

Glossary

abiotic — physical rather than biological; not derived from living organisms.

adaptive management — process that improves the management of biological resources by using new information gathered through monitoring, evaluation, and other credible sources as they become available, and that adjusts management strategies and practices to assist in meeting conservation and management goals (CDFG 2012).

alluvial fan — a wide, cone-shaped deposit of rocks, sand, gravel, and finer materials that has been deposited by a stream as it flows out of a mountainous area onto a plain.

alluvium — sediment deposited by a river or other flowing stream.

anadromous — fish species that spend most of their adult lives in the ocean but migrate to freshwater rivers and streams to spawn.

aquatic — growing in, living in, or frequenting water, usually open water; compare with **wetland**.

arachnids — a class of **arthropods** generally having eight legs and mainly living on land. This class includes spiders, scorpions, ticks, mites, and harvestmen.

arthropods — a group of invertebrate animals having an exoskeleton, segmented body, and paired, jointed appendages.

basin — a large-scale depression in the land surface which is wider than it is deep, with steep or gently dipping sides.

benthic — related to the bottom layer of a body of water.

biodiversity hotspot — a geographic area that is both high in biological diversity and at risk of destruction, often from human causes.

biogeography — the branch of biology that deals with the geographic distribution of plants, animals, and ecosystems.

biota — the plant and animal life of a particular habitat.

bioturbators (bioturbation) — animals or plants that rework soil and sediment through a variety of activities including digging, burrowing, ingestion, and defecation. Bioturbation is an extremely important ecosystem function and is considered a major driver of biodiversity.

branchiopods — a class of **crustaceans** including fairy shrimp, clam shrimp, and tadpole shrimp; mainly small, freshwater animals that feed on plankton and detritus.

California Natural Diversity Database (CNDDDB) — a statewide inventory of the locations and conditions of the state's rarest plant and animal taxa and vegetation types. The CNDDDB is a natural heritage program and is part of NatureServe's National Heritage Network, a nationwide network of similar programs.

chaparral — an ecological community composed mainly of shrubby plants with hard, evergreen leaves, adapted to the dry summers and moist winters of California's Mediterranean climate.

conservation easement — a purchased claim to some rights, generally development rights, on private property as a way of conserving both natural resources and private ownership.

continental shelf — the area of seabed around a large landmass where the sea is relatively shallow compared with the open ocean.

crustaceans — a large, diverse **taxon** of mostly aquatic **arthropods**. This subphylum includes crabs, crayfish, and shrimp.

deciduous — referring to a tree or shrub that sheds its leaves seasonally, usually in the autumn.

easement — see also **conservation easement**; a voluntary, legal agreement that permanently limits uses of the land in order to protect its conservation values.

ecoregions — as used here, defined as "sections" in the Bailey (1976) nomenclature, which are subdivisions of ecological provinces based on major terrain features such as a desert, plateau, valley, mountain range, or a combination thereof. Sections are large land areas of relatively homogeneous physical and biological components that interact to form environments of similar productive capabilities, response to disturbances, and potentials for resource management (McNab et al. 2007)

ecosystem — a natural unit defined by both its living and non-living components; a balanced system for the exchange of nutrients and energy. Compare with **habitat** and **vegetation type**.

ecosystem services — positive benefits that people obtain from wildlife or **ecosystems**, such as food and fresh water, pollination of crops and orchards, soil formation, and recreational opportunities.

endangered — one of several **special status** listing designations of plant and animal **taxa**. Under the California and federal Endangered Species Acts, endangered refers to a **taxon** that is in danger of becoming **extinct** throughout all or a significant portion of its range. The word endangered is also commonly applied to non-listed taxa in danger of extinction.

endemic — found only in a specified geographic region.

endemism — used here as a measure of distribution of those **taxa** that are found only in one specific area, such as one region or the state itself. A region of high endemism has many taxa restricted to it.

estuary — an area in which salt water from the ocean mixes with flowing fresh water, usually at the wide mouth of a river.

evergreen — referring to a tree or shrub that retains green leaves throughout the year.

exotic — a plant or animal that has been introduced to an area from outside its native range, either purposely or accidentally.

extant — still existing.

extinct — refers to a plant, animal, or **vegetation type** that no longer exists anywhere.

extirpated — refers to a plant, animal, or **vegetation type** that had been locally eliminated, but is not **extinct**.

fauna — all of the animal **taxa** in a given area.

flora — all of the plant **taxa** in a given area.

forb — a broad-leaved herb, such as clover, as distinguished from a grass or a woody plant.

gastropods — a large class of **mollusks** comprising aquatic and terrestrial snails and slugs.

geology — the earth's physical structure and substance, its history, and the processes that act on it.

georeferencing — the process of providing geographic coordinates that correspond to a location.

habitat — where a given plant or animal species meets its requirements for food, cover, and water in both space and time; may or may not coincide with a single **vegetation type**.

habitat connectivity — a measure of how easily wildlife, plants, and ecological process can move through the landscape.

harvestmen — the common name for members of the **arachnids**, distinguishable from spiders by their fused body regions and single pair of eyes.

hotspot — a location where a particular condition is concentrated. In this context, the condition may be species richness, risk of extinction, or some combination of these or other factors. Hotspots are relative to the area under consideration: ecoregion, state, world, etc.

HUC — Hydrologic Unit Code. The Watershed Boundary Dataset (USGS 2013) provides Hydrologic Units that define drainage areas for surface water. Hydrologic units are subdivided into progressively smaller units with each unit nested within the previous level. Each hydrologic unit is identified by a unique hydrologic unit code (HUC) consisting of two to twelve digits; HUC12 used in this atlas is the sub-watershed level.

igneous — referring to rocks formed by the solidification of magma due to volcanic processes at or below the Earth's surface (Harden 2004).

introduced — refers to any **species** intentionally or accidentally transported and released into an environment outside its native range.

invasive — a species which spreads rapidly once established and has the potential to cause environmental or economic harm. Most, but not all, invasive species are **introduced**; not all introduced species are invasive.

invertebrate — an animal without an internal skeleton. Examples are insects, clams, shrimp, and snails.

kelp forest — an underwater forest created by dense groupings of brown algae called kelp. Kelp forests occur in nearshore, nutrient-rich environments worldwide. They create a unique habitat that provides food, shelter, **substrate**, and nursing grounds for a diverse array of marine species (CDFG 2001).

latitude — an imaginary horizontal line representing degrees north or south of the Equator. The Equator is 0 degrees while the North Pole is 90 degrees north.

longitude — an imaginary vertical line representing degrees east or west of the Prime Meridian at Greenwich, London. Greenwich is 0 degrees while the line directly

opposite it (in the Pacific Ocean) is 180 degrees west or east of the Prime Meridian.

magma — molten or semi-molten natural material beneath the earth's crust from which **igneous** rocks are formed.

Marine Protected Area — a named, discrete geographic area that has been designated by law to protect or conserve marine life and habitat (CDFW 2016b). This can be a marine or estuarine area below the mean high tide line or the mouth of a coastal river.

Mediterranean climate — climate characterized by dry summers and cool, wet winters, named for the Mediterranean basin, the largest area with this climate regime. Other areas include California and portions of Oregon and Baja California Norte, central Chile, southwestern South Africa, and southwestern Australia.

metamorphic — referring to **igneous** or **sedimentary** rocks that have been subjected to heat and pressure that alters the mineralogy, texture, or grains of the rock (Harden 2004).

migratory — refers to animals that travel seasonally. Migrations may be local or over long distances.

mima mounds — regular, low, dome-shaped mounds of soil and gravel clustered in areas that are relatively flat and poorly drained. These unexplained mound features, typically associated with prairies throughout the United States, are often an integral part of the local **vernal pool** landscape.

mitigation credit — a unit of important **habitat** created to compensate for impacts caused by projects to aquatic functions or to threatened, endangered, or other rare species and their habitats.

mollusks — a phylum of **invertebrate** animals with soft, unsegmented bodies, often enclosed in a calcium carbonate shell. This phylum includes snails, slugs, mussels, and octopuses.

montane — of mountainous country.

narrow endemic species — native species with restricted geographic distributions, often due to specific habitat requirements.

native — naturally occurring in a specified geographic region.

old growth forest — a forest that has not undergone any major unnatural changes (such as logging) for more than 100 to 150 years and thereby exhibits unique ecological features.

plant association — a vegetation classification unit defined by a diagnostic species, a characteristic range of species composition, physiognomy, and distinctive habitat conditions (Jennings et al. 2006). Associations reflect local topography, climate, substrates, hydrology, and disturbance regimes.

playa — a flat, dry area of an undrained desert **basin**, where shallow lakes may form during rainy periods.

pyroclastic — relating to rock fragments erupted by a volcano.

recruitment — the process of adding new individuals to a population through reproduction or immigration.

refugia — areas that will remain relatively buffered from climate change over time, enabling the persistence of ecological resources.

resilience — the capacity of any entity—an individual, a community, an organization, or a natural system—to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience (Rodin 2014).

riparian — of or relating to the areas bordering rivers or streams.

rocky intertidal — the area of rocky shore that lies between the extreme high and low tidemarks. In California, it can be divided into three zones: the high intertidal zone that is only submerged for a short period during high tides; the middle intertidal zone that is regularly exposed and submerged during every tidal cycle; and the lower intertidal zone that is only exposed for a short period during very low tides.

run — a group of fish that migrates to fresh water to spawn during a specific time of the year.

salmonid — collective term for a family of fish that includes salmon and trout.

sedimentary — referring to rocks formed at or near the Earth's surface by accumulation of minerals, rock, and/or plant and animal fragments (Harden 2004).

soil horizon — a distinct soil layer whose properties differ from the layers above and below it (Harden 2004).

special status — collective term for all categories of plant or animal **taxa** whose populations are rare and at risk. The **CNDDDB** tracks special status taxa, which meet one or more of the following criteria:

Is listed, is a candidate for listing, or is proposed for listing under the California or federal Endangered Species Acts or California Native Plant Protection Act as Endangered, Threatened, or (for plants only) Rare;

Is a federal “Species of Concern,” an unofficial designation sometimes seen on U.S. Fish and Wildlife Service species lists;

Meets the criteria for listing, even if not currently included on any list, as described in Section 15380 of the California Environmental Quality Act (CEQA) Guidelines;

Has been designated as a special status, sensitive, or declining taxon by other state or federal agencies or non-governmental organizations, including Bureau of Land Management and U.S. Forest Service;

If an animal, is considered by CDFW to be a Species of Special Concern;

If a plant, is listed in the California Native Plant Society’s Inventory of Rare and Endangered Plants of California (CNPS 2020b);

Is biologically rare, very restricted in distribution, declining throughout its range, or has a critical, vulnerable stage in its life cycle that warrants monitoring;

Has population(s) in California that may be peripheral to the major portion of its range but is threatened with extirpation in California; or

Is closely associated with a habitat that is declining in California at a significant rate (e.g., wetlands, riparian habitats, old growth forests, desert aquatic systems, native grasslands).

speciation — the process by which new **taxa** evolve.

species — the highest level of biological classification from which organisms can breed and produce fertile offspring under natural conditions.

stressor — a change in environmental conditions that places stress on the health and functioning of an organism, population and/or **ecosystem**.

subspecies — the level of classification below **species**; a genetically distinct group.

substrate — the surface on which an organism lives.

taxa — a term used to refer collectively to organisms at different levels of biological classification. For example, **species, subspecies**, varieties, and evolutionarily significant units (ESUs) together may be referred to as taxa. Singular is **taxon**.

taxon — the name that is applied to a group in biological classification, for example, **species, subspecies**, variety, or evolutionarily significant unit (ESU). Plural is **taxa**.

tectonic plate — one of many large plates (slabs of solid rock) which make up the crust of the earth and move slowly around it, sometimes colliding with or pulling apart from other plates.

terrestrial — growing on, living on, or frequenting land.

threatened — one of several **special status** listing designations of plant and animal **taxa**. Under the California and federal Endangered Species Acts, threatened refers to a **taxon** that is likely to become **endangered** in the foreseeable future. The word threatened is also commonly applied to non-listed taxa in danger of extinction.

tidepool — a shallow pool of seawater along a rocky shore that is exposed during low tides. Tidepools harbor many different types of seaweeds, **invertebrates**, and fishes (NOAA 2019).

topography — the shape of the surface of the earth, including mountains and valleys.

ultramafic — **igneous** rocks with very high iron and magnesium content and low (about 40 percent) silica (Harden 2004).

upland — a general term referring to **species, habitats**, or **vegetation types** in non-flooded or non-saturated areas.

upwelling — the process by which warm ocean surface waters are replaced by cooler subsurface waters. For regions such as California, with eastern boundary currents and winds that generally flow in a direction favorable for upwelling, surface waters are moved away from the coast and are replaced by cold, nutrient-rich subsurface waters. These nutrients support high productivity of fish, marine mammals, and sea birds.

References

urbanization — the degree to which natural landscapes have been altered by human development.

vagrant — an animal, usually migratory, straying outside of the normal range for its species. Many vagrants occur in California because of the state's large size; diverse **habitats** and **topography**; proximity to the ocean, where storms originate; long coastline and large marine area; and nearness to Canada, Asia, and Mexico.

vegetation type — a natural unit similar in definition to **ecosystem** but defined primarily by the composition of plant species; compare also with **habitat**.

vernal pool — seasonal **wetland** that forms in a depression on the soil surface above a water-impermeable layer of soil or rock. Plant and animal **taxa endemic** to vernal pools are those which can adapt to an annual cycle of flooding, temporary ponding, and drying.

vertebrate — an animal with an internal skeleton. Examples are birds, mammals, reptiles, amphibians, and fishes.

vulnerability — the susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence of capacity to adapt (Adger 2006).

watershed — defined here as a stream or river basin and the adjacent hills and peaks which “shed,” or drain, water into it.

wetland — a general term referring to the transitional zone between **aquatic** and **upland** areas. Some wetlands are flooded or saturated only during certain seasons of the year. **Vernal pools** are one example of a seasonal wetland.

wildlands — collective term for public or private lands that are largely undeveloped and in their natural state.

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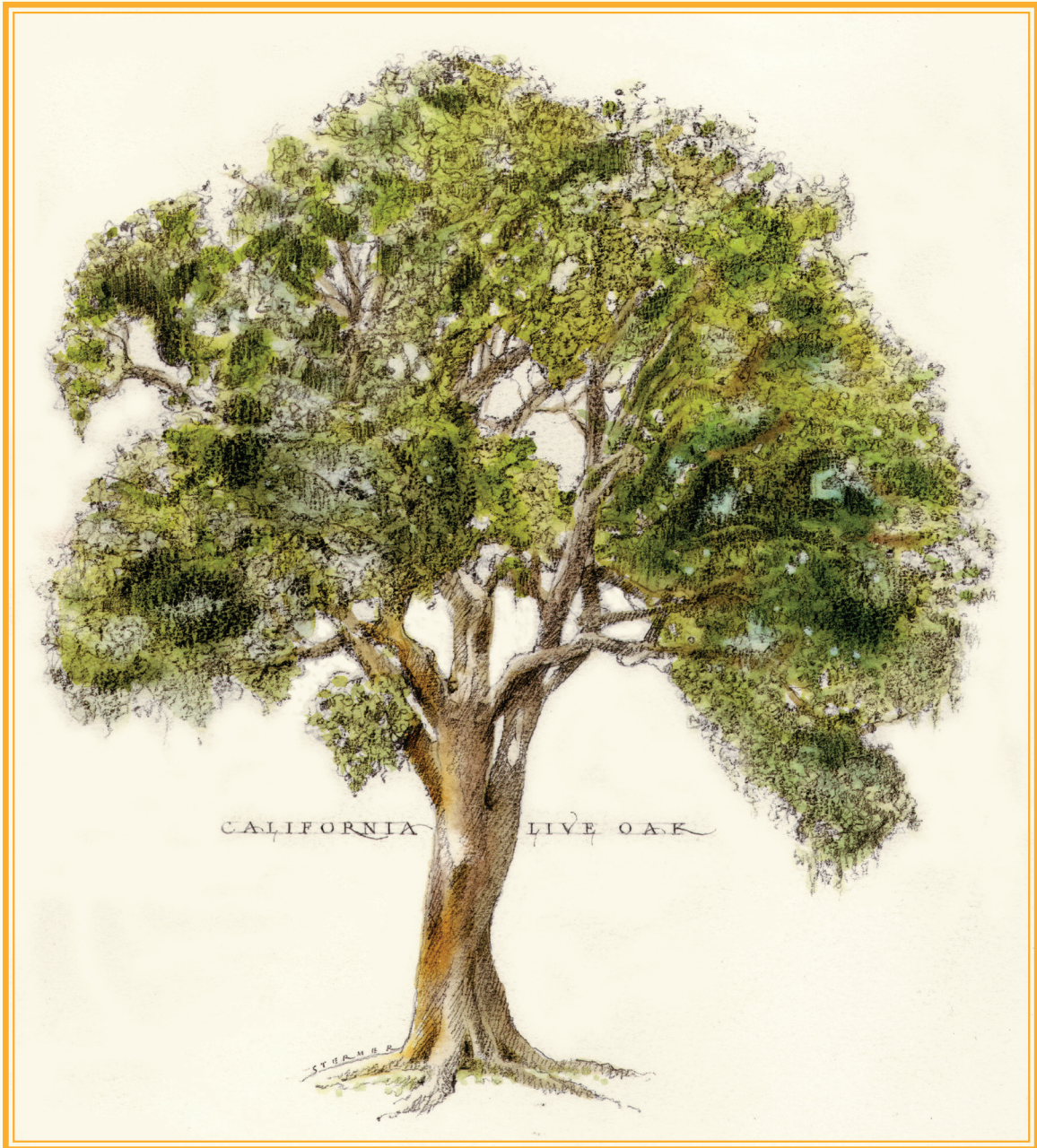
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