

Honours  
Part-I  
Lecture No-06

ALGAE  
Group-A  
Xanthophyceae

8th sept

2020

Characteristics features of class xanthophyceae: plants are generally unicellular, multicellular and founds in fresh water and marine.

The plastids are yellow green. They contain chlorophyll a, very little chlorophyll e and  $\beta$ -carotene.

There is but one unknown

xanthophyll. There is no lutein or fucoxanthin. The chromatophores are discoid and many each cell.

The pyrenoids are absent. Starch is not formed. Oil and fat are the normal food products. The cell wall is often absent but when present it has higher content of pectic compound than the cell walls of green algae. The cell wall is

silicified in a few species. The flagella are of unequal lengths and are inserted at the anterior end.

The longer flagellum is of tinsel or pantonematic type. The shorter whiplash or acronematic type has a smooth surface. Sexual reproduction is rare. If present it

is isogamous. In Vaucheria it is oogamous. Mostly there are fresh water forms.

Classification: The primary classification of xanthophyceae is chiefly based on thallus structure. The xanthophyceae includes the motile and coccoid forms, as well as palmelloid.

1. Heterochloridales: It includes motile forms and is analogous to the Volvocales.
2. Heterococcales: It includes coccoid forms and analogous to the Chlorococcales.
3. Heterotrichales (Tribonematales) It includes the filamentous forms and parallels the Ulotrichales.
4. Heterosiphonales (Vaucheriales): It includes the siphonous forms and is analogous to the Caulerpaceles (old Siphonales).
5. Heterocapsales (Heteroglocales): It includes the palmelloid forms and is considered analogous to the Tetrasporales.
6. Rhizochloridales: It includes the amoeboid forms and has no parallel in the chlorophyceae.