

August '21

Week-33 (221-144)

MONDAY

09

are a well-known example of detritivores (also known as detritus feeders), eating rotten plants leaves and other debris. Some detritus feeders, such as dung beetles, eat faeces.

Consumers can also be classified into primary, secondary, and tertiary consumers based on feeding level or trophic level. The secondary consumers (i.e. primary carnivores) feed only on primary consumers and they belong to the third trophic level. Similarly, the tertiary consumers (i.e. secondary carnivores) feed on secondary consumers, and they belong to the fourth trophic level. Producers belong to the first trophic level.

NOTES

various species of floating and drifting bacteria and protists.

10 Chemolithotrophs - some auto-

11 specialized bacteria, exploits chemical energy to convert inorganic carbon compounds into organic matter. These autotrophs, are called chemolithotrophs. Energy is derived in chemosynthesis from oxidizing reduced compounds.

2 Thermotrophs - are the organisms which cannot synthesize the organic nutrients they need and get them by feeding on the trace of producers or other organisms. fungi, animals and most bacteria are heterotrophs. The heterotrophs can be classified into omnivores and herbivores.

3 Omnivores are the organisms that feed on producers and other consumers. There are several classes of consumers depending on their food sources :-  
4 Herbivores - herbivores (feed directly on plants)  
5 Carnivores (feed on animals)  
6 Omnivores (eat both plants and animals)  
7 Detritivores (eat detritus).

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NOTES

Su	Mo	Tu	We	Th	Fr	Sa
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22	23	24	25	26	27	28
29	30	31				

You cannot climb the ladder of success dressed in the costume of failure. - Zig Ziglar

⑤ **Chemical factors** - It includes pH, salinity, nutrient contents, moisture, contents, amount of toxic substances and level of dissolved oxygen.

II **Biotic components** - (living) Organisms that make up the biotic components of an ecosystem are usually classified as **autotrophs** and **heterotrophs** based on how they get their food or organic nutrients they need to survive.

① **Autotrophs** - are organisms that can synthesize the organic compounds they need as nutrients from simple inorganic compounds obtained from their environment. They are the ultimate sources of organic compounds for all non-autotrophic organisms and for this reason biologists refer to autotrophs as the producers of the biosphere.

There are two kinds of autotrophs:-  
 ① **Photoautotrophs**:- Most autotrophs are photoautotrophs as they make their organic nutrients through photosynthesis. In most terrestrial ecosystems, green plants are the producers. In aquatic ecosystems, most of the producers are phytoplankton, consisting of

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There is no harm in repeating a good thing. Plato

(ii) **Stratification** :- The organisms in each ecosystem form one or more layers or strata each comprising the population of particular kind of species. In some ecosystems like tropical rain forests, the upper part of trees, bushes and ground vegetation form different strata and are occupied by different species. On the otherhand desert ecosystems show a low discontinuous herbal layer consisting of extensive bare patches of soil.

(iii) **The quantity and distribution of non-living materials such as nutrients and water etc.**

(iv) **The range or gradient of conditions of existence such as temperature and light etc.**

Ecosystem consists of various abiotic (non-living) and biotic (living) components.

**Abiotic (non-living) components** :- It include various physical and chemical factors.

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**Physical factors** having the greatest effect on the ecosystem are **light, temperature, precipitation, air, fire and water.**

Fresh water

Marine water

## \* Structure of an Ecosystem :-

The structure of an ecosystem is characterized by the composition and organization of biotic communities and abiotic components.

The major structural features of an ecosystem are →

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### ① Species composition :-

Every ecosystem has its own type of species composition which differs from other ecosystem.

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Chance is a word void of sense; nothing can exist without a cause. - Voltaire