

CALIFORNIA MIOCENE DREAMING

By Michael Hutchins

During my recent trip to attend the Wildlife Society's Western Section Meeting in Visalia, CA, I spent an extra day collecting in Miocene marine formations near Ant Hill in Bakersfield, CA. As I often do when traveling around the country for work, I had contacted the local rock club in Visalia and asked if anyone wanted to go fossil hunting with me. Sure enough, there were takers.

I was lucky enough to make contact with Rob Milner, who is the Tule Gem and Mineral Society's field trip coordinator. Rob, who works for the Tulare County Agricultural Commissioner's Office, picked me up bright and early at 8:00 AM on Saturday, January 30th and it was cloudy and sprinkling as we headed south, eventually finding our way onto Highway 99, the Golden State Parkway. The Parkway winds its way through the San Joaquin Valley from Sacramento to Los Angeles, a major agricultural and oil producing area. Our plans were to meet around 20-25 other folks on this official club trip.

We drove past vast orchards, vineyards, oil fields, and their accompanying industrial footprints. The degree of development is somewhat unfortunate, as this region was once dominated by grasslands and lakes, inhabited by huge flocks of waterfowl, and the now endangered kit foxes, kangaroo rats, and a wide variety of other unique wildlife. But, many of the lakes have now been filled and the grasslands transformed into agricultural fields to feed a growing human population. Only islands of remnant natural vegetation exist to harbor the dwindling wildlife populations. There is some hope, however, as there are a number of restoration projects underway that could help to re-establish at least some of the region's native habitats and species.

After more than an hour's drive, we pulled off the highway in northeast Bakersfield. The clouds had parted and the sun was now shining brightly. The rugged surrounding grassy hills, many of them scarred by erosion, were coming into view. We drove a short distance to an entrance to a parking lot and Rob stopped to put up a sign to direct other club members to the site. As we pulled into the lot, we noticed that a couple of other vehicles had already arrived. Rob introduced me to a small group of club members, one of who was named Darwin Greenfield. I shook his hand and told him that he had a perfect name for a fossil collector. There was also Wes Imoto, a Bank of America Vice President and Tom Zikratch, an individual that used to work with Rob until he retired—all very congenial collecting partners. Rob gave me the tools he had brought for me, including a bucket, a screen, a pick and a shovel, and also had me sign a liability release.

As Rob had to stick around and wait for others to arrive, he told me to follow the group up the hill and start looking, which I eagerly did. Our small group of four trudged slowly up the hill, feeling the effects of a few months of winter inactivity and weighed down by all our gear. But, after ascending a few hundred feet in a quarter of a mile, we arrived at the collecting area. About one third to one half the way up the hill, there extended a continuous line of digging pits where many people had sought shark teeth and other fossils throughout the years. Rob later told me that this line extended for approximately two miles.

I had read about the famous Sharktooth Hill in the Bakersfield, CA area and was anxious to collect in the California Miocene. Many of the folks I met had collected at the famous Sharktooth Hill as children or as young adults. Unfortunately, the privately owned area has now been closed due to the risk of Valley Fever—a potentially serious fungal (mycotic) disease of the lungs spread via inhalation of airborne spores of the fungus *Coccidioidomycosis*. (<http://www.mayoclinic.com/health/valley-fever/DS00695/DSECTION=symptoms>). A majority of active Valley Fever cases resemble the flu, but many who are exposed exhibit absolutely no symptoms at all. In rare instances, however, Valley Fever can progress into a severe illness, manifesting itself in high fever, chills, fatigue, rapid weight loss, inflammation of the joints, meningitis, and pneumonia and, in some cases, even result in death. The risk is present throughout the valley, but not as prevalent during the spring when dust is kept under control by moist conditions. Fortunately, Ant Hill, which is a few miles away, has been kept open for public collecting. However, that may be at risk too, as the area could be targeted for residential housing development.



MGS member Michael Hutchins collecting on Ant Hill near Bakersfield, CA

After briefly exploring the options, Wes and I settled in a spot and started to dig and screen materials from the hillside. Others began to arrive and settle in at various sites as well. Though the teeth were few and far between, Wes and I began to discover several specimens. Eventually we determined that an orange-tinged layer of sediment was particularly productive, but, depending on the site, others were finding teeth and whale, dolphin, or seal bone both above and below this layer as well. The teeth we found had a beautiful brown patina, which is characteristic of this area. Wes found the largest tooth of the day—a two inch-long mako. I also discovered a one and a half-inch mako, as well as seven additional teeth. Rob believes I collected three different species of mako shark teeth, including *Isurus desori*, *I. (Carcharodon) hastalis* and *I. planus*. He also believes that the marine mammal tooth I found is from an extinct dolphin, family Eurhinodelphinidae, and a rarity in those deposits. In addition, Rob generously gave me a small cow shark tooth he unearthed in a nearby area.



Teeth collected by Michael Hutchins on his recent trip to Ant Hill near Bakersfield, CA. The largest tooth, a mako (second from the top) is about 1.5 inches long. At the bottom center is the tooth of the extinct dolphin.

Twelve to fifteen million years ago, most of Kern County, CA was covered by an ocean bay. The waters lapped against rolling hills that were eventually elevated to form the Sierra Nevada Mountains. Northeast of Bakersfield, where the contemporary Kern River flows out of the mountains, an ancient river emptied into the bay. The river deposited sediments including the remains of plants and animals into the bay. These materials, along with the plentiful remains of marine organisms, sank to the bottom and became fossilized. Geologic events pushed up the sediments, which subsequently eroded to form the rolling hills that include both Ant and Sharktooth Hill.



The rolling hills near Bakersfield, CA. Note the excavation line on the middle-left. These extend for nearly two miles.

Rob and I were the last ones off the hill. After the day's strenuous activities, we drove into Bakersfield and stopped for a quiet dinner. We were a bit dirty, however, and one passerby commented that we looked like "roughnecks" from the nearby oilfields. I responded "Not exactly" and we went on our way. Bakersfield is a tough town and it's probably good that the locals perceived us as people not to be messed with. I had a great time making new friends and hunting in the California Miocene. I would definitely go back again if I had the chance. In the meantime, I'll still be dreaming about my California experience—and particularly about the pleasant 60-degree weather. It was 24° F when I arrived at Baltimore-Washington Airport on the evening of January 31st and it took me about 20 minutes to scrape the ice and snow off my vehicle. At least I had a brief reprieve from our seemingly endless winter.