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| **Glossary** |  |
| **Chapter 5** |  |
| **carrying capacity (K)** | Maximum population of a particular species that a given habitat can support over a given period. Compare cultural carrying capacity. |
| **climax community** | Fairly stable, self-sustaining community in an advanced stage of ecological succession; usually has a diverse array of species and ecological niches; captures and uses energy and cycles critical chemicals more efficiently than simpler, immature communities. Compare immature community. See mature community. |
| **coevolution** | Evolution in which two or more species interact and exert selective pressures on each other that can lead each species to undergo adaptations. See evolution, natural selection. |
| **commensalism** | An interaction between organisms of different species in which one type of organism benefits and the other type is neither helped nor harmed to any great degree. Compare mutualism. |
| **competition** | Two or more individual organisms of a single species (intraspecific competition) or two or more individuals of different species (interspecific competition) attempting to use the same scarce resources in the same ecosystem. |
| **dieback** | Sharp reduction in the population of a species when its numbers exceed the carrying capacity of its habitat. See carrying capacity. |
| **ecological succession** | Process in which communities of plant and animal species in a particular area are replaced over time by a series of different and often more complex communities. See primary ecological succession, secondary ecological succession. |
| **emigration** | Movement of people out of a specific geographic area. Compare immigration, migration. |
| **environmental resistance** | All of the limiting factors that act together to limit the growth of a population. See biotic potential, limiting factor. |
| **epiphyte** | Plant that uses its roots to attach itself to branches high in trees, especially in tropical forests. |
| **host** | Plant or animal on which a parasite feeds. |
| **immigration** | Migration of people into a country or area to take up permanent residence. Compare emigration. |
| **inertia** | Ability of a living system such as a grassland or forest to survive moderate disturbances. Compare resilience. See persistence. |
| **interspecific competition** | Attempts by members of two or more species to use the same limited resources in an ecosystem. See competition, intraspecific competition. |
| **J-shaped curve** | Curve with a shape similar to that of the letter J; can represent prolonged exponential growth. See exponential growth. |
| **limiting factor** | Single factor that limits the growth, abundance, or distribution of the population of a species in an ecosystem. See limiting factor principle. |
| **limiting factor principle** | Too much or too little of any abiotic factor can limit or prevent growth of a population of a species in an ecosystem, even if all other factors are at or near the optimal range of tolerance for the species. |
| **logistic growth** | Pattern in which exponential population growth occurs when the population is small, and population growth decreases steadily with time as the population approaches the carrying capacity. See S-shaped curve. |
| **mutualism** | Type of species interaction in which both participating species generally benefit. Compare commensalism. |
| **parasitism** | Interaction between species in which one organism, called the parasite, preys on another organism, called the host, by living on or in the host. See host, parasite. |
| **permafrost** | Perennially frozen layer of the soil that forms when the water there freezes. It is found in arctic tundra. |
| **persistence** | Ability of a living system such as a grassland or forest to survive moderate disturbances. Compare resilience. |
| **population** | Group of individual organisms of the same species living in a particular area. |
| **population crash** | Dieback of a population that has used up its supply of resources, exceeding the carrying capacity of its environment. See carrying capacity. |
| **population density** | Number of organisms in a particular population found in a specified area or volume. |
| **population dispersion** | General pattern in which the members of a population are arranged throughout its habitat. |
| **population size** | Number of individuals making up a population's gene pool. |
| **predation** | Interaction in which an organism of one species (the predator) captures and feeds on some or all parts of an organism of another species (the prey). |
| **predator** | Organism that captures and feeds on some or all parts of an organism of another species (the prey). |
| **predator?prey relationship** | Relationship that has evolved between two organisms, in which one organism has become the prey for the other, the latter called the predator. See predator, prey. |
| **prey** | Organism that is killed by an organism of another species (the predator) and serves as its source of food. |
| **primary ecological succession** | Ecological succession in a area without soil or bottom sediments. See ecological succession. Compare secondary ecological succession. |
| **range of tolerance** | Range of chemical and physical conditions that must be maintained for populations of a particular species to stay alive and grow, develop, and function normally. See law of tolerance. |
| **reproduction** | Production of offspring by one or more parents. |
| **resilience** | Ability of a living system such as a forest or pond to be restored through secondary ecological succession after a severe disturbance. See secondary ecological succession. Compare persistence. |
| **resource partitioning** | Process of dividing up resources in an ecosystem so that species with similar needs (overlapping ecological niches) use the same scarce resources at different times, in different ways, or in different places. See ecological niche. |
| **S-shaped curve** | Leveling off of an exponential, J-shaped curve when a rapidly growing population reaches or exceeds the carrying capacity of its environment and ceases to grow. |
| **salinity** | Amount of various salts dissolved in a given volume of water. |
| **secondary ecological succession** | Ecological succession in an area in which natural vegetation has been removed or destroyed but the soil or bottom sediment has not been destroyed. See ecological succession. Compare primary ecological succession. |

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