

Christopher Smith

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Texas A&M University at Galveston
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EDUCATION

- **Ph.D., Geology**, 2019
University of Georgia, Athens, GA
Dr. Susan T. Goldstein (Advisor)
- **M.S., Geology**, 2015
Auburn University, Auburn, AL
Dr. Ronald D. Lewis (Advisor)
- **B.S., Geology**, 2011
University of North Carolina at Chapel Hill, Chapel Hill, NC

EMPLOYMENT HISTORY

- **Instructional Assistant Professor**, Texas A&M University at Galveston
2021-Present
- **Graduate Teaching Assistant**, University of Georgia
2015-2019
- **Laboratory Technician**, Stable Isotope Ecology Laboratory
Center for Applied Isotope Studies, University of Georgia
Summer 2018
- **Tutor**, Rankin-Smith Student-Athlete Academic Center
University of Georgia
Summer 2017, 2020
- **Graduate Teaching Assistant**, Auburn University
2013-2015
- **Laboratory Teaching Assistant**, University of North Carolina
Spring 2011

RESEARCH EXPERIENCE

- **Master's Thesis**, Auburn University
Distribution of encrusting foraminifera at Cat Island, Bahamas: Implications for foraminiferal assemblages in the geologic record

This research involved an actualistic study of modern encrusting foraminifera off the coast of Cat Island, Bahamas that sought to create a better understanding of the distribution of encrusting foraminifera in the overall Bahaman Island chain. If a model of encrusting foraminiferal distribution could be created, it could provide key information to aid future paleoenvironmental analysis of ancient carbonate systems.

- **Ph.D. Dissertation**, University of Georgia
Foraminiferal responses to heavy metals: An examination of potential bioindicators and incorporation using the propagule method

My doctoral research involved an investigation of benthic foraminiferal responses to heavy metal contamination, from effect on population dynamics to test construction and possible incorporation. This study also featured a focus on zinc contamination and the relationship between heavy metal contamination, test deformities, and salinity and temperature variation.

- **Capstone Undergraduate Research**, Texas A&M University at Galveston

Acted as mentor for undergraduate research project that investigated foraminiferal response to Hurricane Harvey in Galveston Bay. Specifically, this study involved mercury contamination potentially reactivated by storm activity and its subsequent deleterious impact on the foraminiferal population. This project was eventually presented at the International FORAMS Symposium held in Perugia, Italy in summer 2023.

PUBLICATIONS

- **Smith, C.W.** and Goldstein, S.T., 2019, The effects of selected heavy metal elements on experimentally grown foraminiferal assemblages from Sapelo Island, Georgia and Little Duck Key, Florida, U.S.A.: *Journal of Foraminiferal Research* v. 49 (3), p. 303-318.
- **Smith, C.W.**, Fehrenbacher, J., and Goldstein, S.T., 2020, Incorporation of heavy metals in experimentally grown foraminifera from Sapelo Island, Georgia and Little Duck Key, Florida, U.S.A.: *Marine Micropaleontology* v. 156, 101854.
- **Smith, C.W.** and Goldstein, S.T., 2021, Variation of temperature and salinity and their effect on the impact of heavy metal pollutants (nickel and zinc) on experimentally grown foraminiferal assemblages from Sapelo Island, Georgia and Little Duck Key, Florida, U.S.A.: *Journal of Foraminiferal Research*, v. 51 (3), p. 99-114.

CONFERENCE PRESENTATIONS

- **Smith, C.W.** and Lewis, R.D., 2014, The distribution of encrusting foraminifera at Cat Island, Bahamas: Preliminary results: *Geological Society of America Abstracts with Programs*, v. 46, no. 6, p. 540.
Vancouver, British Columbia

- **Smith, C.W.** and Lewis, R.D., 2015, The distribution of encrusting foraminifera at Cat Island, Bahamas: *Joint Symposium on the Natural History and Geology of the Bahamas*.
San Salvador Island, Bahamas
- Lewis, R.D., **Smith, C.W.**, Merrill, D., Tichenor, H.R., 2015, Comparison of encrusting foraminifera at bank barrier reefs and lagoonal patch reefs found at San Salvador and Cat Island, Bahamas: *Geological Society of America Abstracts with Programs*, v. 47 p. 347.
Baltimore, Maryland
- **Smith, C.W.** and Lewis, R.D., 2016, The characteristics and distribution of encrusting foraminifera at Cat Island, Bahamas: *Geological Society of America Abstracts with Programs*, v. 48, no. 7.
Denver, Colorado
- **Smith, C.W.** and Goldstein, S.T., 2017, Effect of selected heavy metal elements on shallow-water benthic foraminiferal assemblages from Sapelo Island, Georgia and Little Duck Key, Florida: An investigation using the propagule method: *Geological Society of America Abstracts with Programs*: v. 49, no. 6.
Seattle, Washington
- **Smith, C.W.** and Goldstein, S.T., 2018, Effects of selected heavy metals on shallow-water benthic foraminiferal assemblages from Sapelo Island, Georgia and Little Duck Key, Florida (USA): *International Symposium on Foraminifera*.
Edinburgh, Scotland
- **Smith, C.W.** and Goldstein, S.T., 2019, Incorporation of heavy metals in experimentally grown foraminifera from Sapelo Island, Georgia and Little Duck Key, Florida, USA: *Geological Society of America Abstracts with Programs*: v. 51, no. 5
Phoenix, Arizona
- Goodwin, G., **Smith, C.W.**, and Dellapenna, T., 2023, A down core analysis of foraminifera from Patrick Bayou (Galveston Texas) before and after hurricane disturbances: *International Symposium on Foraminifera*.
Perugia, Italy

FUNDING

- Auburn University Department of Geosciences Advisory Board
Student Research Award, 2014
\$1,000
- University of Georgia Department of Geology
Miriam Watts-Wheeler Scholarship Research Fund, Spring 2016
\$500
- University of Georgia Department of Geology

Levy Memorial Fund, Spring 2016

\$900

- University of Georgia Department of Geology
Miriam Watts-Wheeler Scholarship Research Fund, Fall 2016
\$500
- University of Georgia Department of Geology
Miriam Watts-Wheeler Scholarship Research Fund, Spring 2017
\$1,000.00
- American Association of Petroleum Geologists Foundation
Bernold M. "Bruno" Hanson Memorial Environmental Grant, Spring 2017
\$2,000
- Cushman Foundation for Foraminiferal Research
Joseph A. Cushman Award for Student Research, Spring 2017
\$2,000
North American Micropaleontology Section
Garry Jones and Brian O'Neill Memorial Grant, Spring 2018
\$1,000

TEACHING EXPERIENCE

Courses Taught:

- **Texas A&M University at Galveston**
Environmental Micropaleontology
 - Instructor of record for lecture and laboratory portions
 - Designed the entire course, including both lecture and laboratory portions
 - Serves as an overview of microfossil groups, their biology, ecology, and applications
 - Instructed between 20 and 30 students

- Historical Geology*
 - Instructor of record for lecture and laboratory portions
 - Designed the entire course, including both lecture and laboratory portions
 - Course focuses on introducing students to geology as a tool for interpreting the history of earth
 - Topics include sedimentary rock classification, fossil classification, basic stratigraphy, and a "walk through time" familiarizing the students with both the geologic time scale and the gradual change of life over time

- Earth and Ocean Science*
 - Instructor of record for lecture and laboratory portions
 - Course focuses on introducing students to earth systems analysis, plate tectonic framework, earth and ocean structure and chemistry, ocean and atmospheric circulation, and global carbon and hydrologic cycles
 - Topics include earth systems interactions in the coastal zone, primary productivity and oceanic life, human modification and dependence on earth system components, and climate change analysis

Ancient Sea Monsters

- Instructor of record for lecture course
- Designed the entire course
- Course is essentially a marine vertebrate paleontology course that focuses on prehistoric marine reptiles of the Mesozoic Era
- Topics include ichthyosaurs, plesiosaurs, mosasaurs, sea turtles, crocodilians, and other marine reptiles
- Course also acts as an overview of general vertebrate paleontology principles and practices

Field Methods in Marine Science

- Instructor of record for lecture and laboratory portions
- Designed the entire course, including both lecture and laboratory portions
- Class meets once a week for an hour lecture followed by an extended laboratory session
- Course focuses on techniques of documenting collected materials, the methods of reconnaissance and the mapping of traverses in the major coastal environments
- Topics include sampling and recording techniques, interview procedures and the use of maps and remotely sensed imagery

Coastal Disasters

- Instructor of record for lecture course
- Designed the entire course
- Course focuses on various natural disasters and their specific impacts on coastal regions
- Topics focus on the scientific principles underlying each hazardous event, particularly notable events in history, and usual mitigation techniques associated with each coastal disaster

Oceanography

- Instructor of record for lecture and laboratory portions
- Designed the entire course, including both lecture and laboratory portions
- Course focuses on introducing students to the ocean environment and interrelated sub-disciplines of oceanography
- Topics include ocean circulation, ocean chemistry, marine geology, marine ecology, and human impact on marine environments

Marine Geography

- Instructor of record for lecture course
- Course focuses on the physical and cultural patterns of the coastal zones of the world
- Topics include the interrelationships between the physical forms/processes and cultural patterns, as well as human use/abuse of the sea

Marine Pollution

- Instructor of record for lecture course
- Designed the entire course
- Course focuses on understanding typical contaminants found in marine environments
- Topics include the different types of marine pollutants, their sources, their impacts on the ecosystem and society, and the various means used to mitigate their impact

- **University of Georgia**

Earth Processes and Environments

- Instructor of record for both the lecture and laboratory portions (Summer 2019)
- Designed the entire course, lecture and laboratory, from the ground up (Summer 2019)
- Instructed between 10 and 20 students in weekly laboratory sessions
- Graded laboratory assignments, exams, and homework
- Covered introductory topics in physical geology including rock identification, mineral identification, geological processes, and basic geological mapping techniques
- Constructed and taught the lecture and laboratory portions of the course during a summer session

Earth's History of Global Change

- Instructed between 20-30 students in weekly laboratory sessions
- Designed exams and quizzes
- Graded laboratory assignments, exams, and homework
- Covered introductory topics in geology with an emphasis on geology as a tool for historical analysis such as basic sedimentary geology, paleontology, and stratigraphy
- Taught a complete unit of the lecture portion of the course covering environmental, evolutionary, and tectonic events of the Paleozoic and Mesozoic Eras during Spring of 2019.

Facies Models and Stratigraphy

- Aided in the instruction of 10-20 students in weekly laboratory sessions
- Graded laboratory assignments, lecture quizzes and lecture exams
- Course involved a thorough exploration of sedimentary geology and stratigraphy for upper level geology majors.

- **Auburn University**

Physical Geology

- Instructed 10-20 students in weekly laboratory sessions
- Graded laboratory assignments, quizzes, and exams
- Course acted as a basic introduction to geology for beginning students, concentrating on the physical properties of rocks and sediments

Historical Geology

- Instructed 20-30 students in weekly laboratory sessions
- Fully designed the laboratory part of the course, including assignments, specimen sets, quizzes, and exams
- Acted as Head Teaching Assistant for the course, responsible for training incoming teaching assistants and running weekly meetings
- Course focused on introducing students to geology as a tool for interpreting the history of earth
- Topics included sedimentary rock classification, fossil classification, basic stratigraphy, and a “walk through time” familiarizing the students with both the geologic time scale and the gradual change of life over time

Paleontology

- Instructed 10-20 students in both weekly laboratory sessions and occasional lectures
- Aided the instructor of record in designing the laboratory assignments, planning field trips, selecting specimens for teaching sets, and grading all assignments, exams, and quizzes for both the lecture and laboratory sections
- Conducted lectures lasting an hour and a half on topics such as dinosaurs, human evolution, and foraminifera
- Course acted as an overview of paleontology for upper level geology majors and covered topics such as invertebrate classification, paleontology techniques, vertebrate evolution, micropaleontology, and the history of paleontological study

Stratigraphy

- Instructed 10-20 students in weekly laboratory sessions
- Graded all laboratory assignments, quizzes, and exams
- Course acted as an overview of the history of stratigraphy, stratigraphic rules techniques, geologic mapping, and cross sections for upper level geology majors

- **University of North Carolina**

Prehistoric Life

- Instructed 10-20 students in weekly laboratory sessions
- Helped design laboratory assignments, quizzes, and exams
- Graded all laboratory assignments, quizzes, and exams
- Course acted as a basic introduction to principles of paleontology and the history of life on Earth for beginning students

AWARDS AND HONORS

- **Recipient of Outstanding Teaching Assistant Award**
University of Georgia, 2019

PROFESSIONAL ACHIEVEMENTS

- **Member of Texas A&M University Faculty Senate**
2022-Present