

Phycology/practical

Lab.4: chlorophyte (green algae)

Super kingdom: Euokaryota

Kingdom: protista

Division: chlorophyta

Class: chlorophyceae

1-order:chlorococcales

Genus: ***Chlorlla , Scendusmus, Pediastrum***

2- order: volvocales

Genus: ***Chlamydomonas, Volvox***

General characteristics of chlorophyte (green algae):

1- Contain chlorophyll type A and B.

2- Chloroplast is present and vary in shape, size and number.

3- Chlorophyta store their food as true starch similar to that in seed plant. This starch is accumulated within granules (pyrenoids) in chloroplast.

4- Flagellated stages are present

5- Sexual reproduction is present. In addition to asexual and vegetative reproduction.

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1-order: chlorococcales

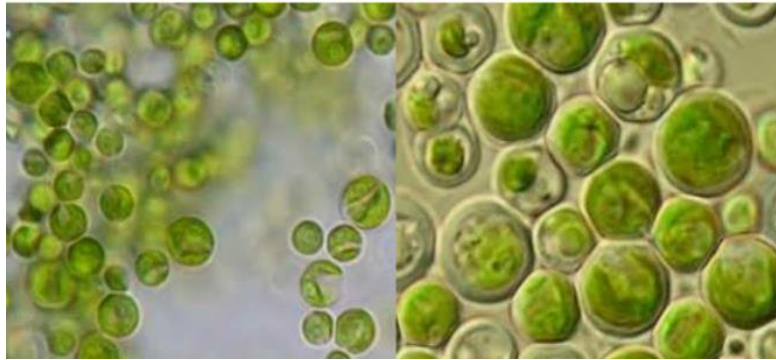
Genus: ***Chlorlla***

1-unicellular alga (spherical shape cells) or present in irregular colonies.

2-cup shape chloroplast

3- reproduce by simple division

4- lacks flagella



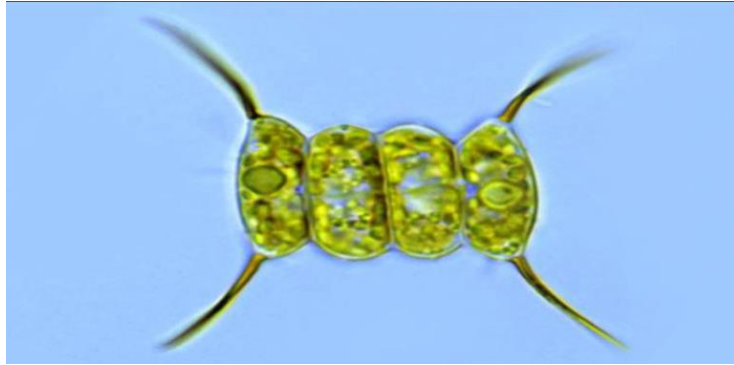
Figure(1): ***Chlorella***

1-order:chlorococcales

Genus: ***Scendusmus***

1- Plate-like cells (usually 4 or 8) aggregated parallel to one another to form a colonies ,The colonies ends are surrounded by fork-like appendages

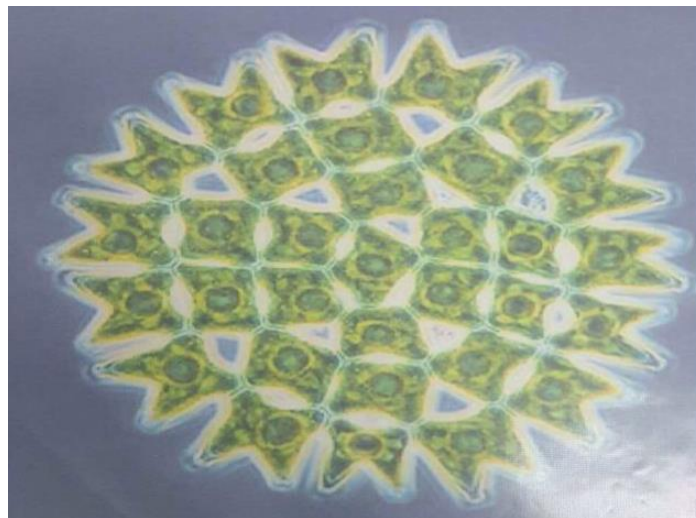
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Figure(2): *Scendusmus*

1-order: chlorococcales, Genus: *Pediastrum*

1-disk- shape colonies with peripheral horn-like projections



Figure(3): *Pediastrum*

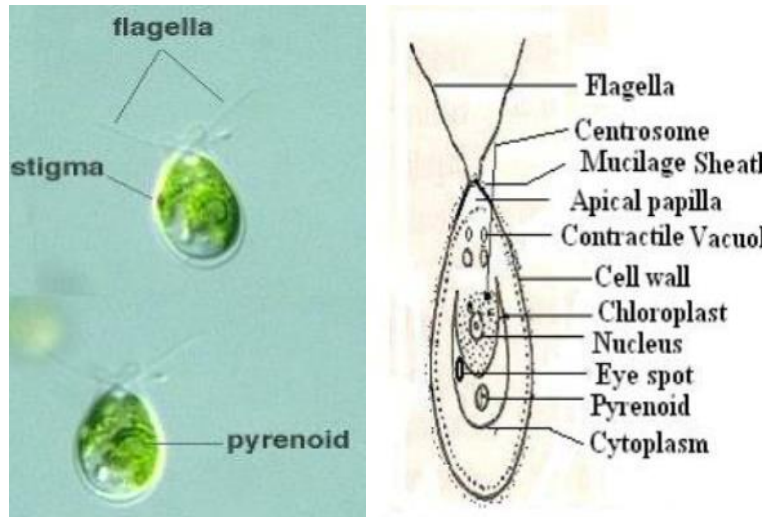
2- order: volvocales, Genus: *Chlamydomonas*

1-unicellular alga

2-motile by two anterior flagella

3-cup shape chloroplast with eye spot (stigma) present in the anterior portion of the chloroplast for photosensitivity

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Figure(4): *Chlamydomonas*

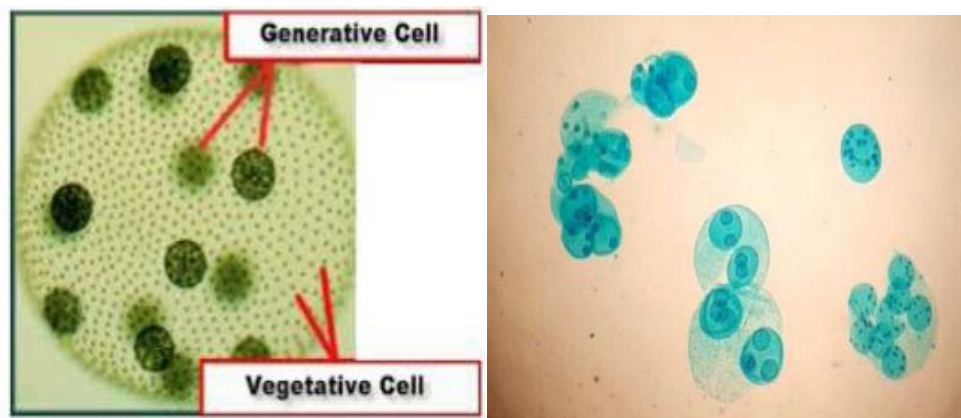
Genus: *Volvox*

1-spherical colonies with hollow center (hollow ball).

4-there are specialized cells within Volvox colony:

a-somatic (vegetative) cells: (most of colony cells specialized for nutrition ,movement)

b-generative cells: responsible of reproduction



Figure(5): *Volvox* colony