



Protists

Any organism not classified as a—plant, animal,
fungus, or bacteria (prokaryote).



General Characteristics

- **Some are unicellular while others are multicellular**
- **Eukaryotic**
- **Mainly undergo asexual reproduction (spores) but some also reproduce sexually**
- **Like moist surroundings**

Importance

- They are at the bottom of the food chain = major food source for many organisms. Can be producers or primary consumers.

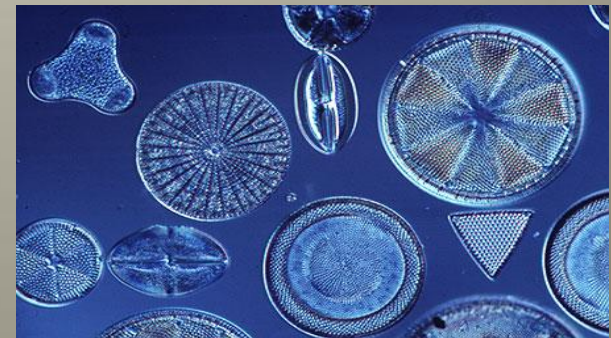
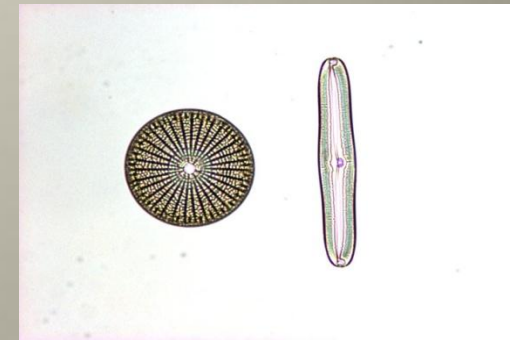
Example: “red tide” due to increased number of red algae → toxins can kill fish and poison people who have eaten affected shellfish

- Also involved in symbiotic relationships-
ex. red algae live in the bodies of corals (algae provide carbohydrates and corals provide shelters)

3 Groups of Protists

1. Plantlike protists : Algae

- aquatic and contain chloroplasts (carry out **photosynthesis** - autotrophs)
- size range from a single cell (ex. diatoms) to 60m in length (ex. green algae)
- some have flagella and able to swim (ex. euglenoids)
- some have cellulose cell walls

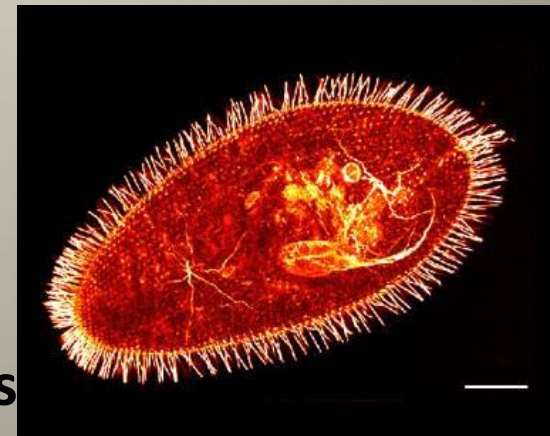
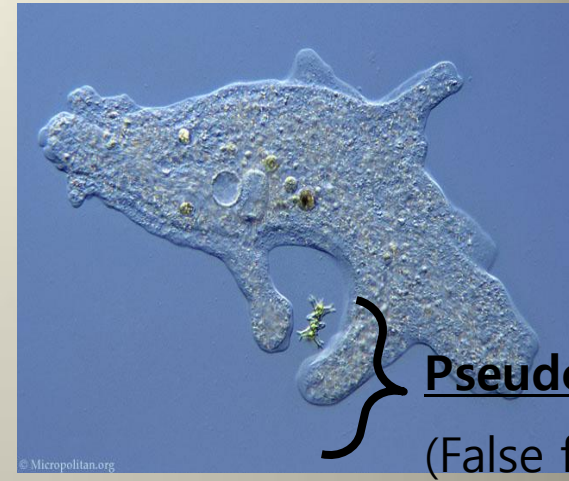


2. Animal-like protists: protozoa (“first animals”)

- Heterotrophs - feed on other organisms or dead matter (Example: amoeba and paramecium)
- Lack cell walls
- Most are motile (some have flagella or cilia)
- Size range from 2 μm to 5 cm in diameter
- Many are parasitic

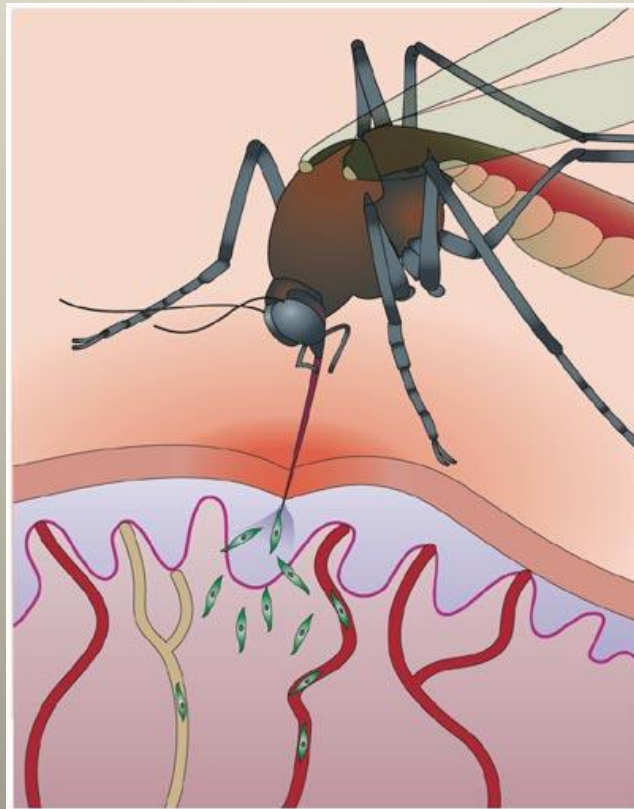
ex. flagellates *Trypanosoma* causes African Sleeping Sickness

- trypanosoma in salivary glands of tsetse flies
→ flies bite human and pass them →
trypanosoma reproduce in human blood and spinal fluid → person becomes dizzy, falls into a coma, and dies



ex. plasmodium causes malaria

- Malaria—Plasmodium spread by mosquito



In mosquitoes

Oocysts develop in gut wall

Sporozoites develop in oocyst

Sporozoites migrate to salivary glands

Parasites sucked up

Sporozoites injected with mosquito bite

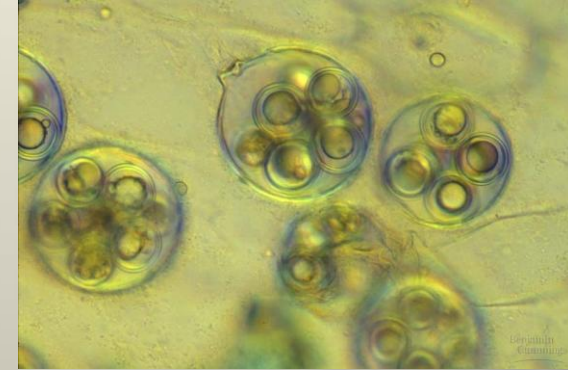
Gametocytes

Liver stage

Red blood cell stage

In humans

3. Fungi-like Protists: slime moulds and water moulds



- **Heterotrophs - some are parasites on fish, insects, and plants (Harmful – ex. *P. Infestans* was a water mold which caused the Great Potato famine in Ireland)**
- **Decomposers - some feed on dead matter (Beneficial – recycles organic matter which results in providing nutrients for plants)**
- **Like cool, shady moist places, leaves slimy trail as it moves**
- **Resemble protozoa and fungi**

Peanut butter – dog vomit mold



Cherry
cobler mold



[http://www.youtube.com/watch?v=IV
bq2yQH52g](http://www.youtube.com/watch?v=IVbq2yQH52g)