Vocabulary/Ch. 5

Friedland

**ecosystem diversity**: The variety of ecosystems within a given region

**species diversity**: The variety of species within a given ecosystem

**genetic diversity**: The variety of genes within a given species

**species richness**: The number of species within a given area

**species evenness**: The relative proportion of different species in a given area

**phylogenies**: The branching patterns of evolutionary relationships

**evolution**: A change in the genetic composition of a population over time

**microevolution**: Evolution occurring below the species level

**macroevolution**: Evolution that gives rise to new species, genera, families, classes, or phyla

**gene**: A physical location on the chromosomes within each cell of an organism

**genotype**: The complete set of genes in an individual

**mutation**: A random change in the genetic code produced by a mistake in the copying process

**recombination**: The genetic process by which one chromosome breaks off and attaches to another chromosome during reproductive cell division

**phenotype**: A set of traits expressed by an individual

**evolution by artificial selection**: A change in the genetic composition of a population over time as a result of humans electing which individuals breed, typically with a preconceived set of traits in mind

**evolution by natural selection**: A change in the genetic composition of a population over time as a result of the environment determining which individuals are most likely to survive and reproduce

**fitness**: An individual’s ability to survive and reproduce

**adaptations**: A trait that improves an individual’s fitness

**bottleneck effect**: A reduction in the genetic diversity of a population caused by a reduction in its size

**founder effect**: A change in a population descended from a small number of individuals

**geographic isolation**: Physical separation of a group of individuals from others of the same species

**reproductive isolation**: The result of two populations within a species evolving separately so they can no longer interbreed and produce viable offspring

**allopatric speciation**: The process of speciation that occurs with geographic isolation

**sympatric speciation**: The evolution of one species into two, without geographic isolation

**genetically modified organisms (GMO)**: An organism produced by copying genes from a species with a desirable trait and inserting them into another species

**range of tolerance**: The limits to the abiotic conditions that a species can tolerate

**fundamental niche**: The suite of ideal environmental conditions for a species

**realized niche**: The range of abiotic and biotic conditions under which a species actually lives

**distribution**: Areas of the world in which a species lives

**niche generalists**: A species that can live under a wide range of abiotic or biotic conditions

**niche specialists**: A species that is specialized to live in a specific habitat or to feed on a small group of species

**fossils**: The remains of an organism that has been preserved in rock

**mass extinction**: A large extinction of species in a relatively short period of time