIONAL

Co-Host, Benthic Ecology Meeting (Charleston SC; April 2024)

Participant, Workshop on “Building Eelgrass Resiliency Workshops”. The Nature Conservancy. Online. July 2022.

At-large Board member – South Carolina Marine Educators Association (2020- present)

Steering committee, member – NSF-funded Research Coordinated Network for “Evolution in Changing Seas” – Northeastern University (2018-present).

Participant, NSF-funded Workshop on “Building the Field Stations and Marine Laboratories of the Future”. Colorado Springs, CO. November 2011.

Discussion Leader, Gordon Conference on Plant-Herbivore Interactions, Session on Marine Plant-Herbivore Interactions. February 2007.

Principal Organizer, Organized Oral Session (*Genetic Explorations of the Seascape: Using Molecules and Experiments to Understand Marine Biodiversity*), Ecological Society of America Meeting – Portland, OR. August 2004.

ADVISING

Postdoctoral researcher – Principal advisor

Stacy Hadfield-Krueger (2013 – 2016); now an Assistant Professor at University of Alabama, Birmingham

Tina Bell (2009 – 2012); now an Assistant Professor at Brevard College, North Carolina

Graduate students – Principal advisor:

M.S. in Marine Biology (College of Charleston)

- Adam Ziegler (2021 – 2023)
- Katherine Harper (2015 – 2017)
- Ben Flanagan (2015 – 2017)
- Alyssa Demko (2012 – 2015)
- Courtney Gerstenmaier (2012 – 2015)
- Nicole Kollars (2011 – 2014)
- Anna Manyak (2009 – 2012)
- Jonathan Craft (2007 – 2011)
- Beth Cushman (2005 – 2008)
- Amanda McCarty (2005 – 2008)

Graduate students – Committee member:

M.S. in Marine Biology, College of Charleston (Jessica Leonar; Emily Parsons)

Graduate students – Committee member (Past):

M.S. in Marine Biology, College of Charleston (Laura Borecki, Anna Greene, Rachel Grey, Whitney Heuring, Luis Leandro, Stacy Littlefield, Suzanne Lunsford, Amanda McLenon, Tucker Williamson, Chris Johns, Jennifer Newby, Tim O'Donnell, Sammi Smoot, Leslie Wickes, Nicole Enright)

M.S. in Environmental Sciences, College of Charleston (Carrie Dixon – 2007, Miranda McManus – 2007)

Ph.D. in Marine Biomedicine and Environmental Sciences, Medical University of South Carolina (Nikole Kimes – 2010, Emily Monroe – 2008)

Ph.D. in Ecology, University of Georgia (Linsey Harem - 2019)

Ph.D. in Genetics, University of Georgia (Tina Bell – 2009)

Ph.D. in Biology, University of North Carolina at Chapel Hill (Mary O'Connor – 2008)

M.S. in Biology, San Francisco State University (Lauren Scheinberg - 2015)

Ph.D. in Biology, Georgia State University (Jonathan Linneman).

Ph.D in Marine Biology, Northeastern University (Robyn Zerebecki, Sarit Truskey)

Undergraduate students

College of Charleston (Hannah Giddens – 2005; Catherine House – 2005; Sam Crickenberger – 2007; Alaina Voss – 2008; Brentley Wiles – 2008; Loren Danese – 2009; Carolyn Tarpey – 2010; Sydney Ramsey – 2012; Courtney Gerstenmaier – 2012; Megan Judd – 2013; Sarah Shainker – 2014; Paige Bippus – 2015; Lauren Lees – 2015; Olivia Drabiak – 2018; Kenzie Hammers – 2018; Daniela Adjunta – 2020; Erica Schmidt - 2020, Hannah Ropkopf – 2021; Dallas Crowder – 2020; Charles Taibi - 2022)

University of North Carolina at Chapel Hill (Megan Gyoerkoe – 2011; Alyssa Popowich – 2012)

NSF Minority in Marine Science program (Wilmelie Cruz – 2011; Edna Diaz Negron - 2013)

NSF Research Experience for Undergraduates Fellows (Tessa Bricker – 2005; Sarah Stachura – 2006; Nikki Oakman – 2007; Jacob Gantz – 2009; Aaron Goldman – 2012; Connon Thomas – 2014; Aaron Baumgartner – 2015; Killian Campbell – 2017; Lilia Garcia – 2019)

High school students

Academic Magnet High School (Katie Hilleke - 2008; Victoria Cragg –2011; Jess Murden – 2013; Hannah Waddell – 2014; Keagan Larkins – 2017)

Visiting scientists

Lucía Couceiro – Visiting graduate researcher – Universidad de A Coruña (Fall 2005)

Sarah Berke – Visiting postdoctoral researcher – Smithsonian (Fall 2009)

Louise McKenzie – Visiting graduate researcher – University of New South Wales (Fall 2009)

Ceiwen Pease – Visiting graduate researcher – University of New South Wales (Summer 2011)

Marieke Feis – Visiting graduate researcher – University of Groningen (2012)

Keryn Bain – Visiting graduate researcher – University of New South Wales (Winter 2013)

Lauren Scheinberg – Visiting graduate researcher – San Francisco State University (Fall 2013; Spring 2014).

Glauco Barreto de Oliveira Machado – Visiting graduate researcher – University of Campinas, São Paulo, Brazil (2015-2016)

John Wares – Visiting faculty – University of Georgia (Spring 2019)

Cynthia Hays – Visiting faculty – Keene State University (Spring 2020)

Sarit Truitsky – Visiting graduate student – Northeastern University (Spring 2020)