

COASTAL CHAPARRAL

Southern California's grayish-brown vistas of low-growing, dense vegetation may seem to the inexperienced observer a dull and unattractive landscape. A closer look, however, reveals a richly diverse, complex community of plants and animals sometimes referred to as the "elfin forest." The chaparral extends through several altitude zones, each with its own community of species. The coastal zone (from the coast to roughly 1,500 feet in elevation) is the most threatened, quite simply because the land is so highly valued for human use. The chaparral in many ways functions like a forest stunted by perennial drought. The plant for which this ecosystem is named, the chaparral oak (from the Spanish name *chaparo*) is a true oak (genus *Quercus*) which seldom grows taller than a man. The chaparral plant community is highly adapted to survive extended periods — eight months or longer — without significant rain. It is also "fire dependent," meaning that many plants require fire for seed germination and new growth.

The topography of the chaparral is itself an integral part of the ecosystem. Much of coastal San Diego is comprised of flat-topped hills (mesas) with fairly steep slopes, converging in a pattern of arroyos and canyons with streams that flow during the late winter and spring. Vernal pools ("spring" pools) form on the flat, hardpan mesas, and an entire community of plants and animals has evolved for this ecological niche, which provides standing water for seldom longer than two months at a time. Perhaps as little as 2 to 3% of these pools have survived the developer's bulldozer.

The animal life of the chaparral is similar to what we find in the desert...in fact, many typically desert animals, from the Cactus Wren to the Ring-tailed Cat, also live in the chaparral or have closely related forms found along the coast. Though most animals are small, larger mammals such as Mule Deer and Mountain Lion are native to the chaparral. There is a wealth of reptile species (over 60 in the county). Several, such as the secretive Granite Night Lizard, are unique to Southern California and northern Baja.

Roughly 90% of the original coastal sage habitat has been developed for the needs of an ever-expanding human population. Much of what remains has been fragmented into diminishing ecological "islands" which, over time, lose many of their species (a prime index of biodiversity). Preservation of the last extensive coastal chaparral strongholds, such as those in Otay Mesa, is vital to the long-term survival of scores of animals and plants, and of a distinctive part of the West Coast landscape.



The San Diego Audubon Society has been on the forefront of conservation for over 50 years. Its mission is to foster the appreciation of birds, other wildlife, and their habitats through study and education, and to advocate for a cleaner, healthier environment. For more information about its programs, field trips, and opportunities for involvement, contact us at (619) 682-7200, e-mail sdaudubon@sandiegoaudubon.org, or visit our website at www.sandiegoaudubon.org.

A Guide to the Species Shown on the Poster...

- ① **Golden Eagle** (*Aquila chrysaetos*) This spectacular raptor is one of the most recognized and admired birds throughout the Northern Hemisphere. Any ecosystem which can support even a small population of these large eagles is one with good vital signs.
- ② **Anise Swallowtail** (*Papilio zelicaon*) Slightly smaller than the Western Tiger Swallowtail, with more black on its wings. Larvae resemble bird droppings, helping them avoid predation when they are small (early larval stages). As they grow, they turn bright green to better hide among the lacy leaves of the introduced Wild Fennel, which is their preferred host plant.
- ③ **Ceanothus** (*Ceanothus sp.*) Springtime brings the extravagant blue or white blooms of the Ceanothus to the hillsides covered with this large shrub. Varieties of Ceanothus have been developed for landscape use as drought-tolerant (xeriscape) gardening. Using native plants in landscaping your yard is an excellent way to create vital habitat oases for native birds and other animals.
- ④ **California Gray Fox** (*Urocyon cinereoargenteus*) Not unlike the clever fox of legend, the Gray Fox is a resourceful and adaptable omnivore which can thrive in a variety of habitats. Gray Foxes have moved successfully into the urban environment. They are a mid-tier predator, finding their own niche among other chaparral predators such as the Bobcat, Raccoon, Coyote and Mountain Lion.
- ⑤ **Bush Daisy** (*Encelia californica frutescens*) Like most chaparral plants, they will flower after a good rain. They take advantage of limited water with rapid germination and growth.
- ⑥ **California Gnatcatcher** (*Poliophtila californica*) This small, grayish insectivorous songbird has created quite a name for itself since its listing as a threatened species. This bird cannot adapt to an urban environment, and rapidly disappears with land development or other disturbance of its habitat. The battle to save this species is in fact a battle to save fragile and dwindling wildlands for many other plant and animal species as well.
- ⑦ **Dusky-footed Woodrat** (*Neotoma fuscipes*) Also known as packrats, these rodents make very large, twiggy nests in crevices and small caves among boulders, or in trees or large shrubs. Many generations may use the same nests, called middens, and the layers are a rich source for biologists researching past shifts in climate and the subsequent changes in the environment. Because woodrats often put man-made objects in their nests, archeologists use them to discover much about ancient Native American cultures throughout the Southwest.
- ⑧ **San Diego Horned Lizard** (*Phrynosoma coronatum blainvilli*) A protected subspecies of the Coast Horned Lizard, one of the largest of the 14 horned lizard species. Loss of habitat (undisturbed mesas and arroyos) and their unfortunate attractiveness to collectors have greatly reduced both their range and their numbers. Another suspected environmental pressure is the loss of native ant species (their principal food) because of competition from the non-native Argentine brown ants (the ants which make their way into our kitchens), which horned lizards do not eat.
- ⑨ **Anna's Hummingbird** (*Calypte anna*) The most common and "urban" of our county's several hummingbird species. Males sport an iridescent purplish-red "gorget" and crown. Hummingbirds have extremely high metabolisms, and without the high-energy sugars they get from flowers (as well as human-maintained feeders) they will quickly starve. There are many "hummer-friendly" plants you can place in your yard, both native and non-native. Most hummingbirds are strongly attracted to red flowers.
- ⑩ **Arroyo Toad** (*Bufo microscaphus californicus*) This smallish toad with a trilling mating call is found in washes and arroyos which are dry most of the year. Its population is broken up into isolated pockets of good habitat, which make it especially vulnerable to local extinction. The still common Western Toad (*Bufo boreas halophilus*) is losing ground as well.
- ⑪ **California Freemontia** (*Fremontodendrom californicum*) Also known as Flannel Bush because fine hairs cover the leaves, giving them a flannel-like feel. This bush can grow to over 10 feet. The Native Americans used the bark to make rope. They are most commonly found in seasonal stream beds, in association with riparian (river and stream) trees such as oak, willow and sycamore.
- ⑫ **Hermes Copper** (*Hermelycaena hermes*) This is an example of an endemic species with a very limited range (parts of south-central San Diego County) and very specific food needs (dependence on the native Redberry (*Rhamnus crocea*)). The niche-species and specialists are usually the ones most vulnerable to extinction.
- ⑬ **Padres Shooting Stars** (*Dode catheon clevelandii*) Usually blooms in the rainy season. Like most chaparral wildflowers, it is low-growing with small, delicately beautiful flowers.
- ⑭ **California Towhee** (*Pipilo crissalis*) Towhees are largish sparrows, usually keeping close to the ground and under cover. This shy, muted-toned species is most commonly found (or heard) in dense chaparral growth.
- ⑮ **Western Scrub Jay** (*Aphelocoma californica*) Jays are highly assertive, intelligent and adaptable birds, and this California species can be found throughout a variety of habitats, including urban yards. In contrast, the very similar Florida Scrub Jay is restricted to the vanishing palmetto scrub, and is listed as endangered.
- ⑯ **California Blue-eyed Grass** (*Sisynchrium bellum*) This annual grows in open, grassy areas. Chaparral meadows suitable for native wildflowers will have many species growing together.
- ⑰ **Black Sage** (*Salvia mellifera*) This highly aromatic shrub is one of several sage species from our region. They are among the most characteristic of chaparral plants, showing traits such as high resin content, small thin leaves covered with fine hairs to minimize sun exposure, and a brief but explosive flowering and growing season followed by near-dormancy during the dry heat of summer.
- ⑱ **White-tailed Kite** (*Elanus leucurus*) These small, agile raptors are superb at hovering over fields, watching for small rodents or reptiles. Raptors are often persecuted for fear of their predation of domestic animals, yet they are invaluable for rodent and insect control.

