
MARINE VOCABULARY

adaptation - a distinct feature of an organism that allows it to survive more easily in its environment

alga(e) - a simple plant, without a true stem, leaves, or roots, and possessing chlorophyll; includes almost all seagrasses

amphipod - one of an order (Amphipoda) of elongate and usually laterally compressed crustaceans. The species live in a variety of habitats from the parasitic state to the deep pelagic.

arthropod - one of a phylum (Arthropoda) of animals with segmented external skeletons and jointed appendages; for example, the crustaceans, spiders, and insects

autotroph - an organism capable of synthesizing its organic nutrients directly from the sunlight energy or from inorganic nutrients; also called primary producer. It includes the plants, phytoplankton, and some bacteria. Opposed to heterotroph, which is an organism that is unable to synthesize its own food and must use other organisms for nourishment.

benthic - referring to the bottom of a body of water (*i.e.* the sea floor)

benthos - the aggregation of organisms living on or at the bottom of a body of water

biotic factors- biological factors, such as availability of food, competition between species, and predator-prey relationships, that affect the distribution and abundance of a given species of plant or animal

bloom - a rapid and often unpredictable growth of a particular species in an ecosystem

buoyancy - the tendency of an object to rise or float. The plankton remain buoyant by several means: body projections or appendages to increase their surface area and frictional drag, air or oil bubbles trapped in their bodies, the exclusion of higher-density ions and their replacement with less-dense ions, and porous and less-weighted skeletons.

carnivore - an animal that eats other animals for food

cilia - tiny, hair-like projections used for locomotion in some protozoans. One of the best known groups of marine ciliate protozoans is the tintinnids.

community - an assemblage of interacting plants and animals forming an identifiable group within a biome, as in salt marshes or coral reef communities

consumer - herbivores and carnivores that consume energy originally transformed into food by the primary producers

copepod - one of a subclass (Copepoda) of minute shrimp-like crustaceans; most species range from about 0.5 to 10.0 mm in length

crustacean - one of a class (Crustacea) of arthropods that breathe through gills or branchiae and have a body commonly covered by a hard shell or crust. The group includes barnacles, crabs, shrimps, and lobsters.

decapod - one of an order (Decapoda) of crustaceans. The group includes shrimps, lobsters, and crabs

decomposer - an organism that breaks down organic wastes and the remains of dead organisms into simpler compounds, such as carbon dioxide, ammonia, and water

deposit feeder - an animal that feeds by removing living or dead material from the sediment

detritus - (or debris) any loose material produced directly from living matter in varying degrees of decomposition

detritus feeder - an animal that feeds on bacteria and dead or dying organic matter

diatom - one of a class (Bacillariophyceae) of microscopic plankton organisms, possessing a cell wall impregnated with silica. Diatoms are one of the most abundant groups of organisms in the sea and the most important primary food source of marine animals.

dinoflagellate - microscopic or minute organism that may possess characteristics of both plants (such as chlorophyll and cellulose plates) and animals (such as ingestion of food). This division of the algae comprises an important part of the marine plankton (phytoplankton).

ecosystem - ecological unit including both organisms and the non living environment, each influencing the properties of the other, and both necessary for maintenance of life as it exists on Earth

environment - the sum total of all the external conditions that affect a substance, object, organism, or community in the ocean

epipelagic - the upper portion of the oceanic province, extending from the surface to a depth of about 200 m; includes the planktonic zone

estuary - a region of a coastline, often indented, in which the freshwater from the land mixes with the ocean to produce seawater with lower salinity

flagellum - a fine and long, whip-like projection of the cytoplasm of a cell. It is used for locomotion in an undulating fashion in some unicellular algae (dinoflagellates and other green flagellates) and some protozoans.

food chain - a sequence of plants and animals in an ecological community, each of which is food for the next higher organism, from the primary producer to the top predator

food cycle - the production, consumption, and decomposition of organic food in the sea, and the associated energy relationships. Decomposition products are transformed by bacteria into inorganic nutrients suitable for use by the producers (marine plants) which, directly or indirectly, are the food source for all animals in the sea.

food pyramid - a diagram that represents each feeding level of a food chain (also called a trophic pyramid). The lowest level is the producers, followed by the herbivores and carnivores at the highest level. The food energy available for the organisms in any trophic level decreases with increasing trophic level.

food web - a group of interacting food chains; all of the feeding relationships of a community taken together. Since several animals rely on a single source of food, and no food is consumed by only one species of animal, the separate food chains in every natural community interlock and form a web.

green alga - one of a phylum (Chlorophyta) of grass-green, single-celled, filamentous, membranous, or branching plants in which the color, imparted by chlorophyll, is not masked by accessory pigments

habitat - place with a particular kind of environment inhabited by organisms

larva - an embryo that becomes self-sustaining and independent before it has assumed the characteristic features of its parents

motile - moving or capable of moving spontaneously

nekton - those pelagic animals that are active swimmers, capable of swimming independently of currents

niche - role, function or job of an organism in its environment

nutrient - any substance required for growth and maintenance of an organism

omnivore - an animal that feeds on both plant and animal material

pelagic - referring to the water column of a lake or ocean; pelagic animals and plants are divided into plankton and nekton

photic zone - upper portion of a lake, river or sea, sufficiently illuminated for photosynthesis to occur. In the ocean, the depth of the photic zone is from the surface down to approximately 50-100 meters, but it can extend to nearly 200 meters in some areas. The depth of this layer varies with the angle of incidence of sunlight, length of day, and cloudiness.

photosynthesis - the organized capture of light energy and its transformation into usable chemical energy in the synthesis of organic compounds; this is almost the only carbon-fixing process on Earth, and the route by which virtually all energy enters the biosphere

phytoplankton - "floating plants" or the plant forms of the plankton community. They are the basic synthesizers of organic matter (by photosynthesis) in the epipelagic zone. The most abundant of the phytoplankton are the diatoms. This does NOT include marine algae and seagrasses.

plankton - the passively drifting or weakly swimming organisms in marine and freshwater habitats. The members of this group range in size from microscopic plants to jellyfishes measuring up to 2 m across the bell, and include the eggs and larval stages of the nekton and benthos. They can be animals (zooplankton) or plants (phytoplankton).

polychaete - one of an order (Polychaeta) of annelids, which includes most of the marine segmented worms, some of which are the tube worms of fouling. Some of these worms are luminescent during spawning.

population - group of individuals of one species living in an area

primary producer - plants, algae, or other photosynthetic (or chemosynthetic) organisms that produce the food of a food chain

producer - primary energy transformer of an ecosystem. Most are green plants, but chemosynthetic bacteria are producers in a few ecosystems.

Protozoa - a kingdom of mostly microscopic, one-celled animals. This group constitutes one of the largest populations in the sea, including some bioluminescent genera.

pseudopod - a "false foot" formed by an extension of the cytoplasm. Pseudopodia are used for locomotion, and to surround and absorb food in some protozoans. Two groups of marine shelled-protozoans that move about by pseudopodia are the foraminiferans and the radiolarians.

red tide - seawater discolored primarily by a dinoflagellate bloom in a density fatal to many forms of life. (Sometimes associated with neurotoxin production).

sessile - permanently attached; not free to move about

suspension feeder - an animal that feeds by removing either living or dead material suspended in the water

taxonomic key - a table in which the distinguishing characteristics of a group of organisms are arranged so as to make it easier to determine their names. It is also known as dichotomous key because, in reaching the final choice that points out the name of the organism to be identified, it offers, at least, two choices at every step (*di-* means two; *-chotomous* means branched).

trophic level - common feeding at the same link on food chains; several levels (usually ranges from 3 to 5 levels) comprise a food pyramid.

upwelling - the vertical movement of water up to the ocean surface from the ocean floor. As a result, nutrients from the bottom are transported to the surface and can then be used by the phytoplankton.

vertebrate - animals having a backbone or spinal column; a subphylum of chordate animals, comprising those having a brain enclosed in a skull or cranium and a segmented spinal column; includes mammals, birds, reptiles, amphibians, and fishes

zooplankton - “floating animals” or the animal forms of the plankton community; animal life drifting at or near the surface of the open sea. They include various crustaceans (such as copepods, cladocerans, and euphausiids), rotifers, jellyfishes, some protozoans, worms, mollusks, and the eggs and larvae of benthic and nektonic animals.