

advances with the receding snows, there is a continuous display of flowers from early May to late September. In the high country lupine, penstemon, heather, and laurel are at their best in mid-August.

WILDLIFE

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

The blacktailed and mule deer are common and are seen in appropriate sections of the park. Ground squirrels and chipmunks are also numerous and frequently tame. It is wisest to enjoy them without actual contact, however, for some rodents have been known to carry dangerous diseases. Other small

mammals, including the chickaree, marten, marmot, and fox, are shyer but often seen. The amusing, shuffling black bear 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 abound in many species of songbirds. The bald eagle is sometimes seen soaring majestically overhead or perched on some tall tree or rocky pinnacle.

FISHING

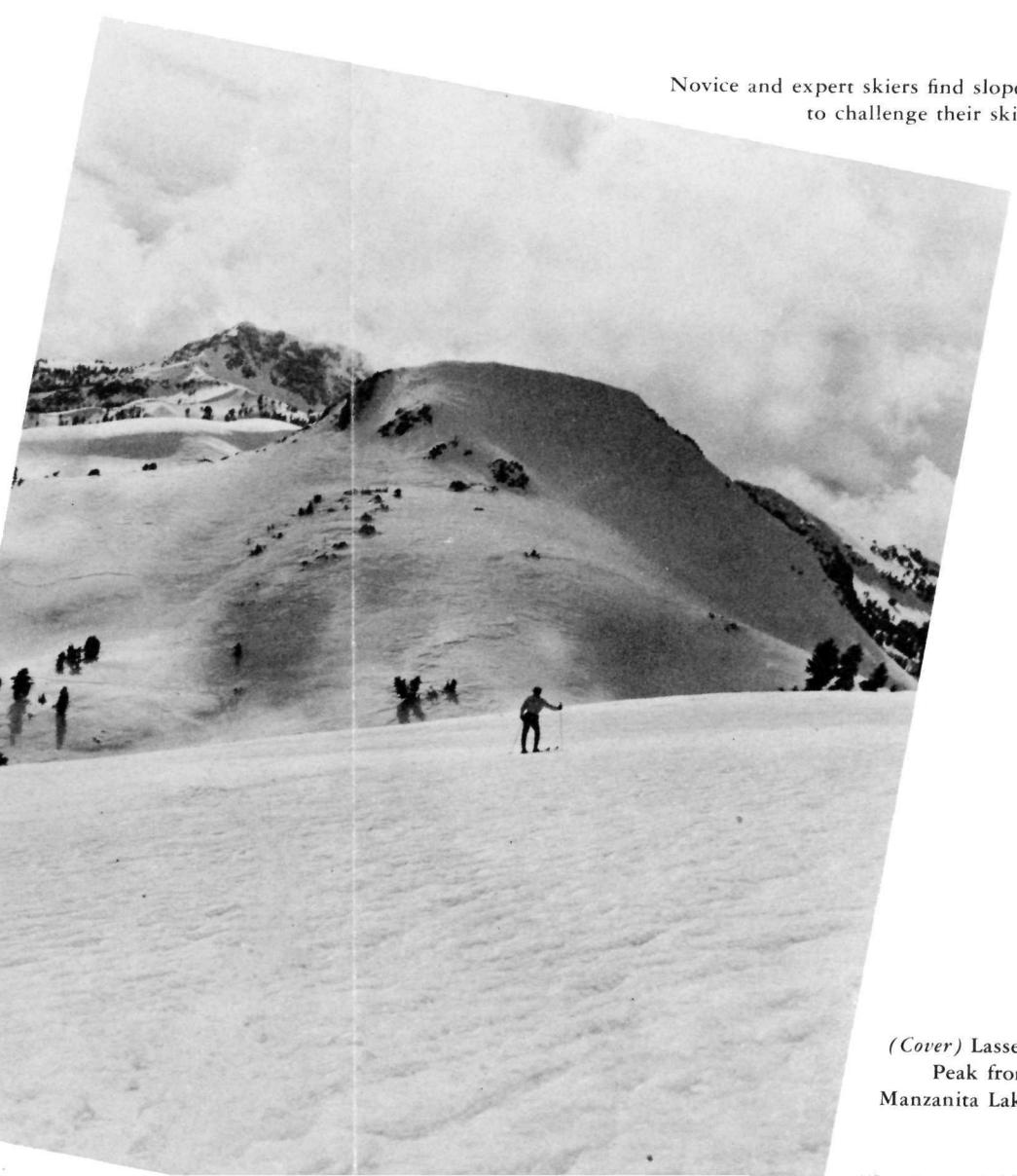
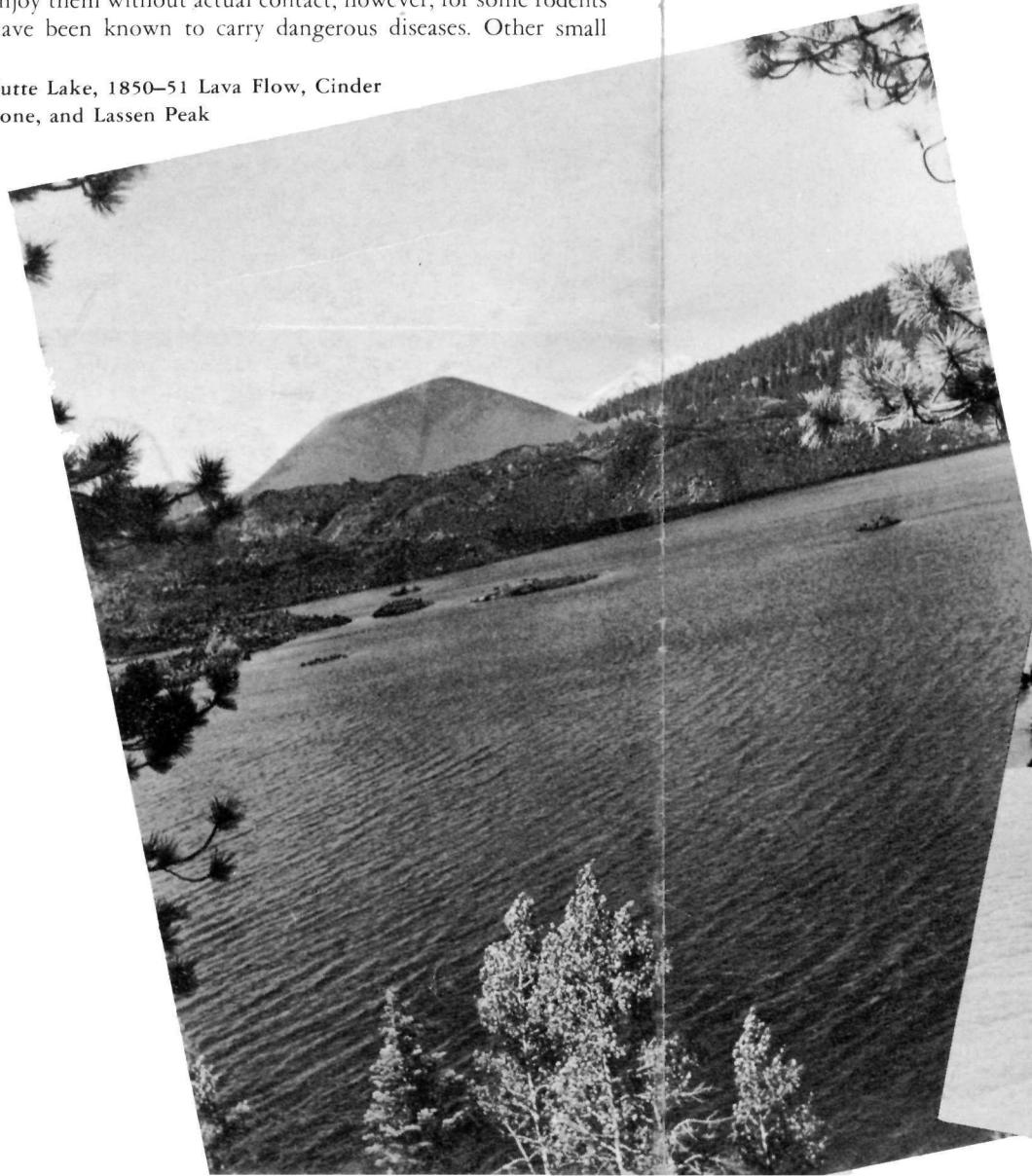
Fishing is one of the important recreational activities of park visitors. Rainbow trout are most abundant. Loch Leven and Eastern Brook are plentiful in some waters. The many lakes and streams are stocked regularly by the National Park Service with the cooperation of the California Division of Fish and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

The ease of access to good fishing is a consideration worthy of note. Many excellent spots are adjacent to the 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 with flies, spinners, or bait during the entire season, which is the same as that prescribed by the State of California.

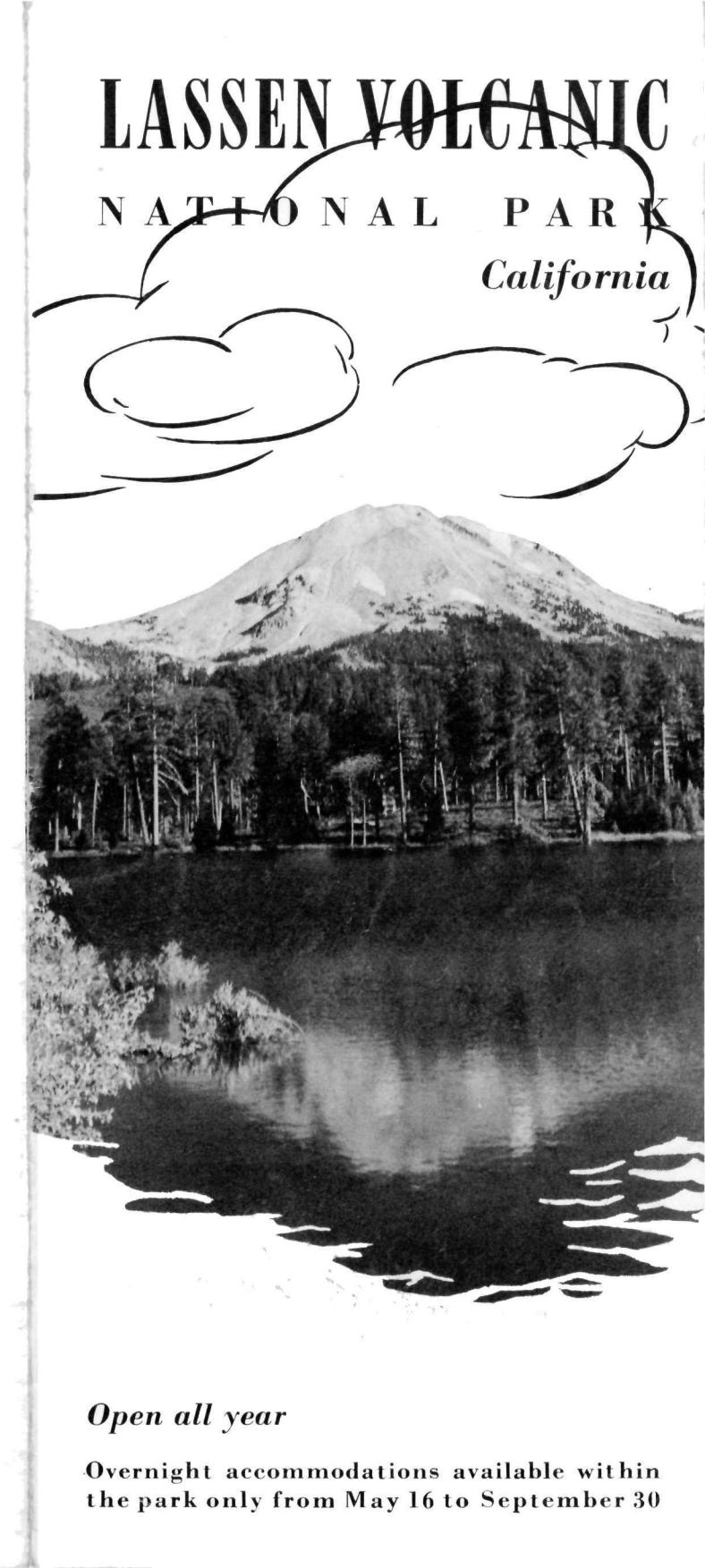
CAMPING

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.

Butte Lake, 1850-51 Lava Flow, Cinder Cone, and Lassen Peak



Novice and expert skiers find slopes to challenge their skill



Open all year

(Cover) Lassen Peak from Manzanita Lake

Overnight accommodations available within the park only from May 16 to September 30

LASSEN VOLCANIC NATIONAL PARK

California



Lassen Volcanic National Park

UNITED STATES DEPARTMENT OF THE INTERIOR
Oscar L. Chapman, Secretary
NATIONAL PARK SERVICE • Arthur E. Demaray, Director

LASSEN VOLCANIC NATIONAL PARK, in northeastern California, was established on August 9, 1916, to preserve Lassen Peak and the park area of approximately 103,429 acres 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 latest 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 30. 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.

HOW TO REACH THE PARK

By Auto.—52 miles, via State Highway 44, from Redding, or 100 miles, via State Highway 89, from Shasta City to Manzanita Lake. 52 miles, via State Highway 36, from Red Bluff and 69 miles from Susanville to Sulphur Works Entrance.

By Train.—Nearest railroad stations are at Redding and Red Bluff, on the Southern Pacific Lines, and Keddie, on the Western Pacific Railroad.

By Plane.—Red Bluff and Redding are the nearest commercial airports.

By Bus.—From Red Bluff and Susanville to Mineral only, all year; from Redding to Manzanita Lake, June 15 to September 15 only.

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 (near Mineral) entrances open throughout the winter.

GEOLOGY

Lassen Peak is volcanic in origin. It had its beginning about a million years before the Ice Age. As one of the large peaks of the Cascade Range, it has associated with it lesser peaks such as Chaos Crags, Eagle Peak, and Bumpass Mountain, which have a similar origin. The Cascade Range itself is volcanic. Lava flows, forming great sheets, spread out in succession until

Three days later, on May 22, minor mud flows took place on the north and west flanks of the mountain. At the same time a terrific hot blast charged heavily 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. A vertical column of vapor and ash rose more than 5 miles above Lassen's crater.

The energy of the volcano was largely spent by the end of 1915. Activity after this date produced little effect besides modifying the form of the crater by opening new vents within it. The initial crater is now filled by the blocky lava which rose into it on May 19, 1915.

Three miles southwest of Lassen Peak once stood a great mountain known as Tehama, over 12 miles in diameter and rising more than 4,000 feet above what are now the steaming vents and boiling springs of Sulphur Works. This mountain was built by a succession of quiet lava flows alternating with fragmental eruptions. Later, the upper portion of the volcano was destroyed by collapse, forming a great bowl or caldera. Brokeoff Mountain is the largest remnant of this old rim. Other remnants are Mount Diller, Mount Conard, and the base of Pilot Pinnacle.

Other volcanic exhibits are present in this area. One of the most spectacular is Cinder Cone with its remarkable symmetry, rugged lava beds, and multicolored dunes. It is recent geologically, being of postglacial age with latest activity in 1850–51.

Chaos Crags and Chaos Jumbles are other remarkable recent examples of volcanic violence. Chaos Crags are pluglike masses which were pushed up as very stiff lava and hardened in place.



Lassen Peak and area devastated in 1915.
Note natural reforestation

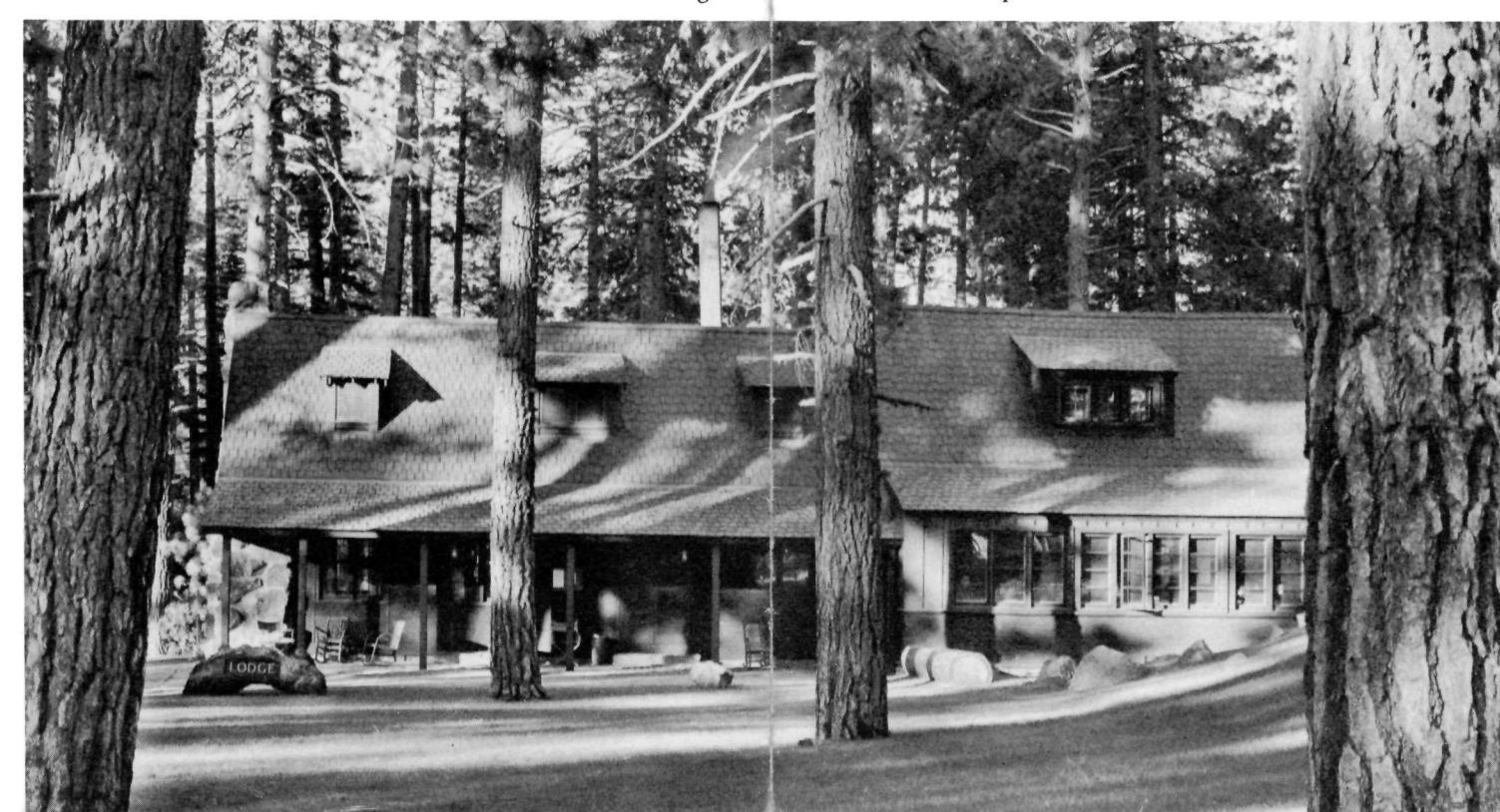
Then followed steam explosions from the north base which undermined the 1,800-foot clifflike slope, causing a great avalanche of such momentum that the hummocky Chaos Jumbles, 2½ square miles in extent, were formed.

Hot springs and steam and sulphurous vents are found in the collapsed Tehama caldera at the Sulphur Works. Next accessible and the most colorful of the thermal areas is Bumpass Hell. Of special interest also are Little Hot Springs Valley, Devils Kitchen, and Boiling Springs Lake. VISITORS TO THESE AREAS ARE CAUTIONED TO EXERCISE GREAT CARE. STAY ON THE TRAILS AND AVOID SLIPPERY OR CRUSTY PLACES, AS THE STEAM AND WATERS ARE DANGEROUSLY HOT.

FORESTS AND FLOWERS

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

Several hundred species of wildflowers are found in the park. In the spring the crimson snowplant is outstanding. Indian paintbrush, scarlet bugler, bleedingheart, mimulus, and tiger lily add color to the mountain meadows. Because spring



Manzanita Lake Lodge. Lassen National Park Co. photo



Lassen Peak in eruption. U. S. Forest Service photo

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 Meadows 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, relatively undeveloped, is near the southwest entrance. It is suitable for emergency camping.

Butte Lake Campground is reached by taking Forest Service dirt road (fair condition) 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. Near it are Boiling Springs Lake and Devils Kitchen. BE CAREFUL in these fascinating but dangerous areas.

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

HIKING AND HORSEBACK TRIPS

The eastern wilderness and lake sections of the park can be enjoyed only by hikers and horseback parties. Over 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. Hikers can travel the well-marked trails without guides, including the Lassen Peak hike, where horses are not allowed.

WINTER USE

The terrain and snow conditions in Lassen Volcanic National Park are excellent in the opinion of leading skiers. The timber-

free slopes in the high country surrounding Lassen Peak are ideally adapted to skiing. Many cross-country routes radiate from the Sulphur Works Ski Area. These are becoming increasingly popular with skiers who seek a new thrill away from the more populous slopes.

Winter sports in Lassen are centered near the Sulphur Works Checking Station. Here ski tows for both beginners and advanced skiers are operated. Rental service of skis and ski accessories is also provided. The road to this area is maintained during the entire year and connects with State Highway 36 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.

As the snow melts during the spring and early summer, the Lassen Peak Highway is cleared and skiers are able to follow the snow line to the highway summit of 8,512 feet. It is during the spring and early summer months that cross-country ski touring is most popular.

The skiing season in Lassen Volcanic National Park usually begins during December and is officially closed with the Mid-Summer Tournament held annually near the 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 usually find snow slopes on which they may ski as late as August. However, all ski rental services and tows at the Sulphur Works Ski Area are discontinued after Easter Sunday.

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.

ACCOMMODATIONS AND SERVICES

No overnight accommodations are available in the park during the winter months, but numerous resorts in Mineral and vicinity, along nearby highways, offer cabin accommodations at reasonable rates. In the summer the following facilities are provided:

Manzanita Lake Lodge.—Located one-half mile from the Manzanita Lake (northwest) Entrance and operated by the Lassen National Park Co. It is the only service operating in the park under Government contract.

Sleeping Accommodations.—Comfortable wooden-floored tents, housekeeping cabins, de luxe cabins, and hotel bungalows are available at Manzanita Lake. Advance reservations are recommended from June 20 to September 10.

Meals.—A dining room and a fountain are provided. Regular meals, a la carte, and short orders may be had.

Gift Shop.—In the lobby of Manzanita Lake Lodge.

General Store.—Groceries, fresh meats and vegetables, fresh frozen foods, dairy products, drugs, fishing and miscellaneous supplies.

Boats.—Rowboats on Manzanita Lake may be rented for a half day or a day. Reservations and keys at desk in Lodge lobby.

Gasoline Service.—Service station at Manzanita Lake furnishes gasoline, oil, minor accessories, and tire service only; May 27 to September 20.

Post Office.—In the General Store; May 16 through Sept. 30.

Communication Service.—Telephone and telegraph at the 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 and reservations to be had at the Lodge desk.

Skiing.—During the winter season the Lassen National Park Co. operates ski tows, furnishes lunches and ski accessories, and rents ski equipment. This service is provided only in the Sulphur Works Ski Area, near the southwest entrance to the park, on week ends and holidays.

Photo Supplies.—Photographs, post cards, films, etc., may be purchased from the Loomis Art Store near the Manzanita Lake Lodge.

Bus Service.—Between June 15 and September 15 the Lassen National Park Co. bus makes one daily round trip to the Greyhound Bus Depot in Redding. Limited "on call" bus service is provided within the park and to Mineral.

As rates are subject to change from season to season, no prices are given in this folder. For detailed information concerning rates and services furnished by the Lassen National Park Co. write to the manager of the company at Manzanita Lake, Calif., May 1 to October 15, or P. O. Box 188, Mineral, Calif., October 16 to April 30.

ADMINISTRATION

Lassen Volcanic National Park is a part of the National Park System owned by the people of the United States and administered for them by the National Park Service of the Department of the Interior. A superintendent is in immediate charge. His office is located at administrative headquarters, $\frac{1}{2}$ 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.

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 talks are given at the Manzanita Lake campfire circle. Programs are presented at other campgrounds when travel is heavy and interpretive personnel is sufficient.

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 and topographic maps are on sale at this museum, and an attendant is on duty to provide general information for visitors.

Visitors are invited to take advantage of the naturalist services, for which there is no charge. Announcements of the programs and schedules are posted on the bulletin boards.

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 entrance is \$1 for the year; trailer \$1 additional; and motorcycle \$1.

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, 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.

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. 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. Owners are responsible for their pets and should see that they make no undue noise or are a nuisance in any way.

Trails.—Taking short cuts on trails is prohibited, and violators are subject to arrest and fine.

Fishing.—California State license is 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. The use of live bait or minnows is prohibited. Waters permanently closed to fishing: Emerald Lake, Grassy, Grassy Swale, and Manzanita Creeks, and Manzanita Lake within 150 feet of inlet and outlet.

Motorboats.—Allowed on Juniper Lake only.

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 Springs 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 ranger.



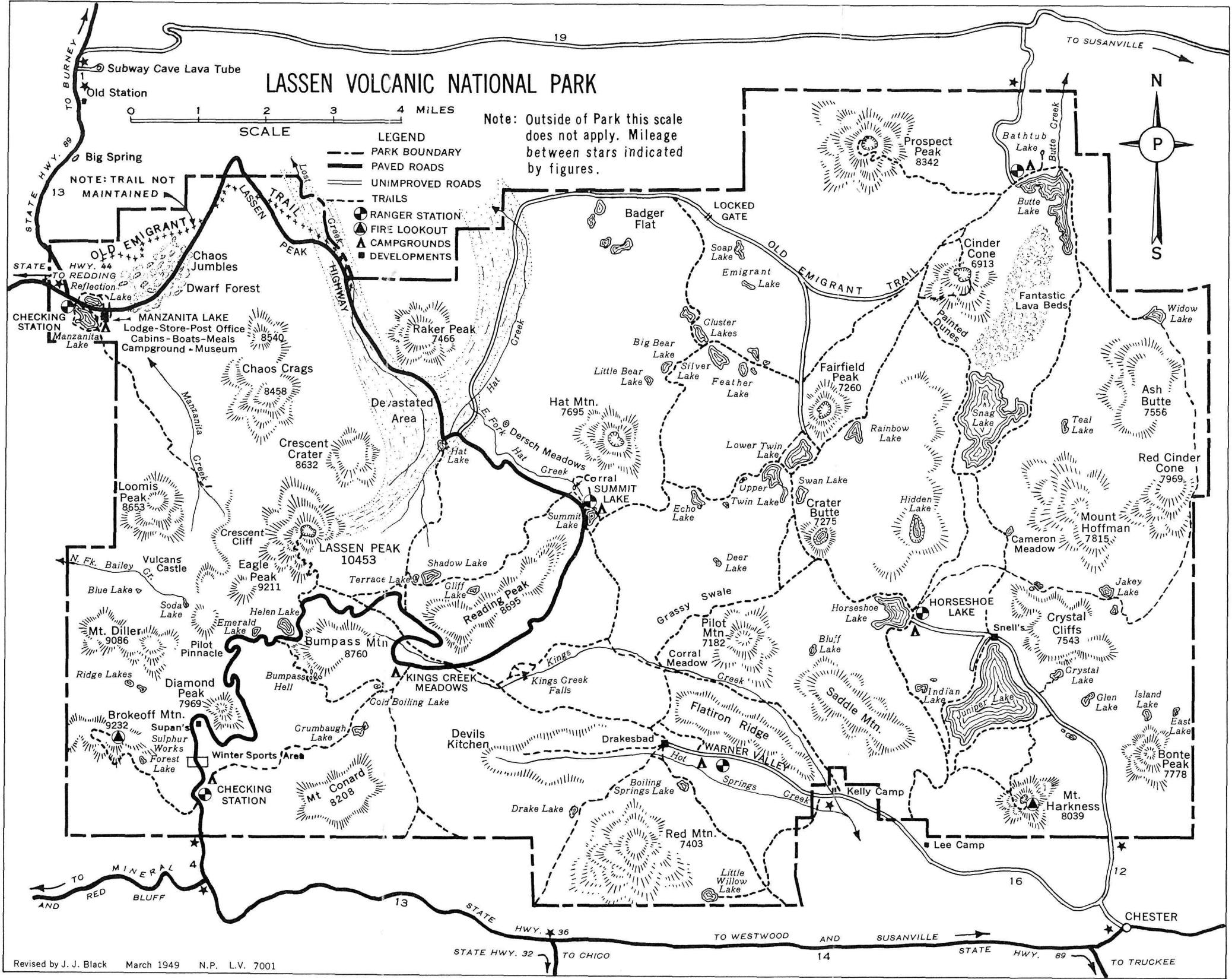


TABLE OF DISTANCES IN THE PARK

| From Southwest Entrance Miles | Feature | From Northwest Entrance Miles |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| 0.0 | Southwest boundary. Raker Memorial Gateway. | 29.7 |
| .6 | Sulphur Works Checking Station. Obtain auto permit and declare firearms on entering. | 29.1 |
| 2.0 | Sulphur Works. Steam vents and mud pots near highway. (Private property.) | 27.7 |
| 4.0 | Road winds about Diamond Peak. Fine vistas. | 25.7 |
| 6.7 | Emerald Lake. Rainbow trout can be seen from the shore. No fishing. | 23.0 |
| 7.1 | Bumpass Hell Self-guiding Nature Trail No. 2; 1.3-mile walk to colorful hot spring area. Easy 1- to 2-hour round trip. Alpine flowers along trail. (Use free guide leaflet.) | 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 2½ miles to summit of only recently active volcano in United States proper. Time, about 3 hours for round trip. | 21.8 |
| 8.1 | Summit of Lassen Peak Highway, 8,512 feet. | 21.6 |
| 12.6 | Kings Creek Meadows. Public campground. | 17.1 |
| 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 |
| 22.0 | "The Hot Rock," a great boulder of 1915 lava deposited as part of the mud flow. It remained hot for days. | 7.7 |
| 27.5 | Chaos Jumbles and Dwarf Forest. Jumbles caused by avalanches from Chaos Crags. | 2.2 |
| 29.0 | Manzanita Lake Lodge. Cabins, post office, gas station, store, campground, museum, campfire circle, interpretive activities, Lily Pond Self-guiding Nature Trail No. 1. (Use free guide leaflet.) | .7 |
| 29.4 | Manzanita Lake Checking Station. Obtain auto permit and declare firearms on entering. | .3 |
| 29.7 | Northwest boundary. | 0.0 |

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