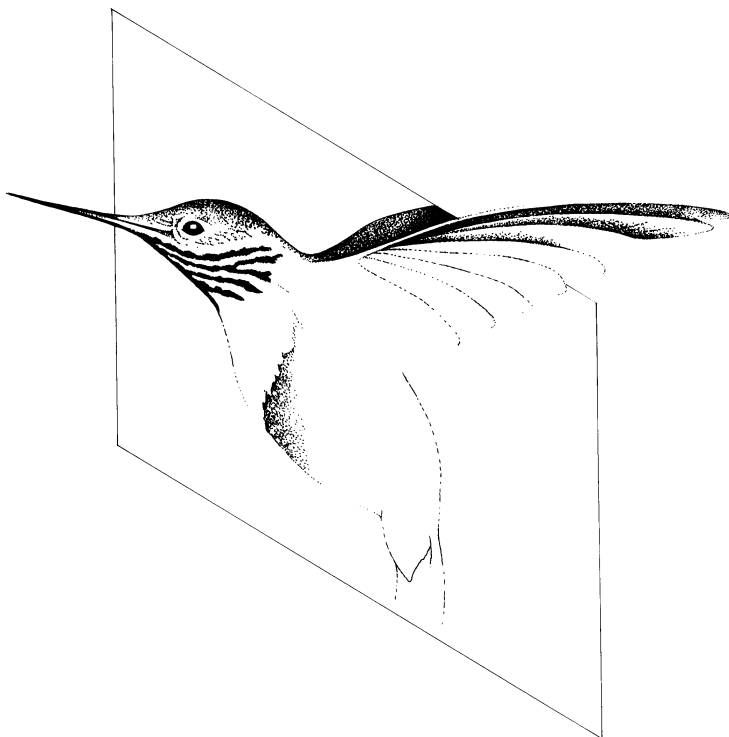




GLOSSARY OF TERMS

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abiotic - A non-living factor in an ecosystem (e.g. air, sunlight, water).

acclimation - Alteration of physiological rate or other capacity to perform a function through long-term exposure to certain conditions.

acclimatization - Changes or differences in physiological state that appear after exposure to different natural environments.

acid rain - Precipitation with an extremely low PH. It is brought about by a combination of water vapor in the atmosphere with hydrogen sulfide and nitrous oxide vapors released to the atmosphere from the burning of fossil fuels. The result is a sulfuric and nitric acid in rain, fog and snow.

adaptation - Genetically determined characteristic (behavioral, morphological, physiological) that improves an organism's ability to survive and successfully reproduce under prevailing environmental conditions.

ancient forest - The late successional stages of forest development. Synonymous with old-growth forest. Characterized by large trees, a broken, uneven canopy, numerous snags, fallen logs, high biomass.

anthropocentrism - A view of life and the world that places humans above all other species in value and importance.

association - Natural unit of vegetation characterized by a relatively uniform species composition and often dominated by a particular species.

biodiversity - The range of different species - microbial, insect, plant and animal - which exist in any given area. Areas of high biodiversity contain many different genetic species. Areas of highest biodiversity typically occur in tropical forests.

biological diversity - The diversity of living things (species) and of life patterns and processes ecosystem structures and functions). Includes genetic diversity, species and population diversity, ecosystem diversity, landscape and regional diversity, and biosphere diversity.

biomass - Weight of living material, usually expressed as dry weight per unit of area.

biome - Major regional ecological community of plants and animals; usually corresponds to plant ecologists and European ecologists' classification of plant formations and classification of life zones.

biosphere - Thin layer about Earth in which all living organisms exist.

biotic community - Contains all living organisms within our ecosystem.

bog - Wetland ecosystem characterized by an accumulation of peat, acid conditions, and dominance of sphagnum mosses.

boreal forest - Needle-shaped evergreen or coniferous forest bordering subpolar regions; also called taiga.

bottleneck - An evolutionary term for any stressful situation that greatly reduces a population.

browse - Part of current leaf and twig growth of shrubs, woody vines, and trees available for animal consumption.

carnivore - Organism that feeds on animal tissue; taxonomically, a member of the order Carnivorea (Mammalia).

carrying capacity - Number of individual organisms that the resources of a given area can support, usually through the most unfavorable period of the year.

GLOSSARY OF TERMS

clearcutting - A logging method by which an entire forest stand is cut down. In national forests, the size of an individual clearcut cannot exceed 40 acres.

climax - State and community of succession that is capable of self-perpetuation under prevailing environmental conditions.

coevolution - Joint evolution of two or more noninterbreeding species that have a close ecological relationship; through reciprocal selective pressures the evolution of one species in the relationship is partially dependent on the evolution of the other.

coexistence - Two or more species living together in the same habitat, usually with some form of competitive interaction.

community - Group of interacting plants and animals inhabiting a given area.

competition - Any interaction that is mutually detrimental to both participants; occurs between species that share limited resources.

commons - Large areas of joint-use land with social control resting in the hands of local communities and standards of use built on intimate knowledge of plants, animals, and ecosystems. Most commons were destroyed with the advent of industrial civilization, but some still exist in less developed parts of the world.

conservation - As originally coined by Gifford Pinchot, the development of natural resources for "the greatest good for the greatest number [of humans] over the longest period of time." Aldo Leopold defined conservation as "a state of harmony between people and land."

conservation biology - The field of biology that studies the dynamics of diversity, scarcity, and extinction.

continuum - Gradient of environmental characteristics or changes in community composition.

deciduous - (of leaves) Shed during a certain season (winter in temperate regions; dry seasons in the tropics); (of trees) having deciduous parts.

decomposer - Organism that obtains energy from the breakdown of dead organic matter to more simple substances; most precisely refers to bacteria and fungi.

deme - Local populations or interbreeding group within a larger population.

detritus - Fresh to partly decomposed plant and animal matter.

disturbance - In ecosystems, an event that interrupts succession, eliminates some part of the existing plant and animal community, and creates conditions for renewed growth and colonization. Examples are wildfire, windstorm, flooding, insect outbreaks, etc.

diversity - Abundance in number of species in a given location.

dominance - (Ecological) Control within a community over environmental conditions influencing associated species by one or several species, plant or animal, enforced by number, density, or growth form; (social) behavioral, hierarchical order in a population that gives high-ranking individuals priority of access to essential requirements; (genetic) ability of an allele to mask the expression of an alternative form of the same gene in a heterozygous condition.

dominant - Population possessing ecological dominance in a given community and thereby governing type and abundance of other species in the community.

dormant - State of cessation of growth and suspended biological activity during which life is maintained.

ecological efficiency - Percentage of biomass produced by one trophic level that is incorporated into biomass of the next highest trophic level.

GLOSSARY OF TERMS

ecosystem - A community of species and its physical environment. When defined at different levels, it often involves arbitrary boundaries. An ecosystem may refer to anything from a fallen log to an entire watershed.

ecosystem management - Any land-management system that seeks to protect viable populations of all native species, perpetuate natural-disturbance regimes on the regional scale, adopt a planning time line of centuries, and allow human use at levels that do not result in long-term degradation.

ecotone - Transitional zone between two structurally different communities; often termed "edge".

ecotype - Subspecies or race adapted to a particular set of environmental conditions.

edge - Place where two or more vegetation types meet.

edge effect - Response of organisms, animals, in particular, to environmental conditions created by the edge.

endangered - A legal classification of the federal Endangered Species Act under which a species is at risk of becoming extinct throughout all or a significant portion of its range.

endemic - Restricted to a given region.

energy - The capacity to do work.

entropy - Transformation of matter and energy to a more random, more disorganized state.

environment - Total surroundings of an organism, including other plants and animals and embracing those of its own kind.

eutrophic - Term applied to a body of water with high nutrient content and high productivity.

eutrophication - Sum of the loss of moisture by evaporation from land and water surfaces and by transpiration from plants.

evolution - Change in gene frequency through time resulting from natural selection and producing cumulative changes in characteristics of a population.

food chain - Movement of energy and nutrients from one feeding group of organisms to another in a series that begins with plants and ends with carnivores, detrital feeders, and decomposers.

food web - Interlocking pattern formed by a series of interconnecting food chains.

forb - Herbaceous plant other than grass, sedge, or rush.

forest plan - The comprehensive land-management plan required of each national forest under the National Forest Management Act.

gap analysis - A method of identifying important areas of biodiversity that remain unprotected.

gene - Unit material of inheritance; more specifically, a small unit of DNA molecule coded for a specific protein to produce one of the many attributes of a species.

global warming - The warming of the Earth resulting from the greenhouse effect.

greenhouse effect - Selective energy absorption by carbon dioxide in the atmosphere that allows short wavelength energy to pass through but absorbs longer wavelengths and reflects heat back to Earth.

habitat - An area that has the minimum required arrangement of food, water, shelter, and space for a particular species.

habitat fragmentation - Destruction of habitat through loss of functional habitat and the isolation of the remaining patches within an ecosystem.

herbivore - Organism that feeds on plant tissue.

GLOSSARY OF TERMS

hibernation - Winter dormancy in animals characterized by a great decrease in metabolism.

immigration - Arrival of new individuals into a habitat or population.

keystone species - A species that plays a role in an ecosystem that far outweighs the role of other species.

Krummbholz - Stunted form of trees characteristic of transition zone between alpine tundra and subalpine coniferous forest.

life zone - Major area of plant and animal life equivalent to a biome; transcontinental region or belt characterized by particular plants and animals and distinguished by temperature differences; applies best to mountainous regions where temperature changes accompany changes in altitude.

marsh - Wetland dominated by grassy vegetation such as cattails and sedges.

mesic - Moderately moist habitat.

microclimate - Climate on a very local scale that differs from the general climate of the area; influences the presence and distribution of organisms.

migration - Intentional, directional usually seasonal movement of animals between two regions or habitats; involves departure and return of the same individual; a round-trip movement.

mutualism - Relationship between two species in which both benefit.

natural selection - Differential reproduction and survival of individuals that result in elimination of maladaptive traits from a population.

niche - Functional role of a species in the community, including activities and relationships.

omnivore - Animal that feeds on both plant and animal matter.

opportunistic species - Organisms able to exploit temporary habitats or conditions

parasite - An organism living in or on another organism (the host) from which it obtains its nutrients. Parasites usually harm their hosts to some degree.

peat - Unconsolidated material consisting of undecomposed and only slightly decomposed organic matter under conditions of excessive moisture.

perturbation - Another word for disturbance; borrowed from physics to suggest an event that alters the state of or direction of change in a system.

photosynthesis - Synthesis of carbohydrates from carbon dioxide and water by chlorophyll using light as energy and releasing oxygen as a by-product.

predation - Act of one living organism consuming another living organism.

primary succession - Vegetation development starting from a new site never before colonized by life.

production - Amount of energy formed by an individual, population, or community per unit of time.

resource - Environmental component utilized by a living organism.

richness - Component of species diversity; the number of species present in an area.

riparian - Along banks of rivers and streams; river bank forests are often called gallery forests.

seral - Series of stages that follow one another in succession.

species diversity - The variety of species inhabiting an area.

stability - Ability of a system to resist change or to recover rapidly after a disturbance; absence of fluctuations in a population.

stand - Unit of vegetation that is essentially homogenous in all layers and differs from adjacent types qualitatively and quantitatively.

GLOSSARY OF TERMS

stochastic - Patterns arising from random factors.

succession - Replacement of one community by another; often progresses to a stable terminal community called the climax.

sustainable - Describes levels of human use that allow ecosystems to retain their basic structure and function over the long term.

symbiosis - Living together of two or more species.

territory - Area defined by an animal; varies among animals according to social behavior, social organization, and resource requirements of different species.

threatened - Legal classification under the Endangered Species Act that describes a species as likely to become endangered in the foreseeable future.

transpiration - Loss of water vapor by land plants.

tundra - Areas in arctic and alpine (high mountain) regions characterized by bare ground, absence of trees, and growth of mosses, lichens, sedges, forbs, and low shrubs.

viable population - A population that stands an excellent chance of surviving with minimal human management.

watershed - Entire region drained by a waterway that empties into a lake or reservoir; total area above a given point on a stream that contributes water to the flow at that point; the topographic dividing line from which surface streams flow in two different directions.

wilderness - Refers to any wildlands other than Congressionally designated Wilderness.

Wilderness - Only refers to Congressionally designated Wilderness - those areas set aside in the National Wilderness Preservation System for the use and enjoyment of the American people as wilderness. In these areas development and human presence are kept to a minimum and natural processes prevail.