

Population: 30,000,000
Surface Area: 198,975 km²

MEDITERRANEAN CALIFORNIA

This relatively small ecological region extends 1,300 km from Oregon in the north to Baja California Norte state in the south. It abuts the Pacific Ocean on the west and the Sierra Nevada and deserts to the east. It is distinguished by its warm and mild Mediterranean climate, its shrubland vegetation of chaparral mixed with areas of grassland and open oak woodlands, its agriculturally productive valleys and its high population (30 million) in extensive urban agglomerations.

Physical Setting

The ecological region is comprised of a mixture of mountains, hills, tablelands and plains. It occupies an area of tectonic instability at the interface of the North American and Pacific tectonic plates and contains a variety of active faults. The coastal ranges contain a series of linear mountain ranges with crests averaging 600–1,200 m with interspersed valleys. The central valley is a broad trough containing the Sacramento and San Joaquin rivers that drain into the delta area and San Francisco Bay. The flat valley is filled with large quantities of silt, sand and gravel washed down from surrounding mountains. In Southern California, the rugged transverse ranges form the northern border of the Los Angeles Basin, and include the highest peak in the region, Mount San Gorgonio at 3,506 m. The peninsular ranges have peaks of 1,500–3,000 m and include the San Jacinto, Santa Ana and Laguna mountains of Southern California, and the Sierra Juárez and Sierra San Pedro Martir of Baja California. Lower hills, valleys and coastal terraces parallel the coast, and there are several islands across the Santa Barbara and San Pedro channels. Soil patterns are complex, mostly dry, and weakly developed with high calcium concentrations.

This ecological region occupies the only portion of the continent with a dry summer mediterranean climate. This climate is characterized by hot, dry summers and mild winters, with precipitation associated with winter frontal storms from the Pacific Ocean. The average summer temperatures are above 18°C and average winter temperatures are above 0°C. Annual precipitation is 200–1,000 mm depending on elevation and latitude, and falls mostly from November to April. San Diego and Tijuana receive about 250 mm, while San Francisco gets about 500 mm. There is a great annual variability of total precipitation, and extreme droughts are not uncommon. Coastal fog is common, particularly from May through July. The frost-free period ranges from 250 days in the north and on uplands to 350 days along the southern coast.

Biological setting

The Mediterranean California region is characterized by a mostly evergreen shrub vegetation called chaparral, plus patches of oak woodland, grassland, and some coniferous forest on upper mountain slopes. The chaparral has a thickened, hardened foliage resistant to water loss, and forms a cover of closely spaced shrubs 1 to 4 m tall. Common shrubs include chamise, buckbrush or ceanothus, and manzanita. Coastal sagebrush, summer-deciduous plants that tolerate more xeric, or dry, conditions than the evergreen chaparral, are found at lower elevations. About 80 percent of the presettlement coastal sage scrub in southern California has been displaced, primarily by residential development. Two listed endangered species and 53 candidate species occur in the coastal sage scrub community. To the north, the chaparral is less continuous, occurring in a mosaic with grassland, as well as broadleaf and coniferous forests. A blue oak-digger

pine woodland community forms a ring around the Central Valley, which itself once had extensive grasslands and riparian forests. The southern oak woodland extends into the transverse and peninsular ranges and includes California walnut and Engelmann oak. Endemic tree species also include Monterey cypress, Monterey pine and Torrey pine.

Endangered or threatened animal species of the Mediterranean California include the California condor, Clapper rail, least tern, Bell’s vireo, California gnatcatcher, Smith’s blue butterfly, several species of kangaroo rats, salt-marsh harvest mouse, San Joaquin kit fox, blunt-nosed leopard lizard, San Francisco garter snake, Santa Cruz long-toed salamander, tidewater goby, green sea turtle, southern sea otter and Guadalupe fur seal.

Human activities

Indigenous people in this region were hunter-gatherers without much agriculture, who were dependent on seafood, seeds and nuts. The pre-European population often depended on acorns, the fruit of the oak, as a dietary staple, and today’s landscape includes more than 150 California city names that incorporate the word “oak.” The savanna-like oak rangelands were used by the early Spanish ranchers and missions for livestock grazing, agriculture and fuel wood. Settlement patterns were established by the Spanish missions, presidios and pueblo systems developed in the late 1700s and early 1800s, the Mexican ranchos of the early to mid-1800s, and commercial activities in the late 1800s. Millions of people moved to California in several waves, from the gold rush of the late 1840s, the land boom of 1880s, the Dust Bowl migration in the 1930s, and the post World War II boom and defense-related boom of the 1950s and 1960s. Today’s ethnically diverse population of more than 30 million is concentrated in the Southern California megalopolis, stretching from Tijuana to Santa Barbara, the San Francisco Bay area metropolis, and the growing urban areas of the Central Valley. More than 90 percent of the population lives in cities. Within Mexico, Tijuana is one of the fastest-growing cities, having doubled its population in less than 15 years.

Major economic activities involve a variety of manufacturing and service industries, including electronics, clothing, and computers, agriculture and food processing, aerospace and defense industries, the television and motion picture industry, tourism, petroleum and automotive-related industries, health care, and finance. The fertile soil, abundant sunshine, long growing season and irrigation water result in high yields of high-value crops. Central Valley produces rice, almonds, apricots, peaches, cherries, olives, sugar beets, wheat, hay, prunes, cattle, milk, grapes and cotton. In the Salinas Valley, artichokes, lettuce and brussel sprouts are common, while the southern portion of the region grows vegetables, citrus fruits, avocados, flowers and nursery products. Breathable air and adequate water quantity and quality have been common concerns for many urban areas of the region, which is dependent on an elaborate engineering delivery system to bring much of its water from distant sources. Contentious debates continue over how this resource will be allocated among agricultural, urban, industrial and environmental concerns.

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Photo: CEC file.

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Photo: F. Takaki

1 Pasture land and scattered oaks are common elements in Mediterranean California.

2 Hills with chaparral, between Tecate and Ensenada, Baja California.

3 Coyotes are still a common sight in the California foothills.

4 Vineyard in Valle de Guadalupe, near Ensenada, Baja California.