ALGAE

1. Algae - plural. Singular - Alga.
2. These are photosynthetic organism possessing pigments.
3. They lack true root, stem and leaves.
4. Plant body Thalloid.
5. They may be simple unicellular to multicellular huge, even complecated as e.g. Chara sps. Nitella sps. Fucus, Saragassum
6. Fresh water as well marine.
7. Highly reproductive
8. Sexual reproduction by formation of gametes.
9. Male gamete is known as microgamete or sperm where as her female gamete is known as mega, or macro, or oogametes or even egg.
10. Gametangia are single celled.
11. Life cycle may be

12. They possess chloroplast and pyrenoids.
13. Foods are stored as starch.
14. They are autotrophic but may be parasitic also, e.g. symbiotic
15. May be free floating or attached to stone, gravel and bogs.

Habit and Habitat

They are highly versatile in habitat. as.

[A] Hydrophytes: They are aquatic. They may be as -

(i) Planktophytes → These are free floating on the water surface. These further may be

a) Euplanktophytes → From the begining they are free. Never get attached e.g. Diatoms, Cosmarium sps., Clostredium sps. Microcystis sps., Volvox sps. etc.

b) Tycholanktophytes: Earlier they are attached. Later on they become free-floating e.g. Spirogyra sps., Zygnema sps., Oedogonium sps. etc.

(ii) Benthophytes: They are attached ones to the substratum e.g. Chara sps.; Nitella sps., Cladophora sps. etc.

(iii) Halophytes: They are found in saline (salty) water e.g. Chlamydomonas sps. & Dunaliella found in salt lakes. Beside these some others are Scendesmus sps. Aphanocapsa sps., Enteromorpha sps.

(iv) Epactiphytes: They are found on shores of lakes and ponds. e.g. Oedogonium sps., Chaetophora sps. Spirogyra sps. etc.

(v) Epiphytes: Found on other living plants
e.g. Bulbochaete sps., Oedogonium sps. Microspora sps. etc.

(vi) Epizoophytes: Found on living aquatic animals
e.g. Cladophora sps. on shells of molusc.
Protoderma sps. and Basicladia sps. on back of turtle.

(vii) Thermophytes: Found in hot water springs.
A/c Copeland 53 genera and 153 species of Chroococcaceae upto 84°C.
Oscillat Members of Oscillatoriaceae may survive upto 85°C.

(B) Edaphophytes: They are terrestrial algae found inside on and upon the soil.
They are further devided into

i) Saxophytes: They are found on the soil surface
e.g. Botrydium sps., Vaucheria sps., Fritschiella sps. etc.

ii) Cryptophytes: They are found inside the soil i.e. sub terrenian e.g.
Nostoc sps., Anabaena sps.
in the pady fields enriching the nitrogen compounds to the soil.

8. [C] Aerophytes: These are aerial found upon walls, fencing wires, rocks, plants and animals. They may be classified as.

(i) Epiphyllophytes: They are found as epiphytes upon leaves of trees. Trentepohlia sps. found on the barks, rocks, and fencing. One may see them on the wall of Royal Botanical Garden of Calcutta.

Phycopeltis sps. on Rubus sps.

Phyllosiphon sps. on Arisaema sps.

Rhodochytrium sps. on Asclepias sps. and Solidago sps.

(ii) Epipholiophytes: They are found on bark of trees with different types of liverworts and mosses.

e.g. Phormidium sps. Scytonema sps. Schizothrix sps. grow on the barks mixed with liverworts

iii) Epizoophytes: They are seen on the bodies of terrestrial animals e.g. Some Chaetophorales on the hairs of sloth.

iv) Lithophytes: These are seen on walls & rocks e.g. Scytonema sps. grow on the walls. We may see them in rainy seasons as black spots on our nearby walls. Vaucheria sps. and Nostoc sps. are found on wet rocks.