



Foundation Document Overview

Tule Springs Fossil Beds National Monument

Nevada



Contact Information

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Purpose



TULE SPRINGS FOSSIL BEDS NATIONAL MONUMENT conserves, protects, enhances, and interprets late Pleistocene fossils, their geologic context, and other scientific values in the upper Las Vegas Wash through education, research, community collaboration, and appropriate public use.



Significance

Significance statements express why Tule Springs 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.

- **Fossils.** Tule Springs Fossil Beds National Monument encompasses one of the largest and most diverse late Pleistocene vertebrate fossil assemblages in the southern Great Basin and Mojave Deserts. The Tule Springs local fauna includes large mammals and other vertebrates and dates from approximately 100,000 to 12,500 years ago. Invertebrates, plant microfossils, and pollen also are present in these deposits.
- **Geologic Context.** The extensive and complex paleospring deposits of Tule Springs Fossil Beds National Monument record vast desert wetland ecosystems that covered much of the Las Vegas Valley during the late Pleistocene. The depositional history of these marsh, wet meadow, and flowing stream environments provides the baseline climate record that serves as a standard of comparison for similar deposits throughout the American Southwest.
- **Evidence of a Fluctuating Climate.** The Pleistocene deposits at Tule Springs Fossil Beds National Monument provide the first record demonstrating that desert wetland ecosystems expanded and contracted repeatedly in response to abrupt climatic fluctuations and that this response was in step with the warm and cold cycles documented in global climate records. The continued study of these responses has current and future implications for understanding how modern wetland ecosystems respond to changes in climate.
- **Scientific Discovery at Tule Springs.** Tule Springs Fossil Beds National Monument has been a place of significant scientific research and discovery since the early 1900s. As a part of the Tule Springs Expedition, the monument became the first site in North America where radiocarbon dating was used on a large scale. Research at the monument has provided a solid base for future studies, new discoveries, and the use of new technologies.

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.

- **Pleistocene Fossils**
- **Scientific Research**
- **Museum Collections**
- **Paleoecosystem**
- **Geologic Processes and Features**
- **Public Understanding and Education**

Tule Springs Fossil Beds 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.

- **Partnerships**
- **Modern Ecosystems**
- **Human History**



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.

- The remarkable collection of fossils preserved within the monument allows us to peer into the distant past, to explore worlds of plants and animals that no longer exist, and to observe the effects of climate and habitat changes on species and ecosystems.
- For thousands of years, people with diverse worldviews, cultures, and technologies have connected with the landscapes of Tule Springs National Monument in vastly different ways.
- The monument is both a historic and living laboratory that continues to reveal secrets of the past that help us to look to the future with greater wisdom.
- The power of water, interacting with climate, continues to remake the landscape and local ecology, as it has for millennia.

Description

The Tule Springs Fossil Beds National Monument was established as the 405th unit of the national park system on December 19, 2014, through the National Defense Authorization Bill and the transfer of 22,650 acres of land from the Bureau of Land Management to the National Park Service. The monument is located in the upper Las Vegas Wash, north of the cities of Las Vegas and North Las Vegas, Nevada, and is bounded on the northeast by the Sheep and Las Vegas Ranges. Neighbors of the monument include the cities of Las Vegas and North Las Vegas, Clark County, tribal lands owned by the Las Vegas Paiute Tribe, federal lands managed by the Bureau of Land Management and the U.S. Fish and Wildlife Service, lands owned by the State of Nevada, and Nellis and Creech Air Force Bases, which use the monument's airspace for training missions.

Pleistocene deposits contain paleontological and paleoecological resources such as fossilized plants, animals, and their traces that were deposited in spring-fed ponds, meadows, marshes, and streams during periods of abundant rainfall in the Pleistocene Epoch. These fine-grained paleospring deposits are known as the Las Vegas Formation.

The paleontological record represented at the monument ranges from approximately 100,000 to 12,500 years ago, part of a geologic formation that spans multiple important global climate cooling and warming episodes during at least the last 500,000 years. The monument is rich with paleontological resources, including a vertebrate fossil assemblage known as the Tule Springs local fauna comprising mammoth, horse, camel, bison, ground sloth, dire wolf, saber-toothed cat, and North American lion. In addition to vertebrate fossils, invertebrates, plant macrofossils, and pollen are found at Tule Springs.

The spring deposits from Tule Springs help to tell an important story regarding how the region's climate varied. The composition of the modern fauna and flora that now dominate the North American landscape are evidence of those animals that survived the last Ice Age.

In addition to the abundance of fossils, the monument contains an important desert ecosystem with multiple habitats that support a variety of plants and animal populations. The area sustains four unique and imperiled plants (Las Vegas bearpoppy, Merriam's bearpoppy, Las Vegas buckwheat, and halfring milkvetch), as well as Joshua trees and several species of cacti. Furthermore, it serves as habitat for threatened desert tortoises, kit foxes, Le Conte's Thrasher, and burrowing owls, as well as important territory for other raptors such as kestrels, barn owls, and great horned owls. More than 52 mammals and 31 species of reptiles and amphibians can be found within the monument's boundaries. The monument helps protect an important wildlife corridor from urbanization, spanning multiple federal land units.

