Great Basin

Great Basin National Park
Nevada

National Park Service
U.S. Department of the Interior

Official Map and Guide

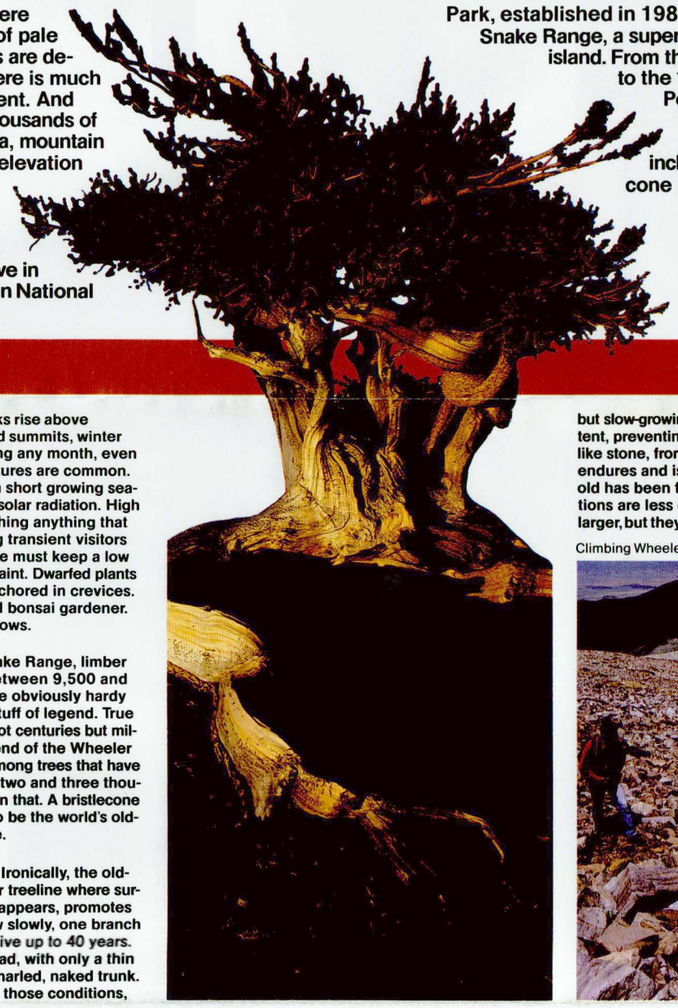
Wheeler Peak

Text by Jeremy Schmidt Cover photo by Jeff Gnass

Mountains in a Sea of Sagebrush

We call it the Great Basin, a vast area of sagebrush-covered valleys and narrow mountain ranges. The name comes from a peculiarity of drainage: over most of the area, streams and rivers find no outlet to the sea. Instead, water collects in shallow salt lakes, marshes, and mud flats, where it evaporates in dry desert air. There is not just one basin here but many, all separated by mountain ranges running roughly parallel, north to south. The landscape plays and replays a single magnificent theme of alternating basin and range—broad basins hung between craggy ranges—from the Wasatch Mountains of Utah to the Sierra Nevada of California in seemingly endless geographic rhythm. At first glance (or even after many miles of driving) you might think of it as a monotonous landscape—nothing out there but sagebrush, a vast sea of pale green shrubs. Appearances are deceptive. As in the ocean, there is much life not immediately apparent. And above the valleys, rising thousands of feet from the sagebrush sea, mountain ranges form a sort of high-elevation archipelago, islands of cooler air and more abundant water. Here we find a rich variety of plants and animals that could not survive in the lower desert. Great Basin National Park, established in 1986, includes much of the South Snake Range, a superb example of a desert mountain island. From the sagebrush at its alluvial base to the 13,063-foot summit of Wheeler Peak, the park includes streams, lakes, alpine plants, abundant wildlife, a variety of forest types including groves of ancient bristlecone pines, and numerous limestone caverns, including beautiful Lehman Caves.

The Great Basin
Centered on Nevada but extending into neighboring states, the Great Basin stretches from California's Sierra Nevada Range on the west to the Rockies of Utah on the east. The region is one of high, silent valleys, numerous mountain ranges, and few rivers. Great Basin National Park protects the South Snake Range, near the Utah border east of Ely, Nev.

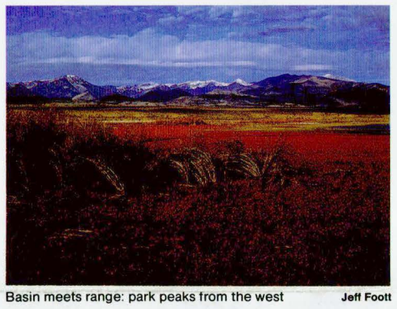


Bristlecone pine Tom Bean

On the Edge of the Desert

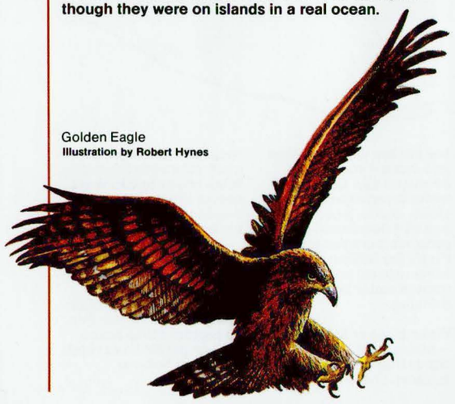
The Snake Range provides a good example of biogeography, the relationship between living things and the landscape. As elevation increases, the climate changes, creating habitats for different plants and animals. During the last Ice Age, glaciers sprawled across the high peaks. The air was cooler, allowing forests of bristlecone and limber pine to grow on the valley bottom, along the shores of long sinuous lakes. The largest body of water was Lake Bonneville, of which the Great Salt Lake is today a shrunken remnant. About 15,000 years ago, its waves lapped a beach just 10 miles from the current park boundary.

That changed around 10,000 years ago, when the climate turned warmer. Glaciers melted, lakes dried up, and the desert plants we see today invaded the desiccated valleys. The Snake Range became an island



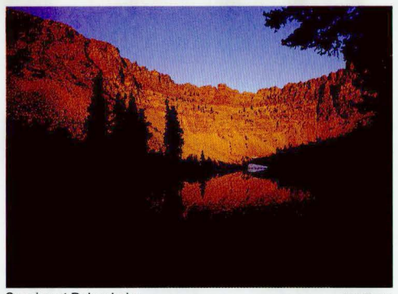
Basin meets range: park peaks from the west Jeff Foott

surrounded by desert, a refuge for temperate-climate dwellers. For many organisms with no means of transport, the desert basins present impassable barriers. These species are cut off from others of their kind, isolated, to develop unique adaptations, as surely as though they were on islands in a real ocean.



Golden Eagle
Illustration by Robert Hynes

A Land of Lakes and Forests



Sunrise at Baker Lake Tom Bean

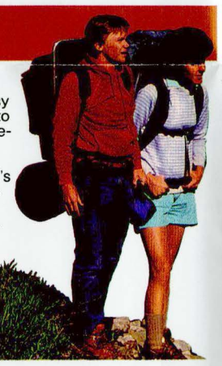
Close beneath the summit of Wheeler Park, a bit of the Ice Age exists in the form of a small glacier, the only one of its kind in the Great Basin. A mere token, it calls to mind the powerful glaciers that capped the Snake Range only a few thousand years ago. Evidence of glacial activity is easy to find. Piles of glacial debris—boulders, sand, gravel—form mounds and ridges. Sparkling Teresa and Stella Lakes occupy hollows gouged by ice.

These were alpine glaciers, not the huge continental ice sheets that enveloped the northern part of the continent. Here, ice never reached the valley floor. Instead, it melted at an elevation of about 8,000 feet. You can see this in the shape of the Baker Creek drainage. Above the melting point, glaciers plucked and carried bedrock, widening and smoothing the mountain slopes. Below the melting point, cascading streams cut sharp-sided canyons.

Wheeler Peak Scenic Drive provides good views of the range. Beginning near the park entrance, it leaves Lehman Creek to climb across a dry shoulder of the mountain, ending near treeline. In 12 miles, it gains 3,400 feet in elevation, passing through a variety of habitats: from pinyon-juniper woodlands, along a creekbed lined with aspen trees, through a zone of shrubby mountain mahogany and manzanita, into deep forests of Englemann spruce and Douglas-fir, to the flower-spangled meadows and subalpine forest of limber pine, spruce, and aspen at the Wheeler Peak campground.

Prehistoric peoples, known from archeological evidence, lived in this area along the shores of ancient Lake Bonneville. Later Native American residents lived in small villages near the present towns of Baker and Garrison from about AD 1100 to 1300. Known as members of the Fremont Culture, they irrigated corn, beans, and squash in the valley and hunted in the mountains. Numerous rock art sites in the park remind us of their presence.

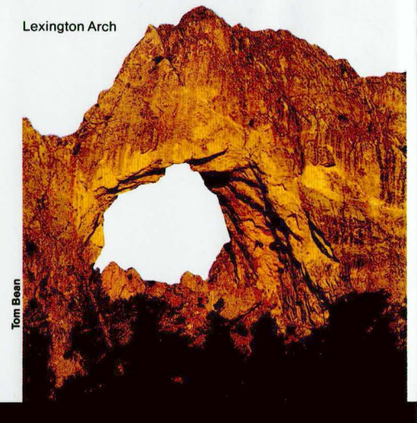
Shoshone and Paiute peoples lived in the area from about 1300 until recently in small kin groups near springs and other water sources. They gathered and hunted a variety of wild foods, but their dietary mainstay, especially important in winter, was the pinyon nut. Descendants of these peoples still live in the area and share this harvest with other residents: pinyon jays, rock squirrels, wood rats, and other small animals.



Hiking opportunities abound in the park. Easy to moderate trails lead to alpine lakes and bristlecone pine forest. More strenuous is a climb up Wheeler Peak, the park's highest point. Rangers lead nature walks and tours of Lehman Caves.

Tom Bean

Parry's primrose Suzi Moore



Lexington Arch

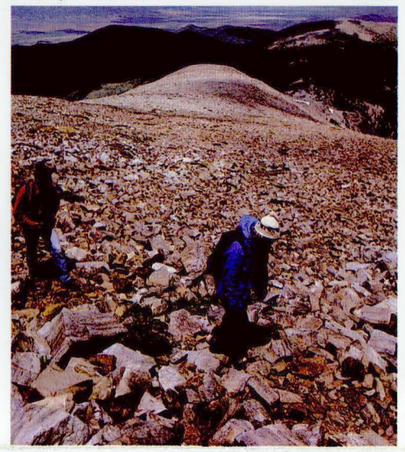
Tom Bean

Treeline and Above

In the South Snake Range, 13 peaks rise above 11,000 feet. On those lofty exposed summits, winter is never far off. Snow can fall during any month, even in July. At night, freezing temperatures are common. To survive, plants must cope with a short growing season, poor soil, thin air, and intense solar radiation. High winds also buffet the peaks, punishing anything that rises above the horizon—including transient visitors such as hikers. Whatever lives here must keep a low profile. Lichens cling to rocks like paint. Dwarfed plants grow tight to the ground, firmly anchored in crevices. Shrubs appear pruned by a careful bonsai gardener. Trees exist in small cavities or hollows.

The trees found highest in the Snake Range, limber and bristlecone pines, appear between 9,500 and 11,000 feet. While both species are obviously hardy plants, bristlecone pines are the stuff of legend. True masters of longevity, they endure not centuries but millennia. On rocky slopes near the end of the Wheeler Peak Scenic Drive, you can walk among trees that have kept their grip on life for between two and three thousand years—some much longer than that. A bristlecone pine found here was determined to be the world's oldest living thing: 4,950 years of age.

Not all bristlecones live that long. Ironically, the oldest trees are the ones growing near treeline where survival is most difficult. Adversity, it appears, promotes long life. These ancient trees grow slowly, one branch at a time. Even their needles can live up to 40 years. Often, a tree will appear nearly dead, with only a thin strip of living tissue clinging to a gnarled, naked trunk. Ordinary trees would decay under those conditions, but slow-growing bristlecone wood has a high resin content, preventing rot. Instead, the wood actually erodes, like stone, from wind and ice crystals. Even dead wood endures and is of scientific value; a piece 9,000 years old has been found. At lower elevations, where conditions are less extreme, bristlecones grow faster and larger, but they die at the tender age of 300 or 400 years.



Climbing Wheeler Peak Tom Bean

The Underground World

Touring Lehman Caves Tom Bean

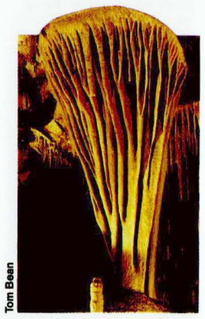
Lehman Caves (a single cavern despite the name) extends a quarter-mile into the limestone and low-grade marble that flanks the base of the Snake Range. Discovered about 1885 by Absalom Lehman, a rancher and miner, this cavern is one of the most richly decorated caves in the country, a small but sparkling gem.

What we see today began millions of years ago. The climate then was much wetter than it is now. Rain water, turned slightly acidic by seeping past surface vegetation and humus, found its way into hairline cracks deep in the native limestone. Trickling downward, the water dissolved the stone, enlarging the cracks, eventually reaching the water table. There it collected in sufficient quantity to create whole rooms. At one time, an underground stream flowed here, leaving behind tell-tale ripple marks.

Eventually the climate turned drier; water drained from the cave, leaving smooth walls and hollow rooms. Then came the second stage of cave development. Small amounts of water still percolated down from the surface. But now, instead of enlarging the cavern, the mineral-rich fluid began filling it once again. Drop by drop, over centuries, seemingly insignificant trickles worked wonders in stone. The result is a rich display of cave formations, or as scientists call them, speleothems. Lehman Caves contains familiar structures such as stalactites, stalagmites, columns, draperies, and flowstone, along with some interesting and delicate rarities.

Lehman Caves is most famous for the rare and mysterious structures called shields. Shields consist of two roughly circular halves, almost like flattened clam shells. How they are formed remains a subject of controversy—another of the pleasant mysteries to be found in the underground world.

The Parachute (right) and other formations make touring Lehman Caves an unusual experience. Helectites look like forests of chow mein noodles. Aragonite grows clusters of snow-white needles. Cave popcorn, looking like it namesake, adorns many walls.



Tom Bean

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Great Basin

Regulations and Safety

Pets must be leashed at all times and are **not** allowed in buildings and caves, on trails, or more than 100 feet from vehicle roads. Campfires are permitted in campgrounds and picnic areas in designated fireplaces only. Above 10,000 feet in the backcountry use a portable camp stove for cooking. All plants, animals, and other natural and cultural features are protected and may not be disturbed or damaged. While in Lehman Caves, stay on the trail and with the ranger at all times. Caves are fragile environments—simply touching a stalactite causes damage.

Access and Services

The main park entrance is five miles west of Baker, Nev., near the Nevada-Utah border. Driving distances in miles are: Las Vegas, 286; Salt Lake City, 234; Reno, 385; and Cedar City, 142. The visitor center is open from 8 a.m. to 5 p.m. daily—longer in summer. It is closed Thanksgiving, December 25, and January 1. Entrance to the park is free. Recreation fees apply to cave tours, developed campgrounds, and use of the RV sanitary station.

A concessioner operates a cafe and gift shop from April to October. Restaurants, a small grocery store, limited motel accommodations, and gasoline are available in Baker. The nearest cities are Ely, Nev., 70 miles to the west and Delta, Utah, 100 miles to the east.

Information Maps, interpretive booklets, and other information may be purchased at the visitor center or by mail from the Great Basin Natural History Association at the park address. Write for a free price list and order form. For more information, write: **Superintendent, Great Basin National Park, Baker, NV 89311.**

Seeing the Park

With one day to spend: stop at the visitor center and take a tour of the cave. Drive the scenic road to the base of Wheeler Peak. From there, follow easy to moderate trails to alpine lakes and the bristlecone pine forest.

With more time to spend: climb Wheeler Peak; visit the glacier in its rock-bound cirque; or explore one of the other park canyons. Snake Creek flows all year through groves of aspens beneath wildly eroded limestone outcroppings. Or visit Lexington Arch in the wild south end of the range. At the park's north end, Strawberry Creek runs through stands of aspen trees and open meadows. All park roads except Wheeler Peak Scenic Drive are unpaved and infrequently traveled. Along the way are many pleasant picnic sites with good views of the broad, sagebrush-covered basin to the east. Before going, get directions and ask about road conditions at the visitor center.

Activities

Rangers lead guided nature walks, present evening campfire programs in summer, and conduct tours of Lehman Caves. The **cave tour**—a ¾-mile walk on paved trail with stairways and indirect lighting—takes about 1½ hours. Wear warm clothing; the cave temperature is 50°F year round. Children under 16 must be accompanied by an adult.

Fishing requires a Nevada fishing license; state regulations apply. **Hunting** is prohibited; all firearms must be unloaded and cased in the park. **Horseback riding** is permitted but not on all trails. **Mountain-biking** is allowed only on designated motor vehicle roadways. The park has miles of dirt roads; check with a ranger about which are open. All motorized vehicles used on park roads, and their operators, must be licensed in their state of residence.

Camping Four developed campgrounds provide water (summer only), restrooms, fire rings, picnic tables, and tent pads. Primitive campsites along Strawberry Creek provide tables, tent sites, and pit toilets, but **no water.** Some sites have road access in summer only.

The backcountry Backpacking opportunities abound, but there are few maintained trails. Routes generally follow ridge lines or valley bottoms. Plan ahead: bushwhacking through stands of mountain mahogany can be arduous—or impossible. Topographic maps, advice, and information on current conditions are available at the visitor center. Backcountry registration is strongly recommended.

Hiker Warnings

Many park trails reach elevations above 10,000 feet. Avoid overexertion and be prepared for sudden weather changes. When storms threaten, and always when hiking above treeline, carry warm clothing and rain gear. Avoid ridges and exposed areas during electrical storms.

Surface water may not be available in summer; carry at least a quart per person on short hikes and more if you plan to be out all day. Drinking water is provided at the visitor center (year round) and all 4 developed campgrounds (summer only). Purify (by boiling or other means) any untreated water before drinking.

Wear proper footgear—hiking boots or sturdy shoes that provide ankle support. Loose and sharp rocks are common, especially off maintained trails. Mine shafts and tunnels, part of the park's history, are dangerous. Do not enter them.

A special note The alpine world is ecologically fragile. High elevation plants grow slowly; their margin of survival is thin. To protect these areas, stay on established roads or trails wherever possible.