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Diversity of Pond Ecosystem and its Components

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Abstract

Basic unit in ecology formed from the cohabitation of plants, animals is known as Pond ecosystem, Ponds shallow water bodies barely reach 12 to 15 feet in-depth. A Pond biological community is a freshwater biological community in which groups of living beings depend on each other and the water environment for their supplements and survival.

Ponds are a vital part of the hydrological framework; and perform various parts in the biosphere. Thinks about on lake environments are, in any case, regularly dismissed, likely, because of their little size.

Keywords: Community; Environment; Ecology; Microphytes; Conservation

Introduction

Ponds are among the maximum various freshwater habitats and were recently determined to help extra species, in addition to extra unusual, rare, and threatened species in comparison to lakes, rivers, and streams [1-10]. The conservation of ponds represents a cost-powerful manner of maintaining or improving biodiversity, due to the everyday small length of pond catchment regions.

A Pond may indicate blends of three diverse nourishment web parts: one based upon cyanobacteria and green growth, another based upon expansive plants, and another based upon rotted plants [11-15].

Pond biological systems have both abiotic and biotic segments.

Biotic components

- light, water and temperature are the environmental factors
- oxygen, carbon dioxide and nitrogen are the inorganic components
- carbohydrates, Proteins, amino acids nucleic acids and fats are organic components

Abiotic components

An abiotic component includes producers, consumers and decomposers.

In which producers are aquatic green plants, consumers are heterotrophic organisms and decomposers includes heterotrophic microorganisms [16-25].

Producers

These are the aquatic green plants which may be of two types:

- Microphytes
- Macrophytes.

Microphytes are also known as phytoplanktons, which are microscopic in nature. For example Spirogyra and Volvox.

Macrophytes are large in nature.

A submerged plant, floating plants and immerged plants comes under marcophytes.

Consumers

The heterotrophic organisms are known as consumers in which primary, secondary and territory consumers [26-35].

Primary consumers

These are herbivores animals completely depending upon auto trophic organisms [36-45].

Example: Zooplankton.

Secondary consumers

These are Carnivores depends upon animals.

Example: Insects and Fogs etc.

Tertiary consumers

These fed upon either plants or animals, these are called as second grade of carnivores.

Decomposers

Decomposer includes all heterotrophic microorganisms like fundi, bacteria [46-50].

These produce food materials by breaking down the organic complex food material to simple inorganic compounds [51-70].

According to pond stratification based on qualities like depth of water, penetration of light and both animals and plant vegetation decomposers are of three zones [71-96].

They are Littoral zone, Limnetic Zone, Profundal Zone.

Uses of Pond Ecosystem

- These can be used as important hotspot for biodiversity.
- Ponds are also wonderful for our terrestrial wildlife.

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