



Lassen Peak Trail

A sense of awesome power mantles the silent, barren slopes of Lassen Peak. This is a dormant volcano; an opening freshly formed in the earth's crust as nature released its mighty power.

A 2.2-mile trail zig-zags up wind-swept slopes, revealing signs of the mountain's recent birth. Life and death of plants in brutal weather also unfold as part of the story of the Cascade Range.

A round trip takes about 4 hours. A slow pace is advised at this elevation (8,500 to 10,457 feet). For comfort, take suntan lotion, a hat, water, and a windbreaker. Be prepared for strong winds at the summit, even though it may be calm when you start your trip. Stay on the trail, please.

Birth of the Cascade Range

A land of earthquakes and eruptions is constantly changing. If so, how did this region appear last year? 1,000 years ago? 10,000 years ago?

Slowly, violent activity pushed the Cascade Range above receding Pacific waters. This 1,000-mile barrier to prevailing westerly winds continued to rise. Precipitation increased; glaciers often formed. Plants slowly changed to represent Canadian forests.

Eruptions were sporadic, often alternating in character. First a layer of lava, then one of ash was laid—a process repeated until great peaks formed. One, Mount Tehama, rose to dominate the southern Cascades. Then, at some distant time in the past, cataclysmic earthquakes fractured the mountain. In a scene of terrifying destruction, Mount Tehama collapsed within itself (just as Mount Mazama collapsed, forming Crater Lake). The remaining caldera lost its original bowl form as streams, glaciers, rising steam and gases eroded away the southern wall. Brokeoff Mountain and Mount Diller still tower as reminders of Tehama Volcano's majesty.

Slowly, the climate became drier. Winter snowfall dropped, and glaciers gradually disappeared. Evidence of their most recent activity covers slopes around Lake Helen.

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Rise of Lassen Peak

Fitful, unpredictable nature. Mount Tehama's destruction was not permanent. Deep-seated fissures branched northward, and dark, pasty lavas spilled over its lower slopes, becoming thicker with each layer. Eruptions ceased for an unknown time, the magma cooled within the new vent—setting the scene for the birth of Lassen Peak.

Gas pressure again increased, but now too thick to flow, magma began to rise through previous flows as an enormous, pasty plug. Lassen Peak's rise continued for months—perhaps years—until the crumbling, stumpy mass towered two to four thousand feet above surrounding hills.

Lassen Peak's sheer walls, composed of a silica-rich lava called dacite, steadily fractured and fell. Great talus slopes are still building as rock debris continues to slough off the plug dome.

Fragments of the plug's smooth surface, formed as the volcano rose, are exposed on its southern slope—evidence of incredible pressures that gave birth to the mountain so abruptly, and so recently.

When did Lassen Peak form? Small moraines on the lower slopes suggest about 10,000 years ago, while primitive humans were struggling to survive in North America. Lack of soil, plants and extensive glacial activity on Lassen's slopes point to formation near the end of the last Ice Age.

Eruption of Lassen Peak

Lassen Peak was quiet after its rise, but not extinct. Old mudflows reveal a past of periodic, minor eruptions.

Suddenly, Lassen Peak erupted on May 30, 1914, and steam explosions continued through the following year. Volcanic debris accumulated on the summit around a freshly formed crater. Then, on May 19, 1915, lava welled up in the crater for the first time. The incandescent mass spilled 1,000 feet down the western slope, and cooled. Lava also poured down the eastern flank, where the winter snowpack still rested. Snow, ash, and lava rapidly combined into a mudflow, which gained speed as it slid down the steep mountainside. A mile-wide swath of forest was buried under the mudflow debris.

The volcano again became silent. Then three days later, came the climax to Lassen Peak's display of power. A violent explosion threw ash



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30,000 feet in the air, which slowly drifted over Nevada. A portion of the hot blast was deflected down over the mudflow. The path of destruction was widened and trees were snapped like matches for a distance of 3 miles. Today, this Devastated Area is in the process of healing, but 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. Will Lassen Peak erupt in the near future? No one knows. Some geologists believe that volcanic activity may be waning in the southern Cascades, but is Lassen Peak merely resting?

Alpine Life

Plant survival on the rocky slopes of Lassen Peak is difficult, for 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 radiation.

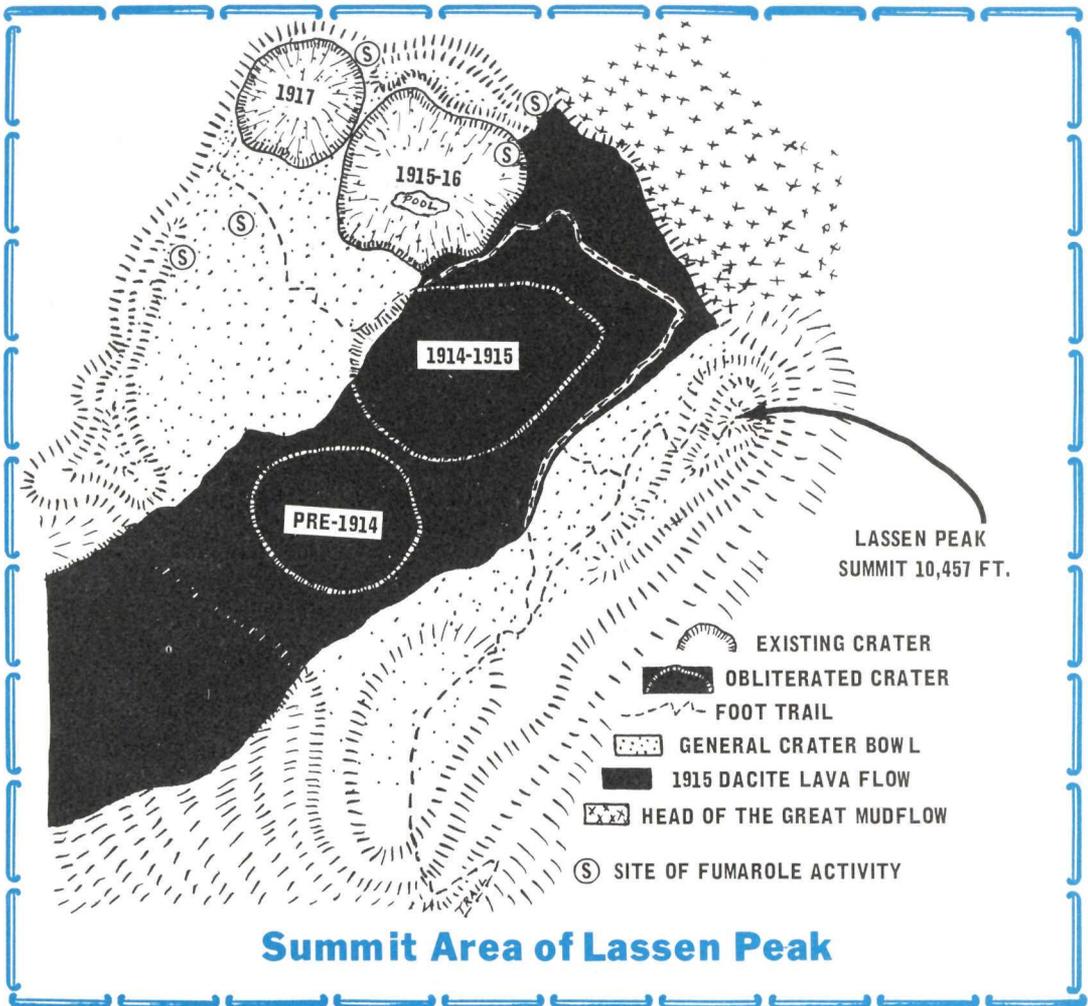
Still, plants adapt. Many have small and waxy leaves to conserve moisture, and extra pigment to resist radiation. Others have extensive root systems to assure nourishment. All have rapid growth in warm weather of a short season.

With these characteristics, a few flowers are able to survive at the summit. Among these are skunkleaf polemonium, alpine pussy toes, penstemon, timberline phacelia, dwarf hulsea, silverleaf lupine, rockspirea, knotweed, and several species of buckwheat (*Eriogonum* spp.).

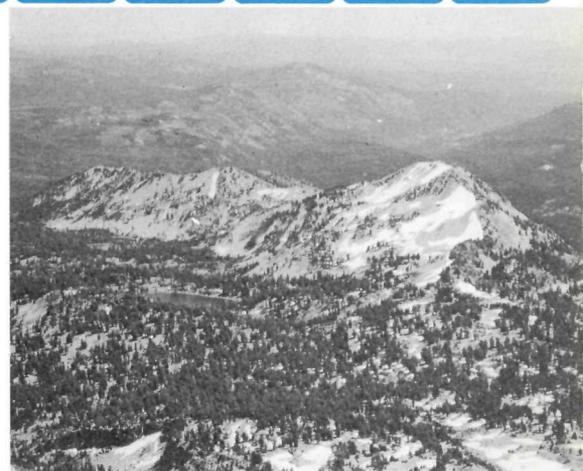
Mammals are not too common, but occasionally a ground squirrel or pocket gopher reaches the summit. Hawks and eagles often nest on inaccessible crags. A myriad of insects—including damselflies, dragonflies, bees, and butterflies—abound at the summit, carried there by the updrafts of wind.

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.



WEATHERED WHITEBARK PINE



READING PEAK FROM LASSEN PEAK TRAIL