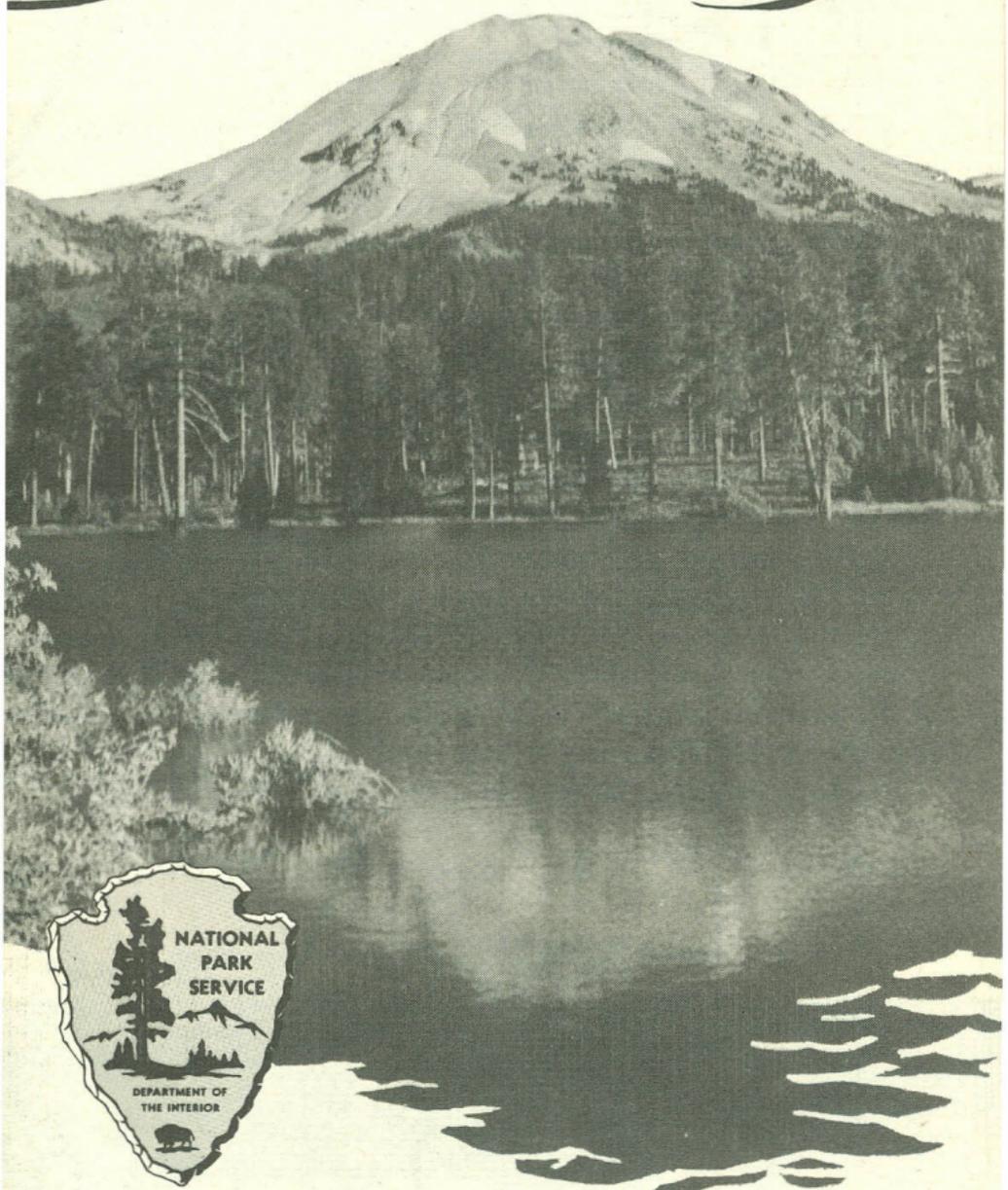


LASSEN VOLCANIC

NATIONAL PARK

California



WARNING

In hot springs or steaming areas **STAY ON ESTABLISHED TRAILS AT ALL TIMES**; keep small children under strict physical control to avoid burns and accidents. Safe-appearing ground crusts may be dangerously thin.

Lassen Volcanic National Park



United States
Department of the Interior
Fred A. Seaton, *Secretary*
NATIONAL PARK SERVICE
Conrad L. Wirth, *Director*

LASSEN VOLCANIC NATIONAL PARK, in northeastern California, preserves Lassen Peak and an area of 104,161 acres of Federal lands 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 occurred between 1914 and 1917. It was established as a National Park on August 9, 1916.

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 in 1859 while prospecting in Nevada, and was buried near Susanville, Calif.

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 the general land surface was raised to about 8,000 feet above sea level. On this platform the peaks of the range have been built up by the outpouring of lava and the explosive eruptions.

The great mass of Lassen Peak rises 10,453 feet above sea level and is almost completely wrapped in a mantle of rock fragments broken from its own cliffs. The peak has had several stages of growth. Prior to the activity beginning in 1914, it appears to have undergone a long period of quiescence, though one or more mudflows had swept down the northeast slope, probably within the last 500 years.

The National Park System, of which this park is a unit, is dedicated to conserving the scenic, scientific, and historic heritage of the United States for the benefit and enjoyment of its people.

On May 30, 1914, a series of eruptions began which lasted through 1917. On May 19, 1915, 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. Also during that night the snow was melted on the northeast 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, minor mudflows 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. Then followed steam explosions from the north base which undermined the 1,800-foot cliff-like slope, causing a great avalanche of such momentum that the hummocky Chaos Jumbles, 2 1/2 square miles in extent, were formed.

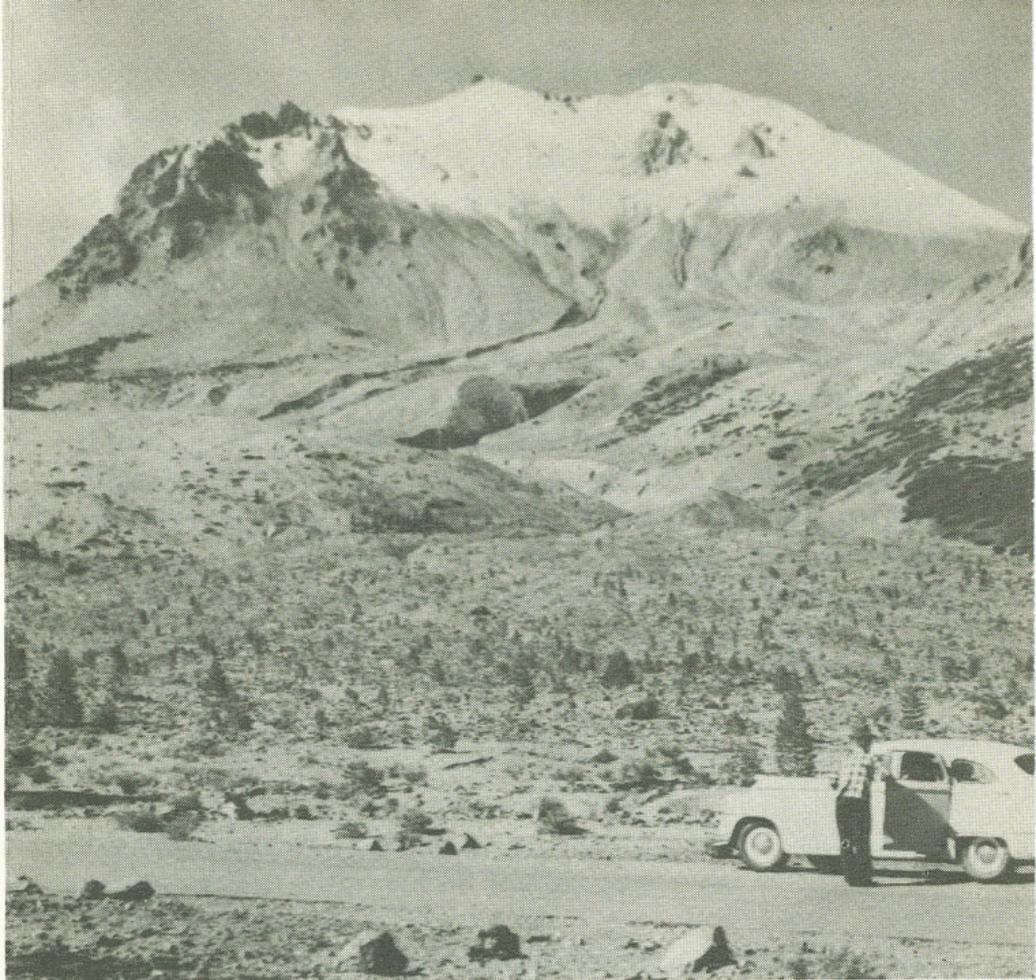
Hot springs and steam and sulphurous vents are found in the collapsed Tehama caldera at the Sulphur Works. Next accessible and the most colorful of the thermal areas is Bumpass Hell. Of special interest also are Little Hot Springs Valley, Devils Kitchen, and Boiling Springs Lake. *You are cautioned to exercise great care, stay on the trails and avoid slippery or crusty places, as the steam and waters are dangerously hot in these areas.*

Forests and Flowers

Lassen Volcanic National Park is covered with beautiful evergreen forests, except on high mountain peaks, grassy meadows, and recent lava flows. 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 timberline tree is the white-bark pine and is found chiefly on the upper slopes

Manzanita Lake Lodge. Lassen National Park Co. photo





Lassen Peak and area devastated in 1915.
Note natural reforestation

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 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 pioneer level. Instinctive fear of man is lessened to a marked degree; however, they are still wild animals and must not be molested.

The black-tailed 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 shy but often seen. The black bear is found in the park, but is rarely seen in the campgrounds.

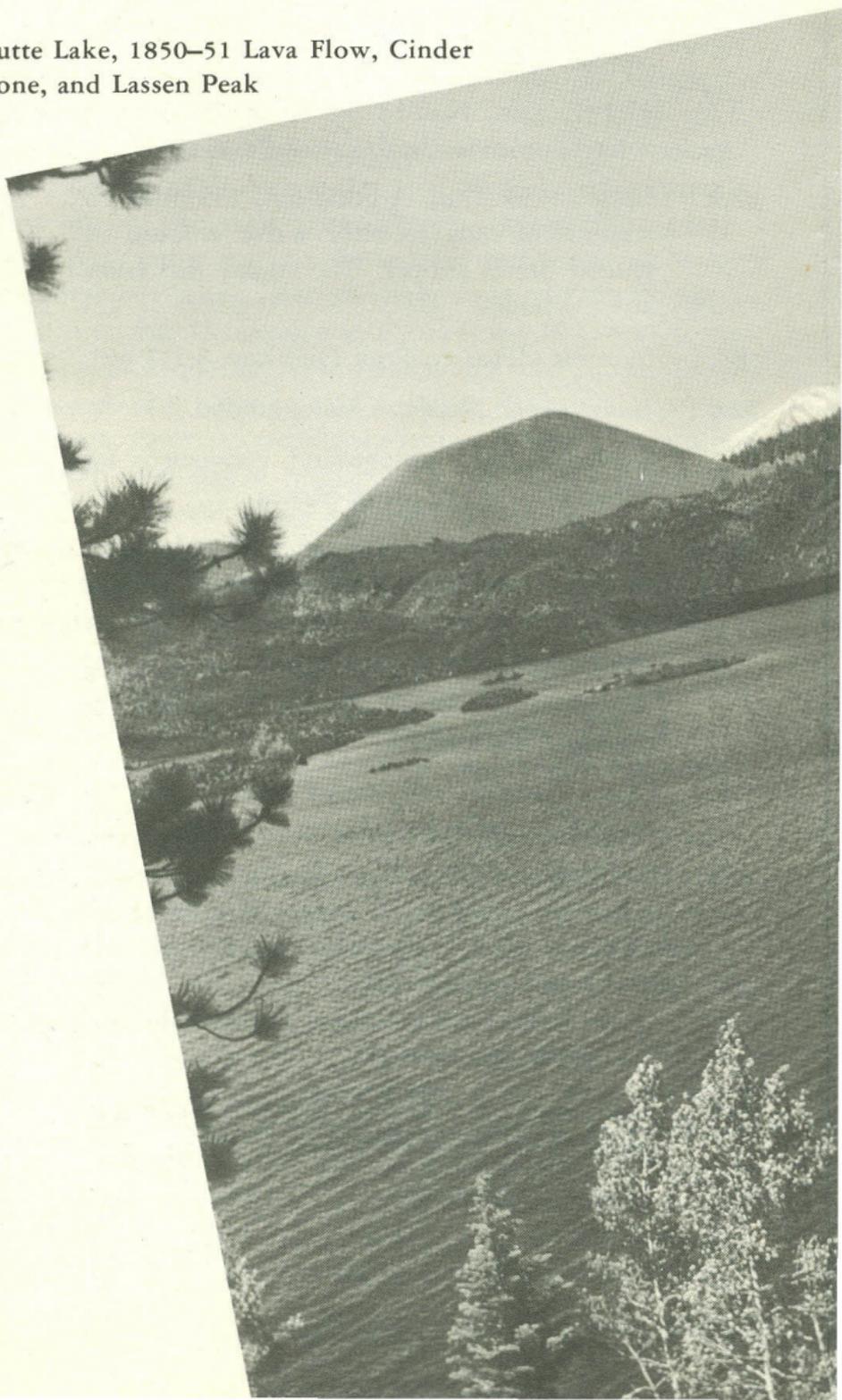
Bird life is abundant. The lakes of the park afford nesting sites for a variety of wild fowl, and the thickets and forests abound in many species of songbirds. The bald eagle is sometimes seen soaring majestically overhead or perched on some tall tree or rocky pinnacle.

Naturalist Activities

Park ranger naturalists are on duty during the travel season to help you understand the natural features and history of the park. Conducted hikes and caravans originate at Manzanita Lake and go to 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

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



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.

You 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.

Fishing

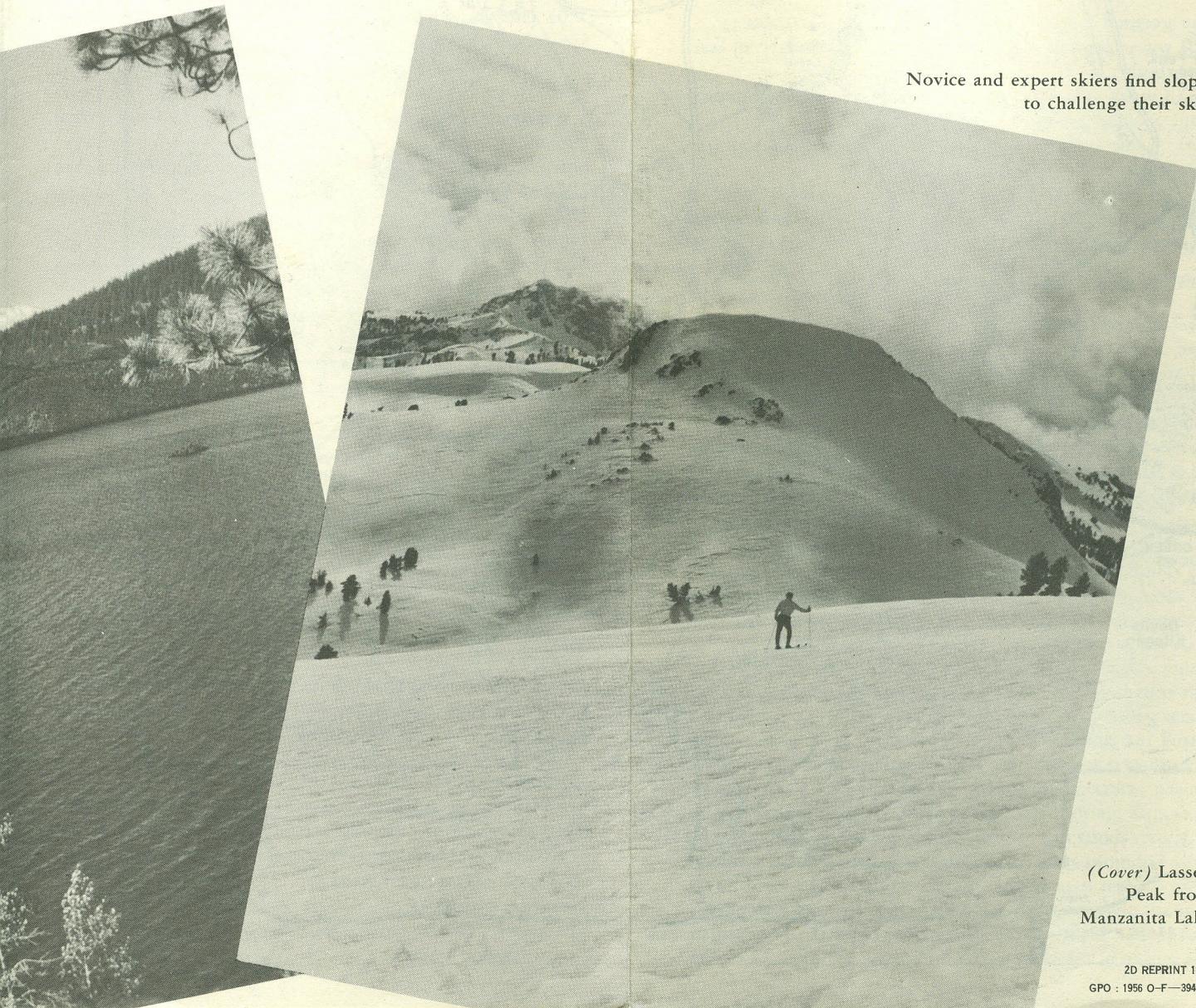
Angling is one of the recreational activities which may be enjoyed in this park. Rainbow trout, which are native to the waters, are abundant. Eastern brook and brown trout, which

are introduced species, are plentiful in some places. The square-tail catfish also was brought in; it is found in Manzanita and Reflection Lakes. More detailed information is in the booklet entitled, *Fish and Fishing in Lassen Volcanic National Park*, which may be purchased at the Loomis Museum.

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.

Novice and expert skiers find slopes
to challenge their skill



(Cover) Lassen
Peak from
Manzanita Lake



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

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, 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, 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 Route 89, about 1 mile north of the village of Old Station. A beautiful camping area near good fishing, it is 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.

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 Route 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 that cross-country ski touring is most popular.

The skiing season in Lassen Volcanic National Park usually begins during December. Enthusiastic skiers may find snow slopes on which to ski as late as August. However, all ski rental services and tows at the Sulphur Works Ski Area are discontinued about mid-April.

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 November and December.

How to Reach the Park

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

By Train.—Southern Pacific Lines to Redding and Red Bluff; Western Pacific to Keddie.

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

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

Park Season

The Lassen Peak Highway usually is open to travel between the latter part of June and the end of October. Opening and closing dates are entirely dependent upon prevailing weather conditions in the high country. The Sulphur Works and Manzanita Lake entrances are kept open to the developed areas throughout the winter.

Accommodations and Services

Overnight accommodations within the park are available only from May 26 to September 20. During the winter, cabin accommodations at reasonable rates may be found at numerous resorts in and around Mineral and along nearby highways. 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, serving regular meals, a la carte, and short orders, and a fountain are provided.

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

Boats.—Rowboats on Manzanita Lake may be rented for a half day or a day. Reservations and keys at desk in lodge lobby. Rowboats are also available at Butte Lake.

Gasoline Service.—Service station at Manzanita Lake furnishes gasoline, oil, minor accessories, lubrication and tire service, May 27 to September 30.

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

Communication Service.—Telephone and telegraph at the lodge.

Saddle and Pack Horses.—Available at Summit Lake during main travel season. Summit Lake is 12 miles from Manzanita Lake on the Lassen Peak Highway.

Skiing.—During the winter season the Lassen National Park Co. operates rope 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 weekends and holidays after Christmas Day.

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 administered by the National Park Service of the United States Department of the Interior. A superintendent is in immediate charge. His office is located at administrative headquarters, ½ mile west of Mineral, on the Red Bluff-Susanville Highway, State Route 36. Address communications for the superintendent to Mineral, Calif. Mail for campers and the Manzanita Lake Lodge should be addressed to Manzanita Lake, Calif.

Please Help Us Protect This Park

Complete park regulations may be seen at the office of the superintendent and at all ranger stations. Park rangers are on duty to help and advise you, as well as to enforce the regulations. If you need information, or are in any difficulty, see a park ranger. The following synopsis is for your guidance:

Automobiles.—Many sharp curves exist on the Lassen Peak Highway, and fast driving is dangerous. Park speed limit is 45 miles per hour. At the Manzanita Lake Area a 20-mile zone has been established and is patrolled.

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 a 30-day camping limit in the Manzanita Lake campgrounds and at Summit Lake.

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.

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.

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 possession or use of live or dead minnows or other bait fish 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.

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

Hours.—The two auto checking stations are open between 6 a. m. and 10 p. m.

Motorboats.—Allowed on Juniper Lake only.

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.

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

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.

Visitor Use Fees.—A charge of \$1 is made for each automobile, motorcycle and housetrailer entering the park. This permit is good for 15 days. An annual permit, for the calendar year in which purchased, costs \$2. During the valid period of all 15-day permits, the cost thereof may be applied toward the purchase of a similar annual permit. All fees are deposited in the United States Treasury and offset, in part, appropriations made for operating the park.

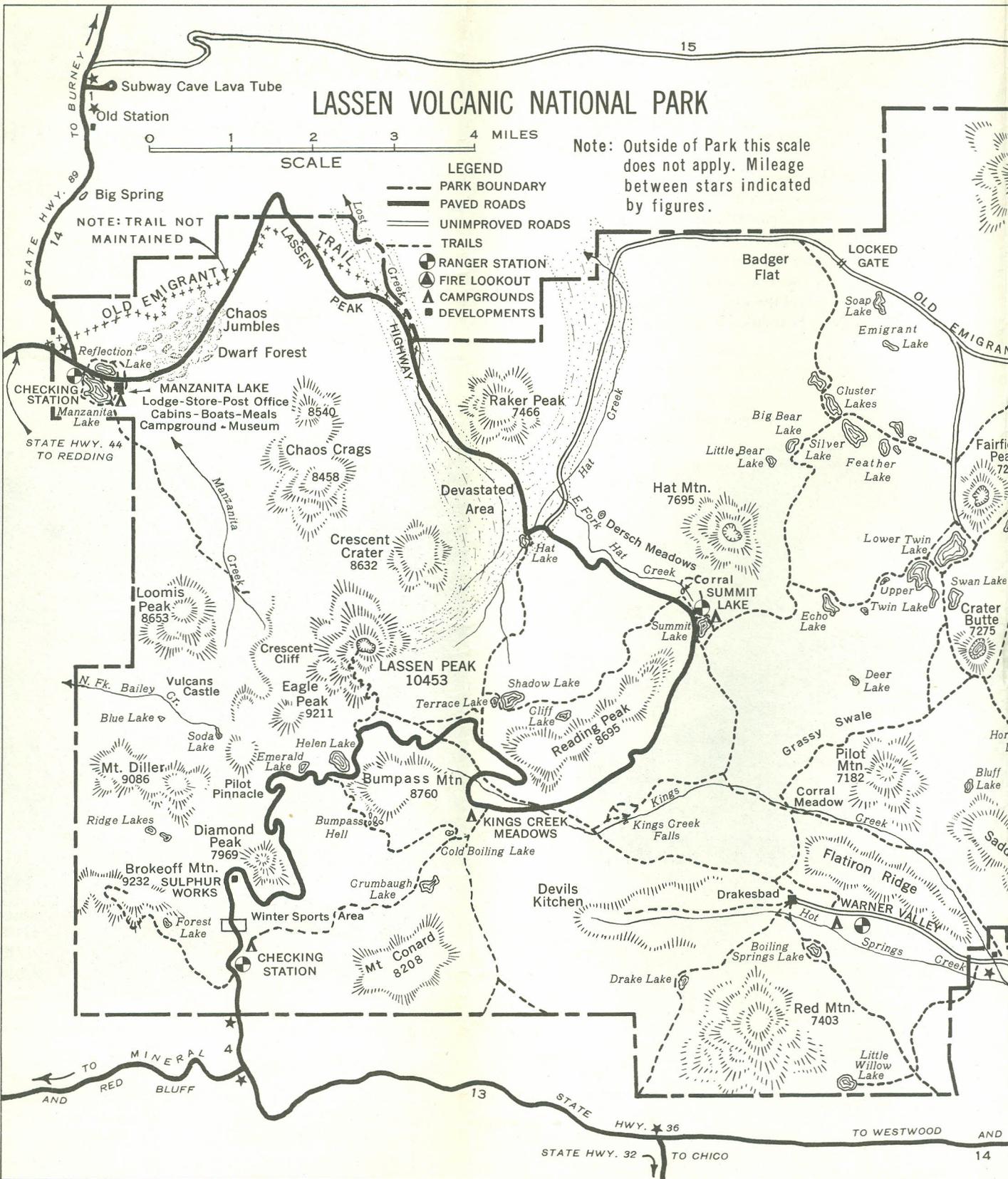
LASSEN VOLCANIC NATIONAL PARK

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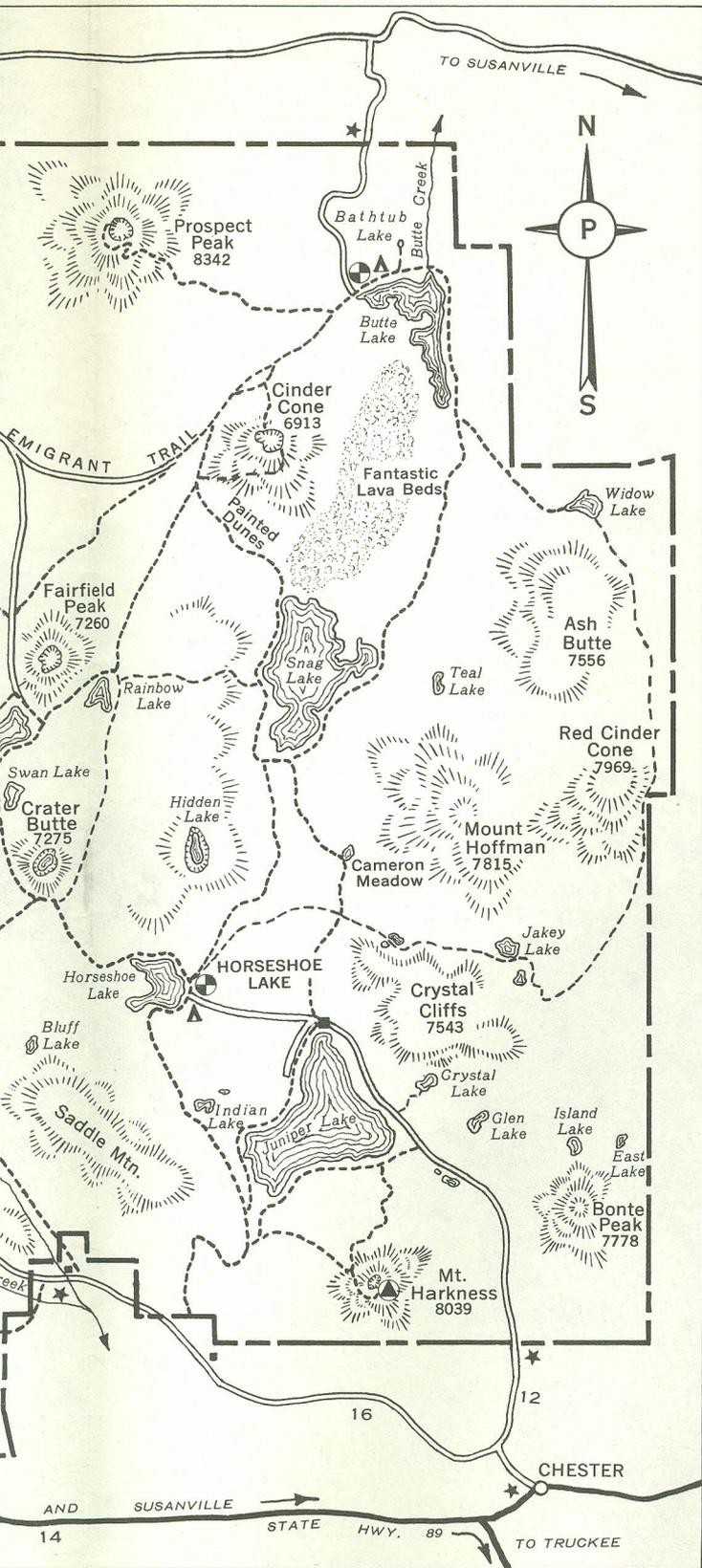
SCALE

Note: Outside of Park this scale does not apply. Mileage between stars indicated by figures.

- LEGEND
- PARK BOUNDARY
 - PAVED ROADS
 - UNIMPROVED ROADS
 - - - TRAILS
 - ⊙ RANGER STATION
 - ⊙ FIRE LOOKOUT
 - ▲ CAMPGROUNDS
 - DEVELOPMENTS



Distances in the Park



From Southwest Entrance	Feature	From Northwest Entrance
Miles		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.	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 (free guide leaflet). 1.3-mile walk to colorful hot spring area. Easy 1- to 2-hour round trip. Alpine flowers along trail.	22.6
7.2	Helen Lake. Named for Helen Brodt, first white woman to climb Lassen 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. The round trip takes about 3 hours.	21.8
8.1	Summit of Lassen Peak Highway, 8,512 feet.	21.6
12.6	Kings Creek Meadows. Campground.	17.1
17.5	Summit Lake. Campground, convenient for hikes, fishing, horseback parties.	12.2
20.0	Devastated Area, denuded of all vegetation by mudflow and blast from Lassen Peak, May 1915.	9.7
22.0	"The Hot Rock," a great boulder of 1915 lava deposited as part of the great mudflow. It remained hot for days.	7.7
27.5	Chaos Jumbles and Dwarf Forest. Jumbles caused by avalanche from Chaos Crags.	2.2
29.0	Manzanita Lake Lodge. Cabins, meals, post office, gas station, store, campground, museum, campfire circle, interpretive activities, Lily Pond Self-guiding Nature Trail No. 1 (free guide leaflet). Information and lost-and-found services in the museum.	.7
29.4	Manzanita Lake Checking Station. Obtain auto permit and declare firearms on entering.	.3
29.7	Northwest boundary.	0.0