



# Foundation Document Overview

## Hagerman Fossil Beds National Monument

### Idaho



#### Contact Information

For more information about the *Hagerman Fossil Beds National Monument Foundation Document*, contact: [hafo\\_superintendent@nps.gov](mailto:hafo_superintendent@nps.gov) or 208-933-4100 or write to:  
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## Purpose



*The purpose of HAGERMAN FOSSIL BEDS NATIONAL MONUMENT is to preserve outstanding Pliocene paleontological resources, to serve as a center for furthering scientific research, and to broaden public understanding of the science of paleontology and the significance of the Hagerman fossil record.*



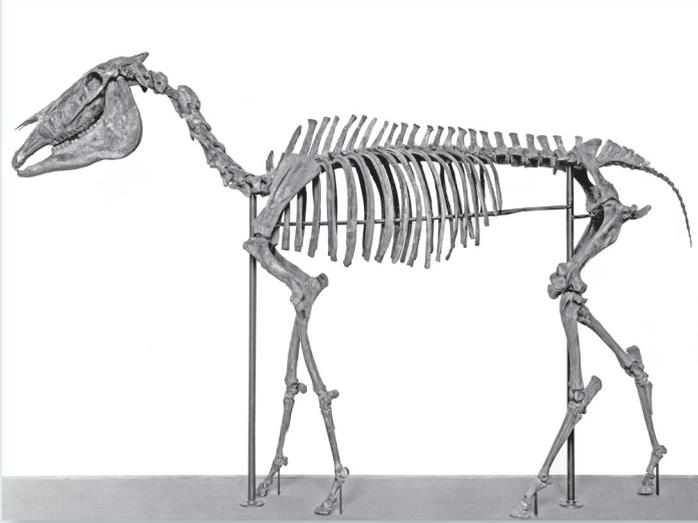
## Significance

Significance statements express why Hagerman Fossil Beds National Monument resources and values are important enough to merit national park unit designation. Statements of significance describe why an area is important within a global, national, regional, and systemwide context. These statements are linked to the purpose of the park unit, and are supported by data, research, and consensus. Significance statements describe the distinctive nature of the park and inform management decisions, focusing efforts on preserving and protecting the most important resources and values of the park unit.

- The park contains globally significant paleontological resources, representing a diversity of fossils from the Pliocene. Tens of thousands of fossils have been discovered in the park, including more than 140 species of animals and plants. This includes species that were first discovered here and species that have not been found anywhere else in the world.
- The park's paleontological resources are contained in an extensive stratigraphic record, spanning at least 500,000 years. These fossil deposits are exposed across more than 4,000 acres of the park. They record a diverse fossil landscape representative of lake, wetland, riparian, woodland, and grassland environments. The majority of the park is classified as a national natural landmark.
- The fossil record at Hagerman Fossil Beds provides a detailed glimpse into life that occurred during the Pliocene period, the most recent geologic time period that experienced global warming. The expansive timeframe exposed on the monument, coupled with the species diversity it contains, provides a framework for understanding climatic change and environmental response today and in the future.



## Significance



- The species found within the Hagerman fossil record include the ancestors of species living today. Some of these descendants occur in North America, while others are now only found in distant places like Asia and South America. Hagerman's fossils contribute to a growing understanding of evolutionary relationships and distributions of species across continents.
- The park features a fossil horse quarry recognized as one of North America's most important sites concerning the evolutionary history of the horse.
- The fossil-rich landscape at the park is the result of 4.2 million years of geologic history of sedimentary deposition, fossilization, and erosion. The park reflects the accumulation of sediments associated with ancient Lake Idaho, the cataclysmic impacts of the Bonneville flood, and the basalt flows that affected the course of the Snake River. Collectively, past and present geologic processes contribute to the ability to access, study, and understand this remarkable fossil record at Hagerman.
- Hagerman Fossil Beds National Monument is one of the few federally administered fossil sites specifically set aside for paleontological research. Since the Smithsonian first excavated in 1929, tens of thousands of additional fossils have been found and new fossils continue to be discovered. Research since the 1930s has led to numerous scientific publications on the descriptions of new species, changing community dynamics throughout the geologic sequence, and the site's geologic history. The opportunities and benefits from multidisciplinary research will continue to grow as additional fossil and geologic discoveries occur and new technologies emerge.

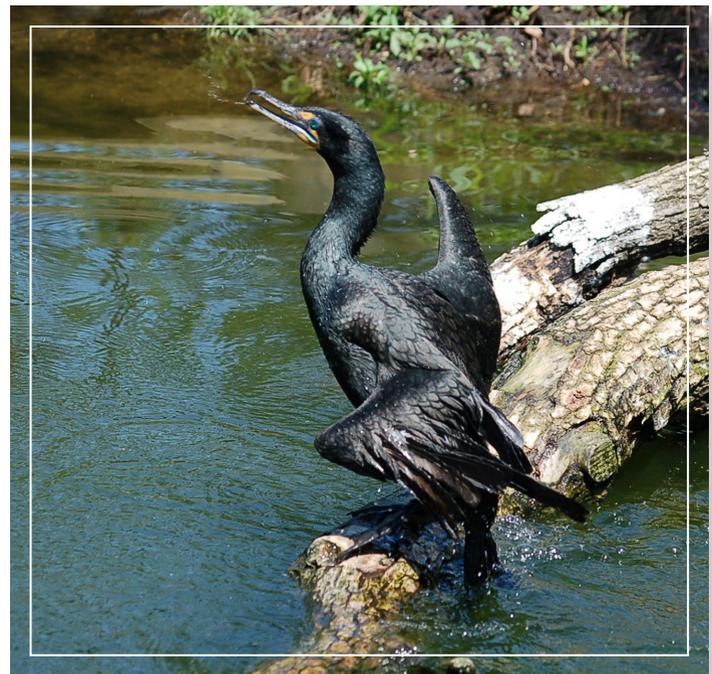
## Fundamental Resources and Values

Fundamental resources and values are those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes determined to merit primary consideration during planning and management processes because they are essential to achieving the purpose of the park and maintaining its significance.

- **Pliocene Fossils**
- **Public Understanding of Paleontology at Hagerman Fossil Beds**
- **Lead and Facilitate Research**
- **Geologic Processes**
- **A Record of Paleoecosystems**

Hagerman Fossil Beds National Monument contain other resources and values that may not be fundamental to the purpose and significance of the park, but are important to consider in management and planning decisions. These are referred to as other important resources and values.

- **Oregon Trail**
- **Scenic Geologic Landscape**
- **Modern Flora and Fauna Communities**



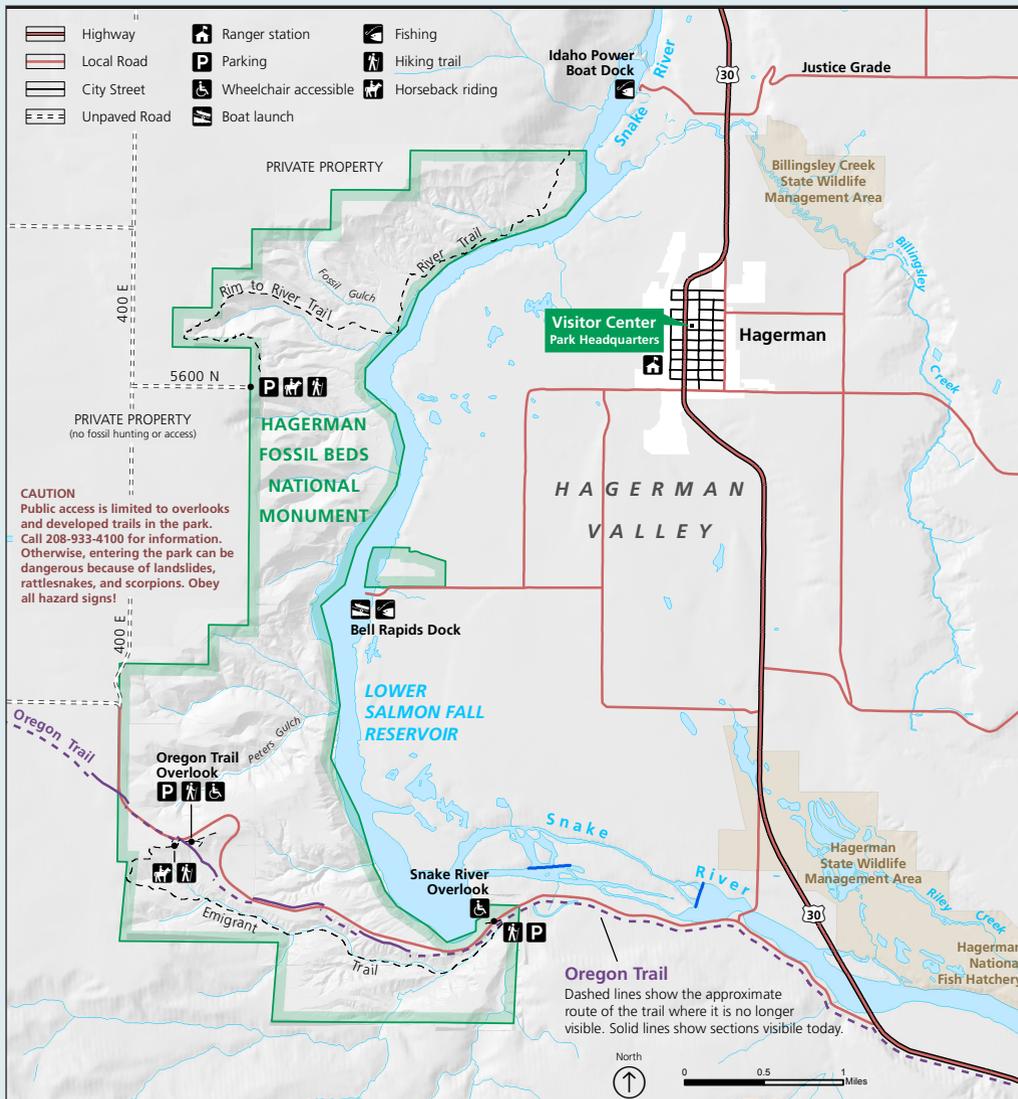
# Description

Hagerman Fossil Beds National Monument (park) preserves the fossil remains of more than 140 fossil species from the Pliocene epoch (5.3 to 2.6 million years ago) and is recognized as one of North America's most important localities concerning the evolution of the horse. The 3 million- to 4 million-year-old geologic strata found in the park provide a detailed record of an evolving environment spanning 500,000 years and includes fossils found nowhere else in the world. The density, diversity, and quality of fossils led to the site being designated as a national natural landmark in 1975.

The 4,281-acre park lies just west of the town of Hagerman in southern Idaho along the Snake River. The topography is characterized by large, flat sagebrush plateaus deeply dissected by water drainages. Numerous small and ephemeral

riparian areas support a wide range of wetland vegetation and numerous mammal, avian, reptile, amphibian, and fish species. The park annually attracts more than 23,000 visitors.

Discovered in 1928 by Elmer Cook, a local rancher, the Hagerman Horse Quarry—the center piece of the fossil beds—has yielded the largest assemblage of the first single-toed horse (*Equus simplicidens*), an ancestor to modern-day horses. However, the fossil beds have yielded more than just horses. Many important species have been recovered, with animals ranging from the diminutive deer mouse to the giant mastodon. The park has the largest known assemblage of the giant river otter (*Satherium piscinarium*), a large badger-like animal (*Ferinestrix vorax*), and numerous other carnivores. At Hagerman, various turtle, bird, and rodent fossils were described for the first time.



In addition to the ongoing research at Hagerman Fossil Beds, the park has signed a sister park agreement with Sibilo National Park in Kenya. The National Park Service fosters such relationships as mutual learning opportunities that can lead to efficiencies, collaboration, and discoveries. Both Hagerman and Sibilo are important Pliocene fossil sites known for their faunal diversity and the extensive nature of their fossil deposits.

Well after the Pliocene, the environs surrounding Hagerman Fossil Beds supported numerous prehistoric and historic peoples. Tribes with traditional ties to the area include the Bannocks, Paiutes, and Shoshones. Beginning in the 1840s, emigrants journeyed through the area on the Oregon Trail, which passes through the southern portion of the park.