

(1)

A paper - I

CLASSIFICATION OF ALGAE

Proposed by A.F.E. FRITSCH'S.

On the basis of pigment, no. of flagella, food reserve.

There are 11 class of algae:-

- 1) Chlorophyceae (Green algae)
- 2) Xanthophyceae (Yellow-green algae).
- 3) Chrysophyceae (Brown or Orange).
- 4) Bacillariophyceae (Yellow or golden brown).
- 5) Cryptophyceae (Nearly brown).
- 6) Dinophyceae (Dark yellow or brown).
- 7) Chloromonadineae (Bright green).
- 8) Euglenineae (Pure green).
- 9) Phaeophyceae (Brown).
- 10) Rhodophyceae (Red).
- 11) Myxophyceae (Blue-green algae) Cyanobacteria.

(1) CHLOROPHYCEAE →

- Pigment as chlorophyll A, chlorophyll B, xanthophyll and carotene.
- Reserve food material starch.
- The plants are unicellular, motile to heterotrichous filaments. Pyrenoids are commonly surrounded by starch sheath. Motile cells have equal sets flagella.
- Mostly plants are found in fresh water.

2) Xanthophyceae →

→ Pigment chlorophyll A, carotene and xanthophyll (Yellow green).

→ Reserve food material oil.

→ Pyrenoids are absent.

→ Flagella is unequal in length.

→ Sexual reproduction is rare and always isogamous.

→ Mostly plants are fresh water and a few are marine.

3) Chrysophyceae (Brown or Orange) →

→ Chromatophores are brown or orange colour.

→ Reserve food material Fat and leucosin.

→ Plants are unicellular motile to branched filamentous.

→ Flagella are unequal.

→ Sexual reproduction seldom occurs but is of isogamous type.

→ Mostly plants are fresh water and a few are marine.

4) Bacillariophyceae (Yellow or green),

→ Chromatophores are yellow or golden brown.

→ Reserve food material Fat and Valutin.

→ Plants are unicellular or colonial.

→ Reproduction forms are diploid.

→ Plants found in fresh water, sea, soil and to terrestrial.

5) Cryptophyceae (Nearly brown) →

→ It may be some shade of brown.

→ Reserve food material solid carbohydrates or in some cases starch.

→ Flagella are slightly unequal.

→ Plants are found both in fresh water and marine.

6. Dinophyceae (Dark yellow or brown) →

- Chromatophores are dark yellow, brown.
- Reserve food material starch and oil.
- Plants are unicellular.
- Sexual reproduction is of isogamous type.
- Plants found may be sea water planktons, and few may be in fresh water.

7. Chromonadineae (Bright green) →

- Chromatophores are bright green in colour and
- Reserve food material oil.
- The plants are motile flagellate with two almost equal flagella.
- All plants are fresh water.

8. Euglenineae (Pure green) →

- Chromatophores are pure green.
- Reserve food material polysaccharide, paramylon.
- The plants are motile flagellate.
- Sexual reproduction is not substantially known. It is isogamous type.
- Mostly plants are fresh water.

9. Phaeophyceae (. Brown) →

- The pigments are chlorophyll A, carotene and access. xanthophyll. (brown).
- Reserve food material Alcohol and fats.
- Flagella are unequal.
- Mostly plants are marine.

10) RHODOPHYCEAE →

- Chromatophores are red-blue containing pigments like red phycoerythrin and blue phycocyanin.
- Reserve food material Floridian starch, a polysaccharide similar to starch.
- It may be fresh water and marine.

11) Myxophyceae →

- The pigments charotene, Xanthophyll, access phycocyanin, phycoerythrin.
- Reserve food material sugar and glycogen.
- Flagella is absent.
- Sexual reproduction is ~~in~~ unknown.
- Both in fresh water and marine.