

Geology – Spring 2005

Have you stopped by the Dept of Geology lately? Or visited a geology class parked at an outcrop? Maybe you've seen a Temple stormwater sampler out in the watershed? Things are busy here as usual. If it's been a while maybe you haven't heard that the students formed a Geological Society on campus. More news...Andy Anderson is retiring in May. We are interviewing to fill the structural geology position that has been vacant. Alumni Mike Ketterer has been pinch hitting every other year to teach the structure course, and we were very lucky to have him. Recent graduate students have worked on projects such as Hawaii volcano videos, dinosaur provenances, PACs in England, magnetic soils in Tennessee, and, here in Pennsylvania on stormwater monitoring and sinkholes. Find out what your favorite profs have been up to at our web site: www.temple.edu/geology. Also, we are starting an electronic newsletter. Send your email address to ltoran@temple.edu to get on the mailing list. Or you can phone Shelah Cox (formerly Burgess) in the Dept office to update your contact information: 215 204 8227.

The geology students have formed a Geological Society of Temple University and are active in field trips, service projects, and the annual jewelry sale. Several students have participated in undergraduate research projects, such as stormwater management on Pennypack Creek and dinosaur bone beds in South Dakota. They have given presentations at NE GSA and campus research forums.

The fall 2004 field trip was to the Adirondacks, where students and faculty visited Whiteface Mt intrusion and a wollastonite mine.



Research Highlight



Twins Celina (l) and Marina (r) Suarez conducting field research at Crystal Geyser Quarry near Arches National Park in Utah. Their research is focused in interpreting the geologic history of a unique dinosaur bone bed at the base of the early Cretaceous Cedar Mountain Formation. They are combining traditional methods of taphonomic analysis (sedimentology, stratigraphy, bone modification, orientation, and sorting) with a new geochemical analysis technique that uses the rare earth element signatures preserved in the fossil bone. Fossils of Therizinosaurus are found in three beds in the CGDQ. Therizinosaurus are a rare type of bipedal theropod dinosaur with very large, raptor-like claws but small herbivorous teeth, previously found mainly in China. Description of the new dinosaur from this site will soon appear in Nature. Bones from the three beds have significantly different REE patterns, indicating that they were fossilized at three different times or locations. REE patterns in fossils from two of the beds have variable signatures, suggesting that the bones have been fossilized elsewhere and were then eroded and transported to their present location.