

Laurie C. Anderson

Head and Professor, Department of Geology & Geological Engineering
Director and Curator of Invertebrates, Museum of Geology
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Education

- Ph.D. 1991: University of Wisconsin-Madison. In geology with a distributed minor in statistics and philosophy.
- M.S. 1987: Bowling Green State University (Ohio). In geology.
- B.A. 1985, with high distinction: University of Minnesota, Morris. In geology, biology, and music; minor in chemistry.

Experience

- Interim Head, Department of Mining Engineering and Management, South Dakota School of Mines & Technology, 2019-present.
- Head and Professor, Department of Geology & Geological Engineering, South Dakota School of Mines & Technology, 2011-present.
- Director and Curator of Invertebrates, Museum of Geology, South Dakota School of Mines & Technology, 2011-present.
- Harrison Family Field Camp Professor, Department of Geology and Geophysics, Louisiana State University, 2008-2011.
- Dr. Henry V. Howe Distinguished Professor, Department of Geology and Geophysics, Louisiana State University, 2006-2011.
- Chair, Department of Geology and Geophysics, Louisiana State University, 2003-2007.
- Associate Professor, Department of Geology and Geophysics, Louisiana State University, 1997-2011.
- Assistant Professor, Department of Geology and Geophysics, Louisiana State University, 1991-1997.
- Geologist, Offshore/Alaska Division, Exploration Department, Exxon Company, U.S.A., 1990 (summer).
- Teaching and Research Assistant, Department of Geology and Geophysics, University of Wisconsin-Madison, 1988-1990.
- Teaching and Research Assistant, Department of Geology, Bowling Green State University, 1985-1986.
- Teaching Assistant, Discipline of Geology, University of Minnesota, Morris, 1984-1985.

Other Appointments

- Program Evaluator Candidate, Geology Program, Applied and Natural Science Accreditation Commission, ABET, 2019-present.

- Adjunct Professor, Department of Geology & Geological Engineering, South Dakota School of Mines & Technology, Summer 2011.
- Adjunct Professor, Department of Geology and Geophysics, Louisiana State University, 2011-12.
- Temminck Fellow, Naturalis, Leiden, the Netherlands, December 2007-March 2008.
- Research Associate, Bell Museum of Natural History, University of Minnesota, Fall 2007.
- Associate Editor, Journal of Paleontology, 1998-2011.
- Adjunct Associate Curator, Museum of Natural Science, Louisiana State University, 1998-2011.
- Visiting Scholar, University of Iowa, Fall 1998.
- Research Associate, Division of Research and Collections, Virginia Museum of Natural History, 1994-2000.

Honors and Awards

- Harrison Family Field Camp Professorship, Department of Geology and Geophysics, Louisiana State University, 2008-2011.
- Temminck Fellow, Naturalis, Leiden, the Netherlands, December 2007-March 2008.
- Commendations for Excellence in Teaching, College of Basic Sciences, Spring 2006, Spring 2007.
- Wesselingh (2006) named a species of Corbulidae *Pachydon andersonae*.
- H.V. Howe Professorship, Department of Geology and Geophysics, 2006-2011.
- Best Paper Award for 2003 volume Journal of Paleontology.
- Speaking of Science Lecturer, Louisiana Board of Regents, 1999-2002.
- Paleontological Society Distinguished Lecturer, 1998-2000.
- Faculty Research Award, College of Basic Sciences, Louisiana State University, 1997.
- Burlington Resources Foundation Faculty Achievement Award, Department of Geology and Geophysics, 1997 (for instructional innovations).
- Gulf Coast Association of Geological Societies, Second place award for paper by Heydari, Wade, and Anderson, 1995.
- Shell Companies Foundation Fellowship, 1989-1991.
- Wisconsin Alumni Research Foundation Fellowship, 1987-1988.
- Amoco Foundation Geology Fellowship, 1985-1987.

Major Areas of Research Interest

The primary foci of my research are the paleobiology, paleoecology, taphonomy, and phylogeny of mollusks, particularly the Bivalvia. My work combines field research in both modern and ancient settings, museum studies, and laboratory analyses. One long-standing project is an investigation of the evolutionary history of the Corbulidae (Bivalvia: Myoidea), especially as it relates to environmental, oceanographic, and climatic changes over the last 23 million years (Neogene) in tropical America. This work has led to the exploration of topics that include 1) the role of constraint, innovation and heterochrony in morphologic evolution; 2) phylogenetic reconstruction of Neogene corbulids of tropical America; and 3) phylogenetic reconstruction of freshwater radiation(s) of corbulid bivalves.

I also am working with geomicrobiologist Annette Engel (University of Tennessee) and microbial ecologist Barbara Campbell (Clemson University) on a NSF Dimensions of Biodiversity grant investigating lucinid (Lucinidae; Bivalvia) chemosymbioses from coastal biomes ranging from low to high anthropogenic impact. We hypothesize that genetic and functional diversity among endosymbionts provides lucinids with a mechanism to cope with changing or stressful environmental conditions through time. We also are addressing research questions related to lucinid and endosymbiont diversity and geochemical controls on diversity as well as testing whether the presence of chemosymbionts and/or degree or type of symbiotic dependence can be inferred from shells in order to provide data to reconstruct trophic relationships in paleocommunities and extant habitats.

In addition, I am investigating changes in coastal food webs caused by the Deepwater Horizon crude oil spill (2010), in particular, the responses by and effects on oysters and other molluscan primary consumers to the environmental stressors resulting from the spill. The work includes histologic analysis of soft tissues, geochemical data from shells, and food web modeling with several colleagues.

Publications

Published book chapters, articles in refereed journals, refereed bulletins

- Ellwood BB, Febo L, Anderson LC, Hackworth RT, Means GH, Bryan JA, Tomkin J, Rowe H, Jovane L (2019) Regional to global correlation of Eocene-Oligocene boundary transition successions using biostratigraphic, geophysical and geochemical methods. *Geological Magazine*. doi: 10.1017/S0016756819000578.
- Lim SJ, Alexander L, Engel AS, Paterson AT, Anderson LC, Campbell BJ (2019) Extensive thioautotrophic gill endosymbiont diversity within a single *Cena orbiculata* (Bivalvia: Lucinidae) population and implications for defining host-symbiont specificity and species recognition. *mSystems* DOI: 10.1128/mSystems.00280-19.
- Lim SJ, Davis BG, Gill DE, Walton J, Nachman E, Engel, AS, Anderson LC, Campbell BJ (2018) Taxonomic and functional heterogeneity of the gill microbiome in a symbiotic coastal mangrove lucinid species. *The ISME Journal* 13:902–920 doi: 10.1038/s41396-018-0318-3.
- Engel AS, Liu C, Paterson AT, Anderson LC, Turner RE, Overton EB (2017) Salt marsh bacterial communities before and after the Deepwater Horizon oil spill. *Applied and Environmental Microbiology*. Aug 4. pii. doi: 10.1128/AEM.00784-17.
- Carter JG, Altaba CR, Anderson LC, Campbell DC, Zongje F, Harries PJ, Skelton PW (2015) The paracladistic approach to phylogenetic taxonomy. *Paleontological Contributions* 12: 1-9.
- Anderson LC (2014) Relationships of internal shell features to chemosymbiosis, life position, and geometric constraints within the Lucinidae (Bivalvia). In: Hembree DI, Platt BF, Smith, JJ (eds.) *Experimental Approaches to Understanding Fossil Organisms: Lessons from the Living*. Springer, Topics in Geobiology 41:49-72.
- Anderson LC (2014) Ultra-elongate freshwater pearly mussels (Unionida): Roles for function and constraint in multiple morphologic convergences with marine taxa. In: Hembree DI, Platt BF, Smith, JJ (eds.) *Experimental Approaches to Understanding Fossil Organisms: Lessons from the Living*. Springer, Topics in Geobiology 41: 21-47.
- Fry B, Anderson LC (2014) Minimal incorporation of Deepwater Horizon oil by estuarine filter feeders. *Marine Pollution Bulletin* 80:282-287. (available online January 2014)

- Hallan A, Colgan DJ, Anderson LC, Garcia A, Chivas AR (2013) Molecular phylogenetics suggests a single origin for the limnetic-euryhaline taxa in the Corbulidae Lamarck, 1818 (Bivalvia: Myoidea). *Zoologica Scripta* 42:278-287.
- Carter JG, Harries PJ, Malchus N, Sartori AF, Anderson LC, Bieler R, Bogan AE, Coan EV, Cope JCW, Cragg S, García-March JR, Hylleberg J, Kelley P, Kleemann K, Kříž J, McRoberts C, Mikkelsen P, Pojeta J Jr, Tëmkin I, Yancey T, Zieritz A (2012) Illustrated Glossary of the Bivalvia. *Treatise Online* 48: Part N (Bivalvia), Revised, Part N, Vol. 1, Ch. 31:209 p.
- Carter JG, Altaba CR, Anderson LC, 48 others (2011) A synoptical classification of the Bivalvia (Mollusca). *Paleontological Contributions* 4:1-48.
- Anderson LC, Wesselingh F, Hartman, JH (2010) A phylogenetic and morphologic context for the radiation of an endemic fauna in a long-lived lake: Corbulidae (Bivalvia; Myoidea) in the Miocene Pebas Formation of western Amazonia. *Paleobiology* 36:534-554.
- Goodwin DH, Anderson LC, Roopnarine PD (2008) Evolutionary origins of novel conchologic Growth Patterns in Tropical American corbulid bivalves. *Evolution and Development* 10:643-656.
- Anderson LC, Hartman JH, Wesselingh F (2006) Close evolutionary affinities between freshwater corbulid bivalves from the Neogene of Western Amazonia and Paleogene of the Northern Great Plains, USA. *Journal of South American Earth Sciences* 21:28-48. (invited)
- Nemésio A, Aronowsky A, Anderson LC (2006) *Exallocorbula* (Bivalvia: Corbulidae), a new name for the Amazonian molluscan fossil *Pebasia* Nuttall. *Veliger* 48:228-229.
- Anderson LC, Roopnarine PD (2005) Role of constraint and selection in the morphologic evolution of *Caryocorbula* (Mollusca: Corbulidae) from the Caribbean Neogene. *Paleontologica Electronica* 8.2.32A. (invited)
- Anderson LC, Roopnarine PD (2003) Evolution and phylogenetic relationships of Neogene Corbulidae (Bivalvia; Myoidea) of tropical America. *Journal of Paleontology* 77:1086-1102. (Received best paper award for journal for 2003.)
- Henderson WG, Anderson LC, McGimsey CR (2002) Distinguishing natural and archaeological deposits: Stratigraphy, taxonomy, and taphonomy of Holocene shell-rich accumulations from the Louisiana chenier plain. *Palaios* 17:192-205.
- Taylor MJ, McBride RA, Anderson LC, Byrnes MR (2002) Building on the research of our founders: 65 years of chenier plain studies at Louisiana State University. In Steinberg MK, Hudson PF (eds). *Cultural and Physical Expositions: Geographic Studies in the Southern United States and Latin America*. Geoscience Publications, Department of Geography and Anthropology, Louisiana State University, Baton Rouge, p. 261-276.
- Anderson LC (2001) Temporal and geographic size trends in Neogene Corbulidae (Bivalvia) of tropical America: Using environmental sensitivity to decipher causes of morphologic trends. *Palaeogeography, Palaeoclimatology, Palaeoecology* 166:101-120.
- Anderson LC (2001) Transport and spatial fidelity. In Briggs DEG, Crowther PR (eds.) *Palaeobiology II*, Blackwell Scientific, 289-292.
- McBride RA, Anderson LC, Tudoran A, Roberts HH (2000) Holocene stratigraphic architecture of a sand-rich shelf and the origin of linear shoals: Northeastern Gulf of Mexico. In Bergman KM, Snedden JW (eds.) *Isolated Shallow Marine Sand Bodies: Sequence Stratigraphic Analysis and Sedimentologic Interpretation*. SEPM Special Publication 64:95-126.
- Anderson LC, McBride RA, Taylor MJ, Byrnes MR (1998) Late Holocene record of community replacement preserved in time-averaged molluscan assemblages, Louisiana chenier plain. *Palaios* 13:488-499.

- Anderson LC, Sen Gupta, BK, McBride RA, Byrnes MR (1997) Reduced seasonality of Holocene climate and pervasive mixing of Holocene marine section: Northeastern Gulf of Mexico shelf. *Geology* 25:127-130.
- Heydari E, Wade WJ, Anderson LC (1997) Depositional environments, organic carbon accumulation, and solar-forcing cyclicity in Smackover Formation lime mudstones, northern Gulf Coast. *American Association of Petroleum Geologists Bulletin* 81: 760-774.
- Anderson LC (1996) Neogene Paleontology in the northern Dominican Republic. 16. The Family Corbulidae (Mollusca: Bivalvia). *Bulletins of American Paleontology* 110:5-34.
- Anderson LC, McBride RA (1996) Taphonomic and paleoenvironmental evidence of Holocene shell-bed genesis and history in the northeastern Gulf of Mexico shelf. *Palaios* 11:532-549.
- Gangopadhyay T, Anderson LC, Jones MH, McBride RA (1996) Mollusca and benthic foraminifera of the Pensacola Bay and Perdido Bay estuarine systems, Florida and Alabama. *Gulf Coast Association of Geological Societies Transactions* 46:133-147.
- McBride RA, Byrnes MR, Anderson LC, Sen Gupta BK (1996) Holocene and Late Pleistocene sedimentary facies of a sand-rich continental shelf: A standard section for the northeastern Gulf of Mexico. *Gulf Coast Association of Geological Societies Transactions* 46:287-299.
- Anderson LC, Byrnes MR, McBride RA (1995) Paleoenvironmental and taphonomic evidence of diverse bioclast sources and their implications for the depositional settings of southwestern Louisiana cheniers. *Gulf Coast Association of Geological Societies Transactions* 45:21-29.
- Heydari E, Wade WJ, Anderson LC (1995) Depositional environments and accumulation of organic matter in the Smackover Formation, north-central Gulf of Mexico. *Gulf Coast Association of Geological Societies Transactions* 45:251-258.
- Anderson LC (1994) Paleoenvironmental control of species distributions and intraspecific variability in Neogene Corbulidae (Bivalvia: Myacea) of the Dominican Republic. *Journal of Paleontology* 68:460-473.
- Anderson LC (1992) Naticid gastropod predation on corbulid bivalves: Effects of physical factors, morphological features, and statistical artifacts. *Palaios* 7:602-620.
- Anderson LC, Geary DH, Nehm RH, Allmon WD (1991) A comparative study of naticid gastropod predation on *Varicorbula caloosae* and *Chione cancellata*, Plio-Pleistocene of Florida, U.S.A. *Palaeogeography, Palaeoclimatology, Palaeoecology* 85:29-46.

In Prep, In Revision, or Submitted for Review

- Engel AS, Paterson AT, Doty TW, Lim SJ, Anderson LC, Campbell BJ. (in prep) The microbiome of a coastal habitat occupied by *Phacoides pectinatus* (Bivalvia: Lucinidae) and implications for the symbiotic system. *FEMS Microbiology Ecology*.
- Kokesh BS, Anderson LC, Engel AS (in prep) Allometric shape variation among chemosymbiotic bivalves from marine lakes and coastal habitats. *Journal of Molluscan Studies*.
- Long BL, Anderson LC (in prep) Live-dead mismatch: Use of intraspecific morphology in conservation paleobiology and paleoenvironmental analyses. *Paleobiology*.

Reports

- Anderson LC (2009) Mollusca from oil and gas platforms on the Louisiana continental shelf: A biotechnology survey. Evaluation of oil and gas platforms on the Louisiana continental shelf for organisms with biotechnology potential, U.S. Dept. of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, LA. OCS Study MMS 2009-059:37-42.

- Anderson LC (2003) Mollusca from oil and gas platforms on the Louisiana continental shelf: A biotechnology survey. Minerals Management Service, Information Transfer Report.
- Anderson LC, Sen Gupta BK, Smith L (2002) Molluscs and benthic foraminifers of Chevron ST23: Preliminary biotic survey and evaluation of biotechnology potential. Minerals Management Service, Information Transfer Report.

Field Guides

- McBride RA, Anderson LC, Taylor MJ, McGimsey C, Byrnes MR (1997) Linear Sand Bodies in Muddy Environments: Geologic Framework, Sedimentary Processes, and Geoarchaeology of the Southwestern Louisiana Chenier Plain. Friends of the Pleistocene--South Central Cell and American Association of Petroleum Geologists Field Guide, 151 p.
- Byrnes MR, McBride RA, Anderson LC, Taylor MJ, Zenero RR (1995) Sedimentary Processes, Geologic Framework, and Coastal Erosion Issues of the Chenier Plain in Southwestern Louisiana. Gulf Coast Association of Geological Societies Field Guide, 101 p.

Book reviews

- Anderson LC (1998) History of a Land Bridge and Sea Barrier. *American Paleontologist* 6:12-13.

Abstracts (last 5 years)

- Anderson LC, Long BL, Kokesh BS, Paterson AT, Engel AS, Lim SJ, Campbell BJ (2019) Holocene Marine lakes as refugia: Morphometric and phylogenetic analyses of Bahamian lake *Ctena* (Bivalvia: Lucinidae) and their endosymbionts. In: Droser, M., N. Hughes, N. Bonuso, D. Bottjer, D. Eernisse, R. Gaines, A. Hendy, D. Jacobs, J. Miller-Camp, R. Norris, K. Roy, P. Sadler, M. Springer, X. Wang, and M. Vendrasco (eds.). 2019. 11th North American Paleontological Conference Program with Abstracts PaleoBios 36 (Supplement 1), ucmp_paleobios_44177, Symposium: Deep Time Paleogenomics, p. 60.
- Long B, Anderson L (2019) Molecular vs. morphologic phylogenies in Neogene and Quaternary Lucinidae (Bivalvia) of the Western Atlantic. NAPC In: Droser, M., N. Hughes, N. Bonuso, D. Bottjer, D. Eernisse, R. Gaines, A. Hendy, D. Jacobs, J. Miller-Camp, R. Norris, K. Roy, P. Sadler, M. Springer, X. Wang, and M. Vendrasco (eds.). 2019. 11th North American Paleontological Conference Program with Abstracts PaleoBios 36 (Supplement 1), ucmp_paleobios_44177, Session: Systematics and Phylogeny, p. 222.
- Kokesh BS, Anderson LC (2018) Phenotypic trajectory analysis reveals temporal divergence of shell shape in bivalves from adjacent marine lakes. *Geological Society of America Abstracts with Programs*, 50 (6), abstract 39-16, Indianapolis, IN.
- Lim SJ, Alexander LC, Engel AS, Anderson LC, Campbell BJ (2018) Novel symbiont species diversity within a *Ctena orbiculata* (Bivalvia: Lucinidae) population. *American Society for Microbiology Microbe*, Atlanta, GA.
- Nachman E, Walton J, Lim SJ, Engel AS, Anderson LC, Campbell (2018) Functional diversity of *Phacoides pectinatus* (Bivalvia: Lucinidae) gill microbiome. *American Society for Microbiology Microbe*, Atlanta, GA.
- Paterson A, Long BL, Kokesh BS, Anderson LC, Engel AS (2018) Anchialine lakes serve as novel habitats for relict taxa including chemosymbiotic bivalves. *Geological Society of America Abstracts with Programs*, 50 (6), abstract 278-12, Indianapolis, IN.

- Paterson A, Long BL, Lim SJ, Kokesh BS, Harmon A, Anderson LC, Campbell BJ, Engel AS (2018) Intraspecific variability of valve morphology and endosymbiont diversity among Lucinidae from shallow marine habitats. Geological Society of America Abstracts with Programs, 50 (3), abstract 24-9, Knoxville, TN.
- Engel AS, Lim SJ, Paterson AT, Payne Z, Scheffler S, Tran A, Campbell BJ, Anderson LC (2017) Taxonomic and metabolic complexity among lucinid bivalve endosymbionts. SAME15 – 15th Symposium on Aquatic Microbial Ecology, Zagreb, Croatia, Sept 3 -8.
- Kokesh BS, Anderson LC, Engel AS (2017) Assessing the diversity of lucinid bivalves from coastal and anchialine habitats on San Salvador Island, the Bahamas. Society of Integrative and Comparative Biology Annual Meeting, New Orleans, LA.
- Kokesh BS, Anderson LC, Engel AS (2017b) Geometric morphometric analyses of *Ctena orbiculata* (Lucinidae: Bivalvia) from marine lakes of San Salvador Island, The Bahamas, and surrounding coastal environments. Geological Society of America Abstracts with Programs. Vol. 49, No. 6. doi: 10.1130/abs/2017AM-301807
- Lim SJ, Engel AS, Anderson LC, Campbell BJ (2017) Novel co-symbiosis in the lucinid bivalve *Phacoides pectinatus*. American Society for Microbiology, New Orleans, LA.
- Lim SJ, Engel AS, Anderson LC, Campbell BJ (2017) Genetic diversity in the lucinid-bacteria chemosymbiosis. Second Gordon Research Conference (GRC) on Animal-Microbe Symbioses, Mount Snow, VT.
- Lim SJ, Davis BG, Gill DE, Engel AS, Anderson LC, Campbell BJ (2017) Novel co-symbiosis in the lucinid bivalve *Phacoides pectinatus*. First Gordon Research Seminar (GRS) on Animal-Microbe Symbioses, Mount Snow, VT.
- Lim SJ, Davis BG, Gill DE, Engel AS, Anderson LC, Campbell BJ (2017) Novel co-symbiosis in the lucinid bivalve *Phacoides pectinatus*. American Society for Microbiology (ASM) Microbe 2017, New Orleans, LA.
- Paterson AT, Fortier CM, Long B, Kokesh B, Lim SJ, Campbell BJ, Anderson LC, Engel AS (2017) Redox-stratified bacterial communities in sediments associated with multiple lucinid bivalve species: implications for symbiosis in changing coastal habitats. American Geophysical Union, New Orleans, LA.
- Payne Z, Kokesh B, Paterson AT, Anderson L, Engel AS (2017) Endosymbiont diversity and shell morphology differences for *Ctena orbiculata* (Lucinidae: Bivalvia). Southeastern Biogeochemistry Symposium, Athens, GA, March 31-April 2.
- Roopnarine D, Giarikos D, Patel S, Anderson LC, Roopnarine P (2017) Determination and quantification of metals in the shells of *Crassostrea virginica* after the Deepwater Horizon oil spill utilizing atomic absorption spectrometry. American Geophysical Union, New Orleans, LA.
- Scheffler S, Paterson AT, Long B, Anderson L, Engel AS (2017) Microbial communities from gill tissues and patchy seagrass habitat of a chemosymbiotic bivalve, *Stewartia floridana*. 4th Southeastern Biogeochemistry Symposium, Athens, GA, March 31-April 2.
- Kokesh B, Anderson LC, Engel AS (2016) Morphometric and ecological discrepancies of Lucinidae (Bivalvia) in various marine environments on San Salvador Island, the Bahamas. Geological Society of America Annual Meeting, Denver, CO, abstract 163-14.
- Long BL, Anderson, LC (2016) Morphologic divergence between life and death assemblages of *Stewartia floridana* (Bivalvia, Lucinidae) from Pine Island, Florida. Geological Society of America Annual Meeting, Denver, CO 138-5.

- Lim SJ, Goemann A, Engel AS, Anderson LC, Campbell BJ (2016) Taxonomic, genetic and functional diversity of chemosymbiosis in lucinid bivalves from coastal biomes. ASM SC Branch 2016 Fall Meeting, University of South Carolina Upstate, SC.
- Lim SJ, Goemann A, Engel AS, Anderson LC, Campbell BJ (2016) Diversity of chemosymbiosis in lucinid bivalves. CBASS, Clemson University, South Carolina.
- Anderson LC, Pagnac D, Belanger C, Shelton S, Price M (2015) Digitizing ancient seas to advance student research and public outreach through the SD Mines Museum of Geology. Geological Society of America Abstracts with Programs 47:28.
- Lim J, Goemann A, Engel AS, Anderson LC, Campbell BJ (2015) Functional diversity of chemosymbiosis in lucinid bivalves from coastal biomes. South Carolina Branch American Society for Microbiology Meeting, Spring, 2015.
- Long BL, Anderson LC, Engel AS (2015) Testing the association of *Stewartia floridana* shell morphology with environmental parameters in a coastal seagrass area. Geological Society of America Abstracts with Programs 47:350.
- Anderson LC, Roopnarine PD, Roopnarine D, Fry B, Engel AS (2014) Coastal ecosystem changes associated with the 2010 Deepwater Horizon oil spill and their implications for the fossil record. Abstract Volume, 4th International Palaeontological Congress, p. 76.
- Goodwin DH, Anderson LC, Roopnarine PD (2014) New schlerochronological insights into heterochronic evolution of tropical American corbulids. 10th North American Paleontology Convention Abstract Book, Paleontological Society Special Publications, v. 13, p. 27.
- Long B, Anderson LC, Engel AS (2014) Calibrating morphometric proxies of chemosymbiosis: A test case using Lucinidae (Bivalvia). Abstract Volume, 4th International Palaeontological Congress, p. 741.
- Pagnac D, Anderson LC, Price MH, Shelton S, Belanger C (2014) Transforming beginners into experts: student-driven digitization efforts at the Museum of Geology, South Dakota School of Mines and Technology. Geological Society of America Annual Meeting, Abstract 342-15.

Conference Proceedings

- Anderson LC (1993) Statement: Important questions and problems facing evolution education today. Proceedings of the Evolution Education Research Conference, Louisiana State University, 12/92, p. 7-8.

Theses

- Anderson LC (1991) Neogene corbulid bivalves of the Dominican Republic and Florida: Species distributions, intraspecific variability, and patterns of naticid gastropod predation. Ph.D. Dissertation, University of Wisconsin-Madison, 174 p.
- Anderson LC (1987) Ostracoda of the Pinecrest Sand Member, Upper Tamiami Formation, Macasphalt Pit Mine, Sarasota, Florida. Masters Thesis, Bowling Green State University, 168 p.

Papers presented at professional meetings (organization, location, and date)

- 11th North American Paleontology Convention, Riverside, CA, 2019
- Geological Society of America, Baltimore, Maryland, 2015.
- International Palaeontological Congress, Mendoza, Argentina, October 2014
- Society for the Preservation of Natural History Collections, Rapid City, SD, June 2013
- Geological Society of America, Minneapolis, MN, October 2011

- LSU Oil Spill Symposium. April 29, 2011.
- Geological Society of America, Southcentral, New Orleans, LA, March 2011.
- Geological Society of America, Denver, CO, October 2010.
- Geological Society of America, Portland, OR, October 2009.
- Geological Society of America, Houston, TX, October 2008.
- Geological Society of America, Denver, Colorado, October 2007.
- American Malacological Society/Western Society of Malacologists, Asilomar, California, June 2005 (invited).
- American Geophysical Union, San Francisco California, December 2004.
- Geological Society of America, Denver, Colorado, November 2004.
- Geological Society of America, Seattle, Washington, November 2003 (invited).
- Minerals Management Service, Information Transfer Meeting, January 2003.
- Geological Society of America, Denver, Colorado, October 2002 (invited).
- First International Palaeontological Congress (Sydney, Australia), Symposium on evolutionary palaeoecology, chronofaunas and -floras: is biogeography punctuated?, July 2002, (invited).
- Minerals Management Service, Information Transfer Meeting, January 2002.
- Geological Society of America, Boston, Massachusetts, November, 2001.
- North American Paleontological Convention, Berkeley, CA, June 2001 (invited).
- Geological Society of America, Reno, Nevada, November 2000.
- Symposium: Cenozoic Paleobiology: the Last 65 Million Years of Biotic Stasis and Change, Gainesville, FL, February 1999 (invited).
- Geological Society of America, Toronto, Ontario, October 1998.
- Panama Paleontology Project and Neogene Marine Invertebrates of Tropical America (NMITA) Molluscan Workshop, Naturhistorisches Museum, Basel Switzerland, June 1998 (invited).
- World Congress of Malacology, Washington, DC, July 1998.
- Geological Society of America, Salt Lake City, UT, October 1997.
- Geological Society of America, Denver, CO, November 1996.
- Geological Society of America, New Orleans, LA, November 1995.
- Gulf Coast Association of Geological Societies, Baton Rouge, LA, October 1995.
- Geological Society of America, Seattle, WA, October 1994.
- American Malacological Union, Houston, TX, July 1994.
- Geological Society of America, Cincinnati, OH, October 1992.
- North American Paleontological Convention-V, Chicago, IL, June 1992.
- Geological Society of America, Southeastern Section, Winston-Salem, NC, March 1992.
- Geological Society of America, San Diego, CA, October 1991.
- American Malacological Union, Berkeley, CA, June 1991.
- Geological Society of America, Dallas, TX, October 1990.
- Geological Society of America, St. Louis, MO, October 1989.

Invited Lectures

- Wyoming Geological Association, Casper, December 2013.
- Darton Geological Society, Rapid City, February 2012.

- South Dakota School of Mines & Technology, March 2011.
- Field Museum of Natural History, November 2010.
- Louisiana State University, Department of Geology & Geophysics, April 2010.
- Louisiana State University, Department of Geology & Geophysics, March 2009.
- Louisiana State University, Museum of Natural Sciences, October 2008.
- Naturalis, Leiden, the Netherlands, February 2008.
- American Malacological Society/Western Society of Malacologists, Asilomar, California, June 2005 (invited).
- Southern University, Department of Physics, May 2004.
- LSU Chapter Sigma Xi, February 2004.
- Geological Society of America, Denver, Colorado, Theme Session: Terrestrial Paleobiology of South America, Cretaceous through Neogene, November 2003.
- Baton Rouge Area Society of Psychologists, August 2003.
- LSU Science Club, April 2003.
- Geological Society of America, Denver, Colorado, Theme Session on Evolution of the Bivalvia, October 2002.
- First International Palaeontological Congress (Sydney, Australia), Symposium on Evolutionary palaeoecology, chronofaunas and -floras: is biogeography punctuated?, July 2002.
- Tulane University, October, 2002.
- University of North Dakota, October, 2002.
- North American Paleontological Convention (UC Berkeley), Symposium on species-level and community-level stability: Case studies from the Dominican Republic Neogene, June 2001.
- University of Louisiana at Lafayette, Department of Geology, March 2000.
- Louisiana State University, Department of Geology and Geophysics, September 1999.
- Louisiana State University, Dept of Physics and Astronomy (Science Saturday), March 1999.
- Louisiana State University, Museum of Natural Sciences, February 1999.
- University of Minnesota, Minneapolis, Department of Geology and Geophysics, January 1999.
- University of Minnesota, Morris, Division of Science and Mathematics, January 1999.
- Symposium: Cenozoic Paleobiology: the Last 65 Million Years of Biotic Stasis and Change, Gainesville, FL, February 1999.
- Cornell College, Department of Geology, December 1998.
- University of Iowa, Department of Geology, December 1998.
- University of Wisconsin, Department of Geology and Geophysics, December 1998.
- Panama Paleontology Project and Neogene Marine Invertebrates of Tropical America (NMITA) Molluscan Workshop, Naturhistorisches Museum, Basel Switzerland, June 1998.
- Louisiana State University, Museum of Natural Sciences, October 1996.
- Louisiana State University, Museum of Natural Sciences, October 1995.
- Geoscience Associates, Baton Rouge, October 1995.
- Southeastern Louisiana University, Department of Biology, March 1995.
- Symposium: Evolution and biostratigraphy in the coastal plain, Geological Society of America, Southeastern Section, 1992.

- University of South Florida, Department of Geology, November 1991.
- Louisiana State University, Department of Geology and Geophysics, November 1990.

Field Collections and Service to Museums:

I have collected extant freshwater mollusks in Peru, Brazil, Guyana, USA (MN); extant brackish to marine mollusks in Panama, Trinidad, Mexico, The Bahamas, USA Gulf and Atlantic Coasts, Gulf of California; fossil freshwater and marine mollusks in Peru, Panama, Costa Rica, Dominican Republic, CO, WY, USA Gulf and Atlantic Coastal Plains. From these collecting efforts, +30,000 lots of fossil and recent mollusks have been donated to museums, including Museu de Zoologia da Universidade Estadual de Campinas, Brasil; Museo de Historia Natural de la Universidad Nacional Mayor de San Marcos, Peru; Museo de La Plata, Argentina; Illinois Natural History Survey; Smithsonian; Museum of Comparative Zoology (Harvard); Naturhistorisches Museum, Switzerland; Naturalis, the Netherlands; Paleontological Institute, Russia; U Wisconsin Museum of Geology; SDSMT Museum of Geology. I have identified mollusk taxa for Academy Natural Sciences Philadelphia; American Museum Natural History; Australian Museum; Bell Museum Natural History; British Museum; CA Academy of Sciences; FL Museum Natural History; LSU Museum Natural Sciences; Museum Comparative Zoology (Harvard); Museum Paleontology (Berkeley); Naturalis; Paleontological Institute, Russia; Museum of Earth, NY; Peabody Museum; Santa Barbara Museum of Natural History; Smithsonian; and University ND Paleontology Collections.

Contributions to juried or refereed publications (e.g., editorships, associate editorships, referee) and review of research proposals

Editor	Manuscripts Edited
• Associate Editor, Journal of Paleontology, 1998-2011	75
Referee for publications	Manuscripts Reviewed
• <i>Palaios</i>	13
• <i>Gulf Coast Association of Geological Societies Transactions</i>	10
• <i>Journal of Paleontology</i>	5
• <i>Malacologia</i>	3
• <i>Paleobiology</i>	3
• <i>Evolution</i>	2
• <i>Veliger</i>	2
• <i>Hydrobiologia</i>	2
• <i>Journal of Marine Biodiversity</i>	2
• <i>Zoological Journal of the Linnaean Society</i>	1
• <i>Geology</i>	1
• <i>Journal of Sedimentary Research</i>	1
• <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i>	1
• <i>Historical Biology</i>	1
• <i>Journal of Experimental Marine Biology and Ecology</i>	1
• <i>Journal of Morphology</i>	1

- *Neues Jarhbuch fur Geologie und Palaontologie* 1
- *Palaeontologia Electronica* 1
- *Ameghiniana* 1
- *Bulletins of American Paleontology* 1
- *Coral Reefs* 1
- *GeoMarine Letters* 1
- *Texas Academy of Science* 1
- 7th International Congress on Rudists 1
- Louisiana Geological Survey, Public Information Series 1
- Geological Society of America Field Trip Guidebook, 1995 1
- Textbook Proposal: *A Key to the Past*, Wadsworth Publ. Co. 1
- Book Chapter: *Deltas*, Harry Roberts, ed. 1
- Book Chapter: *Palynology, Climate, and Sequence Stratigraphy of the Pliocene*, J. Wrenn, ed. 1
- Book Chapter: *The Evolution of Cretaceous Ocean/Climate Systems*, E. Barrerra, ed. 1
- Book Chapter: *Modern Foraminifera*, B. K. Sen Gupta, ed. 1
- Book Chapter: *Central America: Geology, Resources, and Hazards*, J. Bundschuh and G. Alvarado 1
- Book Chapter: *Paleobiology of the Dominican Republic*, Budd, A.F. and Nehm, R., eds. 1
- Louisiana Geological Survey Newsletter 1
- Book Proposal: *Topics in Paleobiology—Bivalves*, Harper, E., Taylor, J. and Crame, A. 1

Other contributions to referred publications

- Member of committee to select best paper, *Journal of Paleontology*, 1991, 1998-2006.

Review Panels for research proposals

- National Science Foundation, Division of Geosciences, Professional Opportunities for Women in Research and Engineering (POWRE), 1998.
- National Science Foundation, Division of Biological Infrastructure, 2014, 2015 (2), 2016, 2018.

Reviewer for research proposals

Reviewer for research proposals	Proposals Reviewed
• National Science Foundation	32
• National Geographic Society	1
• Austrian Research Fund	1
• Council on Research 1994 Summer Stipends Program	14
• LSU Chapter Sigma Xi, Student Grant-in-aid of Research	10
• Paleontological Society Student Grant-in-aid, committee chair, 1998.	47
• Paleontological Society Student Grant-in-aid, committee	44

chair, 1999.

- Louisiana State University, Distinguished Dissertation Award, Science, Engineering, and Technology for 1998 8
 - Louisiana State University, Distinguished Dissertation Award Committee, Science, Engineering, and Technology for 1999, committee chair 12
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Program Reviews

- Macalaster College, Geology Department, February 2011.

Research Grants and Contracts Funded

- Submitted preproposal. Science and Technology Center: Understanding and Negating Illicit Trade and Economic Deceit. PI: JJ Kellar, co-PI GA Crawford, SJ Simske, Senior Personnel LC Anderson, S Dubey, M Gore, S Griffs, R Hoover, A Jayasumana, M. Kammer-Kerwick, B Logue, S. May, J Macdonald, A. Podhradsky, J. Yingling. OIA-STC Integrative Partnerships Adm, submitted 06/24/2019 (pending).
- Funded for \$2,100,000 (SDSM&T subaward \$159,650). Digitization TCN: Collaborative Research: The Cretaceous World: Digitizing Fossils to Reconstruct Evolving Ecosystems in the Western Interior Seaway. NSF DBI Digitization. PIs: B. S. Lieberman (Univ Kansas), A. Moleneux (Univ Texas Austin), S. H. Butts (Yale Univ), J. Hendricks (San Jose State Univ), N. H. Landman (AMNH), L. E. Wilson (Fort Hays State Univ), C. E. Myers (Univ New Mexico); co-PIs: L. C. Anderson, J. H. Beach (Univ Kansas), K. C. Beard (Univ Kansas), M. H. Price (SDSM&T), M. A. Brown (Univ Texas Austin), R. C. Martindale (Univ Texas Austin), C. Norris (Yale Univ), R. O'Leary (AMNH), T. S. Karim (Univ Colorado Boulder), 2016-2020.
- Funded for \$2,000. RMCESU—Fossil Cycad National Monument Specimen Curation and Documentation in Montana (supplement). BLM MT-State OFC (MT935). PI: L. C. Anderson; co-PI: S.Y. Shelton, J. Fox, 2016-19.
- Funded for \$7,000. Fossil Cycad National Monument Specimen Curation and Documentation in Montana. Bureau of Land Management. PI: L.C. Anderson; co-PIs S.Y. Shelton, J. Fox, 2014-15.
- Funded for \$499,887. CSBR: Natural History: Curation and Digitization of Newly Acquired Modern and Fossil Invertebrate and Protist Research Collections at the SDSM&T Museum of Geology. NSF DBI Biological Research Collections. PI: LC Anderson; co-PIs: CL Belanger, DC Pagnac, MH Price, SY Shelton. Duration: 2014-2018 (with no cost extension).
- Funded for \$149,028 (with \$150,000 SDSM&T match). Advancing Collections Digitization, Integration, and Access for the SDSM&T Museum of Geology. PI: LC Anderson; co-PIs: SY Shelton, DC Pagnac, CL Belanger, MH Price. Institute of Museum and Library Services, Museums for America. Duration: 10/01/13– 09/30/16.
- Funded for \$1,634,344 (SDSM&T portion \$464,080). Dimensions: Collaborative Proposal: Functional diversity of chemosymbionts in lucinid bivalves from coastal biomes. PI: A Engel (University of Tennessee Knoxville), LC Anderson, BJ Campbell (Clemson University). NSF DEB Dimensions of Biodiversity. Duration: 01/01/2014– 12/31/19.

- Funded for \$840,000 (SDSM&T subaward \$27,285). Aquatic Faunal Survey of the Lower Amazon. PI: W.G. Crampton (University Central Florida), co-PI: LC Anderson. NSF DEB-Systematic Biology & Biodiversity Inventories. Duration: 6/15/12– 5/31/16.
- Funded for \$250,000. Long-term Site Selection and Analysis of Biota to Determine the Effect of Oil, Dispersant, and Remediation-Related Human Activities on Marsh Plants and Associated Insects and Mollusks. PI: L Hooper-Bui, co-PI: RE Turner, LC Anderson, B Fry. LSU Gulf of Mexico Research Initiatives II (GRI/BP). Duration: 4/1/11– 3/31/12.
- Funded for \$140,000. Effect of Oil, Dispersant, and Remediation-Related Human Activities on Marsh Plants and Associated Insects and Mollusks. PI: L Hooper-Bui, co-PI: LC Anderson, RE Turner. Northern Gulf Institute. Duration: 01/01/11– 12/31/11.
- Funded for \$150,000. Analysis of Samples Collected to Measure Effects of Stressors on Coastal Wetlands. PI: RE Turner, co-PI: LC Anderson, L Hooper-Bui. LSU Gulf of Mexico Oil Spill Research Program. Duration: 8/27/10– 8/26/11.
- Funded for \$149,834. Evaluation of Dual Symbiosis in Lucinid Bivalves. PI: A Engel, co-PI: LC Anderson. NSF IOS-Symbiosis Definition & Self Recognition. Duration: 7/1/2010– 6/30/12.
- Funded for \$137,012. Wetland Stressors, Northern Gulf of Mexico Wetlands. PI: RE Turner, co-PI: LC Anderson, L Hooper-Bui. NSF DEB Ecosystem Studies. Duration: 5/15/2010– 5/14/2011.
- Funded for \$5,000. Changes in coastal food webs caused by the Deepwater Horizon crude oil spill: responses by and effects on oysters and other primary consumers. PI: LC Anderson. Louisiana Sea Grant. Duration 5/1/2010– 5/15/2011.
- Funded for \$404,107 (LSU subaward \$15,460). Aquatic Faunal Survey of Alto Purús National Park, Peru. NSF Biotic Surveys and Inventories. PI: J Albert (University of Louisiana Lafayette). Duration: 2008– 2011.
- Funded for \$10,000. Corbulid Bivalves: Examining Invasive Species in a Phylogenetic Framework. PIs: LC Anderson, M Hellberg. Faculty Research Grant, LSU. Duration: 7/1/06– 6/30/07.
- Funded for \$1,204,416. Geoscience Alliance to Enhance Minority Participation. National Science Foundation, PI: RE Ferrell, co-PIs: LC Anderson, PJ Bart, JM Lorenzo, JH Tomkin. GEO-Opportunities for Enhancing Diversity. Duration: 2003– 2006.
- Funded for \$200,000. Recruitment of Superior Graduate Students in Earth, Ocean and Environmental Sciences. PI: RE Turner, R. Portier, LC Anderson. Louisiana Board of Regents, 2002– 2006.
- Funded for \$200,000. Recruitment of superior graduate students in earth, ocean and environmental sciences. PI: RE Turner, R Portier, LC Anderson. Louisiana Board of Regents. Duration: 2001– 2005.
- Funded for \$581,320 (plus \$502,358 match). Evaluation of oil and gas platforms on the Louisiana Continental Shelf of organisms with biotechnology potential. PI: LJ Rouse, LC Anderson, RL Chapman, DW Foltz, ME Hellberg, FA Rainey, BK Sen Gupta. Minerals Management Service, Coastal Marine Institute. Duration 10/01/00–12/30/03.
- Funded for \$100,000. Recruitment of Superior Graduate Students in Earth, Ocean and Environmental sciences. PI: RE Turner, B Shane, LC Anderson. Louisiana Board of Regents. Duration: 2000– 2004.
- Funded for \$4,984. Foraminiferal and molluscan tracers of ancient seagrass habitats: Ground truth from tropical seagrass beds, Mexico (Planning Visit). PIs: BK Sen Gupta, LC

Anderson. National Science Foundation, International Cooperative Activities. Duration: 3/15/98– 8/31/98.

- Funded for \$134,300. LaCEPT Louisiana State University campus renewal project--the next steps. PI: M Oliver, H Silverman; Co-PI: L Anderson, B Sen Gupta, J Madden, W Wischusen. LaCEPT - The Board of Regents. Duration: 1997– 1998 (calendar years).
- Funded for \$149,782. Synthesis of hard mineral resources of the Florida panhandle shelf: Spatial distribution, subsurface evaluation, and sediment budget. PI: M Byrnes, R McBride; Co-PI: LC Anderson, H Roberts. U.S. Minerals Management Service (LSU-MMS Coastal Marine Institute). Duration: 12/5/95– 9/30/97.
- Funded for \$120,000. LSU campus renewal project--the next step. PI: M Oliver, H Silverman, G Byerly, J Madden, W Wischusen; Co-PI: L Anderson, R Ferrell, B Sen Gupta. LaCEPT - The Board of Regents. Duration: 1996 (calendar year).
- Funded for \$4,000. Comparing surface and subsurface shell accumulations to integrate shelf stratigraphy and modern seafloor processes in the northeastern Gulf of Mexico. PI: L.C Anderson. Council on Research 1996 Summer Stipend Program. Duration: 7/6/96– 8/5/96.
- Funded for \$69,933. Taxonomic and phylogenetic study of Western Atlantic and Eastern Pacific Miocene to Recent Corbulidae (Bivalvia). PI: LC Anderson. National Science Foundation, Geology and Paleontology. Duration: 5/1/94– 10/31/98.
- Funded for \$20,000. An integrated study of stratigraphy, petrography, and geochemistry of the lower laminated member of the Smackover Formation, northern Louisiana (renewal). PI: LC Anderson, E Heydari. Energy Pass-Through Program. Duration: 8/2/93– 6/30/94.
- Funded for \$23,000. An integrated study of stratigraphy, petrography, and geochemistry of the Smackover Formation, north Louisiana. PI: LC Anderson, E Heydari. Center for Energy Studies Faculty Pass-Through Program. Duration: 9/1/92– 6/31/93.
- Funded for \$4,000. Cenozoic corbulid bivalves of the Caribbean region. PI: LC Anderson. Council on Research 1992 Summer Stipend Program. Duration: 7/1/92– 7/31/92.

Teaching History

Course #	Title (lecture courses in bold)	Location	Semester
AES/CEE/GEOL 808	Fundamental Problems in Engineering and Science	SDSMT	Fall 2019
GEOL/GEOE/MEM 700	Planning and Developing Research	SDSMT	Fall 2019
GEOL 464	Senior Research I	SDSMT	Fall 2019
GEOL 465	Senior Research II	SDSMT	Spring 2019
GEOL/GEOE/MEM 700	Planning and Developing Research	SDSMT	Fall 2018
GEOL 464	Senior Research I	SDSMT	Fall 2018
AES/CEE/GEOL 808	Fundamental Problems in Engineering and Science	SDSMT	Fall 2017
GEOL/GEOE/MEM 700	Planning and Developing Research	SDSMT	Fall 2017
GEOL 464	Senior Research I	SDSMT	Fall 2017

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GEOL/GEOE/MEM 700	Planning and Developing Research	SDSMT	Fall 2016
GEOL 464	Senior Research I	SDSMT	Fall 2016
GEOL 412/512	Field Studies in Coastal Biomes	SDSMT	Summer 2016
AES/CEE/GEOL 808	Fundamental Problems in Engineering and Science	SDSMT	Fall 2015
GEOL/GEOE 700	Research Methods	SDSMT	Fall 2015
GEOL 464	Senior Research I	SDSMT	Fall 2015
GEOL 464	Senior Research I	SDSMT	Fall 2014
GEOL/GEOE 700	Research Methods	SDSMT	Fall 2014
AES/GEOL 808	Fundamental Problems in Engineering and Science	SDSMT	Fall 2013
GEOL 464	Senior Research I	SDSMT	Fall 2013
GEOL/GEOE 700	Research Methods	SDSMT	Fall 2013
GEOL/GEOE 700	Research Methods	SDSMT	Fall 2012
GEOE 700			
GEOL 464	Senior Research I	SDSMT	Fall 2012
GEOL/PALE 672	Micropaleontology	SDSMT	Spring 2012
GEOL 1003	Historical Geology	LSU	Spring 2011
GEOL 2061	History of the Biosphere	LSU	Spring 2011
GEOL 7981	<i>Seminar in Geochemistry: Ecosystem Stressors through Time: Lessons learned from the Gulf of Mexico</i>	LSU	Spring 2011
GEOL 3909	<i>Undergraduate Independent Study: Morphologic Integration of Unionoid Bivalves</i>	LSU	Fall 2010
GEOL 2061	History of the Biosphere	LSU	Spring 2010
GEOL 7115	Paleoecology	LSU	Spring 2010
GEOL 3909	<i>Undergraduate Independent Study: Morphologic Integration of Corbulid Bivalves</i>	LSU	Spring 2010
GEOL 1001/1003/ 1601/1602	Freshman Geology Field Camp	LSU Camp Barney	Summer 2009
GEOL 2061	History of the Biosphere	LSU	Spring 2009
GEOL 7911	<i>Seminar in Paleontology: Reconstructing</i>	LSU	Spring 2009

	<i>Paleocommunity Dynamics</i>		
GEOL 1001/1003/ 1601/1602	Freshman Geology Field Camp	LSU Camp Barney	Summer 2008
GEOL 2061	History of the Biosphere	LSU	Spring 2007
GEOL 3011	Introduction to Paleontology	LSU	Fall 2005
GEOL 3011	Introduction to Paleontology	LSU	Fall 2004
GEOL 7931 GEOL 3909	Seminar in Sedimentology: <i>Carbonate Depositional Environments of the Bahamas</i>	LSU	Spring 2004
GEOL 3011	Introduction to Paleontology	LSU	Fall 2003
GEOL 3011	Introduction to Paleontology	LSU	Spring 2003
GEOL 7911	Seminar in Paleontology	LSU	Fall 2002
GEOL 3011	Introduction to Paleontology	LSU	Spring 2002
GEOL 7120	Paleobiology	LSU	Fall 2001
GEOL 3011	Introduction to Paleontology	LSU	Spring 2001
GEOL 1003	Historical Geology	LSU	Fall 2000
GEOL 7911	Seminar in Paleontology: <i>Critical Intervals in the History of Life.</i>	LSU	Fall 2000
GEOL 3011	Introduction to Paleontology	LSU	Spring 2000
GEOL 3011	Introduction to Paleontology	LSU	Spring 1999
GEOL 7120	Paleobiology	LSU	Fall 1999
GEOL 1003	Historical Geology	LSU	Spring 1998
GEOL 7120	Paleobiology	LSU	Spring 1998
GEOL 3909	Undergraduate Independent Study: <i>Growth rates in Neogene corbulid bivalves.</i>	LSU	Spring 1998
GEOL 3909	Undergraduate Independent Study: <i>Paleobiology</i>	LSU	Spring 1998
GEOL 1003	Historical Geology	LSU	Fall 1997
GEOL 3011	Introduction to Paleontology	LSU	Spring 1997
GEOL 1003	Historical Geology	LSU	Spring 1997
GEOL 1602	Historical Geology Laboratory	LSU	Spring 1997

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GEOL 7909	Graduate Independent Study: <i>Paleoecology of the "Ostrea thirsae beds" of the Paleocene Nanafalia Formation, western Alabama.</i>	LSU	Spring 1997
GEOL 3909	Undergraduate Independent Study: <i>Paleoecology</i>	LSU	Fall 1996
GEOL 7115	Paleoecology	LSU	Fall 1996
GEOL 1003	Historical Geology	LSU	Spring 1996
GEOL 1602	Historical Geology Laboratory	LSU	Spring 1996
GEOL 3909	Undergraduate Independent Study: <i>Louisiana Geology Lab</i>	LSU	Spring 1996
GEOL 3909	Undergraduate Independent Study: <i>Gulf Coast Paleontology</i>	LSU	Spring 1996
GEOL 7909	Graduate Independent Study: <i>Mollusca of the Pensacola Bay and Perdido Bay estuarine systems.</i>	LSU	Spring 1996
GEOL 7120	Paleobiology	LSU	Fall 1995
GEOL 7909	Graduate Independent Study: <i>Mollusca of the Pensacola Bay and Perdido Bay estuarine systems.</i>	LSU	Fall 1995
GEOL 3011	Introduction to Paleontology	LSU	Spring 1995
GEOL 3909	Undergraduate Independent Study: <i>Microfauna of Pensacola and Perdido Bay.</i>	LSU	Spring 1995
GEOL 1003	Historical Geology	LSU	Fall 1994
GEOL 7911	Seminar in Paleontology: <i>Marine Paleoecology.</i>	LSU	Fall 1994
GEOL 3011	Introduction to Paleontology	LSU	Spring 1994
GEOL 3909	Undergraduate Independent Study: <i>Holocene molluscan assemblages of the Florida shelf.</i>	LSU	Spring 1994
GEOL 1003	Historical Geology	LSU	Fall 1993
GEOL 7120	Paleobiology	LSU	Fall 1993
GEOL 3011	Introduction to Paleontology	LSU	Spring 1993
GEOL 1003	Historical Geology	LSU	Fall 1992
GEOL 3011	Introduction to Paleontology	LSU	Spring 1992
GEOL 7911	Seminar in Paleontology.	LSU	Spring 1992

New Courses Developed

- GEOL 412/512. Field Studies in Coastal Biomes. Developed in collaboration with A. Engel (University of Tennessee, Knoxville). Taught at Gerace Research Station (San Salvador, the Bahamas), at SDSM&T, and at UTK.
- GEOE/GEOL 700. Research Methods. Developed and taught at SDSM&T.
- GEOL 2061. History of the Biosphere. Developed and taught at LSU.
- GEOL 7120. Paleobiology. Developed and taught at LSU.

Other Educational, Recruiting, and Outreach Programs

- Freshman and transfer student advisor for GEOL BS program (2017-present).
- Program Coordinator, Petroleum Systems Minor, an interdisciplinary undergraduate minor at SDSM&T.
- Faculty Director of the Marathon Geoscience Diversity Enrichment Program (GeoDE). The program's goal is to enhance the diversity of the geoscience community by supporting and mentoring high-achieving students. The program emphasizes scholarship, research, service, and mentoring and provides multiple competitive Ph.D. stipends and undergraduate scholarships, funded research opportunities, and mentoring for and by participants at all levels. Activities supported by GeoDE are intended to enhance a scholarly climate that embraces individual diversity within the Department, at LSU, and within the geosciences profession.
- Participated in discussion of my research related to the impact of oil and other stressors on oyster and marsh communities with Clark University "2011 Social Change Field Experience" class.
- From 2004-08 I was co-PI on an OEDG grant supporting collaboration among nine regional minority-serving institutions and LSU. The program included research-oriented summer courses, undergraduate research opportunities, and graduate stipends. Over five years, we introduced over 450 minority students with STEM majors to geoscience research and careers; 46 students completed a summer program; and 10 summer participants entered graduate school in geology.

Graduate Committees

Chair

- Kayleigh Muilenberg (M.S., 2017-2018)
- Broc Kokesh (M.S., 2016-2018)
- Brooke Long (Ph.D., 2016-present)
- Megan Norr (M.S., 2016-2018)
- Brooke Long (M.S., 2014-2016)
- Jacob Grosskoph (M.S., 2010)
- Jeffrey Agnew (Ph.D., 2008)
- Jill Leonard-Pingel (M.S., 2005)
- Wayne Henderson (M.S., 1999)

Committee Member

- M.S. Paleontology, SDSM&T Geology & Geological Engineering: 5

- Ph.D., SDSM&T Geology & Geological Engineering: 2
- Ph.D., SDSM&T Graduate Education Representative, Civil & Environmental Engineering: 1
- Ph.D., LSU Geology and Geophysics: 15.
- Ph.D., LSU Biological Sciences: 1
- Ph.D., LSU Dean's Representative, Civil Engineering: 1.
- Ph.D., LSU Dean's Representative, Geography: 2
- Ph.D., LSU Dean's Representative, Oceanography and Coastal Sciences, 1.
- M.S., LSU Geology and Geophysics: 13.
- M.S., LSU Education: 1.
- M.S., LSU Biological Sciences: 1

Undergraduates: Julie Doucet, Julie Leber, Sarah Carr, Rebecca Tedford, Danielle Duhe, Mike Lowe, Cierra Rousseau, Michael Dixon, Garson Bowers, Mary Laber, Elizabeth Kilcer, Peter Daly, Nicholas Reid, Ryan Bozer.

Postdoctoral Advising

- Clint Boyd, 2012-2015.
- Audrey Aronowsky, 2003-2007.
- David Goodwin, 2003.

Field Trips Led

- Field Studies in Coastal Biomes (Gerace Research Center, San Salvador, the Bahamas), with A. Engel. For GEOL 412/512 in Summer 2017.
- Stratigraphy, paleontology, and karst geomorphology of the Florida panhandle. For GEOL 2061& 7115 in Spring 2010.
- Stratigraphy & biostratigraphy of the Eocene/Oligocene boundary near Jackson, AL. For GEOL 2061 in Spring 2011.
- Freshman Geology Field Camp, numerous trips throughout southeastern Rocky Mountains. For GEOL 1001/1003/1602/1602 in summer 2008-2010.
- Sedimentology and paleontology of fossil Mastodon Site, Tunica Hills. For GEOL 3011 in Fall 2005.
- Geology of the Bahamas. For GEOL 7931/3909 and LSU Chapter of AAPG in April 2004.
- Linear Sand Bodies in Muddy Environments: Geologic Framework, Sedimentary Processes, and Geoarchaeology of the Southwestern Louisiana Chenier Plain, with R. McBride, M. Taylor, C. McGimsey. For Friends of the Pleistocene in April 1997.
- Geology of northeastern Louisiana. For GEOL 1003 in Spring 1997.
- Louisiana Coastal Environments. For GEOL 1003 in Spring 1996.
- Geology of the Baton Rouge Area. For GEOL 1003 in Spring 1996, 1997.
- Louisiana's Chenier Plain. For GEOL 1003 in Spring 1996, 1997; for GEOL 7115 in Fall 1996; for GEOL 3011 in Spring 1997, 2000, Fall 2004.
- Sedimentary Processes and Geologic Framework of the Chenier Plain in Southwestern Louisiana, with M. Byrnes and R. McBride. For Gulf Coast Association of Geological Societies in October, 1995.

- Tertiary Stratigraphy and Paleontology of the Florida Panhandle and western Florida Peninsula. For LSU chapter of Sigma Gamma Epsilon in February 1995.
- Landscape Evolution of the Baton Rouge Area, with J. Kruger. Donated for Charitable Auction in June, 1995 and June, 1996.
- Stratigraphy and Paleontology of the Gulf Coastal Plain. For GEOL 3011 in Spring 1992-1995, 1997, 2000-2001; for GEOL 1003 in Spring 1996; for GEOL 7115 in Fall 1996.

Summary of Administrative Accomplishments

As Department Head of Geology and Geological Engineering (GGE) and Director of the Museum of Geology at SDSM&T, I oversee two units that combined include 2 administrative staff members, 3 museum professionals, 3 research staff members, and 13 faculty members. In 2019-20 I am also serving as Interim Department Head of Mining Engineering and Management, with 2 administrative staff members and 6 faculty members.

The GGE department supports 5 degree programs, 3 minors, and 3 certificate programs. To date we have established and expanded our advisory board, invested time in careful strategic planning; revised all curricula; proposed 1 new minor and 3 new certificate programs; added accelerated MS degree tracks; developed assessment plans for all degree programs; and achieved increased graduation rates in our degree programs. The BS GEOE degree is accredited by the Engineering Accreditation Commission of ABET; and the BS GEOL degree will be seeking accreditation by the Applied and Natural Science Accreditation Commission of ABET in 2022. In addition, the department developed a pre-tenure review process, a policy for adjunct (courtesy) faculty appointment, a faculty workload model, and a peer-review of teaching process; we also revised our faculty expectations document. Seven tenure-track faculty members and one full-time lecturer also have been hired since 2011.

In the Museum of Geology, we revised our collections management policy and developed a new ethics statement, emergency management plan, mission statement, and strategic plan. The Museum had these core documents verified by the American Alliance of Museum and will undergo an accreditation visit in December 2019.

Grant expenditures for department and museum personnel have increased by 380% (FY12-18). Since coming to SDSM&T, I have helped the department and museum raise \$3.6 million in private and corporate support as well as \$223.9 million in non-monetary donations (software, equipment, scientific collections) (FY12-FY18). These gifts support the Martin Paleontology Research Lab, the Museum exhibit floor, graduate student fellowships, faculty start-up, visiting speakers, undergraduate scholarships, student travel, the field station, and the Energy Resources Initiative.

While Department Chair (2003-2007) of Geology and Geophysics at LSU, we revised its undergraduate curricula and Ph.D. requirements; undergraduate enrollments increased 67% and graduate student enrollments increased 28%; and the number of graduate students on RAs rose from 22% to 50% of GAs. During this time, I helped the department raise \$2.7 million in private and corporate support as well as \$21 million in non-monetary donations (software, equipment, scientific collections). These gifts supported the LSU Geology Field Camp; two endowed chairs; graduate fellowships; program support and RAs for a petroleum geology focused M.S. program; software for teaching and research labs; and equipment for field acquisition of seismic data.

Committees and Other Service

Professional Societies and Panels

- Review-panel member, National Science Foundation, Division of Biological Infrastructure, 2014, 2015, 2016 (2), 2018.
- AAAS Section E (Geology and Geography) nominating committee, 2016-2018.
- Selection Committee for Paleontological Society Medal, 2013-15.
- Member Paleocollections Digitization Working Group, iDigBio, 2012.
- Co-convener with Annette Summers Engel of Symposium (S1C) “Deepwater Horizon Oil Spill: Biotic Responses to the Oil Spill Incident—Microbes to Macrobiota.” Geological Society of America Southcentral Section Meeting, 2011.
- Program Review Committee, Geology Department, Macalester College, St. Paul, MN, 2011.
- Co-convener with Annette Summers Engel of Pardee Keynote Symposium (P1) “Symbiosis as a Driver of Global Change in Ancient and Modern Earth Systems.” Geological Society of America Annual Meeting, 2010.
- Judge, Paleontological Society, Best Student Poster. Geological Society of America Annual Meeting, 2010.
- Symposium Co-convener for American Malacological Society and Western Society of Malacologists Joint meeting, 2005. Symposium: From development to extinction: molluscan neontology and paleontology.
- Executive Committee, Heads and Chairs of Earth and Space Science Departments, 2004-07.
- Advisory Board, World Oil Awards, 2004.
- Associate Editor, Journal of Paleontology, 1998-2012.
- Paleontological Society Distinguished Lecturer, 1998-2000.
- Review-panel member, National Science Foundation, Division of Geosciences, Professional Opportunities for Women in Research and Engineering (POWRE), 1998.
- Chair, Student Grant-in-Aid Committee, Paleontological Society, 1998 and 1999.

University Committees at SDSM&T

- Promotion and Tenure, 2018-19, 2017-18, 2016-17, 2012-13.
- Strategic Enrollment Planning Graduate Education Working Group, 2018-19.
- Reviewer for FY17 NSF EPSCoR RII Track 2 Proposals, 2017, 2016.
- Chair, Ad hoc committee to draft a Workload Model for SDSM&T, 2015-16.
- Served as facilitator for Research Planning Workshop, Spring 2014.
- Provost and VP of Academic Affairs Search Committee, 2014-15.
- Participated in interviews with VP of Research Candidates (GGE had roll-playing exercise to discuss how to increase research activity), 2014.
- Mining Engineering Head Search Committee, 2013-14 (served as chair).
- Major Gifts Guidelines Ad Hoc Committee, 2012-13.
- Dean of Graduate Education Search Committee, 2012.
- Indirect Cost Proposal Committee, 2012-13.
- Task Force on Academic Advising, 2011.

Faculty Senate Committees and Offices at LSU

- Benefits Advisory Committee, 2010-2011.

- Past President, LSU Faculty Senate, 2003-04.
- President, LSU Faculty Senate, 2002-03.
- Chair, LSU System Council of Faculty Advisors, 2001-2003.
- Vice President, LSU Faculty Senate, 2001-2002.
- LSU Representative to Conference of Louisiana Colleges and Universities, April 2001.
- Secretary, LSU Faculty Senate, 2000-2001.
- Senator, LSU Faculty Senate, 1997-2000.
- Faculty Senate Library Committee, 1992-95.

University Committees at LSU

- Search Committee, Vice Provost for Academics & Planning, 2007.
- LSU Commission on the Status of Women, 2006-07.
- Ad Hoc Committee developing BOR proposal for PhD in Env Sciences, spring 2007.
- Co-leader, Chair's Brown Bag Discussion Group, 2003-2007.
- Executive Vice Chancellor and Provost Search Committee, 2002, 2002-2003.
- Ad Hoc Taskforce of Athletic Council Policy, 2002-03.
- LSU Budget Committee, ex officio, 2002-03.
- Faculty Senate Review and Long Range Planning Committee, ex officio, 2002-03.
- Ad Hoc Committee on Graduate Tuition Waivers, Fall 2002.
- Distinguished Dissertation Award Committee, 1999 (for 1998), committee chair 2000 (for 1999).
- Faculty Mentoring Committee, Museum of Natural Science, 1998-2000.

College Committees at LSU

- Admissions, Standards, and Honors 2009-2010.
- Policy Committee, 2008-2010.
- High School Relations (Recruitment), 1996-98, 2008-2011.
- Biological Sciences Professorship Selection Committee, Spring 2007
- Search Committee, Associate Dean for Academic Services, College of Basic Sciences, 2004.
- Chairs Committee, 2003-07.
- Campus Visitors, 2003-07; 2008-09.
- Advising, 1997-1999.
- Ad hoc committee to review M.S. and Ph.D. degree programs in Biological Sciences, 2001.

Departmental Committees at LSU

- Director, GeoDE Program, 2008-2011.
- Field Camp Committee, 2007-08 (chair), 2008-2011.
- Faculty Search Committee 2008-09 (Geochemistry).
- Faculty Search Committee 2008-09 (Field Camp Director).
- Executive Committee, 2008-09.
- Undergraduate Recruiting Committee, 2008-present (chair).
- Student Scholarships Committee, 2003-2007, 2009-2010 (chair).
- Faculty Search Committee, 2004 (biogeoscience).
- Faculty Search Committee, 2004 (geomicrobiology).

- Applied Depositional Geosystems, 2003-2007.
- Chair, Faculty Search Committee, 2002-03 (sedimentary geology).
- Graduate Curriculum, 1999-2000 (chair), 2002-03.
- Graduate Advisor, 1999-2002.
- Graduate Recruitment & Admissions, 1992-93, 1999-2000 (chair), 2000-02.
- Faculty Search Committee, 2001-02 (surface processes)
- Faculty Search Committee, 2002 (physical geology and field camp instructor)
- Faculty Search Committee, 2002 (historical geology instructor)
- Faculty Search Committee, 2000-01 (multiple disciplines)
- Undergraduate Geology Advisor, 1997-99.
- Wilbert Seminar Series Coordinator, 1999, 1994-95.
- Undergraduate Recruiting, 1995-99; committee chair, 1996-97.
- Undergraduate Curriculum, 1991-92, 1996-99.
- Faculty Search Committee, 1998 (sedimentary geology)
- Faculty Mentoring, 1997-98, committee chair 1997-98.
- BS Program Assessment, 1996-97.
- Student Awards, 1995-97.
- Faculty and Staff Awards, 1993-94.
- Speakers, 1992-93.
- Departmental Computer Facilities, 1991-92.
- Public Information, 1991-92.
- Howe-Russell Display Committee, 1991-92.

Membership in Professional Organizations

- Geological Society of America
- Sigma Xi
- Society of Sedimentary Geology (SEPM)
- The Paleontological Society
- AAAS