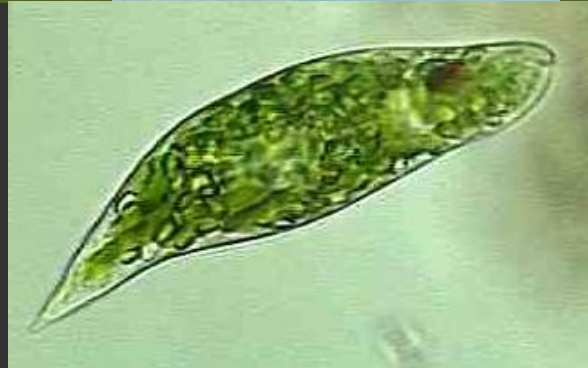


Kingdom Protista

What is a PROTIST ?

The ideas on how to classify a protist are diverse and ever-changing. In a way it may be easier to say that any **EUKARYOTIC** organism that doesn't belong to Kingdoms Fungi, Plantae or Animalia – can be classified as a PROTIST.



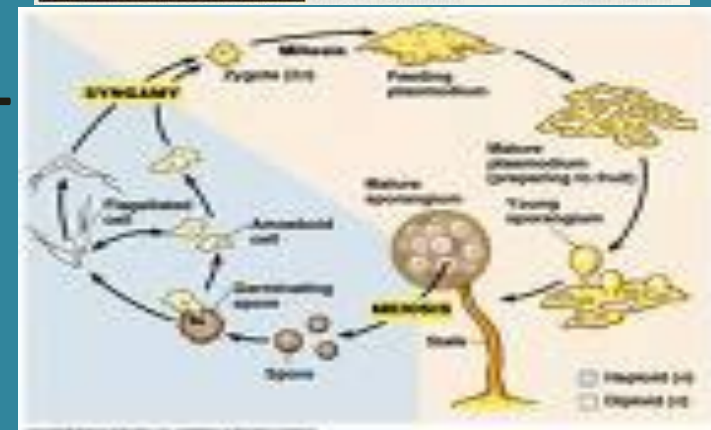
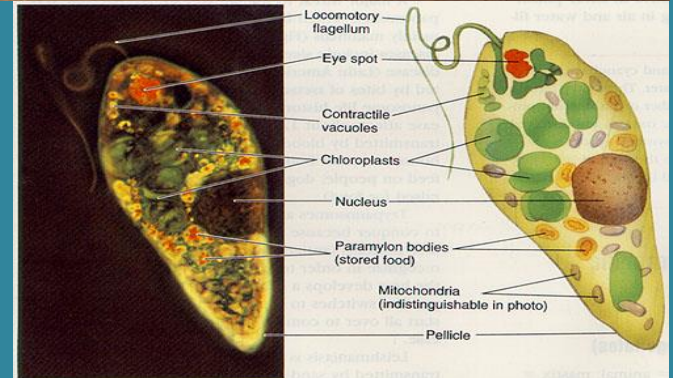
General Definition for Biology 11

- A PROTIST – Is a UNICELLULAR EUKARYOTIC organism.

Some are animal like, in that they are HETEROTROPHIC and tend to move around.

Others are more plant-like in that they are photosynthetic AUTOTROPHS.

While another group are more fungal-like in that they tend to decompose things and produced fruiting bodies that put out SPORES

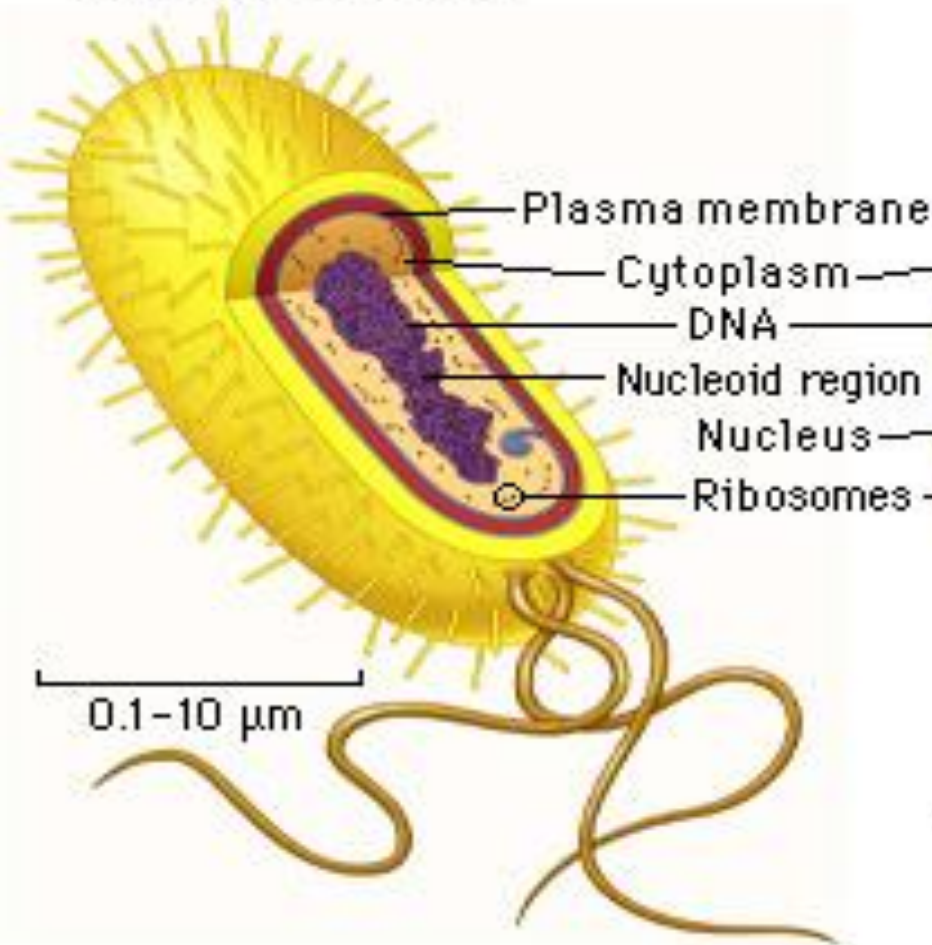


Eukaryotic vs. Prokaryotic

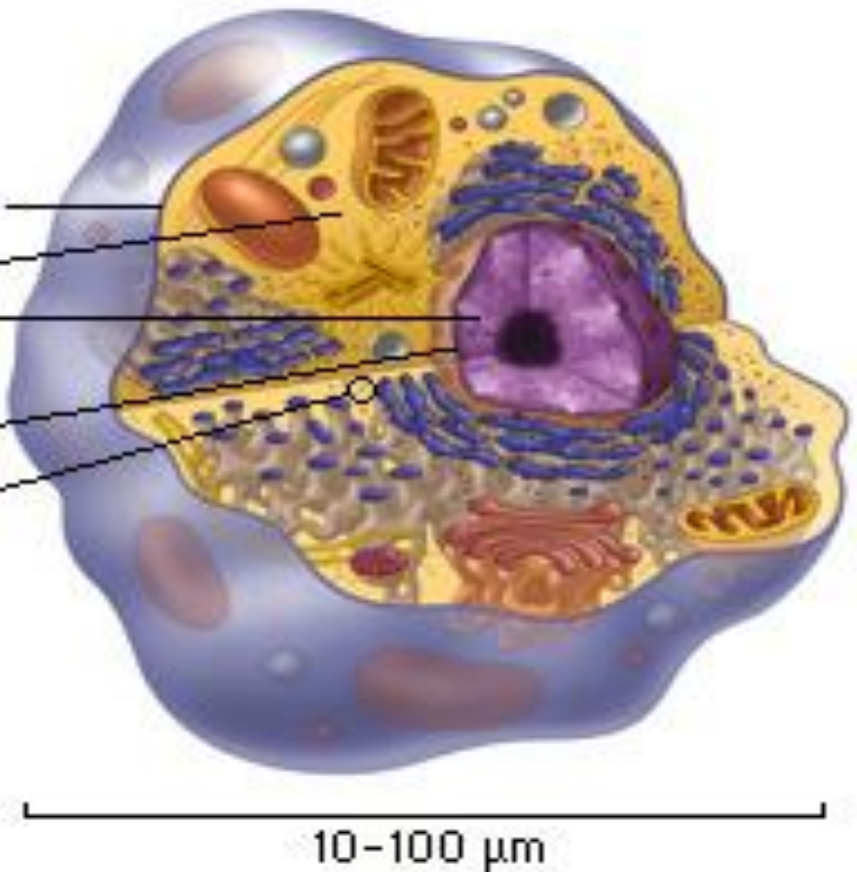
EUKARYOTIC = TRUE KERNEL-LIKE NUCLEUS

PROKARYOTIC = BEFORE KERNEL-LIKE NUCLEUS

Prokaryotic cell

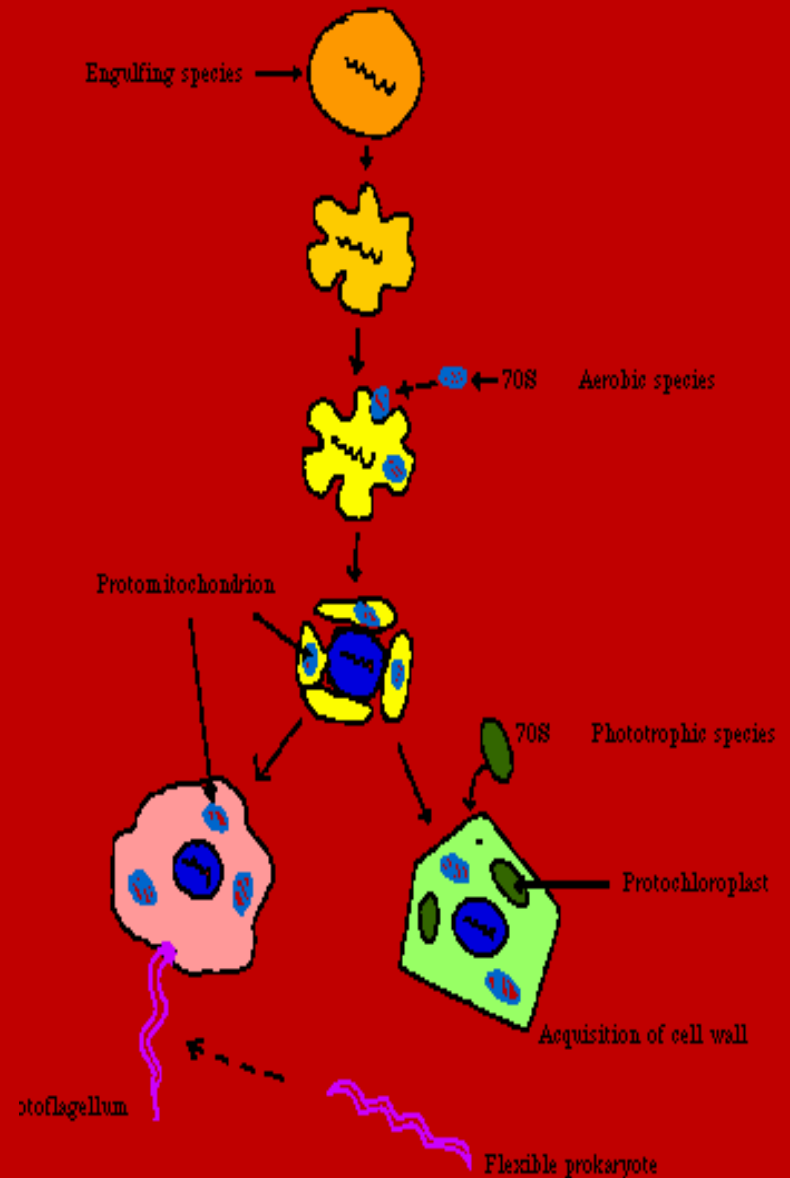


Eukaryotic cell



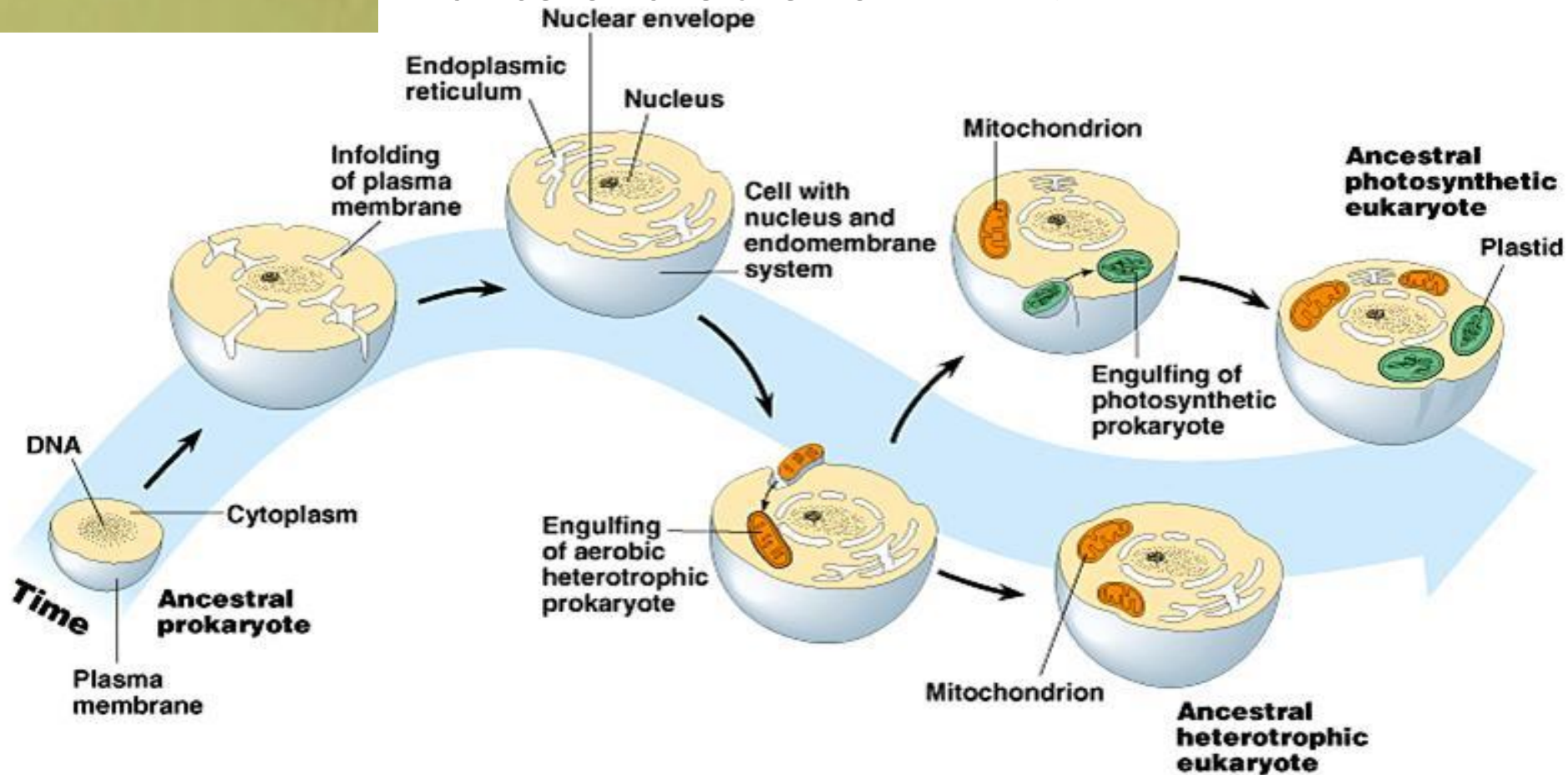
ENDOSYMBIONT HYPOTHESIS

According to the fossil record - Prokaryotic organisms (bacteria) have been around about 3.5 billion years; while, Eukaryotic organisms (protists) have only been around about 1.5 billion years. So where did Eukaryotic cells come from? One theory states that a variety of prokaryotic cells formed symbiotic relationships between each other and they gathered into one another.





- One specific organism called *Cyanophora paradoxa*. It is a eukaryotic plant-like protist, but inside its cell it possesses Blue-Green Bacteria growing inside of it instead of chloroplast organelles. Also mitochondria in all cells have their own DNA.



The Animal-Like Protists – “PROTOZOA”

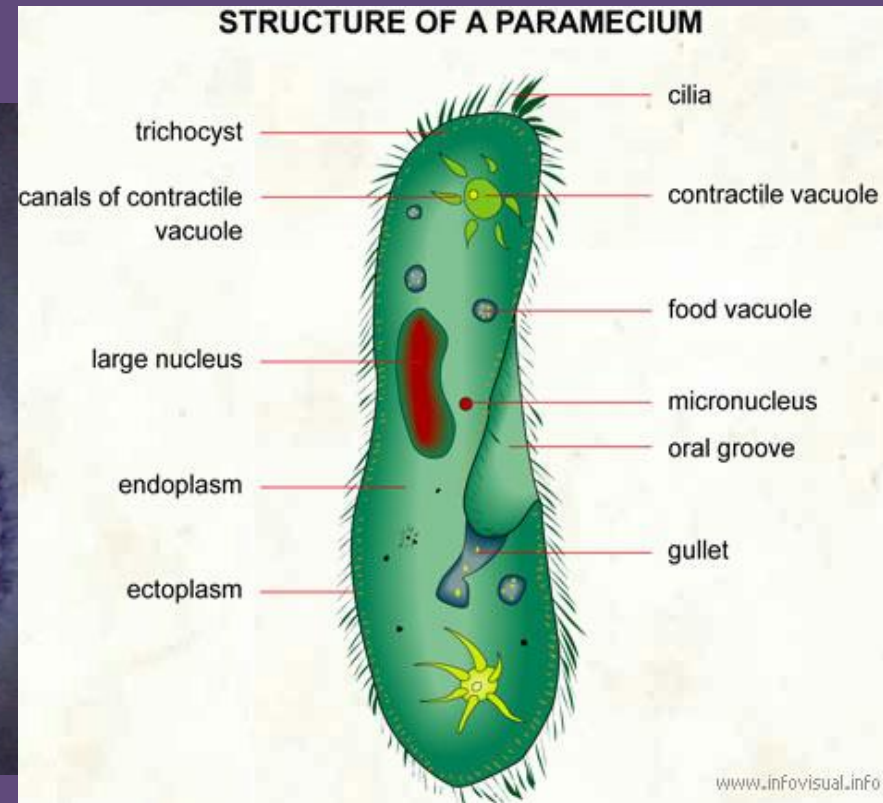
Sometimes referred to as “PROTOZOA” = First Animal. They are classified primarily by their means of locomotion.

1. PHYLUM - CILIOPHORA

- As noted in their name. They possess **CILIA** – which they use to move about.

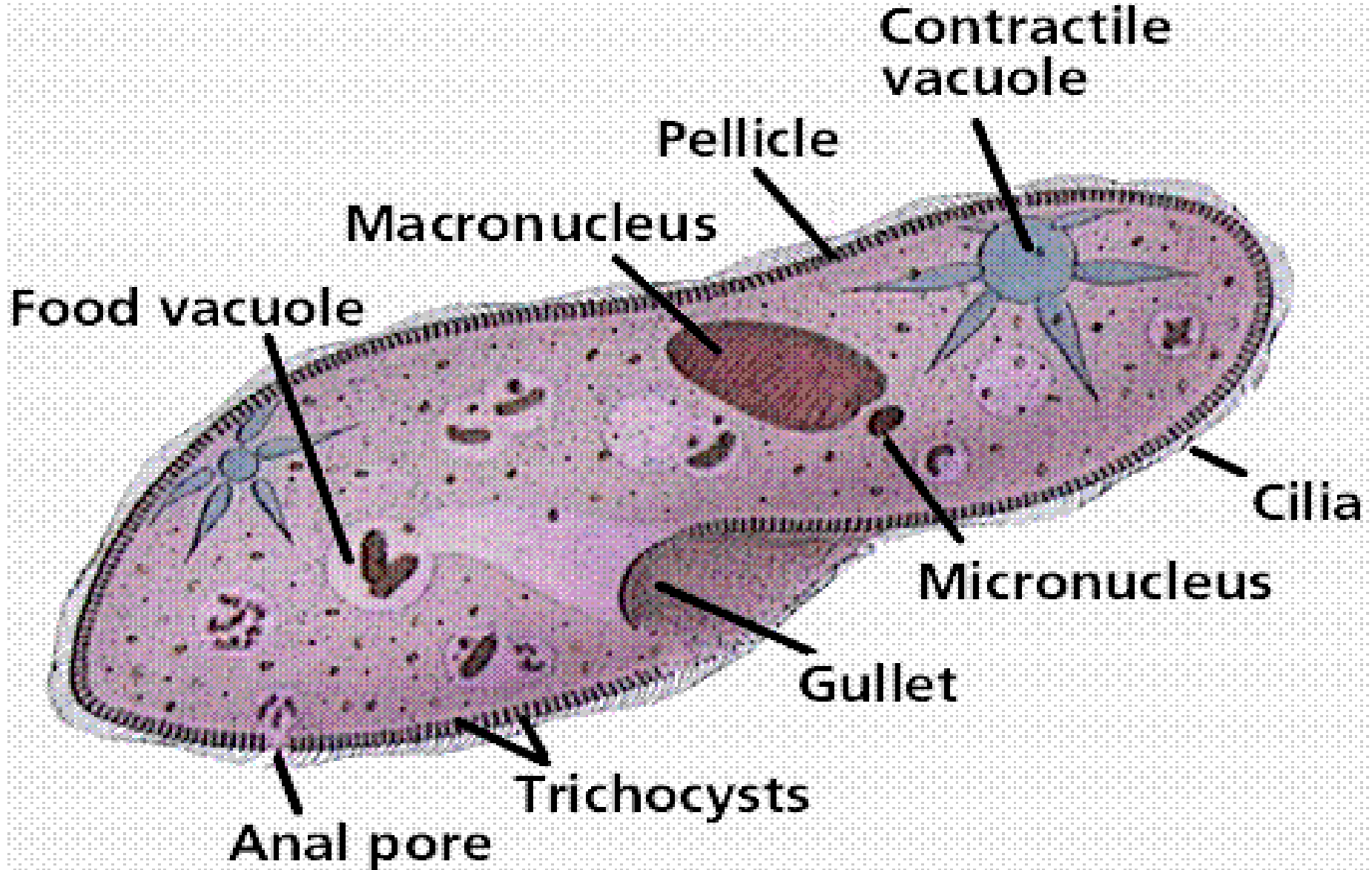


M.J. Walker



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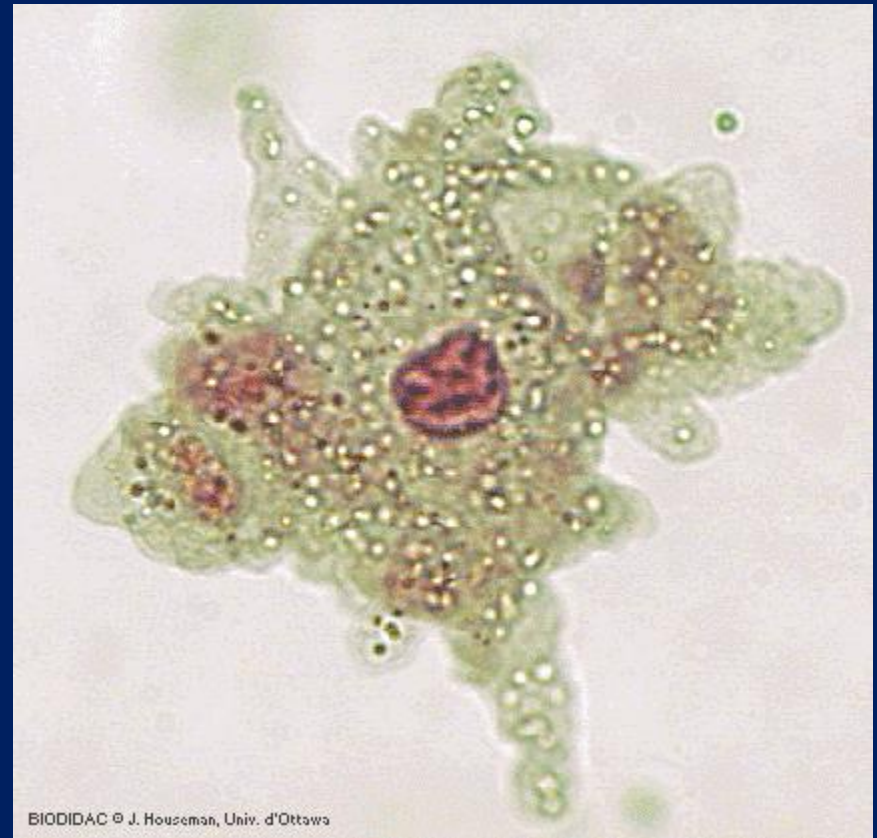
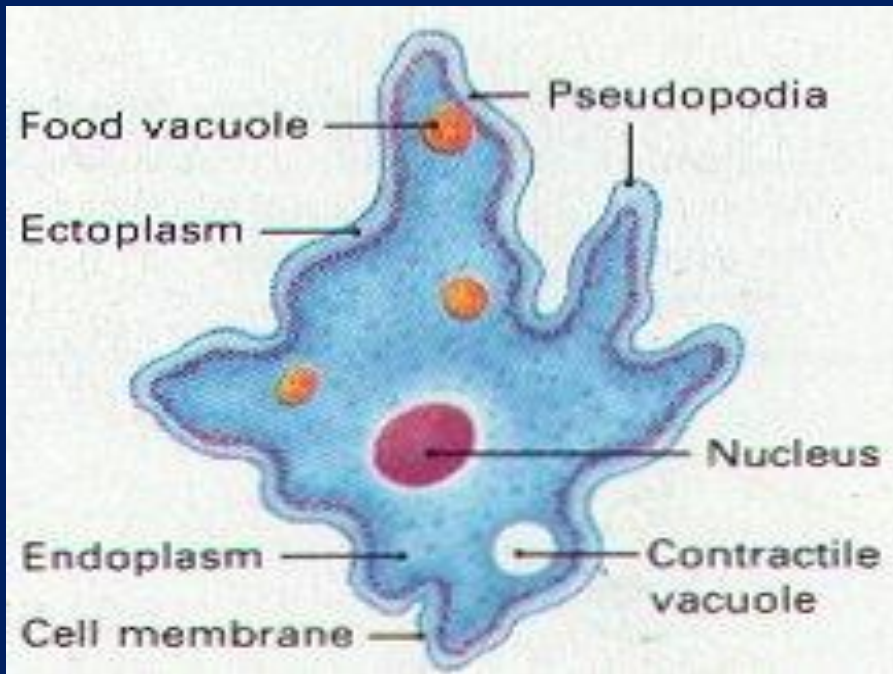
Become One with the PARAMECIUM



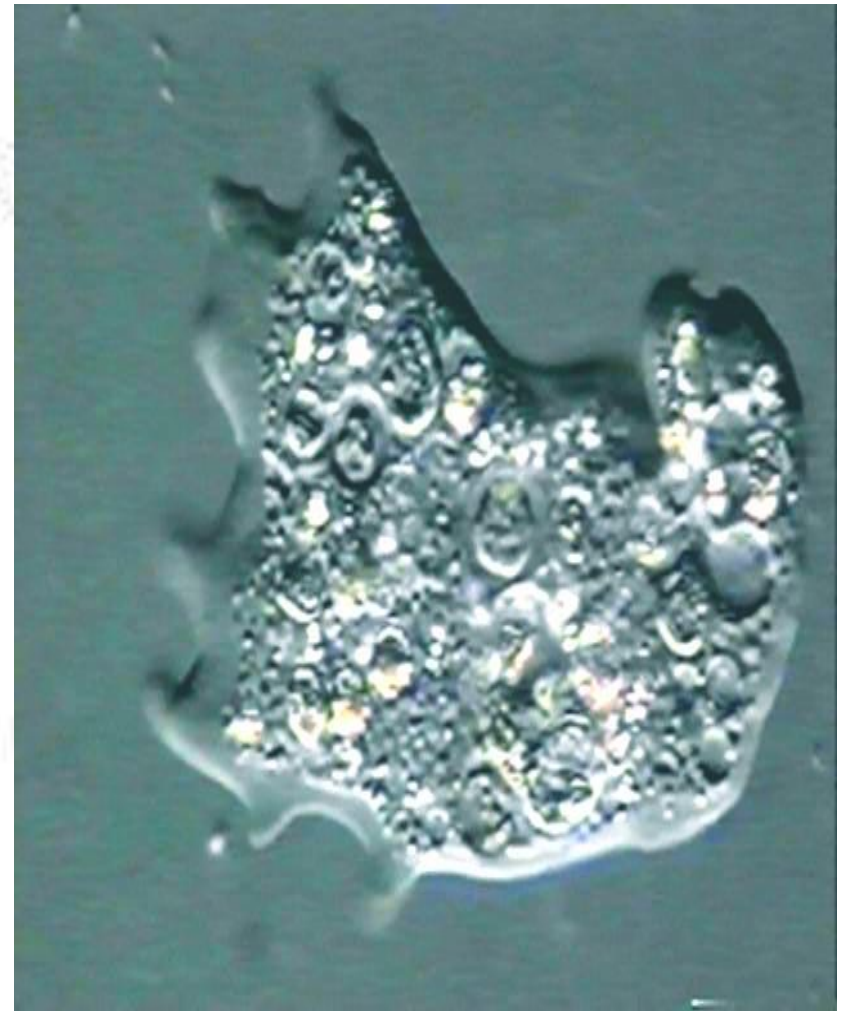
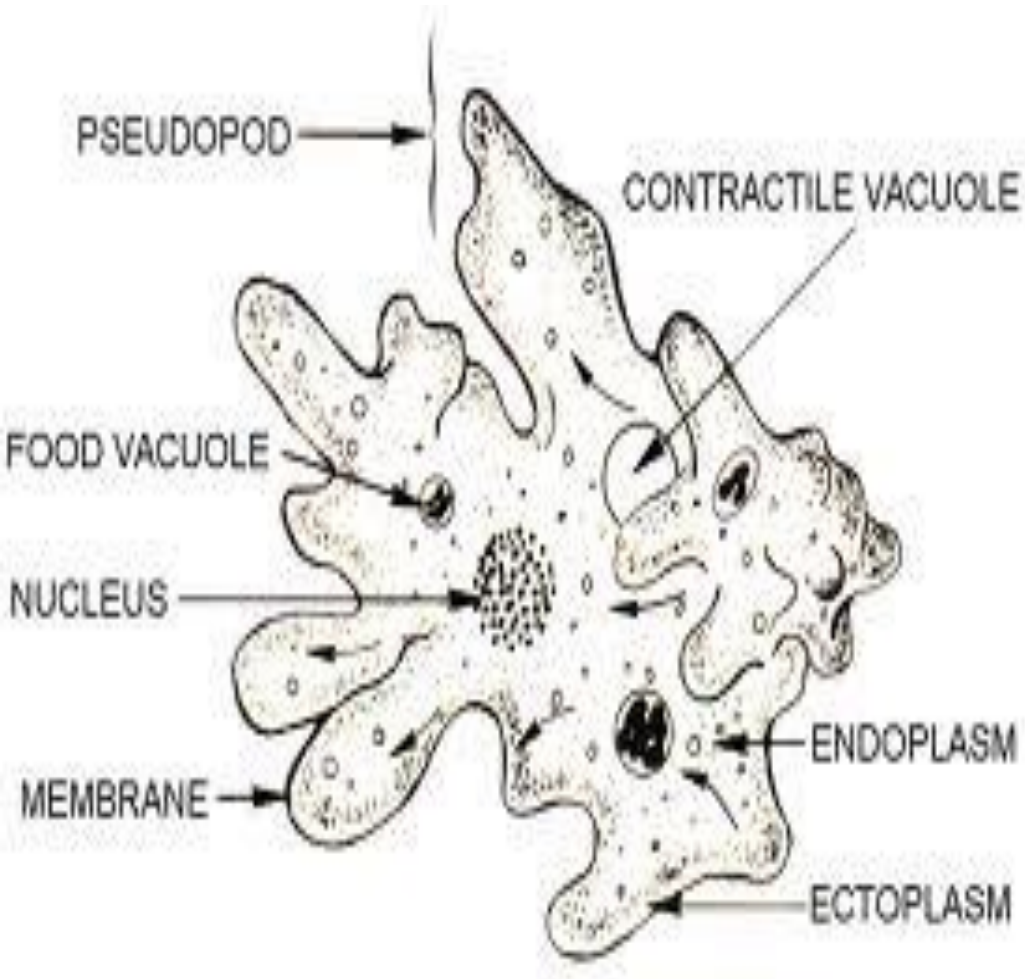
The Animal-Like Protists

2. PHYLUM SARCODINA

The word **SARCODE** = Is Greek for **JELLY**. These protists move around by **blobbing out cytoplasmic extensions**. These extensions are known as **"PSEUDOPODS"** = False Foot



Become one with the AMOEBA



<http://www.youtube.com/watch?v=W6rnhiMxtKU>

The Animal-Like Protists

3. PHYLUM ZOOMASTIGINA

- Members of this phylum use one or more Flagella to move around. In the name the root "ZOO" means animal. If you went to a Zoo, you would find lots of animals, most of which possess a tail.



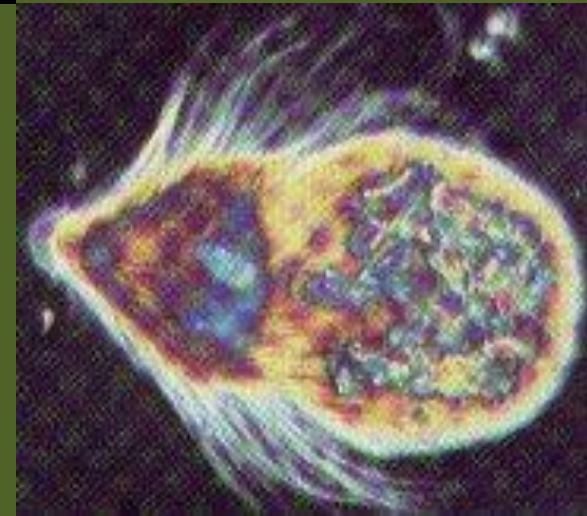
TRYPANASOMA = African Sleeping Sickness



**GIARDIA = "Beaver Fever"
Gastrointestinal Disease**



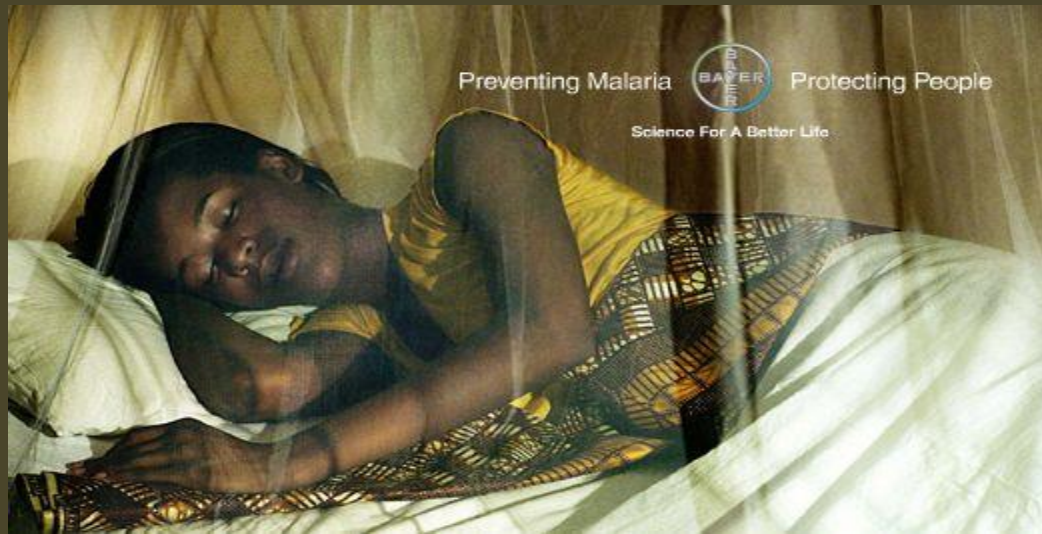
**TRYCHONYMPHA =
Inside Termite Gut**



Animal-Like Protists

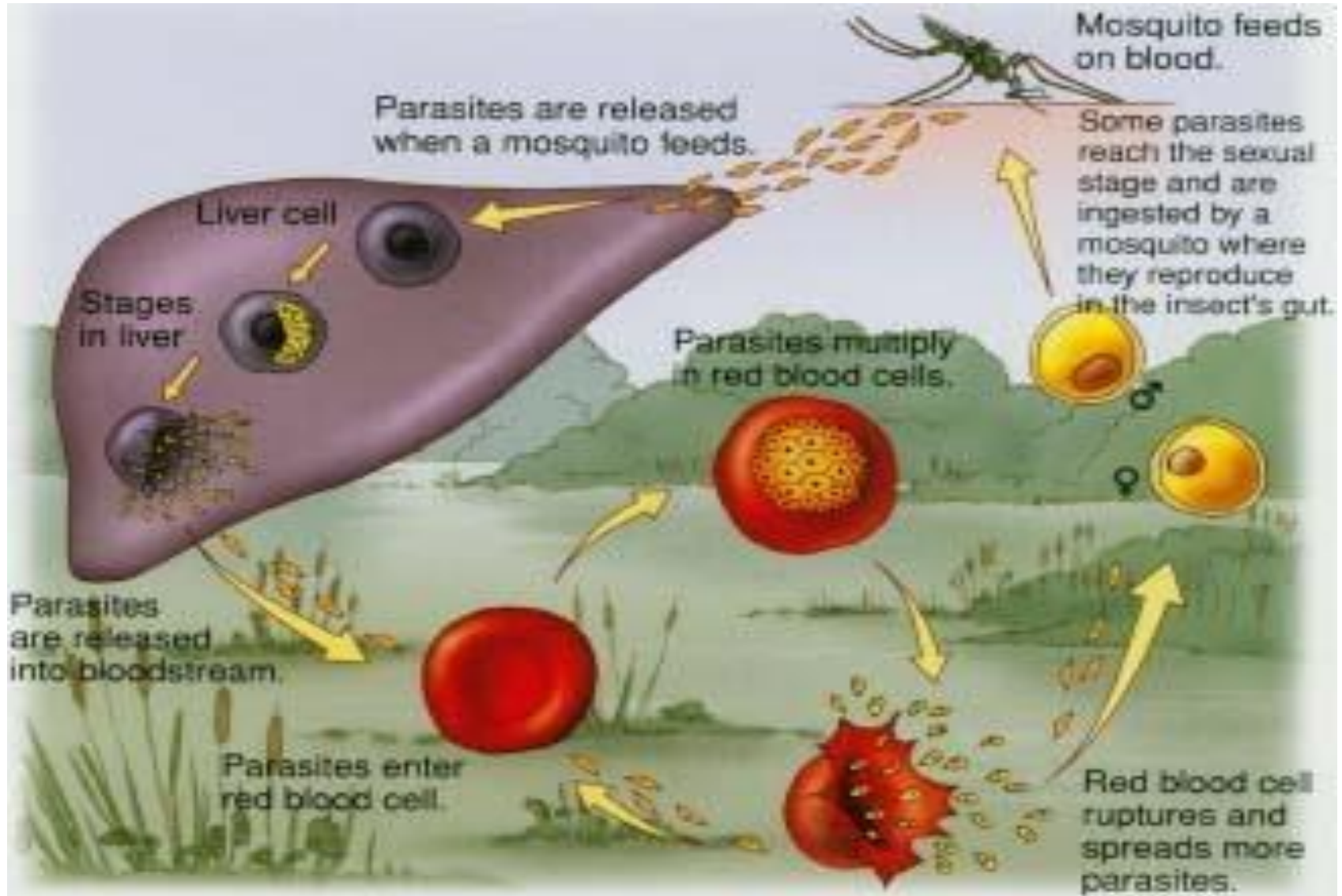
4. PHYLUM SPOROZOA

- This last group that we study is still Heterotrophic like all other animals, but unlike the other groups they have NO ability to move. Most are parasitic and need to get from one host to another. They do this by creating **SPORES** that can travel through bodily fluids and water.



Plasmodium vivax = Malaria

The World Health Organization (WHO), in its latest estimate of malaria mortality, has concluded that around 720,000 people died from the disease in 2020. Around 91% of those who died were children in Africa. There were an estimated 247 million cases globally (range: 189–327 million).



So describe a key Characteristic of each:

1.CILIOPHORA

2.ZOOMASTIGINA

3.SPOROZOA

4.SARCODINA

<http://www.youtube.com/watch?v=l9ymaSzcsdY&feature=fvw>

<http://www.youtube.com/watch?v=iwAEsOpvHn0>

Classify Each into their appropriate Phylum

