



# Foundation Document Overview

## Fossil Butte National Monument

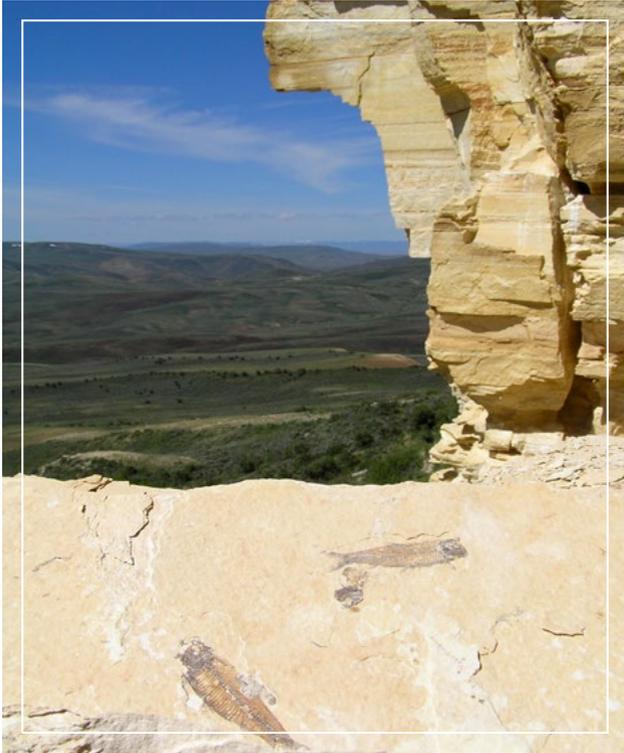
Wyoming



### Contact Information

For more information about the *Fossil Butte National Monument Foundation Document*, contact: [fobu\\_superintendent@nps.gov](mailto:fobu_superintendent@nps.gov) or (307) 877-4455 or write to:  
Superintendent, Fossil Butte National Monument, P.O. Box 592, Kemmerer, WY 83101

## Purpose



*The purpose of FOSSIL BUTTE NATIONAL MONUMENT is to preserve a portion of Eocene Fossil Lake deposits, which contain abundant and exceptionally well-preserved fossils, promote stewardship of the greater Green River Formation, and through exhibits and programs, increase public understanding of their significance.*



## Significance

Significance statements express why Fossil Butte 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 extraordinary quality of fossil preservation within the Green River Formation at Fossil Butte National Monument is almost unparalleled in the fossil record. The unusual conditions of the ancient lake preserved complete skeletons of delicate and rarely preserved fish, birds, and bats. Fossil Lake sediments yield valuable scientific data such as the Earth's only articulated freshwater stingrays, oldest articulated bats, and complete life cycles of fishes.
- The Fossil Lake deposit contains more fossilized fishes than any other deposit on Earth.
- The Fossil Lake deposits and the Greater Green River Formation contain one of the world's most diverse Eocene assemblages of fossilized animals and plants, including the world's most diverse bird fauna, illustrating an almost complete picture of the ancient aquatic and much of the terrestrial ecosystems.
- Fossil Butte National Monument exhibits the greatest number of Green River fossils in the world, and provides a dynamic scientific interpretation of their geological, paleontological, and historical significance.
- Scientific and commercial collecting of fossils has occurred in Fossil Basin since the 1850s. The understanding of paleontology and geology of the Green River Formation has grown through the efforts of and in collaboration with scientists and partnerships with quarries on private and Wyoming state lands.
- Fossil Butte National Monument contains part of the widespread Green River Formation, which is Earth's best-preserved warm-temperate Eocene lake system. This provides opportunities for research and understanding into the geologic processes that created the ideal conditions for preserving fossils.

## 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.

- **Fossil Lake Deposits of the Green River Formation within the Monument**
- **Museum Collections and Fossil Preservation**
- **Exhibits**
- **Fossil Quarriers and Geological/Paleontological Research Institutions**
- **Programs, Education, and Public Outreach**

Fossil Butte National Monument contains 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.

- **Natural Resources**
- **Scenic Values**



## Interpretive Themes

Interpretive themes are often described as the key stories or concepts that visitors should understand after visiting a park—they define the most important ideas or concepts communicated to visitors about a park unit. Themes are derived from—and should reflect—park purpose, significance, resources, and values. The set of interpretive themes is complete when it provides the structure necessary for park staff to develop opportunities for visitors to explore and relate to all of the park significances and fundamental resources and values.

- Fossil Butte National Monument provides an opportunity to study the abundant, diverse, and exquisitely preserved fossil specimens of Fossil Lake and the well-preserved rock record of the basin itself, enabling understanding and appreciation of the wide variety of plants and animals that inhabited this system of lake and terrestrial environments during the early Eocene Epoch.
- Fossils have garnered the interest of commercial and scientific collectors since their discovery in the 1850s in Fossil Basin. Fossil Butte National Monument provides a forum to discuss fossil collecting and the role of public-private partnerships in advancing paleontology.
- Climate change is evident when comparing the fossil evidence of a warm-temperate environment to the semi-arid sagebrush steppe ecosystem of Fossil Butte National Monument today. Studying these fossils reveals how climate and life are intrinsically linked and continually changing, helping us better understand changes through time and explore how climate change continues to alter the landscape.
- Fossil Butte National Monument provides an increasingly rare opportunity to experience solitude, scenic views, and dark night skies.



# Description

Fossil Butte National Monument is near Kemmerer, Wyoming, north of Interstate 80 on U.S. Highway 30. The monument is a day-use area; overnight accommodations are available in Kemmerer and Diamondville and camping is allowed on adjoining Bureau of Land Management (BLM) public lands. National monument facilities include the visitor center, two self-guided interpretive hiking trails, a picnic area, maintenance building, seasonal housing duplex, and a 7.5-mile scenic drive. Many visitors stop at the national monument en route to Dinosaur National Monument, Yellowstone National Park, or Grand Teton National Park.

Fossil Butte National Monument presents a window into life in southwestern Wyoming 52 million years ago during the Eocene Epoch. Today's high-desert environment of the monument is a stark contrast to the warm-temperate lake environment of the past. Fossil Lake, Lake Gosiute, and Lake Uinta interconnected to form a lake system now referred to as the Green River Lake System. The lakes were located in what are now the states of Wyoming, Utah, and Colorado. The maximum size of ancient Fossil Lake was about 50 miles long (north/south) and 30 miles wide (east/west). During its approximately 2 million year life, its length and width varied considerably.

Today, the national monument protects small portions of ancient Fossil Lake sediments. The monument consists of 13 square miles (8,198 acres) of the 1,500-square-mile (960,000 acre) area covered by ancient Fossil Lake. Scientists refer to the lake sediments, now rocks, as the Green River Formation. These rocks preserve a tremendous variety of fossils. In addition to the Green River Formation, the Wasatch Formation, composed of river and stream sediments, is exposed in the monument. The Wasatch Formation contains fossilized teeth and bone fragments of many Eocene bird, reptile, fish, and mammal species, including early primates and horses. These fossils indicate which animals lived near Fossil Lake, adding the shoreline environment to Fossil Lake's story.

The fossil record preserved within the Eocene Green River Formation of Fossil Basin is world renowned. More than 125 years of continuous collecting has revealed a wide diversity of fossil fish, reptiles, birds, crustaceans, amphibians, mollusks, mammals, insects, and plants. Discoveries of new fossil species from the ancient lake sediments continue to expand understanding of the paleoecosystem.

Most notably, the extraordinary quality of fossil preservation is almost unparalleled in the fossil record. The quiet-water conditions, water chemistry, fine-grained lake sediments, and absence of scavengers combine to preserve articulated skeletons (all bones are in place rather than scattered). The delicate bones of rarely preserved fish, birds, and bats yield valuable scientific data.

Fossils from Fossil Lake are found in museums around the world. Active commercial fossil collecting in private quarries around the national monument yields tens of thousands to hundreds of thousands of fossil fish each year. Fossil Butte National Monument's strong relationship with several of the quarries helps the monument stay informed of new discoveries and scientific advancements in paleontology. The fossil fish found in the quarries near the national monument represent the most abundant articulated fossil vertebrates in the world.

