

COVID-19 Response

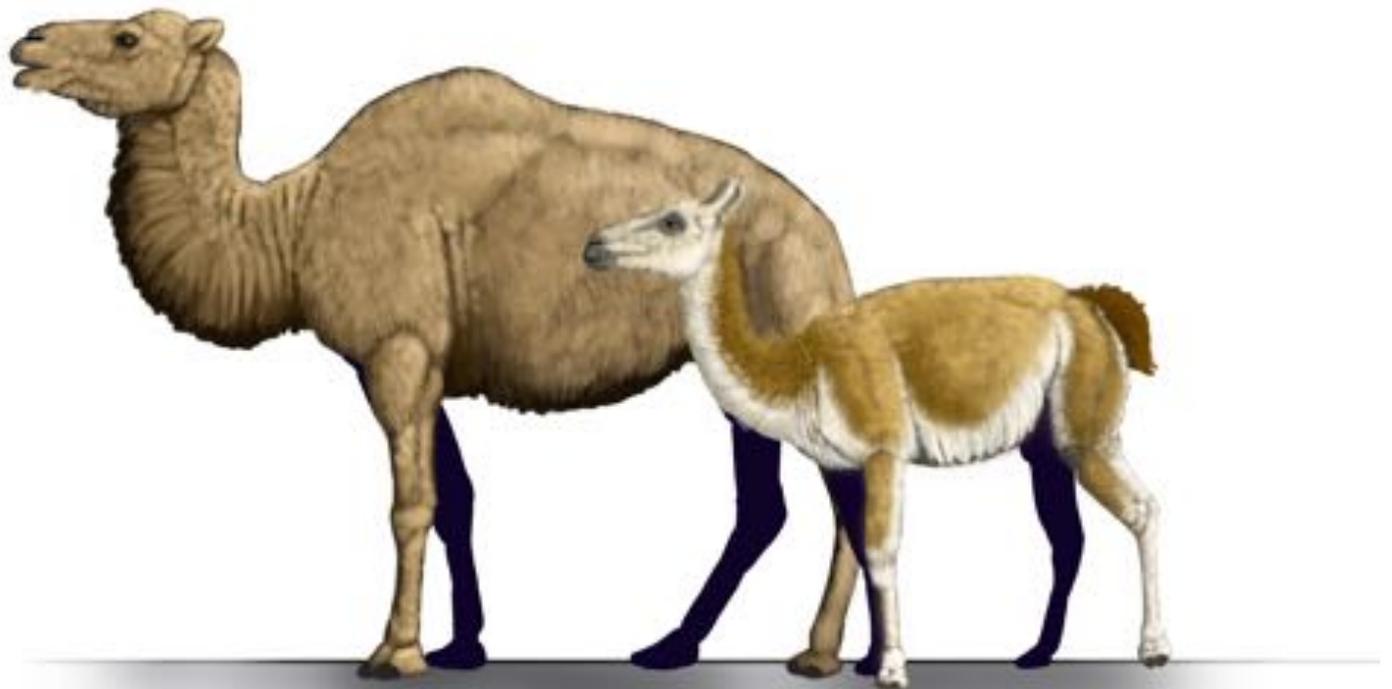
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National Park Service

ARTICLE

The Camels



Camelops (left) and **Hemiauchenia** (right) are two different genera of camelids identified from the late Pleistocene deposits of Tule Springs Fossil Beds.

NPS illustration by Benji Paysnoe.

Introduction

Two different genera of camelids have been identified from the late Pleistocene deposits of Tule Springs:

Camelops and *Hemiauchenia*. *Camelops* was the last of the large North American camels, while *Hemiauchenia* was a large llama that has an extensive fossil record in both North and South America.

The Ancient Camel

Scientific Name

Camelops hesternus

Description

Camelops on average reached an adult height at the shoulder of around 7 feet and is estimated to have weighed 1,800 pounds. Like living camels, *Camelops* had two-toed, hooved feet and a long neck. At present, paleontologists are unable to determine if *Camelops* had a hump on its back like living Bactrian and Dromedary camels.

The first *Camelops* fossils were described by American paleontologist Joseph Leidy in 1854.

Relationships

The Camel family (Camelidae) first evolved in North America approximately 44 million years ago during the Eocene period. *Camelops* first appeared in the fossil record during the Late Pliocene of North America between 4 to 3 million years ago. Living camel species and *Camelops* share a North American ancestor: *Paracamelus*, which crossed the Bering Strait 7-6 million years ago from North America to Eurasia.

Distribution and Habitat

Fossils of the late Pleistocene *Camelops* have been found as far north as Alaska and the Canadian Yukon and as far south as Mexico. *Camelops* was adapted to a variety of habitats including grasslands, open woodlands, and wetlands.

Diet

Camelops was a large herbivore. Plant remains have been found within the teeth of *Camelops hesternus* at Rancho La Brea, suggesting it had a varied diet. Isotopic studies of *Camelops* teeth suggest it was mostly a browser with detectable percentages of plants such as saltbush (*Atriplex* sp.).

Behavior

It has been suggested that *Camelops* lived in small herds, much like their living distant relatives in Asia and Africa, which may explain why they are commonly identified from Tule Springs.

Tule Springs Camelops

Fossils of the ancient camel make up one third (about 38%) of the total large Pleistocene mammals identified at Tule Springs, making it one of the most common mammals to occur here. *Camelops* is also commonly found at other Pleistocene sites within Nevada and other Mojave Desert sites, likely due to lush wetland habitats that supported small herds of these camels.

Ancient Llama

Scientific Name

Hemiauchenia sp.

Description

The late Pleistocene llama was a relatively large species, approximately 5.5 feet tall at the shoulder and a body length averaging over 7 feet. *Hemiauchenia* could weigh as much as 880 pounds.

The first fossils of *Hemiauchenia* were identified from South America in 1880, with the first North American fossils identified in 1893 by American paleontologist Edward Drinker Cope.

Relationships

Hemiauchenia was one of the earliest genera of llamas to appear in the North American fossil record approximately 10 million years ago. There are several species of *Hemiauchenia*, some of which entered South America approximately 3 to 2 million years ago, and share ancestry with the modern llama lineage. The late Pleistocene *Hemiauchenia* went extinct approximately 10,000 years ago.



Llamas, like **Hemiauchenia** appeared in the fossil record of North America, before making their way to South America.

NPS illustration by Benji Paysnoe.

Distribution and Habitat

Hemiauchenia lived in a variety of habitats across North and South America, including woodlands, wetlands, and grasslands. In North America, the most northern distribution was southeastern Alberta Canada and the most southern distribution was central Mexico. Fossils have been found in Florida, South Carolina, and Mississippi, much of central United States, and the American Southwest.

Diet

Isotopic analysis of the teeth of *Hemiauchenia* showed that its diet varied by region, suggesting it was adapted for both grazing and browsing for vegetation.

Behavior

Like the modern llama, *Hemiauchenia* most likely lived in small herds.

Tule Springs *Hemiauchenia*

Compared to the ancient camel *Camelops*, *Hemiauchenia* was much rarer at Tule Springs, and is only known from one fossil specimen. The preservation of this bone, a radio-ulna, identifies the occurrence of the genus *Hemiauchenia* at Tule Springs, but it is not diagnostic enough to identify it to species. *Hemiauchenia macrocephala*, the broad-headed llama, is well known from other late Pleistocene sites in the Mojave Desert.

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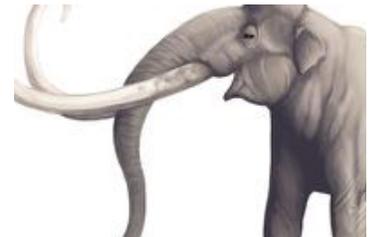
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