

Stacie Skwarcan

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Education

The University of Texas at Austin

Aug 2018 - present

Ph.D. Geological Sciences
Cumulative GPA: 3.696

University of Notre Dame

Aug 2013 - May 2018

B.A. Studio Art, concentration in Photography
Major GPA: 3.900, *cum laude*

B.S. Environmental Earth Sciences
Major GPA: 3.887, *cum laude*

Cumulative GPA: 3.753

Dean's List: Fall 2013, Spring 2015, Spring 2016, Fall 2016, Spring 2017, Fall 2017, Spring 2018

Experience

Non-Vertebrate Paleontology Laboratory

Graduate Research Assistant

Jan 2020 - Aug 2020

Took and processed stack photography images of invertebrate fossils collected in Texas currently housed at the Non-Vertebrate Paleontology Collections at The University of Texas at Austin. Updated specimen information and attached images to specimen records in Specify database. Part of the Digitization TCN: Collaborative Research: The Cretaceous World: Digitizing Fossils to Reconstruct Evolving Ecosystems in the Western Interior Seaway NSF Grant.

Billie L. Turner Plant Resources Center

Volunteer

Oct 2019 - present

Aid in the accessioning process of a collection of aquatic plants donated by City of Austin (500+ specimens) into University of Texas Herbarium by adding identification and collection information to database. Curate bagged plant material, including conifer and yucca fruit collections. Curate and aid in the accessioning process of yucca fruit and leaf material from the southwest United States and Mexico.

Vertebrate Paleontology Laboratory

Volunteer

Oct 2019 - Dec 2019

Began learning to prepare fossil specimens through work on an Aetosaur osteoderm from Otis Chalk, Texas.

PaleoTexas

Graduate Research Assistant

Aug 2019 - Dec 2019

Compiled current literature on paleoclimate, paleoecology, and archaeology for the Edwards Plateau in Central Texas over the past 20,000 years. Extracted data from these publications to be included in database. Created visualizations of the temporal and spatial extent of this data using ArcGIS and MATLAB. Part of the Planet Texas 2050 Bridging Barriers Initiative at The University of Texas at Austin.

Indiana Dinosaur Museum

Field Assistant

Summer 2019 - 2021

Trained to locate, pedestal, cast, and map sauropod bones at a Jurassic quarry site in south-central Montana run by Indiana Dinosaur Museum owner Mark Turner.

Sustaining a Planet (UGS 303; Fall 2018, Fall 2021): reviewed lecture concepts and facilitated discussions on sustainability and environmental issues with three sections of 17 students. Life Through Time (GEO 405; Spring 2019): ran labs on basic paleontology with two sections of 15 students; organized weekly lab materials. Physical Geology (GEO 401; Fall 2020): ran labs on basic geologic concepts and rock and mineral identification with three sections of 7 students. Introduction to Geology (GEO 303; Spring 2021): ran hybrid labs (synchronous in-person and virtual instruction) on rock and mineral specimen identification as well as basic earth science concepts with three sections of 10 students.

Identified, acquired GPS coordinates, and measured height and circumference of trees and shrubs around campus. Pressed and organized collected specimens of these trees and shrubs. Catalogued, identified, and updated taxonomic information for fossil specimens, including material from Burgess Shale and Mazon Creek. Created workflow for imaging herbarium specimens and adding these images to the Consortium of Midwest Herbaria database using iDigBio.

Collected and processed data using Bruker micrOTOF II, Bruker Autoflex III, and Waters ACQUITY UPLC Systems. Calibrated these instruments daily. Utilized Empower and Bruker software. Prepared samples for analysis and batches of mobile phase solutions. Created inventory of all laboratory chemicals and their locations in the lab. Updated computer and instrument software. Assisted in instrument troubleshooting and repair.

Research

Complete approximately 1 meter x 0.75 meter x 1 meter controlled excavation in 5-cm intervals of Pleistocene debris cone located in cave on Phillips Ranch in Crockett County, Texas. Collect bulk sediment sample from each 5-cm layer for future biomarker analyses. Wash excavated matrix using nested coarse- and fine-mesh screens. Pick fossil material from washed matrix under stereoscope for future identification.

Performed monthly visits to four Central Texas caves (Inner Space Cavern, Natural Bridge Caverns, Westcave, and Cave Without a Name) to collect water samples for stable isotope and trace element analyses; collect and replace glass plates on stalagmite sites; and measure temperature, carbon dioxide, and radon concentration throughout cave.

Used APEX I and APEX II Quazar single crystal X-ray diffractometers as well as Varian INOVA-500 NMR to characterize novel, laboratory-synthesized Actinide materials. Prepared reaction mixtures to synthesize these materials.

Training

Attended sessions presented by The Faculty Innovation Center on the role of teaching assistants, engaging students in online teaching environments, trauma-informed pedagogy, and writing teaching and DEI statements.

Course through The University of Texas at Austin. Attended weekly meetings designed to give teaching assistants the tools necessary to effectively facilitate discussions and handle issues that may arise in the classroom.

Volunteer Work

Indiana 4-H

Project Superintendent

Feb 2014 - July 2019

Poultry Assistant Superintendent

Planned and ran county-wide informational meetings; created educational materials for use at these meetings; managed all email communication; set up, ran, and tore down poultry show during fair week.

Photography Superintendent

Planned and ran county-wide informational meetings and interactive workshops. Checked in projects, ran judging, set up project exhibit, and monitored project release during fair week.

Soil and Water Conservation Superintendent

Planned and ran county-wide informational meetings. Checked in projects, ran judging, and set up project exhibit for fair week.

Science Olympiad

Event Coach

Aug 2009 - May 2020

Taught small groups of students in grades 6 - 8 from middle schools in South Bend, Indiana, and Austin, Texas, various topics in science, including geology (fossils, rocks and minerals), entomology, ecology, climate science, invasive species, and simple physics. Wrote and administered weekly assessments to test student knowledge of these topics.

Outreach

Science Y'all Guest Writer

June 2020

Co-wrote post with Natasha Sekhon ("At the Intersection of Art, Science, and Community") for University of Texas at Austin graduate student geosciences blog. Discussed the use of art in science communication with emphasis on interview conducted with Cosmo Sheldrake, a musical artist whose work focuses on natural history concepts and human impact on the environment.

Austin Cave Festival

Feb 2019, 2020

Talked to public about speleothems and cave research being done at the Jackson School of Geosciences. Answered related questions.

Austin Paleontological Society Fossil Fest

Nov 2019

Talked to public about Cretaceous and Quaternary vertebrate fossils found in Texas.

Publications

Published Abstracts

Skwarcan, S. Synthesis of Paleoclimate, Paleoeological, and Archaeological Data for Central Texas over the Last 20,000 Years. 123rd Annual Meeting of the Texas Academy of Science Official Program, Stephen F. Austin State University, 28 - 29 February 2020; 029.225, p. 102.

Honors & Awards

Eugene M. Riley Prize in Photography	2018
Fr. Anthony J. Lauck Award in Studio Art	2017
Bejamin A. Gilman International Scholarship	2015

Conferences Attended

Jackson School of Geosciences Student Research Symposium	Feb 2020
Texas Academy of Science Annual Meeting	Feb 2020

Professional Affiliations

Association of Applied Paleontological Sciences	2020 - present
Geological Society of America	2020 - present
Society for the Preservation of Natural History Collections	2020 - present
Texas Academy of Science	2019 - present
Association of Environmental and Engineering Geologists	2018 - present
Tau Beta Pi	2017 - present

Grants

UROP Academic Year Grant (\$1400)	Mar 2018
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