



The Fossil Record

Monumental Mastodon Fossil Find!

Discovery of a mastodon tusk on BLM property near the Hagerman Fossil Beds National Monument has renewed interest in what Phil Gensler, park paleontologist, considers an underappreciated Idaho treasure. "We uncover 3,000 to 5,000 fossils here every year," he said. "This is the richest fossil site in the world for its time period, and people hardly ever come out here."

Best known for the Hagerman Horse, Idaho's state fossil, the Fossil Beds have yielded specimens of Pliocene Epoch animals from turtles to saber-tooth cats. Mastodons are prehistoric relatives of modern elephants. Discovery of a complete mastodon skeleton would justify "a major dig," and could provide new scientific insights.

There are different types of mastodons. This fossil may be a *Gomphotherium* that's been found in Arizona, Nevada, and Southern California, but never in Idaho. Finding a complete *Gomphotherium* skeleton would give scientists new insights on their range and appearance.

To the average person, the tusk looks like a partially exposed layer of rock. To Gensler, who unearths thousands of fossils a year and all but breathes prehistoric bones, it's a rare find. "This is the largest piece I've found," he said, gesturing to indicate a tusk several feet long. "Usually what we find are little pieces. Look at this." He picks up an inch-long fragment and cups it in his hand. "This isn't tusk. This is bone. That means that there's a chance there's more here."



The bluffs overlooking the Snake River didn't exist during the Pliocene Epoch, 2 million to 5 million years ago. The area then was a flat river delta leading to prehistoric Lake Idaho. Lush from receiving twice southern Idaho's current annual rainfall, the delta teemed with animals from prehistoric rodents to waterfowl to mastodons.

Gensler and his co-workers plan to begin excavating the tusk soon. First, they'll dig around the area. When the fossil is exposed, they'll brush away as much dirt as possible and apply special glue to keep the brittle material from breaking into small pieces. Then they'll encase it with plaster and strips of burlap. By then the whole thing will weigh several hundred pounds.

After the plaster dries, they'll begin the unenviable task of carrying it down the face of the brushy, snake-infested bluff to a truck that will carry the fossil to the lab. Removing the bones from the plaster, cleaning them, and gluing them together with anatomical accuracy could take decades.



Fossil Beds Visitor Center

The Visitor Center is located at 221 North State Street in Hagerman, Idaho. Come view our improved DVD show on our big screen, enjoy our fossil exhibits, Minidoka Internment National Monument exhibit, and stop by the Natural History Association bookstore. Entering the Visitor Center or Monument is free. Winter hours are Thursday - Monday 9 a.m. - 5 p.m.; closed Tuesday and Wednesday. For more information visit our website: www.nps.gov/hafo or call (208) 837-4793 x5224.



Meet More of Our Team



Mary Carpenter poses with the Hagerman Horse and a Sabertooth Cat

Mary Carpenter was born and raised in central Wisconsin. She received an Associate Degree in Graphic Arts. After several years as a summer Earthwatch volunteer digging mammoths at the Hot Springs Mammoth Site in Hot Springs, SD, she moved to Flagstaff, AZ. She attended Northern Arizona University (NAU), receiving a B.A. in Anthropology (minor Geology), and a M.S. in Quaternary Sciences (paleontology). She began her job as Fossil Preparator with Hagerman Fossil Beds NM (HAFO) August 2004.

Her work at HAFO involves a variety of tasks. Fossil preparation is her primary job but she also assists with collections management (such as organization and curation), field work (fossil survey, excavation, and collection), fossil identifications, and some public outreach. She thoroughly enjoys all aspects of her work. Fossil preparation work is personally satisfying to her and also scientifically important. The species diversification at HAFO includes mice to mastodons as well as the Hagerman horse (*Equus simplicidens*).

HAFO has fossils collected from the monument which have yet to be prepared and identified. There is likely enough work to keep her busy for quite a while!



Craig Christensen, Mark Hagge, and Josh Samuels 2004 Field Team

The 2004 field paleo crew team was instrumental in visiting 110 fossil localities within the monument and curating over 3000 fossils.

Craig Christensen is a student at the University of Montana working towards his bachelor degree in geology/anthropology. Craig is interested in fossil vertebrates and has been working several fossil localities in western MT. He works as a curator at the Paleontology Museum at the University of Montana. 2004 was the first year Craig worked at Hagerman Fossil Beds. While picking sediments from a locality within the monument, Craig recovered two spores belonging to an aquatic plant called "stonewort". This was the first evidence of this plant fossil found here.

Mark Hagge is a student at the University of Wisconsin - Madison working towards a bachelor degree in geology. Mark is interested in Hagerman area fossil birds, the subject of his senior honors thesis. This was his second year working at Hagerman Fossil Beds. Through identifying fossil bird material, Mark discovered several new bird fossils that are raptors (hawks, eagles, owls etc.). Since raptors are rare as fossils at the Fossil Beds, Mark's findings add new insight to the raptors that lived in the Hagerman Valley over 3 million years ago.

Josh Samuels is working on his PhD at UCLA and is studying fossil beaver. His dissertation discusses the fossil beaver (*Castor californicus*) found at Hagerman. Josh has worked at the Fossil Beds for five seasons and continues to play a very important role in field collections, curation, and fossil identification. For the past two years, Josh has presented data from Hagerman at the Society of Vertebrate Paleontology (SVP) meetings.



Lisa McClellan with her favorite horse.

Lisa McClellan is the newest member to the Hagerman Fossil Beds NM staff. She works for the maintenance program while pursuing her Psychology degree from Idaho State University. Lisa tracks maintenance project information, checks contract work, and coordinates special projects. She helps with our special interpretive programs as well!

Lisa currently resides in Hagerman with her family. She is also a member of the Hagerman Fire Department and the Hagerman Quick Response Unit. She enjoys any time spent with her daughter, riding horses, and reading.

Library Program

Partnering again with the Hagerman Library, and Mrs. Wilma Butigan, Librarian, we will offer a variety of programs during the cold and bleak winter months.

Our first offering will be **Lewis and Clark Crossing the Centuries** January 22nd 2-3 p.m. in the Visitor Center. This exciting film traces their route from St. Louis, MO to Oregon's coast and examines the changes 200 years have brought. Be sure to check our web site (www.nps.gov/hafo) for future updates.

We would like to extend our congratulations to Mrs. Butigan. Hagerman Public Library was chosen as Idaho's Public Library of the Year 2005!

Local Visitors

It's a common dilemma – tourists from all over the world visit the Hagerman Fossil Beds National Monument, but most of the Gooding Soil Conservation District Supervisors had never visited here. In July 2004, the District Supervisors remedied this problem with a tour of the Visitor Center and a demo of the mock excavation educational program. The tour culminated with a Horse Quarry tour.



Nan Reedy, Kay Hults, Joe Pavkov, Daniel Butler, Annette Rousseau(NPS), Bonnie Hansen

The Fossil Record by Email

We are joining the 21st century and helping to conserve our environment. *The Fossil Record* can now be sent out by email. If you would like to receive your copy by email let us know at . Include your name and address and we will remove you from our regular mailing list. Please be assured that we will provide you only with the information you request and we respect your right to privacy. If, at any time, you do not wish to receive future copies, please let us know and we will remove your name from our list.

Hagerman Fossil Beds and Minidoka Internment National Monument's Greening

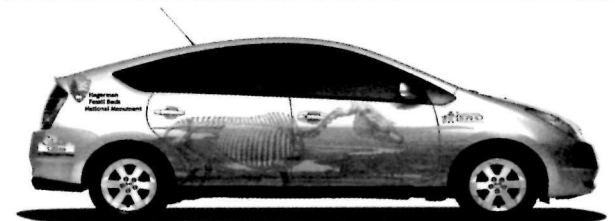
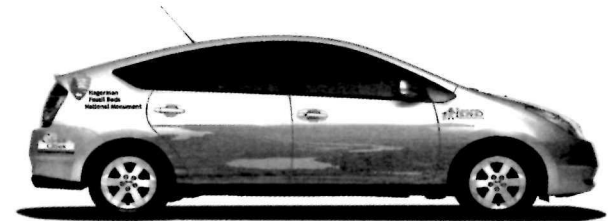
Both Hagerman Fossil Beds and Minidoka Internment National Monuments are using new and innovative technologies as part of our commitment to environmental stewardship and sustainability. The staff is looking for ways to reduce our energy use, waste, and emissions.

Recycling of plastics, aluminum, paper, and batteries is in place at headquarters. Recycling containers have also been made available to park visitors at the Visitor Center in Hagerman. Future plans for waysides include benches and waste receptacles that are built of recycled plastic that will last two to five times longer than wood, metal, or cement. Vaulted toilets made of recycled materials will be installed at the overlooks.

Transportation within the park is another big area of opportunity. We are trading out gasoline vehicles with vehicles that have far fewer emissions. Our Interpretation, Education and Administrative staffs are now driving hybrid gas/electric cars.

What is a hybrid car?

A hybrid car has both a gasoline engine and an electric motor. The car's computer system decides when to use which source of power – sometimes using only the electric motor, sometimes using only the gas engine, and sometimes using both. A hybrid car never needs to be plugged in. These vehicles are extremely fuel-efficient, have nearly zero emissions, and fit most people's lifestyle and driving needs.



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Upcoming Winter Programs

Add some excitement to those blah winter days! Join us for some interesting and fun winter programs. Our popular 'Fun Friday February Film Fest' returns with this year's theme of horses!

New program offerings:

Bats of Idaho, Dragonflies of Idaho

Burrowing Owls: learn about these fascinating birds in the Magic Valley Region and the ongoing studies

Wildflowers of the Magic Valley Region: introductory slide show geared for beginners or the casual enthusiast

Water Developments and Wildlife: Potential Death Traps

Wind Power: How "Green" is Green?

Forgotten Lands- A Story of Southern Idaho: poetry, prose, and a photographic journey through a landscape

A Sense of Place- Using Nature for Healing and Peace: an exploration of "place" in nature and how it can provide both healing and peace for our personal lives

Butterflies of Idaho, Birds of Idaho

Weed Awareness!

**Dates and times to be determined.
Check our web site for further details.**

Hagerman Fossil Beds National Monument
Minidoka Internment National Monument
P.O. Box 570
Hagerman, ID 83332-0570

**OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300**

Field Season 2004

For the 2004 field season, the Hagerman Fossil Beds National Monument paleo crew collected fossils at over 100 localities throughout the monument. Along with NPS Park Paleontologist Phil Gensler and Preparator Mary Carpenter, they explored rarely visited areas of the park throughout the field season and made some very unusual finds.

Early in the summer, the field crew found an articulated skeleton of a suckerfish (family *Catostomidae*). Most of the bones were not scattered but found in their correct anatomical position. The fish was plaster jacketed and brought back to the lab for preparation and cleaning. An in situ specimen of *Clemmys owyheensis* (a pond turtle) was found in the sediment nearby. The field crew also found a jaw with several teeth from *Thomomys gidleyi* (a pocket gopher) and a jaw from *Trigonicictis idahoensis* (a grison from the weasel family). There were also significant bird fossil finds, including bones from rails, ducks, Hibbard's Swan, a cormorant, and a songbird the size of a sparrow.

A particularly rare find was a humerus from the Hagerman mole, *Scapanus hagermanensis*, one of only a handful of mole fossils ever found in Idaho.

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