COVID-19 Response

Masks are required for everyone, regardless of location or vaccination status, in all NPS buildings, crowded outdoor spaces, and all forms of enclosed public transportation. Additional details are available at <u>www.nps.gov/coronavirus</u>. Before visiting, please check the <u>park website</u> to determine its operating status. Please <u>recreate responsibly</u>.

National Park Service

Tule Springs Fossil Beds

National Monument Nevada

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Things To Do

Aliante Loop Temporary Trail

Tule Springs Fossil Beds is a new park, so there are no permanent trails established yet. While the park is going through the planning process, we have established the Aliante Loop as a temporary trail to help gather visitor use data by counting the frequency and number of people using this trail. This data will allow for better trail planning within the park. While the Aliante Loop temporary trail offers year-round scenic views of Mojave Desert scrub habitat and the Las Vegas Range, wildflower blooms in spring and summer are a sight to see.

Trail Overview

Distance: 3.25 mi (5.23 km) Trail Style: LoopElevation: 75 ft (23 m) Difficulty: Easy-Moderate Average Time: 2.5 hours Begin at: North Aliante Parkway Kiosk

Accessibility: Since the trail is temporary, the compacted soil surface is not maintained nor paved, but may be suitable for strollers and mobility aids. A sighted (human) guide is recommended for visitors who are visually impaired. Trail conditions may vary seasonally, use at your own discretion. Please Note: There are no facilities, shade, or rest areas. This temporary trail begins at the North Aliante Parkway Informational Kiosk. Enter through the curved metal pedestrian gate on Aliante Parkway.

Tule Springs Fossil Beds National Monument (TUSK) preserves many important natural and cultural resources, including Pleistocene fossils. Most fossils at TUSK lie beneath the surface, but erosion and human disturbances can unearth them. You can participate in citizen science by leaving fossils undisturbed to preserve their context and by letting us know about fossils you may encounter. Click here to see our Fossil Discovery form. (https://www.nps.gov/tusk/getinvolved/fossil-discovery.htm)

Trail Stops (Points of Interest)

The descriptions below of each of the five stops on this temporary trail can be found by scanning the QR code provided at the beginning of the trail. Most smartphones are able to scan QR codes by opening the camera app, placing the QR code within frame, and clicking the link that appears.

1) Water plays an important role in the Pleistocene to recent ecosystems of Tule Springs Fossil Beds National Monument. The Pleistocene epoch is a time period spanning roughly 2.6 million to approximately 11,700 years ago, which is followed by our current geologic epoch, the Holocene. During this time, between ~570,000-8,500 years ago, groundwater springs appeared on the landscape as seeps, pools, streams, and wet meadows that trapped windblown sand and mud to form the sedimentary deposits of the Las Vegas Formation. These sediments also preserve periods of drying, erosion, and soil formation, indicating that these desert wetlands responded to global changes in climate. Wind and water have carved these deposits over time to form gentle hillslopes, sheer walls, and dramatic washes. These ancient wetlands were once lush habitats for Ice Age animals. In turn, the remnants of these ancient ecosystems provide the modern habitats for Mojave Desert plants and wildlife. The Aliante Loop Temporary Trail begins at the flat-lying light-colored sediments of Pleistocene marshes and leads to mounds of dark gravels capping eroded Holocene age stream beds that cut through these older wetland deposits.

2) Look for red, green, or brown fibrous clusters of desert mistletoe (Phoradendron californicum) tangled among the branches of catclaw acacia or mesquite trees. Desert mistletoe is partially a parasitic plant because although it produces its own energy through photosynthesis, it relies on its host tree to provide water and nutrients. The translucent red berries of the desert mistletoe are a favorite food of the silky flycatcher (Phainopepla nitens), a small, glossy black or dark gray bird with a crest of feathers on its head. Digested mistletoe berry seeds in this bird's droppings help spread mistletoe to other trees across the desert. The habitat for both desert mistletoe and the silky flycatcher has decreased as urbanization spreads, so they are rare to spot in developed areas of the Las Vegas Valley.

3) Strong and resilient to the arid climate, Mojave Desert plants have adaptations that allow them to thrive in high temperatures, and without much rain or shade. This desert scrub plant community also provides vital food and shelter for native wildlife, including rodents, rabbits, birds, and reptiles. Have a keen eye and look out below! The Las Vegas bearpoppy (Arctomecon californica) [https://www.nps.gov/lake/learn/nature/las-vegas-bearpoppy.htm] is critically endangered in the state of Nevada and the Las Vegas buckwheat (Eriogonum corymbosum var. nilesiican) [https://www.fws.gov/nevada/nv_species/lv_buckwheat.html] is a Bureau of Land Management recognized sensitive species. Urbanization has fragmented and degraded the habitat of these plant species. Protecting these plants from trampling, off-roading, and competing invasive plants will help

prevent them from going extinct.

How can you help? Anyone can be a citizen scientist!

*Citizen Science Station--*Citizen science is the voluntary involvement of the public in scientific research. The data you collect as a citizen scientist can assist professional scientists and resource managers in their studies to better understand the park's natural resources. Join our citizen science project by photographing these plants following the instructions on our Chronolog time lapse station. Your photo, and photos from other citizen scientists will be used to document changes in our native and invasive plants through months and seasons to inform scientists at the monument. Email captured photos to: **upload@chronolog.io** with the subject line "TSF-101". You will receive an email back with a link to view the time-lapse.

4) Distinct from the darker hue of the gravels that formed over ancient stream beds, the highly eroded topography visible here and throughout TUSK are what remain of older Pleistocene age wetlands. The expansive wetlands and streams preserved in the Las Vegas Formation were subjected to intense weathering and erosion as the springs dried and local climate became more arid. Over time, flowing water here in the upper Las Vegas Wash carved through the soft sediments of the Las Vegas Formation to expose sediment layers and fossils. This process continues to this day, allowing researchers to study the changing wetland habitats, plants, and animals through time.

5) Thousands of fossils have been found in the Las Vegas Formation belonging to mammals, reptiles, fish, snails, birds, and plants that used to live here thousands of years ago. The most common vertebrate fossils (animals with a backbone) identified at Tule Springs are from Columbian mammoths (Mammuthus columbi), close relatives of living elephants with long, curved tusks. Extinct camels, giant ground sloths, several species of horse, deer, bison, and even sabertooth cats lived in this desert wetland habitat. What happened to these Ice Age plants and animals? Many species of animals went extinct, and the cause of this extinction is still under scientific investigation. Several species of plants and animals survived this extinction, such as juniper trees (Juniperus californica), pinyon pine (Pinus monophyla), and waterfowl, but they shifted to more suitable habitats after the Tule Springs area became too arid and warm for them. Some plant and animal species, such as sagebrush (Artemesia sp.), coyotes (Canis latrans), rabbits (Lepus sp.), and rodents have remained part of the Tule Springs ecosystem for thousands of years.

Hiking Information & Safety

SeasonalityThe Monument is open year-round. In spring-summer, wildflower blooms may be visible generally from March-May. In summer, temperatures usually exceed 100° F (38° C) by noon. In winter, average low temperatures range from 38-57° F (3-14° C).

Stay Safe

- Beware of the heat! Temperatures from May-September are often above 100° F (38° C) by midday. Take caution when hiking during these months and hike in the early morning.
- When you hike, bring plenty of water and wear sturdy walking or hiking shoes, a hat, protective clothing, and sunscreen. It's also wise to pack salty snacks, a first aid kit, a map, a flashlight with spare batteries and a whistle. Be sure to tell someone where you're hiking and when you expect you'll return.
- Desert thunderstorms can cause flash floods, so be wary of nearby storms. If rain is in the forecast, seek high ground. Flash flooding through washes can occur rapidly, even if it's not raining where you are. Do not enter flooded areas; flash floods flow at high velocities and can carry large rocks and debris.
- The upper Las Vegas Wash is in a constant state of erosion; even stable-looking surfaces may be undercut below and can cause the ground to collapse underneath you. Therefore, hiking or climbing on or near the wash walls may cause injury or falls.
- Rattlesnakes are native to the Mojave Desert, including Tule Springs Fossil Beds. Although venomous, rattlesnakes are very wary of people. To avoid surprise encounters with a rattlesnake, it is best for you and your pet to stay on the trail and avoid densely vegetated areas where snakes may be resting. If you do see a rattlesnake, steer clear, and do not approach it or attempt to chase it away.

Water

Drinking water is not available at the trailhead or along the trail. It is recommended that hikers bring at least 4-5 liters of water per person.

Restrooms

There are no restroom facilities within Tule Springs Fossil Beds National Monument at this time.

Parking

Parking for the Aliante Loop Temporary Trail is available on North Aliante Parkway between Grand Teton Road and Horse Drive (Across from West Moonlight Falls Avenue).

Transportation

For more information on park transportation, visit our transportation page (link: **Directions - Tule Springs Fossil Beds National Monument (U.S. National Park Service) (nps.gov)**)

Trail Etiquette

Hikers, joggers, leashed pets, and bicycles are permitted on our temporary trails. Please stay on the designated route, following trail signage. Respect wildlife while enjoying the trail by keeping your distance and carrying out all trash, pet waste, and food waste (fruit peels, pits, shells, etc.). Photographs and memories make the best souvenirs- the collection of rocks, fossils, soil, plants, artifacts, or any resources are prohibited.

Last updated: June 22, 2021

CONTACT THE PARK

Mailing Address:

Not to be used for navigation purposes Tule Springs Fossil Beds National Monument 601 Nevada Way Boulder City, NV 89005

Phone:

(702) 293-8853 Information Line