

Glossary

Abundant: Plentiful.

Adaptation: A change in an animal's behavior or body that allows it to live better in its surroundings.

Behavior: What an animal does; its reactions or actions under specific conditions.

Biodiversity: A term used to describe the number, variety and variability of living organisms; the variety of insects, fish, animals, plants and other living things that share our planet and the essential interdependence of all living things.

Biologist: A person who studies living organisms, life processes and/or the animal and plant life of a particular place. Biologists also study the relationship of living things to one another.

Carnivore: An animal that eats meat.

Class: Part of the classification system scientists use to help identify plants and animals. Sea otters are in the class Mammalia. Other classes include birds, reptiles, amphibian and fish.

Coerced: To bring about by force or threat.

Congregated: To collect into a group or crowd.

Conservation: Protection of natural resources from loss, waste or harm; the wise and intelligent use of natural resources so that they will be available for future generations.

Consumer: In an ecosystem, this is an organism that feeds on other organisms. An herbivore is a primary consumer because it gets its food directly from plants. Carnivores are secondary consumers because they get their nutrition from eating herbivores.

Contaminants: Something that makes impure or unclean by contact or mixture.

Crevices: A narrow opening resulting from a split or crack.

Debris: The remains of something broken down or destroyed.

Decimated: To kill a large number of (something), or to reduce (something) severely.

Degradation: Decline to a low, destitute, or demoralized state.

Detrimental: Obviously harmful.

Ecology: The science of the relationships between plants, animals and the environment.

Ecosystem: The complex of a community of organisms and its environment functioning as an ecological unit; natural unit or area defined not only by its physical characteristics but by the complex links and relationships between the plants and animals that live there. It is important to remember that ecosystems are not static. Rather, they are dynamic, meaning that they are always undergoing change and alteration in response to many factors.

Endangered: An “endangered” species is one that is in danger of extinction throughout all or most of its range.

Endangered Species Act: Federal act that was established in 1973 that seeks to “provide for the conservation of endangered and threatened species of birds, mammals, fish, invertebrates and plants and their habitat.”

Entanglement: The act of wrapping or twisting together.

Estuary: A water passage where the tide meets a river current.

Environment: The external conditions, including sun, air, water, soil and plants that make up an area where an animal lives.

Extinct: No longer existing or living.

Extinction: The process of being destroyed so that it no longer exists.

Family: Part of the classification system scientists use to identify plants and animals. Sea otters are in the family Mustelidae, along with weasels, minks, skunks, badgers and wolverines. A family is a subgroup of an order.

Forage: To look for food; food for animals especially when taken by browsing or grazing.

Foraging: The act of looking for food.

Genus: Part of the classification system used to identify plants and animals. Sea otters belong to the genus *Enhydra*. A genus is a subgroup of a family.

Gill Nets: A net used to catch halibut, sharks and certain other species of fish by entangling the gills of the target species.

Habitat: The type of environment in which a plant or animal usually lives. Forest, deserts, and lakes are examples of habitats.

Herbivorous: An animal that eats grass and other plants.

Hypothermia: Subnormal temperature of the body.

Inhabit: To live in (a place).

International Fur Seal Treaty: A treaty established in 1911 to ban the hunting of sea otters and fur seals.

Invertebrates: An animal that lacks a spinal column.

Irreparable: Not reparable.

Keystone species: An organism whose abundance or activity is central to maintaining the nature of the habitat; they may be important habitat modifiers, pollinators or seed dispersers.

Kingdom: Part of the classification system scientists use to identify plants and animals.

Mammal: Animals that are warm-blooded, have hair on their bodies and produce milk for their young with special glands called mammary glands.

Management zone: The area where sea otters are not allowed. It was established in 1986 to reduce conflicts between fisheries and conservationists.

Mandate: A formal order from a superior court or official.

Marine Mammal Protection Act: A federal act established in 1972 for the protection and conservation of marine mammals and their habitat. This act also established a federal Marine Mammal Commission appointed by the President.

Miocene: Pertaining to an epoch of the Tertiary Period, the period from 25 to 10 million years ago when grazing mammals became widespread.

Mortality: the number of deaths that occur in a particular time or place.

Nearshore: The region of land extending from the backshore to the beginning of the offshore zone.

Olfactory: Of, relating to, or connected with the sense of smell.

Order: Part of the classification system scientists use to identify plants and animals. Sea otters are in the order Carnivora, meaning meat-eating. An order is a subgroup of a class.

Parent range: The main area, which includes the northern and southern boundaries, from which the population or subpopulation is found.

Pelage: The coat of a mammal, as distinct from bare skin.

Peninsula: A piece of land jutting out into the water whether with or without a well-defined narrow strip of land connecting the two land masses.

Perpetrators: Those who bring about or carry out (as a crime or deception).

Perspective: A point of view. People have varying perspectives about sea otters.

Phylum: Part of the classification system scientists use to identify plants and animals. Sea otters are in the phylum Chordata, which means they possess a notochord, or rod-like structure of cells that forms the vertebrae in humans and other vertebrates. Phylum is a subgroup of kingdom.

Pigmentation: Coloration of tissue.

Pliocene: Pertaining to an epoch of the Tertiary Period, which occurred from 10 to 2 million years ago, and was characterized by increased size and numbers of mammals, the growth of mountains and global climatic cooling.

Population: All of the individuals from the same species (or closely-related species) that are closely associated and that occupy a certain area.

Predation: The capture of prey as a means of maintaining life.

Predator: An organism that lives by preying on other organisms.

Preservation: Protection of wildlife and habitat which emphasizes nonconsumptive values and uses, such as no wildlife viewing. Conservation, on the other hand, emphasizes both consumptive and non-consumptive use of resources.

Prey: An animal that is hunted and killed for food by another animal.

Profound: Extreme.

Proliferated: To increase greatly and suddenly in number.

Propulsion: The act of driving forward or onward by, or as if by, means of a force that imparts motion.

Prosecuted: Brought legal action against for redress or punishment of a crime or violation of law.

Range: The land upon which animals live.

Regime shift: A pronounced and prolonged change in the characteristic atmosphere-ocean climate of a region.

Remnant: A small surviving group.

Repertoire: A list or supply of capabilities.

Sculling: A behavior in which a sea otter swims on its back.

Shellfish: Abalone, crab, lobster and various other invertebrates.

Solitary: Being, living, or going alone or without companions.

Species: Subgroup of genus. Part of the classification system scientists use to identify plants and animals. There are three subspecies of sea otters, *Enhydra lutris nereis* (southern sea otters), *Enhydra lutris kenyoni* (northern sea otter) and *Enhydra lutris lutris* (Russian sea otter). The proper name of a species is made up of two words: the genus name (*Enhydra*) and the specific name and subspecies name (*lutris* and *nereis*, *kenyoni* or *lutris*).

Stress: A harmful pressure on an organism or a population. For example, a drought or a flood or a severe winter would cause stress to a plants and animals.

Subspecies: Part of the classification system scientists use to identify plants and animals. It is the lowest, or most specific, group of animals.

Substrate: The base on which an organism lives.

Tactile: Of or relating to the sense of touch.

Taxonomy: The classification of organisms in categories based on common characteristics.

Territoriality: The pattern of behavior associated with the defense of a territory.

Threatened: A species present in its home range, but in declining numbers and in danger of becoming endangered.

Top predator: A predator, usually large in size, that is rarely killed by other predators and may kill smaller predators.

Translocation: To move a species from one location to another to increase that species' range or augment numbers in a critical population

Undulating: To form or move in waves.

U.S. Fish and Wildlife Service: The agency of the federal government that is responsible for wildlife, including saving endangered species. Polar bears, manatees, dugongs and sea otters are the marine mammals under their purview.

Vibrissae: Whiskers.

Vulnerable: Open to attack or damage.

Wary: On guard, watchful.

Additional Resources

Websites:

Defenders of Wildlife

<http://www.defenders.org/sea-otter/basic-facts>

Marine Wildlife Veterinary Care and Research Center

<http://www.dfg.ca.gov/ospr/Science/marine-wildlife-vetcare/>

Monterey Bay Aquarium

<http://www.mbayaq.org>

Monterey Bay Aquarium Sea Otter Research and Conservation Program

<http://www.montereybayaquarium.org/conservation/research/saving-sea-otters>

USGS Ecological Research Center

<http://www.werc.usgs.gov/seaottercount>

Friends of the Sea Otter

<http://www.seaotters.org>

The Otter Project

<http://www.otterproject.org/>

California Department and Fish and Wildlife

<https://www.wildlife.ca.gov/>

U.S. Fish and Wildlife Service

<http://www.fws.gov>

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Meeker, Clare Hodgson. Lootas Little Wave. Sasquatch Books; 1999. (Ages 4-8).

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Non-fiction Books:

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Biological Dictionary:

Market House Books (Editor). A Dictionary of Biology (Oxford Paperback Reference). Oxford University Press; 4th edition: 2000.

Videos:

A Sea Otter Story - (60 Minutes)

Beneath the Surface - Narrated by Betty White – (26 minutes) Cradle in the Sea - Sea Otters and Spotted Dolphin - (50 Minutes)

Otters - Free of Narration Featuring Original Music and Natural Animal Sounds (45 Minutes)

World of the Sea Otter - Minimal Narration and Natural Ocean Sounds (30 Minutes)

Local resources for teachers in and around Monterey, California to learn more about the marine ecosystem:

Año Nuevo State Reserve -- <http://www.anonuevo.org/home/html/>

California Coastal Commission, Marine, Coastal and Watershed Resource Directory -- <http://www.coastal.ca.gov/publiced/directory/dirndx.html>

Elkhorn Slough National Estuarine Research Reserve -- <http://www.elkhornslough.org/>

Elkhorn Slough Safari -- <http://www.elkhornslough.com>

Institute of Marine Sciences, University of California, Santa Cruz -- <http://ims.ucsc.edu/>

Marine Wildlife Veterinary Care & Research Center, California Department of Fish and Wildlife -- <http://www.dfg.ca.gov/ospr/Science/marine-wildlife-vetcare/>

The Marine Mammal Center – <http://www.marinemammalcenter.org/>

Monterey Bay Aquarium -- <http://www.mbayaq.org/>

Monterey Bay Aquarium Research Institute -- <http://www.mbari.org/>

Monterey Bay National Marine Sanctuary -- <http://montereybay.nos.noaa.gov/>

Moss Landing Marine Labs -- <http://www.mlml.calstate.edu/>

*Annual Open House (open to public and geared towards families and kids) in the spring of each year.

National Marine Fisheries Service, Santa Cruz office -- <https://swfsc.noaa.gov/fed.aspx>

Seymour Marine Discovery Center at Long Marine Lab -- <http://seymourcenter.ucsc.edu/>