



Lecture No.: 25

Date: 30th April, 2020

CORE CONCEPT OF

HONOUR'S PART 1

Group A - Algae

Paper - 1

GENERAL ACCOUNT OF ALGAE

GENERAL ACCOUNT :

1. **Linnaeus** (1753) first introduced the term algae.
2. The actual delimitation of algae from other plants was done by A. L. **Dejussieu** (1789).
3. The algae represent chlorophyll bearing heterogeneous assemblage of plant (ranging from unicellular forms to large and complex forms like sea weeds) in which O_2 is evolved as a by-product in photosynthesis.
4. They are largely aquatic (both fresh and sea water) but some are terrestrial (e.g. *Fritschiella*) Depending on the habitat conditions algae are of following types -



- A. **Lithophytic algae** - Which grow on rocks e.g. **diatoms**.
- B. **Halophytic algae** - Which grow in **saline** habitat e.g. *Chlamydomonas ehrenbergi*
- C. **Cryophytic algae** - Grow in frozen habitats e.g. *Sphaerella*.
- D. **Parasitic algae** - Which grow parasitically on other living organisms e.g. *Cephaleuros coffea* (causes rust of coffee).
- E. **Thermal algae** - Which grow in hot water springs e.g. *Mastigocladus*.
- F. **Epiphytic algae** - Which grow epiphytically on other plants e.g. *Coleochaete*, *Bulbochaete* etc.
- G. **Symbiotic algae** - Which grow in symbiotic association with other organisms *Anabaena cycadae* with the roots of cycas, *Anabaena azollae* within the leaves of *Azolla*, *Nostoc Sp.* within the thallus of *Anthoceros* etc.



The cells constituting the algal thalli are of two types - prokaryotic and eukaryotic. The prokaryotic cells are the characteristic of cyanobacteria (blue green algae) while eukaryotic cells are found in rest of the algal groups. The classification of algae is based upon -

- A. Nature of pigments
- B. Nature of food reserve
- C. Nature of flagella
- D. Chemical composition of cell wall.

Some important divisions of algae are as follows -

1. Cyanophyta
2. Chlorophyta (Green algae)
3. Bacillariophyta (Diatoms olive-green algae)
4. Xanthophyta (Yellow green algae)
5. Phaeophyta (Brown algae)
6. Rhodophyta (Red algae)