

Taxonomy of Phytoplankton Chlorophyta

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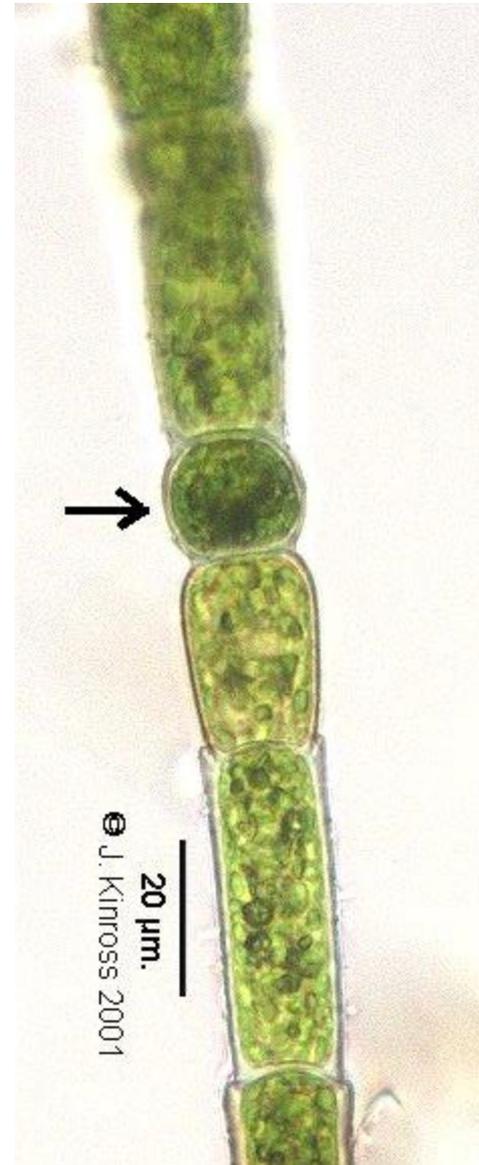
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Order: Oedogoniales

- Fibrillar Tallus
- Each cell has one nucleus, double layered cell wall
- Chloroplast is weblike or strip (band like) shaped
- Outer wall is covered with musilage

Genus: Oedogonium

- Unbranched filaments
- 3-50 micron diameter
- Cells are forming filaments and their front-end is slightly wide.
- Chloroplast has parietal weblike appearance
- Reproduction:
 - Asexually: Zoospores
 - Sexually: Oogamy
- Exists in stagnant waters, free floating or attached to plants.
- Their colour can change into the yellow-green or cream colours related to the ages



Order: Zygnematales

Genus: Spirogyra

- Unbranched mucilaginous filament
- 10-100 micron diameter
- Cells are long, cylindrical shaped
- Cell walls are folded in some species
- Chloroplast is in spiral shaped
- More than 300 species
- Reproduction
 - Sexually
 - Asexually (Zygospores)
- Dispersion Ranges
 - Stagnant water (Durgun sular) (Spring)
 - They form green clouds under waters
 - Green coloured above the water – in reproduction period they swim as brown coloured with masses



Genus: Zygnema

- Unbranched, mucilageous filaments
- 10-50 micron diameter
- Cells are longer and 2 star shaped chloroplast
- Big, central pyreneoid in each cells.
- Lots of species types
- Reproduction
- Asexually (Zygospores)
- Sexually: Via conjugation
- Distribution Range:
- Stagnant waters
- Masses float on waters
- Balloon or cloud shape like masses under the water



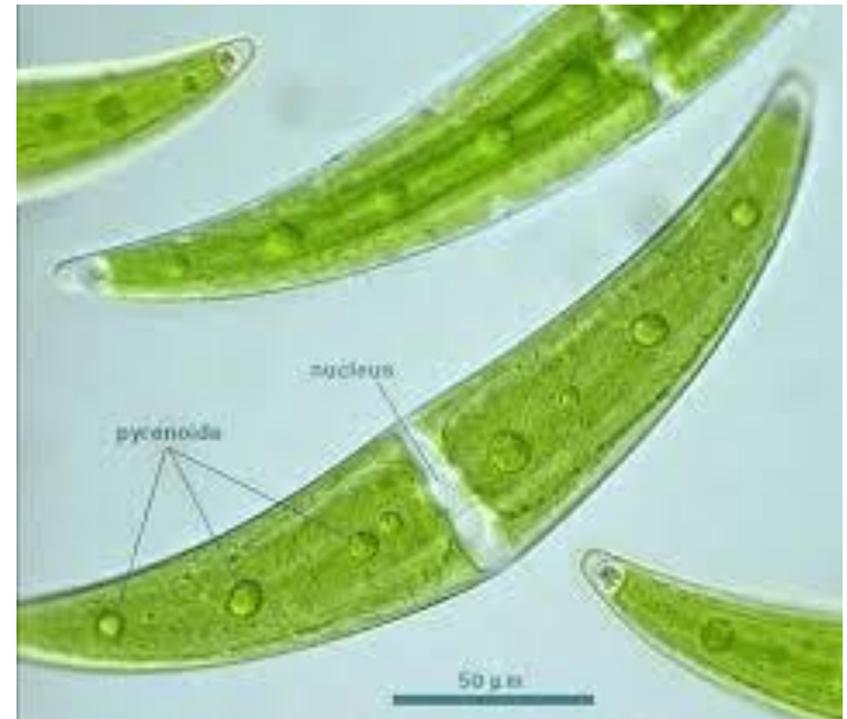
Order: Desmidiiales

- Members of this type are known as placoderm desmids
- Cell wall has two sections and these are united in the middle
- Cell wall can be straight in some species (Closterium)
- Cell wall appearance usually contains wart, bubbled, granular forms (Sturastrum)
- Cellulose inside the cell wall,
- Outer walls contain pectin, many of them has regular holes
- Each half cell has 1, 2 or 4 axial chloroplasts



Genus: Closterium

- Crescent shaped cells
- Each ends of the cell has CaCO_3
- Cell contains 2 half cells
- There is chloroplast in each half
- One or some pyrenoids
- Cell wall is straight lined
- Cell can be look like brown coloured due to iron accumulation
- Many specious of this genus
- Reproduction:
 - Asexually: Dividing
 - Sexually: Conjugation
- Distribution Range:
 - Wetlands, lakes, slow-flowing streams



Genus: Staurastrum

- Cell is half triangle
- Each cell has three corners
- Corners are branched and have spines
- Cells 100 micron length
- Reproduction
- Asexually: Dividing
- Sexually : Conjugation
- Distribution Range
- Lakes
- Mild waters

