The Chaparral Habitat

For Young Chaparralians

Ceanothus chaparral in bloom

Photos and text by Richard W. Halsey unless otherwise noted

Life in the Shrublands

You may be surprised to discover that the most common habitat in California is the chaparral. It is made up of beautiful, woody shrubs like manzanita and mountain lilac, is home to the California condor, bobcats and cougars, and has a wonderful assortment of song birds, reptiles and insects. It was also where the California grizzly bear once roamed.

Chaparral forms a dense cover of shrubs over many hills and mountains along the coast and on the slopes of inland valleys. It can be found all the way from southern Oregon to Baja California in Mexico. The chaparral shrub cover is often so solid that hills look like they are covered with green velvet. Every once and a while you'll see a few trees like big-cone Douglas fir punching through the chaparral in canyons, but for the most part, trees are very rare.

Chaparral shrubs are quite tough. They can survive long periods without rain and can even recover from fire as long as the flames do not come too often. Rain in the chaparral almost always falls in late autumn and winter, rarely in the summer. This

Chaparral habitat in blue. Map from J.E. Keeley and F.W. Davis. 2007.

is unusual because most habitats in the world receive a lot of rain during the summer months.

Living with Heat and Fire

This special combination of hot, dry summers and mild, wet winters is called a Mediterranean-type climate. There are only five places on earth that have it: California, central Chile in South America, parts of southern Australia, South Africa, and the lands around the Mediterranean Sea. To survive this type of climate, many chaparral shrubs have small, tough leaves with waxy coatings to prevent water loss. Nearly all chaparral shrubs are evergreen, meaning they keep most of their leaves all year. However, in the dry months of summer and autumn, some chaparral shrubs, like mountain lilac, drop nearly half their leaves. Less leaves means less water will be lost through evaporation. The leaves on other shrubs, like black sage, curl up and look dead. In fact, many plants in the chaparral look dead in the dry season, but they are actually just dormant to conserve their moisture. Their stems are still green inside.

By mid-winter, after the first few rain storms have soaked the ground, chaparral plants will begin to sprout new leaves. As early as December, shrubs like manzanita will start blooming. Imagine, flowers in the winter! But this is how the chaparral has adapted to the Mediterranean-type climate in which it thrives.

In the summer and autumn heat, chaparral can catch fire because it is so dry. These fires, especially if strong winds blow, can burn thousands of acres. In Southern California, strong Santa Ana winds from the desert are responsible for spreading the largest fires. Such large fires are natural and the chaparral can recover as long as there are not too many. In the past, before humans

came to California, the chaparral burned probably once every 50 to 100 years. Now, with so many fires caused by people, some areas covered by chaparral are burning every ten years or less. This is not enough time for the chaparral to recover. When this happens, the chaparral habitat is destroyed and is usually replaced by non-native weeds and grasses.

If given enough time, however, chaparral plants can respond to fire in special ways. Some shrubs send up tiny green shoots from their root burls a few days after the fire is out. Within a month or two these re-sprouting shrubs decorate the burned

Re-sprouting chamise shrubs

landscape with little green bundles of leaves.

Other shrubs are completely burned up in the fire, but live on through the thousands of seeds they have produced over the years.

Ceanothus seedlings

These seeds can hide in the soil for a century or more. They only become seedlings after their seeds have been cracked open by heat or are exposed to chemicals found in smoke and charred wood. Some shrubs can both re-sprout and produce seedlings after a fire.

There are also many annual wildflowers that appear after a fire. The seeds of these plants were produced after the last blaze and remain dormant until fire awakens them. This is why the first spring after a fire, burned chaparral hillsides are often covered with thousands of beautiful wildflowers such as orange poppies, white snapdragons, and purple lupines. Sometimes these wildflowers will return a second year, but will then disappear until after the next blaze.

Wildflowers after a fire

Within a few years after a fire, re-sprouting plants and shrub seedlings start to take over. In 15-20 years, the chaparral is able to cloak the land with its green, soft velvet cover again.

Plant Life in the Chaparral

The most common shrub in the chaparral is chamise. It has tiny leaves that help the plant keep its moisture. In the summer, its creamy white blossoms turn golden brown, coloring the hillsides with a rich cinnamon glow. Mountain lilac, or ceanothus, is another common chaparral shrub. In the spring, these shrubs decorate mountains and hills with beautiful white and purple flowers.

The name "chaparral" comes from Spanish word *chaparro*, which describes areas in Spain covered by scrub oak, another common chaparral shrub. Scrub oak is like a short oak tree with very small acorns.

Manzanita, with its smooth red bark and flat, oval leaves, is a shrub most people recognize in the chaparral. Its urn-shaped flowers are an important source of nectar for hummingbirds and insects. Old-growth chaparral, over a century in age, can form a canopy more than twenty feet high with huge manzanitas having stems the size of a person's waist.

This was the favored habitat of the now extinct California grizzly bear. These giant mammals made tunnels through the dense chaparral, placing their big paws in the same spots generation after generation. A few of these trails may still exist, hidden under the shrub canopy for you to discover.

Old-growth manzanita

Baby cougar. Photo by Deborah Knapp.

Wildlife in the Chaparral

The most common bird in the chaparral is the wrentit, a small gray songbird with a long tail. Its call has the rhythm of a bouncing ping-pong ball and is often the first chaparral sound you hear in the morning, and the last one at dusk. A pair of wrentits can live up to ten years and nest in the same small territory their entire lives.

Other birds you may see include the gray and blue scrub jay, family groups of California quail, and roadrunners running about looking for a meal. If you are lucky, you may even see a California condor soar overhead. The chaparral provides one of the last habitats for this extremely rare bird.

Since the grizzly bear became extinct, the largest predators in the chaparral now are cougars, bobcats, coyotes, and gray foxes.

Snakes, like the red diamond rattlesnake and the gopher snake, also play an important role in the chaparral's food web. Western fence lizards and horned lizards hunt for the smallest prey.

Woodrats are common in the chaparral, but you will probably see their nests before you ever see them running along the stems of shrubs. Their nests are made of large piles of sticks and leaves. These nests are also home to many other animals including mice, lizards, and insects.

A woodrat and her nest. Photo by Scott Tremor.

Pocket gophers are also common in the chaparral, digging their tunnels and raising small mounds of dirt in the rocky soil.

People and the Chaparral

California Indians used many of the natural resources found in the chaparral. For example, they ground manzanita berries into a meal to make mush or cakes. Manzanita leaves were steeped in water to make a tea to treat several illnesses. In caves deep in the mountains, California Indians drew images inspired by many chaparral animals such as grizzly bears, lizards, and insects.

Chaparral is often one of the easiest habitats to find near your home where you can experience an undisturbed native plant community. Although it is almost impossible to walk through, you can usually find a trail or road nearby that allows you to explore its hidden secrets.

Chumash Indian cave paintings

Chaparral provides not only an important habitat for all the animals and plants we share the earth with, but also gives us a beautiful place to enjoy nature. Chaparral is one of California's most important natural treasures.

Chaparral covered mountain