



# SOUTH DAKOTA MINES

An engineering, science and technology university

## Department of Geology and Geological Engineering GGE Research Highlights...

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**Please visit our research page to learn more about your future graduate advisor's research!**

GGE Research Highlights...

PhD student Brooke Long-Fox's research focuses on morphology and phylogeny of chemosymbiotic lucinid bivalves.

Under the expertise of Dr. Laurie Anderson, Brooke has collaborated with researchers at Clemson University on microbiology and the University of Tennessee – Knoxville on geochemistry. Data collection includes field work in Florida and Bahamas, and visits to museums including those at the University of Florida, Yale, and the Smithsonian. This research has led us to producing some of the first molecular phylogenies of lucinids using the DNA barcoding gene COI.

Brooke's research interests include:

- Morphologic mismatch between life and death assemblages in relation to anthropogenic impact
- Comparative studies of morphologic vs. molecular phylogenies
- Phylomorphospace studies which combine morphology as cartesian coordinates (geometric morphometrics) with a molecular phylogeny
- Population-level differences of morphology, phylogeny (evolutionary relationships), and endosymbiont diversity

Click on the following link to learn more about our department's diverse research areas:

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