



**A GLOSSARY OF TERMS  
FOR THE SELF-GUIDED NATURE TRAIL:  
LESSONS IN NATURAL HISTORY AND FIRE ECOLOGY**

**Adaptation:** This word has two different meanings:

- a) An inherited trait that increases an organism's chance of reproducing and surviving in a particular environment.
- b) Adjustment to new or different conditions during an organism's lifetime.

**Algae (singular Alga):** Single-celled, colonial, or multicellular photosynthetic organisms that live in damp or aquatic environments. Algae are important primary producers in aquatic food chains.

**Annual Rings:** Concentric rings seen in the cross-sections of many trees. By counting the annual rings, one can calculate the age of a tree. Technically, one annual ring is the secondary xylem that is produced during one growing season.

**Aquatic:** Living or growing in water. Both plants and animals can be aquatic.

**Arborist:** A specialist in the cultivation and care of trees and shrubs. An arborist's work includes the diagnosis, treatment, and prevention of tree diseases, the control of pests, and tree surgery.

**Biodiversity:** A term used to describe the enormous variety of life on Earth. It can also be used to refer to all of the species in one region or ecosystem. Biodiversity refers to every living thing, including fungi, bacteria, plants, and animals.

**Biodiversity Hotspot:** A biodiversity hotspot is a biogeographic region with high levels of biodiversity that is threatened by human habitation. There are now 36 identified Global Biodiversity Hotspots. Our area, the *California Floristic Province*, is a global biodiversity hotspot.

**Camouflage:** Color or markings of an animal that allow it to blend in with its surroundings and hide.

**Carnivore:** A consumer that eats animals. For example: great blue herons are carnivores that eat fish and rodents.

**Chumash people:** The Native American people of coastal parts of southern California.

**Contact Dermatitis:** A rash of the skin caused by touching or having a reaction to a certain substance. Poison Oak contains urushiol, an oil that causes contact dermatitis in most people.

**Debris Flow:** A moving mass of mud, sand, soil, rock, water, and air that travels down a slope under the influence of gravity. Some debris flows move very slowly, while others move very quickly. In areas with very steep slopes, debris flows can reach speeds of over 100 miles per hour.

**Deciduous:** A plant that loses all of its leaves at one time of year in response to stress. The Western Sycamore (*Platanus racemosa*) is an example of a winter deciduous tree. The California Buckeye (*Aesculus californica*) is an example of a summer deciduous (or drought deciduous) tree.

**Deposition:** The process that follows erosion; when the materials that have been moved by wind, water, or ice land and are deposited in a new place.

**Diatoms:** Single-celled photosynthetic organisms of fresh and salt-water habitats. Each diatom has a two-part silica shell. Diatomite is a soft sedimentary rock and diatomaceous earth is a fine siliceous earth. These are composed mainly of fossilized diatoms. The white hills around Lompoc are composed of diatomite.

**Dissolved Oxygen:** The amount of oxygen dissolved (and so available to sustain aquatic life) in a body of water such as a lake, river, or stream. Measurement of dissolved oxygen is important when assessing the health of an aquatic ecosystem.

**Ecosystem:** A community of organisms together with its physical and chemical (abiotic) environment.

**Endangered Species:** A plant or animal species that exists in such small numbers that it is in danger of becoming extinct. Example: the southern steelhead trout.

**Endemic:** A native plant or animal species that is restricted to a certain place. Example, Hoffmann's nightshade is a variety of purple nightshade that is endemic to the area around Arroyo Hondo.

**Erosion:** The process by which soil and rock is removed from one area of the earth's surface due to natural causes such as wind, water, and ice. The eroded materials are then transported elsewhere.

**Evergreen:** A plant that has green leaves at all times of year. Evergreen trees do lose leaves but not all leaves are lost at the same time of year.

**Ferns:** Non-flowering, spore producing vascular plants with fronds.

**Fire-following Plants:** Specialized plants that germinate and grow in areas burned by fire. Germination of seeds of these plants may be encouraged by the presence of charred plant material, smoke, or increased sunlight. Plants that are usually only seen after chaparral wildfires include fire poppy, whispering bells, and large-flowered phacelia.

**Flammable:** Something that is easily set on fire. Some plants are more flammable than others. Example: Chamise is a chaparral shrub that contains flammable oils.

**Food Chain:** A diagram that shows how energy in food molecules flows from one organism to the next. For example, grass > deer > mountain lion.

**Food Web:** A complex diagram of interconnected food chains that represents the many energy pathways in a real ecosystem.

**Fossil:** The evidence in rock for the existence of plants or animals from an earlier geological period. Examples of fossils include remains or impressions of shells or skeletons and impressions of plants.

**FronD:** the leaf or leaflike part of a fern (or a palm tree).

**Fungus (plural Fungi):** Member of the Kingdom Fungi that including molds and mushroom-forming species. Fungi decompose and absorb the living or non-living organic material in or on which they grow. The *mycelium* is the main body of most fungi and is made up of a web of microscopic branching threads or *hyphae*.

**Habitat:** The environment in which an organism lives.

### **Habitats of Arroyo Hondo:**

- **Riparian Woodland** – found along streams and rivers and dominated by tall trees including California bay laurel, western sycamore, willow, white alder, and big-leaf maple. Usually with an understory of ferns, mosses, snowberry, and other smaller plants.
- **Coast Live Oak Woodland** – dominated by coast live oak trees with an understory that includes poison oak, blackberry, and ferns.
- **Chaparral** – on dry rocky slopes; chaparral has dense, impenetrable thickets composed mainly of stiff, mostly small-leaved, drought-tolerant, evergreen shrubs including ceanothus and manzanita species, mountain mahogany, and chamise.
- **Coastal Sage Scrub** – with many different shrubs including coastal sagebrush, black sage, and coyote brush. In contrast to chaparral, many of the shrubs of the coastal sage scrub have soft, drought-deciduous leaves.
- **Grassland** – as in much of California, Arroyo Hondo's grassland has been disturbed by agriculture. There are some native bunchgrasses, but also many non-native European and African grasses as well as a diversity of other native and non-native flowering plants.

**Habitat Restoration:** work to renew and restore damaged or destroyed habitats as closely as possible to their original natural state.

**Herbivore:** An animal that feeds on plants. Example: mule deer.

**Horsetails:** Non-flowering plants of the genus *Equisetum*. Horsetails have hollow stems, scaly leaves, and spike-like cones that produces spores.

**Invertebrate:** An animal without a backbone (or vertebral column). Examples are insects, snails, and worms.

**Larva (plural Larvae):** The young, free-living form of any animal that changes structurally when it becomes an adult, usually by complex *metamorphosis* (the caterpillar is the larva of the butterfly; the tadpole is the larva of the frog).

**Mediterranean Climate:** a climate type with warm, wet winters and hot, dry summers. This climate type occurs in Mediterranean Europe, in parts of California, Chile, South Africa, and in southwestern Australia.

**Meristem:** a region of actively dividing cells that form new tissue. Meristems are mostly in the growing tips of roots and shoots and in the cambium layer of stems. In some fire-adapted plants, meristems are also found around the root crown.

**Metamorphosis:** the process of change from a young (immature) form to an adult form in two or more distinct stages. Metamorphosis occurs in amphibians (example: frogs) and many insects (example: butterflies).

**Mycelium:** the vegetative (non-reproductive) part of a fungus, consisting of a network of fine filaments or *hyphae*.

**Nature Preserve:** an area of land that has been especially set aside so that animals, plants, and other living things are protected.

**Nectar:** The sugary liquid produced by flowers. Nectar is food for many birds and insects.

**Omnivore:** A consumer that eats a variety of organisms, both plant and animal. Bears are omnivores as their food may include berries and fish.

**Predator:** An animal that naturally preys on others. Example: mountain lions prey on deer and other smaller animals.

**Prescribed Grazing:** Managing the growth of vegetation with grazing and/or browsing animals including cattle, sheep and goats. Prescribed grazing may be used:

- 1) As a tool to control invasive weeds and encourage the growth of native plants.
- 2) To reduce fuel and so reduce the risk of wildfires.

**Quadrat:** A frame, usually square, used in biology to study of the distribution of plants, slow-moving animals, and some aquatic organisms.

**Raptors:** Birds of prey including eagles, hawks, falcons, and owls. Some definitions include vultures as well, even though vultures eat dead animal matter (carrion) and do not hunt live prey.

**Riparian:** Relating to the stream corridor. In riparian woodlands, moisture-loving trees line the stream or river. Along the California coast, watercourses may not have running water on the surface all year. Even during periods of drought, the water table is higher in riparian areas than in the surrounding area.

**Rock Types:** There are three basic rock types: Sedimentary, Metamorphic, and Igneous.

- **Sedimentary** - Formed from particles of sand, shells, pebbles, diatoms, and other materials. Sediment accumulates in layers over a long time and hardens into rock. Sedimentary rocks are often quite soft and may crumble or break easily. Some sedimentary rocks contain fossils. Examples: sandstone, limestone, and diatomite.
- **Metamorphic** - Formed under the surface of the earth from other rock types due to change (metamorphosis) that occurs as a result of extreme heat or pressure. Metamorphic rocks often have ribbon-like layers or shiny crystals. Examples: slate and marble.
- **Igneous** - Formed when molten rock (magma) cools and hardens. Sometimes it cools deep within the earth, and other times it erupts (as lava) onto the surface from volcanoes. If lava cools very quickly, no crystals form, and the rock that forms is shiny and glasslike. Example: obsidian. If gas bubbles are trapped as the lava cools, tiny holes form in the rock. Example: pumice.

**Crown Sprouting:** Crown sprouting is the ability of a plant to regenerate its shoot system after destruction (usually by fire) by activating dormant buds or lignotubers to produce regrowth from the root crown, between the root and shoot portions of a plant.

**Sapsucker Wells:** Are made by sapsuckers. These birds that are part of the woodpecker family. The bird drills narrow, circular holes or wells in horizontal rows into the tree's xylem—the inner part of the trunk—to feed on sap that moves up to the branches in early spring.

**Scat:** Animal droppings (poop).

**Spore:** The asexual reproductive body of non-flowering plants including mosses, ferns, and horsetails. Fungi also produce spores.

**Spot Fire:** a fire that starts outside the main part of a wildfire as a result of a glowing ember carried by wind.

**Spring:** A spring occurs when an aquifer (a permeable rock type that can hold water) is filled to the point that the water overflows onto the land surface.

**Staple Food:** a food that is eaten often and is the main part of the diet for a particular group of people. Examples of staple foods eaten in different parts of the world are beans, rice, and potatoes. Also, wheat and corn based foods including bread and tortillas.

**Terrestrial:** A plant or animal that lives on dry land.

**Tree Sap:** The liquid, made up of water with dissolved sugars and mineral salts, that circulates in the vascular system of a tree.

**Vertebrate:** An animal that has an internal skeleton of bone or cartilage that includes a braincase and a backbone or vertebral column. The following groups of animals are vertebrates:

- **Fish** - A cold-blooded, aquatic vertebrate. Fish typically breathe with gills, have fins and a tail, and an elongated body covered with scales.
- **Amphibian** - A vertebrate of the class Amphibia. Frogs, toads, and salamanders (including newts) are amphibians. Larvae are typically aquatic and breathe with gills. Adults of most amphibians are semi-terrestrial and breathe with lungs and through their moist glandular skin.
- **Reptile** - A vertebrate of the class Reptilia. Reptiles usually have dry scaly skin and lay soft-shelled eggs on land. Reptiles include snakes, lizards, tortoises, turtles, and crocodiles.
- **Bird** - A warm-blooded, egg-laying vertebrate of the class Aves. Birds have feathers, wings, scaly legs, and a beak.
- **Mammal** - A vertebrate of the class Mammalia. Mammals are usually covered with hair. Female mammals produce milk to feed their young.

**Watershed:** An area of land from which water drains by streams and rivers into lakes or an ocean.

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