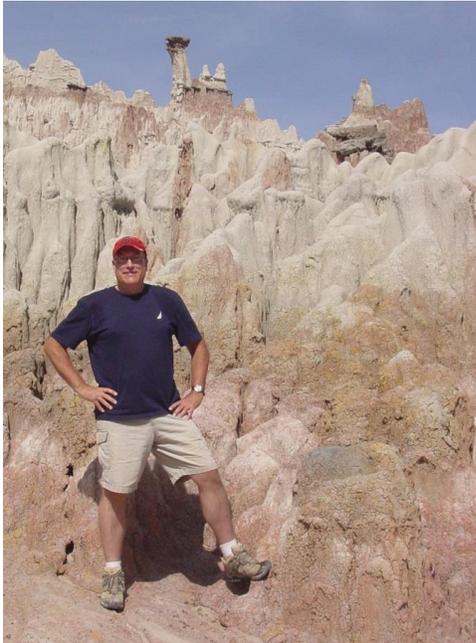


## Return to Wyoming 2011

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I have reported on my annual trips to Wyoming in previous *Rostrums* and this year is no exception. As has typically been the case, I met with several friends in Casper, WY from June 2-8, 2011 to attend a paleontology conference at Casper College's Tate Museum and to collect in the region. This year's conference was special, as it was not only the Tate Museum's annual conference, but also that of TerQua, a society for Tertiary and Quarternary paleontological studies. This renewed scientific society had its organizational meetings at the conference and all conference attendees, including myself, were made charter members of the organization.

During the conference proper, which lasted a day and a half, we listened to a wide variety of paleontological papers, ranging from evidence of stress and infection in Pleistocene mammoths and mastodons to the case for competition as a factor in the extinction of the short-faced bear, *Arctodus*, to the locomotor capabilities of the dire wolf from Rancho La Brea, California. Many of the presentations were excellent and contributed to my growing knowledge of paleontology.

As part of the conference, we also took several field trips.

The first stop was a 10,000-acre badlands site near Douglas, WY, where I have been allowed to hunt with Dr. Kent Sundell, curator at the Tate Museum, who has leased the area for both commercial and scientific collecting for nearly two decades. A smaller group of us spent an additional two days at this site after the conference ended. These rapidly eroding badlands represent one of the best sites in North America to collect Early Oligocene mammal fossils, including oreodonts (*Miniochoerus* and *Merycoiododon* sp.), camels (*Poebrotherium wilsoni*), horses (*Mesohippus bairdii*), early rhinoceroses (*Hyracodon* and *Subhyracodon* sp.), and a wide variety of other species from the White River Formation. The Orellan and Chadronian land mammals from 33.3-38 million years ago (mya) are both present. This year's trip was no exception. I was able to recover a number of specimens of interest, including several jaws with teeth (mostly oreodont), partial oreodont and rabbit skulls (*Paleolagus* SP.) a titanothere (*Megacerops* sp.) ankle bone (from the Chadronian age (38-33.9 mya) and a variety of smaller fossils, including coprolites, insect cocoons, dung beetle balls, gastropods, and turtle eggs. Some of the other finds by our group members included an entire oreodont skeleton minus the head, a nearly complete skeleton and skull of a small, Three Toed Horse, *Mesohippus bairdii*, a rhinoceros jaw of *Hyracodon nebraskensis* with five teeth, a nice tortoise, *Stelemys*, and a complete skull of *Leptictis*, an ancient insectivore.

We spent one day hiking through another interesting site that lies around 40 miles directly west of Casper, affectionately known as Hell's Half Acre. This early Eocene/Paleocene site is characterized by spectacular rock formations that have eroded out of the Wyoming plains. Perhaps best known from many scenes in the science fiction movie *Starship Troopers*, this rugged, rattlesnake-infested area definitely had an "other-worldly" look. The area has been important to humans for millennia, and besides containing fossils, is also full of important archaeological treasures, including a Native American bison kill site. Entrance to the site, which is owned by the county, is restricted and a local archaeologist accompanied us to protect the site and record and confiscate any human artifacts found. Indeed, one participant found a complete spear point and we were able to observe several middens full of bison bones. The most interesting fossil find of the day was a lower jaw and several teeth of a *Coryphodon*. These extinct animals, commonly called pantodonts, were members of the world's first group of large browsing mammals. The biggest mammal of its time, *Coryphodon* stood approximately 1 meter

(3.28 feet) high at the shoulder and was approximately 2.25 meters (7.38 feet) in length. *Coryphodons* are not related to modern day hippos although they were anatomically similar and were also semi-aquatic, likely living in or around swamps or marshes.

During the conference, we also had an opportunity to travel by bus to a couple of interesting sites in Nebraska. Our first stop was Agate Fossil Beds National Monument, an important Miocene mammal mortality site where hundreds of ancient animals died around a few shallow water holes. All of the fossils found at the site are from species now extinct and include creatures such as *Stenomylus*, two foot tall gazelle camels; *Parahippus*, a three toed ancestor of the modern horse; the bear dog, *Daphoenodon*; the laterally horned rhinoceros, *Menoceras*; a large entelodont relative of pigs distinguished by huge, crushing jaws, a *Daeodon*; and a huge horse-like mammal with a long neck, *Moropus*. Among the area's fossils were strange spiral structures, known as *Daemonelixes* or Devil's corkscrews. The function of these bizarre trace fossils was unknown until examples were found with the builders still inside them. Such structures were the protective burrows of an extinct beaver, *Paleocaster*, that lived in colonies like prairie dogs on the high plains of ancient Nebraska.



Our second and final stop was at historic Fort Robinson, Nebraska, site of an important U.S. Army base during the wars for the western United States. After the Civil War, it was the expressed intent of the Union Army to open up and make safe the Indian lands for settlers. In 1885, the Buffalo soldiers, an all black unit, was stationed at Fort Robinson, a center of activity during the Sioux Wars from 1876-1877. Crazy Horse and his band of warriors surrendered there and in May of 1877 he was fatally wounded while allegedly resisting imprisonment. A plaque marks the place of his death. There is a small natural history museum containing examples of fossils from the surrounding region. One exhibit is an excavation of two large mammoths with their tusks locked together in death. A reenactment of the event has been painted on a large floor-to-ceiling mural.

It was another great trip and I hope to make it back next year.

(Photo of author at Hell's Half Acre by Steve Olson. Photo of mural by author.)