



## Lassen Peak Trail

Zig-zagging 2.2 miles to the top of one of the world's largest plug domes, the Lassen Peak Trail offers magnificent vistas of a land of volcanoes, mountain forests and sparkling lakes. Four types of volcanoes can be seen from the trail. The summit of the peak is crowned by several craters and the lava flow of 1915.

A round trip takes about four hours for the average person. A slow pace is advised at this elevation (8,500 to 10,457). For your comfort, take suntan lotion, dark glasses, a hat, water and a wind breaker. Be prepared for strong winds at the summit, even though it may be calm when you start on your trip. PLEASE stay on the trail.

## The Circle of Fire

Lassen Peak lies at the southern tip of the Cascade Range, a series of volcanic mountains that extend through Northern California, Oregon, Washington and on into Canada. Lassen and the Cascade Range are in turn a part of the Circle of Fire, a series of volcanoes that ring the Pacific Ocean. They owe their existence to the drifting of the continents upon the earth's crust. Thus, Asia and America are moving closer together and overriding the floor of the Pacific Ocean.

Tremendous forces are at work, faults occur and molten material, perhaps from the ocean floor that has dipped below the Pacific Coast, can return to the earth's surface as lava.

Today the Lassen region is a land of earthquakes and volcanoes, but it has not always been so. Seventy million years ago, a seaway, "the Lassen Strait," flowed through this area connecting the Pacific Ocean with an inland sea in Eastern Oregon. So the Lassen region has a long history of change; change that still continues.

L  
A  
S  
S  
E  
N

P  
E  
A  
K

## Rise of Lassen Peak

About 11,000 years ago, while glaciers still mantled this region, a one-cubic mile dome of semi-solid lava thrust from the earth. Lassen's creation would have been a terrifying event to witness. Enormous earthquakes must have reverberated across this land as this massive volcano shoved aside the overlying rock. The peak reached its full height in perhaps five years—a short time for such a huge dome—then it plugged its vent by virtue of its own size and weight; hence, the name plug dome volcano.

Much of the dome is hidden by the talus which formed as the lava cooled and fractured, but outcroppings reveal the steepness of the original dome. Glaciers have left signatures in the form of small moraines on the talus slopes.

## Eruption of Lassen Peak

Except for the occasional minor eruptions every few hundred years, the peak was quiet after its rise. The Indians, Spanish and American pioneers knew Lassen Peak as a peaceful quiet mountain.

Suddenly, on May 30, 1914, the peak erupted once more. Over 150 steam explosions continued through the following year piling volcanic debris and ash on the deep snow pack on the volcano's slopes. Then on May 19, 1915, lava welled up in the throat of the volcano and spilled over notches in the summit. The glowing mass flowed 1,000 feet down the western slope and cooled. But on the steeper eastern flank, the lava broke off in chunks and combined with snow and ash to form a massive mudflow that swept down the mountain and beyond for 18 miles. A quarter-mile wide swath was cut through the forest.

Three days later a violent eruption shook the peak and blasted volcanic debris five miles into the air. Ash was dumped as far as Reno, though a portion of the Great Hot Blast was deflected down over the path of the mudflow widening it by snapping trees like matches for a distance of three miles. Today this Devastated Area is in the process of healing, but it is still a reminder of the mountain's power.

Minor eruptions continued until 1921, and steam was visible in summit craters until the early 1940's. Only



KNOTWEED



SKUNKLEAF  
POLEMONIUM



EARLEAF  
ERIOGONUM



ALPINE  
PUSSYTOES



TIMBERLINE  
PHACELIA



SILVERLEAF LUPINE

thin wisps of steam are visible upon close inspection today.

Will the peak erupt again? No one knows. It seems unlikely, but as long as the continents continue to drift, volcanic activity is apt to continue in the Pacific Circle of Fire. So the peak and surrounding volcanoes are being closely monitored via satellite, infrared photography from aircraft and seismographs.

## Alpine Life

Plant survival on the rocky slopes of Lassen Peak is difficult and growth is slow in the harsh environment. Driving winds suppress size; long winters, twenty-foot snowpacks and bitter temperatures shorten the growing season; lack of soil reduces fertility; and high elevations increase exposure to, and allow penetration of, oppressive solar radiation.

Still, plants adapt. Many have small and waxy leaves to conserve moisture, and extra pigment to resist radiation. Others have extensive root systems to assure nourishment. All have rapid growth in warm weather of a short season.

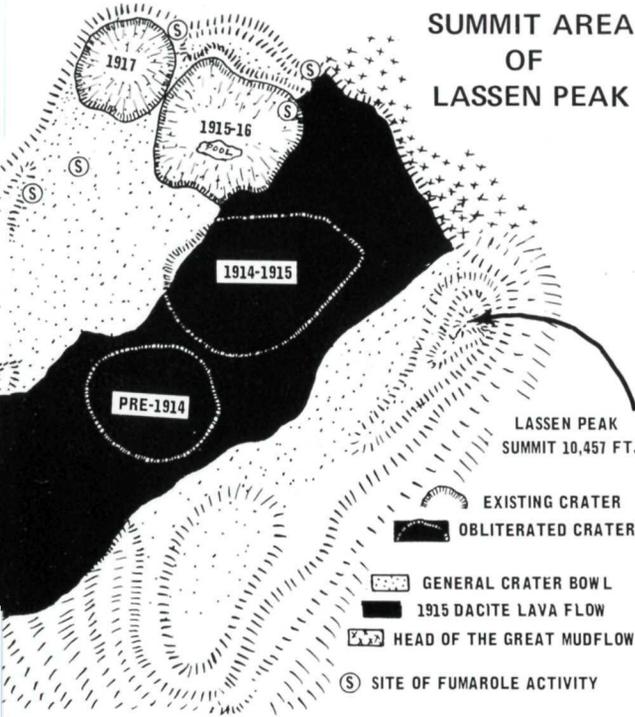
With these characteristics, a few flowers are able to survive at the summit. Knarled white bark pine creep higher up Lassen slopes than any other tree but fail to reach the summit. At lower elevations, Mountain Hemlock and Western White Pine dominate.

Mammals are not too common, but occasionally a ground squirrel or pocket gopher reaches the summit. Hawks and eagles often nest on inaccessible crags. A myriad of insects—including damselflies, dragonflies, bees, and butterflies—abound at the summit, carried there by the updrafts of wind.

Most characteristic of these barren rocky slopes is the pika, a small, grayish, rounded-eared relative of the rabbit. You may see one. If you are not fortunate enough to see these elusive animals, you may hear their harsh, high-pitched call where the trail crosses the talus slopes.

With time, soil will develop and other forms of life will dot the slopes of Lassen Peak. But above treeline, weather and the silent mountain will always dominate.

# SUMMIT AREA OF LASSEN PEAK



PIKA  
TRACKS



PIKA



7.5M - 5/93



PROSPECT PEAK, A SHIELD VOLCANO (REAR)  
AND CINDER CONE, A CINDER CONE VOLCANO  
(RIGHT FRONT)



BROKEOFF (LEFT), MT. DILLER (CENTER) AND  
PILOT PINNACLE (RIGHT) ALL PART OF THE RIM  
OF AN ANCIENT COMPOSITE VOLCANO  
(SIMILAR TO MT. SHASTA IN APPEARANCE)



WEATHERED WHITE BARK PINE



READING PEAK, A PLUG DOME VOLCANO