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# HAGERMAN FOSSIL BEDS NATIONAL MONUMENT

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# The FOSSIL RECORD

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FALL, 1998

VOLUME 7, NUMBER 4

## THE BARE BONES OF THIS ISSUE:

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**Printed on recycled paper.**

## VISITOR INFORMATION

Winter hours for the Visitor Center are Thursday through Sunday, 10:00 am until 4:00 pm. (unless otherwise noted). Brochures and copies of "The Fossil Record" may be picked up in front of the Visitor Center (which is located on Highway 30 across from the High School), or by calling (208) 837-4793.

**RANGER PATROL** - Please remember that all access on the Monument is limited to designated trails except in the Hunting and Fishing Zone along the Snake River. The public is asked to report any illegal activities observed in the park.



Hunting season has arrived, so Monument users should look out for each other. We want you to have a safe and enjoyable experience here. Part of the River Trail passes through the hunting zone, so visitors in this area of the Monument should be alert.

## NEW TRAIL OPENING -

The Emigrant Trail on the southern end of the Monument was officially opened on Saturday, August 22. This adds another three miles to the four opened earlier this year.

Construction of the trail was made possible by a generous grant from American Airlines in coordination with the National Park Foundation. Its purpose is to allow visitors to "Experience the Oregon Trail." A brochure provides quotes from emigrant journals which guide the visitor on this "Trail Into the Past." The brochure may be obtained at the trail head register box or by contacting the park office.

Chief Ranger Bob Willhite, who designed the trail and brochure, provided some opening remarks and acknowledged Kay Threlkeld from the National Trails Office in Salt Lake City, Utah. Mary Inman of Twin Falls, a living history presenter of Oregon Trail stories, also made the opening day hike along with others.

Mary also assisted with reviewing the brochure. Interested Oregon Trail buffs may catch one of her programs as "Grammaw Maudie Miller" at the Monument or other locations.

Hikers that day were surprised on the trail by "Captain Walker" of the U.S. Cavalry, portrayed by Bob Willhite. He rode his white Arabian stallion, Sir Vivor, with 1859 replica gear, and cautioned the hikers to be alert and warned them of the many dangers along the "trail."



Our thanks to Thousand Things and the Hagerman Buyway for their donation of beverages for the trail opening participants.

The trail starts across from the Snake River Overlook in an area where wagons camped to trade for salmon with the American Indians. The trail then leads up a canyon at a gradual grade for about two miles until a steep grade (ten percent), leads to the

top of the bluff. The trail ends at the Oregon Trail Overlook. The round trip is six miles unless you have a second vehicle.

To preserve the historical character, the trail is open only to hiking or horseback riding. Mountain bikes and other vehicles are prohibited. The footing is soft soil so it is also ideal for jogging, or for horses with no shoes. Horse trailers must park at the Oregon Trail Overlook and ride down the trail to the register box and start reading the brochure from that point to maintain the journal quotation sequence. Please be sure that your horses have been eating Certified Weed Free hay or cubes, 96 hours prior to the ride, as required by all of the National lands in Idaho.

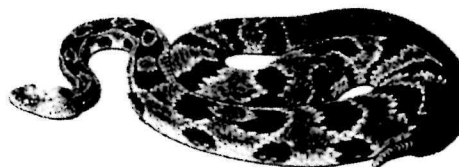
There are no toilet facilities or drinking water available along the way. The conditions are similar to how the emigrants found them. Wear sturdy hiking shoes and be prepared for rapid changes in the weather.

## RESOURCE MANAGEMENT

**Hunting Markers** - This summer employees installed about 100 more yellow fiberglass stakes to mark the upper limit for hunting on the

Monument. The location of the stakes were accurately established using a laser transit to determine the 50 foot elevation level above the high water mark of the Snake River. This zone was established by Congress to preserve hunting on Monument lands.

**Rattlesnakes** - Recreationists using the Snake River should be aware that rattlesnakes concentrate along the shoreline when the weather gets hot. Bob Willhite had close encounters with eleven rattlesnakes



Don't tread on me!

this summer. Nearly all were within 25 feet of water. Surprisingly many of the snakes did not rattle when the temperature was hot. Perhaps they react to the heat much like people and become sluggish. As the television show said, "Be careful out there."

## SPECIAL EXHIBIT

From September 15 to October 5, Hagerman Fossil Beds National Monument participated in Magic Valley Mall's "**The Mammals of the Ice Age**" exhibit. A comparative display, designed by the Fossil Beds, showed the differences between Pliocene and Pleistocene animals.

## MONUMENTAL SCIENCE

The second year of excavation at the Hagerman Horse Quarry continued with the removal of several more “Hagerman Horse” skulls and hundreds more of their bones. These fossils were carefully documented



and removed from the quarry and transported to the lab where preparators remove the bone from the sandstone.

Besides the quarry, field work also included surveying and documenting other fossil sites on the Monument. To protect these sites from vandalism, a laser transit is used to determine the locations so no visible reference is needed on the ground. Over fifty previously known sites were revisited this summer and many new fossils were recovered. Voles, frogs, snakes, shrews, fish and rabbits dominated the microfossil collection, while beavers, turtles, camels, llamas, and mastodonts were also found. Over all, it was an exciting and productive summer for paleontology on the Monument.

## CRITTER CORNER

### Cook's Grison

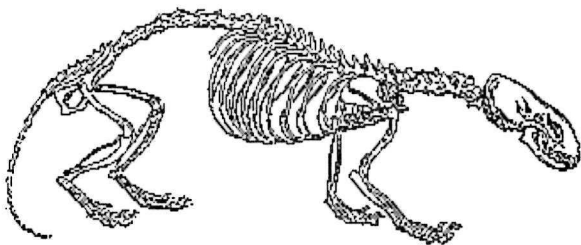
By Dr. H. Greg McDonald,  
Monument Paleontologist

Often when new animals and plants are given a scientific name, part of that name is based on the name of a person. The reasons for using a person's name are as varied as the personalities doing the descriptions. Often the reason is straightforward; it is an acknowledgment of a scientist's contributions to the study of a group of organisms, or to recognize the person who first discovered the specimen. Such a practice has always been associated with the description of new animals from Hagerman starting in 1933 when C.L. Gazin described a new species of fossil shrew, naming it *Blarina gidleyi* after James Gidley. Gidley was Gazin's predecessor at the Smithsonian and the first paleontologist to work at Hagerman.

The following year Gazin published the first paper on the carnivores of Hagerman Fossil Beds and described the mustelids (the carnivore group to which weasels, skunks, badgers and wolverines belong). Among the animals described was an animal closely related to the living South American grison (known as the huron

in Spanish and *furao* in Portuguese) which he named *Lutravus cooki*. Although later studies of this animal and its relatives resulted in a change in the first name, we now refer to this animal by the scientific name *Trigonictis cooki*.

Anyone who has spent any time reading about the history of paleontology at Hagerman Fossil Beds can probably guess the individual after whom the species was named, Elmer Cook. Elmer, born in 1887 in Glenwood, Utah came to Hagerman as a boy about 1901 and was a long time resident. In many of the early scientific papers written about the fossils of Hagerman, Elmer is credited as being instrumental in bringing the fossils in the Hagerman area to the attention of the scientific community. He worked for the Smithsonian during their excavations at the Hagerman Horse Quarry and ending in 1934, but continued to collect specimens for the Smithsonian. In recognition of his many contributions, Gazin named this newly discovered animal after him.



While most people may not know too many details about the anatomy of the family Mustelidae, most people are familiar with at least one of the group's obvious attributes - their well developed scent gland! While the development of a scent gland is carried to the extreme in skunks, a well developed scent gland is present in all members of the group including weasels, badgers and wolverines. Like all soft tissues, such as muscle or nerves, the scent glands are not preserved as fossils (for which paleontologists are grateful). Given the absence of this important feature, the question might be raised, "How do we know the fossil forms like those found at Hagerman are related to the living species in South America?" As is the case for many mammals, the patterns and shapes of the teeth are distinctive. Gazin based his original description of *Trigonictis cooki* on a lower jaw with two premolars and a molar preserved. The number of teeth in the jaw, their relative size to each other, and the shape of the cusps of the different teeth all provided clues as to the type of animal from which the jaw came. However, there were enough differences to also demonstrate that this was a new member of the group and that it deserved a new and distinctive name, thus providing an opportunity for Gazin to recognize Elmer Cook's contributions.

Members of the Mustelidae family are found around the world, including South America, where relatives of our fossil animal *Trigonicictis cooki* live today. One species does get as far north as southern Mexico, but is also found as far south as central Peru and southeastern Brazil.

Along with the grison there are other members of the Mustelidae that are found in South America, but like the grison, all are derived from North American ancestors, and many have ancestors known from fossil localities all over North America. It may be that the species of *Trigonicictis* found at Hagerman and elsewhere, is the direct ancestor of the living genus *Galictis* which includes the two species that are known as grisons.

The living grison is about the size of a mink and has a similar elongated body seen in weasels and minks. Since Gazin's original description, additional specimens of *Trigonicictis cooki* have been found, including partial skeletons which provide a better idea of the size and proportions of the animal. In addition to *Trigonicictis cooki*, there is a second larger species of *Trigonicictis* known from Hagerman. This second species was also described by Gazin as *Trigonicictis idahoensis* but it has since been determined that this is the same as an earlier described species now

known as *Trigonicictis macrodon* (meaning large tooth). At one time it was thought that the smaller species *cooki* might be the female form of the larger species *macrodon*. At first this seems possible since we know in modern weasels and their relatives, the males are noticeably larger than the females. However, many features of *Trigonicictis cooki* distinguish it from the larger species. While we might not expect to have two closely related species of carnivore living in one place, a close relative of the living grison, called the tayra is also found from southern Mexico into South America. The tayra is larger than the grison, and while the grison lives on the ground in more open country, the tayra is a forest animal and lives in trees.

Perhaps the two species of *Trigonicictis* found at Hagerman were similar with the smaller *cooki* being the open country form and the larger *macrodon* preferring forests. Based on our current knowledge of the geology and paleoecology at Hagerman, we know that both types of habitats were present in the area 3.5 million years ago. As more specimens of Cook's grison and the "large tooth" grison are found, we will have more information with which to work.

While 1998 marks the 10th Anniversary of the establishment of

Hagerman Fossil Beds as a National Monument, it is also the 69th anniversary of the first excavation of the Horse Quarry and the 64th anniversary of the description of *Trigonictis cooki*. Since there is no one word that can be used to describe all these anniversaries together perhaps we can roll them all together and call this our "Grison-tenial."

#### FURTHER READING

Bjork, P.R. 1970. The Carnivora of the Hagerman Local Fauna (Late Pliocene) of Southwestern Idaho. Transactions of the American Philosophical Society, new series, 60(7):54 pp.

Gazin, C.L. 1934. Upper Pliocene Mustelids from the Snake River Basin of Idaho. Journal of Mammalogy 15(2):137-149.

Ray, C.E., E. Anderson, and S.D. Webb. 1981. The Blancan Carnivore *Trigonictis* (Mammalia: Mustelidae) in the Eastern United States. Brimleyana No. 5:1-36.

# CELEBRATE

OUR  
10TH ANNIVERSARY  
WITH US!

JOIN US FOR AN OPEN  
HOUSE AND  
THE  
DEDICATION OF  
THE  
"ELMER COOK  
CLASSROOM"  
AT THE VISITOR  
CENTER,  
WEDNESDAY,  
NOVEMBER 18!  
1:00 - 5:00 pm



#### SCHOOL PROGRAMS

Teachers - Students - would you like to learn more about Hagerman Fossil Beds National Monument?

Throughout the 1998-99 school year, we are offering **free** programs to school groups either at your location or here at the Fossil Beds. Each class must make a reservation and group size is limited. For more information, please call Judi Hart at the National Park Service - **837-4793**.

#### MONUMENT RIDDLE

What weighs over 400 pounds and was found in the Monument? No, it is not a giant ground sloth, nor a mastodon...it's the trash that was picked up on our **Fourth Annual Monument Clean-Up!** We would like to thank Rick and his son Kevin from Mountain Home Air Force Base and park staff for their efforts in maintaining a clean environment. Plans for our Fifth Annual Clean-up are underway. We hope to coordinate this event with Earth Day (April 22) celebrations. Look for more information next year.