

## **FOSS Populations and Ecosystems Course Glossary (10.5.04)**

**Abiotic:** Nonliving.

**Adaptation:** Any trait of an organism that increases its chances of surviving and reproducing.

**Alkaline lake:** A salty lake where the pH is greater than 7.

**Allele:** Variations of genes that determine traits in organisms; the two corresponding alleles on two paired chromosomes constitute a gene.

**Aquatic:** Of the water.

**Autotroph:** Organisms that make their own food.

**Biomass:** The total organic matter in an ecosystem.

**Biotic:** Living organisms and products of organisms.

**Carbohydrate:** Food in the form of sugar or starch.

**Carrying capacity:** The maximum size of a population that can be supported by a given environment.

**Chromosome:** A structure that transfers hereditary information to the next generation.

**Community:** All the interacting populations in a specified area.

**Consumer:** An organism that eats other organisms.

**Decomposer:** An organism that consumes parts of dead organisms and transfers all the biomass into simple chemicals.

**Detritivore:** An organism that eats detritus, breaking the organic material into smaller parts that a decomposer could use for food.

**Detritus:** Small parts of organic material.

**Dominant allele:** A form of a gene that is expressed as the trait when a dominant allele is present.

**Ecosystem:** A system of interacting organisms and nonliving factors in a specified area.

**Environment:** The surroundings of an organism including the living and nonliving factors.

**Exoskeleton:** A tough, outer covering that insects and other organisms have for protection.

**Feature:** A structure, characteristic, or behavior of an organism, such as eye color, fur pattern, or timing of migration.

**Food chain:** A sequence of organisms that eat one another in an ecosystem.

**Food pyramid:** A kind of trophic-level diagram in the shape of a pyramid in which the largest layer at the base is the producers with the first-level, second-level, and third-level consumers in the layers above.

**Food web:** All the feeding relationships in an ecosystem.

**Gene:** The basic unit of heredity carried by the chromosomes; code for features of organisms.

**Genotype:** An organism's particular combination of paired alleles.

**Herbivore:** An organism that eats only plants.

**Heterotroph:** An organism that cannot make its own food and must eat other organisms.

**Heterozygous gene:** A gene composed of two different alleles (a dominant and a recessive).

**Homozygous gene:** A gene composed of two identical alleles (e.g., both dominant).

**Incomplete metamorphosis:** A process of gradual maturing of an insect (egg, nymphal stages or instars, adult).

**Individual:** One single organism.

**Instar:** An immature nymphal stage of an insect as it grows into an adult form.

**Limiting factor:** Any biotic or abiotic component of the ecosystem that controls the size of the population.

**Molting:** The process of shedding exoskeleton in order to grow.

**Morph:** A form in a species that occurs in one or more forms (such as colors).

**Natural selection:** The process by which the individuals best adapted to their environment tend to survive and pass their traits to subsequent generations.

**Omnivore:** A consumer that eat both plants and animals.

**Organism:** A living thing.

**Phenotype:** The traits produced by the genotype; the expression of the genes.

**Photosynthesis:** The process by which producers make energy-rich molecules (food) from water and carbon dioxide in the presence of light.

**Phytoplankton:** A huge array of photosynthetic microorganisms, mostly single-celled protists, that are free-floating in water.

**Population:** All the individuals of one kind (one species) in a specified area at one time.

**Proboscis:** A tubelike beak for sucking fluids from plants. True bugs have this structure.

**Producer:** An organism that is able to produce its own food through photosynthesis.

**Recessive allele:** A form of a gene that is expressed as the trait only when a dominant allele is not present.

**Reproductive potential:** The theoretical unlimited growth of a population over time.

**Species:** A kind of organism; members of a species are all the same kind of organism and are different from all other kinds of organisms.

**Terrestrial:** Of the land.

**Tertiary:** Third level.

**Trait:** The specific way a feature is expressed in an individual organism.

**Trophic levels:** Functional role in a feeding relationship through which energy flows.

**Tufa tower:** A naturally occurring, gray, lumpy structure that forms under water in a salt lake because of a chemical reaction between calcium and salt in the water.

**Variation:** The range of expression of a trait within a population.

**Zooplankton:** Microscopic adult animals and larval forms of animals found free-floating in fresh water and seawater.