

# Aquatics Glossary

-A-

## abiotic

Non-living factor in an environment; for example, light, water, temperature, or rocks.

## acid

Substances with a pH of less than 7.

## acid rain

Rain, snow, or other forms of water that are made more acid by the waste gases that come mainly from the burning of coal and oil products. The gases (usually sulfur dioxide and oxides of nitrogen) mix with water and other materials in the air. Acid rain falls on the land and water, and can affect wildlife, plants, soil, and building materials.

## active solar power

A solar energy collection system in which water, air, or another heat-absorbing fluid is actively pumped through a solar collector. After absorbing the heat from the sun, the fluid is stored in insulated tanks until the heat energy is needed.

## adapted, adaptation

The process of making adjustments to the environment. For example, plants grow only where soil types, moisture, and sunlight are balanced to the proper degree. Desert plants have adapted so they live under intense sunlight, on poor quality soils, and with a much reduced water supply.

## adipose fin

The fatty fin on some species of fish, such as catfish and bullheads.

## aerate, aeration

To supply with air or oxygen; to loosen the soil to add air space to it; to supply running water with additional oxygen, as when a stream runs over falls or rapids or when wind creates waves on a lake.

## aerobic

Living or occurring only in the presence of oxygen

## aesthetic

Sensitivity to or appreciation of beauty through recognition of its unique and varied components or through its orderly appearance.

## aestivation

Dormancy, typically seasonal.

## aggregate

To gather into a group or mass

## algae

Any of numerous chlorophyll-containing plants of the phylum *Thallophyte*, ranging from unicellular to multi-cellular forms in fresh or salt water.

## alkalinity

The alkali concentration or quantity

## allantois

Part of an egg that receives waste from the embryo.

## amnion

A thin, fluid-like sack that encloses the embryo in an egg

## amphibian

Typically, an animal that, when young, lives in an aquatic habit and breathes by gills; as an adult, an amphibian lives primarily in a terrestrial habitat breathing by lungs and through moist glandular skin. For example, frogs and salamanders are amphibians.

## amphibole/pyroxenes

Easily weathered group of minerals that provides calcium and magnesium; not as abundant as feldspars.

## anadromous

Any species of fish that lives in saltwater and spawns in freshwater. Some examples are salmon, shad, and striped bass.

## anaerobic

An organism, like bacteria, that lives without the presence of oxygen

## anal fin

The fin found on the lower portion of a fish's body near the tail.

## angiosperm

Any class of flowering plants characterized by seeds that are fully enclosed by fruits.

## animal community

Animals of various species living within a certain habitat, each occupying a specific position in that particular environment; directly parallel to plant communities.

## anthropomorphism

The attribution of human characteristics to non-humans, especially animals. Biologists recognize that animals may exhibit emotions and behavior patterns resembling those of humans. Anthropomorphism is generally used to refer to a fictionalized portrayal of animals such as those found in children books, cartoons, and so on.

## arid

Dry; receives little precipitation.

## aquatic

Growing, living in, or frequenting waters.

**aquifer**

A geological formation that is permeable; a water-bearing layer of rock or soil. An aquifer has an impervious layer of rock or soil at the top and at the bottom of a pervious layer that contains water.

**-B-****bacteria**

Single celled microorganisms that lack chlorophyll. Many bacteria break down organic matter in the air, the water, and the soil. Some bacteria are capable of causing diseases in humans, other animals, and plants.

**barbel**

A whisker-like projection for the jaws of some fish such as a carp or catfish. Barbels help a fish to taste and feel.

**behavior**

What an animal does.

**benthic**

Having to do with the ecosystem at the bottom of a lake.

**biennial**

A plant that lives for two growing seasons, producing foliage during the first season and flowers, fruit, and seeds during the second.

**bioaccumulation**

The build-up of chemicals in a plant or animal. For example, DDT in bluebirds.

**biology**

The study of living organisms

**biodegradable**

The property of a substance that permits it to be broken down by microorganisms into simple, stable compounds such as carbon dioxide and water.

**biodiversity (biological diversity)**

A term used to represent the variety of life forms in a given area.

**biogeochemical cycles**

Movement of matter within or between ecosystems caused by the interaction of living organisms, geologic forces, or chemical reactions.

**biologist**

A person who studies living organisms and their relationship to one another.

**biological diversity**

The variety of life forms in a given area. Diversity can be categorized in the number of species, the variety in the areas of plant and animal communities, the genetic variability of the animals, or a combination of these elements.

**biomass**

The total weights of all living matter in a particular habitat, at a given moment in time.

**biome**

A large geographic area with somewhat uniform climatic conditions; a complex of communities characterized by a distinctive type of vegetation and maintained under the climatic conditions of the region.

**biotic**

The living components of an ecosystem (fauna and flora); a reference to the living components of the biosphere or of an ecosystem as distinguished from the non-living components.

**biosphere**

The part of the earth's crust (water and atmosphere) where living organisms can exist.

**biota**

The animal and plant life of a region or period.

**biotic community**

The living organisms in a given community. It includes all plant and animal life within the community. The non-living parts are considered the abiotic parts of the community.

**biotic potential**

The capacity of a population of animals or plant to increase in numbers under optimum environmental conditions.

**bog**

A wetland formed in a former glacial depression by the accumulation of organic matter, known as peat, and which supports mosses tolerant of acidic conditions

**botanist**

A specialist in the study of plants.

**bottomlands**

A forest area near a stream, river, or other moving body of water. Bottomlands are subject to periodic flooding and usually have wetland hardwood species.

**Brackish**

The water in the area where fresh and salt water meet; often has varying salinity but is saltier than fresh water.

**breeding**

A series of complex behavioral interactive patterns from courtship to mating; rearing of young, which are necessary for the continuation of a species.

**bromeliad**

A member of a family of tropical American and epiphytic herbaceous plants that includes the pineapple and various other ornamentals.

**brood**

The offspring of a bird or mammal.

**buffer strip**

A narrow zone or strip of land, trees, or vegetation bordering an area. Common examples include visual buffers, which screen the view along roads, and streamside buffers, which are used to protect water quality. Buffers may also be used to prevent the spread of forest pests.

**burrowing**

Digging a hole or tunnel.

-C-

**camouflage**

Colors, tones, patterns, shapes or behaviors that enable an organism to blend in with its surroundings. Some organisms, for example, have a skin or coat color that lets them hide from predators.

**carbohydrates**

Sugars, starches, and cellulose that are produced by green plants and are important nutritional sources of energy for many animals.

**carbon cycle**

The circulation and recycling of carbon atoms, especially through the processes of photosynthesis, respiration, and decomposition.

**carnivore**

A meat eater.

**carrion**

The bodies of dead animals, usually found in nature in the process of decay; not "fresh meat".

**carrying capacity**

A wildlife management term for the equilibrium expressed by the availability of habitat components and the number of animals in a given area. In general ecological usage, carrying capacity is the dynamic equilibrium established between any life form and its environment. It is frequently expressed as a number indicating the population of any given animal a given area can support. Carrying capacity varies throughout the year. The population number varies from year to year, dependent upon conditions within the habitat such as rainfall, weather, and habitat conditions.

**catadromous**

Any species of fish that lives in freshwater and spawns in saltwater, such as the eel.

**catfish**

A group of fish without scales named for the long barbels around their mouths that look like the whiskers of a cat.

**caudal**

Related to, or being a tail; the tail fin.

**cell**

The smallest living unit of an organism.

**cellulose**

A complex carbohydrate that constitutes the chief part of the cell walls of higher plants and yields fiber.

**chart**

A "map" of water areas; showing water depths for the shorelines, reefs, rocks, shoals, wrecks, and other areas of dangers.

**chlorophyll**

The green coloring matter in plants necessary for photosynthesis.

**chloroplasts**

The structures within plants that contain chlorophyll and enable photosynthesis to occur.

**chorion**

The outer membrane enclosing the embryo.

**chromatography**

A method of analyzing materials of various compounds by testing their absorption rates.

**climate**

The kind of weather a place has over a period of years, based on conditions of heat and cold, moisture and dryness, clearness and cloudiness, wind and calm.

**climatic**

The average condition of the weather as defined by temperature, precipitation, and wind velocities; the environmental conditions relating to weather.

**coastal plain**

Large, nearly level areas of land near ocean shores.

**codominate**

To be one of two or more of the most characteristic species in a biotic community

**coloration**

Genetically-controlled patterns or markings that can protect an individual organism.

**combustion**

An oxidative chemical process that results in the creation of heat and light.

**commensalism**

A relationship between two organisms of different species in which one organism benefits, while the other is generally neither helped nor harmed.

**community**

An association of organisms—plants and animal—each occupying a certain position or ecological niche, inhabiting a common environment and interacting with each other; all the plants and animals in a particular habitat that are bound together by food chains and other interrelationships.

**competition**

When two or more organisms compete to use the same resource; may be inter- or intra-specific.

**condensation**

The physical change of state in which a gas or vapor is transformed into a liquid, as in the formation of water droplets when water vapor cools.

**conservation**

The use of natural resources in a way that ensures their continuing availability to future generations; the intelligent use of natural resources for long-term benefits.

**Conservation Reserve Program (CRP)**

A federal program designed to remove highly erodible, marginal farmland from production through a one-time cost-sharing payment to establish trees, grass, or other cover. The landowner receives a 10-year annual rental payment to maintain the cover.

**consumer**

An organism that obtains energy by feeding on other organisms and their remains.

**congregate**

When animals group together in an area.

**consumptive use**

In general terms related to wildlife, any use resulting in the use of wildlife after harvest. Examples may be the death of an individual animal as in hunting, fishing, and trapping.

**courtship**

A pre-mating behavior where the male tries to woo or court the female in order to mate.

**cove**

A small bay or inlet in a body of water.

**cover**

Vegetation and other land features that provide areas for wildlife to hide, sleep, feed, and reproduce.

**creel limit**

A term to indicate the number of fish, by species, that can be legally caught in one day.

**crepuscular**

Active at dawn and dusk.

**cross section**

A sample meant to representative of a whole

**current**

Any movement of water, whether caused by tides, ocean water movements, or flowing water in rivers and stream.

**cycle**

A periodically repeated sequence of events.

**-D-****DDT**

A colorless contact insecticide. Banned in the United States for most uses since 1972

**dabbling ducks**

Ducks which frequent shallow marshes, ponds and rivers and "tip up" to feed. They feed with their body above water and take off vertically when startled.

**daphnia**

Any of many kinds of water fleas

**decadent**

Declining in health and/or productivity.

**decibel**

A unit of intensity of sound. A measurement of 50 decibels is considered moderate sound; 80 is loud; sound beyond 100 becomes intolerable.

**decomposer**

A plant, animal, or fungi which feeds on dead material and causes its mechanical or chemical breakdown.

**defoliation**

The removal of leaves or needles from trees or plants, usually caused by insects, diseases, or chemicals and often causing mild to severe damage—even death—to the tree.

**detritus**

Disintegrated material or debris; loose fragments washed away from rocks

**denitrification**

To remove nitrogen or nitrogen-containing gases

**dense**

Thick, or crowded closely together.

**density**

Number of organisms per unit of space.

**depredation**

The act of preying upon, usually in relation to wildlife damage to people's crops or animals.

**desert**

An arid habitat with limited amounts of vegetation.

**detrimental**

Having harmful effects.

**dew**

Water droplets condensed from the air onto cool surfaces such as grass or leaves. Usually occurs at night.

**dioecious**

Male and female flowers produced on separate plants.

**dissolved oxygen**

The oxygen mixed into water and used by fish. Dissolved oxygen is originally put into water by things such as wind, current, plants, and micro-organisms..

**display**

An observable behavioral pattern that carries a specific message. The message may be inter- or intra-specific.

**diurnal**

Active by daylight; the opposite of nocturnal.

**diversity**

Variety.

**diving ducks**

Ducks that prefer to feed in deep water like lakes and bays.

**dominant species**

The plant or animal species which exerts major controlling influence on the community. Removal of dominant species results in important changes in the community. Generally, dominants have the greatest total bio-mass represented by total number or weight.

**dorsal fin**

A fin located on the back or upper-most part of a fish.

**DNR**

Department of Natural Resources; abbreviation for the name of the natural resources agency in many states. In North Carolina the name of the agency is DENR— Department of Environment and Natural Resources.

**drought**

The lack of normal precipitation for an extended period of time. A long period with little or no rain.

-E-

**ecology**

The scientific study of the relations of living things to one another and their environment. A scientist who studies these relationships is called an ecologist.

**ecological diversity**

The variety of forest, desert, grasslands, oceans, stream, and other biological communities interacting with one another and with their nonliving environment.

**ecological islands**

Small spaces of wildlife and plant habitat remaining when land is cleared for farming or urban development.

**ecological niche**

The role played by an organism in a biological community: its food preferences, its requirements for shelter; its special behaviors, and the timing of its activities (nocturnal or diurnal). The ecological niche of organism has little to do with where it is found but much more to do with its function or role in the community (for example, predator or decomposer) and how it performs that function.

**ecosphere**

A term for the total of all the regions on the earth capable of supporting life.

**ecosystem**

All living things and their environment in an area of any size where all are linked together by energy and nutrient flow. Also, the interacting system of a biological community and its nonliving environment; the place where these interactions occur.

**ecosystem management**

Use of ecosystem concepts to predict the effects of management actions on the ecosystem and to guide management planning and actions.

**ecological succession**

The changes, over time, in the structure and function of an ecosystem. When no previous vegetation exists on a site, the process is called primary succession. When a site supported vegetation previously but was disturbed, the process is called secondary succession.

**ecologist**

A scientist who studies the interrelations of living things to one another and their environment.

**ecology**

The scientific study of the relations of living things to one another and to their environment.

**edge habitat**

The transition zone between two different habitat types.

**effluent**

The outflows from sewage or industrial plants.

**endangered**

A species that is in danger of extinction throughout all or a significant portion of its range. (A *threatened* species is one that is likely to become endangered.)

**energy flow**

The one-way passage or transfer of energy through an ecosystem according to the laws of thermodynamics.

**endemic**

Pertaining to a population that is restricted to a particular geographic area.

**entomology**

The study of insects

**environment**

The sum of all external conditions and influences, living and nonliving, that affect the development and survival of an organism (or group of organisms); includes other plants, animals, climates, and locations.

**epidermis**

The outermost layer or layers of cells in a plant or animal.

**epilimnion**

The warm layer of water above the thermocline.

**epiphyte**

A plant that grows on the surface of another plant but is not a parasite since it gets its nourishment from the air.

**erosion**

The wearing away of the land surface by wind or water. Erosion occurs, naturally from weather or runoff, but it is often intensified by some human practices.

**estuary**

A partly enclosed body of water where sea water and fresh water meet and mix.

**ethnobotany**

The study of the relationship between societies and the plants of their environment.

**ethics**

A personal or social moral code.

**eutrophication**

Enrichment of water due to fertilization, sewage, effluent or other waters that carry a high plant-nutrient component which speeds up the ecological aging of a body of water.

**evaporation**

A physical change of state in which a liquid is transformed into a vapor or gas.

**evapotranspiration**

The evaporation of water from the soil and the transpiration of water from the plants that live in that soil. Approximately one-quarter of a forest's annual rainfall returns to the air through evapotranspiration.

**excavate**

To make a cavity or hole. To hollow out.

**exotic species**

A species that is not native to the ecosystem; also known as an invader species.

**exclusion**

Keeping something out of an area.

**extinction**

The condition of having been removed from existence. An animal or plant facing extinction is one in danger of vanishing from our world.

**eutrophic**

A type of body of water that has high levels of nutrients.

**-F-****fauna**

Animals, especially the animals of a particular region or period considered as a group.

**fiber**

A thread-like body or filament many times longer than its diameter. Paper pulps are composed of fibers—usually of vegetable origin, but sometimes animals, minerals, or synthetic—for special types of papers.

**filter**

Any substance (paper, charcoal, sand, cloth, or fiber) through which air, smoke or liquid passes to remove impurities or recover solids.

**fingerling**

A young fish, about as long as the length of your finger.

**fisheries management**

The science of management of fish populations through research, habitat manipulation, stocking, water quality control, and regulations.

**flora**

A list of the species of plants that make up the vegetation for an area. (See also **vegetation**.)

**fluctuate:**

To vary; or rise and fall irregularly.

**flyway**

Fly routes established by migratory birds

**food chain**

The transfer of food energy from organisms in one nutritional level to those in another.

**food web**

A complex and interlocking series of food chains.

**forage**

Refers to the vegetation eaten by animals.

**forb(es)**

Low growing herbaceous plants, both annuals and perennials.

**freshwater**

Water that contains little or no salt.

**fungi**

Simple plantlike organisms that lack chlorophyll. Fungi get their nutrition from living on or in other organisms (parasitically), from living with other organisms (symbiotically), or by breaking down dead organic materials (saprophytically). Examples of fungi include: mushrooms, molds, and yeast.

**-G-****gaff**

A "J" shaped, barbless hook on a long handle used to hook large fish while landing them.

**gamete**

A reproductive cell having the haploid number of chromosomes capable of fusing with a gamete cell of the opposite sex to produce a fertilized egg.

**gas**

The physical state of a compound that characteristically has no fixed shape or size. Gases will fill and take the shape of any container in which they are placed.

**generalists**

Species that have broad adaptability; more likely to survive changes in habitat

**genetic diversity**

Variability in genetic or hereditary makeup among individuals within a single species.

**geothermal energy**

Heat transferred from the earth's interior to underground concentrations of water trapped in fractured or porous rock to form steam or hot water.

**gill**

A breathing organ located behind the gill cover on a fish's head.

**global climate change**

The long term changes in temperature, moisture, and air mass movements occurring globally as a result of changes in the earth's atmosphere.

**global warming**

The observed increase in the average temperature of the Earth's innermost atmosphere; believed to be a result of the greenhouse effect of trapping gases.

**grass**

Relatively short plants (less than 4 to 5 feet) typically having long narrow leaves and hollow jointed stems. Flowers for grasses are inconspicuous and often in

clusters.

**greenhouse effect**

The trapping of heat by gasses, such as chlorofluorocarbons and carbon dioxide, in the Earth's atmosphere.

**greenhouse gases**

Gases in Earth's lower atmosphere (troposphere) that trap heat. Examples are carbon dioxide, chlorofluorocarbons, ozone, methane, water, vapor, and nitrous oxide.

**gross national product**

Total market value in current dollars of all goods and services produced by a country's economy for final use during a year.

**groundwater**

Water that infiltrates the soil and is stored in slowly flowing and slowly renewed underground reservoirs called aquifers.

**-H-****habitat**

The native environment of an animal or plant, or the kind of place that is natural for an animal or plant; an area that provides adequate food, water, shelter and living space.

**herb**

Any flowering plant or fern that has a soft, rather than woody, stem.

**herb layer**

The layer of soft-stemmed plants growing close to the forest floor.

**herbaceous**

All grasses and forbes having soft rather than woody stems, including plants called weeds and flowers.

**herbicide**

Chemicals used to control the growth of plants.

**herbivore**

A plant-eating animal.

**hibernate**

To pass the winter in a dormant state.

**high-grading**

A harvesting technique that removes only the biggest and most valuable trees from a forest stand.

**home range**

The area in which an animal travels in the scope of normal activities; not to be confused with *territory*.

**hormones**

A substance produced by one tissue and conveyed by the bloodstream to another to affect physiological activity like growth.

**hydric**

A descriptive term referring to plants and soils existing in flooded, saturated, or ponded areas. (For example, hydric soils.)

**hydrological cycle**

The process where water circulates through the ecosystem; includes precipitation, respiration, evaporation; the water cycle.

**hydrophyte**

A plant adapted to grow in water.

**hydropower**

Electric energy produced by falling or flowing water.

**hyphae**

A threadlike filament forming the mycelium of a fungus.

**hypothermia**

The rapid and abnormal chilling of the body. Hypothermia can occur even in mild and warm weather. Victims must be warmed by special means to prevent long-term damage or death.

-I-

**iceberg**

A large floating mass of ice detached from a glacier or polar ice cap.

**ichthyology**

The branch of zoology that deals with fish, their classification, structure, habits, and life history.

**IGFA**

Abbreviation for the International Game Fish Association, a group that keeps records on fish catches and supports sport fishing.

**impoundment**

A man-made body of water.

**impervious**

Cannot be penetrated

**indigenous**

Pertaining to plants or animals that are native to a particular region or country.

**infiltration**

The act of permeating a porous area with a liquid or gas.

**inorganic**

Composed of matter that is not animal or vegetable; not having the organized structure of living things.

**insecticide**

Chemicals used to kill insects.

**innate**

Possessed at birth.

**instinctive**

Actions taken as a result of an inborn pattern of behavior.

**interaction**

The relationships of one organism to another; the action of one population affecting the growth or death rate of another population. For example, one population may eat members of the other population, compete for food, excrete harmful wastes, or otherwise interfere with the other population. Some interactions are positive; some negative; and some are completely neutral.

**interdependencies**

The interrelationships of wildlife with one another and with the various elements of their environments

**interior basin**

Land areas that are generally bowl-shaped and surrounded by hills and mountains. Usually drained by one river system and isolated from ocean influence by mountains and hills.

**invade**

To enter, to encroach upon, to spread over into. In wildlife usage, this usually describes when an organism is removed from a community and another organism spreads over into this community.

**invertebrate**

Animals lacking a backbone. Some examples are insects, spiders, mollusks, and crustaceans.

**irrigate**

To supply cropland, parks, yards, and so on, with water through the use of diversions, ditches, and pipes.

-K-

**key plant species**

Those plant species that are used to indicate the general condition of a habitat. For example, when plants show overuse, the animals may have exceeded the carrying capacity of the habitat.

**keystone species**

A wildlife species whose removal will effect many different plants and animal species. For example, a beaver would be a keystone species in a beaver pond.

**knee**

A round or spurlike growth rising from the roots of some swamp trees such as bald cypress and tupelo.

**-L-**

**landfill**

A specially engineered site for disposing of solid waste on land, designed to confine the refuse to the smallest practical area and reduce it to the smallest practical volume.

**lateral line system**

A system of sense organs in fish, a series of pores or canals running along a line on each side of the body and on the head; detects pressure changes (including vibrations) in the water.

**leaching**

The removal of soluble substance from soil by percolating water.

**life cycle**

The phases, changes, or stages through which an organism passes during its lifetime.

**limiting factors**

Influences in the life of any animal, population of animals, or species such as: food, water, shelter, space, disease, predation, climatic condition, population, hunting, poaching and accident. When one or more of these exceeds the limit of tolerance of that animal, population of animals, or species, it then becomes a limiting factor and can directly affect the well-being of that animal and may even cause the animal's death. Limiting factors may result from causes in nature as well as human activities

**litter**

The number of young born per birthing; the leaves or needles that fall from trees and lie on the ground to decompose and form soil.

**littoral**

Of or on a shore.

**loess**

Windblown deposit of fine-grained silt or clay.

**-M-**

**macrofauna**

Large animals; extremely visible.

**management**

In general terms related to wildlife, the intentional manipulation or non-manipulation of habitat and/or the organisms within the habitat.

**manipulate**

Manage or influence to achieve desired results.

**map**

A drawing of land or physical features. Maps are useful to find streams and access points to rivers and lakes.

**marine deposits**

Sediment deposited in oceans.

**marl**

A type of bottom under a body of water; a mixture of clay and carbonate of lime.

**marsh**

A wetland without trees which often has standing water.

**meandering**

Curving; often used to describe rivers and streams in lowlands.

**microclimate**

A "small climate;" the environmental conditions within a restricted area.

**microfauna**

Very small animals, barely visible to the eye.

**microhabitat**

A small habitat within a larger one in which environmental conditions differ from those in the surrounding area. A hole in a tree trunk or a decaying log is a microhabitat within the forest.

**microorganism**

An organism microscopic in size, observable only through a microscope.

**migration**

The movement of animals—including fish—from one area to another.

**mitigate**

To make up for; to substitute some benefit for losses incurred.

**Montane zone**

The band of vegetation that occurs at intermediate elevations in mountainous regions between foothills and subalpine zones.

**mortality rate**

The death rate—usually expressed in deaths per thousand.

**mottled**

A variegated pattern of color.

**mucus**

In fish, a slimy substance that coats the skin and helps protect fish from infection and disease. Also helps them move through the water.

**multiple-use**

A term referring to a system of management in which the same lands and waters are managed for a variety of purposes. The uses are not necessary simultaneous but are intended to be compatible. For example, a forest can serve as a home for wildlife, provide clean air and water, provide recreation, be used to grow trees for products, and be aesthetically pleasing—all at the same time also

**multiple-use management**

The practice of managing forest resources for a variety of benefits including water quality and yield, forage, wildlife habitat, wood, recreation, wilderness, and minerals.

**mutualism**

A close association between two different species whereby each species derives some benefits. For example, the yucca plant and the yucca moth each benefit from their relationship.

**mycelium**

The mass of interwoven filaments that forms the vegetative portion of a fungus.

**mycorrhiza**

The symbiotic association between the mycelium of a fungus and the roots of certain plants.

**-N-****nares**

The nostrils in the snout of a fish, used for smelling.

**naturalist**

A specialist who studies and/or teaches about nature.

**natural resources**

Those raw materials supplied by the Earth and its processes. Natural resources include nutrients, minerals, water, plant animals, and so on.

**natural selection**

A process in nature resulting in the survival and perpetuation of only those forms of plants and animal life that have certain favorable characteristics that enable them to adapt best to a specific environment.

**naval stores**

Turpentine and resin derived from the distillation of oleoresins from slash and longleaf pine.

**needleleaf**

Refers to a trees or shrub with narrow, needle-like leaves.

**niche**

Refers to specific place where an individual organism can live.

**nitrogen-fixation**

Conversion of elemental nitrogen from the atmosphere to organic combinations or to forms readily usable in biological processes. Nitrogen-fixation is normally carried out by bacteria living symbiotically in legumes, or by free-living soil bacteria.

**nocturnal**

Active by night; the opposite of diurnal.

**nonconsumptive use**

In general terms related to wildlife, any use which does not directly kill wildlife. For example, most forms of bird watching, photography, hiking and other pursuits involving activity as well as various forms such as movie, television, and gallery viewing of wildlife.

**nongame**

All wildlife species which are not commonly hunted, killed, or consumed by humans, such as songbirds and raptors.

**nonrenewable resources**

Nonliving resources such as rocks and minerals; resources which do not regenerate themselves; substances, such as petroleum, coal, copper, and gold which, once used, cannot be replaced—at least not in this geological age.

**non-point-source pollution**

Pollution that enters water through run-off from farmland, forestland, and urban areas. It can not be determined exactly where this pollution comes from.

**nuclear fusion**

Nuclear change in which two nuclei of isotopes of elements with a low mass number (such as hydrogen-2 and hydrogen-3) are forced together at extremely high temperatures until they fuse to form a heavier nucleus (such as helium-4). This process releases a large amount of energy.

**nutrients**

Chemicals required for plants and animals to grow and exist; a chemical compound required for the life of an organism.

**nymph**

A larval phase of an aquatic insect.

**-O-****olfactory**

Nerves involved in the sense of smell.

**oligotrophic**

Lake type used to describe bodies of water characterized by low amounts of nutrients in proportion to their total volume of water.

**omnivores**

Organisms that eat both animals and plants.

**organic**

Referring to or derived from living organisms; in chemistry, any compound containing carbon.

**organic matter**

Chemical compounds of carbon combined with other chemical elements and generally manufactured in the life processes of plant and animals. Most organic compounds are a source of food for bacteria and are usually combustible.

**organism**

Any form of life (composed of mutually dependent parts) that maintains various vital processes.

**ozone**

A form of oxygen that has three atoms to a molecule.

-P-

**pathology**

The study of the nature of disease and its causes.

**parasite**

An organism that lives on or in an organism of another species and derives nutrients from it.

**parasitic**

To be a parasite on. For example, mistletoe is a parasite growing on trees.

**parasitism**

Any relationship in which a consumer organism lives on or in and feeds on a living plant or animal, known as the host. The parasite draws nourishment from it and may gradually weaken its host and kill it.

**passive solar power**

A solar energy collection system in which natural materials or large stationary absorptive surfaces absorb and temporarily store the heat of the sun. Heat collected during the day is usually released from the absorptive surfaces at night.

**peat**

Moist, semi-decayed, organic matter.

**pectoral fins**

Side fins on fish

**pelagic**

Relating to or living in deep, open water as opposed to along the banks.

**pelvic fins**

Fins on each side of a fish's belly. These fins aid in positioning and balance.

**percolation**

The downward movement of water in soil; leaching.

**perennial**

A plant that lives for several years and, when mature, usually produces seeds each year.

**permeability**

The quality of soil that allows air or water to move through it.

**perpetual resource**

A resource, such as solar energy, that is virtually inexhaustible on a human time scale.

**pest**

An undesirable, harmful, or noxious organism.

**pesticide**

An agent to control undesirable organisms. This can be an insecticide for insect control, a herbicide for weed control, a fungicide for control of fungal plant diseases, or a rodenticide for killing rats and mice. Some pesticides can contaminate water, air soil, or accumulate in the tissues of living organisms, and should therefore be used carefully.

**pH**

The hydrogen-ion activity used in expressing both acidity and alkalinity on a scale whose values range from 0-14, with 7 representing neutrality. Numbers less than 7 represent increasing acidity; numbers greater than 7, represent increasing alkalinity. Also, pH describes the condition represented by such a number.

**pheromones**

A chemical secreted by an animal or insect that influences the behavior or development of others of the same species.

**phloem**

The plant tissue that transports dissolved nutrients from the leaves to the other parts of the plant.

**phosphate**

A chemical compound that aids root growth and is essential in energy transfer. It is commonly incorporated into beds as triple super phosphate (TSP) at time of planting.

**photosynthesis**

Complex process that takes place in cells of green plants. Radiant energy from the sun is used to combine carbon dioxide and water to produce oxygen and carbohydrates (such as glucose) and other nutrient molecules.

**phytoplankton**

Microscopic floating and suspended aquatic plants. Phytoplankton are the first step of the food chain in many aquatic systems.

**pigment**

A chemical substance that reflects and transmits only certain light rays and thus imparts color to an object.

**pith**

Soft, spongy center of the stem of most flowering plants.

**plant communities**

An associations of plants, each occupying a certain position or ecological niche, inhabiting a common environment and interaction

**plankton**

Organisms suspended in an aquatic habitat that control their own movements. Plankton are usually microscopic and include bacteria, algae, protozoan, rotifers, larvae, and small crustaceans. Phytoplankton are plant plankton; zooplankton are the animal species of plankton.

**playa**

The level area at the bottom of a basin that is often covered with water from rain runoff and snow melt.

**point source pollution**

Pollution that comes from a specific place such as a drain or pipes.

**pollution**

Harmful substances deposited in the air, water, or land leading to a state of dirtiness, impurity, or unhealthiness.

**pore spaces, pores**

The area of the soil through which water and air move. The space between soil particles.

**porous**

Admitting the passage of gas or liquids through pores.

**precipitation**

Rain, snow, and other forms of water that fall to earth.

**predator**

An animal that hunts or captures other animals for food.

**prey**

Animals that are killed and eaten by other animals.

**producers**

Organisms that synthesize organic compounds from inorganic substances by way of *photosynthesis* (green plants) or *chemosynthesis* (anaerobic bacteria).

**productivity**

The amount of crops or animals that can be harvested from land. It can also mean the general amount of goods made in a given time or in a given area.

**profundal**

Zone of water at the bottom of deep, open water.

**propane**

A heavy, flammable, gaseous, paraffin hydrocarbon found in crude petroleum and natural gas; used especially as fuel and in chemical synthesis.

**protoplasm**

The complex of protein, other organic and inorganic substances, and water that constitutes the living nucleus, cytoplasm, plastids, and mitochondria of a cell.

**public land**

Land owned by the citizens and administered and managed by the local, state, or federal government agencies.

**-R-****range**

The land where animals live; an area grazed by livestock and/or wildlife.

**rare**

Referring to wildlife species not presently in danger but of concern because of its low numbers.

**rare species**

Species that populate a site or region infrequently, or in very low numbers. Rare species are not necessary endangered.

**recreation**

Entertainment, frequently implying activity in the out-of-doors.

**recycle**

The salvage and reprocessing of used materials (paper, metals, glass, cloth or fiber).

**redd**

A nest dug on the bottom of a body of water by spawning trout.

**reintroduction of species**

A wildlife management technique where a species is reintroduced into their historic range; the repopulation of animals in areas where they have become extinct.

**regenerate**

To replace lost or damaged parts with new tissue.

**renewable resource**

A resource that has the capacity to be replaced through natural processes. Trees are a renewable resource. (Nonrenewable resources are in limited supply and cannot be replenished by natural processes—at least not for thousands of years. Fossil fuels are a nonrenewable resource.)

**rejuvenate**

To stimulate and return to youthful health and vigor.

**resident wildlife**

Animals which are residents to a specific area on a year-round basis as opposed to migratory.

**residium**

Rock that is altered either chemically or physically but not moved from its place of origin.

**resource**

Portions of an environment upon which people have placed or assigned value or see as being available for use.

**respiration**

An energy-yielding oxidation process that goes on in living plants and animals; an exchange of gasses.

**rill**

A type of erosion.

**riparian**

On or near the bank of water areas. The land area and plants that are influenced by the adjacent water.

**rock**

A complex mineral aggregate.

**root collar**

The transition zone between stem and root at the ground line of a tree or seedling.

**rootlet**

A small root.

**runoff water**

Fresh water from precipitation and melting ice that flows on the ground into nearby streams, lakes, wetlands, and reservoirs.

**-S-****salinity**

Level of salt in a given substance (like water).

**saltwater**

Water with salt in it, such as in an ocean or sea.

**sand**

Loose soil made up of small rock particles.

**scale**

One of the small covering plates on the body of many fish.

**scavenger**

An animal that eats the dead remains and wastes of other animals and plants.

**school**

A number of fish of the same species that are grouped together.

**secluded**

Removed or screened from view of other areas and disturbances.

**sedges**

Grass-like plants with solid stems and leaves that grow in threes.

**sediment**

The matter that settles to the bottom of a liquid (such as water).

**sedimentation**

The deposition or accumulation of sediment.

**seedling**

A young tree grown from a seed to a small sapling.

**sere**

The series of communities that follow one another in a natural succession, as in the change from a bare field to a mature forest. A serial stage refers to one such community.

**silt**

Very fine particles of soil often transported by water and deposited as sediment.

**sloughs**

A swampy place or marshy inlet.

**solar energy**

Heat from the sun that can be used to do work.

**solid waste**

Discarded solid materials, excluding recovered materials.

**spawn**

The act of releasing eggs into the water by female fish for fertilization by male fish.

**spawning run**

The movement of fish to an area for the purpose of spawning.

**species**

Animals and plants that are the same and successfully reproduce the same kind of plant or animal; a category of biological ranking just below the genus or subgenus category. Members of the same species are closely related organisms that are potentially able to breed with one another.

**species diversity**

The number of different species and their relative abundance in a given area.

**springwood**

The less dense, larger-celled, first-formed part of a growth layer.

**sport fishing**

Fishing for recreation, not for profit or commercial reasons.

**stagnant**

Sluggish, not producing to potential.

**stewardship**

The concept of responsible care taking is based on the premise that we do not own resources but are managers of resources and are responsible to future generations for their condition.

**stoma**

A small opening found in the epidermal layer of plants that allows: access for carbon dioxide; the release of water; and the release of oxygen. Stomata are surrounded by guard cells that control the opening size.

**Streamside Management Zone (SMZ)**

An area adjacent to a stream in which vegetation is maintained or managed to protect water quality. The width depends on slope, but 50 feet is the normal minimum. Trees may be removed from SMZs as long as the stream bed is not disrupted and sufficient vegetation is left to protect water quality.

**sustained yield**

The rate at which a resource may be used without reducing its long-term availability or limiting its ability to renew itself.

**swamp**

A wetland dominated by trees.

**symbiosis**

The living together in close association of two or more dissimilar organisms; includes parasitism, mutualism, and neutralism.

**-T-****threatened species**

A species that, in nature, is abundant, but because of a decline in its numbers, may become endangered.

**tissue**

A group of cells, usually a particular kind of cells, that function together and form the structural material in an organism.

**transitional**

The process of changing from one form to another.

**transpiration**

Vapor water lost or given off by land plants.

**turbid**

Having sediment or foreign particles stirred up or suspended; muddy.

**-U-****undulating**

A regular rising and falling or side-to-side motion.

**-V-****vegetation**

The mass of plants that cover a given areas. (*Flora* sometimes used—incorrectly—as a synonym for vegetation is actually a list of the species of plants that compose the vegetation.

**vegetative reproduction**

An asexual means of propagating new plants through root shoots, bulbs, leaf cutting, or underground stems.

**vigor**

In plants and animals, refers to the capacity for strong growth and high survival.

**VOC (Volatile Organic Compound)**

A "naturally" derived compound that can cause serious environmental and health threats when found in high concentrations or used in poorly ventilated areas. VOC can be found in several products, including household cleaners, paints, wood finishes, and pesticides.

**-W-****waste stream, solid**

Discarded solid materials, excluding recovered materials.

**waste water**

Water that runs off cropland during irrigation.

**watershed**

The land area where all rain drains into a body of water—delivering both runoff water and sediment to a major river or stream and its tributaries.

**wetland**

An area that is regularly wet or flooded where the water table stands at or above the land surface for a least part of the year. Wetland plant communities are made up of species which require hydric soils.

**wilderness**

Area that has never been developed by humans.

**wilderness area**

An area established by the federal government to be managed and preserved in an essentially untouched condition. Wilderness areas are open to some recreational activities. Use of machinery, mining, logging, and many other commercial pursuits are generally not allowed in wilderness areas.

**wildlife**

A loose term that includes non domesticated animals, especially mammals, birds, and fish.

**wildlife management**

The application of scientific knowledge and technical skills to protect, preserve, conserve, limit, enhance, or extend the value of wildlife and its habitat.

**-X-****xylem**

The complex woody tissue of higher plants that includes systems for transporting water, storing nutrients, and supporting the plant's structure. (See **transpiration**.)

**-Z-****zero population growth**

Maintaining population numbers at a fixed level resulting in no increase in population.

**zone**

An area composed of groups of tree species having the same specific moisture and nutrient requirements for growth.

**zoologist**

A specialist who studies the animal kingdom with respect to the behavior of individual animals, species, or both.

**zooplankton**

Plankton that consists of animals including coral, sea anemones, and jellyfish.