Glossary

Algae- Simple plants, without a true stem, leaves, or roots, and possessing chlorophyll; includes almost all seaweeds.

Antennae- A pair of sensory organs which grow from the head of an invertebrate animal.

Autotroph- An organism that makes its own food from inorganic compounds such as CO_2 or H_2O.

Bathypelagic zone- The open-ocean environment between the depths of approximately 1000 and 4000 meters (3,000 to 12,000 feet).

Benthic- The ocean bottom environment. Benthic organisms live either on the bottom or in the sediment.

Bioluminescence- Production of light by an organism.

Biomass-Total weight or volume of organisms in a given area.

Brotulas- Eel-like fishes of the deep-sea benthos.

Buoyant- Capable of staying afloat in a fluid.

Caudal peduncle- Region just in front of the tail fin on a fish.

Chemosynthesis- A type of primary production (carbon dioxide fixation) carried by some bacteria in the absence of sunlight.

Cilia- Short, hairlike, outgrowths on the surface of a cell.

Circulatory system- The system by which blood is circulated through the body.

Cones- One of the cone-shaped cells in the retina of the eye, sensitive to bright light and color.

Crinoids- A group of echinoderms, most are attached to the bottom by a long stalk. Species without stalks swim or creep slowly about.

Crustacea-Diverse group of organisms including crabs, lobsters and shrimp.

Decomposers- Heterotrophic organisms that break down non-living matter, thereby converting organic compounds into inorganic compounds, which can then be used by plants.

Decompostion-The break down of nonliving organic material.

Deep scattering layer- Well-defined horizons in the ocean that reflect sonar, usually consisting of fishes, squid, or other larger zooplankton.

Demersal organisms- Organisms living on or near the bottom.

Density-The mass of a substance per unit volume.

Diel migrations- Having a daily cycle.

Diversity-The species richness of an area.

Echinoderms- Primarily benthic, spiny skinned marine animals. They are radially symmetrical. Some common echinoderms are starfish, sea urchins and sea cucumbers.

Echo Sounding- Determination of water depth by measuring the time interval between the emission of a sonic signal and its return from the bottom.

Environment- The complex of climatic and biotic surroundings of an organism.

Epifauna- Benthic organisms that live on the surface of the ocean floor either attached or motile.

Epipelagic zone- The 0- 200m (0-600feet) depth zone, seaward of the shelf-slope break.

Euphotic- Water bodies or habitats with high concentrations of nutrients.

Fluorescence- Giving off light as a result of absorption of radiation from some other source.

Food poor- An area with few food sources.

Fusiform- Spindle-shaped; tapering toward the ends.

Generalist- An organism able to take advantage of broad array of unrelated food stuffs.

Genus- A group of organisms that are closely related. One step above species in taxonomy (e.g. *Genus species- Homo sapiens*).

Gill rakers- Projections found on the gill arches that aid in food gathering.

Habitat- A place where an organism lives, usually refers to an area smaller than environment.

Infauna- Benthic organisms that borrow into the sediment or seafloor.

Halosaur- Member of the family Halosauridae. Small, elongate deep-sea fish. usually found near continental shelves.

Heterotroph- An organism that utilizes organic compounds for food.

Holothurians- Sea cucumbers. Phylum Echinodermata.

Ichthyologist- A person that studies fish.

Infauna- Animals that live in the sediment.

Invertebrate- Lacking a spinal column.

Lantern fishes (myctophids)- Small, midwater fishes that have many light organs on their bodies. Most undergo vertical migrations.

Lunate- Shaped like a crescent.

Mesopelagic zone- The middle zone of the ocean. It is also known as the twilight zone, because this is where light becomes dimmer. It extends from about 200 to 1000m (600 to 3000 feet).

Metabolism- The sum of the physical and chemical processes in an organism by which its substance is produced, maintained and destroyed, and energy is made available.

Messenger- A dispatch bearer or bearer of a message. Weighted triggering mechanism.
Microhabitat- A small area in the general habitat with its own set of distinguishing environmental conditions.
Migrations- The movement of animals from one area to another by well-defined routes usually triggered by a periodic factor of some kind.
Morphology- Form and structure of something.
Neuromasts- The basic receptors of the acoustico-lateralis system.
Nutrient- Substances that provide nourishment.
Olfactory organs- The organs of smell.
Opportunistic- Able to utilize different nutritional sources.
Parameter- A constant or numerical descriptor.
Pelagic environment- The open ocean environment. It may be divided into the Neretic (0-200 meters) and Oceanic (greater than 200 meters) zones.
Photophores- Luminous organ of certain fishes and crustaceans.
Photosynthesis- The organized capture of light energy and its transformation into usable chemical energy in the form of organic matter. This is the route whereby most energy enters the biosphere.
Phytoplankton- Microscopic floating plants. The plant forms of the plankton. They synthesize organic matter by photosynthesis. They are found in the epipelagic layer.
Phytoplankton blooms- The sudden development of a mass of photosynthesizing organisms that live in the plankton.
Plankton- Organism that cannot move independently of the currents.
Polychaete- A class of mainly marine segmented worms, bristleworms.
Pupil- The expanding and contracting opening in the iris of the eye, through which light passes to the retina.
Rattails- Macrouridae. An important group of benthic fishes found in deep water.
Respiration- Oxidation-reduction process by which chemically bound energy in food is made available in an organism.
Retina- The innermost coat of the posterior part of the eyeball that receives the image produced by the lens
Rods- One of the rodlike cells in the retina of the eye sensitive to low intensities of light.
Scavenger- An organism that feeds on carrion or organic waste.
Sessile- Permanently attaches not mobile.
Swimbladder- Thin walled sac found in the upper part of the body cavity of a fish utilized for maintaining neutral buoyancy.
Thermocline- A layer of water in which a rapid change in temperature occurs.
Topography- The relief features or the surface configuration of an area

Tube worm- Worms that build calcareous or leathery tubes in which they live.
Ventral- Of, or pertaining to the belly or abdominals
Zooplankton- Animal plankton

After working through the discussion questions and activities section in this packet, please feel free to send your answers to us! Our e-mail address is askocean@marine.usf.edu. We might use some of your answers in the show. Also, visit our website (which is under construction) at www.marine.usf.edu/pjocean/index.html

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http://www.sciam.com/0697issue/0697pratson.html
http://www.nerc-oban.ac.uk/dml/projects/benthic/aims.html

WEB SITES FOR TEACHERS

http://educate.si.edu/lessons/currkits/ocean/connect/essay.html
http://www.biology.ualberta.ca/cources.hp/biol361/LecOut1-98/out109.html

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