



## U. C. Berkeley • Ecology Glossary

<http://www.ucmp.berkeley.edu/glossary/gloss5ecol.html> [Accessed 8 July 2006]

**Absorption** — The taking in of water and dissolved minerals and nutrients across cell membranes. Contrast with ingestion.

**Aerobic** — Pertaining to the presence of free oxygen. Aerobic organisms require oxygen for their life processes.

**Anaerobic** — Pertaining to the absence of free oxygen. Anaerobic organisms do not require oxygen for their life processes, in fact oxygen is toxic to many of them. Most anaerobic organisms are bacteria or archaeans.

**Autotroph** — Any organism that is able to manufacture its own food. Most plants are autotrophs, as are many protists and bacteria. Contrast with consumer. Autotrophs may be photoautotrophic, using light energy to manufacture food, or chemoautotrophic, using chemical energy.

**Benthic** — Organisms that live on the bottom of the ocean are called benthic organisms. They are not free-floating like pelagic organisms are.

**Biological/biotic factors** — Living factors such as decomposers, scavengers and predators.

**Biomes** — The world's major communities, classified according to the predominant vegetation and characterized by adaptations of organisms to that particular environment. MORE?

**Boreal** — adj. Describes the northern biotic area that is dominated by tundra, taiga, and coniferous forests.

**Canopy** — Layer of vegetation elevated above the ground, usually of tree branches and epiphytes. In tropical forests, the canopy may be more than 100 feet above the ground.

**Carnivore** — Literally, an organism that eats meat. Most carnivores are animals, but a few fungi, plants, and protists are as well.

**Consumer** — Any organism which must consume other organisms (living or dead) to satisfy its energy needs. Contrast with autotroph.

**Cyst** — n. A small, capsule-like sac that encloses an organism in its resting or larval stage, e.g., a resting spore of an algae.

**Decomposer** — An organism that breaks down the tissue and/or structures of dead organisms.

**Decomposition** — The breakdown of dead organic material by detritivores or saprophytes.

**Dessication** — Mummification.

**Detritus** — Accumulated organic debris from dead organisms, often an important source of nutrients in a food web.

**Detritivore** — Any organism which obtains most of its nutrients from the detritus in an ecosystem.

**Disease** — Organisms suffer from disease when their normal function is impaired by some genetic disorder, or more often from the activity of a parasite or other organism living within them. Many diseases are caused by viruses, bacteria, or fungi.

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**Ecosystem** — All the organisms in a particular region and the environment in which they live. The elements of an ecosystem interact with each other in some way, and so depend on each other either directly or indirectly.

**Environment** — The place in which an organism lives, and the circumstances under which it lives. Environment includes measures like moisture and temperature, as much as it refers to the actual physical place where an organism is found.

**Food chain/food web** — All the interactions of predator and prey, included along with the exchange of nutrients into and out of the soil. These interactions connect the various members of an ecosystem, and describe how energy passes from one organism to another.

**Frugivore** — Animal which primarily eats fruit. Many bats and birds are frugivores.

**Generalist** — Organism which can survive under a wide variety of conditions, and does not specialize to live under any particular set of circumstances.

**Grassland** — Region in which the climate is dry for long periods of the summer, and freezes in the winter. Grasslands are characterized by grasses and other erect herbs, usually without trees or shrubs. Grasslands occur in the dry temperate interiors of continents, and first appeared in the Miocene.

**Groundwater** — Water found underground as a result of rainfall, ice and snow melt, submerged rivers, lakes, and springs. This water often carries minerals. These minerals can accumulate in the remains of buried organisms and eventually cause fossilization.

**Habitat** — The place and conditions in which an organism lives.

**Halophile** — Organism which lives in areas of high salt concentration. These organisms must have special adaptations to permit them to survive under these conditions.

**Herbivore** — Literally, an organism that eats plants or other autotrophic organisms. The term is used primarily to describe animals.

**Host** — Organism which serves as the habitat for a parasite, or possibly for a symbiont. A host may provide nutrition to the parasite or symbiont, or simply a place in which to live.

**Ingestion** — The intake of water or food particles by “swallowing” them, taking them into the body cavity or into a vacuole. Contrast with absorption.

**Inorganic** — Not containing carbon. Not from living things. Ex., minerals, water, oxygen, etc.

**Intertidal** — The coastal zone measuring from the lowest to the highest tide mark. The intertidal zone is subject to alternating periods of flooding and drying.

**Kelp forest** — Marine ecosystem dominated by large kelps. These forests are restricted to cold and temperate waters, and are most common along the western coasts of continents. Kelp forests first appeared in the Miocene.

**Limnology** — The study of river system ecology and life.

**Litter** — Leaf litter, or forest litter, is the detritus of fallen leaves and bark which accumulate in forests.

**Macroscopic** — Objects or organisms that are large enough to be seen with the naked eye.

**Marine** — Refers to the ocean.

**Microscopic** — Objects or organisms that are too small to be seen with the naked eye.

**Monsoonal** — adj. Describes a climate pattern with a wind system that changes direction with the seasons; this pattern is dominant over the Arabian Sea and Southeast Asia.

**Morphology** — n. The form and structure of anything, usually applied to the shapes, parts, and arrangement of features in living and fossil organisms.

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**Niche** — n. The portion of the environment which a species occupies, defined in terms of the conditions under which an organism can survive, and may be affected by the presence of other competing organisms.

**Nitrogen fixation** — The conversion of gaseous nitrogen into a form usable by plants. Usually by bacteria.

**Nocturnal** — Active only at night.

**Nutrient** — Any element or simple compound necessary for the health and survival of an organism. This includes air and water, as well as food.

**Nutrient cycling** — All the processes by which nutrients are transferred from one organism to another. For instance, the carbon cycle includes uptake of carbon dioxide by plants, ingestion by animals, and respiration and decay of the animal.

**Omnivore** — Literally, an organism that will eat anything. Refers to animals who do not restrict their diet to just plants or other animals.

**Organic** — adj. Pertaining to compounds containing carbon. Also refers to living things or the materials made by living things. inorganic— ant.

**Parasite** — n. An organism that lives on or within a host (another organism); it obtains nutrients from the host without benefiting or killing (although it may damage) the host; parasitic- adj.; parasitism- n. a type of symbiotic relationship in which one organism benefits and the other does not.

**Pathogenic** — Organism which causes a disease within another organism.

**Pelagic** — Pelagic organisms swim through the ocean, and may rise to the surface, or sink to the bottom. They are not confined to live on the bottom as benthic organisms do.

**Periphyton** — Dense strands of algal growth that cover the water surface between the emergent aquatic plants. Spirogyra is commonly responsible for this growth.

**Photic zone** — Region of the ocean through which light penetrates; and the place where photosynthetic marine organisms live.

**Phytoplankton** — Tiny, free-floating, photosynthetic organisms in aquatic systems. They include diatoms, desmids, and dinoflagellates.

**Plankton** — n. Very small, free-floating organisms of the ocean or other aquatic systems, including phytoplankton, which produce their own nutrients through photosynthesis, or zooplankton, which get their nutrients from organisms.

**Pollinator** — Animal which carries pollen from one seed plant to another, unwittingly aiding the plant in its reproduction. Common pollinators include insects, especially bees, butterflies, and moths, birds, and bats.

**Predator** — Organism which hunts and eats other organisms. This includes both carnivores, which eat animals, and herbivores, which eat plants.

**Prey** — Organism hunted and eaten by a predator.

**Producer** — Any organism which brings energy into an ecosystem from inorganic sources. Most plants and many protists are producers.

**Rain shadow** — n. The dry region on the leeward side of a mountain range, where rainfall is noticeably less than on the windward side. For example, the White Mountains in east central California are in the rain shadow of the Sierra Nevada.

**Riparian** — Having to do with the edges of streams or rivers.

**Salinity** — A measure of the salt concentration of water. Higher salinity means more dissolved salts.

**Saprophyte** — Organism which feeds on dead and decaying organisms, allowing the nutrients to be recycled into the ecosystem. Fungi and bacteria are two groups with many important saprophytes.

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**Scavenger** — An organism that feeds upon dead and dying organisms.

**Seaweed** — Any large photosynthetic protist, including rhodophytes and kelps. Seaweeds are not true plants, but like plants they can make their own food. More info?

**Specialist** — Organism which has adopted a lifestyle specific to a particular set of conditions. Contrast with generalist.

**Substrate** — “Supporting surface” on which an organism grows. The substrate may simply provide structural support, or may provide water and nutrients. A substrate may be inorganic, such as rock or soil, or it may be organic, such as wood.

**Symbiosis** — n. A relationship between two organisms that live in intimate contact with each other; includes mutualism (both organisms benefit, they rely on each other for survival), parasitism (one organism benefits at its host’s expense) and commensalism (one partner benefits and the other is neither benefitted nor harmed); symbiotic- adj.

**Temperate** — Region in which the climate undergoes seasonal change in temperature and moisture. Temperate regions of the earth lie primarily between 30 and 60 degrees latitude in both hemispheres.

**Terrestrial** — Living on land, as opposed to marine or aquatic.

**Tropical** — Region in which the climate undergoes little seasonal change in either temperature or rainfall. Tropical regions of the earth lie primarily between 30 degrees north and south of the equator.

**Tundra** — n. A vast, mostly flat, treeless Arctic region of Europe, Asia, and North America in which the subsoil is permanently frozen. The dominant vegetation is low-growing lichens, mosses, and stunted shrubs.

**Upwelling** — The raising of benthic nutrients to the surface waters. This occurs in regions where the flow of water brings currents of differing temperatures together, and increases productivity of the ecosystem.

**Zooplankton** — Tiny, free-floating organisms in aquatic systems. Unlike phytoplankton, zooplankton cannot produce their own food, and so are consumers.

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