



Plants and Animals of Lassen Volcanic National Park

Although Lassen is primarily known for its volcanic geology, the park boasts a rich diversity in plant and animal life. Over 700 flowering plant species grace the park, providing shelter and food for 250 vertebrates (animals with backbones) as well as a host of invertebrates including insects.

This great diversity of life forms is due to two factors--the geographic location of the park and the abundance of habitats that occur there.

Situated at the southern end of the Cascade Range geologic province, Lassen Volcanic National Park lies at the crossroads of three great biological provinces--the Cascades to the north, the Sierra Nevada mountains to the south and the Great Basin desert to the east.

The myriad of habitats in Lassen Park are allowed by variations in such environmental conditions as elevation (5,000 to 10,457 feet), moisture (precipitation is greater on the western than the eastern side of the park), substrate (rock type and soil depth), temperature, insulation (amount of sun) and prior disturbance (both natural and man-caused).

Habitats and their resident plants and animals can be arranged into communities named after their predominant plant species or by some other descriptive term such as climate or general vegetation type. The following survey is a brief introduction to the major communities of Lassen. It is important to remember that animals are mobile and thus may occur in more than one community, and also that some species are ubiquitous--that is they occur over a wide range.

UBIQUITOUS SPECIES. As mentioned earlier, some animals range over a number of plant communities. Mammals on the move include mule deer, black bear, coyote, red fox, golden-mantled ground squirrel, long-tailed weasel, mountain lion, bobcat, and bats.

MIXED CONIFER FOREST (YELLOW PINE FOREST). At the lower elevations in the western part of the park (below about 6,500 feet) is a rich forest community characterized by a mix of conifers. The most common trees in this forest are Jeffrey pine, ponderosa pine, incense cedar, sugar pine, and white fir.

UPPER MONTANE FOREST (RED FIR FOREST). Just above the mixed conifer forest lies a forest zone containing less diversity than that found at lower elevations. Here, at elevations in the park between 6,500 and 8,000 feet, occur dense red fir forests with little understory and fewer animals.

In the more open areas western white pine is common. On thin soils occur lodgepole pine. At this elevation, winter snows lie deep and summer temperatures are cool in the dense shade of the red fir.

The upper montane forest does have its characteristic animals, although most are rather shy and secretive. This includes snowshoe hare, red fox, and pine marten.

Many animals make no distinction between the mixed conifer forest and upper montane forest, and so live happily in both. This is especially true for a number of forest dwelling birds, such as the Steller's Jay, western tanager, golden-crowned kinglet, woodpeckers (hairy, downy, and white headed), and dark-eyed junco. Other forest mammals include the porcupine, chickaree (or Douglas' tree squirrel), northern flying squirrel, and chipmunks.

SUBALPINE. As one rises above the forest zone in Lassen Volcanic National Park the trees begin to take on a more gnarled character and bare patches of ground intersperse between the wooded areas. The subalpine community is a land of extremes, with shaded hollows collecting very deep drifts of snow (up to 40 feet!) while adjacent areas may remain snow free due to the fierce winter winds. The subalpine areas do contain, however, a distinctive assemblage of plants and animals that can tolerate, and often thrive, in the harsh conditions.

The subalpine community in Lassen Volcanic National Park (between 8,000 and 10,000 foot elevations) is the home of two distinctive and beautiful conifers, the whitebark pine and the mountain hemlock. The pine prefers the drier sites while the hemlock does well in moist shaded areas. Both trees are subject to the harsh winter weather and are often forced into a prostrate position known as krummholtz ("crooked wood").

Because of the rich and varied flora in the subalpine community, there is also a host of birds and other animals common to the

area. Most notable are Clark's nutcracker, mountain chickadee, mountain bluebird, Cassin's finch, yellow bellied marmot, and pika (or cony).

ALPINE. The alpine community is the region above the tree line that experiences intense sunlight, desiccation winds and very cold temperatures. The wind keeps many areas snow-free all year--adding to the moisture stress--while other areas may have snow patches lasting into late August or throughout the year. The alpine is often considered a desert because during most of the year water is tied up in the frozen solid state--and hence unavailable for plant life.

And yet, the alpine community manages a yearly blossoming of life during the brief summer. Many plants are adapted to the harsh conditions (mostly by forming small mats or cushions that conserve heat and moisture), and each year a small number of animals hurry to gather food for the long winter that is just around the corner. Animals in the alpine include the gray-crowned rosy finch, Clark's nutcracker, pika, and some small rodents.