

Pahneekahvets Trail Guide

at Sundance Preserve



Sundance
Nature Alliance

trail map

trail map



Sundance Mountain Resort's
Vision statement:

“To build upon Robert Redford’s legacy
as stewards of this mountain drawing
inspiration from art, nature, and humanity
to provide a place of discovery.”

Cover Art by Robert J. Colorow

1 Who came before us? Cultural History

Welcome to the Pahneekahvets trail. The story of this valley begins with its earliest inhabitants, the Noochew Ute, and specifically the Toompahnawach (Mouth of the Headwaters) band of the Ute Indian Tribe. We recognize and respect the enduring relationship that exists between many indigenous peoples and their traditional homelands.

The Sundance area was not a permanent home to the Ute because the extreme winter conditions made other locations more desirable. They would use this area in the summer months to hunt and gather plant foods and medicinal herbs. Mt. Timpanogos was well known to the Ute who traveled along the Provo River.

At the turn of the 20th century (1899), Scottish immigrant Andrew Jackson Stewart and his two sons, Scott and John, surveyed the North Fork of the Provo River. The family subsequently homesteaded

about 2,200 acres of this valley, and in 1944 developed a small ski resort here called Timp Haven.

In 1969, Robert Redford began to acquire the land now known as Sundance Mountain Resort and envisioned the careful growth of a community that balanced art, nature, and recreation.

Today, the new owners of Sundance Mountain Resort continue to uphold a commitment to conservation by providing experiences where art and nature inspire visitors to develop a connection to the land.

“They don’t mention Timpanogus in the Ute language. The mountain would shake when you called it. In rainstorms, it would thunder and lightning all at once.”

— Quote by Bobby Cuch, Ute Elder

Where Are We? Climate and Watershed

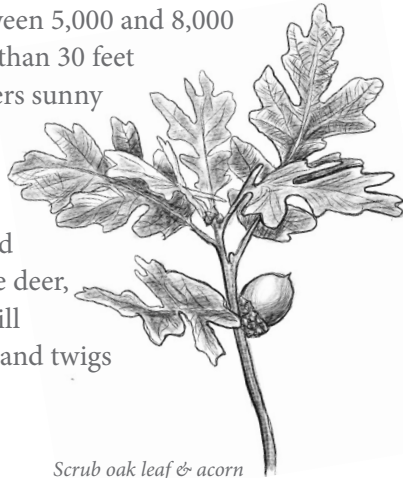
Today, you are hiking on a recreational trail system located on the 1500-acre Sundance Mountain Resort Preserve, containing wildlife habitat, recreation, and scenic vistas. This land is managed in partnership with Sundance Mountain Resort and Sundance Nature Alliance.

Located in the Wasatch Mountain Range, which is part of the Rocky Mountain Montane Forest (elevations between 6000-9,500 ft/ 1828-2895 m). The elevation at the trailhead is **about 6,600** feet (2,011m). The local climate is defined by snowy winters and hot dry summers. Snowmelt in the mountain ranges of northern Utah provides the vast majority of drinking & agricultural water to communities downstream. The snowpack in this mountain range serves as an important reservoir, slowly melting through the growing season and providing year-round freshwater to Stewart and Aspen Grove streams which flow into the North Fork of the Provo River, which finds its terminus via the Jordan River into the Great Salt Lake.

2 Scrub Oak Community

With a total distance of 1.25 miles, the trail begins with a slight uphill and then follows a gradual descent for the rest of the way. As you begin your ascent, dense low shrubs cover both sides of the trail. Look carefully at the shape of the leaves. What do you notice? Unlike the towering oaks of the east, and the broad live oaks of coastal California, scrub oak or gambel oak typically grows as a low shrub. Found in Utah's mountains between 5,000 and 8,000 feet, and typically less than 30 feet high, gambel oak prefers sunny south-facing slopes.

The acorns provide a rich food source for small mammals and ungulates such as mule deer, elk and moose, who will also graze on the bark and twigs during the winter.



Scrub oak leaf & acorn

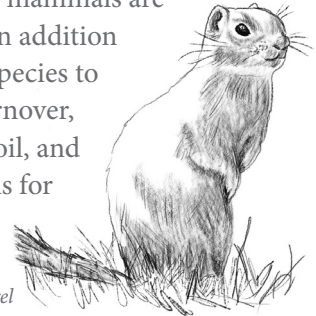
3 Meadow Ecology



Balsamroot

At the top of the climb, the trail opens up into a small meadow. During the summer months, you may notice a variety of blooming plants such as lupines, mule's ear or balsamroot, yarrow, asters, and goldenrod, all attracting various pollinators. If you look carefully, you can see soil disturbances and small holes

in the ground dug by burrowing animals such as ground squirrels and rabbits. As ecosystem engineers responsible for creating and maintaining various habitat types, these burrowing mammals are considered keystone species. In addition to creating habitats for other species to use, they help facilitate soil turnover, modify the properties of the soil, and create ideal growing conditions for nearby plants.



Uinta Ground Squirrel

4 Geology & Mt. Timanogos

After making your way over the rocky ridge, Mount Timpanogos dominates the landscape to the west, presenting a magnificent example of a glacier-sculpted bowl, or cirque. At 11,752 ft. (3,582 meters) above sea level, 'Timp' is the second-highest peak of the Wasatch range. Composed of largely sedimentary rocks formed 300 million years ago when most of central North America was submerged under a shallow sea, the Wasatch has been dramatically sculpted by uplift on a fault line formed between the Basin and Range to the West and the Middle Rocky Mountains to the east. Look carefully and you will spot Stewart Falls at the base of the cirque.

5 Hydrology, Climate & Provo River Watershed

Sundance lies at the ancient terminus of three converging glaciers below Mt. Timpanogos, whose imposing peaks and cirques produce a profusion of springs -- areas where underground water comes to the surface and feeds the lakes, falls, creeks, and ponds in the area. This runoff provides precious freshwater year-round to flora and fauna and the Sundance community. Eventually, the canyons' two main tributaries, Stewart Creek and the North Fork reach the Provo River.

Looking towards the horizon in the east, you can see the Uintah Mountain range in the distance, the location for the headwaters of the Provo River. Snowmelt in the mountain ranges of northern Utah provides the vast majority of drinking & agricultural water to communities along the Wasatch Front.

6 Sagebrush Community

Continuing on, the mountain mahogany tree to your right might invite you to rest in its shade. The sagebrush may beckon you to take in its aromatic scent. The nearby serviceberry shrubs have delicate white blooms in spring, followed by small dark berries that form an important food source for wildlife as well as indigenous peoples, the surplus was dried and preserved for consumption during the winter months.

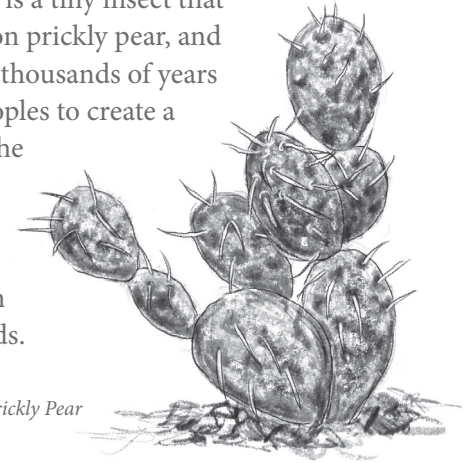
The sagebrush/ juniper habitat is one of the most prevalent in the arid state of Utah. However, due to a large amount of precipitation (mostly in the form of snow) in northern Utah and the Wasatch mountains, and the varied topography, the Sundance area supports an incredible diversity of habitat and corresponding plant and animal species.



Serviceberry

7 Prickly Pear

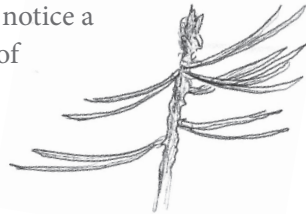
Look carefully for a plant that might seem out of place here, a cactus commonly known as a Prickly Pear (Opuntia). The sunny exposure and dry soils of this spot on the trail have created a suitable habitat to a plant that is more commonly found in the arid deserts of the Southwest. Known as nopales in Spanish, the prickly pear has a long history of cultivation, medicinal, and nutritional use in that region. Cochineal is a tiny insect that feeds exclusively on prickly pear, and has been used for thousands of years by indigenous peoples to create a natural red dye. The species of prickly pear found in Utah are cold-tolerant, and often distributed by birds.



Prickly Pear

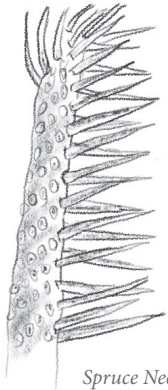
6 Douglas Fir Community

As the trail begins to descend, notice a transition from the scrub oak of the sunny south-facing slopes, to the evergreens (conifers) that prefer the cooler and more moist north-facing slopes. Look carefully at the conifers as you pass, and feel their needles. What do you notice? Are the needles flat or rounded, stiff or supple? Do the needles grow individually or in bundles?



Pine Needles

Douglas Fir is the most prevalent tree species in this section of the trail, and you will find that the needles are somewhat flat and soft. Their cones have bracts (outer cone scales) that are three-pronged, often referred to as mouse-tails, which distinguish them from any other conifer cone. With 20-



Spruce Needles

30 seeds per cone, they are an important food source for small mammals as well as many bird species such as Clark's nutcrackers, mountain and black-capped chickadees, red-winged crossbills, and dark-eyed juncos. Douglas Firs also provide excellent cover and forage opportunities for other wildlife species including the great horned owl, red-tailed hawk, northern goshawk, Mexican spotted owl, Steller's jay, blue grouse, red fox, porcupine, and mule deer.



Fir Needles



Douglas Fir Cone

9 Nesting Cavities & Bark Beetle

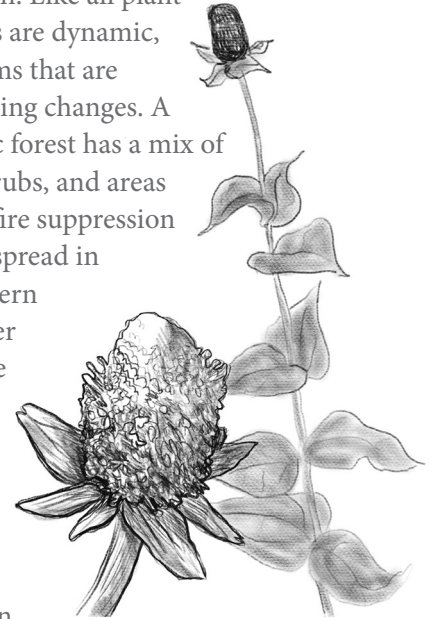


*Hairy Woodpecker
& Nesting Cavity*

You may notice a few dead-standing trees near this section of the trail. Look carefully for small cavities in the trunk. These cavities are formed by various woodpeckers such as the northern flicker, red-naped sapsucker, downy and hairy woodpeckers as they search for boring insects and larvae hidden under the bark or in rotting wood. They also excavate larger holes to use as nesting sites for their young. Similarly to burrowing animals, these primary cavity nesters are keystone species that create habitat for other species such as owls, kestrels, and starlings that are unable to construct their own nesting cavities. On dead trees where the bark has also been peeled off, you may also notice many small holes and intricate patterns in the wood created by bark beetles.

10 Forest Health, Succession & Disturbance

As a stand of Douglas Fir trees grows to maturity, the trees typically create a closed canopy with sparse understory vegetation. Like all plant communities, forests are dynamic, ever-changing systems that are constantly experiencing changes. A healthy and dynamic forest has a mix of tall trees, smaller shrubs, and areas of open floor. Since fire suppression efforts became widespread in the early 1900s, western forests became denser and more susceptible to disturbances such as bark-beetle outbreaks and large-scale wildfires.



Coneflower in bloom

The Sundance community has taken

a proactive approach to manage forest health and wildfire risk by removing many dead trees and manually thinning the forest, opening up the canopy, and promoting the growth of new seedlings and a variety of understory plants. As you make your way down this portion of the trail, keep your eyes out for patches of coneflowers, elderberry bushes, horsemint and winterberry.

Conclusion

This brings us to the end of the Pahneekahvets trail. We hope this guide has offered a glimpse into the complex web of interactions between landforms, natural forces, and living organisms that produce such an abundance of life at Sundance. As we continue to be faced with pressing issues of global climate change, here at Sundance we are renewing our commitment to conserving the lands within and beyond our resort. By protecting and stewarding these lands, we hope to secure a future for our community of guests and residents to find beauty, inspiration, and adventure in the great outdoors.



Sundance Nature Alliance

Sundance Nature Alliance is an environmental nonprofit working to protect, care for and connect people to wildlands located at the base of Mount Timpanogos within the Wasatch Mountain Range.

We want to thank and acknowledge our partners: Sundance Mountain Resort, and Wasatch Mountain Institute for their support and partnership in our shared mission to protect land and connect people to nature.

sundance
MOUNTAIN RESORT



Written and illustrated by Lara Chho – Wasatch Mountain Institute