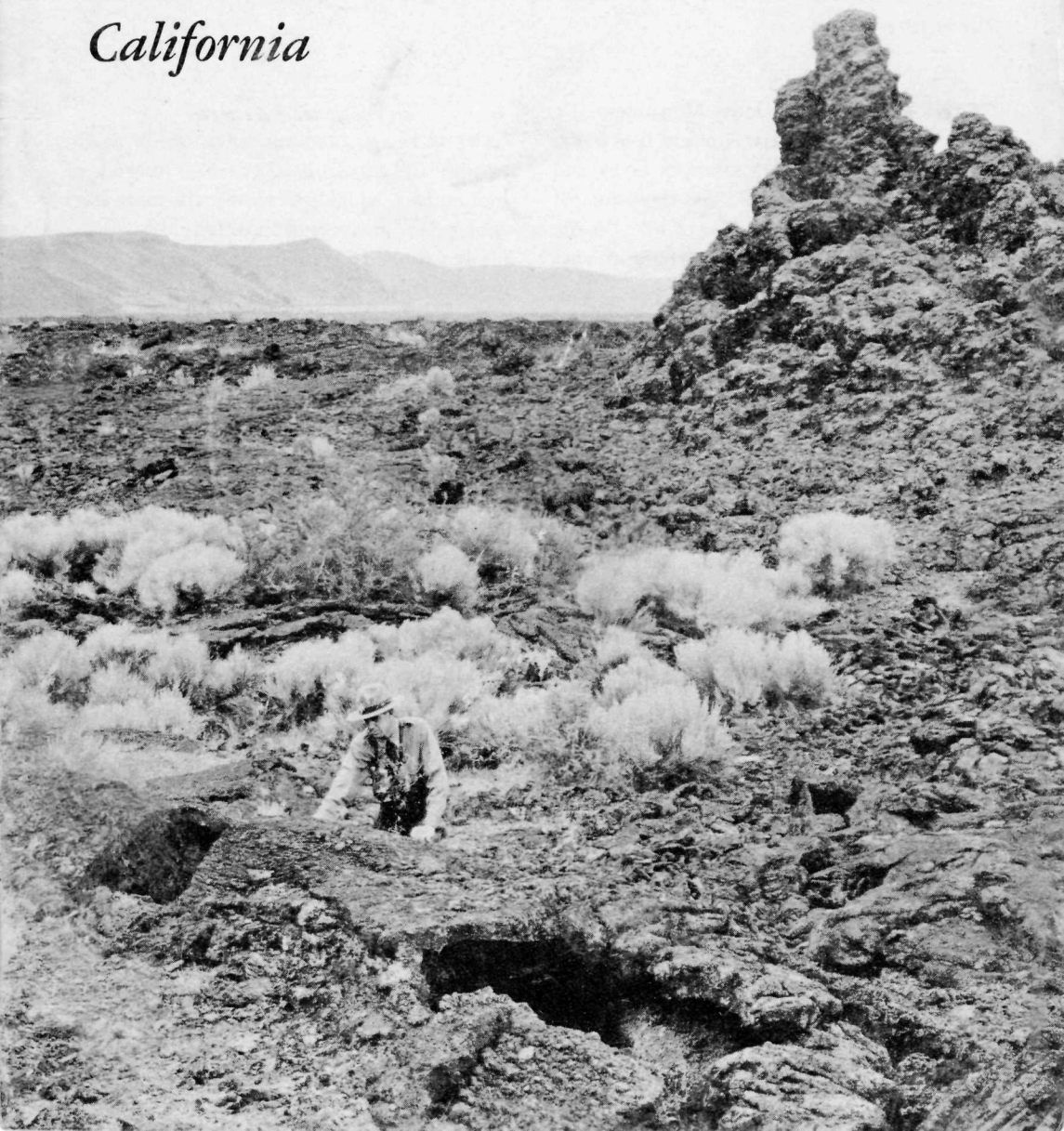


# LAVA BEDS

NATIONAL MONUMENT

*California*



# Lava Beds



## National Monument

United States Department of the Interior, J. A. KRUG, *Secretary*  
National Park Service, NEWTON B. DRURY, *Director*

*The Lava Beds is an area of volcanic formations of recent origin and the scene of the Modoc Indian War of 1872-73.*

THE Lava Beds National Monument is a region of comparatively recent lava flows, with their attendant lava tubes, or caves, and related volcanic features. It was the principal scene of the Modoc Indian War of 1872-73, the only important war of its kind fought in what is now the State of California.

The area, embracing approximately 46,000 acres in the extreme northeastern part of California, was set aside as a national monument by Presidential proclamation in 1925 under the jurisdiction of the Forest Service, Department of Agriculture, and was transferred to the National Park Service, Department of the Interior, by Executive order of 1933.

*Devils Homestead—a lava flow*



### Volcanic Features

CENTURIES ago, flaming volcanoes in northeastern California belched their masses of molten lava, which spread over the more level land below in rivers of liquid fire. In cooling off they formed one of the most curious regions in California.

From a distance, Lava Beds National Monument appears as a fairly level terrain. Lying between 4,000 and 5,000 feet above sea level, slopes to the north and is interspersed with symmetrical cinder cones pitted with craters. From these cones extend dark winding trenches that mark the collapsed roofs of the main distributing lava tubes. In the distance, to the



*Pictographs on sides of Symbol Bridge*

northeast, on the Tule Lake peninsula, are three cliffs of Columbia River basalt, one of which rises 1,000 feet as an almost sheer precipice.

It is not until one comes close to the Lava Beds that the rugged nature of the country becomes apparent. Present throughout the region are yawning chasms, sometimes 100 feet deep, masses of lava rock twisted into almost every conceivable shape and form, and caves large and small, of which over 200 have been discovered.

Among the most conspicuous topographic features of the Lava Beds National Monument are the smooth, round cinder cones, or miniature volcanoes, that rise 100 to 300 feet from the adjacent lava. Schonchin Butte, named after the famous war chief of the Modocs, is the largest of these cones and is composed entirely of scoriaceous cinders. There are in all about 11 cinder cones in the monument, most of them in the southern portion.

Of equal interest are the fumaroles, or "chimneys," which are produced by small fountains of gas-inflated lava, similar to the fire fountains of Kilauea Volcano in Hawaii. Some of these have deep holes extending down into the earth, one on the main auto road northwest of Indian Well being 3 feet in diameter and over 100 feet deep.

Eruptions within the monument were of two general types: the explosive type and the fissure type. The explosive type created the numerous conical cinder cones in the southern portion of the area. The fissure type of eruption produced the billowy slag-like lava which flowed like thick, frothy molasses from deep cracks in the earth's crust. It is in this type of lava, known as pahoehoe, that the caves, otherwise known as lava tubes, occur. These were formed by the hardening first of the surface and later of the walls of the flow which, after the lava inside drained out, became a tube. The collapsed portions form long, serpent-like trenches of broken rock 20 to 100 feet deep and 50 to 250 feet wide, with occasional narrow, unbroken strips of the roof serving as natural bridges.

As the lava tube drained, the space between the fiery molten floor and the roof would fill with hot gases which remelted and glazed the ceilings and side walls with weird, multicolored drip pendants, or "lavacicles." Rivulets of glazed lava dripping down the side walls of the tube hardened into ribs with which portions of the caves are completely covered.

### The Caves

THE visitor to the Lava Beds National Monument will usually drive to Indian Well and first visit the nearby cave of that name in which is found a large body of ice and water. The main entrance to the Labyrinth is also here.

On the auto road leading south from Indian Well to Catacombs Cave is found a series of wonderful caves—Sunshine, Juniper, and Sentinel—the last named so called because of the guardian figures which adorn its passageway. Catacombs Cave is one of the most striking

caves in the whole region and derives its name from the peculiar niches in the wall, resembling the Christian burial places of ancient Rome. The floors of this cavern, the numerous passages of which total nearly 1½ miles in length, are for the most part very smooth.

Along the main road, which traverses the monument approximately southeast and northwest, are many large caves. A detour road, not far southeast of Indian Well, takes one past Dragon's Head and Post Office Caves, two immense caverns, one of which is located in a chasm 100 feet deep. Farther west, where the main road crosses a deep chasm on a natural lava bridge, are the Bear Paw Caves of several levels, the lower one of which, Merrill Ice Cave, contains a river of ice that never melts and a frozen waterfall.

The Lyons Road runs from near Indian Well north to Tule Lake, and provides access to many wonderful caves. At Captain Jack's Ice Cave the road crosses a natural bridge of such height that looking up the chasm from a distance an automobile on the bridge seems almost to be suspended in air.

Skull Cave on the same road has three levels and is one of the largest in the region in height

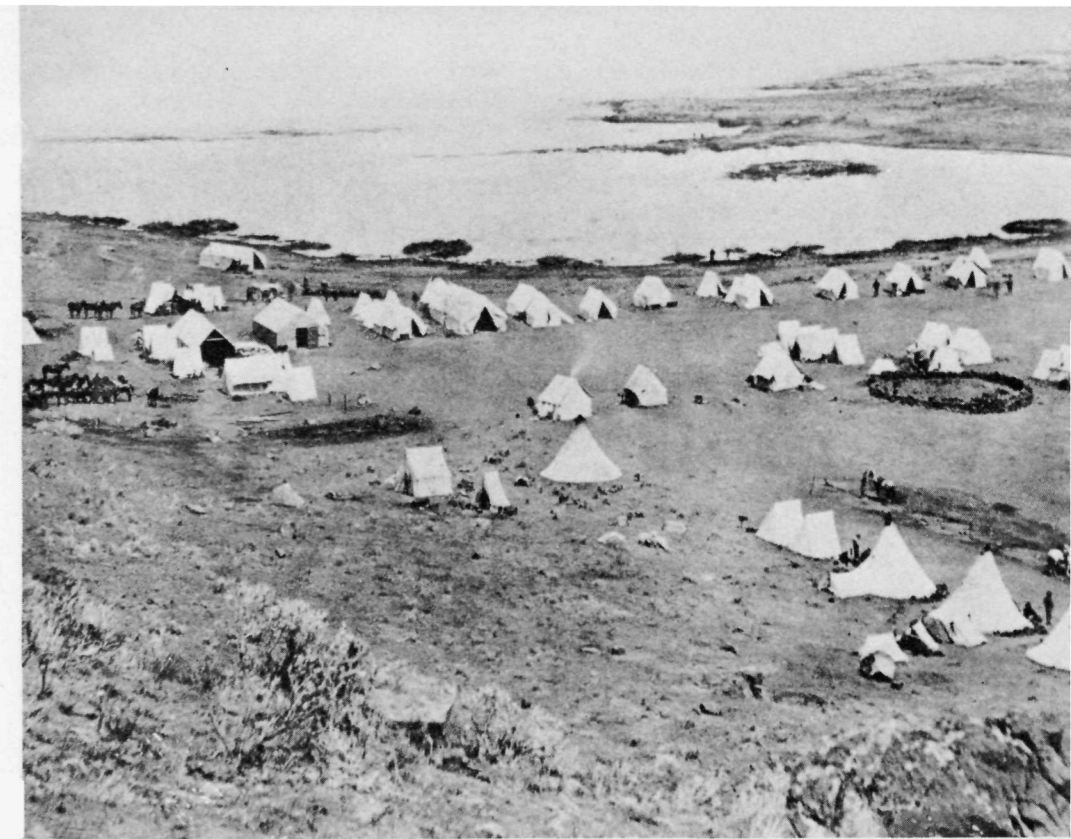
*A natural trench—Captain Jack's Stronghold*



and breadth. The roof, rising 75 feet above the floor, is beautifully domed. The lower story is a river of solid ice. The name of the cavern derived from the fact that scores of skulls bighorn sheep and pronghorn antelope, slain by aboriginal Indians, were found here.

### The Modoc War

THE Modoc War of 1872-73 was one of the most costly Indian campaigns engaged in by the United States. In the fall of 1872, a small band of Modoc Indians under a leader commonly known as Captain Jack, dissatisfied with their banishment to a reservation which they were forced to share with their hereditary foes, the Klamaths, clashed with a body of United States cavalry near Lost River just north of the California-Oregon line. Several soldiers and citizen volunteers were killed, and the victorious Indians escaped. Renegades from other Indian tribes joined the band, and after raiding the adjoining settlements they retreated to the natural lava bed fortress now known as Captain Jack's Stronghold. Here this ragged band of Indian numbering only 71 fighting men at their great strength, fought two battles with a white force of soldiers and volunteers many times superior



*Military camp in Lava Beds, in 1873, during the Modoc War*

in numbers.

On April 11, 1873, Gen. E. R. S. Canby was killed during a parley with the Indian leaders under a flag of truce. The Indians then were driven from their stronghold into the more open country to the south. Here, 2 weeks later, in a battle known as The Thomas Massacre they won another victory when two-thirds of the white command was killed or wounded and four of the five leading officers met death.

The last big battle, and the only major engagement resulting in a victory for the white troops during the entire 6 months' campaign, was fought at Dry Lake on May 10, 1873. A few weeks afterward Captain Jack was captured, and in October he and three other leaders of the band were hanged at Fort Klamath.

Unlike the usual savage bands of early western history, these Indians were not decked out in a panoply of war bonnets and beaded buckskins,

but dressed in white men's clothing, spoke the white men's tongue, and were accustomed to white men's ways. Although obliged to care for their women and children and live off the country, at the same time they held at bay for months an army of regular soldiers and volunteers of many times their numbers.

It is only when one has looked over the battlegrounds, seen the natural rock trenches and caves in which the Indians lived, and the adaptability of the country for offense and defense to a foe familiar with the terrain, that it is possible to realize how the weaker side could be so long the aggressor and victor.

The battlegrounds of the Modoc Indian War are practically the same today as they were in 1873. Rock forts, used by Indians and white troops alike, still mark the scene of the struggle, and bits of rotting leather and bleached bones of animals are yet found on the ground.

### Ethnology and Archeology

THERE are two types of symbolic Indian writings in the Lava Beds National Monument: paintings (pictographs) of red, yellow, and green ocher on the walls of the caves and the sides of the natural bridges, and carvings (petroglyphs) which are confined entirely to rocky bluffs in the Tule Lake peninsula where the rocks are soft enough to be picked by stone tools.

Pictographs, which usually are less than 10 inches high, occur in Big Painted, Little Painted, Fern, Ship, and Indian Well Caves, and on Symbol Bridge. Petroglyphs occur on the bluffs of the Tule Lake peninsula, in a detached section of the monument. They are deeply carved in the solid face of the rock and etched with yellow ocher. These carvings are considered different from others in California or Oregon and seem to indicate a somewhat higher civilization than that of the tribes of Indians found in this vicinity by the first white men. Even at that time the existence of the tribe responsible for these inscriptions remained only a tradition among the later Indians.

### Plant and Animal Life

THE plant life of the area is unexpectedly colorful. In the spring and early summer months the region at times is a veritable garden, with flowers blooming profusely wherever there is sufficient soil for plant growth among the black lava flows. About 400 species of plants grow in the area. The dark green of the scattered junipers and an occasional western yellow pine tree mingle with the fragrant flowering bitterbrush, mountain-mahogany, and blooming wild currant.

Underneath, among the purple sage, the vivid scarlet of the wild pink, or Indian paintbrush, contrasts with the pale blue of the wild flax or the yellow of the evening-primrose—the whole bathed in dazzling sunshine, and contrasting with the cold silence and the darkness of the caves.

There are approximately 40 species of animals in Lava Beds National Monument. During

winters of deep snow, hundreds of Rocky Mountain mule deer, the one great game animal remaining in the Modoc region, come from the neighboring high country to the Lava Beds. The old trails of Lava Beds bighorn, a distinct species, still are visible on some of the buttes, but before the monument could be established the animals were exterminated in the winter competition with domestic sheep and cattle for the scant forage buried under the snow. The Tulelake National Wildlife Refuge, administered by the Fish and Wildlife Service, Department of the Interior, and adjoining the monument on the north, is a haven for millions of migratory birds, especially during the flight season each spring and fall.

The checklist of birds of the Lava Beds area comprises over 100 species.

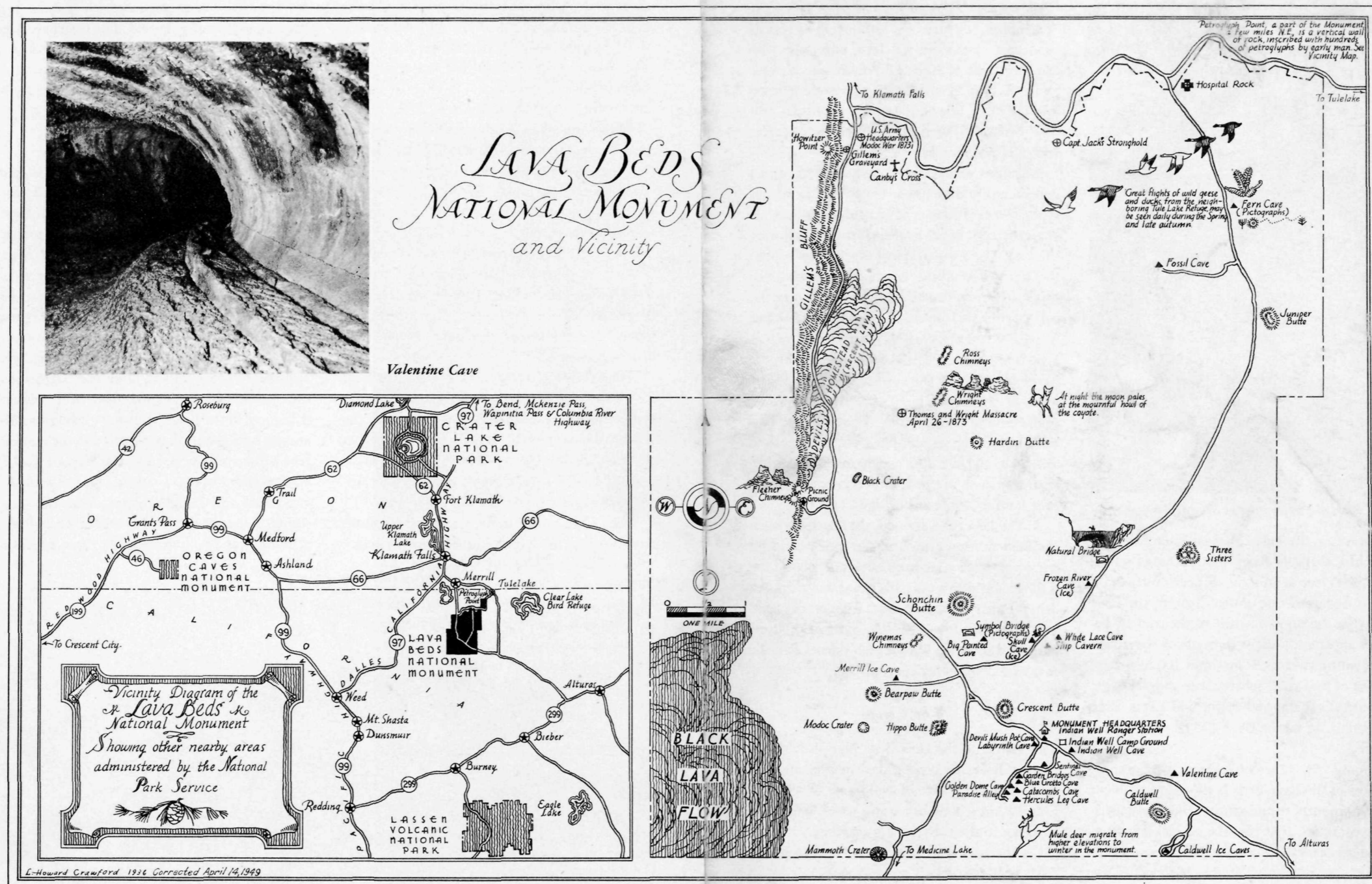
### General Information

To south-bound travelers, the monument is best reached from State Highway 39, either from Merrill, Oreg., or Tulelake, Calif., via the northwest entrance road, or Tulelake, Calif., via the Petroglyphs and the northeast entrance road. North-bound travelers may enter via the southeast entrance road, off State Highway 39. There is also a southwest entrance road from Medicine Lake.

There is no concessioner in the monument, hence no accommodations such as meals, lodging, food supplies, gas or oil, etc., are available, but they are procurable in nearby towns. There is an improved free public camp ground at Indian Well, and a picnic ground at Fleener Chimneys.

### Administration

LAVA BEDS National Monument is a unit 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. It is under the immediate supervision of a superintendent, and monument headquarters are at Indian Well. For additional information address: The Superintendent, Lava Beds National Monument, Tulelake, Calif.



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