Subsidiary
Part-II
Lecture-17

Ecology
Group-C
Ecosystem

20th August 2020

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Life is dependent upon non-living matter of the environment. Accordingly this physical universe together with all varied forms of life that it supports, can be divided into two components — Abiotic and Biotic. Dependin upon nature of biotic components, the biosystem may range from the smallest cellular system to the largest and the most complex system of communities is called 'ecosystem'.

Types of ecosystem:

1. Natural ecosystem —
   A. Terrestrial Ecosystem — Grassland, Forest, Desert etc.
   B. Aquatic ecosystem :— It is again of two types —
   (i) Freshwater ecosystem — River, pond, lake etc.
   (i) Marine cosystem : Ocean.
2. Artificial ecosystem, crop-~~fields~~-fields, Aquaria etc.

Structure of AN Ecosystem:

The two main components of an ecosystem namely biotic and abiotic have been further divided into smaller constituents —

A. Producers : These are mainly green plants which are the soul converters of radiant energy in their own food. They also utilize mineral salts,

water, CO_2 etc. from the environment.
They also photosynthetic as well as chemosynthetic bacteria. These are called Autotrophs. However, all other living organisms (heterotrophs) depend upon these producers for the supply of food.

B. Consumers: Heterotrophs :—

(i) Primary consumers — These include the herbivores which directly and ~~entir~~ entirely depend upon the producers for their food supply, e.g. Deer, Rabbit.

(ii) Secondary consumers : These are the carnivorous animals, which depend up on herbivorous for their food e.g. frog lion etc.

(iii) Tertiary consumer : These are the organisms which eat upon the carnivorous e.g. snake.

(iv) Top consumers : These include the carnivores not killed and eaten by other organisms e.g. Tigers, Leopards.

(C) Decomposers : Reducers : These are the bacteria and fungi which unlock and release the vital and left over material trapped in the body of dead organisms

The producers and consumers of an ecosystem are arranged into several feeding groups, each of is known as trophic level.