

## Reproduction in Algae.

Production of similar ones by / from similar ones is known as reproduction. Most of algae are aquatic or highly depends upon water. In terrestrial condition there is plenty of water during limited period. The scarcity of water and excessive variation in temperature may cause the condition unfavourable for the growth and development of these organisms. There are certain process to tide over it. The process to tide over the unfavourable condition and grow again on the onset of favourable condition is known as Perennation. Perennation also looks like as Reproduction. Here we discuss both simultaneously.

In algae we see all the three types of reproduction.

- I) Vegetative.
- II) Asexual
- III) Sexual.

I) Vegetative Reproduction: There is no specialised structure such as spore or gamete. Any vegetative part if get separated may develop a new individual. There is no alteration of generation. It is the most common method of reproduction. It may be of following types -

- i) By cell division: Mother cells divide forming daughter cells. These daughter cells produce new plant bodies. ~~By~~ These methods are common in unicellular forms e.g., Plauococcus sps, Chlamydomonas sps.
- ii) By fission: The cell/<sup>filament/body</sup> may divide into two or more than two. Each may form a new plant. e.g. Desmids.  
Diatoms.
- iii) Fragmentation: Due to certain accidental or natural phenomenon the plant body may break into two or more than two parts. Now each part may develop into an individual if get a suitable environmental condition. e.g.  
Spirogyra sps; Ulothrix sps.

iv) Hormospores : They are produced in somewhat drier condition. These are thick walled homogones.

v) Hormogone : These are small parts of trichome. Each grow into new individuals, e.g.

vi) Adventitious thalli : The main thallus may give rise to certain additional adventitious parts of thallus ~~known as~~ which may form new plant body on separation.

vii) Tubers : These are certain specialised round structures having filled with starch in abundance. Each one may give rise to a new plant. e.g. Chara.

viii) Amylum stars : These are like tubers but possess star-like structures found in the basal part.

ix) Protonema : These are thread like bodies. On separation they may give rise to new plant. They may be  
a) Primary & b) Secondary

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a) Primary Protonema: The thread like bodies develop from the main plant body.  
e.g. Chara sps.

b) Secondary Protonema: These thread like bodies developing into new plant body arise from Primary Protonema.

x) Akinetes: The protoplast contracts and form a thick wall around the cell. Such structure is known as Akinetes. They are normally single but sometimes may be formed in chains. Each akinete form a new plant body in favourable condition.

xi) Budding: They may develop due to proliferation of vesicles as a protosiphon. A septum is formed at the junction with the main plant body. It separate it from the main plant body. On detachment they may form new plants.

xii) Bulbils: They are small round structures that develop as small buds on the rhizoids of certain algae. Each one may develop into a new plant body. e.g. Chara.