

## Forests and Flowers

Except for high mountain peaks and recent lava flows, Lassen Volcanic National Park is covered with beautiful evergreen forests. In the lower reaches, ponderosa pine, Jeffrey pine, lodgepole pine, and sugar pine predominate. A few incense cedar and Douglas firs are found near Reflection Lake. As one approaches the higher elevations, white fir, red fir, and mountain hemlock are encountered. The timber-line tree is the whitebark pine and is found only on the upper slopes of Brokeoff Mountain, Mount Diller, and Lassen Peak. Other species found in the park include aspen, cottonwood, willow, and alder. Shrubs making up the chaparral thickets are common manzanita, tobacco brush, and chinquapin.

Several hundred species of wildflowers are found in the park. In the spring the crimson snow plant is outstanding. Indian paintbrush, scarlet bugler, bleeding heart, mimulus, and tiger lily add color to the mountain meadows. Because spring advances with the receding snows, there is a continuous display of flowers from early May to late September. The high country species of lupine, pentstemon, heather, and laurel are at their best in mid-August.



KINGS CREEK FALLS, AN EASY HIKE FROM THE LASSEN PEAK HIGHWAY

Seven



SKI SLOPES NEAR HELEN LAKE. SKI TERRAIN IN THE PARK IS UNSURPASSED

## Wildlife

Lassen Volcanic National Park, like all national parks, is an absolute sanctuary for the animals inhabiting it. Under this protection, all species of wildlife native to the area have increased in number. Park visitors never fail to thrill at seeing wild animals in their natural environment, their instinctive fear of man lessened to a marked degree because they are not molested.

The blacktailed and mule deer are numerous and are seen in almost every section of the park. Ground squirrels and chipmunks are also numerous and frequently tame. It is wisest to enjoy them without actual contacts, however, for some rodents have been known to carry dangerous diseases. Other small animals, including the chickaree, marten, marmot, and fox, are shy but often seen. The clumsy, shuffling black bear, the clown of the woods, is found in the park, but is rarely seen in the campgrounds.

Bird life is abundant. The lakes of the park afford nesting sites for a variety of wild fowl, and the thickets and forests are alive with many species of songbirds. The rare bald eagle is sometimes seen soaring majestically overhead or perched on some tall tree or rocky pinnacle.

Eight

## Winter Activities

The terrain and snow conditions in Lassen Volcanic National Park are as fine as may be found anywhere in the world. This is the opinion of leading skiers both in this country and abroad. The timber-free slopes in the high country surrounding Lassen Peak are ideally adapted to skiing, and the many cross-country trails that radiate from the Sulphur Works Ski Area are becoming increasingly popular with skiers who seek a new thrill away from the more populous slopes.

The park enjoys a longer skiing season than any other area in the United States. Snow is favorable for skiing 6 or 7 months of the year and for a longer period during those years when heavier than normal snowfall occurs.

Winter sports in Lassen are centered at the Sulphur Works in the southwestern corner of the park. The road to this area is maintained during the entire year and connects with State Route 36, the main lateral between Reno, Nev., and the Sacramento Valley. Facilities in the area consist of a warming house where hot lunches, refreshments, accessories, and rental ski equipment are available. Two semi-portable rope tows operated in tandem are installed at the Sulphur Works, having a total length of 900 feet with a 500-foot rise.

As the snow melts during the spring and early summer, the Lassen Peak Highway is cleared and skiers are able



THE PARK IN WINTER

Nine

to follow the snow line to the summit of 8,500 feet. It is during the spring and summer months, when weather is usually clear and fine, that cross-country ski touring is most popular.

The skiing season in Lassen Volcanic National Park usually begins the first of December and is officially closed with the Mid-Summer Tournament held annually the last week end of June. This unique event attracts skiers from all over the Nation and has become established as one of the more important skiing events. Enthusiastic skiers, however, usually find snow slopes on which they may ski as late as August.

Ice skating is to be enjoyed for a limited time during the late fall and early winter before snow blankets the ice. Reflection Lake is the most popular spot for skaters, especially during the months of November and December. Helen Lake, at the foot of Lassen Peak, is famous for its scenic grandeur as well as for skating.

No overnight accommodations are available in the park during the winter months, but numerous resorts along the highways offer standard cabin and cottage accommodations at reasonable rates. Resorts at Mineral, Lassen Camp, Mill Creek Homesites, Childs Meadow, and St. Bernard Lodge are within less than an hour's drive from the Sulphur Works. Red Bluff and Chester are about 50 miles from the park.

## Rules and Regulations

(Briefed)

**Complete park regulations** may be seen at the office of the superintendent and at all ranger stations. The following synopsis is for the general guidance of visitors, who are requested to assist in the administration of the park by observing the rules.

**Automobiles.** Many sharp curves exist on the Lassen Peak Highway, and fast driving is dangerous. Park speed limit is 35 miles per hour. At the Manzanita Lake Area a 20-mile zone has been established and is patrolled. Fee for automobile permit, \$1; house trailer, \$1; motorcycle, \$1. Drive slowly, keep to the right, enjoy the scenery.

**Hours.** The two checking stations are open between 6 a.m. and 10 p.m. No vehicle may enter or leave the park outside of these hours.

**Specimens and Souvenirs.** In order that future visitors may enjoy the park unimpaired and unmolested, it is prohibited to break any formation; to take any mineral or rock specimen; to injure, molest, or disturb any animal, bird, tree, flower, or shrub in the park. Driving nails in trees or cutting the bark of trees is likewise prohibited. Dead wood may be gathered for campfires.

**Trash.** Scraps of paper, lunch refuse, film cartons, and similar trash scattered along the roads and trails and in the campgrounds and parking areas are unsightly. Help keep the park clean and attractive by carrying trash with you until it can be burned, buried, or placed in receptacles.

**Camping.** Camp only in designated areas. Keep your camp clean. As far as possible, burn garbage in campfires and place empty cans and residue in garbage cans provided for that purpose. There is no time limit on camping, except at Manzanita Lake where a 30-day limit is in effect between June 15 and August 31.

**Dogs and cats** may be taken into the park provided they are under physical restrictive control at all times, except that no pets may be kept at Manzanita Lake overnight at cottages and campgrounds. Lodge guests and Manzanita Lake campers should consult the Manager, Manzanita Lake Lodge, for kennel service.

**Trails.** Cutting corners and taking short cuts on trails is dangerous practice and causes considerable damage. This practice is prohibited.

**Fishing.** State license required. Limit, 10 pounds and 1 fish, or 10 fish, except in Manzanita and Reflection Lakes where the limit is 5 pounds and 1 fish, or 5 fish, in either or both lakes.

Eleven

# LASSEN VOLCANIC NATIONAL PARK



LASSEN PEAK FROM HELEN LAKE

### SEASON

**Open Late June to Early October**  
Dates depend on weather conditions

UNITED STATES  
DEPARTMENT OF THE INTERIOR

HAROLD L. ICKES, Secretary

NATIONAL PARK SERVICE

NEWTON B. DRURY, Director



# LASSEN VOLCANIC NATIONAL PARK CALIFORNIA

## HISTORY

- 1820 Arguello exploring party first to record and name Lassen Peak (St. Joseph's Mountain).
- 1850-51 Last lava flow from Cinder Cone.
- 1863 First recorded ascent of Lassen Peak by William H. Brewer, Clarence King, and party.
- 1864 First white woman, Helen Brodt, climbed Lassen Peak.
- 1906 May 6. Lassen Peak and Cinder Cone National Monuments established.
- 1914 May 30. First known eruption of Lassen Peak since coming of white man.
- 1915 May 19 and 22. Major eruptions of Lassen Peak devastated large forest area.
- 1916 August 9. Lassen Volcanic National Park established by act of Congress, absorbing Lassen Peak and Cinder Cone National Monuments.
- 1921 Lassen Peak ceased to erupt and subsided into a state of quiescence.

LASSEN VOLCANIC NATIONAL PARK, in northeastern California, was created to preserve Lassen Peak and the park area of 163.32 square miles containing spectacular volcanic exhibits which surround it. This impressive peak, from which the park derives its name, stands at the southern end of the Cascade Range and is the only recently active volcano in the United States proper. Its last eruptions, occurring between 1914 and 1921, aroused popular and scientific interest in the area.

Lassen Peak was named for Peter Lassen, an early pioneer in northern California. He was born near Copenhagen, Denmark, in 1800, and came to this country when he was thirty. After he became acquainted with northern California, he piloted emigrants from Humboldt, Nev., into the Sacramento Valley, using Lassen Peak as a landmark. Lassen was killed by Indians in 1859 while prospecting in Nevada. His grave is near Susanville, Calif.

## Geology

The Cascade Range, which is volcanic in origin, had its beginning in the Pliocene period, about a million years before the great ice age, or glacial epoch. The present range rests upon a great platform of lava flows which issued from many vents and fissures. Later this platform



DEVASTATED AREA. DAILY NATURE CARAVANS VISIT THIS SCENE OF LASSEN'S DESTRUCTION

was arched slightly upward along the line of the Cascades. No more widespread floods of lava came forth, but numerous localized eruptions produced the magnificent series of peaks for which the Cascades are famous.

**Lassen Peak and Vicinity.** The western part of the park includes a profusion of volcanic peaks of the "dome" type, of which Lassen Peak itself is an outstanding example. Others include Chaos Crags, Eagle Peak, and Bumpas Mountain, all closely related in origin.

The great cone of Lassen Peak, rising 10,453 feet above sea level, on the north slope of an ancestral mountain, is almost completely wrapped in a smooth-sloping mantle of rock fragments broken from its own cliffs. The mountain as it stands today has passed through two stages of growth. The earlier Lassen was a broad, gently sloping volcano of the "shield" type, built of layer upon layer of lava. It rose by a succession of lava flows to an elevation above 8,500 feet, with a base 5 miles across from north to south and 7 miles from east to west.

In the second stage, the steep Lassen cone was built on this broad, substantial platform. This, the more conspicuous portion, represents a still rarer "dome" type of volcano, formed by stiff, viscous lava which was pushed up through the vent, like thick paste squeezed from a tube. Piling up in and around the old crater, this stiff lava rose in a bulging domelike form high above it.

Most dome volcanoes have no crater at the top, but at Lassen Peak gases escaping from lavas deep below main-

tain open conduits through the softer central part of the cone. Such activity opened a funnel-shaped or cup-like crater at the top. Before the eruptions of 1914-21, the crater of Lassen Peak was an oval bowl approximately 1,000 feet across and 360 feet deep.

Following the rise of the Lassen dome, there was a long period of quiescence. Nevertheless, prior to the activity of 1914-21, one or more "mud" flows had swept down the northeastern slope, probably within the past 500 years, as judged from the state of preservation of logs that were buried in the mud and recently have been uncovered along the course of Lost Creek.

On May 30, 1914, a series of eruptions began which lasted until February 1921, the most recent volcanic activity in the United States proper. On May 19, 1915, the first glowing lava made its appearance, rising in the new crater and spilling through the western notch in the crater rim in the form of a tongue which reached down the slope 1,000 feet. During the night of May 19, the snow was melted on the northeastern slope, causing destructive flows of mud which swept 20-ton boulders 5 to 6 miles into the valleys of Hat Creek and Lost Creek.

Three days later, on May 22, another and lesser mud flow moved down the same slope, and minor flows took place on the north and west flanks of the mountain. At the same time a terrific hot blast, heavily charged with dust and rock fragments, was discharged down the northeast flank of the peak. So violent was the outburst that trees on the slopes of Raker Peak, more than 3 miles away,

were felled uniformly in the direction of the onrushing blast. At the same time, a vertical column of smoke and ash rose more than 5 miles above Lassen's crater.

The energy of the volcano was largely spent by the end of the 1915 eruptions, but a series of explosions occurred in May and June, 1917. The activity after 1915 produced little effect besides modifying the form of the crater by opening new vents within it. Most of the crater is now filled by the rough, blocky lava which rose into it in May 1915.

**The Cinder Cone Area.** One of the most beautiful and unusual features of the park is Cinder Cone, 10 miles east-northeast from Lassen Peak, with its rugged lava beds and its multicolored dunes. The almost total absence of vegetation intensifies the appearance that the eruptions occurred not long ago. Actually, its last lava flow is not much older than the recent activity of Lassen itself, dating back only to the winter of 1850-51. The beginning of its history was considerably earlier, although it is entirely post-glacial and hence very recent in the geologic sense.

After most of the present cone had been piled up by explosive cinder eruptions, lava flowed out from its base; then followed a second series of cinder eruptions and also a second series of lava flows. The last of the second series was erupted in 1851, when flaring lights, which persisted for many nights, were observed from various distant points.



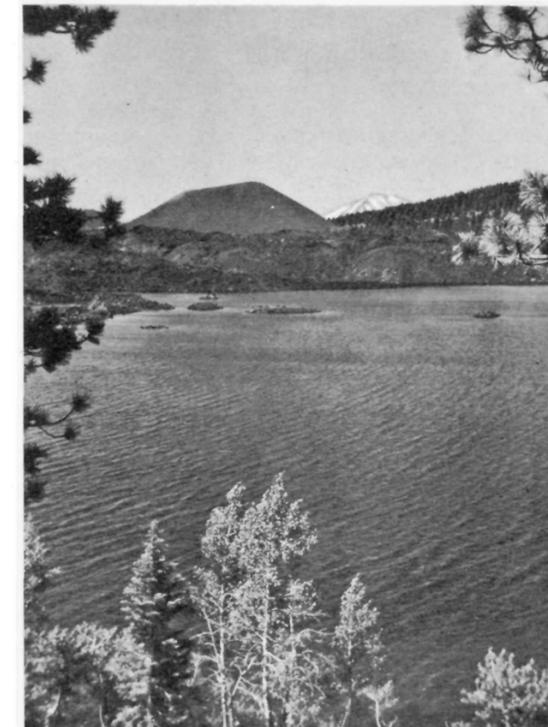
MOUNTAIN HEMLOCK NEAR THE BASE OF LASSEN PEAK



BUMPAS HELL IN EARLY SPRING

**Chaos Crags and Chaos Jumbles.** These features present the most spectacular scene of disorder to be found in the park. Early eruptions formed several cinder cones at the north base of Lassen Peak. A portion of one of these cones, with its crater 600 feet in diameter and 60 feet deep, is still preserved against the south flank of the Crags, and the disorganized remains of others are recognizable. The pushing up of viscous lava doubtless followed soon afterward, forming two domes, each about a mile in diameter, the older south dome partially encircling the later and higher north dome. Able to flow only a short distance, this stiff lava piled up about the vents. Great strains were set up in the solidifying mass by the upward surge of the lava into the swelling dome and probably by frequent violent explosions of steam and gases from various parts of the stiffening mass. Thus vast talus slopes were formed by the breaking and crumbling of the rising masses, and the domes were thrust up through their own accumulating debris.

The north dome had risen 1,800 feet above the surrounding country when explosions at the base of the rising mass blasted away the support from the north face and hurled vast quantities of broken and falling lava out upon the cinder-covered region below. This rock blast was shot forward with such momentum that its front advanced



BUTTE LAKE, 1850-51 LAVA FLOW, CINDER CONE, AND LASSEN PEAK

400 feet up the opposite slope of Table Mountain, 2 miles distant from the craters at the north foot of the Crags, and stopped there with an abrupt front. An area of 2½ square miles in extent was thickly covered by angular rock mingled with finer, sand-like material.

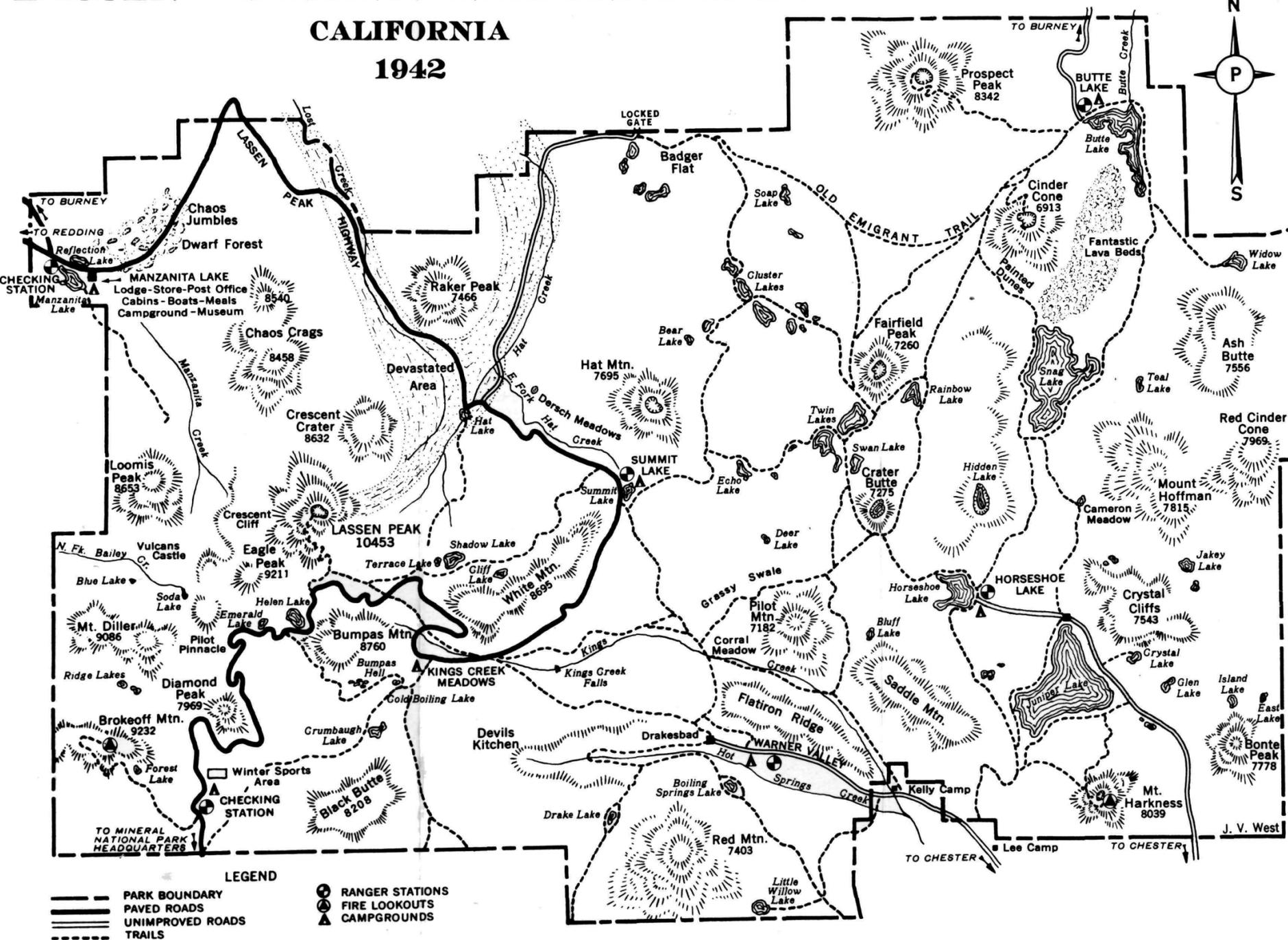
**Ancestral Mount Tehama.** Three miles southwest of Lassen Peak once stood a great mountain known as Tehama with a base more than 12 miles in diameter and rising approximately 4,000 feet above the steaming vents and boiling springs of Sulphur Works. This mountain was built by a succession of quiet lava flows, alternating with fragmental eruptions. After this activity ceased, the crater and the upper parts of the volcano were destroyed, thus forming a great bowl, or caldera. Brokeoff Mountain is the largest remnant of this old rim. Other remnants are Mount Diller, Black Butte, and Pilot Pinnacle.

Numerous steam and hot gas vents (fumaroles) and hot springs in the old caldera, including Sulphur Works, Bumpas Hell, and Little Hot Springs Valley, show that the lava beneath the surface has not yet entirely cooled. Farther east, similar types of activity may be seen at Devils Kitchen and Boiling Springs Lake.

# LASSEN VOLCANIC NATIONAL PARK

CALIFORNIA

1942



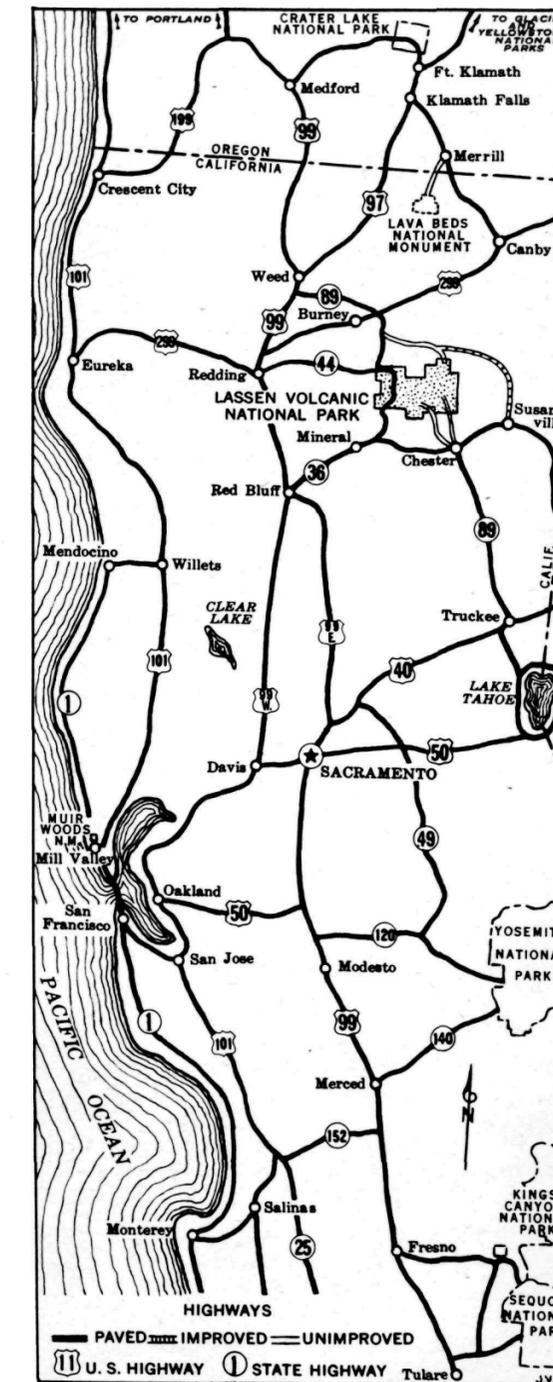
**Fires.** Light carefully and in designated places. Extinguish completely before leaving camp, even for temporary absence. A written fire permit must be obtained from a park ranger before building fires outside of established campgrounds.

**Hot Spring Areas.** Dangerous. Do not take chances. Keep on trails. Serious injuries have resulted from carelessness.

**Park Rangers** are on duty to help and advise you, as well as to enforce the regulations. **When in doubt, ask a man in uniform.**

## Table of Distances in the Park

From Southwest Entrance Miles	Feature	From Northwest Entrance Miles
0.0	Southwest boundary. Raker Memorial Gateway.	29.7
0.6	Checking Station. Obtain permit, seal firearms.	29.1
2.0	Sulphur Works. Steam vents and mud pots near highway. (This is private property.)	27.7
4.0	Road winds about Diamond Peak. Fine vista points.	25.7
6.7	Emerald Lake. Rainbow trout can be seen from the shore. No fishing.	23.0
7.1	Bumpas Hell Trail. 1.3-mile hike to colorful hot spring area. Alpine flowers along the trail.	22.6
7.2	Helen Lake. Named for Helen Brodt, first white woman to climb the peak, 1864.	22.5
7.9	Lassen Peak Trail. A good trail 2 1/2 miles to summit of only recently active volcano in United States proper. Time, about 3 hours.	21.8
8.1	Summit of Lassen Peak Highway, 8,512 feet.	21.6
12.6	Kings Creek Meadows. Public campground.	17.2



17.5	Summit Lake. Public campground, convenient for hikes, fishing, horseback parties.	12.2
20.0	Devastated Area, denuded of all vegetation by mud flows and blasts from Lassen Peak, May 1915.	9.7
27.5	Chaos Jumbles and Dwarf Forest. Jumbles caused avalanches from Chaos Crags.	2.2
29.0	Manzanita Lake Lodge. Cabins, meals, post office, gas station, store, campground, museum.	0.7
29.4	Manzanita Lake Checking Station. Obtain permit, seal firearms.	0.3
29.7	Northwest boundary.	0.0

## How to Reach the Park

**By Automobile.** Main approach roads to the park are in excellent condition. From Redding, Calif., on U. S. Highway 99, take State Highway 44 to the Manzanita Lake entrance. State Highway 89 from Shasta City is a popular route from the north. U. S. Highway 299, connecting Alturas and Redding, intersects route 89, about 38 miles north of Manzanita Lake.

From Red Bluff, Chester, Westwood, and Susanville, approach is over State Highway 36, to the Mineral entrance, thence to Manzanita Lake over the Lassen Peak Highway.

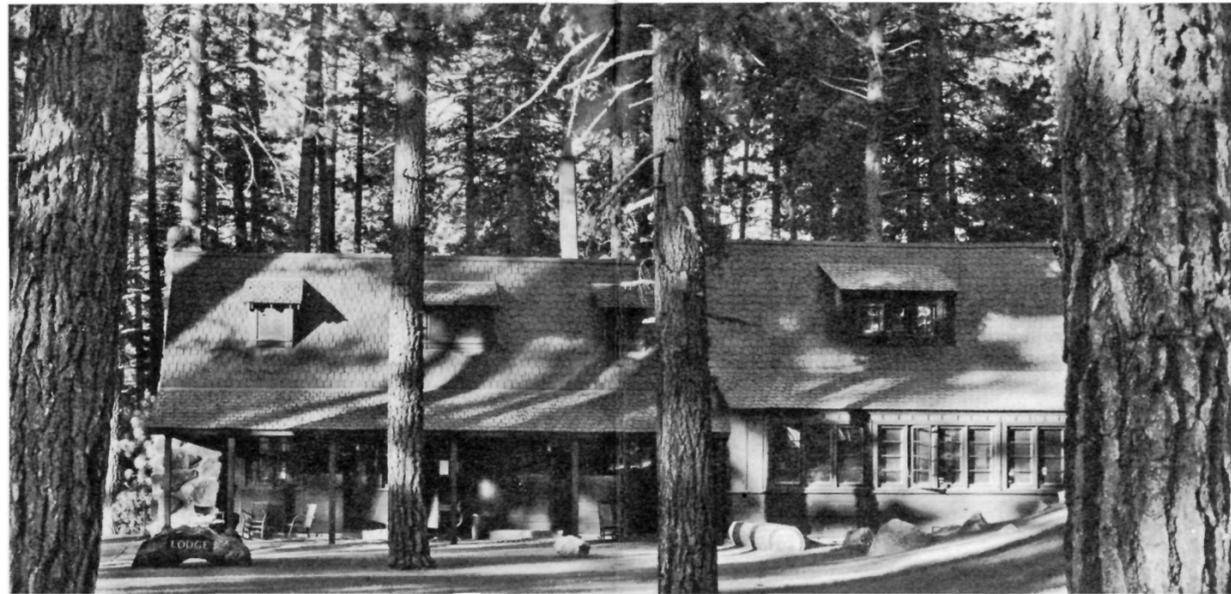
Roads into Warner Valley, Juniper and Horseshoe Lakes branch off from State Highway 36 at Chester. These roads are usually in poor condition.

Butte Lake may be reached by turning east from State Highway 89, about 15 miles north of Manzanita Lake. This road is usually in poor condition.

**By Rail.** Nearest railroad connections to the park are at Red Bluff and Redding on the Southern Pacific Line and at Keddie on the Western Pacific Line.

**By Air.** The nearest transcontinental air depot is at Red Bluff.

**By Bus.** Between June 15 and September 15, the bus of the Lassen National Park Co. makes daily connections with the Southern Pacific line at Redding. The schedule is as follows: Leave Manzanita Lake 9:20 a.m., arrive Redding 11 a.m., leave Redding 4:35 p.m., arrive Manzanita Lake 6:20 p.m.



MANZANITA LAKE LODGE

LASSEN NATIONAL PARK CO. PHOTO

The Mount Lassen Transit Co. makes daily connections with Southern Pacific trains at Red Bluff. Bus connections with the Western Pacific at Keddie can be made by transfer at Westwood with the Mount Lassen Transit Co. The Burlington Transportation Co. provides bus service to Reno, Nev., and Pacific Greyhound Lines to Reno and Red Bluff. Bus service is also available to Redding.

From Mineral, the Lassen National Park Co., with headquarters at Manzanita Lake, will furnish "on call" transportation over the Lassen Peak Highway and to various points along the way. For complete details write to the Lassen National Park Co., Manzanita Lake, Calif.

### Park Season

The Lassen Peak Highway usually is open to public travel between the latter part of June and the middle of October. Opening and closing dates are entirely dependent upon prevailing weather conditions in the high country. An effort is made to keep the Manzanita Lake and southwest (Mineral) entrances open throughout the winter, so they may be available to winter sports enthusiasts.

### Accommodations and Services

**Manzanita Lake Lodge.** Located one-half mile from the Manzanita Lake (northwest) entrance, is operated by the Lassen National Park Co. It is the only service operating in the park under Government contract. The post office address is Manzanita Lake, Calif.

**Cottage and Bungalow Accommodations.** Cottage bedrooms, \$1.50 up; housekeeping cottages, \$2.25 up; hotel bungalows, \$3.50 up. Advance reservations are recommended from June 20 to September 10.

**Dining Room and Fountain.** Meals served at rates from 25 cents to \$1.25. A la carte and fountain service available.

**Gift Shop.** In the lobby of Manzanita Lake Lodge, specializing in Indian crafts of local and southwest tribes. Wood, metal, and leather gifts and souvenirs also available.

**General Store.** Groceries, fresh meats, fresh vegetables, drugs, fishing and miscellaneous supplies.

**Boats.** Rowboats on Manzanita and Reflection Lakes. Rates, 35 cents an hour, \$1 a half day, \$1.50 a day, \$7 a week.

**Gasoline Service.** Service station at Manzanita Lake furnishes gasoline, oil, minor accessories, and tire service.

**Communication Service.** Telegraph and telephone services are available at Manzanita Lake Lodge.

**Saddle and Pack Horses.** Available at Summit Lake during main travel season. Summit Lake is located 12 miles from Manzanita Lake on the Lassen Peak Highway. Rates vary and depend on length of trip.

**Winter Sports.** During the main winter season, the Lassen National Park Co. operates ski tows and furnishes lunches, ski accessories, and rental ski equipment. This service is provided only in the winter sports area near the southwest entrance to the park and at such times as road conditions and travel warrant this service.

**Kennel Service.** Overnight care of a limited number of pets (cats and dogs only) is provided at nominal rates. See regulations concerning keeping of dogs and cats overnight in the Manzanita Lake Area.

**Photo Supplies.** Photographs and films may be purchased from the Loomis Art Store near the Manzanita Lake Lodge.

**Other Camps, Lodges, and Resorts.** At other points in and near the park, private accommodations range from campsites to cabin and hotel rooms.

**The rates mentioned herein may have changed slightly since issuance of this folder, but the latest rates approved by the Secretary of the Interior for the Government-controlled accommodations are on file with the superintendent and park operator.**

For detailed information concerning services provided by the Lassen National Park Co., write to the Manager of the company at Manzanita Lake, Calif.

### What To Do and See

#### ONE-DAY TRIP

Only a small portion of the park can be seen in 1 day, but those who cannot stay longer will find the following suggestions helpful:

Obtain information about conducted trips and hikes from the ranger at the checking station. Drive over the Lassen Peak Highway (29 miles) from one checking station to the other, stopping en route at:

The Sulphur Works	The Devastated Area
Lake Emerald	Chaos Jumbles and Dwarf Forest
Summit Lake	The Loomis Memorial Museum

If time permits, climb Lassen Peak and enjoy the wonderful panoramic view from the summit. Allow 3 hours for the round trip. Hike to Bumpas Hell to see the colorful hot springs and steam vents. Two hours is the average time required.

#### TWO DAYS OR LONGER

Stay at Manzanita Lake Lodge or at other places in or near the park where accommodations are provided. If camping, the Manzanita Lake Campground, equipped with many modern conveniences, is recommended. Summit Lake Campground is the most centrally located and is modern except for comfort stations. Both of these campgrounds are located near the highway and are close to good fishing waters. Groceries and supplies can be purchased only at Manzanita Lake. Visit the museum. Hikes conducted by naturalists add greatly to your enjoyment. Take a horseback trip to the lake country. Ask a man in uniform for information.

### Naturalist Activities

**Ranger naturalists** are on duty during the main travel season to help visitors understand the natural features and history of the park. Conducted hikes and caravans originate at Manzanita Lake and go to various points of interest. Nightly lectures are given at the Manzanita Lake campfire circle. Programs are presented at other campgrounds when travel is sufficient to warrant this service.

**The Loomis Memorial Museum** was given to the park by Mr. and Mrs. B. F. Loomis. The building houses a series of dioramas and exhibits explaining the geological story of the park and vicinity. Illuminated transparencies tell of the eruptions of Lassen Peak. Botanical, zoological, and historical exhibits are also found here. Literature dealing with park subjects is on sale. An attendant is on duty to provide general information for visitors.

**There is no charge for naturalist services. Visitors are invited to participate in their programs.**

### Camping

Lassen Volcanic National Park is primarily a campers' park. Excellent camping spots have been located in accessible areas. Some are undeveloped and rustic, and others have many modern conveniences. Fire permits are required for camping in other than regularly established campgrounds. These permits may be secured at park headquarters or at any ranger station.

**Manzanita Lake Campground**, situated near the northwest entrance, has the best developed conveniences. It is the only campground located near a store, post office, and general supplies. Naturalist activities also originate in this area.

**Summit Lake Campground**, situated near the Lassen Peak Highway, is the most centrally located camping area. It is recommended for those who wish to ride or hike to the wilderness or lake region.

**Kings Creek Campground**, also on the main highway, is at a high elevation. It is a delightful camping spot, but is open only 5 or 6 weeks during the summer.

**Sulphur Works Campground**, new and relatively undeveloped, is near the southwest entrance. It is suitable for emergency camping.

**Butte Lake Campground** is reached by taking Forest Service road (generally poor) which turns east from State Highway 89, about 1 mile north of the village of Old Station. A beautiful camping area near good fishing and within easy hiking distance of the colorful Cinder Cone area.

**Warner Valley Campground**, in the south-central part of the park, is reached over fair dirt road from Chester,

Calif. It is in the Boiling Springs Lake-Devils Kitchen district.

**Horseshoe Lake Campground** can be reached by driving over poor dirt road from Chester, Calif., via Juniper Lake. This campground has some conveniences and is in excellent fishing country.

### Horseback Trips

The eastern wilderness and lake sections of the park can be enjoyed only by hikers and horseback parties. Nearly 100 miles of trail lead to remote sections of the park. Colorful hot springs, gorgeous wildflower meadows, silvery lakes, and other wonders await those who leave the highways and take to the trails. Saddle and pack trips will be arranged for those desiring this service.

### Fishing

Fishing is one of the foremost recreational activities of park visitors. Rainbow trout are most abundant. Loch Leven and Eastern Brook are plentiful in some waters. The many lakes and streams are stocked regularly by the National Park Service with the cooperation of the California Division of Fish and Game.

The ease of access to good fishing is a consideration worthy of note. Many excellent spots are adjacent to the



HORSEBACK PARTY AT SUMMIT LAKE. LASSEN PEAK IN BACKGROUND

LASSEN NATIONAL PARK CO. PHOTO

main highway or a side road. None are more than an easy half-day's hike distant. Fly fishing is excellent in September and October, but fish may be readily taken during the entire season with flies, spinners, or bait. The helgramite, an insect larva found clinging to the underside of rocks or logs along the lake shores, is a lure which never fails to be effective.

A State license is required to fish park waters. The limit for a day's catch is 10 fish, or 10 pounds and 1 fish, except in Manzanita and Reflection Lakes, where it is 5 fish, or 5 pounds and 1 fish. Regulations prohibit the use of live minnows as bait. Motorboats are permitted only on Juniper Lake. Waters permanently closed to fishing include Emerald Lake, Grassy Creek, Grassy Swale Creek, Manzanita Creek, and Kings Creek above the lower highway crossing.

### Administration

Lassen Volcanic National Park is administered by the United States Department of the Interior through the National Park Service, with the superintendent in immediate charge. The superintendent's office is located at administrative headquarters one-half mile west of Mineral, on the Red Bluff-Susanville Highway 36. Address communications for the superintendent to Mineral, Calif. Mail for campers and the Manzanita Lake Lodge should be addressed to Manzanita Lake, Calif.