# Algae

Algae can also grow in association with animals (eg. Sloth bear)

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Different sizes of algae are available:-

Microscopic unicellular forms:- Chlamydomonas.

Colonial forms - Volvox.

Filamentous forms - Ulothrix and Spirogyra.

Kelps: a marine algae which forms a massive plant body.

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Algae can reproduce by vegetative, asexual and sexual methods.

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Vegetative reproduction is by fragmentation and each fragment develops into a thallus.

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Asexual reproduction is by production of different types of spores; the most common being the zoospores

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Zoospores are flagellated, motile and on germination gives rise to new plants.

15
Wednesday

Week 24
Day 164 : 201
Date 13 : 06 : 2018
June 2018

Sexual reproduction takes place through fusion of two gametes.

These gametes can be flagellated and similar in size (as in Chlamydomonas) or non flagellated (non-motile) but similar in size (as in spirogyra). Such reproduction is called isogamous.

Fusion of 2 gametes dissimilar in size, as in some species of chlamydomonas is termed as anisogamous.

Fusion betn one large, non-motile female gamete and a smaller, motile male gamete is termed as oogamous.
eg:- Volvox, Fucus.

Importance of Algae:

Half of the $CO_2$ fixation on earth is carried out by algae through photosynthesis.

Being photosynthetic, they increase the level of dissolved oxygen in their immidiate environment.

Many species of Porphyra, Laminaria and Sargassum are among 70 species of marine algae which are used as food.

Notes

Business is a continental calculation, an instinctive exercise in foresight.

Algin (brown algae) and carrageen (red algae) are hydrocolloids (water holding substances).

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Agar is obtained from Gelidium and Gracilaria.

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Chlorella and spirullina are unicellular algae, rich in proms are used as food supplements even by space travellers.

## Chlorophyceae:-

Plant body is unicellular, colonial or filamentous.

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They contain pigments like chlorophyll a and b. in chloroplast.

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The chloroplast may be discoid, plate-like, reticulate, cup shaped, spiral or ribbon shaped.

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Chloroplast contains one or more storage bodies called pyrenoids which contains proms besides starch.

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Some algae store food in the form of oil droplet.

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Green algae usually have a rigid cell wall made of an inner layer of cellulose and outer layer of pectose.

Notes

Vegetative reproduction usually takes place by fragmentation or by formation of different types of spores.

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Asexual reproduction is by flagellated zoospores produced in zoosporangia.

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Sexual reproduction can be isogamous, anisogamous or oogamous.

eg:- Chlamydomonas, Volvox, Ulothrix, Spirogyra and Chara.

# Phaeophyceae.

- found in marine habitat.

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They show great variation in size and forms i.e. from simple branched, filamentous forms (Ectocarpus) to profusely branched forms as represented by kelps which may reach a height of 100m.

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Pigments - Chlorophyll a, c, carotenoids and xanthophylls. / fucoxanthin