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- 1 Classification of plants according to Eichle's grouping of 1873
 - a Cryptogams: Absence of flowers and seed, reproduction by spores
 - b Phanerogams: Presence of flowers and seeds
- 2 Economic Importance of algae
 - a They are important as food for fish
 - b They are considered nutritious because of their high protein content, concentration of minerals and high iodine content
 - c Brown algae yield alginic acid used to stabilize emulsions and suspensions
 - d The natural substance can be used as fertilizers
 - e They are the source of much of Earth's oxygen
- 3 Unicellular form of algae are also called acellular algae as they function as complete living organisms. Unicellular forms are common in all the groups of algae except Rhodophyceae, Phaeophyceae and Charophyceae. The unicells may be motile or non-motile. The motile unicells are either rhizopodial or flagellated while the non-motile cells may be spiral filament as found in Cyanophyceae.
- 4 Reproduction in unicellular algae
Asexual reproduction in unicellular algae involves cell division followed by cell separation. The unicellular forms of algae commonly reproduce by the simple process,

often called honey combs as found in *Chlamydomonas*,
Volvox etc.

5. The two colonial forms of algae

Volvox colony is a hollow sphere of mucilage having 500 or more bi-flagellate algal cells that are equally spaced around its outer surface.

Spiraea has varied number of oval golden brown cells. Each cell bears two flagella, whose beatings propel the colony through the water with a smooth rolling motion. The individual cells divide longitudinally and the colonies also divide into two, as they grow larger.

6. Complex form of algae

The most complex form of algae is seaweed but marine algae. Seaweed is the common name for countless species of marine plants and algae that grow on the ocean as well as in rivers, lakes and other water bodies.