

Sharon Larimer Gilman

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Education:

- Ph.D. Biological Oceanography, 1992**, University of Rhode Island
“Bioenergetics of sand lance (*Ammodytes dubius*) on Georges Bank”
- B.A. Biology, 1985**, Western Maryland College (Now called McDaniel College)

Academic Experience:

Aug 2017-present, Professor, Biology Department, Coastal Carolina University

- Teach undergraduate and graduate biology courses, labs
- Research in science education in formal and informal settings

2006-July 2017, Associate Professor, Biology Department, Coastal Carolina University

- Teach undergraduate and graduate biology courses, labs
- Research in science education in formal and informal settings

2007-2010, Chair, Department of Biology, Coastal Carolina University

- Manage budget of ~\$55K (not including salaries)
- Schedule and supervise instruction for 17 full-time faculty, and adjuncts as needed (including graduate teaching assistants), for >500 majors
- Annual faculty evaluations
- Annual and ongoing departmental assessment
- Overseeing student advisement and graduation applications

2001-2006, Assistant Professor, Biology Department, Coastal Carolina University

- Develop, coordinate and teach introductory labs for undergraduate science majors
- Teach undergraduate and graduate biology courses
- Pedagogical research, undergraduate science education

1998-2001, Instructor, Biology Department, Coastal Carolina University

- Teach introductory Biology lectures and labs for undergraduate science majors and education majors

1998-2001, Education/Research Coordinator, NSF-AIRE Grant

- Coordinate science research and assist with development of education programs for local public school students and teachers and CCU students at the Playcard Environmental Education Center
- Co-Director, Rivers Project
-This program of volunteer monitoring of local water quality by high school students is run by the CCU Environmental Quality Lab. I was the contact person and coordinator for the high schools and am supervising program assessment.

1994-98, Lecturer, Marine Science Department, Coastal Carolina University

- Taught Marine Biology and introductory Marine Science labs for undergraduates
- Developed, designed, and taught a new Marine Science course with labs for non-science majors

1992-1994, Instructor, Biology Department, University of Victoria, B.C.

- Responsible for organizing and teaching undergraduate oceanography laboratories

Other Relevant Experience:

2016-2018, Vertebrate Life, 10e Active Learning Exercises. Collected or wrote these to accompany the text https://www.coastal.edu/honors/Vertebrate Life, 10th ed. 2018, H. Pough and C. Janis, Oxford University Press. Available from: https://www.coastal.edu/honors/

2013-2014, Test Bank/Study Guide Writer, *Biology for the Informed Citizen*, D.M. Bozzone and D.S. Green. 2014, Oxford University Press. Available from: <http://global.oup.com/us/companion.websites/9780195381986/ins/>

2007-2011, Co-Assessment Coordinator, College of Science

- Plan and execute strategies for assessing the students in the College of Science
- Assist with assessment planning and reporting for programs within the College

2009-2010, Chair, Institutional Effectiveness SACS Audit Committee

2009-2010, Co-Chair, University Student Learning Assessment Committee

2007-Present, Institutional Animal Care and Use Committee member (presidential appointment)

2005-2008, Chair University Student Retention and Assessment Committee

2005-2007, Education and Public Awareness Committee for the Ocean Research Interactive Observatory Networks (ORION)

- Funded by the National Science Foundation

2001----, Member of the Faculty for the 21st Century, Project Kaleidoscope

2004-2007, Councilor, South Carolina Academy of Science

Summer 1999-2000, Instructor, Graduate Courses for Teachers

- Marine Ecology for Teachers-graduate level course (with Ms. Orbie Smith), Summer 2000
- Wetland Ecology for Teachers-graduate level course, Summer 1999
- 2 1-credit workshops on Marine Ecology and Wetland Ecology, Summer 2000

Summer 1998, Director, Hotel/Motel Environmental Education Pilot Program “Beach Buddies”

- Designed this program which is funded by the S.C. Sea Grant Consortium. I have developed fun, environmentally oriented activities and trained 2 students to conduct them at 3 local hotels.

Summers 1995-1998, Co-Director, Marine Science for Junior Scholars

- Assisted in the planning of activities, organization, and running of a 2 week summer camp at Coastal Carolina University oriented toward marine science for gifted 8th and 9th graders

Summers 1998-1999, Director, Challenge-By-The-Sea Summer Camp

- Planning of activities and instructing this week long summer camp from the University of Georgia

Summers 1995-1997, Curriculum Coordinator, 4-H Clemson Extension Marine Camp

- Planned marine educational activities for a week-long summer camp for 8-14 year old children and trained student volunteers as instructors

Summer 1997, Coordinator, Woodrow Wilson Physical Science Institute for Teachers

- Coordinated and ran this institute designed to teach a hands-on approach to physical science for teachers at all levels, this was sponsored by the Waccamaw Math and Science Hub

Spring 1995/Fall 1997, Director, Waccamaw and Atlantic Varied Education Program

- Created and ran a successful series of fun, educational short courses dealing with environmental topics of local interest for the general public

1985-89, Graduate Research Assistant, University of Rhode Island

- Lab and field (several oceanic cruises) work on zooplankton-Right whale interactions off the coast of Cape Cod. Also participated in local bay sampling for a winter flounder growth project.

Publications:

Gilman, Sharon L. and Martha C. Fout. 2017. A bold experiment: teachers team with scientists to learn Next Generation Science Standards. *The Learning Professional* 38(1): 24-29.

Gilman, Sharon Larimer, Austin M. Hitt, and Craig Gilman. 2015. Training masters level graduate students to use inquiry to teach middle level and high school science concepts. *School Science and Mathematics* 115(4): 155-167.

Gilman, Sharon L. 2015. Walking in the footsteps of Charles Darwin. *Progressions: The Newsletter of the College of Science, CCU*. Winter 2015.

Gilman, Sharon. 2014. Biology for the Informed Citizen Student Study Guide. New York: Oxford Univ. Press. 176 pages.

Gilman, Sharon. 2014. Biology for the Informed Citizen Test Item File. New York: Oxford Univ. Press. Available online, faculty teaching resources: <http://oxfordpresents.com/bozzone/>

Gilman, Sharon L. and C. Lilly. 2013. Having some pHun with Soils. *Science Scope* April/May: 61-67.

Gilman, Sharon L. 2013. Prepping the next generation. *Progressions: The Newsletter of the College of Science*, Spring 2013.

Gilman, Sharon L. 2006. Do On-Line Labs Work: as assessment of an on-line lab on cell division. *American Biology Teacher*. Online: www.nabt.org/sites/S1/pdf.068-09-0023.pdf

Gilman, Sharon Larimer and Florence Eliza Glaze. 2005. How science survived: medieval manuscripts as fossils. *Science* 207: 1208-1209.

Gilman, Sharon. 2004. Science not necessarily contrary to religion. Myrtle Beach: *The Sun News* "Opinion" Page. July 31.

Gilman, Sharon L. and Richard Valliere. 2003. The time-distance-direction navigation connection. *Current: J. of Marine Educ.* 19(3): 27-31.

Libes, S.M., J.T. Bennett, **S.L. Gilman**, V.L. Dunham, and J.P. Idoux. 2004 Undergraduate institutions as catalysts for integrating research across disciplines and communities of learners. In: Kauffman, Linda and Janet Stocks (eds.), *Reinvigorating the undergraduate experience: successful models supported by NSF's AIRE/RAIRE Program*. Council on Undergraduate Research. <http://www.cur.org/publications/rueril.asp>. ISBN #0-941933-26-1.

Gilman, Sharon L. 1994. An energy budget for sand lance, *Ammodytes dubius*, on Georges Bank, 1977-1986. *Fishery Bulletin*. 92(3):647-654.

Durbin, E.G., R.G. Campbell, **S.L. Gilman**, and A.G. Durbin. 1995. Diel feeding behavior and ingestion rate in the copepod *Calanus finmarchicus* in the southern Gulf of Maine during late spring. *Continental Shelf Research* 15(4/5): 539-570.

Durbin, E.G., **S.L. Gilman**, R.G. Campbell, and A.G. Durbin. 1995. Abundance, biomass, vertical migration, and estimated development rate of the copepod *Calanus finmarchicus* in the southern Gulf of Maine during late spring. *Continental Shelf Research* 15(4/5): 571-591.

External Grants

Horry County School District. 2015. Coastal Math Science Partnership. **SL Gilman**, Evaluator and CCU PI. \$100,800 (CCU's share), SC Department of Education. April 2015-August 2018.

Gilman, S.L., J. Goodwin, C. Moore. 2012. II-VI Foundation Undergraduate Research Program. \$33,929. May-Sept 2012.

Moore, JC. And LJ Rubbo. (CCU Physics Dept.) 2012. Improving Scientific reasoning and meta-cognition via a conceptual physics course. \$118,214. National Science Foundation, Jan. 2014- Dec. 2016. **S. Gilman**, external evaluator.

Horry County School District. 2011. Coastal Math Science Partnership. **SL Gilman**, Evaluator and CCU PI. \$686,000, SC Department of Education. April 2011-August 2014.

Gilman, CS, RF Young, KS Godwin, **SL Gilman**, AM Hitt. 2007. Gk-12 Fellows Linking Marine and Wetland Research with Science Education in Coastal Carolina Schools. \$2,294,030, National Science Foundation. June 2008-May 2013.

Gilman, S. L., K. Fuss, A. O'Brien-Gayes. 2007. Building and Applying Remotely Operative Vehicles to Integrate STEM Research into the Freshmen Experience. \$8000, SC Space Grant Consortium. Funded in full, May 2007-April 2008.

Luken, James O. and **Sharon L. Gilman**. Coastal Quest: Developing a Learnscape Approach for Edutourism. \$74,611, National Science Foundation, *Oct. 2005-Sept. 2007*

Gilman, S. Peer-Led Team Learning Workshop Project Associate Grant, \$4967, National Science Foundation's Multi-Initiative Dissemination Project, *Fall 2002*

Gilman, S. Community Rivers Project: Volunteer Monitoring Program for Horry County, SC \$4832, Environmental Protection Agency, *June 2000*

Gilman, S. and T. Kibler. Hotel/Motel Environmental Education Pilot Program \$3723, S.C. Sea Grant Consortium, *May 1998*

Gilman, S. Waccamaw and Atlantic Varied Education (WAVE) Program \$1500, S.C. Sea Grant Consortium, *January 1995*

Internal Grants

Scott, C., and **S.L. Gilman**. 2013. Environmental Education in the Galapagos Islands: Proposal for a Student-Faculty Engagement in Cooperative International Research Program at USFQ. \$7000.

Gilman, S.L. and Catherine Scott. 2013. Professional Enhancement Grant. Proposal for Student-Faculty engagement in cooperative international research program at Universidad de San Francisco Quito. \$2600

- Gilman, S.** and J. Steen. 2008. Assessment of critical thinking gains in students in the CNAS. \$7500 requested, \$3500 funded (with an additional \$4200 allocated from the CCU Assessment Fund). CCU Assessment Grant Program.
- Gilman, S.L.** 2007. Elasmobranch survey of North Santee Bay.” \$3990. CCU Faculty Research Enhancement Grant.
- Hitt, Austin M. and **Sharon Gilman**. 2007. Students’ perceptions of evolutionary theory. \$3500, CETL-SOTL Grant Proposal. Funded in full, Summer 2007.
- Gilman, S.** Scholarship of Teaching and Learning: Does Technology Help Students Understand Biology In a Lab Setting? \$3282.08, CCU, *Fall 2004*
- Gilman, S.** Academic Enhancement Grant “Inquiry and Technology in Introductory Biology Labs”\$2500, CCU, *Spring 2003*
- Gilman, S.** Teaching with Technology Microgrant, On-Line Cell Biology Lab Exercise for Biology 121, \$355, CCU, *Fall 2002*
- Gilman, S.** Professional Activities Mini-Grant, \$1130, Attending Chautauqua Workshop on PLTL Workshops with a Student Leader, CCU, *Spring 2003*

Graduate Student Projects

M.Sc. Completed (advisor):

- Scott, Travis. 2009. Bat species richness and edge habitat use on a coastal island in South Carolina.
- Shreer, Justin. 2010. Seasonal residency and movement patterns of blacktip sharks, *Carcharhinus limbatus*, in a South Carolina Estuary.
- Connelly, Rachel. 2010. Colonization by aquatic insect larvae in experimental ponds: reproductive decisions based on biotic and abiotic factors.
- Bisesi, Rachel. 2013. Promoting Healthy Coastal Environments through Watershed Restoration along the North Carolina Coast.
- Bozza, Katie. 2016. Coastal Conservation, Education, and Outreach at Huntington Beach State Park.
- Petrigac, Jonathan. 2016. An Evaluation of Recreational Fishing Pier Behavior at Myrtle Beach State Park.

M.Sc. Completed (committee member):

- O’Connell, Craig. 2009. The Effectiveness of Permanent Magnets on Feeding and Swim Pattern Manipulation of Elasmobranchs
- Blakeney, Sean. 2010. Application of hydrogeomorphic (HGM) functional assessment outside the designated regional subclass: an estimation of HGM transference for pond cypress depressions of South Carolina.
- Driscoll, Josh. 2014. Professional Studies Report: Keep Horry County Beautiful
- Keller, Bryan. 2015. Social Network Analysis of Partner Preference in Lemon Sharks, *Negaprion brevirostris*, During the Introduction of Unfamiliar to Familiar Groups
- Catherman, Hannah. 2016. Bridging the Gap between Formal and Informal Science Education at the Playcard Environmental Education Center: Promoting conservation awareness in grades K-12 through the development of engaging, hands-on learning experiences in nature.
- Sylvester, Caitlyn. 2017. Sea turtle conservation and outreach with SC DNR marine turtle conservation program.

Recent Undergraduate Student Projects

Year	Student	Project (BIOL 399)
2008	Benjamin Sochor	Elasmobranch Survey
2009	Jessica Davis	Biogenic Drug Review
	Angela DeLario	Pharmacy Shadowing
	Stephan Laub	Chiropractor Internship
2010	Joshlyn Wilson	Dental Assistant
	Melanie Carter	Playcard Environmental Education Center
	Sandra Ludoffs	Grand Strand Medical Lab
	Brittany Rawlins	Medical Clinic in Guatemala
	Christina Ellis	Medical Clinic in Guatemala
	Heather Vaught	Medical Clinic in Guatemala
	John Motto	Medical Clinic in Guatemala
	Matthew Cooper	Conway Medical Center
	John Motto	Conway Medical Center
	Mara Krill	Cincinnati Zoo Animal Husbandry
	Stephanie Mcleod	SC Cares Animal Sanctuary
	Rachel Bonertz	Medical Job Shadowing
	Meagan Tracey	Medical Job Shadowing
	Kaitlin O'Toole	Bald Head Island Conservancy
2011	Brooke Donaldson	SC Cares Animal Sanctuary
	Alison Henry	SC Cares Animal Sanctuary
	Chelsey Kimes	Conway Medical Center
2012	Carrie Hain	Playcard Environmental Education Center
	Matt Siracusa	High School Classroom Experience
	Callie Hodge	Physical Therapy
2013	Norris Ross	Health Progressions
	Duncan Perry	Practical Dental Experience(Honors Thesis)
2014	Meg Oshima	Wood's Hole Discovery REU
	Kristen Smith	Playcard Environmental Education Center
	Casey Monahan	Environmental Education Impacts
	Maeve Snyder	Waccamaw National Wildlife Refuge
	Tyler McGee	Pharmacy Job Shadowing
2015	Shannon Westrom	GAIAS
	Alexis Miller	CVS Pharmacy
	Alexandria Richardson	SOS Healthcare
	Frances Bozak	Operation Wallacea
2016	Kathryn Cahalane	Playcard Environmental Education Center
	Gina Sanocki	Playcard Environmental Education Center
2018	Kathryn Kalenick	Marine Mammal Training Clearwater Aquar.

Invited Presentations

- **Gilman, S.** 2014. Using the biology of the Galapagos to teach natural selection. Universidad de San Francisco-Quito, Ecuador. June 10.
- **Gilman, S.** 2013. Panel discussion about working with K-12 students/teachers at the *Association of Southeastern Biologists* annual conference, Charleston, WV, April 12.
- **Gilman, S.** Research, Publications, and Teaching: Oh My! Presentation for Research Café, at the request of the CCU Office of Research Services, Feb 15.
- **Gilman, SL.** 2009. 20,000 Sensors Under the Sea: a new way of looking at the oceans. Tarleton University, TX. Oct 9.
- **Gilman, S.** 2003. NSF Multi-Initiative Dissemination Project. "Peer-Led Team Learning Workshops," *Fall 2003*

Workshops/Conferences Attended (*presented):

- Hitt, AM*, and **SL Gilman**. 2015. Making sense of the modern synthesis: Investigating how biology majors conceptualize evolution. Association for Science Teacher Education International Conference, Portland, Oregon, Jan. 7-10, 2015.
- Hitt, AM, and ***SL Gilman**. 2013. Placing emerging scientists in middle level and high school science classes: the impact of graduate STEM fellows in education program on student learning. Association of Science Teacher Education annual conference, Jan. 10, 2013, Charleston, SC
- * **Gilman**, SL, Sarah Banks, Julie Binz, Karen Beshears. 2011. Can environmental education result in improved science test scores. North American Association of Environmental Education Annual Conference, Raleigh, NC, Oct 12-15
- South Carolina Marine Educators Annual Conferences, *1994, 1995, 1997, 2010*
- South Carolina Science Council, 2010
- Hitt, Austin M*. and **Sharon L. Gilman**. 2009. That's Disgusting! The Connection Between the Emotion of Disgust and College Students' Views on Evolution and Creationism. The Association for Science Teacher Education. January 8-10, Hartford, CT.
- Critical Thinking Assessment Test *Train the Trainer Workshop*, Tennessee Tech University, 2008
- *Institute on Quality Enhancement and Accreditation*, SACS, Louisville, KY, 2007
- Annual Meeting of the SACS-Commission on Colleges, New Orleans, Dec. 8-11, 2007
- *The Institute on Quality Enhancement and Accreditation* put on by the SACS, July 22-24, Louisville, KY
- ***Gilman, S**. 2005. Peer-Led Team Learning in our Introductory Biology Courses. Lowcountry Conference on Teaching and Learning in Higher Education, *Spring 2005*
- ***Gilman, SL**. 2004. Do peer-led team learning workshops improve grades and retention in introductory biology, and do students like them? PLTL Workshops National Conference, Chicago, IL. *Fall*.
- *Sinclair, L., J. Goodwin, L. Bedwell, **S. Gilman**. 2004. Curriculum, Instruction, Assessment Issues" 2004. Middle Level Teacher Education Symposium at CCU; co-sponsored by SC Dept. Edu., SC CHE, and SC Middle School Association. *Spring*.
- ***Gilman, SL**. 2004. Do peer-led team learning workshops improve grades and retention in introductory biology courses and do student's like them? South Carolina Academy of Science Annual Meeting, *Spring*
- Lowcountry Conference on Teaching and Learning in Higher Education, *Spring 2003*
- Chautauqua Workshop—Peer Led Team Learning Workshops, *Spring 2002*
- Project Kaleidoscope Summer Institute, *Summer, 2002*
- NASA Opportunities for Visionary Academics, *Fall, 2001*
- ***Gilman, SL**. 2001. The River Project: Water Quality Analysis by Volunteers. South Carolina Academy of Science Annual Meeting, *Spring*.
- ***Gilman, SL**. 2000. Wetland Education Through Cooperative Programs Between a University and Local Schools. Society of Wetland Scientists Regional Conference, Education Session, *Spring*.
- CCU Grant Proposal Writing Workshop, *Winter 2000*
- SC LASER: Developing a New Vision of K-8 Science Teaching and Learning, *Fall, 2000*
- AAAS for Higher Education Conference on Institutional Change: Targeting Institutional Change, Quality Undergraduate Science Education for all Students, *Winter 1999*
- ***Gilman, S**. 1998 Using the Website Format for Informal Marine Education. National Marine Educators Conference, *Summer 1998*
- ***Gilman, S**. 1998. For Teachers and Travelers: Two New Environmental Education Programs. South Carolina Marine Educators Annual Conferences, *Fall, 1998*
- Council for Undergraduate Science and Math Educators Conference, *Spring 1996, 1998*
- "Working with Nature Accreditation" *Spring, 1997*
- South Carolina Nature Based Tourism Association *Spring, 1995*

Reviews

- *School Science and Mathematics* journal reviewer, 2014-present (4 articles)
- *Marine Ecology Progress Series*, Spring 2016 (one article related to my dissertation)

- Proposal Reviewer for NSF Directorate for Geosciences, Jan. 2008-present (1-2 proposals annually)
- Proposal Reviewer for NOAA California Bay and Watershed Education and Training Program, Fall 2010-present
- Reviewed proposed non-majors text “Biology for the Informed Citizen” from Oxford University Press, 2008-2009
- Encyclopedia of Earth (www.eoearth.org) Focus Group, 2008---
- Belk, C., and V. Belden. 2008. *Biology: Science for Life*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Book Reviewer for Pearson/Prentice Hall: Freeman and Herron 2007, *Evolutionary Analysis*, 4th ed. Feb. 2008
- Reviewer for the Winter 2005/2006 special issue of the *Marine Technology and Society Journal* on "Promoting Lifelong Education--Exemplary Ocean and Aquatic Education Efforts that Foster Science Literacy for All Americans."
- Special edition of the National Science Teachers Association Journal, *School Science and Mathematics*, focusing on college science/math learning and teaching
- Belk, C., and V. Belden. 2004. *Biology: Science for Life*. Upper Saddle River, NJ: Pearson Prentice Hall.

Professional Memberships:

- National Science Teachers Association (until 2017)
- National Association of Biology Teachers
- Association of Science Teacher Education (until 2017)
- National Marine Educators Association
- Project Kaleidoscope (F21 Member)

Selected Community Service:

- Co-Regional Coordinator (and judge), MATE ROV Competition, Carolinas Region, 2010-2013
- Consultant on “Wind Powering America: A new wind economy for South Carolina and Georgia.” SC Dept. of Energy, 2009
- “Wonderful Wednesday” Science Presentations at the Children’s Museum of South Carolina, Summer 2004, 2005, 2007
- Local Science Fair judge at Conway, Carolina Forest, and Myrtle Beach High Schools and Jonakin Middle School, St. Andrews Middle School, *ongoing*
- Consultant on Syllabus Project where we developed model syllabi for Middle School Teacher certification programs for South Carolina, CCU, Spring 2001
- Coordinated Ecoteam Environmental Education Program (from Warren Wilson College, Asheville, NC) for 150 local 3rd graders, Spring 2001
- Conducted workshops for students at Middle and Elementary School Academy of Science Annual Conference, CCU, Nov. 2001
- Assist local teachers in developing and running science activities such as the following:
 - Forestbrook Middle School 7th Grade Environmental Camp, May, 1998
 - North Myrtle Beach Elementary School Marine Science Day, May, 1998
 - Conway High School’s new marine science class, May, 1998
 - Math/Science Activity Day, Loris Elementary School, April, 1998
 - Super Science Sleepover, North Myrtle Beach Elementary School, March, 1997-1999
- “Coastal Creatures” Class for C.C.U.’s Lifelong Learning Society, Jan.-Feb, 1998
- Presentation "Why Wetlands Matter," to Georgetown Senior Scholars Program, Nov., 1998
- Beach Sweep, 1994-1998

Courses Taught (CCU unless otherwise indicated)

Undergraduate Courses

- Apex Predators and Other Endangered Wildlife (team taught with 2 others)

- Vertebrate Zoology with Lab
- Animal Behavior with lab (team taught with 1 other)
- Evolution with Lab
- Biological Science II
- Freshman Year Experience
- Biology: The Science of Life
- Biology: The Science of Life Lab
- Ecology Lab
- Biological Science I Lab
- Biological Science II Lab
- The Sea
- Lab for The Sea
- Introduction to Marine Science I Lab
- Introduction to Marine Science II Lab
- Marine Biology Lab
- Introduction to Oceanography Lab (University of Victoria, B.C. Canada)

Graduate Courses

- Interpreting Science for Non-Scientists
- Vertebrate Zoology
- Animal Behavior
- Coastal Marine and Wetland Ecological Processes (team taught with 1 other)
- Biology: A History
- Marine Science for Teachers
- Wetland Ecology for Teachers
- Biological Oceanography Lab (University of Rhode Island Graduate School of Oceanography)