



Mountains in a Sea of Sagebrush

We call it the Great Basin, this vast region of sagebrush-covered valleys and narrow mountain ranges named for its lack of drainage. Its streams and rivers mostly find no outlet to the sea, and water collects in shallow salt lakes, marshes, and mud flats to evaporate in dry desert air. It's not just one but many basins, separated by mountain ranges roughly parallel, north to south, basin and range alternating in seemingly endless geographic rhythm. Broad basins hang between craggy ranges—from California's Sierra Nevada to Utah's Wasatch Mountains.



The Great Basin
Centered on Nevada the Great Basin stretches from California's Sierra Nevada to Utah's Wasatch Mountains. The region features high, silent valleys, many mountain ranges, and few rivers. Great Basin National Park protects the South Snake Range near Utah's border east of Ely, Nev.

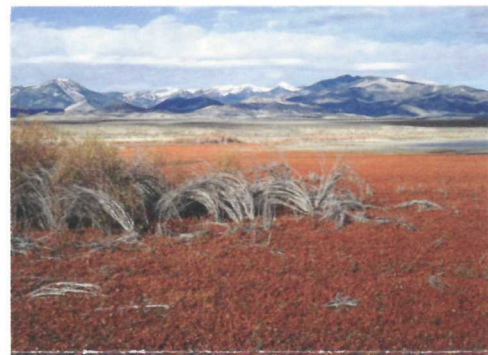
At first glance (or after long driving) you might see the landscape, as monotonous—a sea of pale green shrubs. But looks deceive. As with oceans, much life here is not immediately apparent. Above the sagebrush sea, mountain ranges form a high-elevation archipelago as islands of cooler air and more abundant water. Richly varied plants and animals live up there that could not survive in the lower desert.

Congress created Great Basin National Park in 1986, including much of the South Snake Range, a superb example of a desert mountain island. From sagebrush at its base to Wheeler Peak's 13,063-foot summit, the park offers streams, lakes, abundant wildlife, varied forest types (even groves of ancient bristlecone pines), alpine plants, and many limestone caverns, including beautiful Lehman Caves.

On the Edge of the Desert

The Snake Range exemplifies how living things and landscapes interrelate. As elevation increases, the climate changes, creating habitats for different plants and animals. The most recent ice age glaciers sprawled across these high peaks. The air was cooler, so forests of bristlecone and limber pine grew in the valley, beside long sinuous lakes. Lake Bonneville was the largest—today's Great Salt Lake is its shrunken remnant—and 15,000 years ago its waves lapped shoreline 10 miles from today's park boundary.

All that changed starting about 10,000 years ago as the climate warmed. Glaciers melted. Lakes dried up. Desert plants invaded the desiccated



Basin meets range: park peaks seen from the southeast
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valleys. The Snake Range became an island surrounded by desert, its elevation giving temperate-climate dwellers cooler refuge. For many organisms with no means of transport, desert basins are rigid barriers, and isolated species develop unique adaptations as surely as those on ocean islands.



Golden eagle
ILLUSTRATION NPS/ROBERT HYNES

A Land of Lakes and Forests



Sunrise at Baker Lake
©TOM BEAN

Close beneath Wheeler Peak's summit the ice age persisted until recently as a small, one-of-its-kind Great Basin glacier. This token called to mind Snake Range-capping glaciers a few millennia back. Other evidence is easy to find. Piles of glacial debris—boulders, sand, gravel—form mounds and ridges, and sparkling Teresa and Stella lakes sit in ice-gouged hollows.

These were alpine glaciers, not the continental ice sheets that blanketed the northern part of our continent. Ice never reached the valley floor here, but melted at about 8,000 feet of elevation. Baker Creek drainage's shape shows this. Above 8,000 feet glaciers plucked and carried bedrock, making mountain slopes wider and U-shaped. Below that level, cascading streams cut sharp-sided, V-shaped canyons.

Wheeler Peak Scenic Drive offers good views of the range. Starting near the park entrance, it climbs from Lehman Creek across a dry shoulder of mountain, ending near the treeline. In 12 miles it gains 3,400 feet in elevation, showing you varied habitats. You go from pinyon-juniper woodlands along an aspen-lined creek bed, through shrubby mountain mahogany and manzanita, into deep forests of Englemann spruce and Douglas fir. Then you move on to flower-spangled meadows and subalpine forest—limber pine, spruce, and aspen—at Wheeler Peak campground.

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

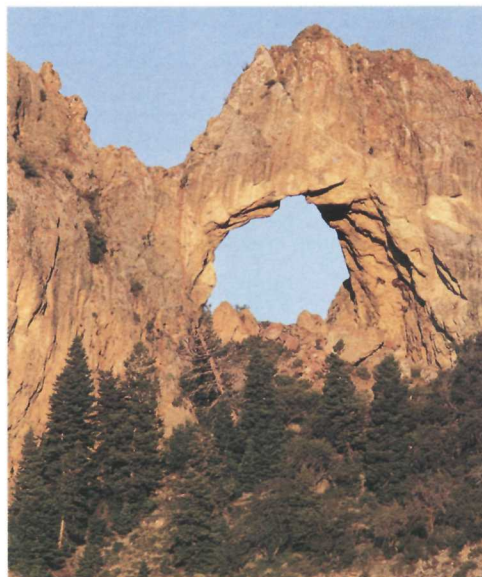
Treeline and Above

In the South Snake Range, 13 peaks rise above 11,000 feet, where the winter is never far off. Snow can fall in any month, even July. Freezing night temperatures are common. Plants cope with a short growing season, poor soil, thin air, high winds, and intense solar radiation. High winds punish anything much above the ground—even hikers. Living up there demands a low



Parry's primrose
©SID MOORE

profile. Lichens cling like paint to rocks and dwarfed plants grow snug to the ground, anchored in crevices. Shrubs look like a bonsai gardener pruned them, and trees live in cavities or hollows.

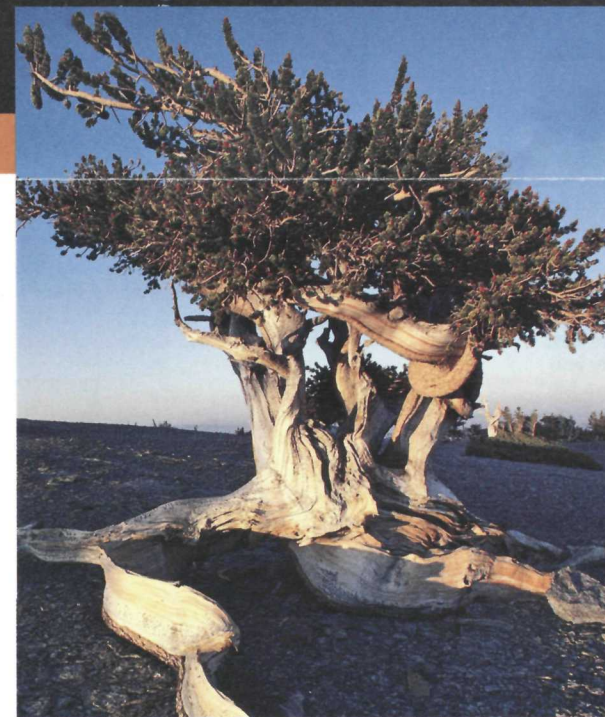


Lexington Arch
©TOM BEAN

The trees highest up in the Snake Range, the limber and bristlecone pines, appear between 9,500 and 11,000 feet. Both are hardy, but bristlecone pines are masters of longevity, enduring not centuries but millennia. On rocky slopes past Wheeler Peak Scenic Drive's end, you walk among trees 2,000 to 3,000 and more years old.

Not all bristlecones live that long. Ironically, the oldest grow near treeline where survival is the most difficult. Adversity seems to foster long life. They grow slowly, a branch at a time, their needles living up to 40 years. Often, a tree looks nearly dead—a thin strip of living tissue clinging to a gnarled, naked trunk. Most species decay under such conditions, but bristlecone wood's high resin content prevents rot. Instead, the wood erodes, like stone, from wind and ice crystals. Even dead wood endures and is of scientific value. At lower elevations' lesser extremes, bristlecones grow faster and larger but die at tender ages, 300 or 400 years.

People of the Great Basin Archeology reveals that prehistoric peoples lived along the ancient Lake Bonneville around 10,000 years ago. From about 1100 to 1300, American Indians (known as Fremont) lived in small villages near today's Baker and Garrison. They irrigated corn, beans, and squash in the valley and hunt-



Bristlecone pine
©TOM BEAN



Climbing Wheeler Peak
©TOM BEAN

ed in the mountains. Several rock art sites in the park recall their presence. Small kin groups of Shoshone and Paiute peoples lived near the springs and other water sources from 1300 until recently. They hunted and gathered wild foods, but their staple, especially in winter, was pin-

yon nuts. Their descendants still live in this area and share the harvest with resident pinyon jays, rock squirrels, wood rats, and other small animals.

The Underground World



Touring Lehman Caves
©TOM BEAN

Lehman Caves is a single cavern despite the name. It extends a quarter-mile into the limestone and marble that flank the base of the Snake Range. American Indians knew of it long before the rancher and miner Absalom Lehman explored it in 1885. It is one of the region's most profusely decorated caves.

What you see today started hundreds of thousands of years ago. Surface water, turned slightly acidic from carbon dioxide gas, mixed with water deep below the surface, dissolving the soluble rock at the horizontal water table. Evidence of the dissolving action from the slowly circulating water was recorded in the cave's rock as spherical domes in ceilings and spoon-shaped scallops on walls. Eventually the water drained from the cave, leaving behind hollow rooms and sculptured walls.

In the second stage of cavern development, water percolated down from the surface, carrying small amounts of dissolved limestone (calcite). Drop by drop, over centuries, seemingly insignificant trickles deposited the wonders of stone. The result is a rich display of cave formations scientists call speleothems. Lehman Caves has familiar formations like stalactites, stalagmites, columns, draperies, flowstone, and soda straws. But there are also rarities, like shields—two roughly circular plates fastened like flat-

tened clam shells, often with graceful stalactites and draperies hanging from their lower plate. Lehman Caves is most famous for its abundant shields.

A shield called the Parachute (right) and other formations make a tour of Lehman Caves both an unusual and rewarding experience. Delicate helictites, small branching formations that defy gravity, are found throughout. Cave popcorn, which looks like the edible kind, adorns many walls and formations.

THE TEXT IS BASED ON ORIGINAL WRITING BY JEREMY SCHMIDT



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Great Basin

Location and Services

Great Basin Visitor Center, on NV 487 in Baker, is open in summer only; contact the park for hours. Lehman Caves Visitor Center, six miles west of Baker, is open year round 8 am to 4:30 pm (longer in summer). Driving distance (miles) to Lehman Caves Visitor Center: Las Vegas 286; Salt Lake City 234; Reno 385; and Cedar City 142.

Both visitor centers have information, bookstores, and exhibits. Lehman Caves and Lehman Caves Visitor Center are closed Thanksgiving, December 25, and January 1. Great Basin Visitor Center is open in summer.

Entry to the park is free. Fees are charged for campgrounds, cave tours, and RV sanitary station (summer only). A cafe and gift shop next to Lehman Caves Visitor Center are open in summer.

Things To See and Do

For a One-day Visit Stop first at Great Basin Visitor Center to see the exhibits and learn about the Great Basin Desert. Drive to Lehman Caves Visitor Center and take a ranger-led cave tour. Drive to Wheeler Peak, then follow trails to subalpine lakes and bristlecone pine groves.

For a Longer Visit Climb Wheeler Peak, and explore park canyons. Snake Creek flows through aspen groves beneath limestone outcroppings. Lexington Arch Road requires high-clearance and four-wheel drive. Witness how plant communities of the Great Basin recover after a fire in the north end of the park. All park roads except Wheeler Peak Scenic Drive are unpaved and rarely traveled. Snow closes many roads in winter. Ask for details at a visitor center.

Activities Scheduled tours of Lehman Caves run when the Lehman Caves Visitor Center is open. Cave tours are up to a ½-mile walk on a paved trail with stairways and indirect lighting; tours take up to 90 minutes. Shorter walks are available. Dress warmly; the cave is 50°F year-round. An adult must accompany those under 16. For advance ticket sales please visit www.recreation.gov or call 877-444-6777.

A Nevada fishing license is required; state regulations apply. Hunting is prohibited. Nevada law governs the possession of firearms. Firearms are prohibited in federal buildings. Horseback riding is allowed on some trails. Mountain bike only on designated motor vehicle roadways. Vehicles and drivers on park roads must be

Baker has restaurants, hotels, gas, and basic food supplies. Garrison has no facilities. Nearest cities are Ely, NV, 68 miles west, and Delta, UT, 106 miles east. Unpaved and unmaintained roads on the park's west and south sides have no services.

Order publications about the park from Western National Parks Association at the park address.

Accessibility We strive to make our facilities, services, and programs accessible to all. Call or check our website.

More Information Great Basin National Park 100 Great Basin NP Baker, NV 89311-9700 775-234-7331 www.nps.gov/grba

Great Basin National Park is one of over 400 parks in the National Park System. Learn more at www.nps.gov.

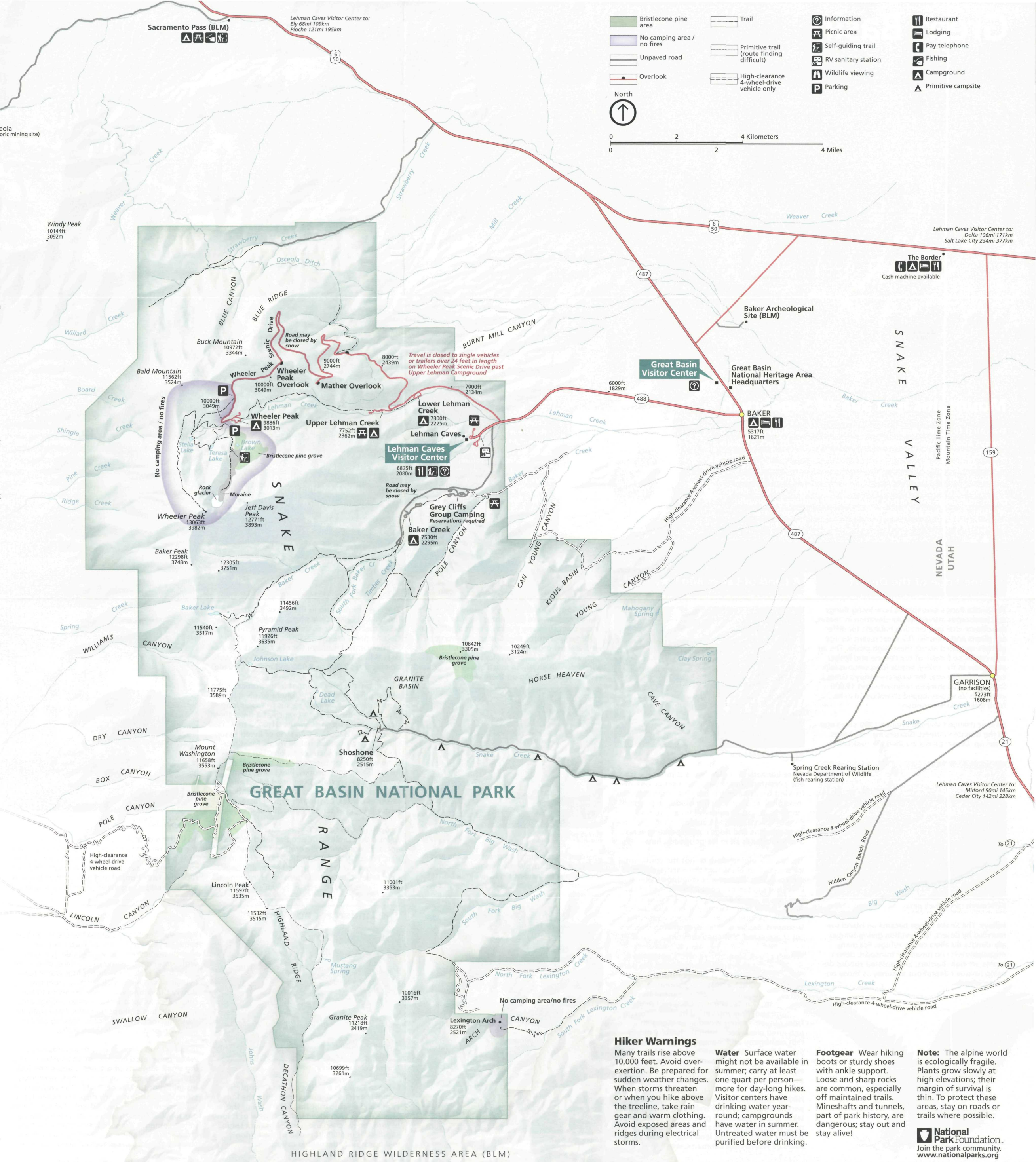
licensed. ATVs must be street-legal and licensed. Off-roading prohibited.

Camping Four campgrounds have water (summer only), restrooms, fire rings, tables, and tent pads. One campground is open year-round (no water in winter). Primitive sites along Strawberry and Snake creeks have tent sites, fire grates, and tables; some Snake Creek sites have pit toilets but no water. Some sites have road access in summer only.

Backcountry Hiking and backpacking options abound, but many park trails are primitive and route finding may be difficult. Most routes follow ridgelines or canyons. Plan ahead: bushwhacking through mountain mahogany can be tough or impossible. Get information on conditions and topographic maps at a visitor center. Backcountry registration is strongly recommended.

Regulations Pets must be on a leash six-feet-long or less. Pets are prohibited in caves and buildings, on trails except Lexington Arch Trail, and over 100 feet from roads. • Campfires are allowed only in campgrounds and picnic areas in designated grills. Campfires are prohibited above 10,000 feet; use portable stoves. • Federal law protects all natural and cultural features; do not disturb or damage. • Do not feed wildlife. • In Lehman Caves stay on the trail with the ranger. Do not touch cave formations. • Obey speed limits and traffic regulations.

Visit the park website for more information, and enjoy a safe visit.



Hiker Warnings

Many trails rise above 10,000 feet. Avoid over-exertion. Be prepared for sudden weather changes. When storms threaten or when you hike above the treeline, take rain gear and warm clothing. Avoid exposed areas and ridges during electrical storms.

Water Surface water might not be available in summer; carry at least one quart per person—more for day-long hikes. Visitor centers have drinking water year-round; campgrounds have water in summer. Untreated water must be purified before drinking.

Footgear Wear hiking boots or sturdy shoes with ankle support. Loose and sharp rocks are common, especially off maintained trails. Mineshafts and tunnels, part of park history, are dangerous; stay out and stay alive!

Note: The alpine world is ecologically fragile. Plants grow slowly at high elevations; their margin of survival is thin. To protect these areas, stay on roads or trails where possible.

National Park Foundation. Join the park community. www.nationalparks.org