

## **Some important terms in practical Ecology**

### **(Ecological terminology)**

**1. Acclimation:** - A reversible physical change in an adapting organism in response to environmental pressures. acclimated, acclimating: it means to accustom or become accustomed to a new climate or environment. e.g.: Fish are able to adjust only gradually to changes in water temperature and quality

**2. Adaptation:** the process by which a species becomes fitted to its environment; it is the result of natural selection's acting upon heritable variation over several generations. Adaptation refers to the ability of cells to adjust to severe stresses and achieve altered. A more popular view of adaptation is in regard to the form of a feature that has evolved by natural selection for a specific function. Examples include the long necks of giraffes for feeding in the tops of trees

**3. Aero plankton:** - Tiny organisms are living in the atmosphere. Such as small seeds, bacteria, and spores. **N.B:** The Plankton consist of microscopic plants ("phytoplankton") and animals ("zooplankton").

**4. Autecology:** - Is the science that deals with the study of ecology of individual.

**5. Benthos:** - Organisms live in, on, or near the bottom of aquatic environments.

**6. Ecology:** - Is the science that deals with the study of interaction between organisms and their environment composed of biotic and abiotic factors.

**7. Food Chain:** The path that energy takes through an ecosystem, from sunlight to producers, to herbivores, to carnivores. Individual food chains connect and branch to form food webs. It also can be defined as the interactions of predator and prey, included along with the exchange of nutrients into and out of the soil.

**8. Food web:** is several food chains connected together.

**8. Limnology:** - Limnology is the study of freshwater ecosystems-especially lakes, ponds, and streams.

**9. Lentic-ecology:** - Is the study of ecology of standing water (pond, lake, and swam).

**10. Lotic-ecology:** - Is the study of ecology of running water (river, and stream).

**11. Marine ecology:** - Study the ecology of saline water (sea and oceans).

**12. Terrestrial ecology:** - Study the ecology of land.

**13. Environment:** - Is the physical, chemical and biological factors affecting on organisms, such factors like: -

- **Physical-** temperature, water viscosity, etc.
- **Chemical-** nutrients and other chemical factors.
- **Biological-** competitors, predators, etc.

**14. Ecosystem:** - Is a live supporting environment consisting of organisms, nutrients, physical and chemical environment. The biosphere is a largest ecosystem and the ecosystem is a smaller level of ecology.

**a- Living components of the environments** are called biotic factors, which include all of the living things (Producer, Consumer, and Decomposer).

**b- Non living components of the environments** are abiotic factors, which include physical and chemical factors like (sunlight, temperatures, viscosity) (pH, dissolved oxygen, and carbon dioxide).

**15. Biomass:** - Biomass The total dry weight per unit area (=”density”) of living matter.

**16. Biosphere:** - That portion of the surface of earth (air, water, and soil), in which living thing exist or it can be defined as the global ecosystem (all living things on Earth) and their interactions with each other and their environment

**17. Autotrophs (producer):** - Organisms which produce food for all other organisms.

**18. Heterotrophs:** - Organisms which depends directly or indirectly on the autotrophs for their food.

**19. Herbivores:** - Animals that feed directly on plant.

**20. Carnivores:** - Free living organisms feed directly on the herbivores.

**21. Omnivores:** - Organisms feed on both animal and plant.

**\* Producer = Autotroph**

**22. Consumer:** - Organisms which depend directly upon the producers for their food.

**23. Decomposer:** - The organisms which secrete digestive enzymes to break down food into simple substances and then absorb the digestive food.

**24. Individuals:** - Each species of an organism which live in any place on the earth.

**25. Habitat:** - A place suitable to the life of a particular organism.

**26. Population:** A group of organisms of the same species that inhabit the same geographical location.

**27. Niche:** The role an organism occupies within its ecological community. A niche represents a unique way in which the organism relates to other biotic and abiotic elements of its surroundings.

**28. Mutualism:** A type of interaction between two different species that enables both species to benefit from their interaction and in which the interaction is necessary to both. Also referred to as symbiosis.

**Symbiosis:** Two species living together in close association whereby one or both benefit, see mutualism, commensalism & parasitism.

**Succession:** A sequence of changes in plant communities occupying a particular site, which sometimes leads to a stable climax community

**Limiting Factor:** Limiting Factor any abiotic (temperature, moisture) or biotic (food, competition) factor that limits population growth.

**Competition** : The interaction between two species over a limiting resource that negatively affects one or both of their population growth rates

**27. Community:** - A characteristic group of plants and animals inhabiting an area.

**28. Niche:** - The function of an organisms in the community.

**29. Predators:** - Species that kill and eat their prey have no long term interaction with them.

**30. Parasites:** - Species of organisms that live on or in their host over along period of time and harm, but are unlikely to directly kill the host.

**31. Parasitism:** - Is an interaction between two organisms which in which one organism damaged while the other remained benefited.

**32. Commensalisms:** - Is a relation between two organisms, one of which benefited while the other remains unaffected.

**33. Ammensalism:** - Is a relation between organisms in which one harmed while the other remains unaffected.

**35. Fauna:** - List of animals living in an ecosystem of defined area.

**36. Flora:** - List of plants living in an ecosystem of defined area.

**37. Productivity:** - Rate of storage of dry matter or organic carbon by plant.

**38. Humus:** - Partially decomposed organic matter added to the soil by living organism.

**39. Climate:** - The physical environment changes in the atmosphere, including temperature, solar radiation, rain, and humidity.

**40. Meteorology:** - Is the science that deals with the study of climate.

**41. Weather:** - Is the conditions that occurred very recently or are currently happening. The current temperature, relative humidity, cloud cover and precipitation are examples of weather.

**Distribution:** spatial relationship between individuals in a population; uniform = equally spaced, random = no predictable pattern, clumped = individuals clustered into groups

**42. Mortality:** - The rate of death per unit area.

**43. Natality:** - The rate of birth per unit area.

**44. Necton:** - Strong swimming animals, like fishes.