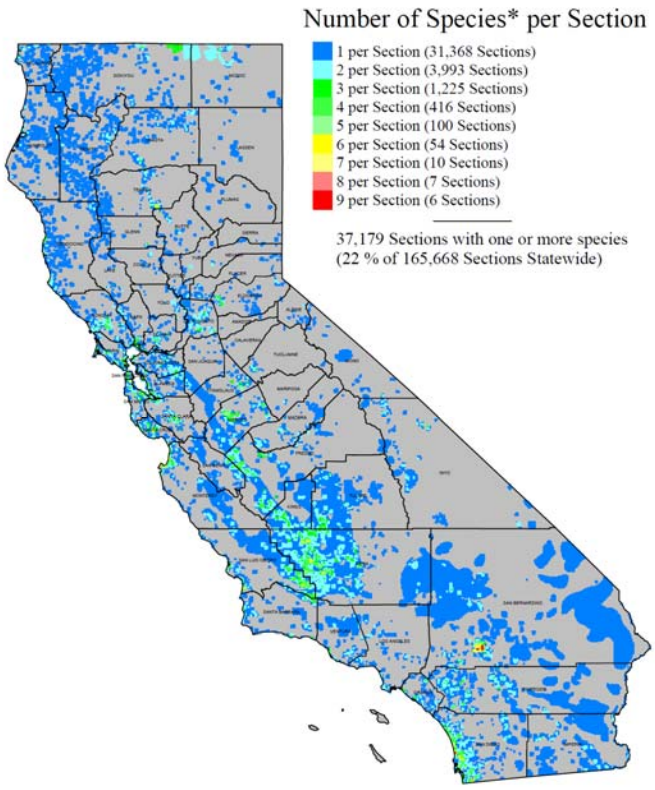
Endangered Species and Habitat

California is the most biologically diverse state in the country and one of the most diverse areas in the world, with a unique diversity of climates and landscapes. Moreover, many of the region's plants and animals evolved in isolation due to rivers, mountain ranges, deserts and other natural barriers that partition the state. California is home to more unique species of plants and animals than any other state and many endangered species. More than 24 percent of all threatened animal and plant species in the United States are in California (DFG 2009).

Species loss in California is largely a consequence of population growth and income growth. Since many species are adapted to a specific regional habitat, the loss of such habitat can devastate the species. In addition, some species are agricultural pests and their control can disturb the balance within the local ecosystem and lead to further harm to local wildlife. Therefore, there is a natural tension between agricultural practices and species and habitat conservation. Comparing state agricultural gross products and endangered species listings from 1975 to 1990, Meyer (1995) finds no statistically significant relationship between the number of endangered species in a state and the rate of growth for agriculture in that state. Nonetheless, critical habitat designation has the potential to affect the operations of individual growers in California.

The Federal and California governments both have legislation and extensive regulations to respond to concerns about species preservation and habitat conservation.

At the federal level, vulnerable plants and animals are protected by the Endangered Species Act (ESA). The ESA is administered by two federal agencies, the United States Fish and Wildlife Service (FWS) and the National Oceanic and Atmospheric Administration (NOAA). NOAA oversees the protection of marine species, while the FWS is charged with protecting freshwater fish and all other plants and animals. The danger to most species results from destruction of their habitats. Therefore, under the Endangered Species Act the responsible federal agencies have designated certain areas as critical habitat zones and restrict development in these zones because they are deemed essential to the conservation of a species (FWS 2009).



The National Environmental Policy Act (NEPA) is another federal law that offers some protection for plants and animals. Under NEPA, federal agencies must prepare an assessment of the environmental impacts of significant federal projects that may have ecological consequences. Since many private industries require federal permits, the law indirectly applies to many projects on private land. California also provides protection to plants and animals through the California Endangered Species Act (CESA), which is enforced by the California Department of Fish and Game (CDFG). Although similar to its federal counterpart, the CESA also protects species that are candidates for listing, but have not yet been designated as endangered or threatened. The California Environmental Quality Act (CEQA), mirrors the critical habitat provision of the federal ESA. The CEQA gives the CDFG jurisdiction over the conservation of habitats that are deemed necessary for any species to survive in self-sustaining numbers. However, the CEQA does not allow the CDFG to govern land use. It only stipulates that development projects include an environmental impact assessment of the proposed activities (CDFG 2009b). The California Department of Pesticide Regulation regulates the use of pesticides near habitats for endangered species.

Currently, there are 359 species listed or proposed as endangered or threatened in California (DPR 2009). These plants and animals inhabit about 16 million acres, or about 16 percent of the state's land area. The San Joaquin kit fox is native to about 10 million of these acres, spread across 14 counties. Its habitat is particularly vulnerable to agricultural activities, especially in the San Joaquin Valley (DPR 2009). In the Sacramento-San Joaquin delta, the Delta Smelt and several other fish species received endangered status and will affect water deliveries to agriculture.

Concentrations of endangered and threatened species occur along the Monterey Bay, the San Diego coastline, within the San Bernardino National Forest and in the San Joaquin Valley (Figure 1. Source: DPR 2009b). More than 800 additional *taxa* are listed on the California Fish and Game's Special Animals List, which includes species that are showing declining numbers, but have not yet been designated as threatened or endangered.

– University of California Agricultural Issues Center, July 2009

Sources:

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