

Lab (2)

Phylum: Protozoa

2-Class:Sarcodina

a/Order: Amoebina

e.g. Amoeba

b/Order: Testacea

e.g. Arcella.

c/Order: Heliozoa

e.g. Actinosphaerium

3-Class: Ciliata

a/Order :Holotricha

e.g. Paramecium , Didinium

b/Order: Peritricha

e.g. Vorticella

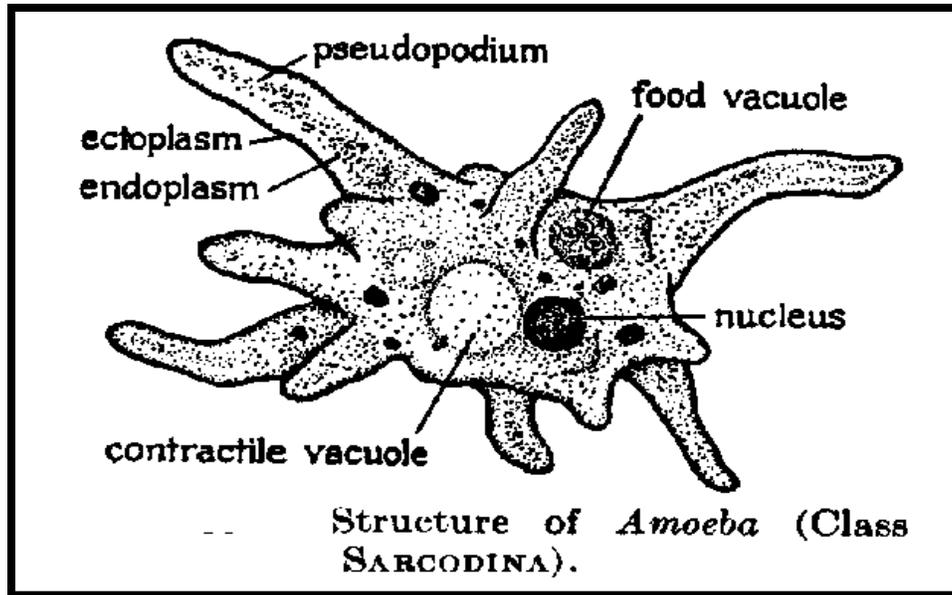
2-Class:Sarcodina

a/Order:Amoebina

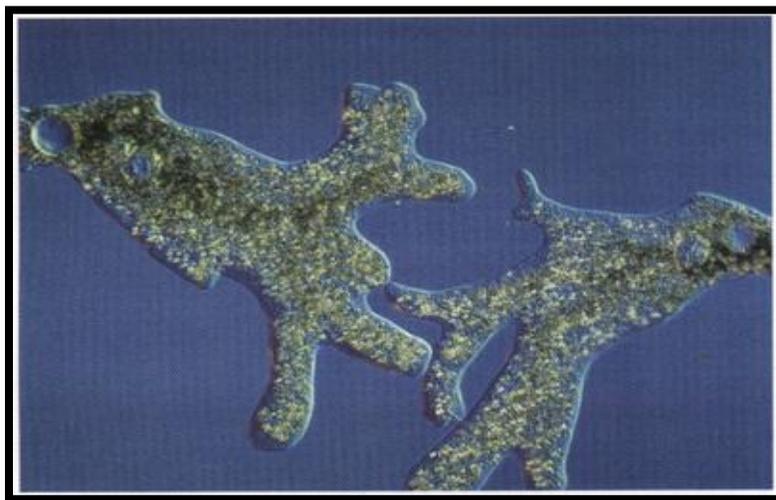
e.g.Amoeba

- **Single cell surrounded by cell membrane.**
- **Naked without Skelton**
- **Jelly-like cytoplasm fills most of the cell.**
- **Have large nucleus controls its growth and reproduction.**
- **Respiration and Excretion occurs by diffusion through general body surface.**

- Eukaryotic (they have a membrane enclosed nucleus) .
- Cytoplasm divided up into Endoplasm (near the nuclei membrane) and Ectoplasm(near the cell membrane) .
- Amoeba moves by pseudopodia (lobopoda) uses to engulf its prey.
- The contractile vacuole responsible for osmoregulation Without it the Amoeba would expand and burst .



Amoeba



Amoeba

b/Order: Testacea

e.g. *Arcella*.

-*Arcella* species have a shell contain from caitineous material like clock shape and brown colour .

-There are two nuclei or more and many constrictle vacuole.

- Finger-like pseudopods (filopodia).

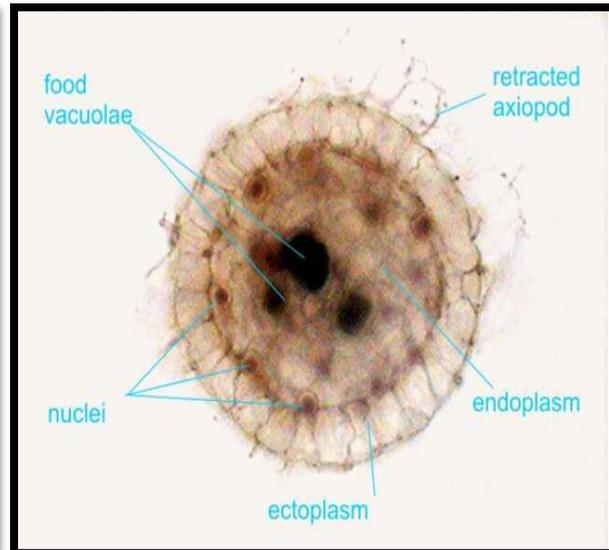
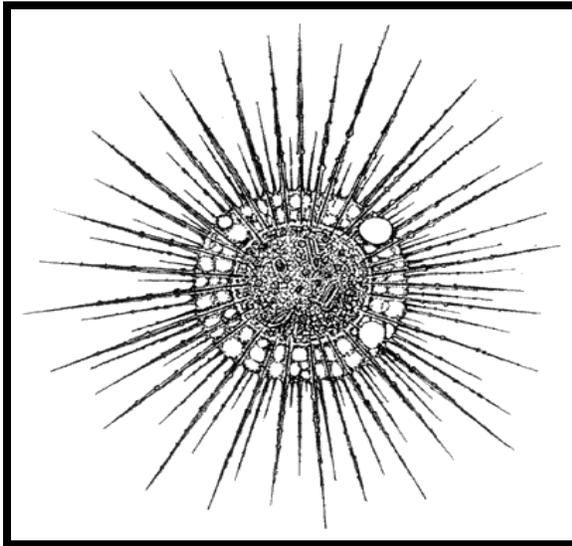


Arcella

c/Order:Heliozoa

e.g. *Actinosphaerium*

- unicellular and spherical in shape, without any shell .
- with many pseudopodia (axopodia) radiating outward from the cell body, which adhere to passing prey and allows it to roll or float about.
- A cytoplasm has a peripheral layer (ectoplasm) of large vacuoles ,which assist in flotation .The inner portion of the cell or (endoplasm) is filled with many small food vacuoles and with numerous small nuclei .



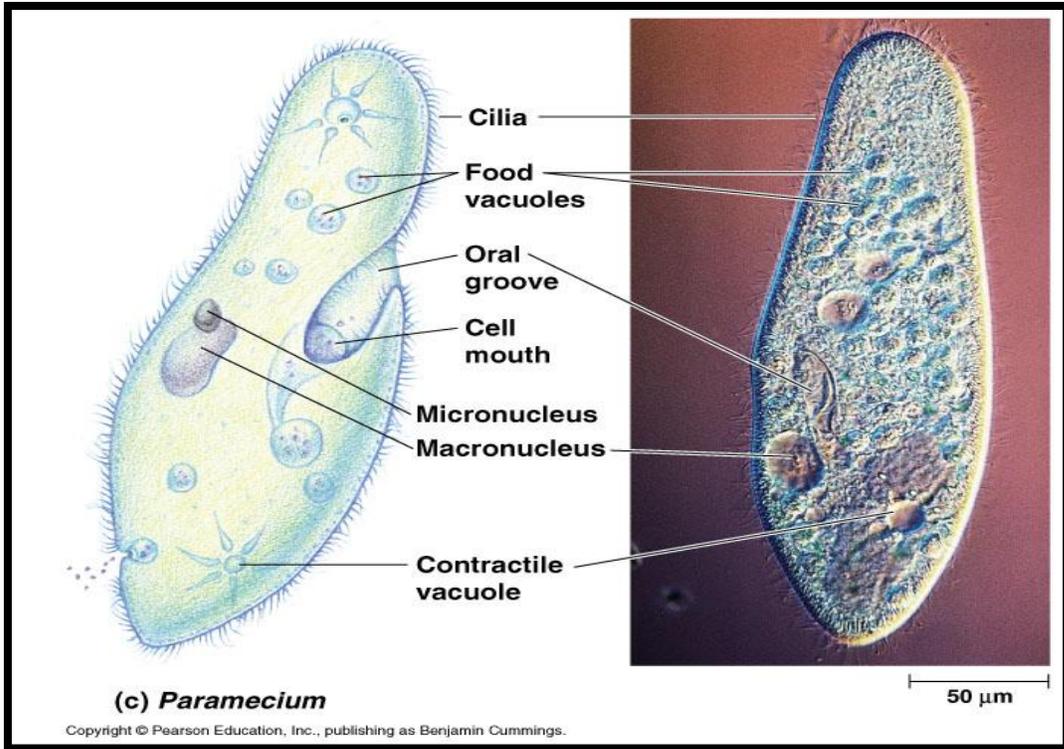
Actinosphaerium

3-Class: Ciliata

a/Order :Holotricha

e.g. *Paramecium*

- **unicellular organism, covered with many hundreds of tiny hair-like structures called cilia using for locomotion.**
- **Usually two sizes of nuclei ,Macronucleus and micronucleus**
- ***Paramecium* has a permanent feeding mechanism, consisting of an oral groove and a funnel-shaped gullet**
- **Food waste left in a food vacuole is excreted through the anal pore (the vacuole and pore fuse.**
- **Other wastes left over from cellular activity (metabolic waste) simply diffuse through the pellicle.**
- **Excess water and some metabolic wastes are excreted through the contractile vacuole.**
- **Reproduction usually by transverse binary fission .**
- **Sexual reproduction by conjugation**



Paramecium



Transverse binary fission
(Asexual Reproduction)

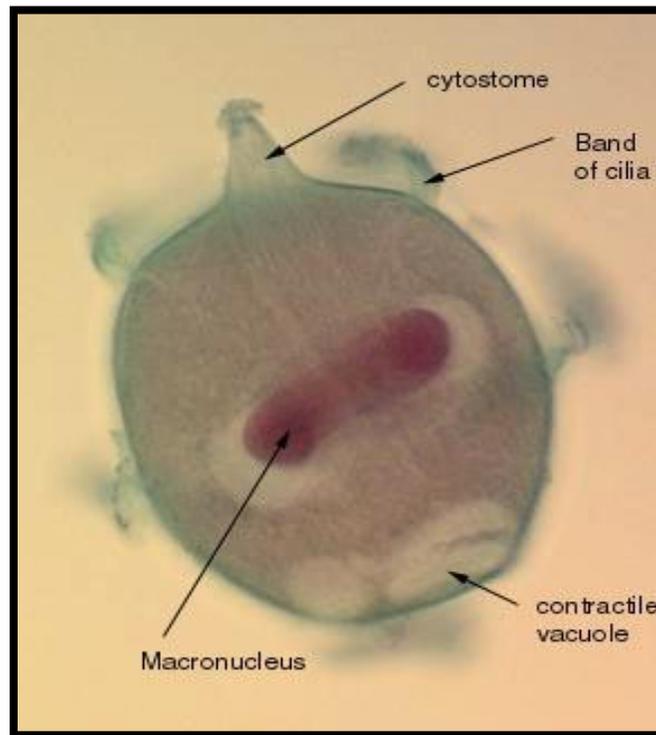


Conjugation
(sexual reproduction)

a/Order :Holotricha

e.g. *Didinium*

- unicellular and oval ciliated shape,
- have two sizes of nuclei Macronucleus and micronucleus.
- Cilia are arranged in bands around the body. One is located around the middle, and the other at the front.
- The front ends in a pointed snout (cytosome).

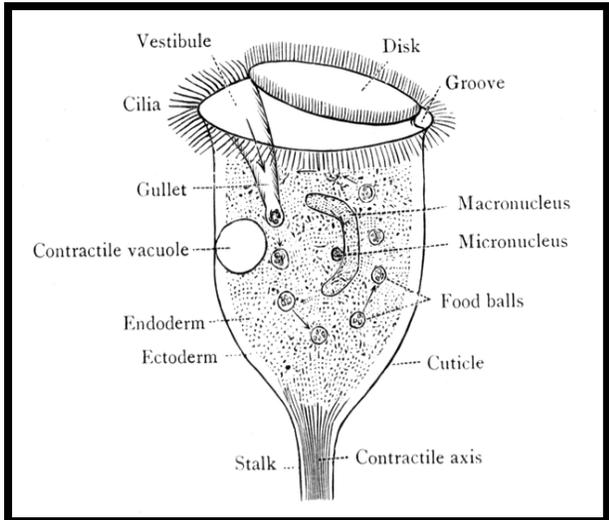


Didinium

b/Order:Peritricha

e.g. *Vorticella*

- **Bell-shaped or cylindrical organism with ring of cilia on the oral end**
- **contractile stalk on the aboral end attached to the substrate**
- **Usually two sizes of nuclei ,Macronucleus and micronucleus.**



Vorticella