

Mammals, Minerals, and Microorganisms: What's new in research at Florissant Fossil Beds NM

by *Melissa Barton, Museum Aide*

Park Paleontologist Herbert Meyer has been hard at work editing an upcoming Geological Society of America Special Paper on Florissant paleontology. Co-edited by Dena Smith, curator of invertebrate paleontology at the University of Colorado Museum, the volume will contain about 15 papers on research conducted at Florissant over the past several years. Three of the papers are co-authored by former paleontology interns, and several are co-authored by Meyer.

One key paper is about Florissant mammals, authored by Karen Lloyd, Marie Worley-Georg, and Jaelyn Eberle of the University of Colorado (CU). This paper will discuss the fossils found by Worley in 2003 when she interned at the park, as well as specimens collected last summer, including

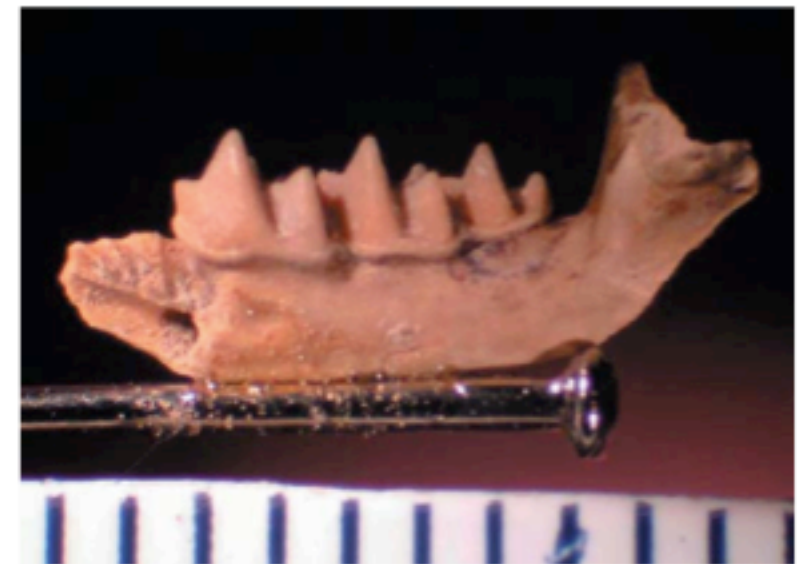
a tooth from an extinct camel relative. A related project by 2005 intern Melissa Barton analyzed oxygen isotope ratios in Eocene mammal teeth, including specimens from Florissant. Oxygen isotopes can provide information about paleorelief and elevation of the Rocky Mountains, an ongoing controversy among geologists.

Other highlights include papers on the history of paleontology at the fossil beds; plant-insect interactions in the fossil record; and the mineralogy and geochemistry of fossil wood. The volume will also contain a paper authored by Jen Young, George Mustoe, and Meyer, which analyzes conservation techniques that could be used to protect the park's fossil stumps from weather damage. Visitor entrance fees via the National Park Service's Fee Demo program supported this project.

MaryEllen Benson, a graduate student at CU, has been conducting research on Florissant diatoms, a type of microscopic algae, for her doctoral dissertation. Research over the past few years has suggested that diatoms play an important role in the excellent preservation of some fossils, but until now there has been little study of the diatoms themselves. Benson, who is advised by Dena Smith and Sarah Spaulding, is

identifying and describing the diatoms. This major long-term project is also funded by the Fee Demo program.

Several other scientific studies are currently in progress at Florissant as well. The GSA Special Volume on Florissant is currently expected to publish in 2007.



Fossil jaw of an ancient member of the shrew family.