# Pinnacles

National Park Service
U.S. Department of the Interior

Pinnacles National Monument

## Habitats and Plants of Pinnacles National Monument

NPS photos: Paul G. Johnson and Gavin Emmons

Within Pinnacles National Monument 674 species of plants (not including algae, fungi, lichens, and mosses) are presently identified and listed as growing. Plant species include 536 natives and 138 non- natives. Five natural communities of associated plants have been defined within the park and are briefly described. Highly varied topography, soil type, solar orientation and exposures to wildfires influence the vegetation types. Because of the rich diversity of plant species, only the more common and those of special interest are discussed. Those who wish more detailed information should refer to the park plant checklist, which can be used in conjunction with relevant field guides. These interpretive materials are available at the visitor center on the east side of the park and at the ranger station on the west side

### Chaparral

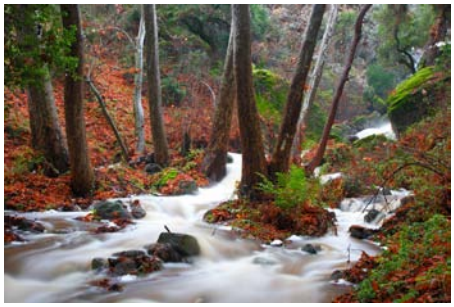
**Chaparral** is dominated by shrubs which have adapted to hot, dry summers, rocky soils and periodic fires. Many chaparral plants will quickly sprout after a fire. Chaparral plants have evolved many ways to cope with their harsh environment. Drought and heat are overcome by small wax- coated leaves that inhibit transpiration and extensive roots, which search for moisture in the rocky substrate. On the drier, most exposed slopes, Chamise *(Adenostoma fasciculatum)* is the dominate chaparral plant. This member of the rose family burns readily when dry, but quickly sprouts. Some chaparral plants, such as Big Berry Manzanita *(Arctostaphylos glauca)* need fire to germinate their seeds. Other chaparral plants common to Pinnacles are California Buckwheat *(Eriogonum fasciculatum)*, Bush Poppy *(Dendromecon rigida)* and Buckbrush *(Ceanothus cuneatus)*. Holly- leaved Cherry *(Prunus ilicifolia)*, Scrub Oak *(Quercus berberidifolia)* and Toyon (*Heteromeles arbutifolia*) are common shrubs in chaparral areas where there is more shade and moisture. Some of the more showy flowering plants associated with chaparral are Sticky Monkeyflower *(Mimulus aurantiacus)*, Indian Paintbrush *(Castilleja foliolosa)* and Woolly Blue Curls *(Trichostoma lanatum aurantiacus)*.

woodlands

### Woodlands

**Woodland** communities are represented by fourteen tree species which vary from dense riparian groves to open oak savannas. There are many understory species, both annuals and perennials, but exotic annual grasses tend to dominate, except in dense riparian groves. Drought tolerant Blue Oaks *(Quercus douglasii)* can be found on the hillside woodlands. Valley Oaks *(Quercus lobata)* dominate the alluvial flats. Groves with Coast Live Oaks *(Quercus agrifolia)* are found in the canyon bottoms and draws where there is more moisture. California Sycamore *(Platanus racemosa)*, Fremont Cottonwood *(Populus fremontii)* and Red Willow *(Salix laevigata)* grow directly in the riparian corridors. The adaptable Grey Pine *(Pinus sabiniana)* can be found growing in all the woodland associations. Watch out for Poison Oak *(Toxicodendron diversilobum)* in the more shaded areas of

## Riparian



**Riparian** communities at Pinnacles are restricted to areas with perennial water on or near the surface. Bear Gulch and Chalone Creeks have good examples of riparian communities. The water- loving trees listed above grow directly in these water courses. Common creek bottom and spring seep plants include Mule Fat *(Baccharis salicifolia)* and Arroyo Willow *(Salix lasiolepis)*. Look for huge Chain Ferns *(Woodwardia fimbriata)*, broad leaved Bracken Ferns *(Pteridium aquilinum)*, Sedges *(Carex sp.)*, Tules *(Scirpus sp.)* and Rushes *(Juncus sp.)*. Riparian communities also include beautiful flowering plants such as Scarlet Monkeyflower *(Mimulus cardinalis)* and Seep- Spring Monkeyflower *(Mimulus guttatus)*.

## Grasslands

**Grasslands** occupy a small percentage of Pinnacles. They are open areas dominated by exotic annual grasses. The common species include Wild Oats *(Avena fatua)* and several exotic Bromes *(Bromus sp.)*, as well as a scattering of native perennial grasses such as Purple Needlegrass *(Nasella pulcra)* and Pine Bluegrass *(Poa secunda)*. Grasslands also contain many annual and perennial wildflower species such as Wine Cup Clarkia *(Clarkia purpurea)*, Popcorn Flower *(Platiobothys nothofulvus)* and Fiddleneck *(Amsinckia mensiezii)*. Grasslands in the park occur where there are thin soils. Periodic ground fires also tend to create and maintain grasslands.

## Rock and Scree

**Rock and Scree** is characterized by bare rock and nearly bare talus slopes. This association occupies the least area of the five plant communities, however, the spectacular spires, crags and rock faces for which Pinnacles is named is the reason this area was designated as a national monument. Rock and scree vegetation consists of plants able to survive the extremes of temperature and lack of moisture. Bare rock supports multicolored lichens. Mosses grow in cool, shady areas. Succulents, such as Rock Lettuce *(Dudley cymosa)* and Stone- crop *(sedum spathulifolium)* grow out of cracks in the rock faces. The beautiful Bitterroot *(Lewisia rediviva)* and the rare Two- leaved Onion *(Allium cratericola)* grow in the scree areas.

## Selected References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