

## Dr. Scott C. Neubauer

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### A. PROFESSIONAL PREPARATION

- University of Miami, B.S. 1994, Marine Science and Biology
- College of William and Mary, School of Marine Science, Virginia Institute of Marine Science, Ph.D. 2000, Marine Science. Advisors: I.C. Anderson and R.L. Wetzel
- Smithsonian Environmental Research Center and George Mason University, postdoctoral fellow, 2000-2003, Biogeochemistry and Microbial Ecology. Advisors: J.P. Megonigal and D. Emerson

### B. APPOINTMENTS

- Assistant Director, University of South Carolina, Baruch Marine Field Laboratory, Aug 2004 to present
- Research Assistant Professor, University of South Carolina, Aug 2004 to present
- Visiting Assistant Professor, Department of Biology, Villanova University, Aug 2003 to May 2004

### C. PUBLICATIONS [<sup>†</sup>Graduate student, <sup>‡</sup>undergraduate student]

- Web of Science statistics: h-index = 10; average citations per item = 21.4 [31 Jan 2012]
- 17) Neubauer, S.C. 2011. Ecosystem responses of a tidal freshwater marsh experiencing saltwater intrusion and altered hydrology. *Estuaries and Coasts*. Online First article. doi: 10.1007/s12237-01109455-x.
  - 16) Weston, N.B., M.A. Vile, S.C. Neubauer, and D.J. Velinsky. 2011. Accelerated microbial organic matter mineralization following salt-water intrusion into tidal freshwater marsh soils. *Biogeochemistry*. 102:135-151.
  - 15) Neubauer, S.C. 2010. Book review: Silliman, B.R., E.D. Grosholz, and M.D. Bertness (ed.) Human impacts on salt marshes: A global perspective. *Wetlands*. 30:173-175. (*not peer-reviewed*)
  - 14) Megonigal, J.P. and S.C. Neubauer. 2009. Biogeochemistry of tidal freshwater wetlands. pp. 535-562 in: G. Perillo, E. Wolanski, D. Cahoon, M. Brinson (eds). *Coastal wetlands: An integrated ecosystem approach*. Elsevier.
  - 13) Tobias, C.R. and S.C. Neubauer. 2009. Salt marsh biogeochemistry: An overview. pp. 445-492 in: G. Perillo, E. Wolanski, D. Cahoon, M. Brinson (eds). *Coastal wetlands: An integrated ecosystem approach*. Elsevier.
  - 12) Neubauer, S.C. and C.B. Craft. 2009. Global change and tidal freshwater wetlands: Scenarios and impacts. pp. 253-266 in: A. Barendregt, D.F. Whigham, and A.H. Baldwin (eds). *Tidal freshwater wetlands*. Backhuys Publishers, Leiden, The Netherlands.
  - 11) Neubauer, S.C. 2008. Contributions of mineral and organic components to tidal freshwater marsh accretion. *Estuarine, Coastal and Shelf Science*. 78:78-88.
  - 10) Neubauer, S.C., D. Emerson, and J.P. Megonigal. 2008. Microbial oxidation and reduction of iron in the root zone and influences on metal mobility. pp 339-371 in: A. Violante, P.M. Huang, and G.M. Gadd (eds). *Biophysico-chemical processes of heavy metals and metalloids in soil environments*. John Wiley and Sons, Hoboken NJ.
  - 9) Weiss, J.V., J. Rentz, S.C. Neubauer, M. Floyd, T. Lilburn, J.P. Megonigal, and D. Emerson. 2007. Phenotypic and molecular characterization of neutrophilic Fe(II)-

- oxidizing bacteria isolated from the wetland plant rhizosphere and description of *Ferritrophicum radicolica* gen. nov. sp. nov, and *Sideroxydans paludicola* sp. nov. *Geomicrobiology Journal*. 24:559-570.
- 8) Neubauer, S.C., G.E. Toledo-Durán<sup>†</sup>, D. Emerson, and J.P. Megonigal. 2007. Returning to their roots: Iron-oxidizing bacteria enhance short-term plaque formation in the wetland-plant rhizosphere. *Geomicrobiology Journal*. 24:65-73.
  - 7) Neubauer, S.C., K. Givler, SK Valentine<sup>†</sup>, and J.P. Megonigal. 2005. Seasonal patterns and plant-mediated controls of subsurface wetland biogeochemistry. *Ecology*. 86:3334-3344.
  - 6) Neubauer, S.C., I.C. Anderson, and B.B. Neikirk. 2005. Nitrogen cycling and ecosystem exchanges in a Virginia tidal freshwater marsh. *Estuaries*. 28:909-922.
  - 5) Neubauer, S.C. and I.C. Anderson. 2003. Transport of dissolved inorganic carbon from a tidal freshwater marsh to the York River estuary. *Limnology and Oceanography*. 48:299-307.
  - 4) Neubauer, S.C., J.A. Constantine<sup>†</sup>, I.C. Anderson, and S.A. Kuehl. 2002. Sediment deposition and accretion in a mid-Atlantic (U.S.A.) tidal freshwater marsh. *Estuarine, Coastal, and Shelf Science*. 54:713-727.
  - 3) Neubauer, S.C., D. Emerson, and J.P. Megonigal. 2002. Life at the energetic edge: Kinetics of circumneutral iron oxidation by lithotrophic iron-oxidizing bacteria isolated from the wetland-plant rhizosphere. *Applied and Environmental Microbiology*. 68:3988-3995.
  - 2) Miller<sup>†</sup>, W.D., S.C. Neubauer, and I.C. Anderson. 2001. Effects of sea-level induced disturbances on high salt marsh metabolism. *Estuaries*. 24:357-367.
  - 1) Neubauer, S.C., W.D. Miller<sup>†</sup>, and I.C. Anderson. 2000. Carbon cycling in a tidal freshwater marsh ecosystem: a carbon gas flux study. *Marine Ecology Progress Series*. 199:13-31.

#### D. PROPOSALS [TOTAL FUNDING SINCE 2005 = \$1,358,519]

- 8) Franklin, R.B., B.L. Brown, and S.C. Neubauer [pre-proposal in review, National Science Foundation – Ecosystems panel, submitted Jan 2012] *Climate change effects on coastal wetlands - Does microbial community composition influence ecosystem responses?*
- 7) Neubauer, S.C. and S.L. McCallister [National Science Foundation – Ecosystems panel, **Funded**, Jan 2012 – Dec 2014, \$370,085 to USC] *Collaborative Research: Impact of salt water intrusion on C storage in temperate tidal freshwater wetlands: Assessing the amount, age, and fate of mobilized C.*
- 6) Morris, J.T. and S.C. Neubauer [National Science Foundation – Long Term Research in Environmental Biology program, **Funded**, Jan 2011 – Dec 2015, \$457,560] *LTREB: Long term studies of salt marsh primary production.*
- 5) Neubauer, S.C. [Department of Energy - National Institute for Climate Change Research, **Funded**, Apr 2010 – Aug 2012, \$122,246] *Salt-water intrusion into coastal freshwater wetlands: Effects on ecosystem metabolism and soil carbon and nutrient storage.*
- 4) Richardson, C.R., P.V. Sundareshwar, and S.C. Neubauer. [National Science Foundation – Ecosystems panel, **Funded**, Sept 2008 – Aug 2012, \$284,544 to USC] *Collaborative Research: Exploration of the mechanistic basis and biogeochemical implications of differential nutrient limitation among trophic levels.*
- 3) Neubauer, S.C. [University of South Carolina Office of Research and Health Sciences Research Funding Program. **Funded**, Apr 2007 – Dec 2008, \$17,000] *Understanding the effects of sea level rise on coastal freshwater wetlands.*
- 2) Vile, M.A. and S.C. Neubauer. [U.S. Environmental Protection Agency – Science to Achieve Results (EPA-STAR). **Funded**. May 2005 – Aug 2008. \$33,313 to USC] *Linking*

*impacts of climate change to carbon and phosphorus dynamics along a salinity gradient in tidal marshes.*

- 1) Smith, E.M., S.C. Neubauer, and D.M. Allen. [National Science Foundation – Field Stations and Marine Laboratories program, DBI-0533504. **Funded**. Sep 2005 – Aug 2007. \$73,771] *Improving and expanding organic carbon and nitrogen analyses at the Baruch Marine Field Laboratory.*

#### **E. INFORMAL TEACHING AND OUTREACH ACTIVITIES**

- Graduate student committee member [4 Ph.D. students, 2 M.S. students since 2008]
  - Gillespie, J. M.S., program, Virginia Commonwealth University, 2011 to present
  - Morrissey, E. Ph.D. program, Virginia Commonwealth University, 2010 to present
  - Gautam, S. Ph.D. program, South Dakota School of Mines & Techn., 2010 to pres.
  - Sutter, L.A. Ph.D. program, Virginia Institute of Marine Science, 2009 to present
  - Jenkins, A. Ph.D. program, Virginia Commonwealth University, (withdrew)
  - Koren, L.M. M.S. 2009, Virginia Commonwealth University
- Hosted Ph.D. student from University of Parma, Italy, summer 2010
- Undergraduate research supervisor [7 trainees, resulting in 3 co-authored publications]
  - Gillespie, J., Virginia Commonwealth University, summer 2011
  - Stewart, S., University of South Carolina, summer 2011
  - Dzuris, G., Wofford College, summer 2005
  - Toledo-Duran, G.E., University of Puerto Rico, Arecibo, summer 2003
  - Valentine, SK., Warren Wilson College, summer 2002
  - Maltese, J., Harvard University, summer 2002
  - Constantine, J.A., College of William and Mary, 1998-1999
- Orientation/instruction of multiple visiting college/university classes, 2004 to present
- Speaker/participant at Centers for Ocean Sciences Education Excellence's (COSEE) Ocean Sciences Leadership Institutes, 2005 and 2009. Professional development opportunity for educators to interact with regional scientists
- Science judge & moderator, National Ocean Science Bowl regional competitions, 2005-08
- Earth Day classroom activities, McDonald Elementary School, Georgetown SC [2007, 2008], Lowcountry Preparatory School, Pawleys Island SC [2009]
- Speaker, Environmental Club meeting, Lowcountry Preparatory School, November 2009
- Wetland presentation at staff meeting, Brookgreen Gardens, Murrells Inlet SC, Aug 2008
- Speaker at Friday morning chapel assembly, Lowcountry Preparatory School, Oct 2006
- Field lab liason, Carolina Master Scholars Adventures in Marine Science program, summer 2006. Field/lab/classroom experience for middle-school children
- Mentor, Smithsonian Institution-Louis Stokes Alliance for Minority Participation, sum. 2003
- National Science Foundation Mentor; Research Experience for Undergraduates, summer 1998, 2002
- MentorNet participant, e-mail based undergraduate student mentoring, 2002/03

#### **F. PROFESSIONAL SERVICE**

- Associate Editor, *Wetlands*, 2008-2012
- Associate Editor, *Estuaries and Coasts*, 2011-2014
- Chair, Society of Wetland Scientists Biogeochemistry section, 2009-2010 [Chair-elect, 2008-2009 and Past-chair, 2010-2011]

- Organizing committee, American Geophysical Union Chapman Conference on *Hydrogeomorphic feedbacks and sea level rise in tidal freshwater river ecosystems* (conference proposal currently under review by AGU)
- Symposium/session organizer [6 symposia since 2009, at SWS, ASLO, and INTECOL]:
- Manuscript Reviewer [57 reviews since 2005] for *Aquatic Botany; Aquatic Microbial Ecology; Biogeochemistry; Chemosphere; Conservation Biology; Continental Shelf Research; Ecological Applications; Ecological Modeling; Ecology; Ecosystems; Estuarine, Coastal and Shelf Science; Estuaries; Geomicrobiology Journal; Global Change Biology; Journal of Coastal Research; Journal of Environmental Quality; Journal of Geophysical Research – Biogeosciences; Limnology and Oceanography; Marine Chemistry; Marine Ecology Progress Series; Plant and Soil; Science of the Total Environment; Soil Science Society of America Journal; Water, Air and Soil Pollution: Focus; Wetlands; Wetlands Ecology and Management*
- Proposal Reviewer [32 reviews since 2005] for Florida Bay Program, Georgia Sea Grant, Louisiana Sea Grant, Maryland Sea Grant, National Estuarine Research Reserve program, National Oceanic and Atmospheric Administration, National Science Foundation, North Carolina Sea Grant, Society of Wetland Scientists student grant program, Swiss National Science Foundation, Texas Sea Grant, Wisconsin Sea Grant