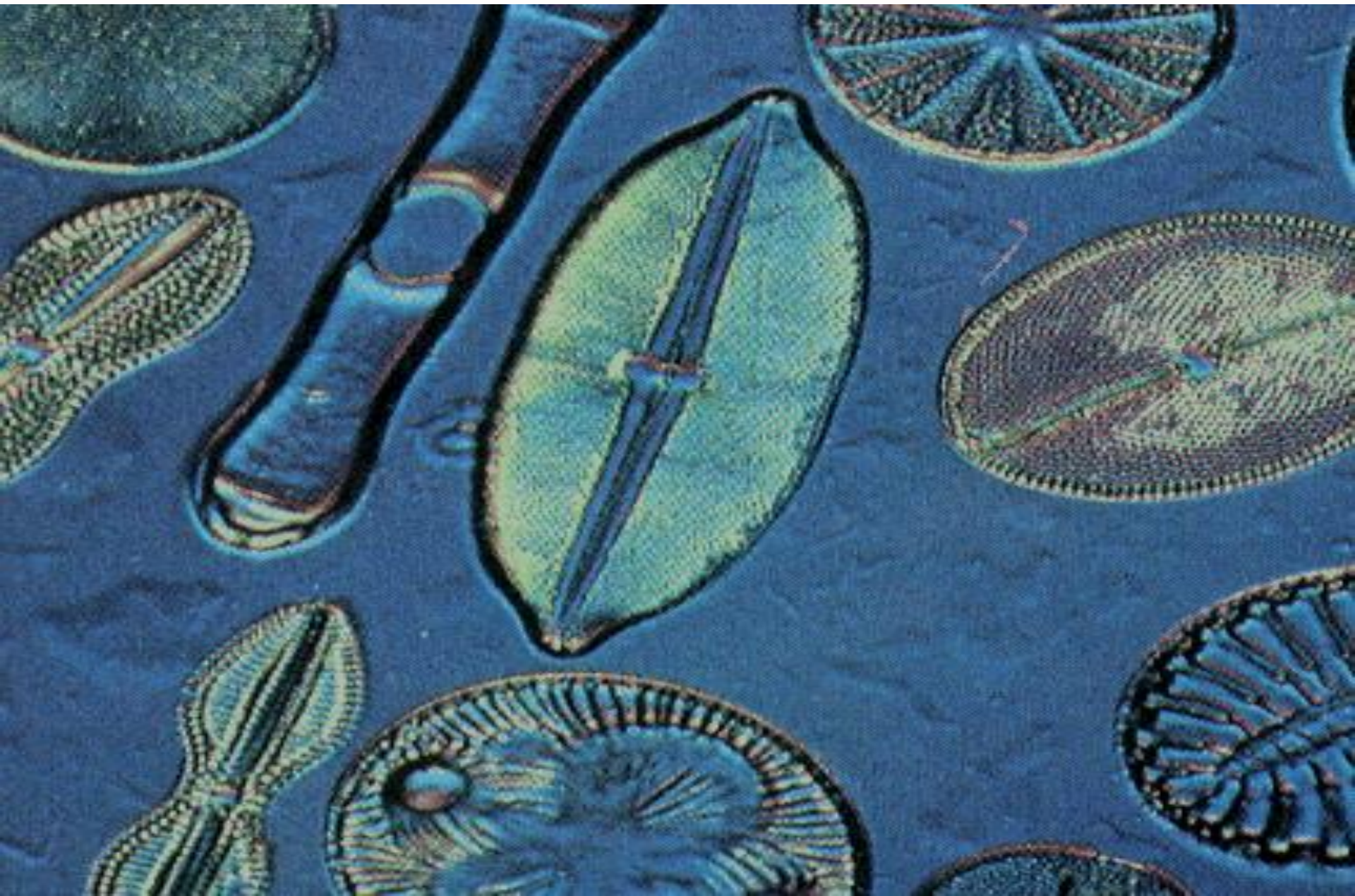


PROTISTS



Similarities and Differences in the Protist Kingdom

- All are eukaryotes (cells with nuclei).
- Live in moist surroundings.
- Unicellular or multicellular.
- Autotrophs, heterotrophs, or both.
- Some can move - others cannot.

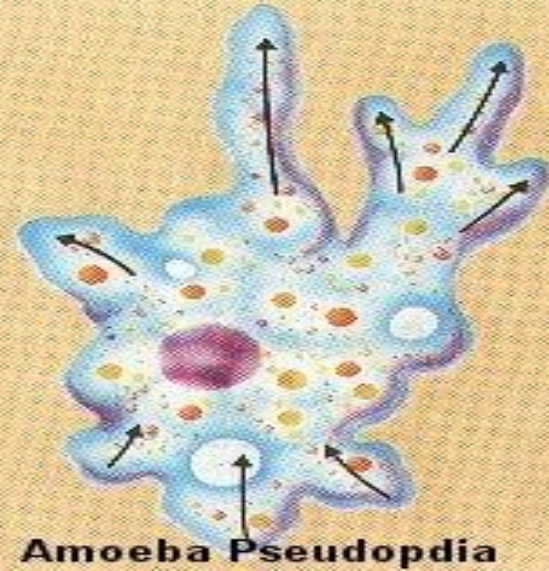
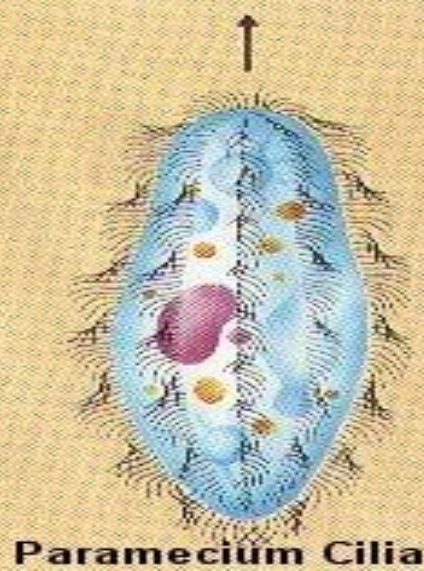
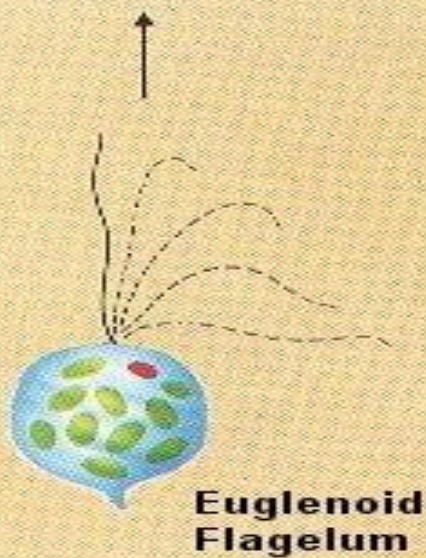
3 categories of Protists:

- Animal-like
- Fungus-like
- Plant-like

Animal-like Protists (Protozoans)

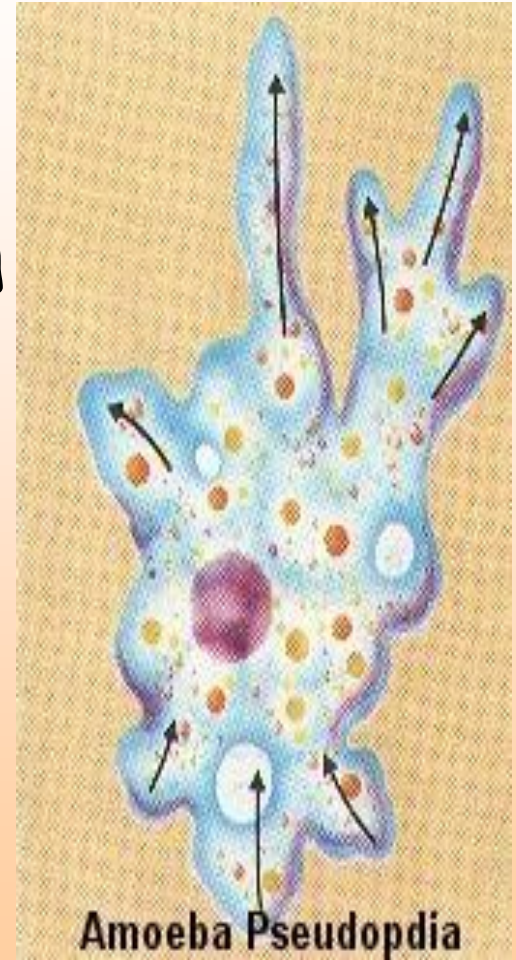
- *Unicellular Heterotrophs

- *Four groups based on movement:
those with **flagella**, **cilia**,
pseudopods, and the '**others**'.



Protozoans with Pseudopods

- Pseudopods also called 'false feet'
- Cell membrane **pushes** in one direction & the cytoplasm **flows** into the bulge.
- This allows the protozoan to move, **dragging** the rest of the cell behind it.



Pseudopod Movement

EXAMPLE OF HOW
PSEUDOPODS MOVE



PUSH

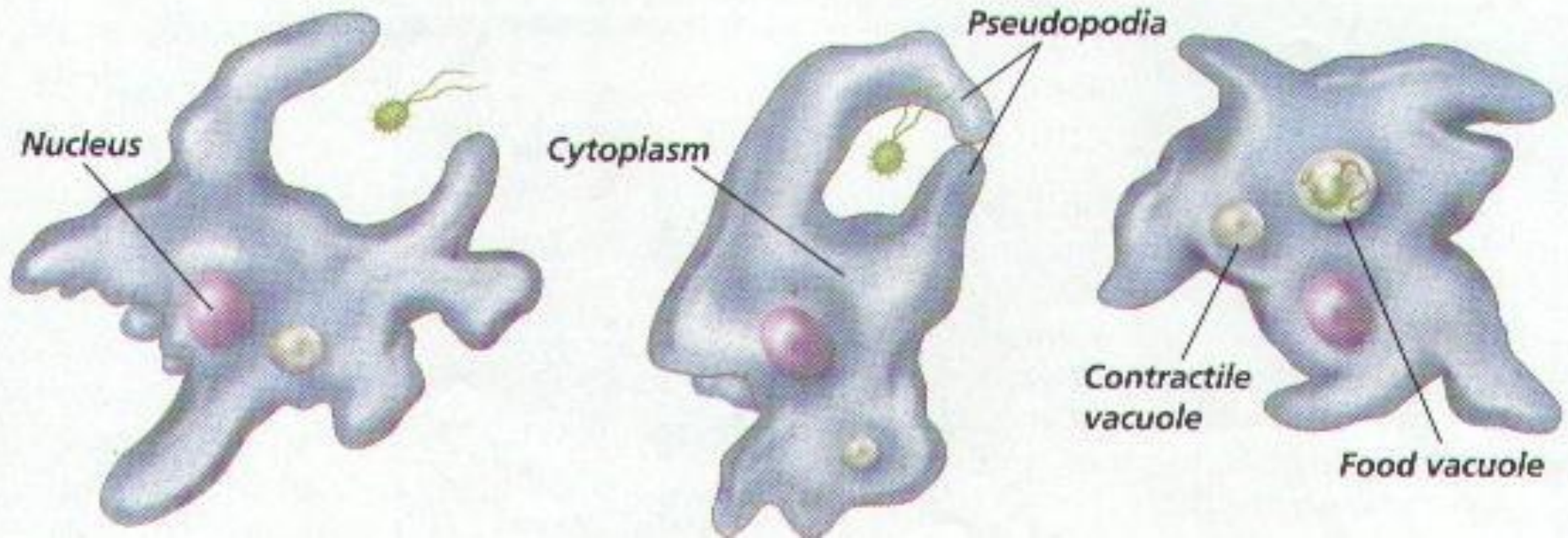
FLOW



DRAG

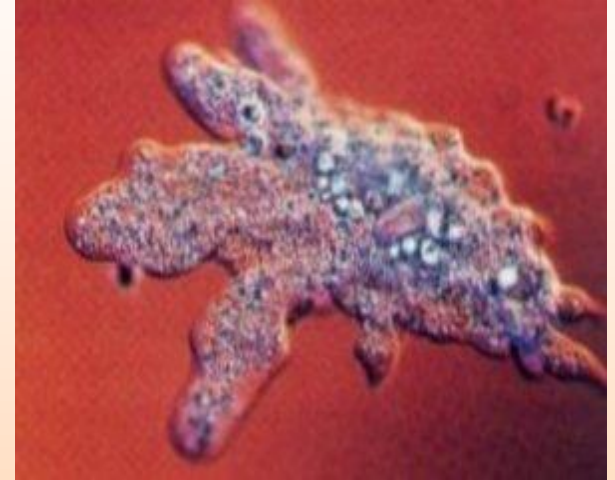
Pseudopods & Feeding

They can form pseudopods to surround & trap food. Then form a food vacuole to break down food in the cytoplasm.



Pseudopods

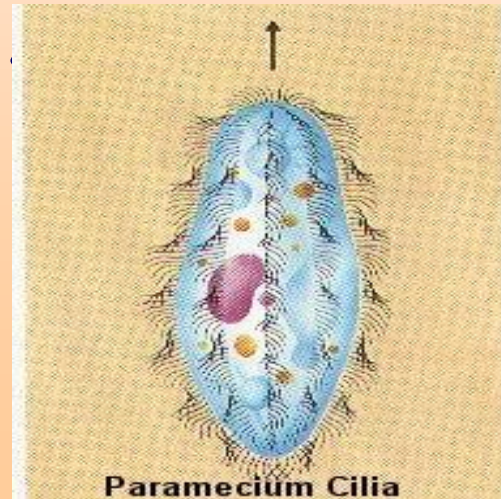
- Reproduce by mitosis
- Contractile vacuole - it collects extra H₂O & expels it from cell
- Thin cell membrane
- No definite shape.
- Example - Amoeba



Protozoans with cilia



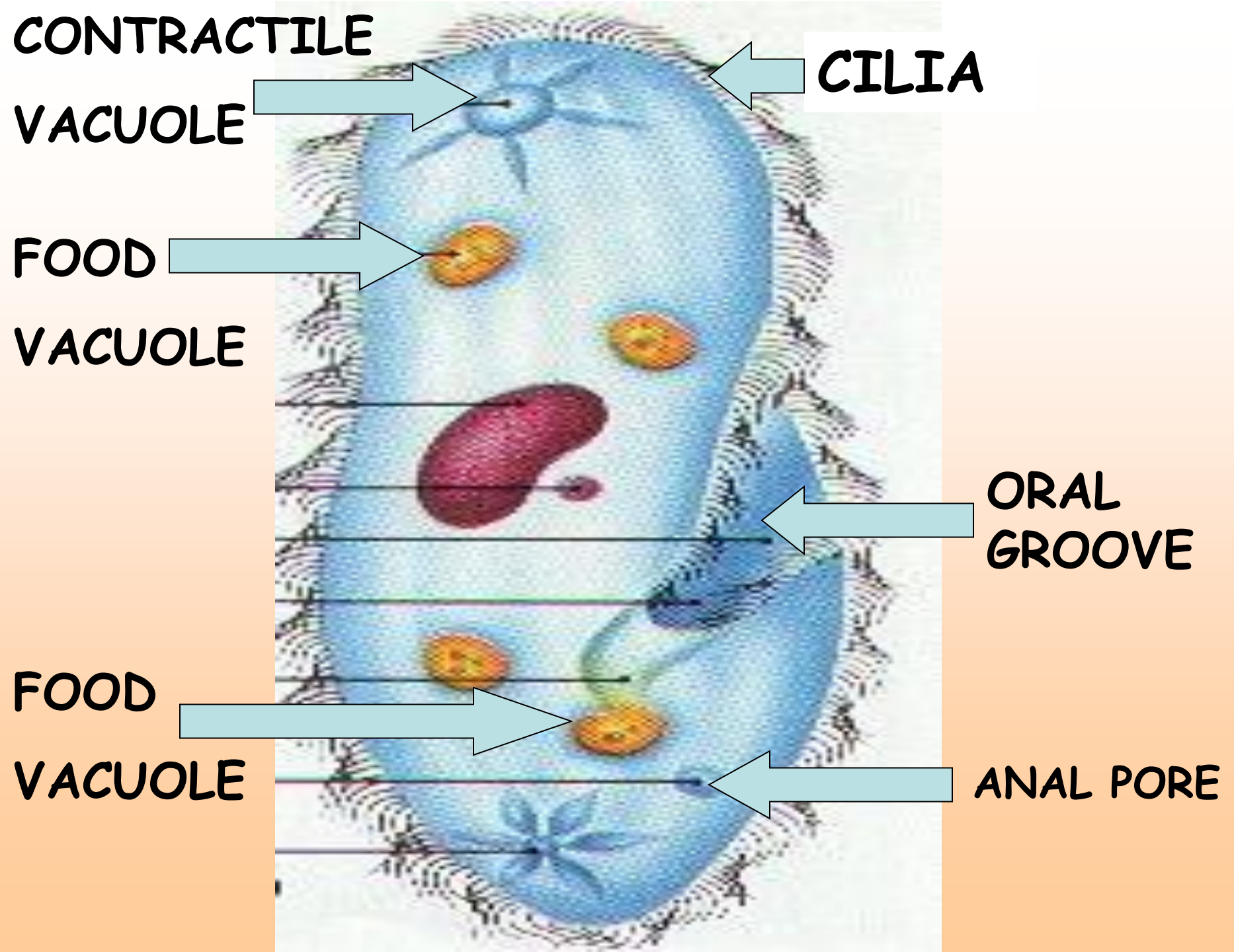
- Cilia - hairlike structures - help organisms move, get food and sense environment.
- Multicellular with 2 nuclei.
- 1 nuclei controls everyday functions
- 1 nuclei is for reproduction
- Reproduce by mitosis or conjugation.



Ciliates

- Oral groove lined with cilia
- moves H₂O containing food into food vacuole at end of oral groove.
- Food vacuole breaks down food and sends through cell.
- Anal pore sends out waste.
- Example of protozoan w/ cilia: paramecium.





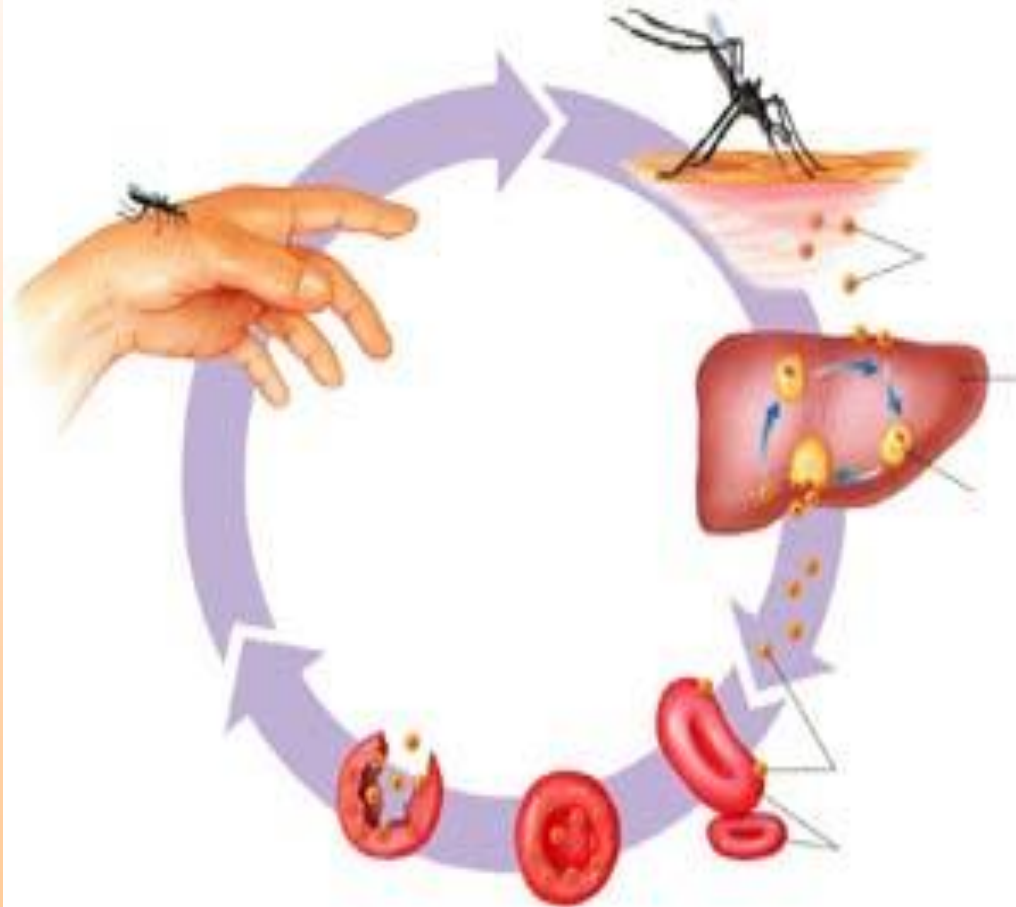
Protozoans with flagella

- Organisms called zooflagellates
- Use long whiplike part called flagella to move.
- These usually live inside other organisms.



Other Protozoans

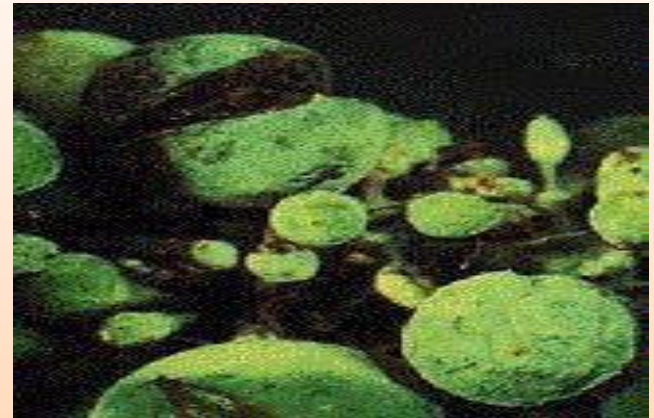
- Called **sporozoans** - parasites
- Feed on cells & body fluids of hosts



Sporozoans like
Plasmodium
(causes malaria)
have more than 1
host: mosquitoes
and then humans

Funguslike Protists

- Like animals, they are heterotrophs
- Like plants, they have cell walls
- Reproduce by spores (tiny cells that can grow into a new organism)
- Not in fungi kingdom because they can move at one point in their lives.
- Example are water or slime molds.



Plantlike Protists

- Better known as algae
- **Autotrophs**
- Size: unicellular to very large
- **Contain different pigments so they come in different colors.**
- Euglena: special type of algae - when there is no sunlight they become heterotrophic.

