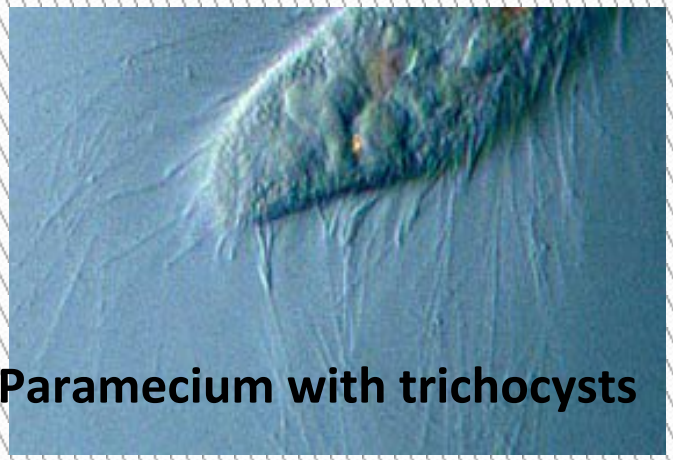
Paramecium overview

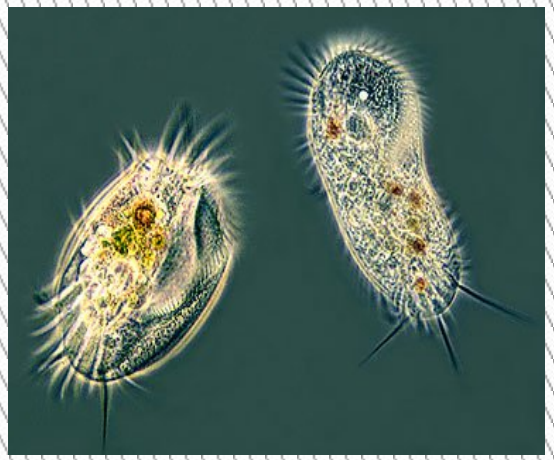
Ram Balak Mahto
Guest faculty
Zoology department
v.s.j college Rajnagar Madhubani
Class B.Sc 1st yr. Paper 1, group-A
7908055676

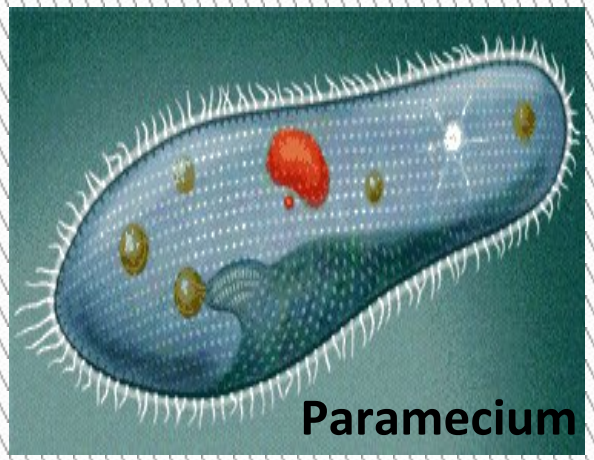
HABITAT

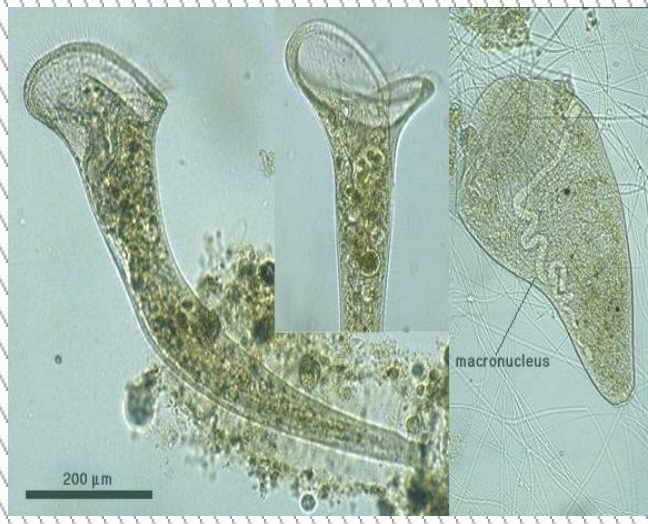
- Majority of free-living
- Marine, terrestrial & freshwater.
- Some are parasites on algae to vertebrates
- Make up the zooplankton in marine ecosystems. Feed on phytoplankton
- Abundant in soil or on plants & animals
- Some live in guts of termites, roaches & ruminants (cows)

DIFFERENT PROTOZOANS





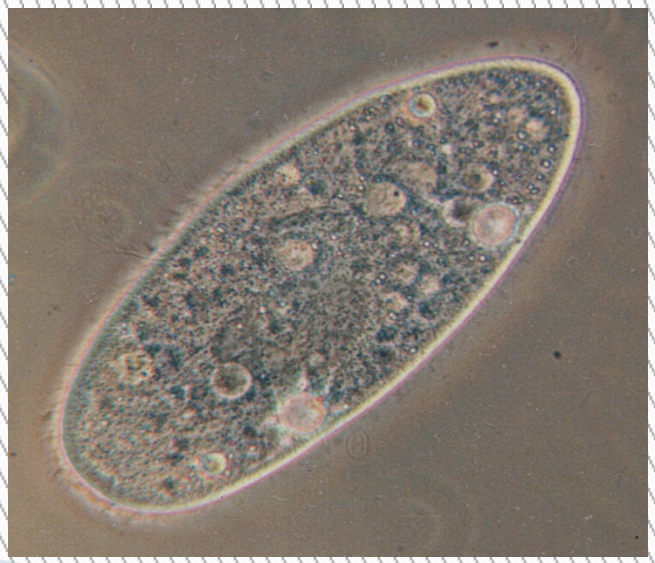




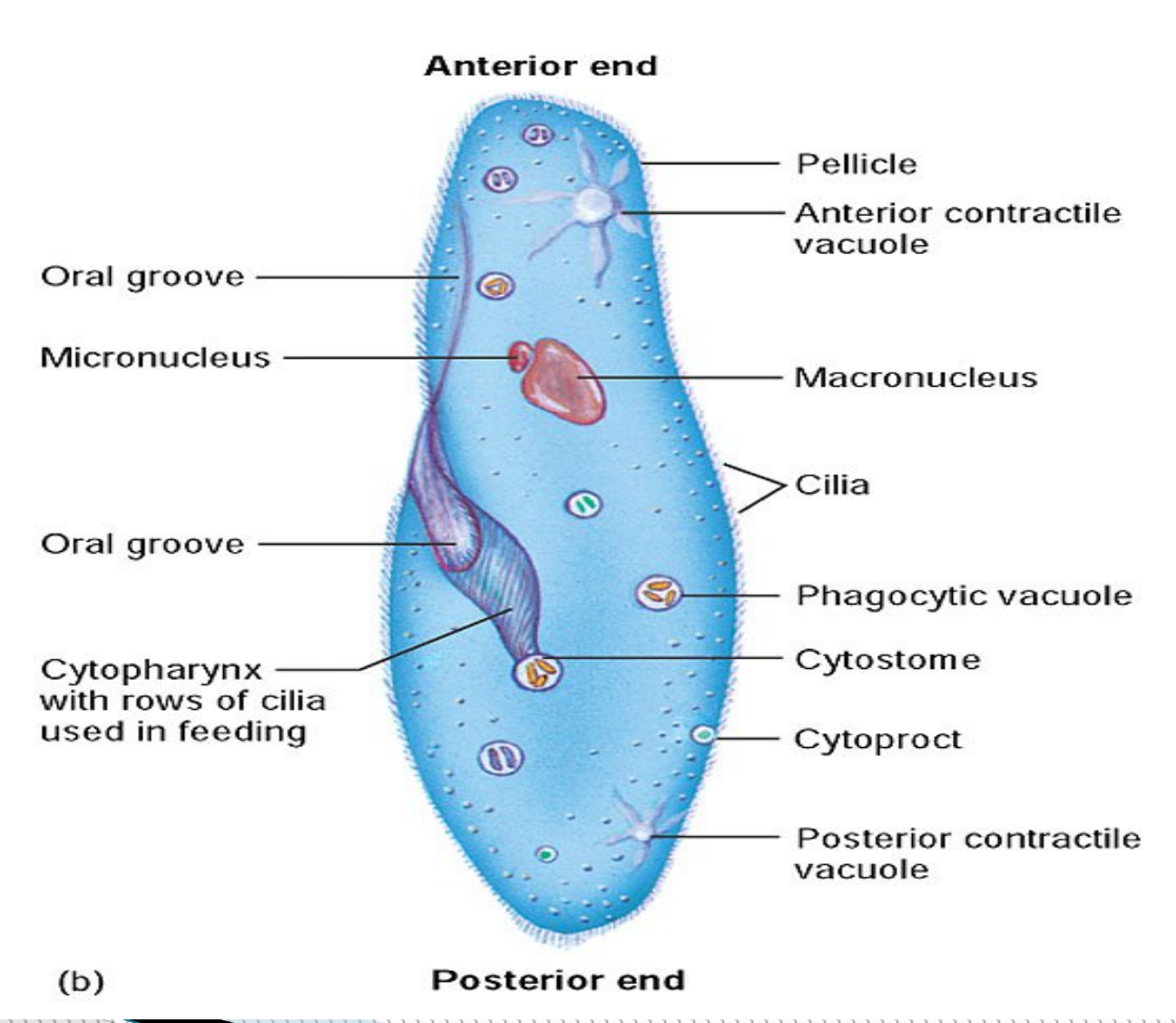
PARAMECIUM

- *Paramecium is a small unicellular organism.*

- *It is plentiful in freshwater ponds.*



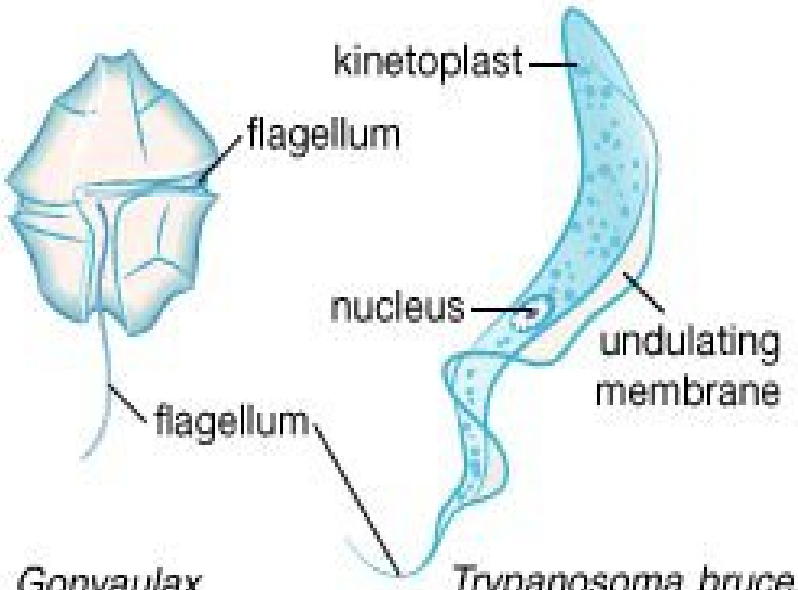
STRUCTURE


Anterior end
Pellicle
Anterior contractile vacuole
Oral groove
Micronucleus
Macronucleus
Cilia
Oral groove
Phagocytic vacuole
Cytopharynx with rows of cilia used in feeding
Cytostome
Cytoproct
Posterior contractile vacuole
(b)
Posterior end

Position Of Protists In The Prokaryotic Kingdom

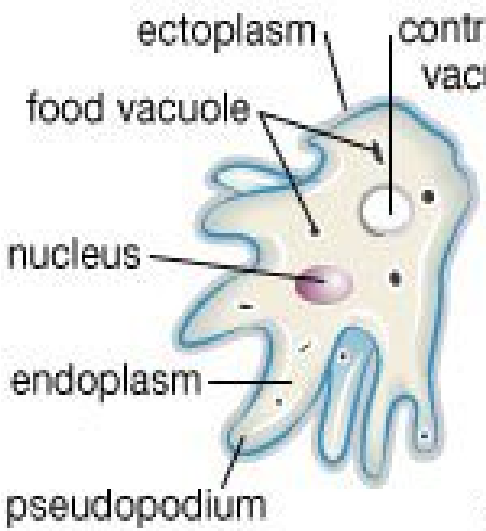
phylum Sarcomastigophora

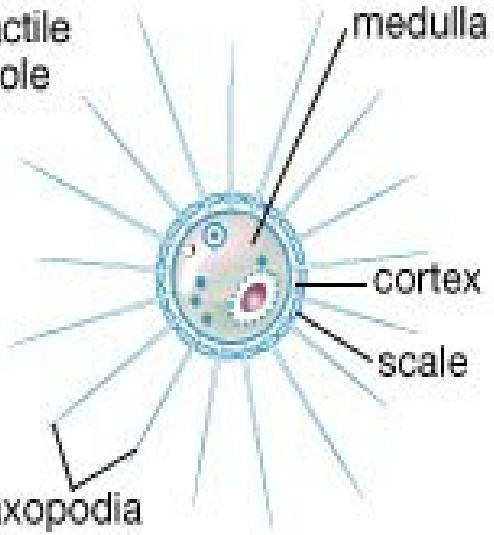
subphylum Mastigophora



Gonyaulax *Trypanosoma brucei*

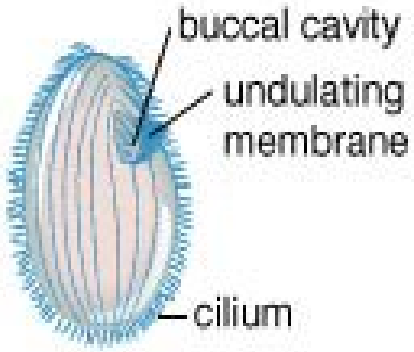
subphylum Sarcodina



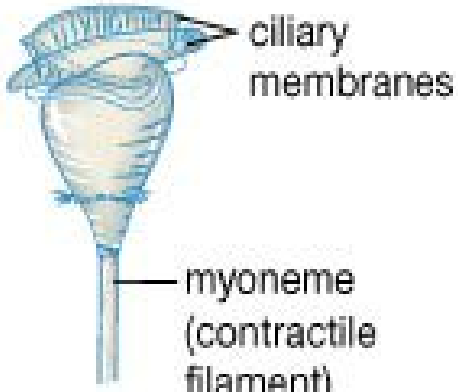


Amoeba proteus *Pinaciophora*

phylum Ciliophora

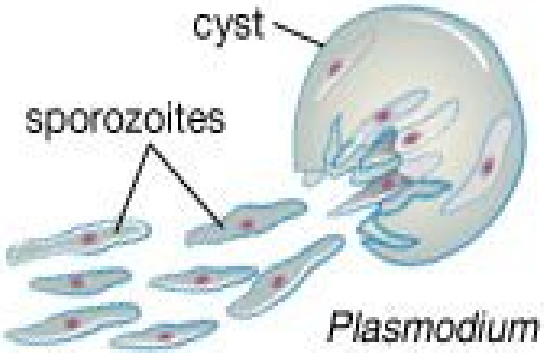


Tetrahymena



Vorticella

phylum Apicomplexa

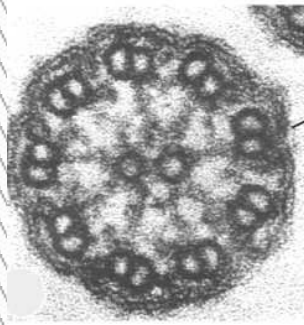


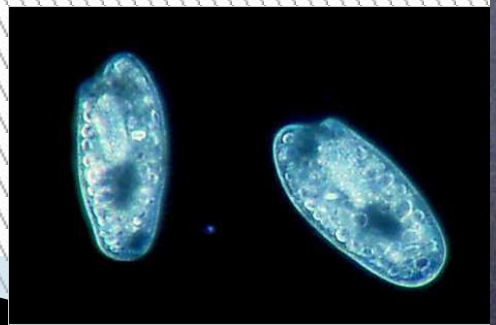
Plasmodium falciparum
class Sporozoa

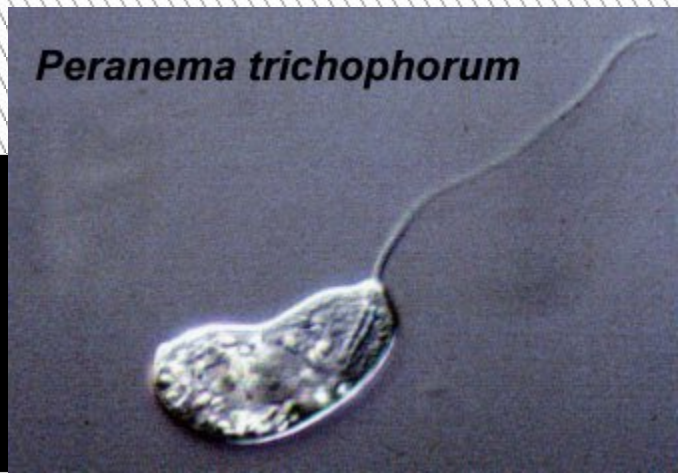
Classification

- Classified by method of locomotion
- Mastigophora – have one or more flagella
  - Have a flagella with a 9–2 microtubule arrangement
  - Flagella are polar & undulates, pushing protozoan in opposite direction
  - Longitudinal reproduction

i.e. Peranema, Chilomonas

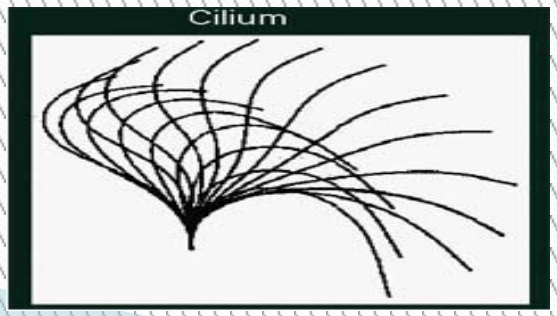


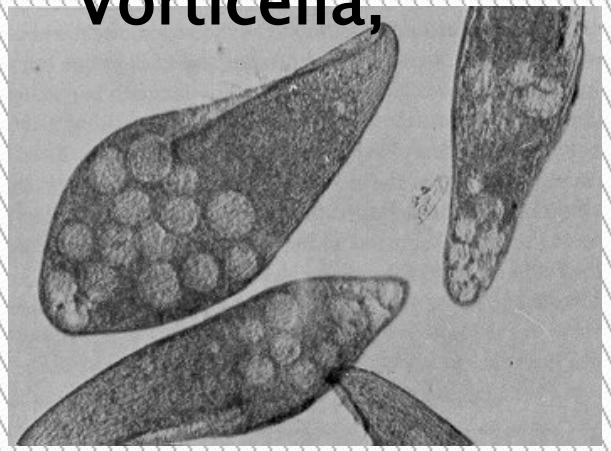




Ciliata (Ciliophora)

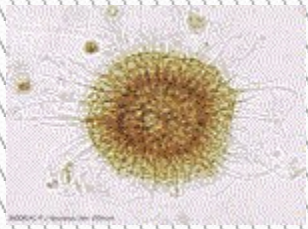
- Have cilia.
- Similar in structure to flagella but shorter and all over surface of organisms
- Cilia usually arranged in rows & connected to each other
- Cilia near oral cavity involved w/ food getting
- Transverse fission, & sexual repro by conjugation I.e – Paramecium, Didinium, Blepharisma, Vorticella, Stentor

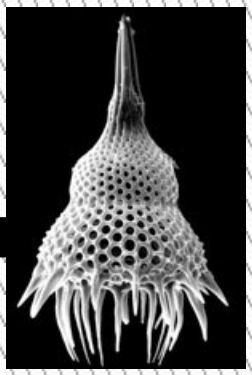




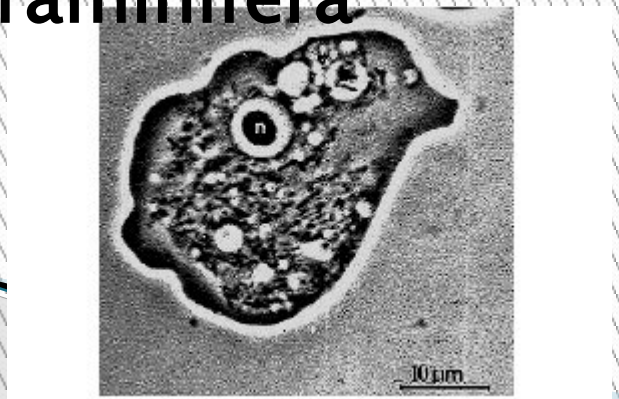
Sarcodina

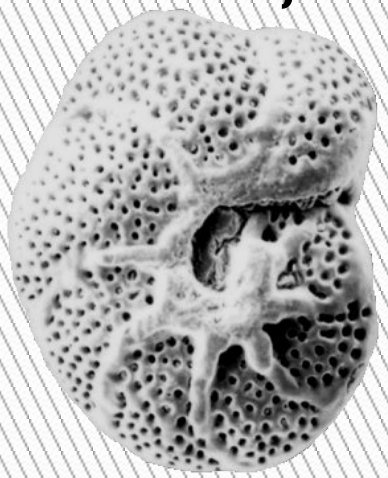
- Use Pseudopods for movement
- Cytoplasmic streaming – amoeboid movement
- Tips of pseudopods are less viscous so flow goes in that direction
- Pseudopods for phagocytosis
- Reproduce by binary fission



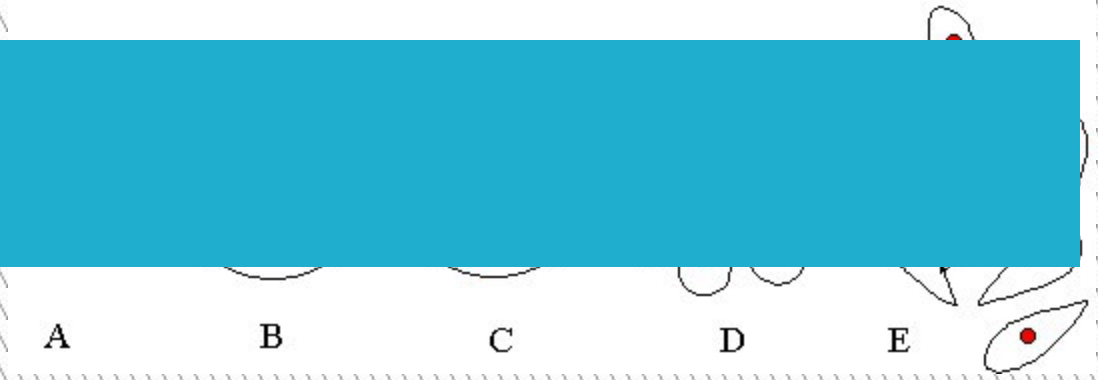


i.e. Amoeba, Naegleria, Heliozoans, Radiola
Foraminifera





Sporozoa



- No method of motility
- All are parasites – use host for motility
- Reproduce by schizogamy (multiple fission) in host & sexual reproduction in a second host
- Ie. *Plasmodium (malaria), Giardia, Toxoplasma, Trypanosoma, Trichomonas*