

Waco Mammoth National Monument



CITY OF WACO
PARKS & RECREATION



Visitor's Guide

Welcome to Waco Mammoth National Monument

This park is a partnership between the National Park Service, the City of Waco, Baylor University, and the Waco Mammoth Foundation.

Things to know before you explore:

- Restrooms are located in the Welcome Center.
- Water is located in the plaza by the Welcome Center.
- The paved walking trail is 300 yards long (0.27 km).
- Take only photos; leave only footprints.

Park Safety



- Stay on marked trails and be aware of your surroundings.
- Keep pets on a leash.
- Stay a safe distance from wildlife.
- Use insect repellent, concentrating the spray on socks, shoes, and pants.
- Summer temperatures can rise above 100° F (37° C). Bring water and consider wearing sunscreen and a hat.

A Once-In-A-Lifetime Discovery



In April 1978, Paul Barron and Eddie Bufkin explored the creek that runs here, hoping to find fossils or possibly arrowheads. They found a very large bone in the creek bed. They did not know what the bone was, so they took it to the Strecker Museum at Baylor University. There, David Lintz identified it as a mammoth leg bone.

When Lintz visited the creek, he found more fossils. Digging began in 1978, continuing until 1980. Digging resumed under Calvin Smith in 1984, lasting until 2001.

Researchers have found at least 23 mammoths here so far! The mammoths are in two groups—an upper group of four, and a group of 19 buried deeper. The lower group was all adult females and young calves, a nursery herd.

The Waco mammoth herd is the only known nursery herd of Columbian mammoths in the world.

Baylor University worked with the City of Waco and the Waco Mammoth Foundation to develop the site. The site opened as a city park in 2009. The National Park Service joined this team in 2015, when the park became a national monument.

*Left: copperhead snake and wester honey bee. Right: Mammoth Q
photos by City of Waco*

Central Texas During the Ice Age



Columbian mammoths with longhorn bison. Art by Karen Carr

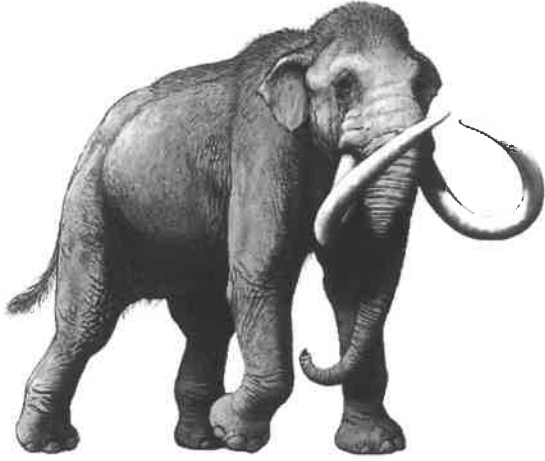
The fossils at Waco Mammoth are from the Pleistocene Epoch, often called the Ice Age. The Ice Age started 2.6 million years ago and ended just 12,000 years ago.

Texas was warm during the Ice Age, reaching 90°F (32°C) during the summer. It was not wooded like today. Instead, Central Texas was savanna—open grassland. Two rivers meet in Waco, the Bosque and the Brazos. This site is between the two rivers, a watering hole with shade trees. Judging by the number of fossils found here, this area must have been very popular!

Most of the animals that live in Central Texas today lived here during the Ice Age. Rabbits, coyotes, deer, and other familiar animals have lived in Texas since the Ice Age. Larger animals, called megafauna, lived alongside them. Many of the animals were grazers, or grass-eaters, such as horses, mammoths, and bison. Trees grew near rivers, and this is where browsers, or leaf-eaters, lived. These included animals such as mastodons, western camels, llamas, and ground sloths.

Predators followed these prey animals. One of the most famous is the *Smilodon*, or saber-tooth cat. This cat weighed 600 lb. (272 kg) and had 6-inch (15 cm), blade-like fangs. Other predators lived in Texas, such as dire wolves and short-faced bears, as well as predators that still live here, such as coyotes, foxes, and bobcats.

Not So Woolly



A male Columbian mammoth. Art by Carl Buell

The largest animals that lived in Texas during the Ice Age were the Columbian mammoths. These animals lived throughout North and Central America. They were much larger than their woolly mammoth “cousins” were. A male woolly mammoth could get as tall as 10 ft. (3 m). A male Columbian mammoth could get as tall as 14 ft. (4.3 m)! Full-grown males could weigh up to 10 tons.

Mammoths are not ancestors of modern elephants. They are their relatives. In fact, scientists think mammoths behaved much like elephants.

For instance, evidence at this site suggests females stayed together in a group, called a nursery herd. This matches modern elephant behavior. Elephant herds have a matriarch, the oldest female in the group. This “grandmother” has the most experience finding food and defending against predators. Did Waco’s mammoth herd rely on a matriarch too?



Female mammoths at the Waco Mammoth dig site in 1990. Photo by Nick Cirincione.

Protecting the Past



A view from inside the dig shelter. photo by City of Waco

Researchers have dug two quarries here so far. Fossils from the first quarry were moved to Baylor University in 1990. These fossils included fish, turtles, dwarf antelope, American alligator, and 17 mammoths.

Fossils in the second quarry remain on-site. A Dig Shelter protects the site. So far, this quarry has produced six mammoths, a western camel, a saber-tooth cat, and a giant tortoise. The dig shelter protects these fossils by keeping the same temperature and humidity all year.

Mammoths in the second quarry are in two levels. The upper level has four mammoths, including Mammoth Q, a large male. The lower level has mammoths from the nursery herd, a camel, and a giant tortoise shell.



Mammoth W, a female in the upper level.



Mammoth Q, a male in the upper level.



A western camel in the lower level.

Photos by City of Waco

Looking to the Future



Dr. Lindsey Yann with Mammoth T, a juvenile in the lower level. Photo by the NPS

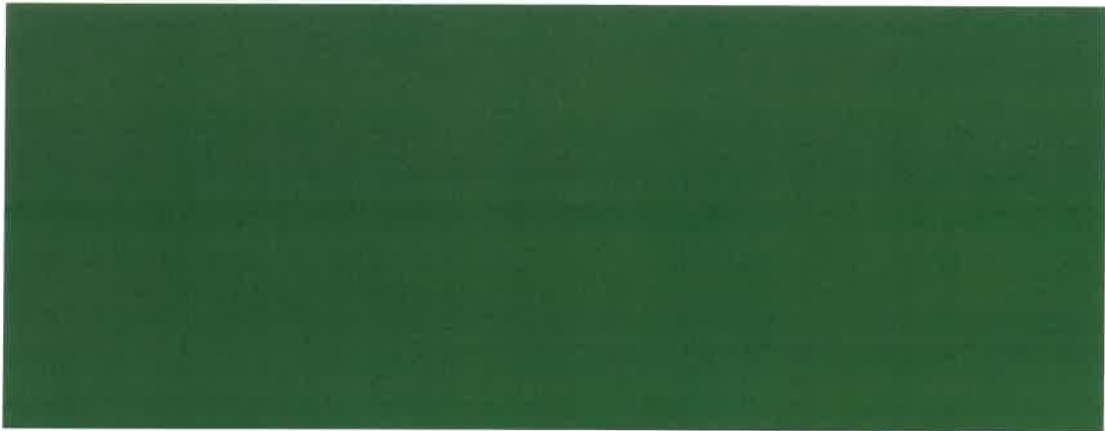
The purpose of Waco Mammoth National Monument is to protect and conserve the remains of a nursery herd of Columbian mammoths and related fossils. The park's partners work together to inspire visitors, foster a learning environment, and support ongoing research.

Scientists have many questions to answer. The Bosque River buried remains here, just as it does today during local floods. Did the river also kill the mammoths? Some scientists say it did, while others point to different causes. Fossils are in multiple layers, built up over time. Why did mammoths keep returning here? What can we learn about the changing environment?

The site's resources, and the potential for more discoveries, inspire us to explore, appreciate, and ponder the mystery and diversity of life on Earth.



The Geoscientists-in-Parks program places students and recent graduates in paid NPS internships. This intern is cleaning fossils in the park's lab.



Explore.



Learn.



Protect.



Share your Waco Mammoth discoveries at:
<https://www.inaturalist.org/projects/mammoth-trackers>

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Produced by City of Waco Parks and Recreation in
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