

HAGERMAN FOSSIL BEDS NATIONAL MONUMENT

The
FOSSIL



RECORD

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VISITOR INFORMATION

Monument staff is gearing up for another summer season! Join us for the 12th annual Fossil Days Celebration, May 29 and 30!

Summer hours at the Visitor Center starting May 27th are 9:00 am to 5:00 pm seven days a week.

FOSSIL DAYS 1999 -

Join the celebration! Lots of games, food, fun and tours of the excavation site. The National Park Service is offering **free** bus tours, provided by the Hagerman Fossil Council, to the Smithsonian Horse Quarry on a first come, first served basis. Tours start at the Amalgamated Sugar L.L.C. Beet Dump at the top of Bell Rapids Grade at the intersection of 5400 North and 400 East. Visitors should



drive to that location arriving 10-20 minutes before the tours begin. Tours will last approximately one hour and fifteen minutes and will begin promptly on Saturday: 1:30, 3:00, and 4:30 p.m.; Sunday: 9:00, 10:30 a.m., noon, 1:30, 3:00, and 4:30 p.m. Stop in the Visitor Center for directions to the parking area and to view our slide program.

RANGER PATROL - The Fossil Beds received six surplus radios from Whitman Mission National Historic Site to allow our staff better communication opportunities while in the field. Thank you Whitman Mission!

Vandals knocked down a horse trailer parking sign at the Oregon Trail parking lot. Portable toilets have also been overturned, making them temporarily unusable until they are cleaned. Repair, cleaning and replacement costs come directly from our operational budget and add up to hundreds of dollars.

Please report any vandalism observed to a park ranger on patrol or by calling 837-4793. The county sheriff's department may also be able to assist by calling the Southern Idaho Regional Communications Center at 324-1911. Be sure to give your exact location and provide your name and

what you have observed. Thank you for supporting your Monument.

A new trail map and guide is now available at our Visitor Center and many other centers throughout Idaho. It provides clear directions to the



trailheads, trail etiquette, and trail lengths and elevation changes. The horse quarry parking area will provide trailhead parking when the Grandview Trail is completed. A replacement wayside panel offering information about the Horse Quarry is on order and

will be installed in the parking area. Please remember that visitors are only allowed in the quarry during a Park Ranger-led tour.

RESOURCE MANAGEMENT

MORE COTTONWOOD TREES PLANTED - The horticulture teacher at Hagerman Middle School, Jeff Miller, volunteered his time to collect more black cottonwood cuttings for the Monument. The cuttings were

soaked and treated with a growth hormone to stimulate rooting. Jeff worked with park staff to plant almost fifty trees in the River Trail grove. Other previously planted trees continue to grow.

CANADA GEESE - Another nesting box is being used this spring for the first time. Goslings should be fledgling soon.

TRAILS

COOPERATIVE AGREEMENT - The Bureau of Land Management (BLM) and the National Park Service have developed a cooperative agreement for a Regional Trail system. The existing trails on the Monument will tie into a proposed system that may one day provide 40 miles of visitor enjoyment. Funding will come from grants and volunteers. Each of the following groups has agreed to build one mile of new trail: the High Desert Backcountry Horsemen and two mountain bike groups, the Southern Idaho Fat Tire Association, and the Screaming Eagles.

Truth, and goodness, and beauty, are but different faces of the same All. Beauty in nature is not ultimate. It is the herald of inward and eternal beauty...it must stand as a part and not yet as the last or highest expression of the final cause of Nature.
Ralph Waldo Emerson

CRITTER CORNER

Hagerman: Where the Deer and the Antilocaprids Played

By Dr. Greg McDonald,
Monument Paleontologist

Perhaps no other group of mammals can be considered as more quintessentially North American than our pronghorn antelope. Although popularly called antelopes, pronghorns are more properly termed antilocaprids. They are not closely related to the true antelopes of the Old World which are close relatives of cows, sheep and goats. The antilocaprids are known only from North America and unlike many other groups that originated here such as the horses and camels, the antilocaprids never dispersed from their continent of origin.

Although there is only a single living representative of the group today,



Skull of *Antilocapra americana*.

Antilocapra americana, the pronghorns were a diverse group in the past. Antilocaprids first appear in the middle Miocene and have been a common member of the North American fauna ever since. North American antilocaprids have prominent horns which superficially look like those of the bovids or cow family which also includes sheep, goats and African antelopes. Like these other animals there is a bony core which projects from the top of the skull covered with an outer covering of horn. The major difference is that in antilocaprids this outer covering of horn is shed each year and regrown while in the bovids the outer horn continually grows throughout the life of the animal and is never shed. As with members of the cow family, the horns are present in males and females and like the cows they are generally larger and better developed in males than in females.

Another feature of some fossil antilocaprids that distinguishes them from bovids is that the pronghorn might be divided so that in some forms there was a pair of horns on each side of the skull and in others three horns. This certainly makes it easy to tell the different types of pronghorns apart. While the living pronghorn lacks any branches to the bony core of the horn, they may have

been present in its ancestors since the outer covering of horn has a branch on its front side.

During the excavation at the Horse Quarry by the Smithsonian Institution, the remains of two individuals of a small antelope were found. One set of remains was from an adult and another from a juvenile. Unfortunately neither were complete skeletons. The adult consisted of the back part of the skull and the first five neck vertebrae and the juvenile an immature skull and hind leg. The adult skull preserved the horn cores and showed that like many other fossil antilocaprids this animal had two horns. The larger of the two horns was in front and positioned directly above the eye and the smaller one sat just behind it. In other antilocaprids the front horn often tilted forward and the back horns tilted backwards but in the Hagerman specimen both horn cores stick straight up from the skull.

Because of the distinctive differences in the horn and other features of the skull, C.L. Gazin in 1935, described this new antilocaprid as *Ceratomeryx prenticei*. Cerato is Greek for horn and meryx is a Greek word used for ruminants, a group of mammals that includes cows, bison, African antelopes and their relatives. The species name is for Sidney Prentice, a



Side and top view of antilocaprid skull.

scientific illustrator at the Smithsonian and also the illustrator for the paper in which the new animal was described.

Ceratomeryx was a small animal about half the size of the living pronghorn. The living North American pronghorn is well adapted to open grassland habitat and is a fast runner, having been clocked at 86.5 km/hour (54 miles/hour). Byers (1998) suggested that the speed of the living pronghorn evolved to escape fast predators such as the extinct North American cheetah. While *Ceratomeryx* may not have been as fast as its living relative, its primary defense to escape predators probably

also involved running since its smaller size would have made it vulnerable to a wide variety of predators. Another indication of its mobility is the preserved leg bones which are similar to those in its living relative.

Ceratomeryx is not a common member of the Hagerman fauna. Since its initial discovery only a few additional isolated teeth and bones have been found. In addition to its rarity at Hagerman it has not yet been found any place else. Since it is known from such a small number of specimens it simply may have gone unrecognized in other faunas. The lack of material makes it difficult to say much about the animal, but it probably shared the grassland habitats with the Hagerman Horse.

FURTHER READING

Byers, J.A. 1998. American Pronghorn: Social Adaptations and Ghosts of Predators Past. University of Chicago Press, Chicago.

Gazin, C.L. 1935. A new antilocaprid from the Upper Pliocene of Idaho. *Journal of Paleontology* 9 (5):390-393.

CAMA

See page 7 for information!

PLIOCENE

Calendar of Events

Tours are scheduled throughout the summer on Saturdays. Participants should plan to meet at the Visitor Center in the town of Hagerman prior to the actual tour for information and directions, unless otherwise noted. Dress properly and be prepared for variable weather. Participants are required to drive their own vehicles. Call the National Park Service for more information **(208) 837-4793**.

May 22 **A Day with Native American Idaho** **2:00 pm**
Song, dance and storytelling from the peoples of the Nez Perce, Shoshone-Bannock, Shoshone-Paiute, and Couer D'Lane tribes.
At Malad Gorge State Park (208) 837-4505.

May 29 **Fossil Days Celebration Begins**
Parade, food, music, games, fun!
Free bus tours of the Smithsonian Horse Quarry at **1:30, 3:00, and 4:30 pm** on a first-come, first-served basis. Meet at the Amalgamated Sugar L.L.C. Beet Dump. Stop in the Visitor Center for directions.

May 30 **Fossil Days Celebration Continues**
Free bus tours of the Smithsonian Horse Quarry at **9:00, 10:30 am, noon, 1:30, 3:00, and 4:30 pm** on a first-come, first-served basis. Meet at the Amalgamated Sugar L.L.C. Beet Dump. Stop in the Visitor Center for directions. Food, music, games, fun!

June 5 **National Trails Day** **9:00 am**
Join rangers from Hagerman Fossil Beds on a Monumental Trek. Hikers, mountain bike riders, and horseback riders are welcome! Experience what the westward journey might have been like on the Emigrant Trail by hiking (from the Snake River Overlook) or horseback riding (from the Oregon Trail Overlook), or bike ride our network of trails beginning at the Rim Trail trailhead.

June 12

Wildflower Walk

9:30 am

Experience the flora of the sagebrush steppe and how these plants survive the desert. Participants will meet at the Visitor Center and then drive over to the Fossil Beds.

June 19

Mountain Bike Tour

9:00 am

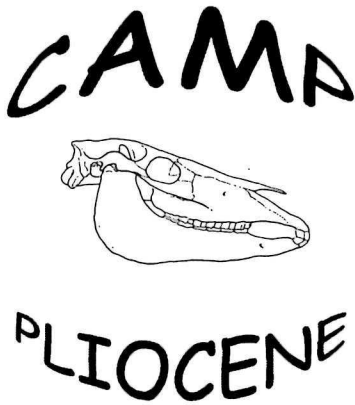
Join a park ranger for a scenic tour of the Monument. Participants will meet at the trailhead on 5600 North (inside the Monument). The ride will be approximately 8 miles long with a 600 foot elevation change. Be sure to bring plenty of water, sunscreen, and stamina. Call James Ward 837-4793 for more details.

June 26

Horse Quarry Tour

9:00 am

Participants will meet at the Visitor Center and travel to the Monument. After a short hike from the quarry parking area, visitors will be able to see fossils and where the previous two summer excavations have taken place.



Beginning in July, children in 4 - 6th grade will have an opportunity to visit **Camp Pliocene**. The day camp is for students to have fun learning about the sciences of paleontology, geology, and ecology. Activities will include a look at the quarry, studying animals and plants in the Monument and what our role should be as stewards of the land. Interested participants need to contact Judi Hart at 837-4793.