

Sarah W. Keenan

Sarah W. Keenan, Ph.D. is an Assistant Professor in the Department of Geology and Geological Engineering (2018) and the curator of Recent Vertebrates at the South Dakota School of Mines and Technology. She received her B.Sc. in Geoscience and Environmental Biology from the University of St. Andrews in Scotland in 2008. Dr. Keenan received an M.S. in Paleobiology from the University of Bristol in England in 2009 where she researched the geochemistry of dinosaur bones from Montana. She received a Ph.D. in Geology from the University of Tennessee in 2014. Her dissertation integrated microbial ecology and bone geochemistry to explore the biotic and abiotic processes involved in the diagenesis of American alligator bone postmortem.

Dr. Keenan then continued as a postdoctoral researcher at Saint Louis University in the Department of Biology (2014-2016), where she conducted research related to turtle physiology and bone geochemistry. She then moved back to Knoxville and the Smoky Mountains for a second postdoctoral appointment at the University of Tennessee in the Department of Biosystems Engineering and Soil Science. Here, her research focused on vertebrate decomposition “hotspots” and biogeochemical cycling within soils.

The overall goal of Dr. Keenan’s research is to explore the biological and geochemical processes responsible for bone preservation (or dissolution) in modern systems to better understand our vertebrate fossil record. Her teaching includes graduate and undergraduate-level courses on low-temperature geochemistry, quantitative methods and tools in geology and paleontology, and geomicrobiology.