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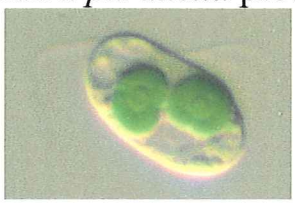
ch 20 **Kingdom Protist Notes**

* The kingdom Protista contains creatures that are NOT plants, animals, fungi, Archaebacteria or Eubacteria.

* Most protists are single-celled Eukaryotes, although there are some multi-cellular exceptions.

* There are currently more than 115,000 Species of protists, about 1.5 billion years old.

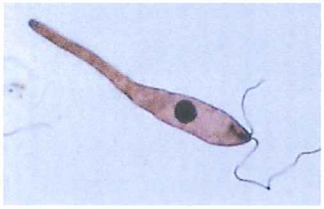
* First organism that shows mutualism, having other organisms live within them. This supports the endosymbiont hypothesis. *Cyanophora paradoxa* protist has blue green algae growing in it!



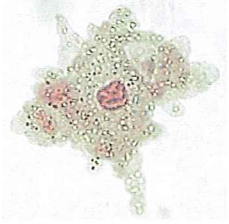
* Scientists organize protists into 3 groups based on which Eukaryotic kingdom it is most similar: Animal-like, Plant-like, or Fungus-like.

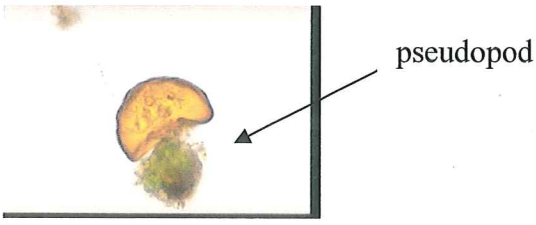
Animal like protists (often called Protozoans – like in the video we watched)

- Contains 4 phyla (based on way they move)
  - Zoomastigina – a.k.a. "flagellates" – due to use of flagella

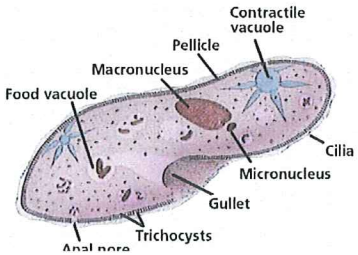


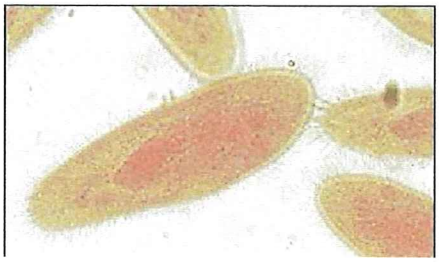
  - Sarcondina - use a pseudopod "false foot" like a snail – includes amoebas

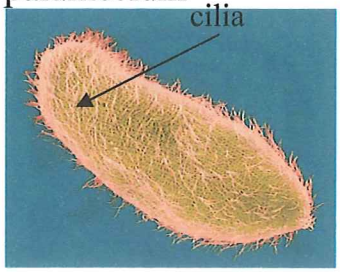




  - Cilophora - a.k.a. "ciliates" – due to use of cillia – include paramecium







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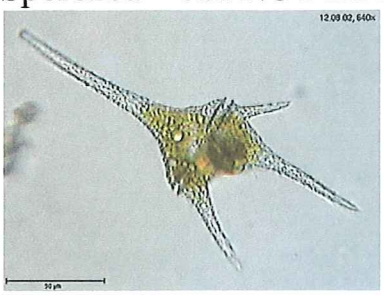
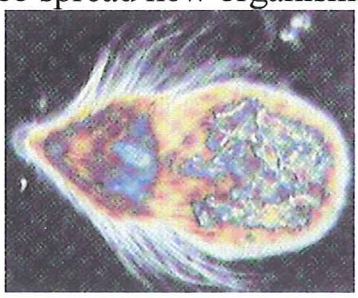
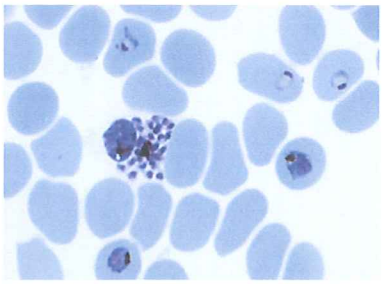
- Sporozoa – can NOT move, so spread new organisms by spores – are parasitic

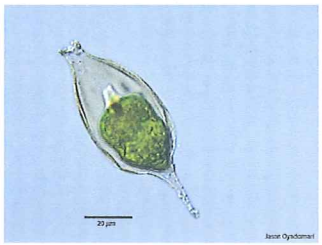


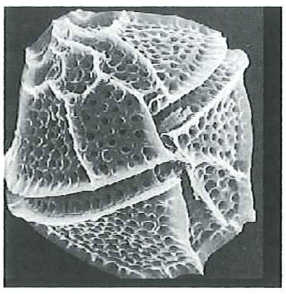
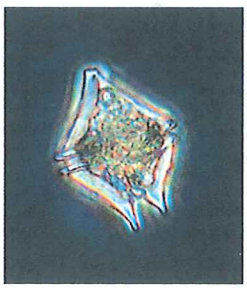
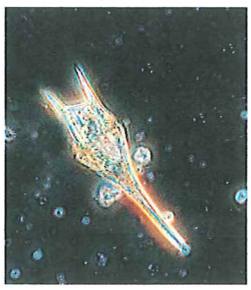
Plant-like protists

* All contain chlorophyll and can photosynthesize
* These protists can also be included in the organism classification "algae"
- 3 main phyla:

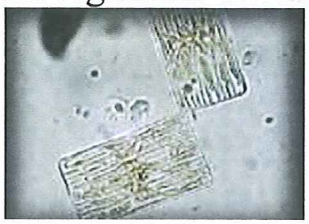
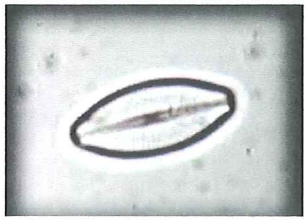
  - Euglenophyta – a.k.a. Euglenophytes look similar to flagellates, but have chloroplasts. Can use sunlight, or absorb food from surroundings. No cell wall. Can swim or squirm/crawl – include euglena

  - Pyrrophyta – a.k.a. Dinoflagellates or "fire plants" – most are photosynthetic and are aquatic. When disturbed they can produce light and glow.

  - Chrysophytes – a.k.a. golden plants – contain yellow pigments. Have cell walls with carbohydrate called pectin. Have hard shells of silica. Phylum contains diatoms, one of the most abundant organisms on Earth.

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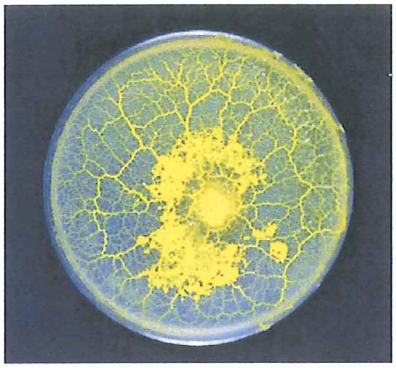
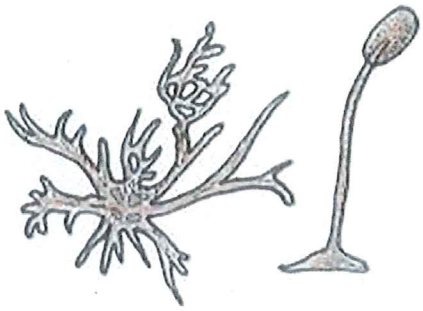
Fungus-like Protists

- Lack chlorophyll and absorb food through cell walls. Their cell walls are composed of chitin and their cells contain centrioles, which fungi do NOT have.

- 3 main phylum:

  - Acrasiomycota – a.k.a. cellular slime molds. Start life cycle looking like amoebas then accumulates into a slimy mass with many others. Produce spores that become new slime mold cells.


  - Myxomycota – a.k.a. acellular slime molds. Starts life like cellular slime molds, but the adult phase is found in large single organism mass with thousands of nuclei. Grow on twigs and leaves and eat bacteria and other matter.



  - Oomycota – a.k.a. water molds. Have cell walls made of cellulose and produce swimming young. Most live in water, but some have spread to land crops.