

Phytoplankton

- Are all unicellular
- planktonic and Benthic
- Photosynthetic

Phytoplankton are classified into three divisions. They fall into the Protista kingdom and Bacteria and Archaeobacteria (anaerobic environment, mudflats)

Major Divisions are:

Cyanobacteria- Blue-green algae (bacteria)

Chrysophyta- Coccolithophores, Diatoms (Eukaryote)

Dynophyta- Dinoflagellates (Eukaryote)



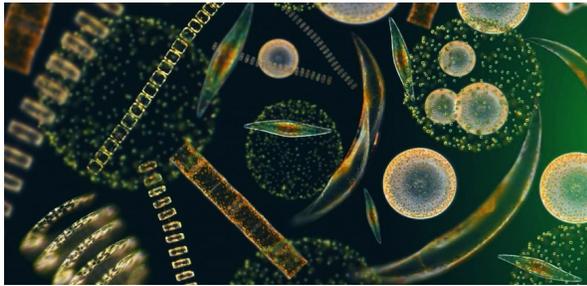
Dinoflagellates



Phytoplankton

Cannot move much under their own power, subjected to waves and currents. Very tiny in size.

All nutrients are taken from the water they live in. Their tiny size allows them to have a larger surface area which helps them to absorb nutrients quickly, and slows down sinking into deeper water. Phytoplankton are always sinking deeper in the ocean.



Cyanobacteria- Bluegreen algae

Typical prokaryote: simple structure, tiny. Prehistoric and can be found anywhere there is light and water.

Found abundantly in estuaries and intertidal

Some perform Nitrogen fixation (fixing atmospheric Nitrogen into a usable form)

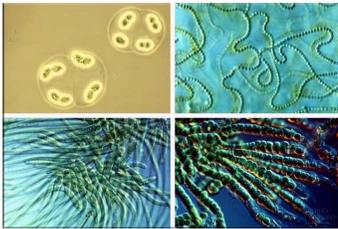


The Blue Green Algae are actually a type of bacteria called cyanobacteria that grow in water and are photosynthetic (use sunlight to create food and support life). Cyanobacteria live in fresh, brackish, or marine water.

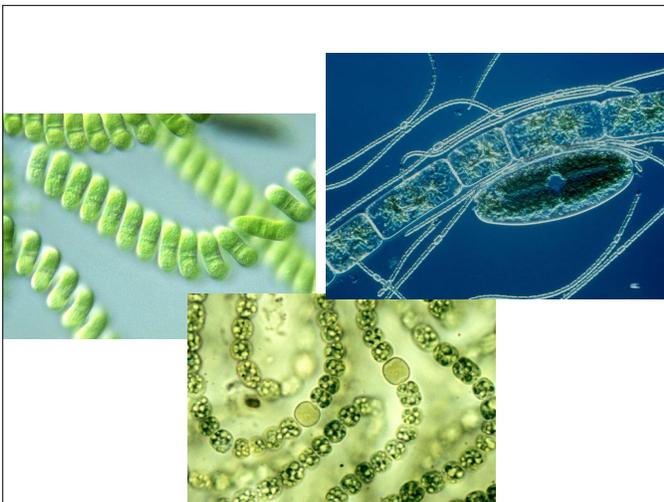
They usually are too small to be seen, but sometimes can form visible colonies or "blooms." They have been found among the oldest fossils on earth and are one of the largest groups of bacteria. Cyanobacteria have been linked to human and animal illnesses around the world.

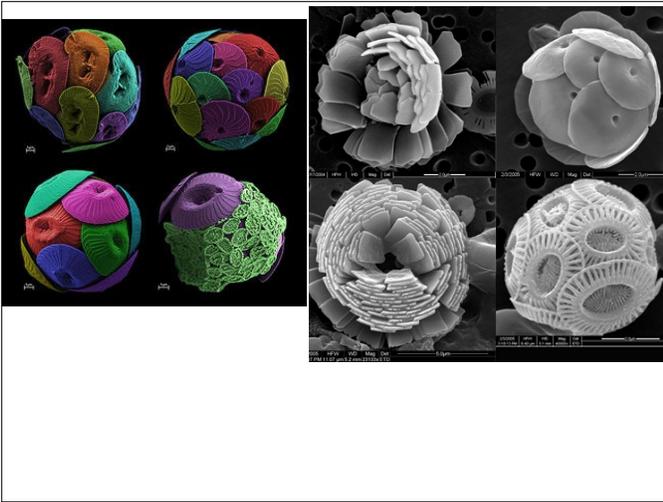
Diseases caused by Cyanobacteria

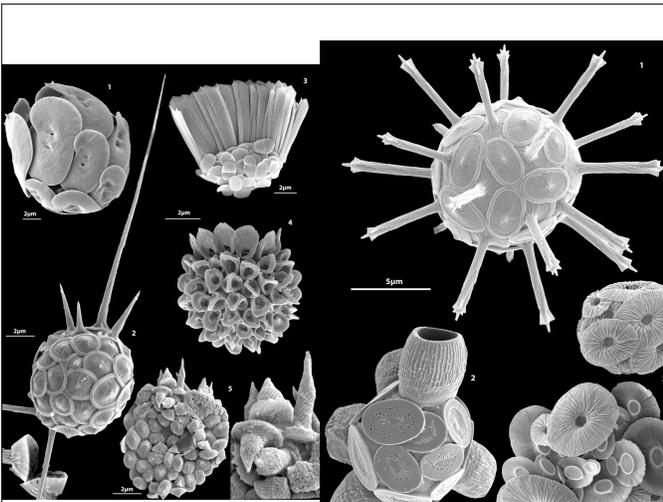
Acute, severe gastroenteritis (including diarrhea and vomiting).
Liver toxicity. Symptoms of liver poisoning may take hours or days to show up in people or animals. Symptoms include abdominal pain, diarrhea, and vomiting.
Kidney toxicity



Harmful algal blooms are caused by overuse of fertilizers and pesticides.
Improper maintenance of your household septic system.







Chrysophyta

Diatoms

Make Diatomaceous earth, chalk, White Cliffs of Dover

Most diatoms have a frustule made of silica. The frustule is split into two parts that fit together like a two-piece box.

Photosynthetic, radially symmetrical, very complex and beautiful in structure (kind of like snowflakes).

gent Wood

