

# North Menan Butte Trail

## River Habitat

This is an excellent view of where the Henry's Fork and South Fork of the Snake River join forming the Snake River. The actual confluence is hidden behind the South Butte. These rivers support one of the most extensive cottonwood gallery forests remaining in the western United States.

Narrow leaf cottonwoods, **Populus angustifolia**, need direct sunlight and up to 100 gallons of water per day per tree. The cottonwood is a vital part of the river environment. Roots stabilize the river bank, preventing erosion, and mature trees provide habitat for wildlife.

## Deer Parks Wildlife Mitigation Unit

The Deer Parks Wildlife Mitigation Unit and is 2,556 acres that is cooperatively managed by the BLM, the Idaho Department of Fish and Game and the Shoshone-Bannock Tribes. The photograph below shows part of the Mitigation Unit in the foreground looking east to South Menan Butte.

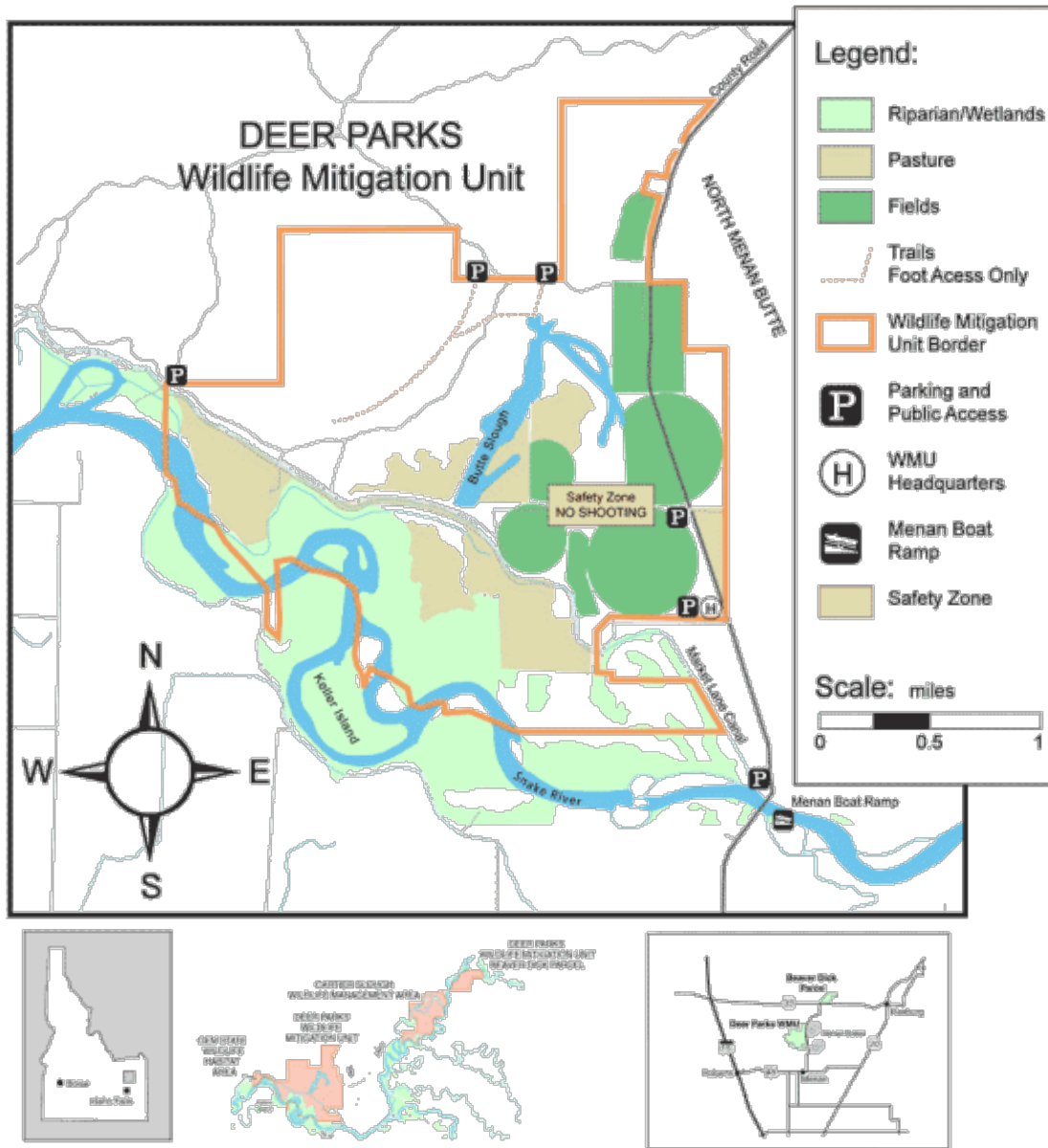


The Deer Parks Wildlife Mitigation Unit includes 3 miles of Snake River frontage, wetlands, shrub-steppe

uplands and croplands. This area was purchased with funds from Bonneville Power Administration as partial mitigation for the 16,000 acres flooded by the Palisades Reservoir.

Deer Parks Wildlife Mitigation Unit is open year-round and offers a wide range of recreational opportunities such as bird watching, walking, hiking, jogging, horseback riding, cross-country skiing, snowshoeing, hunting and fishing.

This Wildlife Mitigation Unit is closed to all motorized use to protect the vegetation, minimize wildlife disturbance, and improve hunting opportunities. Camping, firewood cutting, or fires are not permitted at Deer Parks Wildlife Mitigation Unit.



## **Raptors: What makes a bird a raptor?**

Raptors soar on rising air currents to hunt their prey of fish, ground squirrels, jackrabbits and other small mammals that live on North Menan Butte. Raptors soar on rising air currents to hunt their prey of fish, ground squirrels, jackrabbits and other small mammals that live on North Menan Butte.

The word raptor comes from the Latin word “rapere” which mean to seize or plunder. Today, the word is used to describe a group of birds also known as birds of prey. In Idaho, 31 species of raptors can be found. Seventeen species of diurnal raptors (hawks, eagles, and falcons) and 14 species of nocturnal raptors (owls). The river system above Idaho Falls produces over half of Idaho’s bald eagles and one third of the Yellowstone area bald eagles.

Raptors are characterized by a hooked beak, strong feet with sharp talons, keen eyesight, and a carnivorous diet.

## **St. Anthony Sand Dunes: Looking North from the top of Menan Butte**

The largest set of sand dunes in Idaho covers 175 square miles and is visible from here. When sand grains are lifted by the wind, they bounce along the surface like a basketball. Eventually, they are stopped by a bush or a rock. The sand grains will stack up on each other forming a dune. This is how the St. Anthony Sand Dunes were formed. Can you see the white dunes from here? You can see North Menan Butte from the sand dunes...just check out the photo below.



They are approximately 35 miles long and 5 miles wide. Dunes are from 50 to 400 feet tall and consist of sand made up mostly of white quartz peppered with black basalt.

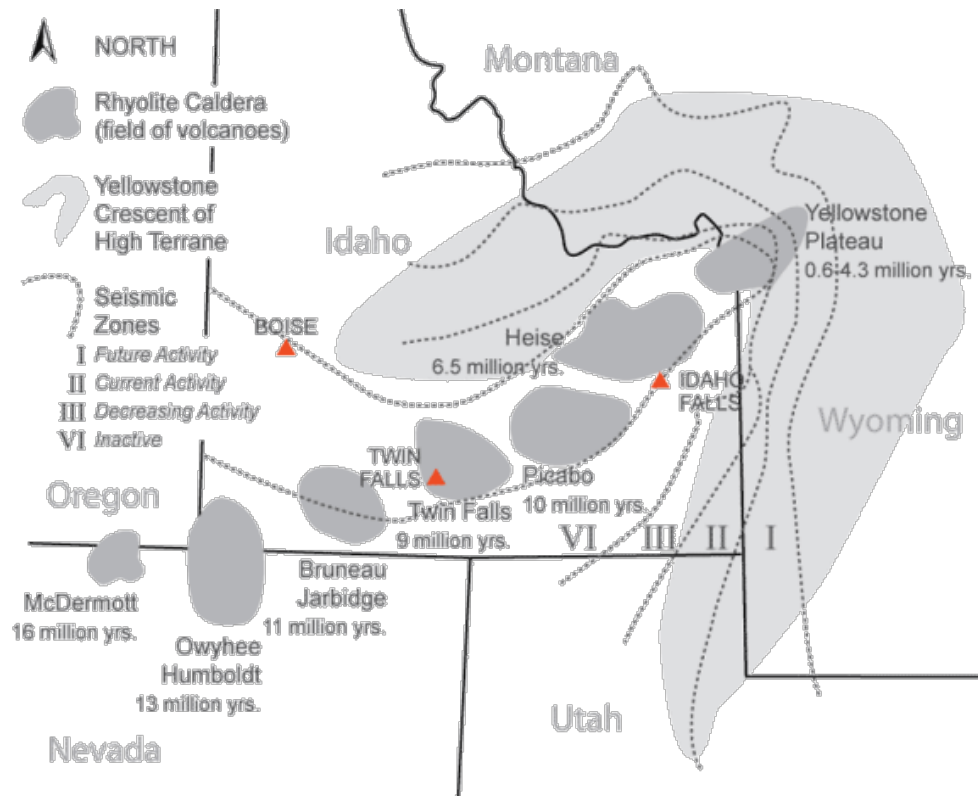
St. Anthony Sand Dunes are called **barchan** dunes because they form **sharp crescents** that resemble **ram's horns**. At St. Anthony, the tips of the horn-shaped dunes face northeast which indicate the winter winds from the southwest seem to move the sand. Southwest winds have also created the elongated shape of both Menan Butte volcanoes. Off-road recreational vehicle use is encouraged on open sand only at St. Anthony Sand Dunes.



## Snake River Plain: Footprints of Collapsed Volcanoes

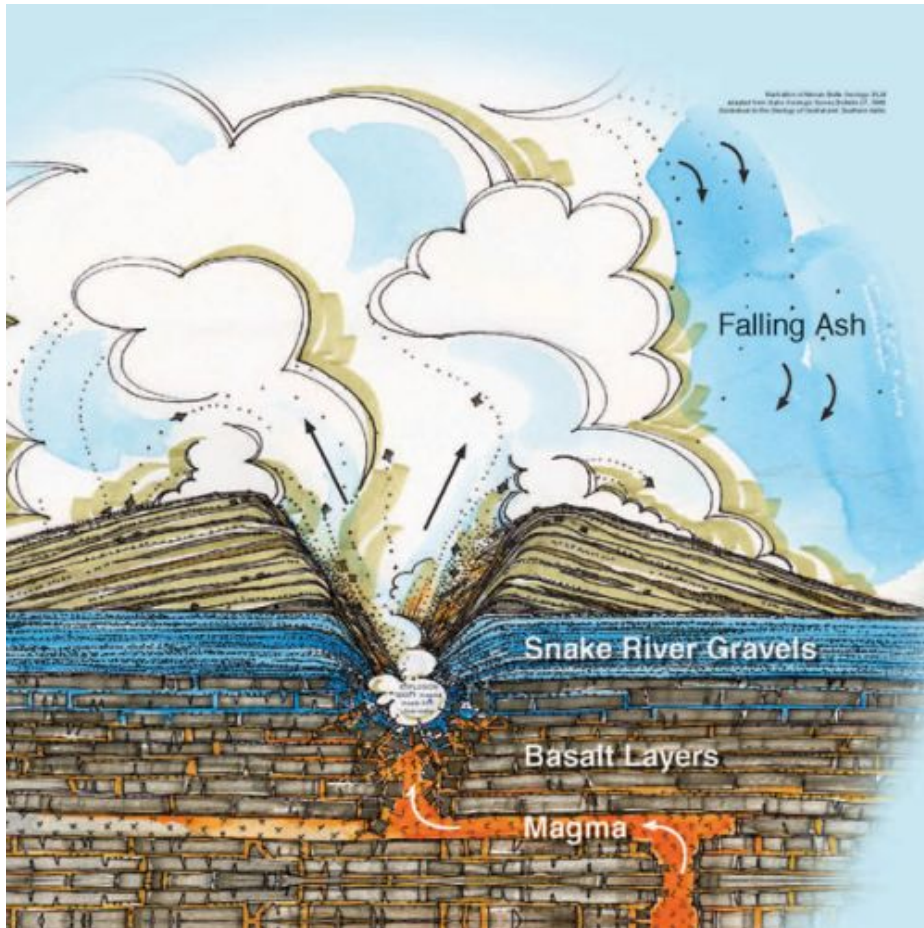
The Snake River Plain was formed by eruptions beginning in southwest Idaho 13 million years ago. As the North American continent shifted to the southwest over the stationary hotspot (now currently under Yellowstone), the earth's crust melted into magma and erupted. To the southwest, a straight line of ancient volcanoes were formed. These volcanoes are oldest in the west and progressively younger to the east due to the continuous movement of the North American continent over the hotspot.





## Glass Mountain: (Tachylites) are Unusual and Unique

The Menan Buttes are extinct volcanoes formed by violent eruptions 10,000 years ago. Unusual because they erupted through the cold waters of the Snake River that flowed where the buttes stand today. When molten magma met the cold river water, it cooled so quickly crystals were unable to form and the lava solidified into glass called tachylite. The heat of the magma flashed the river water to steam, shattering the magma into tiny fragments that welded together as the hot ash settled to the ground into glassy rocks. North Menan Butte is a National Natural Landmark because the buttes are the only volcanoes in the United States to erupt through freshwater.



Spaces left by gas bubbles in hot lava as it surfaced, cooled and solidified from the vent of the North Menan volcano.

## Wildlife

Look around you. You are surrounded by different homes to animals (habitats). Animals seek refuge (shelter) in riparian areas, wetlands, shrub lands, lava fields, pasture and croplands. Some animals migrate (travel) to different habitats depending on the season. For example, waterfowl migrate to riparian areas and wetlands at Deer Parks Wildlife Mitigation Unit in late winter and early spring. Deer, skunk and porcupine live all year long on and around Menan Buttes.

[Download the Wildlife Book here!](#)

## Wind Bowl: The Tuff Stuff

For 10,000 years wind and dirt have blown in a circular fashion scouring away the tuff (rock composed of compacted volcanic ash). Wind erosion fashioned windows, arches, pillars, caves, channels and this large circular basin. For numerous years prevailing winds have blown from the southwest. During eruptions, the winds carried the molten material to the northeast of the vent giving the volcanic cones their elongated shape.



Wind-swept rocks at the top of Menan Butte, otherwise known as the amphitheater.

Wind is also responsible for the sharp crescent shape of each dune at St. Anthony Sand Dunes. The tips of the crescent-shaped dunes face northeast which indicate the winds from the southwest.

The South Butte volcano is visible from "The Amphitheater" on North Menan Butte. WIND, not water, erodes the volcanic tuff into spaces and shapes that stir the imagination. A stream trickles into this basin and off the side of this volcano.

BELOW: Aerial view of North Menan Butte reveals an elongated bowl shape driven by southwest winds during and after eruptions.





## **Xenoliths = Strange Rock**

A xenolith is a one type of rock embedded in a different igneous rock (solidified magma) like chocolate chunks in cookie dough. Xenoliths range from sand size to boulders more than one foot in diameter. The Menan Butte cones contain xenoliths of basalt and of river gravel carried upward by the explosions in the vent.

Notice the shape of xenoliths. When the xenolith shape is angular or rough-edged with a dark color, they are fragments of basalt torn from the walls of the underground feeding conduits below the surface of where you are now standing (see below photo).

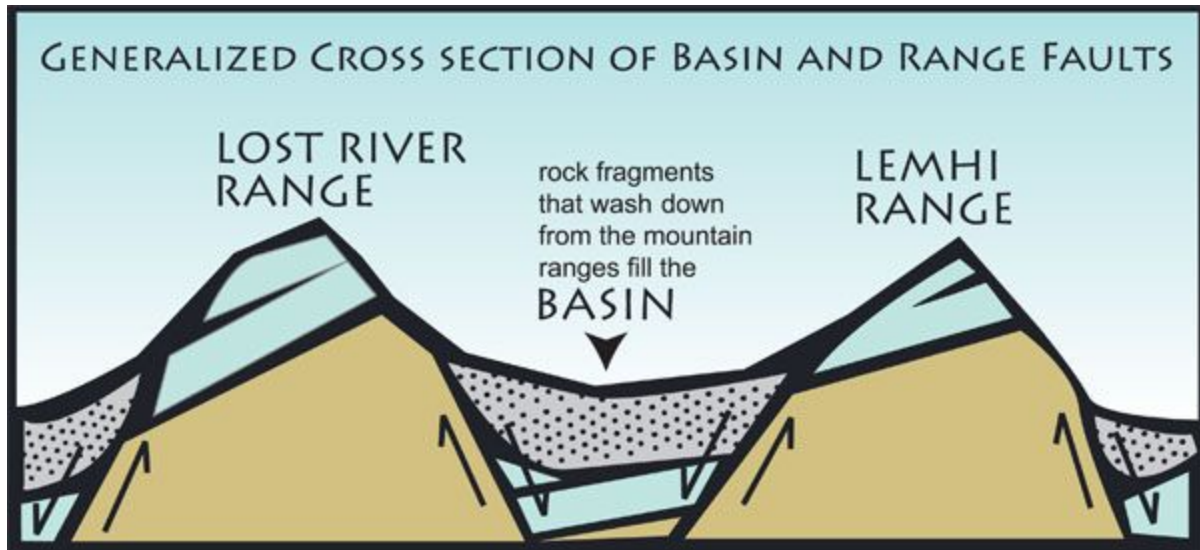


This angular xenolith is embedded into the volcanic tuff.

Rounded xenoliths are river rock that has been transported and rounded by the South Fork of the Snake River. These rocks are composed of granite, quartzite, and schist which are found in the Teton Range 50 miles from here.

## **Faulty Mountains**

The Lemhi Mountains to the west are typical of a "Basin and Range" landscape. This range was created when the earth's crust stretched so that it cracked apart, creating large faults. Along the faults, the mountains lifted up from pressure beneath the crust as the valleys subside.



Extending from the Snake River Plain to the south, the Lemhi Range forms a rugged line of peaks stretching northeast over 100 miles to end near Salmon Idaho. Unlike the Lost River Range to the west, there are no low passes crossing the Lemhi Range. A hundred mile drive may be required to get from one side of the range to the other.



Birch Creek flows from the beautiful Lemhi Mountains. Photo: James Neeley

High and dry in the south, lower and greener in the north describes this range, with dozens of peaks beckoning as you travel north. Saddle Mountain, Diamond Peak (above, center), Bell Mountain, Gilmore, Big Creek, Yellow and Lem Peaks, to name a few. Further to the west, you will find Bear Mountain and Iron Creek Point on the Iron Divide