



Major Migration Routes

- Waterfowl
- Sea Birds
- Whales
- Monarch Butterflies

- Monarch Wintering Grounds
- Monarch Public Viewing (Areas of concentration with >4,000 individuals)

Land Ownership

- Federal
- State
- Local
- Private
- Tribal
- National Wildlife Refuge



Blue-winged Teal
(*Anas discors*)
15.5 inches

The second most common duck in western North America, the blue-winged teal migrates farther than any other waterfowl species, often reaching Venezuela and Peru.



Monarch Butterfly
(*Danaus plexippus*)
4 inches

Monarchs that breed west of the continental divide migrate to the California coast during winter.



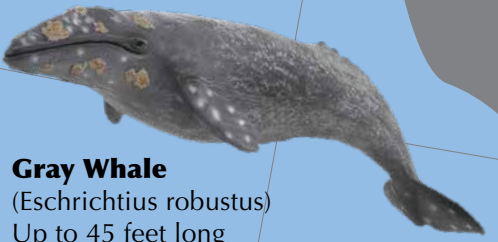
Swainson's Hawk
(*Buteo swainsoni*)
19 inches

These hawks migrate from the plains of North America to the pampas of Argentina.



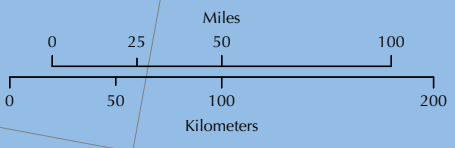
Snowy Plover
(*Charadrius alexandrinus*)
6.25 inches

Some plovers live all year along the coast. Others migrate inland to large saline lakes (like Mono Lake) in the Great Basin to breed, then return to the coast in winter.



Gray Whale
(*Eschrichtius robustus*)
Up to 45 feet long

Gray whales, California's most common whale species, spend summers near Alaska and winters near Baja California, Mexico. Humpback and sperm whales are also known to migrate along this coast.

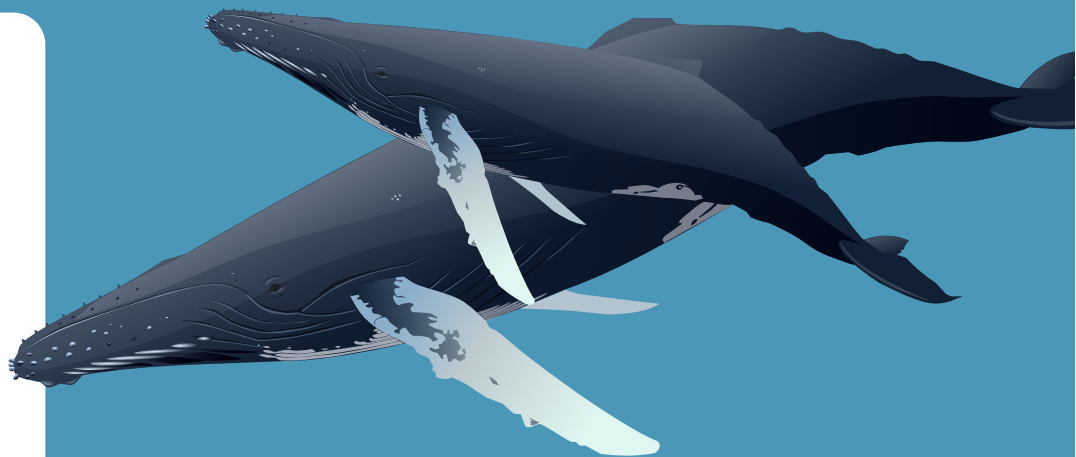


Animal Migrations

(map on left page)

California's diverse natural environments provide habitat for more plant and animal species than any other state. This remarkable **biodiversity** includes 5,418 plant species, 415 birds, 195 mammals, 86 reptiles, 57 amphibians, and 62 **freshwater** fish. Their continued survival depends on conservation of their habitats and is supported by a complicated patchwork of private and government owned land. While parks and preserves protect many species, humans use much of California for housing, growing crops, and grazing livestock. This affects the **habitats** required for native plants and animals.

Migratory species spend part of each year in California, then fly, walk, or swim elsewhere for the rest of the year. California's mid-latitude and coastal location places it squarely on the path of waterfowl and whale migrations between Arctic summer feeding grounds and more southerly winter locations. Birds and butterflies also travel between the Pacific Coast and interior North America. The map does not show the seasonal movement of species within California, such as deer migrations up and down mountain slopes in search of better food, or the California gull that winters on the coast and then flies across the Sierra Nevada to summer at Mono Lake.



COMPANION WEBSITE FOR *California: A Changing State*

calgeography.org/california-atlas

Downloadable/printable PDFs

- Interactive maps with expanded multi-media content
- Expanded glossary
- Lesson plans

The California Geographic Alliance promotes high quality and standards-based geography education. We help educators prepare students to embrace a diverse world, succeed in a global economy, and steward the planet's resources.

Sources

Made with Natural Earth. Free vector and raster map data at www.naturalearthdata.com.

General references used throughout Atlas of California, 1979; California Water Atlas, 1979; Medium Resolution Digital Vector Shoreline (1998) for the Contiguous United States, National Oceanic and Atmospheric Administration; National Aeronautics and Space Administration Shuttle Radar Topography Mission, various dates; California Spatial Information Library

Pages 4-8 Oregon Geographic Alliance

Page 9 Department of Conservation, California Geological Survey

Page 10 Rivers and Lakes: California Department of Fish and Wildlife

Page 11 National Land Cover Database, 2014

Page 12 Commission for Environmental Cooperation, 2010

Page 13 United States Geological Survey, 1946

Page 14-15, 17 PRISM Climate Group, Oregon State University, <http://prism.oregonstate.edu>, created July 11, 2012

Page 16 National Centers for Environmental Information; National Oceanic and Atmospheric Administration Western Regional Climate Centers

Page 18 Handbook of North American Indians, Volume 8, 1978; Salton Sea Database Program, University of Redlands

Page 19 U.S. Census Bureau, 2017

Page 22 Exploration and Settlement 1820-1835, Perry-Castañeda Map Collection, University of Texas Libraries; The Search for a Southern Overland Route to California, Harlan Hague, California Historical Quarterly, Summer 1976; The Web de Anza Project, Center for Advanced Technology in Education, University of Oregon; Peter Skene Ogden's Snake Country Journals; Gaspar de Portola, San Diego Biographies, San Diego Historical Society; Jedediah S. Smith, Utah History Encyclopedia; End of the Oregon Trail Interpretive Center; Captain John Charles Fremont and the Bear Flag Revolt, The California State Military Museum; California National Historic Trail, National Park Service; Our History, Hudson Bay Company

Page 23 California Spatial Information Library; Calisphere Collections for Educators, University of California

Page 24 Map of the Gold Regions of California, Showing Routes from Chagres, Panama, and Cape Horn, 1849 (David Rumsey Map Collection); Tom Patterson, Natural Earth II

Page 25 Gold Districts of California, Bulletin 193, California Division of Mines and Geology, 1970

Page 26 California: An Interpretive History, 2002

Page 27 United States Census Bureau, 2017

Page 28 "Railroads and the Making of Modern America", <http://railroads.unl.edu/resources/>, Center for Digital Research in the Humanities, University of Nebraska-Lincoln; Caltrans, Division of Transportation Planning

Page 29 Fire and Resource Assessment Program, California Department of Forestry and Fire Protection, 2018

Page 30 Handbook of North American Indians, Volume 8, 1978; J.T. Davis, 1974 (1961)

Page 31 Caltrans, Division of Transportation Planning

Page 34 California Department of Water Resources, 2018

Page 35 California Department of Water Resources, 2016; United States Census Bureau, 2017

Page 36 Farmland Mapping and Monitoring Program, California Department of Conservation, 2018; United States Census Bureau, 2017

Page 37 California Department of Food and Agriculture, 2017-2018

Page 38 California Department of Food and Agriculture, 2017-2018

Page 39 United States Census Bureau, 2017

Page 40 Department of Finance, State of California, 2018; Migration Policy Institute; United States Census Bureau, 2017

Page 41 United States Census Bureau, 2017

Page 42 United States Census Bureau, 2017

Page 43 Steven Manson, Jonathan Schroeder, David Van Riper, and Steven Ruggles. IPUMS National Historical Geographic Information System: Version 14.0 [Database]. Minneapolis, MN: IPUMS. 2019. <http://doi.org/10.18128/D050.V14.0>

Page 44 - 45 United States Census Bureau, 2017

Page 46 Fire and Resource Assessment Program, California Department of Forestry and Fire Protection, 2018; Xerces Society, 2016

Page 48 California Community College Chancellor's Office; The California State University Map of Campus Locations; The University of California It Starts Here

Back cover Map of California shown as an Island, circa 1650, by Joan Vinckeboons (Library of Congress)