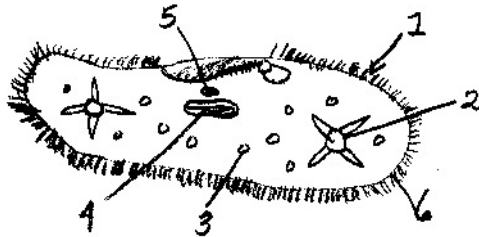


Unit 8:3A

Kingdom Protista

The Ciliates

- **Phylum Ciliophora:**
- **Ciliates contain hair-like structures called cilia.**
- **The cell is covered by a pellicle that gives it shape.**
- **They contain two nuclei: the macronucleus controls the cells growth and the micronucleus is used during the process of conjugation.**
- **They contain 2 star-like contractile vacuoles that control the organism's water content.**
- **They are heterotrophic**



Paramecium

- **Phylum Rhizopoda**
- **The Amoeba proteus or Amoeba is an example.**
- **They use pseudopodia (false feet) for movement and feeding.**
- **The species Entamoeba histolytica can cause a serious disease in humans.**

8:3B

- They do not contain cilia or flagella and are heterotrophic.
- They reproduce through binary fission.



Amoeba

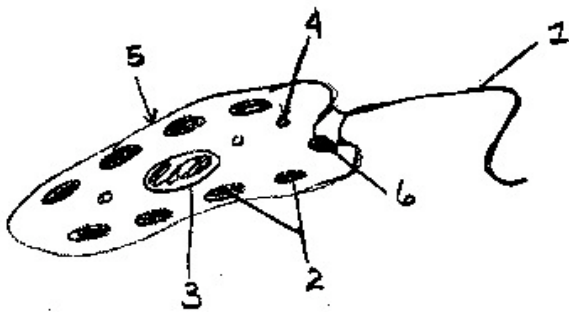
The Algae

- Algae include all photosynthetic protists.
- Most algae live in water, but some are terrestrial.
- Most algae live near the surface of the water producing 30 to 50 percent of the earth's oxygen.
- Phylum Dinoflagellata:
 - Dinoflagellates are unicellular or colonial organisms with two flagella.
 - Some produce nerve poisons toxic to vertebrates. A bloom of red-pigmented dinoflagellates causes “Red Tide”.

8:3C

Other Algae-like Protists

- **Phylum Euglenida:**
- **Most members of this group live in fresh water.**
- **Many contain two flagella and contain a hard pellicle.**
- **Their chloroplasts contain chlorophyll and carotenoids.**
- **Many contain a red eyespot, which is used as a photoreceptor.**
- **They reproduce asexually by dividing lengthwise into two.**



Euglena

Other Protists

- **Phylum Zoomastigina:**
- **Zooflagellates contain whip-like flagella.**
- **Termites cannot live without a certain zooflagellates in their intestine producing cellulose-digesting enzymes.**

8:3D

- **Trypanosomes live in the blood of vertebrates causing sleeping sickness.**
- **Human malaria is caused by four species of Plasmodium.**