

UNITED STATES DEPARTMENT OF THE INTERIOR
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NATIONAL PARK SERVICE
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CIRCULAR OF GENERAL INFORMATION REGARDING
LASSEN VOLCANIC
NATIONAL PARK
CALIFORNIA



LASSEN PEAK IN ERUPTION, MAY 22, 1915



SEASON—JUNE 1 TO SEPTEMBER 15
1931



View of Cinder Cone from top of the cinder-covered terrace of lava about one-fourth mile away



Crater of Cinder Cone

LASSEN VOLCANIC NATIONAL PARK

GENERAL DESCRIPTION

LASSEN VOLCANIC NATIONAL PARK, in northeastern California, was created by act of Congress approved August 9, 1916, and later was enlarged to its present area of 163 square miles. It is under the control and supervision of the National Park Service of the Department of the Interior. Ten years prior to the establishment of the national park two of the cones considered the best examples of recent volcanism, Lassen Peak and Cinder Cone, were set aside by President Taft as the Lassen Peak and Cinder Cone National Monuments, and these, of course, were included in the Lassen Volcanic National Park.

Lassen Peak, which stands at the southern end of the Cascades, where these mountains join the Sierra Nevada, is the only recently active volcano in the United States, exclusive of Alaska and Hawaii. Within the area of the park nature has wrought the greatest physical changes that are known to have occurred on the earth's surface in recent centuries, and the comparatively mild renewal of Lassen Peak activity between 1914 and 1917 drew the attention of the scientific world, as well as the interest of travelers, to the park's many unique exhibits. In addition to Lassen Peak, which rises 10,453 feet in altitude, and Cinder Cone, 6,913 feet, other interesting volcanic cones are Prospect Peak, 8,342 feet high, and Harkness Peak, 8,039 feet. Then there are smaller volcanic peaks and fantastic lava fields, both ancient and modern, fumaroles, hot springs, and mud volcanoes, as well as boiling lakes and other interesting phenomena of a volcanic region. The cones, which are easily climbed and studied, have remained nearly perfect. The west front of the park exhibits a magnificent sky line, culminating on the north in pink-toned lava crags which rise to a height of over 8,500 feet above sea level, and over 3,300 feet above the older lava flows upon which they rest. The central cone of the crags rises to a height of two-thirds of a mile above the crater, and at its base is approximately 1 mile in diameter.

Cinder Cone, with its fantastic lava beds and multicolored volcanic ejecta, is unusually beautiful. It is bare of vegetation and leaves the impression of having been formed so recently that the heat of creation should still be present. Evidence has been found,

both historical and scientific, to indicate that some of the flows seen here did occur as late as 1850-51. Adjoining Cinder Cone on the south and east are the chromatic dunes, colorful heaps of volcanic ash. Cinder Cone itself is nearly all of a reddish, dark brown, or cinder slate color.

For a period of about 200 years Lassen Peak was quiescent, then in the spring of 1914 started a series of comparatively small eruptions. Since the close of its most vigorous activity in 1915 it has remained relatively quiet, although many hot springs and other minor phenomena are proof of its internal heat, and from time to time, at decreasing intervals, the volcano emits quantities of steam and smoke. There may be future explosions, but Lassen's history as a dying volcano does not lead one to expect any great outbreaks. To-day it can be classed between semiactive and active.

GEOLOGIC HISTORY ¹

Lassen Peak is a volcano of large type surrounded by many smaller ones of later date, built up of a variety of lavas. The volcanic activity which resulted in the upbuilding of Lassen Peak began near the close of the Eocene. The lava flows appear to have been largest and most numerous in the Miocene and Pliocene, successive flows decreasing in size during the Quaternary to near extinction in recent times.

There were long periods of interrupted activity separated by long intervals of quiescence. During the active periods both explosive and effusive eruptions were common, the one forming cinder cones and sheets of volcanic agglomerate and tuff, the other forming rugged lava fields.

As the volcanic center developed the most active crater migrated. The first crater was in the head of Mill Creek. It was not only the oldest but also the largest crater, more than a mile in diameter. Composed of andesitic lavas, it rose to a height of 9,400 feet. The peak named "Brokeoff Mountain" is the most prominent remnant of this great crater in the head of Mill Creek.

The second great crater opened on the northern edge of the first and erupted dacite, building up Lassen Peak to its present height with a summit crater about a quarter of a mile in diameter.

The third crater, about 4 miles a little west of north from the first, opened only a few centuries ago at the northwest base of Lassen Peak, and the rugged lava flows from it formed Chaos Crags.

The products of this eruption in Chaos Crags are well preserved and their relations clearly visible. The eruption began by a succession of explosions that spread a thin layer of volcanic sand and

¹ From Volcanic History of Lassen Peak, by J. S. Diller, United States Geological Survey.

dust over the surrounding country and ended in the extravasation of a most rugged mass of dacite which, though at first glance having the aspect of granite, is rich in volcanic glass, generally of dark color, somewhat pumiceous and full of inclusions like the dacites of Lassen Peak.

The fourth crater of Lassen Peak is the result of the latest activity. The last eruption began by a slight explosion within the old crater, second of those enumerated, on the summit of Lassen Peak, and was remarkable for its place of outbreak, as well as its low energy, the small mass of material erupted and the continuity of the activity. Like the eruption of a few centuries ago at Chaos Crags, it had two phases; one explosive, the other effusive.

During the first phase the explosive eruptions were of gas carrying out with it rock fragments and dust only. The size of the crater increased with each eruption. The second phase, which was effusive, included also an eruption of lava, which formed a lid on the volcano and overflowed to the west.

In the beginning the new crater was confined to the loose material filling the old crater, but later it reached the solid rock of the old crater rim, and finally after more than 150 eruptions it attained, near the end of March, 1915, a size of about 700 to 1,000 feet.

By far the greatest eruptions that have occurred at Lassen Peak since its present activity began are those of the night of May 19 and the afternoon of May 22, 1915. The first great result was the extrusion of new lava and the formation of a lava lid which culminated in the devastation of the Lost Creek and Hat Creek country by horizontal blasts of gas.

About the end of March, 1915, the old crater having been thoroughly cleaned out by explosive eruptions and the superincumbent load largely removed from the magma, it began to rise in the volcanic conduit and initiated the second stage, the effusive stage, of the volcanic activity. The hot magma, apparently more or less viscous in the volcanic conduit, was forced upward by pressure of magma or gas from beneath and was gradually upheaved, with great escape of steam, until it reached the surface as new lava, and as a lava table filled not only the new, but also the old crater, so as to form a lid on the volcano. The lava overflowing from the edge of the lid through a notch in the old rim passed down the west slope of Lassen Peak about 1,000 feet.

On the night of May 19 and on the afternoon of May 22, 1915, the eruptions were violent. A mushroom-shaped cloud was hurled to a height of about 4 miles above the summit of the mountain and afforded a magnificent spectacle as seen from the Sacramento Valley. At night flashes of light from the mountain summit, flying rocket-like bodies, and cloud glows over the crater reflecting the light from

incandescent lavas below were seen by many observers from various points of view.

Although the intrusion of the new lava, with the formation of the lava lid, was the main feature of the great eruptions in May, 1915, it was far surpassed in interest and wonder by the remarkable horizontal eruptions of the hot blasts that devastated Lost and Hat Creeks. It appears that the body of superheated gases which accumulated beneath the lid, forcing it up, escaped from under the edge with terrific force down the deep snow-covered northeast slope of Lassen Peak toward Lost and Hat Creeks. The snow was instantly converted into water, and the mighty onrush of water and blast of hot gases swept everything before it for more than 10 miles, along Lost Creek, forming a devastated belt from a few hundred yards to a mile in width. Meadows were buried beneath finer débris and occasional large boulders broken off from the edge of the lava lid far above. Trees 3 feet in diameter were broken off or uprooted and the country scoured as by a mighty sand blast. The fine green leaves of the pine trees left standing along the borders of the blast were killed by the heat and turned brown. Locally, on favorable slopes, the heat was so great that the green leaves were charred; not only those of the pine but also those of the manzanita, several acres of which, at a distance, had the general appearance of an area swept by a forest fire. It was reported by the forest ranger in the vicinity that two fires were actually kindled by the eruption.

Fumaroles have developed at a number of points on the north and west slopes of Lassen Peak within 800 feet of the summit, but all the violent eruptions have occurred at or very near the summit. No fumaroles have appeared on the south and east slopes, the direction of easiest approach, where at lower levels, 5,800 to 7,400 feet, fumaroles and solfataras are such active features. These solfataras within 3 miles of Lassen Peak have been active with but little change during the past 50 years. They are on the strongest side of Lassen Peak and have not been affected by the eruption at its summit, 4,000 feet above them.

INTERESTING VOLCANIC PHENOMENA

Clustered around the southerly base of Lassen Peak, from within the ancient crater on the southwest to the outer slopes on the southeast, are numerous boiling lakes, hot many-colored mud pots, boiling springs, steamers, and incipient geysers. These are gathered in six important centers of activity.

The Boiling Springs Lake is perhaps the outstanding feature of the solfataric phase of volcanism in the park. It is what its name implies—a seething, simmering caldron with a shore line of approxi-

mately 2,000 feet. Encircled by a primeval forest of conifers, it is a striking spectacle. To be fully appreciated it should be visited when atmospheric conditions are favorable—early in the morning or near sunset during the warm months.

Within 2 miles of the Boiling Springs Lake is the Devils Kitchen, and on another drainage is the Willow Creek Geyser, one of the most active in the park. The Devils Kitchen is a half mile of canyon between high walls of volcanic rock, through which flows the lovely stream known as Warner Creek. The features of the Kitchen range all the way from incipient geysers and sputtering hot springs to hot mud and paint pots, ordinary boilers and steamers, and vapping fumaroles.

Bumpas Hell, a weird, solfataric area, lies in the spectacular Pit a few miles south of Lassen Peak on the ancient crater rim 8,000 feet above sea level. The Pit, covering about 10 acres, is hemmed in by glaciated peaks which form segments of the ancient crater rim, at this point more than 4 miles in diameter. Most of the active geysers are found in Bumpas Hell, and the region is highly colored, with reds and yellows predominating.

Within the caldera of the ancient volcano to the south of Lassen Peak and in the canyons on the outer slopes, thousands of hot and cold mineral springs occur, ranging from palatable soda waters to magnesia and waters with a widely varying sulphur and other mineral content.

OTHER INTERESTING FEATURES

Impressive canyons, scored deeply into the ancient lavas in the westerly and southerly regions of the park, add to its attractions. Primeval forests cover the entire area, except where the loftier peaks rear their summits above timber line. Not only is the park interesting for the group of volcanic features which stand as markers to indicate the joining of Cascades and Sierras, but it is also interesting to witness the intermingling of forest growth natural to rather definite regions of the northern and southern Pacific coast mountains of the United States. In the main we find western yellow pine, Jeffrey pine, sugar pine, lodgepole pine, incense cedar, white fir, Douglas fir, red fir, western white pine, an occasional juniper, and at the timber line the rich, dark masses of western black hemlock interspersed with occasional groups of white bark pine. During the warm summer months a variety of flowers further enrich the profusion of color found here.

Through the forest curtain the silvery sheen and shimmer of innumerable alpine lakes greet the eye. The splendid Chain-of-Lakes in the eastern region of the park extends from Juniper, with a shore line of 5 or 6 miles at the northerly base of Mount Harkness, to the

northward, including Horseshoe Lake, which divides its waters between the Feather and the Pit, to flow apart for several hundred miles and meet again; then linking in Snag Lake with its broad beaches of volcanic sand formed by the ejecta from Cinder Cone; and on to Butte Lake near the eastern base of Prospect Peak with its rugged shores of lava and its scenic setting. Through the clear waters of Snag Lake, and at many places above the surface of the water, can be seen standing the remains of trees that grew at the south end of the lake before it was dammed by the lava flow and raised to its present shore level.

A most inspiring view may be obtained from the summit of Lassen Peak. For a radius of 150 miles the magnificent panorama unfolds. To the west and southwest the Sacramento Valley spreads like a great map, from the base of Shasta to where it merges into the great Central Valley of California, a sweep of fully 200 miles; to the north Mount Shasta looms in splendid majesty and far beyond the peaks of southern Oregon link Lassen Volcanic with its sister park at Crater Lake; to the eastward the Susan River drainage guides the eye to Honey Lake Valley and the distant mountains of Nevada; to the south the view is over the High Sierra, across the broad expanse of forested mountain region in the Feather River country, until the picture dissolves in the purple mysteries which veil the distances.

In the foreground of the picture the splendid mountains viewed from the lower elevations now seem pigmies. At the base of Lassen to the north the Chaos Crags and to the east White Mountains stand out in bold relief. Curving from the southerly base the serrated edges of the ancient crater rim, with Helen Lake, a gemlike setting in its crescent, include six peaks which attain a height of over 9,000 feet above sea level. Brokeoff Mountain and Mount Diller stand out prominently among the encircling peaks which form the amphitheater marking the location of the once dominating volcano of this region, active when the earth was young. Compared with this, our Lassen Peak is of geologic yesterday.

FISHING

The lakes referred to above and many others are well stocked with game trout of several varieties. Regulations regarding fishing in the park will be found in section 5 of the regulations, on page 15.

WILD ANIMALS

Lassen Volcanic National Park, like all the other national parks, is an absolute game sanctuary. (See regulation 4, on page 15, prohibiting hunting.) Before active administration of the park was begun, hunting in certain sections was carried on excessively. As a

consequence the wild game was seldom seen in any quantity. Under the protection afforded during the past few years, the park has apparently succeeded in establishing itself as a sanctuary for wild animals, which are now more numerous than before. The fact that the wild animals must range unprotected outside the park during most of the year, however, precludes the possibility of their becoming quite so accustomed to human companionship and consequently as tame as they are found to be in some of the parks which embody both winter and summer feeding grounds. Occasionally black bear are seen and black tail and mule deer may be met in most any section of the park. A considerable variety of smaller animals and a large group of birds will introduce themselves to the visitor before he may journey far.

HOW TO REACH THE PARK

The park may be reached by railroad and automobile. The Shasta route of the Southern Pacific Lines, the Western Pacific over the Feather River route, and the Southern Pacific Lines from points in the east, as well as the Sacramento & Northern Electric, locally, all connect with modern auto stages at convenient approach cities only two or three hours' journey from the park.

By automobile it may be reached from the Park-to-Park Highway from Red Bluff, Calif., as well as by connecting roads from several near-by cities. Connection can also be made from the Lincoln Highway at Truckee, Calif., or Reno, Nev., and the northwestern part of the park may be reached by road from Redding on the Park-to-Park Highway.

Development of a comprehensive road system in Lassen Park was begun in 1924 and will be prosecuted as rapidly as funds will permit. Completion of this system will bring most of the major attractions of the park within easy reach of the motorist.

ACCOMMODATIONS

Up to the present time no public utilities have been authorized to operate in Lassen Volcanic National Park, with the exception of several permittees furnishing guide and saddle-horse service. Rustic hotel accommodations are available at Juniper Lake Resort, in the southeast section of the park, on beautiful Juniper Lake and in fine fishing country. At Drakesbad, situated at the upper end of Warner Valley, near both the Devils Kitchen and the Boiling Springs Lake, comfortable tent and cabin accommodations are available. Rates at both these places are quoted on page 20 for the information of visitors. Although both these places are within the exterior boundaries of the park, they are on private lands, and therefore not under Government supervision.

Other stopping places outside the park, but within close proximity (see map on pp. 8 and 9), are:

- Lee Camp, Warner Valley, tents and cabins, lodge.
- Kelly Camp, Warner Valley, tents and cabins.
- Lee Lodge, Chester, modern hotel, tents, and cabins.
- Mineral Campsite, Mineral, cabins, also garage.
- Viola Hotel, Viola, hotel accommodations.

Post office, store, and gasoline supplies may be found at all of the above-named places.

CAMPING

Camping in the Lassen Volcanic National Park is permitted as provided in section 2 of the rules and regulations quoted on page 14.

ADMINISTRATION

The park is administered by the Department of the Interior, through the National Park Service, with the superintendent, L. W. Collins, in immediate charge. He is assisted by a permanent park ranger, clerk, and naturalist, and during the travel and fire season by additional rangers.

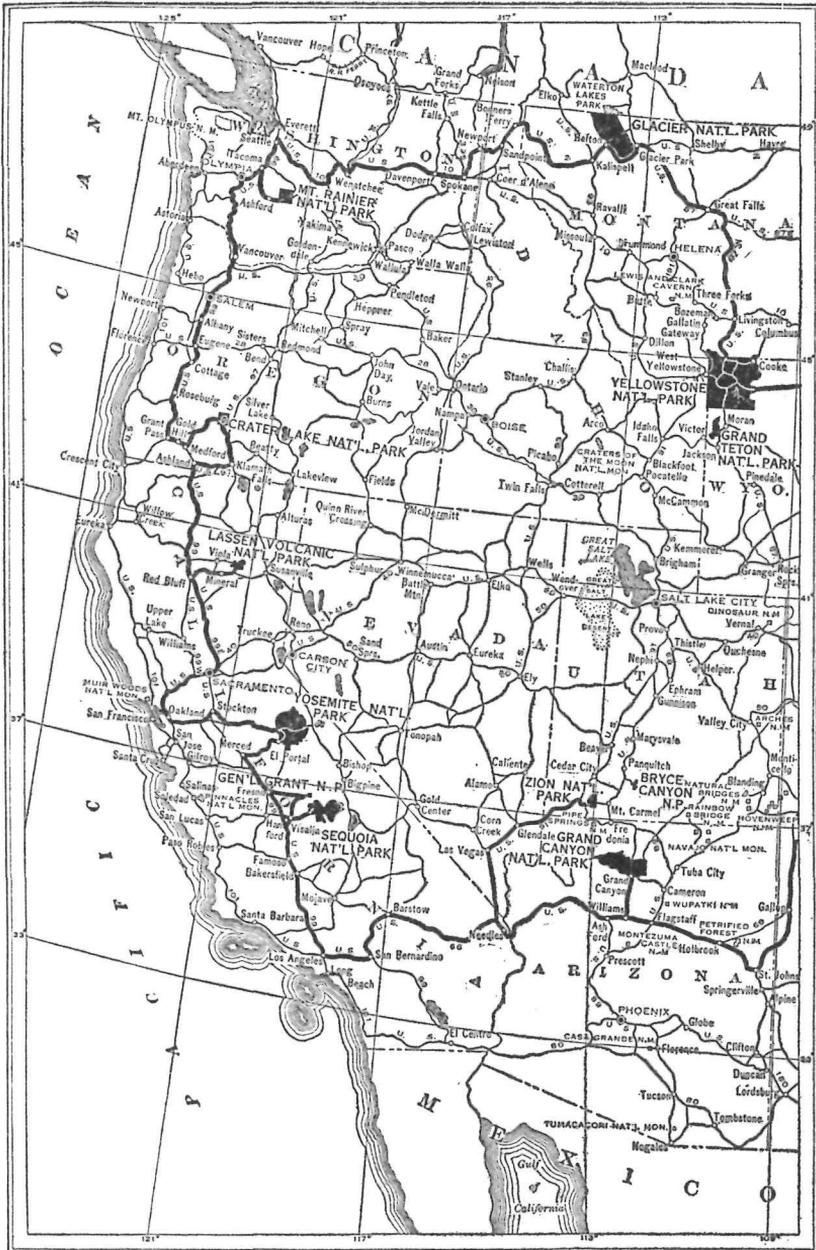
Ben V. Curler, United States commissioner for the park, tries all cases of infractions of the regulations.

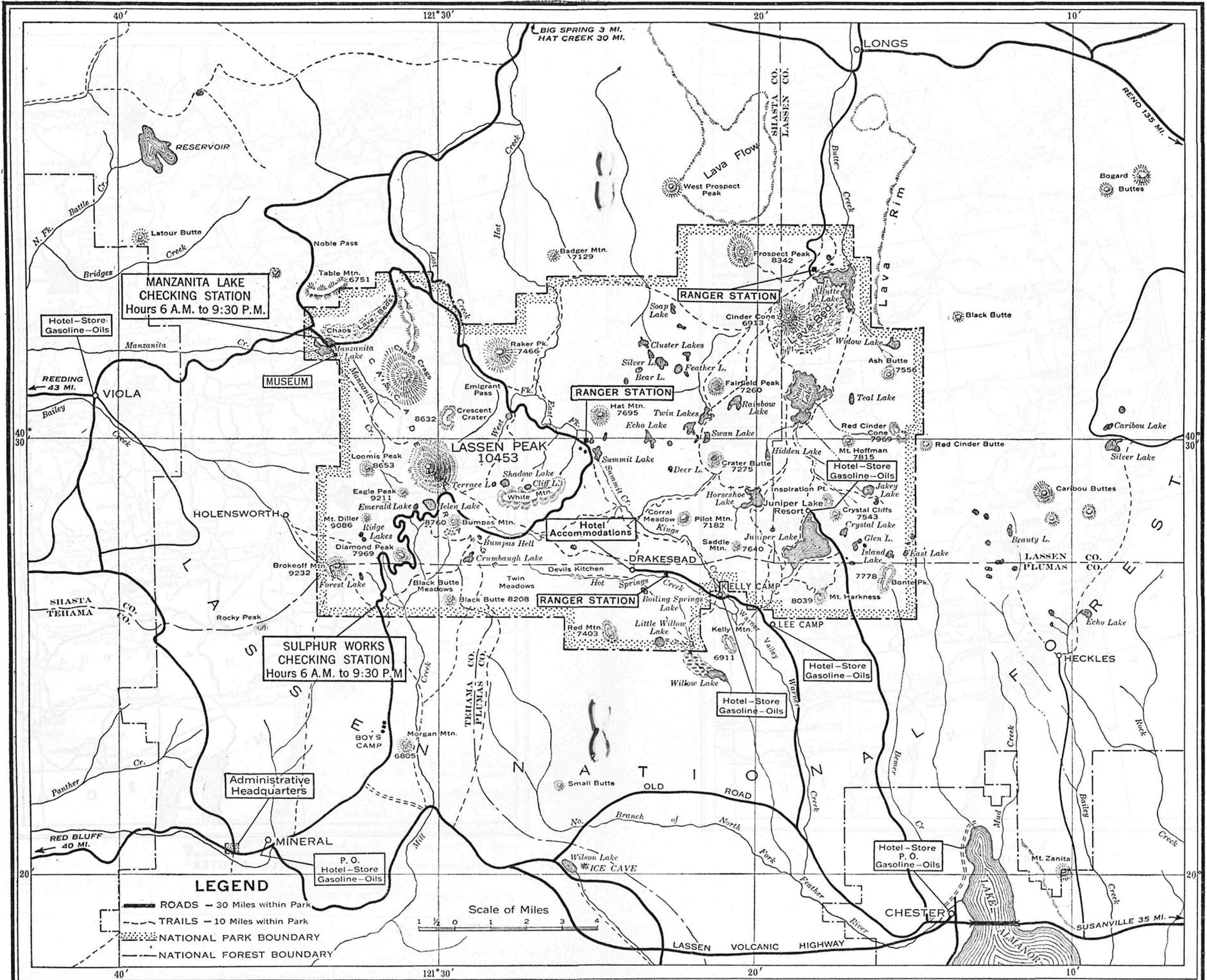
The superintendent's office is located at administration headquarters on the Lassen Volcanic Highway, one-half mile west of Mineral. Information, maps, and bulletins may be obtained there. The post-office address is Mineral, via Red Bluff, Calif.

Distances to principal points of interest by automobile

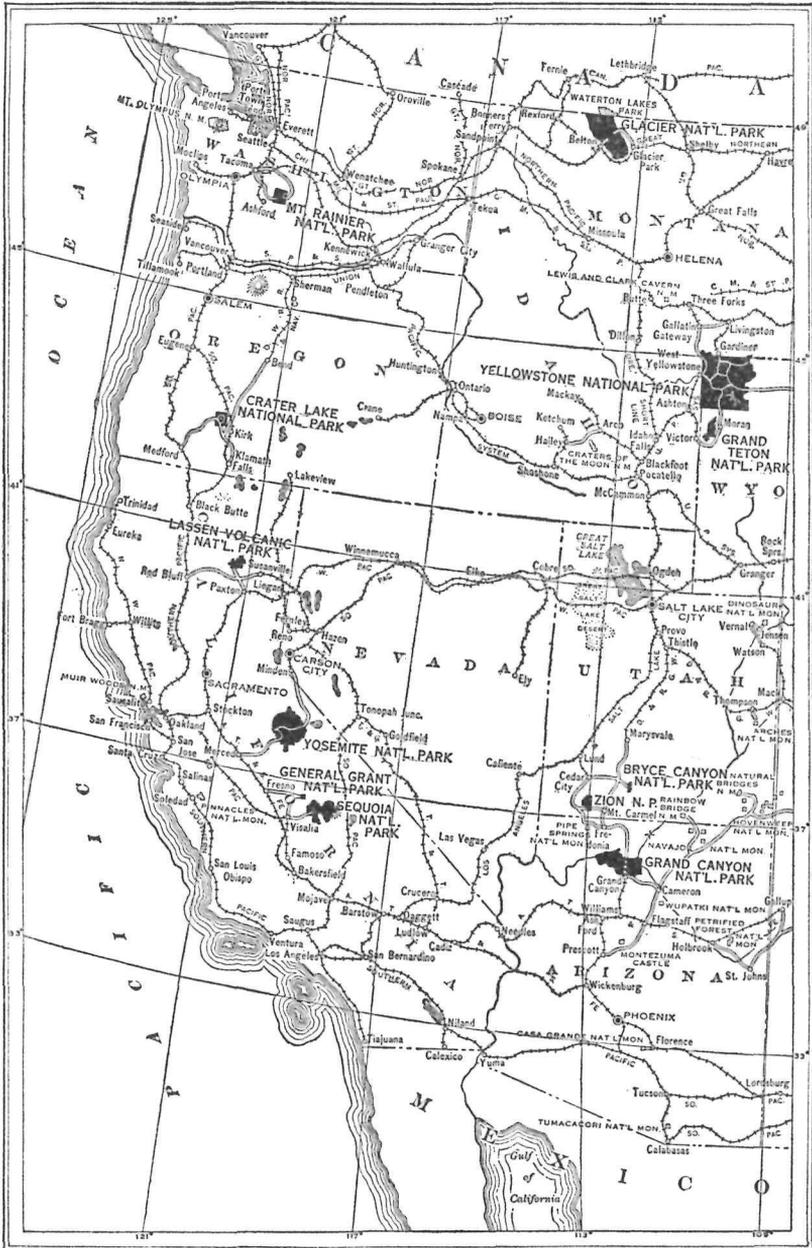
MINERAL TO MANZANITA LAKE

Name	Distance between points	Distance from Mineral	Remarks
	<i>Miles</i>	<i>Miles</i>	
Mineral.....			Next gas station at Viola, 40 miles.
Park boundary.....	8.2	8.2	Elevation 6,300 feet above sea level.
Sulphur works checking station.....	.6	8.8	Hours, 6 a. m. to 9.30 p. m. Guns must be declared and sealed.
Sulphur works.....	.4	10.2	Stop and inspect the steam vents and fumaroles.
Soda Spring.....	3.7	13.9	Free soda water.
Lake Emerald.....	1.0	14.9	Elevation 8,100 feet.
Lake Helen.....	.5	15.4	Named after the first white woman to climb Lassen Peak.
Start, Lassen Peak trail.....	.7	16.1	Allow 2½ hours for the climb. Good trail, wonderful views.
Summit of Loop Highway.....	.3	16.4	Elevation 8,512 feet.
Upper Kings Creek Meadows.....	4.7	21.1	Good camping. Lake Almanor and the lookout on Mount Harkness on right when descending.
Summit Lake.....	4.6	25.7	Good camp site, plenty of fish here but hard to catch.
Devastated area.....	2.0	27.7	Land denuded by hot lava and gas flowing from Lassen Peak in May 1915, melting the snow and causing the flood.
Hot Rock.....	2.5	30.2	Large black rock on the left was carried from the peak and retained its heat for over a week.
Intersection, Hat Creek Road.....	2.3	33.5	Old Station, Burney, Alturas, Subway Lava Tube points north.
Museum, Manzanita Lake.....	3.7	37.2	Gift of B. F. Loomis; contains pictorial story of eruptions.
Manzanita Lake checking station.....	.4	37.6	Hours, 6 a. m. to 9.30 p. m.
Northwest boundary.....	.4	37.97	Road continues on to Viola and Redding or Mineral.





LASSEN VOLCANIC NATIONAL PARK AND VICINITY



Scale of Miles
0 25 50 100 150 200 250 300
RAILROAD ROUTES

Distances to principal points of interest by automobile—Continued.

MINERAL TO OTHER PARK ENTRANCES

Name	Distance between points	Distance from Mineral	Remarks
	<i>Miles</i>	<i>Miles</i>	
To Warner Valley (Devils Kitchen and Boiling Lake):			
Mineral.....			East on main highway.
Chester.....	32	32	Red River Lumber Co. holdings.
Lee Camp.....	12	44	Resort accommodations.
Kelly Camp.....	2	46	Do.
Ranger Station.....	5	46.5	Park boundary, information, maps.
Drakesbad (Warner Valley).....	2.5	49	Resort accommodations, private land, 50 cents charge for picnics.
To Juniper Lake:			
Mineral.....			
Chester.....	32	32	
Juniper Lake Camp Ground.....	11	43	On south shore of Juniper Lake.
Juniper Lake Resort.....	1	44	Resort accommodations (on private land).
To Butte Lake:			
Mineral.....			
Chester.....	32	32	
Westwood.....	13	45	Turn right on Pitville road.
Park boundary.....	45	90	12 miles of rough, dangerous road.
Butte Lake.....	2	92	Good fishing, Cinder Cone (via trail) 2 miles.

Distances to principal points of interest by trail

1. From the Loop Highway:	Miles
A. To Lassen Peak.....	2.5
B. To Bumpas Hell.....	1.2
C. To Brokeoff Mountain Lookout.....	3.0
2. From Warner Valley:	
A. Drakesbad to—	
The Boiling Lake.....	.7
The Terminal Geyser.....	2.7
Kelly Camp, via Terminal Geyser.....	4.3
B. Drakesbad to the Devils Kitchen.....	1.7
C. Drakesbad to—	
Corral Meadow.....	1.9
Crater Butte.....	5.2
Swan Lake.....	6.2
Cinder Cone.....	10.7
D. Kellys Camp to—	
Crater Butte, via trail east of Pilot Mountain.....	4.3
Cinder Cone, via Twin Lakes.....	9.8
E. Kelly Camp to—	
Terminal Geyser.....	1.6
Boiling Lake.....	3.6
F. Lee Camp to—	
Horseshoe Lake.....	3.7
Snag Lake.....	7.7
Cinder Cone.....	10.5
Cinder Cone, via Twin Lakes.....	11.3
G. Lee Camp to Boiling Lake, via Kelly Camp.....	5.6

3. *From Juniper Lake:*

	Miles
A. Juniper Lake Resort to—	
Horseshoe Lake.....	1.3
Snag Lake.....	4.4
Cinder Cone.....	7.2
B. Juniper Lake Resort to Inspiration Point.....	.7
C. Juniper Lake Resort to—	
Mount Harkness Lookout, via road to start of trail.....	1.5
Lookout Station.....	3.5

RULES AND REGULATIONS

GENERAL REGULATIONS

The following rules and regulations for the government of the Lassen Volcanic National Park are hereby established and made public, pursuant to authority conferred by the acts of Congress approved August 9, 1916 (39 Stat. 442), and August 25, 1916 (39 Stat. 535), as amended June 2, 1920 (41 Stat. 732):

1. *Preservation of natural features and curiosities.*—It is forbidden to throw any object or substance into any crater, spring, or steam vent; or to injure or disturb in any manner or to carry off any mineral deposit, specimen, natural curiosity, or wonder within the park; or to deface the same with written inscriptions or otherwise.

The destruction, injury, defacement, or disturbance in any way of the public buildings, signs, equipment, or other property, or the trees, flowers, vegetation, rocks, minerals, animal, bird, or other life is prohibited: *Provided*, That flowers may be gathered in small quantities when, in the judgment of the superintendent, their removal will not impair the beauty of the park. Before any flowers are picked permit must be secured from this officer.

2. *Camp grounds.*—Camp grounds shall be thoroughly cleaned before they are abandoned. Combustible rubbish shall be burned on camp fires, and all other garbage and refuse of all kinds shall be buried or carried to a place hidden from sight.

Campers and others shall not wash clothing or cooking utensils or pollute in any other manner the waters of the park. Bathing in any of the streams or lakes near the regularly traveled thoroughfares in the park is not permitted without suitable bathing clothes.

Wood for fuel shall be taken only from dead or fallen trees.

3. *Fires.*—Fires constitute one of the greatest perils to the park; they shall not be kindled near trees, deadwood, moss, dry leaves, forest mold, or other vegetable refuse, but in some open space on rocks or earth. Should camp be made in a locality where no such open space exists or is provided, the deadwood, moss, dry leaves, etc., shall be scraped away to the rock or earth over an area con-

siderably larger than that required for the fire. Fire shall be lighted only when necessary, and when no longer needed shall be completely extinguished, and all embers and bed smothered with earth or water so that there remains no possibility of reignition.

Especial care shall be taken that no lighted match, cigar, cigarette, or other lighted substance is dropped in any grass, twigs, leaves, or tree mold.

4. *Hunting.*—The park is a sanctuary for wild life of every sort, and all hunting or the killing, wounding, frightening, or capturing at any time of any wild bird or animal, except dangerous animals when it is necessary to prevent them from destroying human lives or inflicting personal injury, is prohibited within the limits of said park.

The outfits, including guns, traps, teams, horses, or means of transportation of every nature or description used by any person or persons engaged in hunting, killing, trapping, ensnaring, or capturing birds or wild animals within the limits of said park, shall be taken up by the superintendent and held subject to the order of the Director of the National Park Service. Possession within said park of the dead bodies or any part thereof of any wild bird or animal shall be prima facie evidence that the person or persons having same are guilty of violating this regulation. Firearms are prohibited within the park except upon written permission of the superintendent. Visitors entering or traveling through the park to places beyond shall, at entrance, report and surrender all firearms, traps, nets, seines, or explosives in their possession to the first park officer, and in proper cases may obtain his written permission to carry them through the park sealed. The Government assumes no responsibility for loss or damage to any firearms, traps, nets, seines, or other property so surrendered to any park officer, nor are park officers authorized to accept the responsibility of custody of any property for the convenience of visitors.

NOTE.—*The foregoing regulation is in effect a declaration of the law on this subject contained in sections 4 and 5 of the act of Congress, approved April 26, 1928 (45 Stat. 463), accepting cession by the State of California of exclusive jurisdiction of the lands embraced within the Lassen Volcanic National Park, and for other purposes.*

This act by its terms applies to all lands within said park, whether in public or private ownership.

5. *Fishing.*—Persons desiring to fish in the waters of the park must secure a sporting-fishing license, as required by the laws of California. Fishing is permitted in the park lakes and streams, not posted as closed from season to season, from May 1 to October 31, inclusive. Fishing with nets, seines, traps, or by the use of drugs or explosives,

or in any other way than with hook and line, or for merchandise or profit is prohibited. All fish hooked less than 6 inches long shall be carefully handled with moist hands and returned at once to the water, if not seriously injured. Fish retained shall be killed. Fishing in particular waters may be suspended; or the number of fish that may be taken by one person in any one day from the various lakes or streams may be regulated by the superintendent. Ten pounds and 1 fish, with a maximum of 10 fish, shall constitute the limit for a day's catch in all lakes and streams of the park. Possession of more than this limit by any one person shall be construed as a violation of this regulation.

6. *Private operations.*—No person, firm, or corporation shall reside permanently, engage in any business, or erect buildings in the park without permission in writing from the Director of the National Park Service, Washington, D. C. Applications for such permission should be addressed to the director through the superintendent of the park.

7. *Cameras.*—Still and motion picture cameras may be freely used in the park for general scenic purposes. For the filming of motion pictures requiring the use of artificial or special settings, or involving the performance of a professional cast, permission must first be obtained from the superintendent of the park.

8. *Gambling.*—Gambling in any form, or the operation of gambling devices, whether for merchandise or otherwise, is prohibited.

9. *Advertisements.*—Private notices or advertisements shall not be posted or displayed on Government lands within the park, excepting such as the park superintendent deems necessary for the convenience and guidance of the public.

10. *Mining.*—The location of mining claims is prohibited on Government lands in the park.

11. *Patented lands.*—Owners of patented lands within the park limits are entitled to the full use and enjoyment thereof; the boundaries of such lands, however, shall be determined, and marked and defined, so that they may be readily distinguished from the park lands. While no limitations or conditions are imposed upon the use of private lands so long as such use does not interfere with or injure the park, private owners shall provide against trespasses by their livestock upon the park lands, and all trespasses committed will be punished to the full extent of the law. Stock may be taken over the park lands to patented private lands with the written permission and under the supervision of the superintendent, but such permission and supervision are not required when access to such private lands is had wholly over roads or lands not owned or controlled by the United States.

12. *Grazing.*—The running at large, herding, or grazing of livestock of any kind on the Government lands in the park, as well as driving of livestock over same, is prohibited, except where authority therefor has been granted by the superintendent. Livestock found improperly on the park lands may be impounded and held until claimed by the owner and the trespass adjusted.

13. *Authorized operators.*—All persons, firms, or corporations holding franchises in the park shall keep the grounds used by them properly policed and shall maintain the premises in a sanitary condition to the satisfaction of the superintendent. No operator shall retain in his employment a person whose presence in the park may be deemed by the superintendent subversive of good order and management of the park.

All operators shall require each of their employees to wear a metal badge, with a number thereon, or other mark of identification, the name, and the number corresponding therewith, or the identification mark, being registered in the superintendent's office. These badges must be worn in plain sight.

14. *Dogs and cats.*—Dogs and cats are not permitted on Government lands in the park, except that dogs may be transported through the park, provided they are kept under leash while within the confines of the park.

15. *Dead animals.*—All domestic or grazed animals that may die on Government lands in the park, at any tourist camp, or along any of the public thoroughfares shall be buried immediately by the owner or person having charge of such animals at least 2 feet beneath the ground, and in no case less than one-fourth mile from any camp or thoroughfare.

16. *Travel on trails.*—Pedestrians on trails, when saddle or pack animals are passing them, shall remain quiet until the animals have passed.

Persons traveling on the trails of the park, either on foot or on saddle animals, shall not make short cuts, but shall confine themselves to the main trails.

17. *Miscellaneous.*—(a) Campers and all others, save those holding licenses from the Director of the National Park Service, are prohibited from hiring their horses, trappings, or vehicles of any kind to tourists or visitors in the park.

(b) All complaints by tourists and others as to service, etc., rendered in the park should be made to the superintendent, in writing, before the complainant leaves the park. Oral complaints will be heard daily during office hours.

18. *Fines and penalties.*—Persons who render themselves obnoxious by disorderly conduct or bad behavior shall be subjected to the

punishment hereinafter prescribed for violation of the foregoing regulations, or they may be summarily removed from the park by the superintendent.

Any person who violates any of the foregoing regulations shall be deemed guilty of a misdemeanor and shall be subject to a fine of not more than \$500 or imprisonment not exceeding six months, or both, and be adjudged to pay all costs of the proceedings.

NOTE—Lost and found articles.—Persons finding lost articles should deposit them at the nearest ranger station, leaving their own names and addresses, so that if not claimed by owners within 60 days articles may be turned over to those who found them.

AUTOMOBILE AND MOTOR-CYCLE REGULATIONS

Pursuant to authority conferred by the acts of Congress approved August 9, 1916 (39 Stat. 442), and August 25, 1916 (39 Stat. 535), as amended June 2, 1920 (41 Stat. 732), the following regulations covering the admission of automobiles and motor cycles into the Lassen Volcanic National Park are hereby established and made public:

(The provisions of the California vehicle act, except section 155, shall be enforced in Lassen Volcanic National Park in so far as they are applicable and not inconsistent with the special regulations given below.)

1. *Entrances—hours.*—Automobiles and motor cycles may enter and leave the park by any of the entrances except the southwest (Sulphur Works) entrance and the northwest (Manzanita Lake) entrance, which are closed between the hours of 9.30 p. m. and 6 a. m.

2. *Automobiles.*—The park is open to automobiles operated for pleasure, but not to those carrying passengers who are paying, either directly or indirectly, for the use of machines (excepting, however, automobiles used by transportation companies operating under Government franchise), and any person operating an automobile in contravention of the provisions of this regulation may be deemed guilty of its violation.

Careful driving is demanded of all persons using the roads.

The Government is in no way responsible for any kind of accident.

3. *Motor trucks.*—Motor trucks may enter and leave the park subject to the weight limitations prescribed by the Director of the National Park Service.

4. *Motor cycles.*—Motor cycles are admitted to the park under the same conditions as automobiles and are subject to the same regulations as far as they are applicable.

5. *Permits.*—No person may operate a motor vehicle over any of the park roads without a permit.

The owner or driver of each motor vehicle entering the park shall secure a permit at the entering ranger station.

The permit will entitle the holder to operate the particular motor vehicle therein described over any of the roads in the park. It is not transferable to any other vehicle. It is good for the entire season, expiring at the end of the calendar year. The permit should be carried with the car and exhibited to park rangers on demand.

6. *Fees.*—Fees for automobile and motor-cycle permits are \$1 and 50 cents, respectively.

7. *Speeds.*—Automobiles and other vehicles shall be so operated as to be under the safe control of the driver at all times. The speed shall be kept within such limits as may be necessary to avoid accidents. Cautionary and speed-limit signs shall be strictly observed.

The speed of motor trucks over 1½ tons capacity shall at no time exceed 20 miles per hour.

NOTE.—*Reckless driving will be vigorously prosecuted.*

8. *Fines and penalties.*—Any person who violates any of the foregoing regulations shall be deemed guilty of a misdemeanor and shall be subject to a fine of not more than \$500 or imprisonment not exceeding six months, or both, and be adjudged to pay all costs of the proceedings, or may be punished by revocation of the motor-vehicle permit and by immediate ejection from the park. Such violation shall be cause for refusal to issue a new motor-vehicle permit to the offender without prior sanction in writing from the Director of the National Park Service or the superintendent of the park.

LITERATURE

DISTRIBUTED FREE BY THE NATIONAL PARK SERVICE

The following publications may be obtained free on written application to the Director of the National Park Service:

Map of National Parks and Monuments.

Shows location of all the national parks and monuments administered by the National Park Service and all railroad routes to these reservations.

Glimpses of Our National Parks. 65 pages, including 23 illustrations.

Contains descriptions of the most important features of the principal national parks.

Glimpses of Our National Monuments. 81 pages, including 34 illustrations.

Contains brief descriptions of all the national monuments administered by the Department of the Interior.

Information circulars on the following national parks:

Acadia National Park.
 Crater Lake National Park.
 Glacier National Park.
 Grand Canyon National Park.
 Grand Teton National Park.
 Hawaii National Park.
 Hot Springs National Park.
 Mesa Verde National Park.
 Mount McKinley National Park.

Mount Rainier National Park.
 Rocky Mountain National Park.
 Sequoia and General Grant National
 Parks.
 Wind Cave National Park.
 Yellowstone National Park.
 Yosemite National Park.
 Zion and Bryce Canyon National
 Parks.

SOLD BY THE SUPERINTENDENT OF DOCUMENTS

The following publications may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C. Remittance should be made by money order or in cash.

National Parks Portfolio, by Robert Sterling Yard. Fifth edition, 270 pages, including 310 illustrations. Bound securely in cloth, \$1.

Contains nine chapters, each descriptive of a national park, and one larger chapter devoted to other national parks and monuments.

TOPOGRAPHIC MAP

A topographic map of Lassen Volcanic National Park, size 24 by 20½ inches, scale 1:48,000 or 1- $\frac{5}{16}$ inches to the mile, may be obtained from the Director of the United States Geological Survey, Washington, D. C., for 10 cents.

RATES FOR ACCOMMODATIONS

The following accommodations in the park are located on private lands. The National Park Service exercises no control over these accommodations. The rates given below are published for the information of the public, but the service assumes no responsibility for their correctness.

AT JUNIPER LAKE RESORT (AMERICAN PLAN)

Accommodations are available at Juniper Lake Resort, in the southeast section of the park on beautiful Juniper Lake, at the following rates:

Tent accommodations, 1 person in tent, \$4.50 per day, or \$20 per week and up.

Cabin accommodations, 1 person in cabin, \$6 per day, or \$30 per week.

Saddle horses are available at \$3 per day and guides at \$6 per day.

AT DRAKESBAD (AMERICAN PLAN)

At Drakesbad, situated at the upper end of Warner Valley, near both the Devils Kitchen and the Boiling Springs Lake, comfortable tent and cabin accommodations are available at \$4.50 per person per day, or \$26 per person per week. Saddle horses may be rented for \$2 per day, and guides may be hired for \$6 per day.



THE NATIONAL PARKS AT A GLANCE

[Number, 23; total area, 12,456 square miles]

Name of park	Location	Area in square miles	Distinctive characteristics
Acadia..... 1919	Maine coast.....	16	The group of granite mountains upon Mount Desert Island and also bold point on opposite mainland across Frenchmans Bay—Formerly called the Lafayette National Park.
Bryce Canyon..... 1928	Southwestern Utah....	48	Box canyons filled with countless array of fantastically eroded pinnacles—Best exhibit of vivid coloring of earth's materials.
Carlsbad Caverns... 1930	Southeastern New Mexico.	1½	Beautifully decorated limestone caverns, believed to be largest yet discovered.
Crater Lake..... 1902	Southwestern Oregon..	249	Lake of extraordinary blue in crater of extinct volcano—Sides 1,000 feet high—Interesting lava formations—Fine fishing.
General Grant..... 1890	Middle eastern California.	4	Created to preserve the celebrated General Grant Tree, 40.3 feet in diameter—35 miles by trail from Sequoia National Park.
Glacier..... 1910	Northwestern Montana.	1,534	Rugged mountain region of unsurpassed alpine character—250 glacier-fed lakes of romantic beauty—60 small glaciers—Precipices thousands of feet deep—Almost sensational scenery of marked individuality—Fine trout fishing.
Grand Canyon..... 1919	North central Arizona.	1,009	The greatest example of erosion and the most sublime spectacle in the world.
Grand Teton..... 1929	Northwestern Wyoming.	150	Includes most spectacular portion of Teton Mountains, an uplift of unusual grandeur.
Great Smoky Mountains 1936 (proposed).	North Carolina and Tennessee.	248	This area is not to be developed as a national park until at least 427,000 acres have been donated to the United States, as specified in the organic act. Meanwhile the park area of 158,876.50 acres already in Federal ownership is being protected by the National Park Service.
Hawaii..... 1916	Hawaii.....	245	Interesting volcanic areas—Kilauea and Mauna Loa, active volcanoes on the island of Hawaii; Haleakala, a huge extinct volcano on the island of Maui.
Hot Springs..... 1921	Middle Arkansas.....	1½	46 hot springs said to possess healing properties—Many hotels and boarding houses—19 bath-houses under Government supervision. Reserved by Congress in 1832 as the Hot Springs Reservation to prevent exploitation of hot waters.
Lassen Volcanic... 1916	Northern California....	163	Only recently active volcano in United States proper—Lassen Peak, 10,453 feet—Cinder Cone, 6,913 feet—Hot springs—Mud geysers.
Mesa Verde..... 1906	Southwestern Colorado.	80	Most notable and best preserved prehistoric cliff dwellings in United States, if not in the world.
Mount McKinley... 1917	South central Alaska....	2,645	Highest mountain in North America—Rises higher above surrounding country than any other mountain in the world.
Mount Rainier..... 1899	West central Washington.	325	Largest accessible single peak glacier system; 28 glaciers, some of large size; 48 square miles of glacier, 50 to 500 feet thick—Wonderful sub-alpine wild-flower fields.
Platt..... 1902	Southern Oklahoma....	1	Sulphur and other springs said to possess healing properties.
Rocky Mountain... 1915	North middle Colorado.	491	Heart of the Rockies—Snowy range, peaks 11,000 to 14,255 feet altitude—Remarkable records of glacial period.
Sequoia..... 1890	Middle eastern California.	604	The Big Tree National Park—Scores of sequoias 20 to 30 feet in diameter, thousands over 100 feet in diameter, General Sherman Tree, 37.3 feet in diameter and 273.9 feet high—Towering mountain ranges—Startling precipices—Mount Whitney—Kern River canyon.
Sullys Hill..... 1904	North Dakota.....	1	Small park with woods, streams, and a lake—Is a wild-animal preserve.
Wind Cave..... 1903	South Dakota.....	17	Cavern having several miles of galleries and numerous chambers containing peculiar formations.
Yellowstone..... 1872	Northwestern Wyoming, southwestern Montana, and northeastern Idaho.	3,426	More geysers than in all rest of world together—Boiling springs—Mud volcanoes—Petrified forests—Grand Canyon of the Yellowstone, remarkable for gorgeous coloring—Large lakes—Many large streams and waterfalls—Vast wilderness, one of the greatest wild bird and animal preserves in the world—Exceptional trout fishing.
Yosemite..... 1890	Middle eastern California.	1,139	Valley of world-famed beauty—Lofty cliffs—Romantic vistas—Many waterfalls of extraordinary height—3 groves of Big Trees—High Sierra—Waterwheel Falls—Good trout fishing.
Zion..... 1919	Southwestern Utah....	148	Magnificent gorge (Zion Canyon), depth from 1,500 to 2,500 feet, with precipitous walls—Of great beauty and scenic interest.



Hat Creek Meadow. Lassen Peak and Choas Crags in background



Shore line of Boiling Springs Lake, showing mud pot in foreground