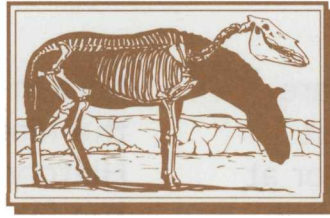


# HAGERMAN FOSSIL BEDS NATIONAL MONUMENT

## The Fossil RECORD



DECEMBER, 1995

VOLUME 4, NUMBER 4

THE BARE BONES  
OF THIS ISSUE:

VISITOR  
INFORMATION

General Management Plan

NOW'S THE TIME! -

Fall Schedule

Provide input on how you'd like  
to see Monument services  
managed in the future. The

Ranger Patrol

Visitation

Park Brochures

Mid-Snake River  
Recreation Group

Resource Management

Critter Corner



General Management Plan is now available for review and public comment. The document is an environmental impact statement that evaluates three alternatives.

You may agree with and support our Proposed Action alternative, suggest changes, or recommend another alternative.

Discussed are the Monument purpose and significance, management objectives, desired future conditions, management zoning, and anticipated impacts. Congress will not be asked to provide all of the funds for the Proposed Action. After approval of the plan, partnerships will be developed to achieve the desired outcomes.

Public meetings to discuss the plan and answer questions, and to take oral comments are scheduled as follows:

January 9, 1996 - Hagerman, ID, NPS Temporary Visitor Center, 221 N. State St., 7:00 - 9:30 p.m. Open House from 10:00 a.m. - 4:00 p.m.

January 10, 1996 - Twin Falls, ID, College of Southern Idaho, Shields Bldg., Rooms 117 & 118, 315 Falls Ave., 7:00 - 9:30 p.m.

January 11, 1996 - Boise, ID, Holiday Inn, Brundage Room, 3300 Vista Ave., Open House 10:00 a.m. - 4:00 p.m.

You may phone (208) 837-4793 to ask questions, or to arrange a meeting with staff if you cannot attend the scheduled dates.

Written comments will be accepted until January 31, 1996. Please address them to Superintendent, Hagerman Fossil Beds National Monument, P. O. Box 570, Hagerman, ID 83332

All comments received become part of the public record, and copies of comments, including names, addresses, and telephone numbers may be released for public inspection.

FALL HOURS - The temporary visitor center is open Thursday through Saturday, 9:00 a.m. to 3:00 p.m. until Memorial Day weekend in May, when longer hours and tours will start again .

VISITATION ALL-TIME HIGH - More than 10,000 people visited the temporary visitor center this year, a 44 % increase over 1994. This is without benefit of road signs to direct people to the Fossil Beds. Facilities and staff numbers are not yet sufficient to provide the services that would be required if signs went up on I-84.

Our two seasonal rangers were able to stay on until September this year, so more than twenty schools were provided programs for their students. This service could expand significantly if staffing were provided. Staff also developed twelve other special programs this year in addition to the two ranger tours each each.

PARK BROCHURES - We're official now with our new glossy Park brochures that has a good map and descriptions about

Monument services. If you would like one, stop by or call us at (208) 837-4793 to have one or more mailed to you or friends.

#### MID-SNAKE RIVER RECREATION TASK FORCE -

A joint effort by communities, agencies, and conservation groups is underway to identify recreation needs and opportunities along the Snake River. The group is evaluating the River from American Falls to Glens Ferry. News releases will announce meeting dates, times, and locations. Or you may call Mike Pepper at (208) 324-3389.



RANGER PATROL - Fences were repaired and more boundary markers installed to ensure that people observe the Monument boundaries. Off-road vehicle trespass continues to occasionally damage fossil and

archeological resources, as well as a new wheel-chair accessible trail. Procedures are in place to confiscate equipment of those causing resource damage, along with appropriate fines. If you see such trespass, please contact a Ranger immediately.

More contacts were made with hunters in the hunting zone this year. Monument staff are dedicated to ensuring the hunting mandate is met and that everyone enjoys a safe season. The availability of a National Park Service patrol boat this year allowed more contacts with hunters within the Monument; cooperation was excellent. The boat was also used for resource management projects described in the next section.

## **RESOURCE MANAGEMENT**

**GOOSE HABITAT PROJECT -**  
Eleven goose nesting boxes were installed at suitable locations along the Monument shoreline to encourage spring nesting of

Canada geese. The structures were built by Kevin Price, Idaho Department of Fish and Game, who helped Monument staff install them.

### **PHOTO SURVEY UPDATED -**

Photos taken years ago and provided to the Monument have allowed staff to establish permanent points where successive photos are taken to record change. The photos show significant changes on slopes impacted by the unnatural seeps and landslides. This study complements a more exacting one where permanent points in likely landslide areas are resurveyed periodically to check for movement. This will hopefully warn of impending landslides.



# MONUMENTAL SCIENCE

## CRITTER CORNER

Pliopotamys - Not just a minor member of the Hagerman Fauna

By Dr. Greg McDonald  
Monument Paleontologist

The diverse variety of animals found as fossils at Hagerman Fossil Beds National Monument reflects the variety of habitats that existed in the area 3.5 million years ago. One of these habitats, the wetlands, is especially well preserved within the monument and species of frogs, birds, mammals and turtles associated with this environment are quite abundant as fossils. Among these species that are so common is the ancestor to the living muskrat that still thrives in the Hagerman Valley today.

This ancestral muskrat, also referred to as the pygmy muskrat, since it is smaller than its living

descendent is known by the scientific name Pliopotamys minor which is a rather appropriate and descriptive name since Plio refers to the Pliocene the time it lived, pota means river (ever hear of the Potomac River? which translates to the river river) and mys means mouse. The species name minor is in reference to its small size. So literally our animal is the small Pliocene river mouse but pygmy muskrat works just as well.

Pliopotamys was first described in 1933 based on jaws collected by Smithsonian at Hagerman. It's relationship to the living muskrat was immediately recognized because it was first given the scientific name of Ondatra idahoensis minor but later study determined that there were enough differences that the Hagerman form should be recognized as being distinct from the living muskrat Ondatra and was given the name Pliopotamys. Changes in scientific names (such as the recent change of the well known Brontosaurus to the previously unknown name

Apatosaurus) may make some people uncomfortable or just plain irritated. After all once you give something a name shouldn't it stay that way. But despite the inconvenience of having to substitute a new name for a well known animal the changing of names actually reflects an improvement in our understanding of these extinct animals and is really a type of progress, sometimes major, sometimes minor.

It is important to remember that when one is working with fossil animals, unlike modern species, we don't always have a complete individual with which to work. Once an animal dies it is easy for the bones of the skeleton to become separated and scattered. Many of the fossil species have been described based on a single bone or sometimes only part of a single bone. While this is not always ideal, since a single bone is not likely to provide all the information you need to understand the animal, it is often all you have preserved in the fossil record. Often it is only

after years of collecting additional material that paleontologists have enough to recognize that a previously described species is the same as another one. What if one species is described based on a humerus (upper arm bone) and another based on a jaw? You wouldn't know they were from the same type of animal until you found a skeleton with both the jaw and humerus preserved. By the same token you may not be able to tell how really different two animals are until you have enough pieces to make a real comparison. Larger samples permit better comparisons and often let us make more accurate determinations as to how similar or different two described species are.

The first specimen of Pliopotamys described was a lower jaw and it turns out that most of the specimens known of this animal especially at Hagerman are jaws and isolated teeth. A few limb bones that resemble smaller versions of the living muskrat have been found but most of our knowledge of the

animal is based on the well preserved teeth and jaws. There is not a single skeleton known for Pliopotamys minor and such a find at Hagerman would greatly enhance our knowledge of the animal. In fact, despite Pliopotamys being common as a fossil, it wasn't until 1969 that a complete skull was found at Hagerman. Prior to that discovery all that was known of the skull was a few partial palates and other bits and pieces.

So what would a complete skeleton of Pliopotamys tell us? For one thing it would provide good information as to whether this ancestral muskrat was a good swimmer like its living descendent or was at the early stages of moving into the water. This is just one research project that is underway right now using fossil material from Hagerman Fossil Beds. Mary Thompson-Flint, a graduate student at Idaho State University, is looking at the evolution of swimming from Pliopotamys to Ondatra. Like any good detective story, she is piecing together clues about how

this animal changed, not only using specimens from Hagerman but numerous other localities so as to get as complete a picture as possible. And like any good detective story, there is the frustration that she doesn't have all the pieces. Although she is seeing a pattern and the story is emerging, it would be nice to be able to fill in some gaps, such as having a complete skeleton of Pliopotamys. But then, that's what Hagerman Fossil Beds is all about - to protect an area that preserves an important part of earth history so that those missing pieces may come to light someday and fill in the gaps.