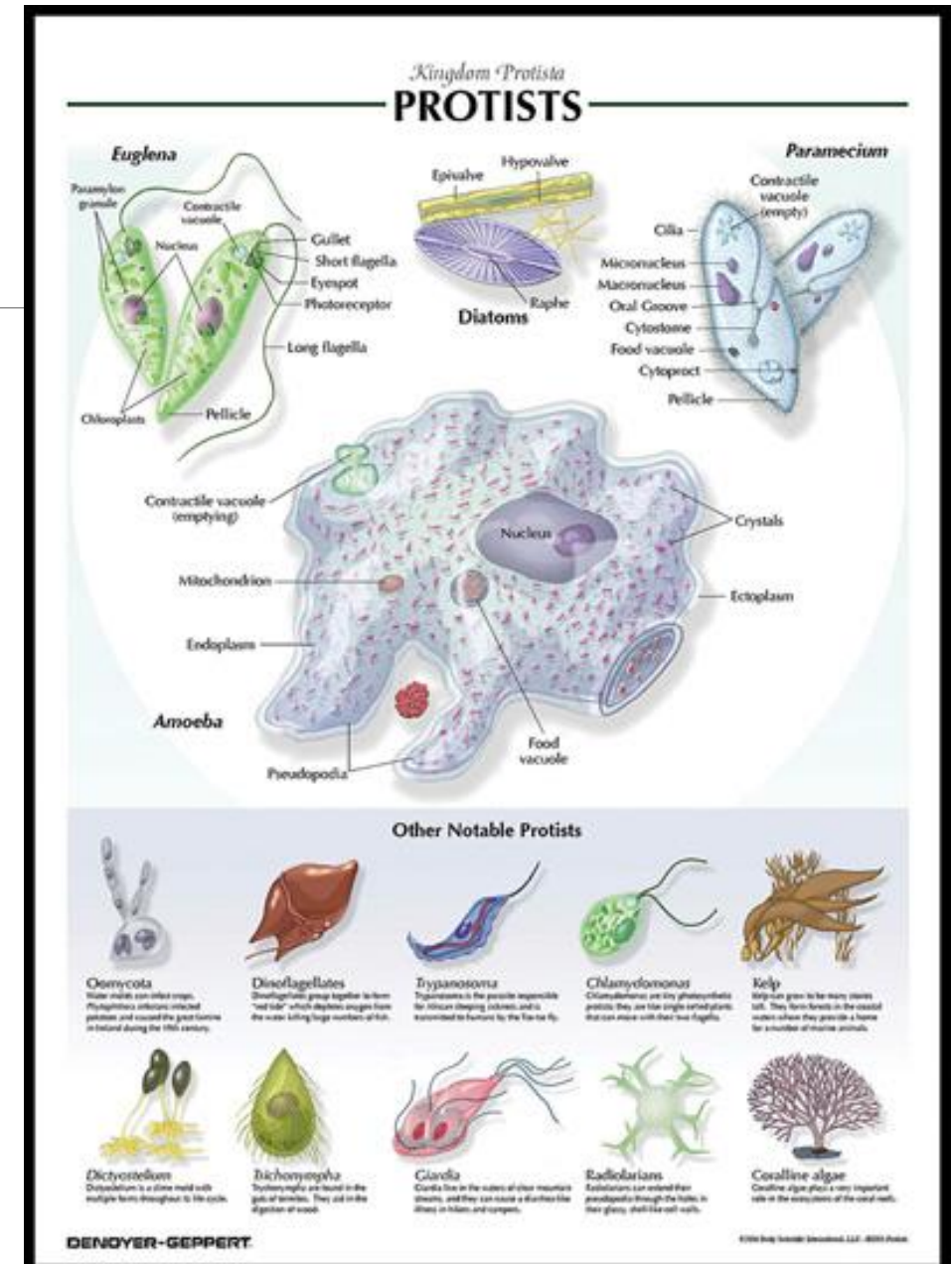


Kingdom Protista

BENILDA RAMOS-BUTRON

Introduction

- Kingdom is artificial
- May be algaelike, animallike, funguslike
- Unicellular or multicellular



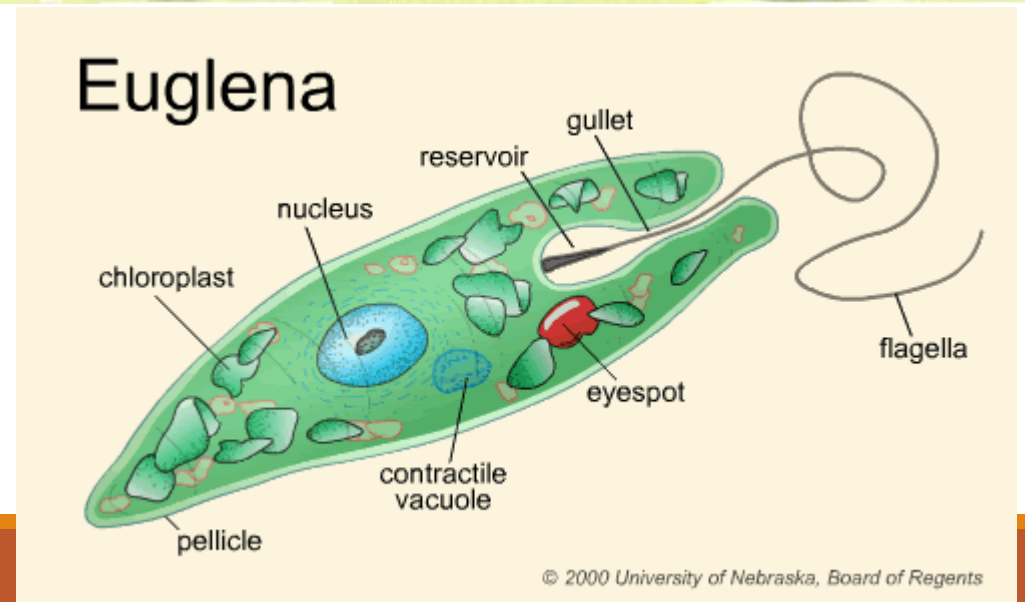
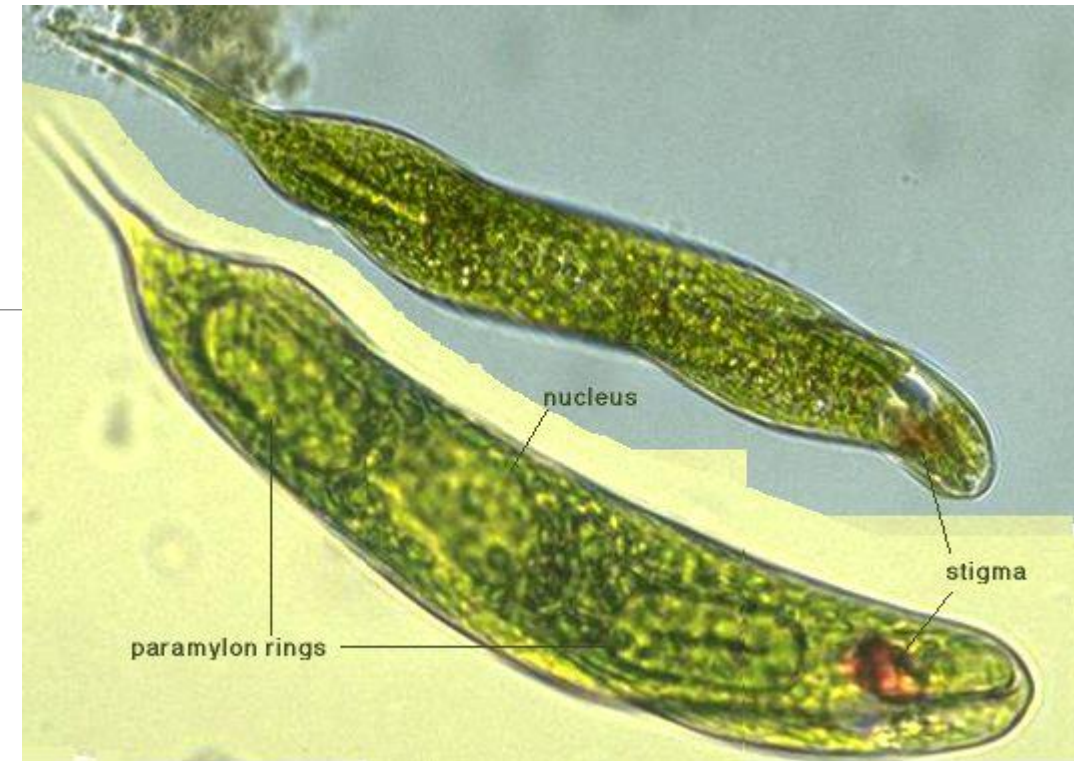
Algae-like (or Plant-like)

- Obtain their energy from photosynthesis
- For classification → chlorophylls and accessory pigments, form of carbohydrates used to store energy, the number of flagella (if present), and the make up of the cell walls

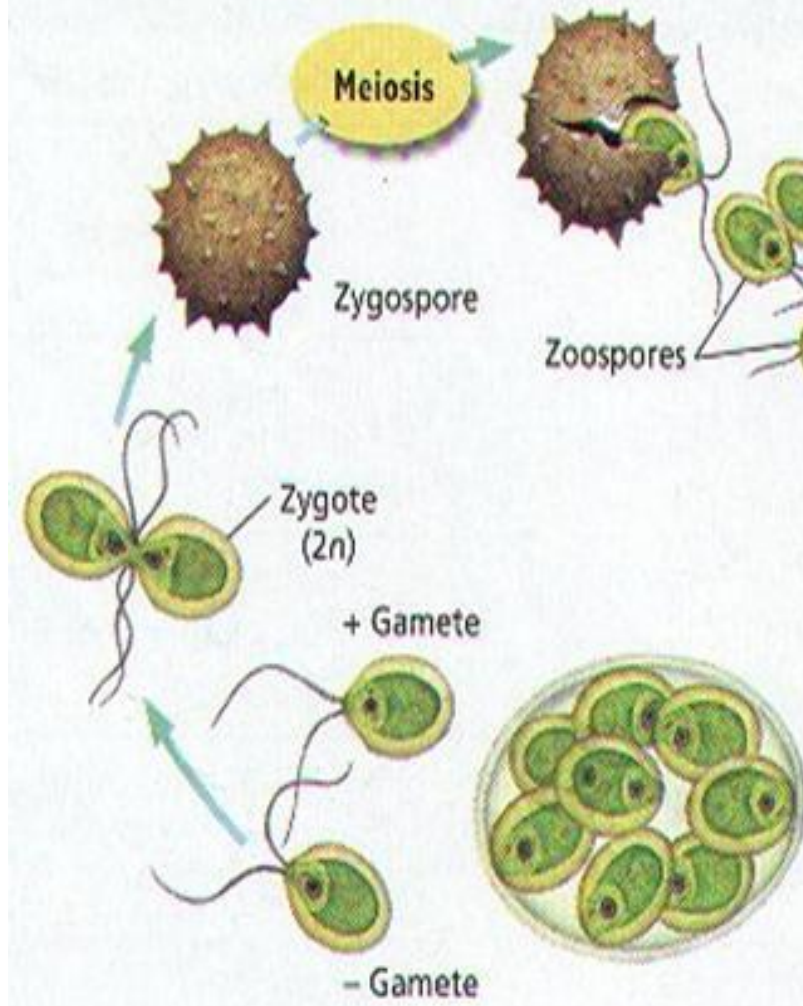
Algae-like (or Plant-like)

Euglenophyta (euglenoids)

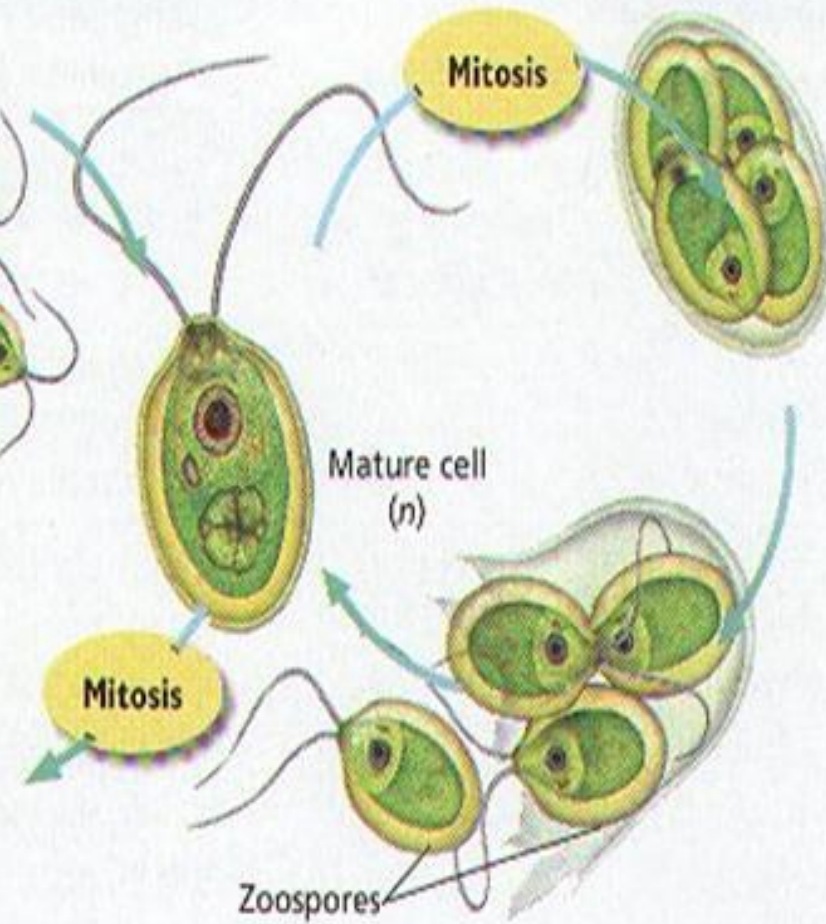
- One to three flagella at their apical end
- Cell walls made up of pellicle
- Can be heterotrophic
- Some with eyespot for phototaxis



SEXUAL REPRODUCTION



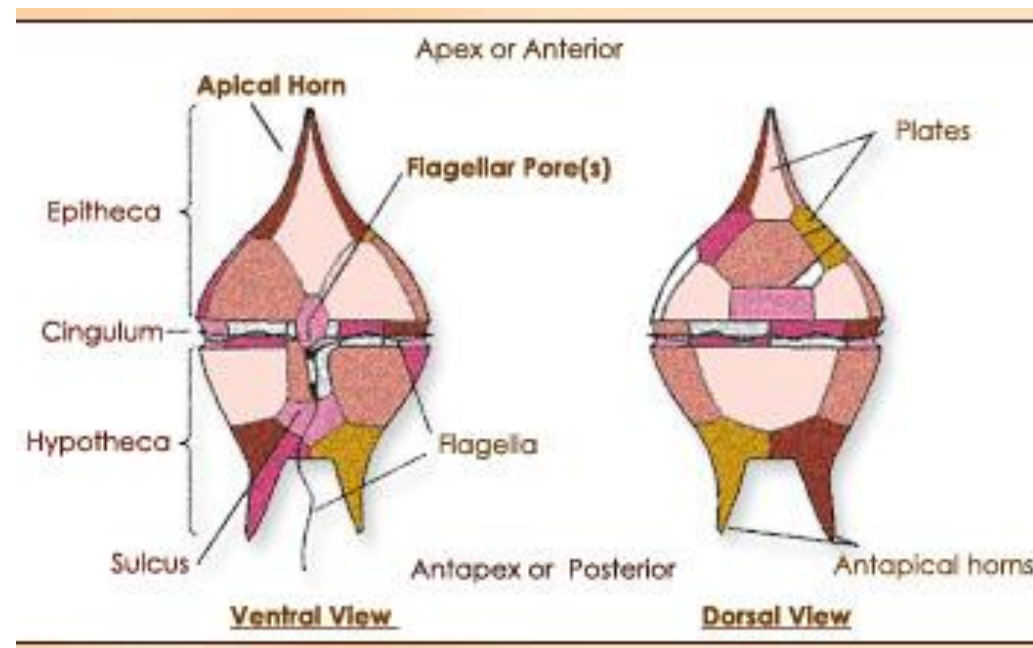
ASEXUAL REPRODUCTION



Algaelike (or Plant-like)

Dinoflagellates

- Have two flagella, posterior and transverse (perpendicular to the first)
- Bioluminescent
- Produce nerve toxins



Algae-like (or Plant-like)

Chrysophyta

- Golden algae
- Golden yellow with one or two apical flagella



Algae-like (or Plant-like)

Bacillariophyta

- Diatoms
- Have tests that contain silica

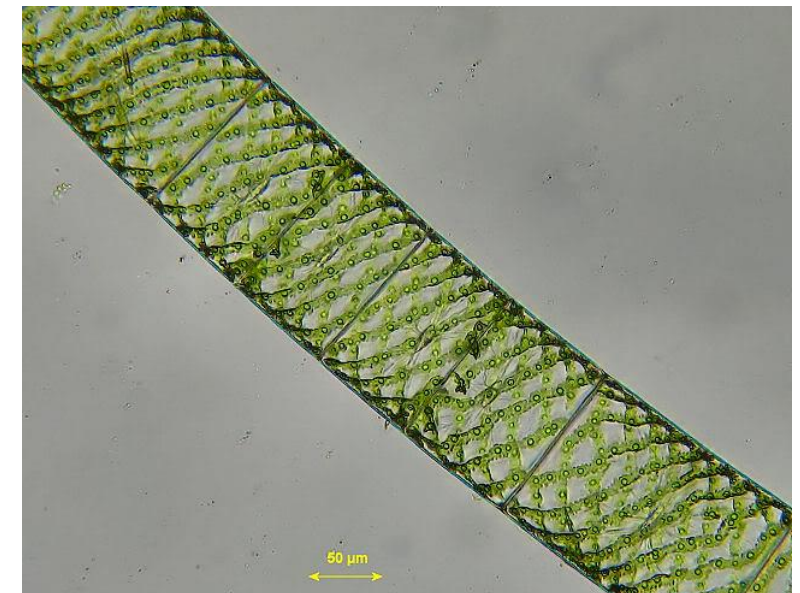
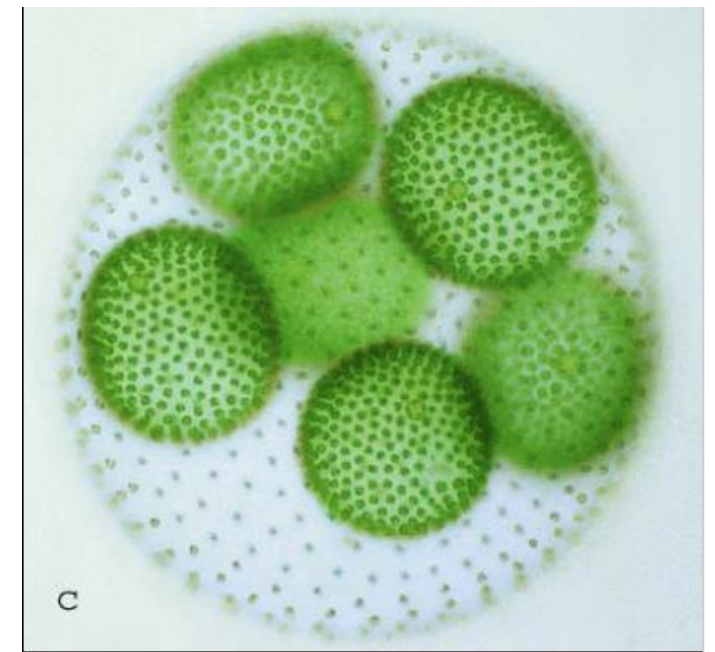
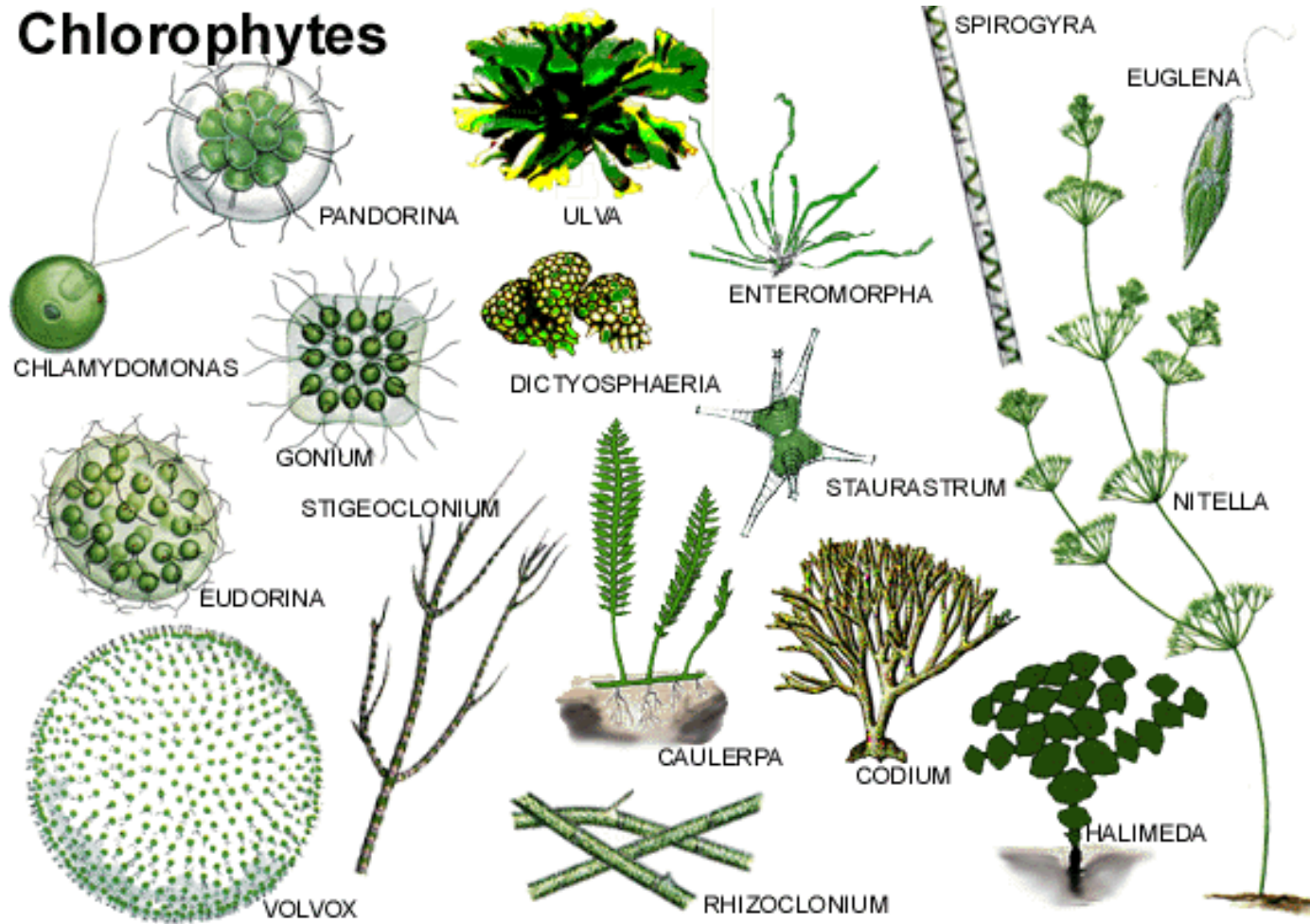


Algae-like (or Plant-like)

Chlorophyta

- Green algae
- Have chlorophyll a and b
- Cellulose cell walls
- Stores carbohydrates as starch
- May have isogamous, anisogamous or oogamous gametes
- Unicellular organisms (Chlamydomonas) to colonies

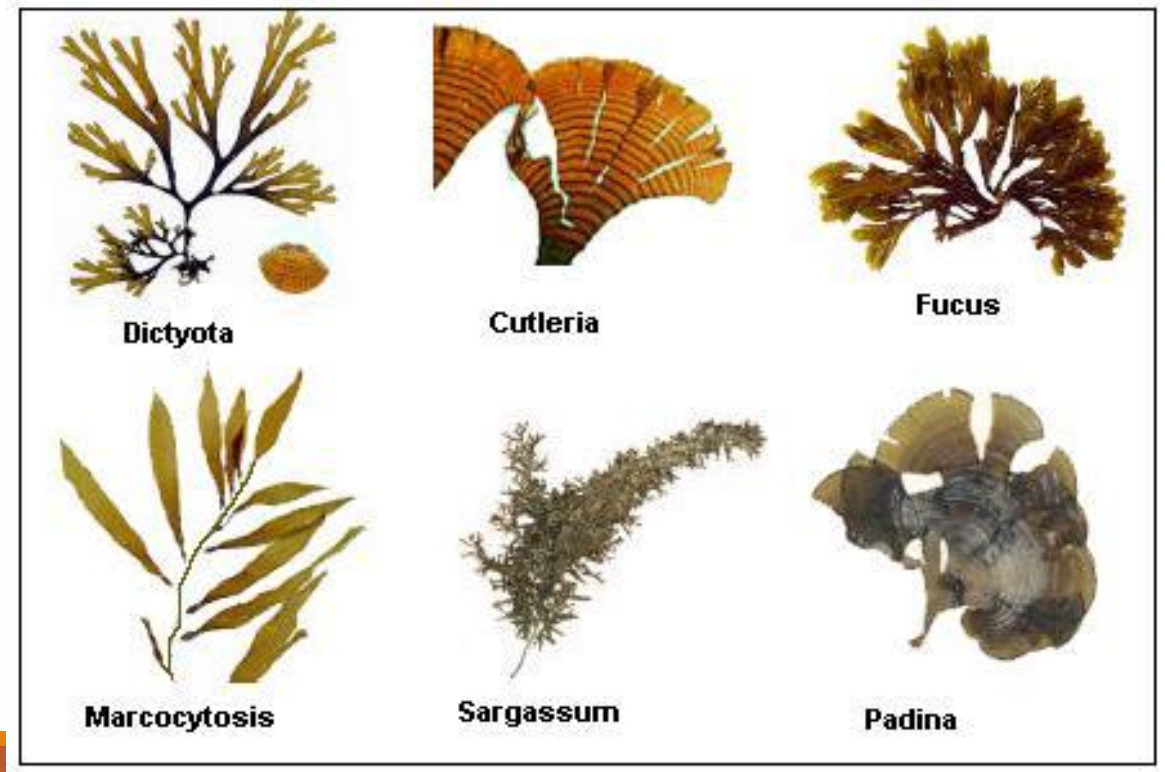
Chlorophytes



Algaelike (or Plant-like)

Phaeophyta

- Brown algae
- Multicellular
- Flagellated sperm
- Examples: giant seaweeds or kelps



Algaelike (or Plant-like)

Rhodophyta

- Red algae
- Contains red accessory pigment (phycobilins)
- Multicellular
- Nonflagellated gametes



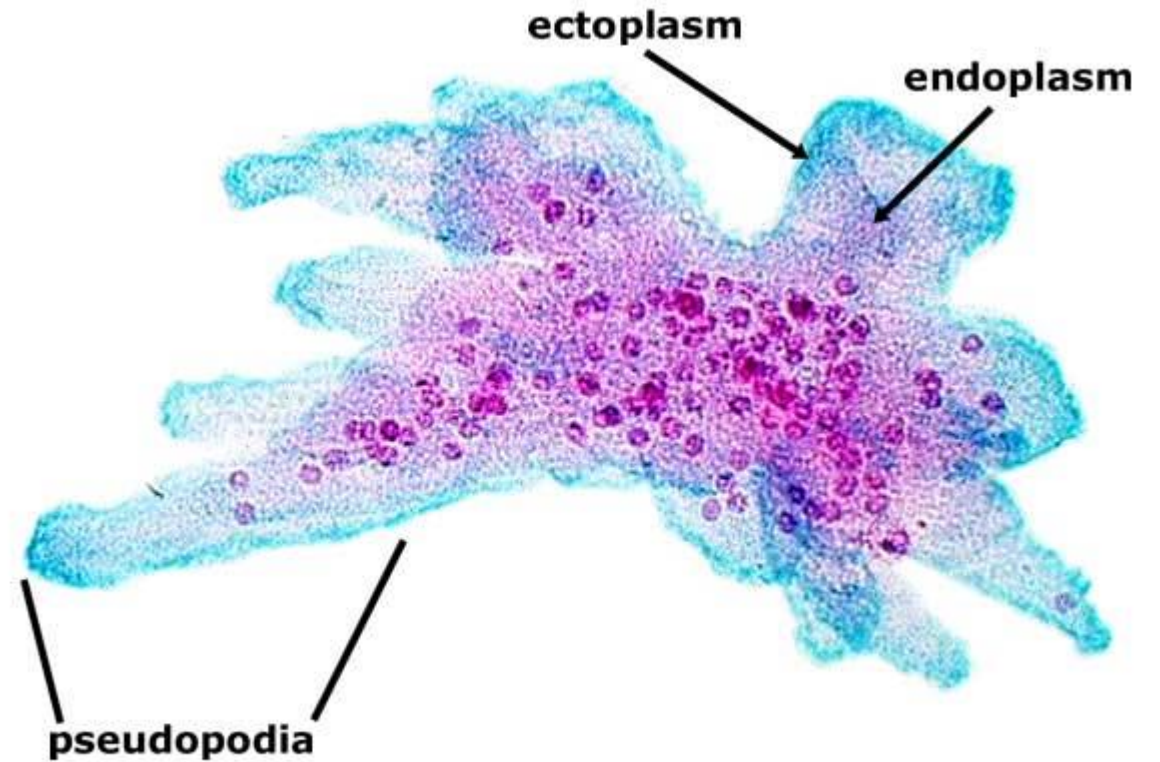
Protozoa (Animal-like)

- Heterotrophs
- Consume either living cells or dead organic matter

Protozoa (Animal-like)

Rhizopoda

- Amoebas
- Moves by pseudopodia
- Absorbs food by phagocytosis



Protozoa (Animal-like)

Foraminifera

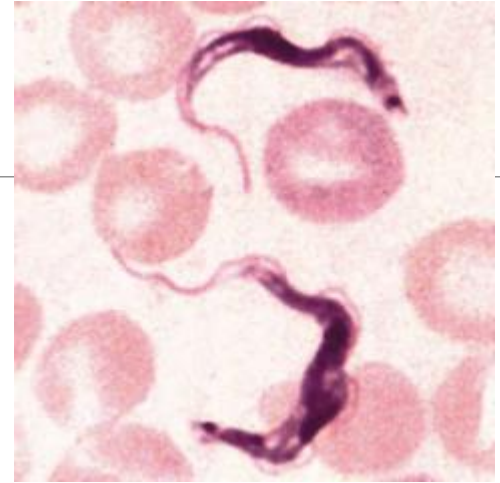
- Forams
- With test of calcium carbonate
- Compose ancient marine sediments



Protozoa (Animal-like)

Zoomastigophora

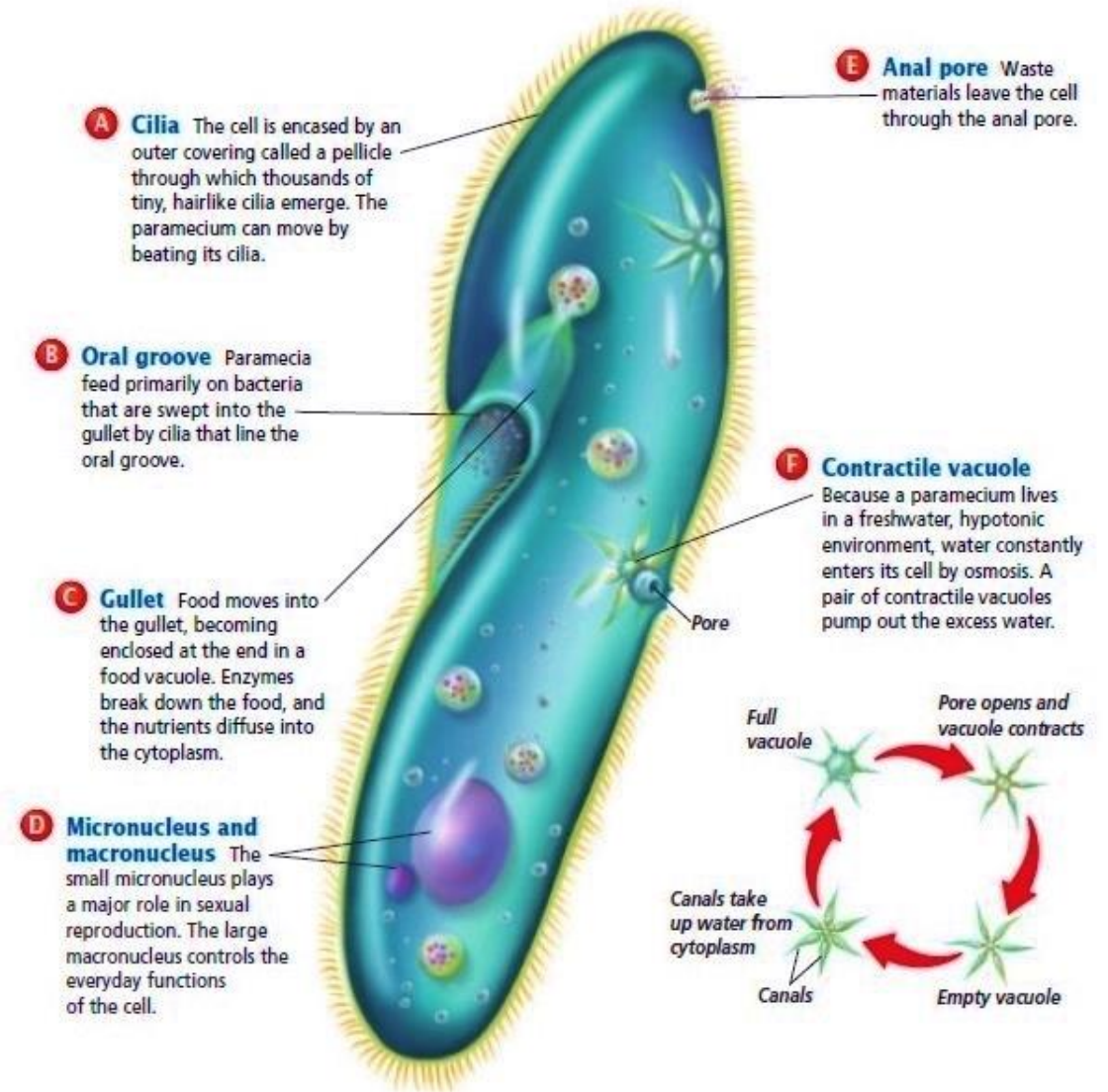
- Zooflagellates, flagellated protozoa
- Found in guts of termites to digest cellulose
- Others are parasite: *Trypanosoma* (African sleeping sickness)

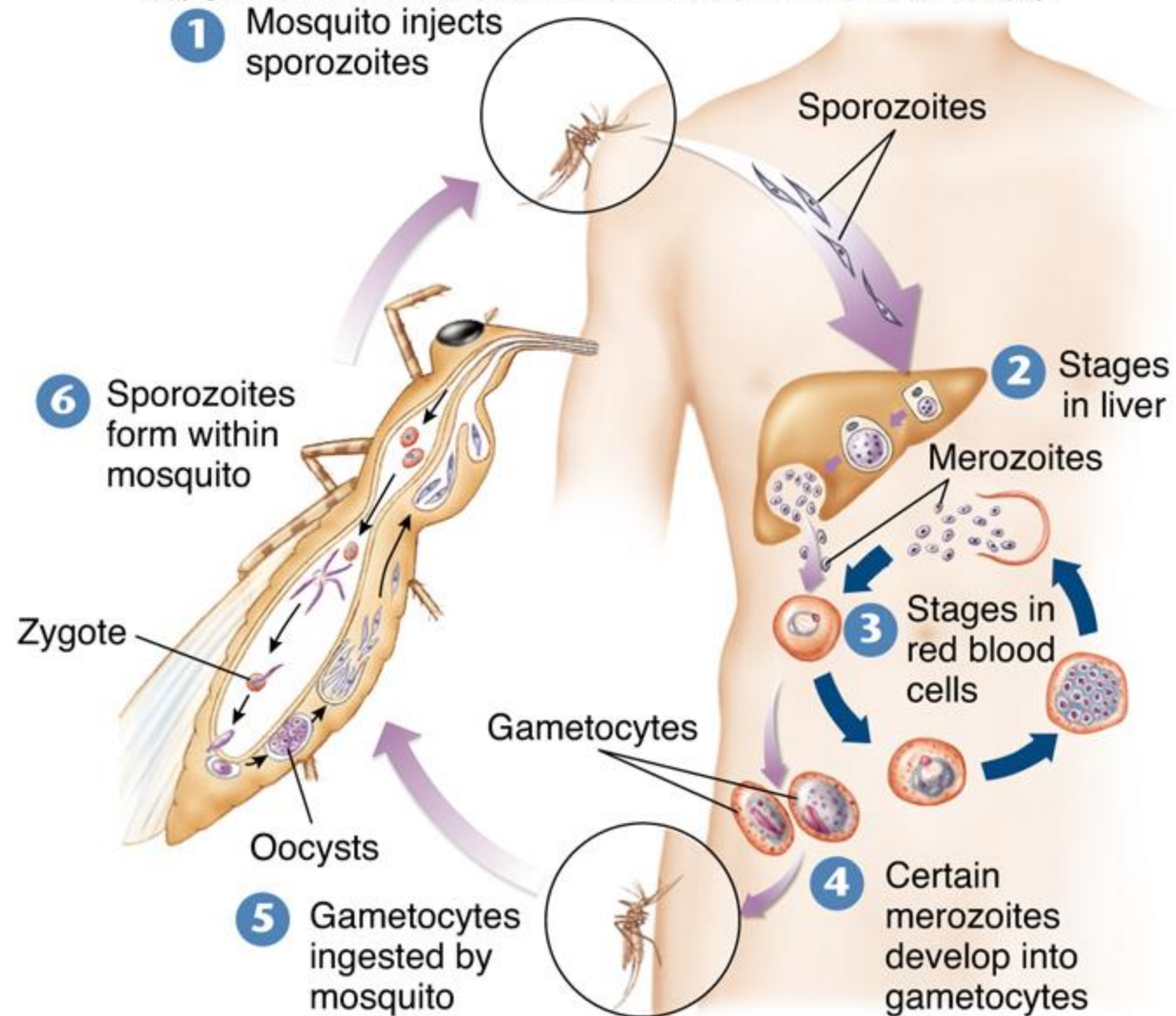


Protozoa (Animal-like)

Sporozoa

- Parasites of animals
- Nonmotile
- Form spores dispersed by one or more hosts
- Causes malaria (*Plasmodium*)

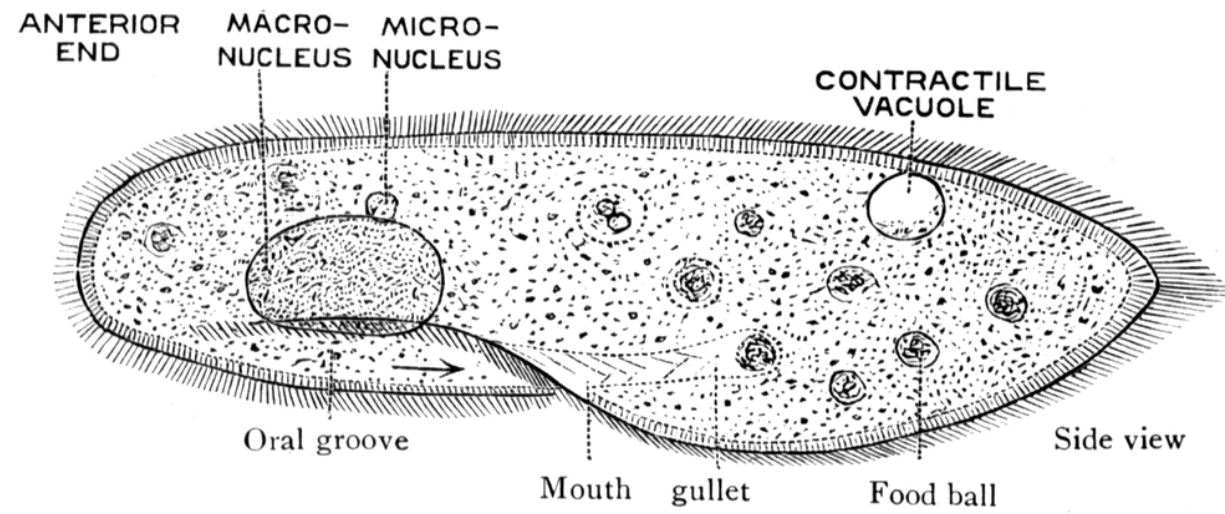




Protozoa (Animal-like)

Ciliophora

- Distinguished by their cilia
- With mouths, anal pores, contractile vacuoles, two kinds of nuclei
- Most complex of all cells
- *Paramecium*



Fungus-like

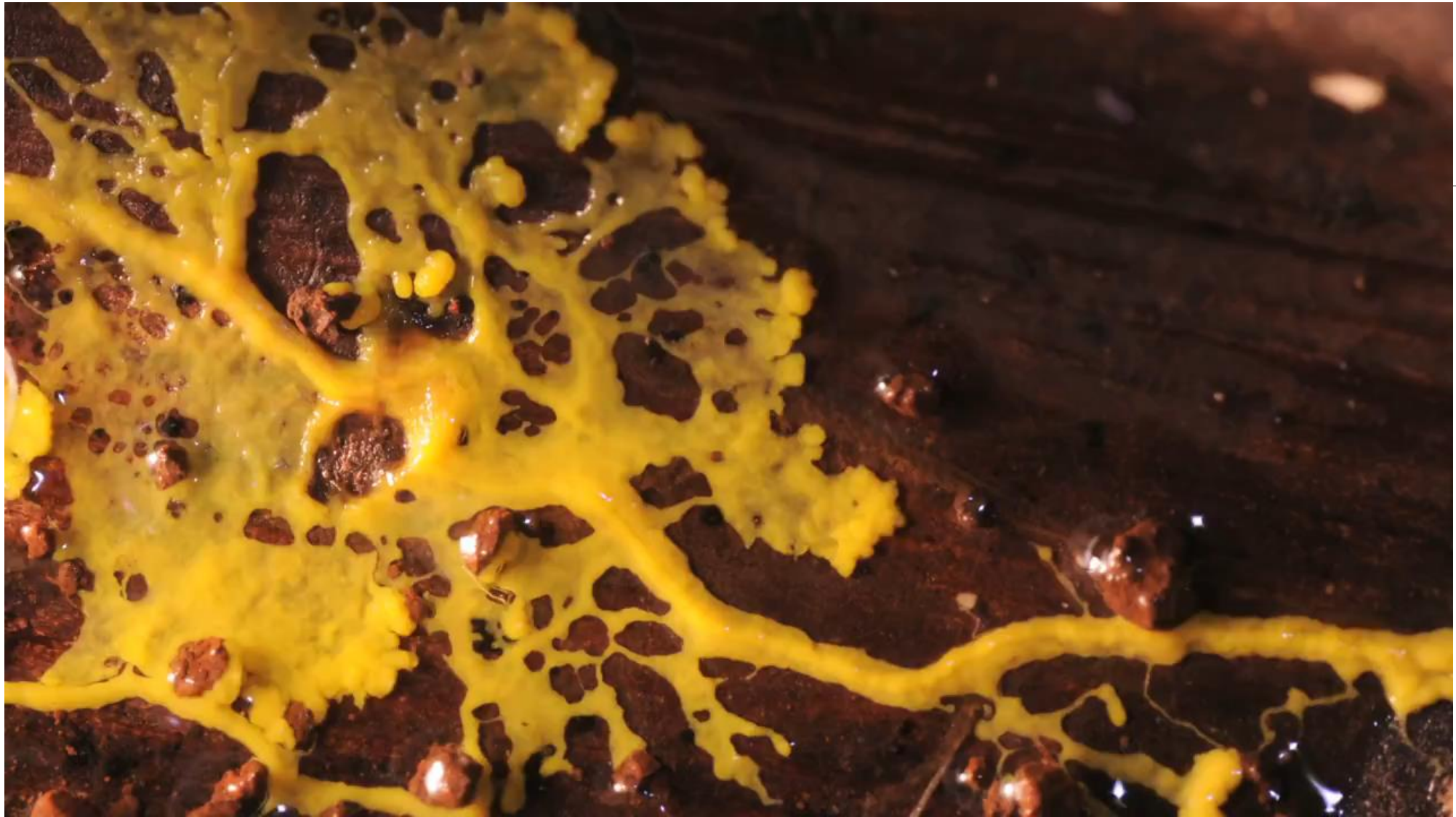
- Form either filaments or spore-bearing bodies similar to the fungi

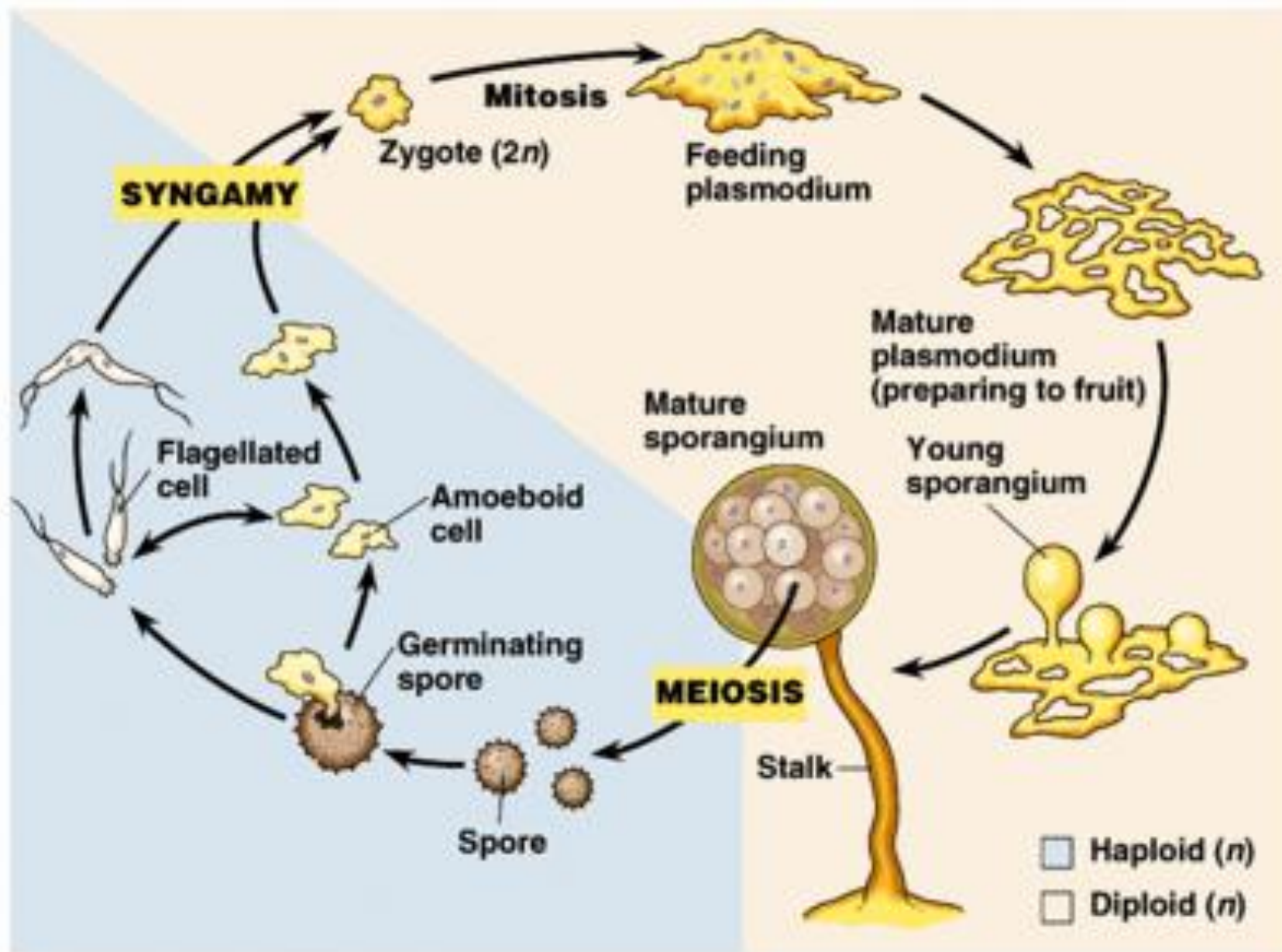
Fungus-like



Acrasiomycota

- Cellular slime molds
- Exhibit both funguslike and protozoalike characteristics
 - Spores germinate into amoeba feeds on bacteria
 - Absence of food, amoeba aggregates to a single unit and migrates as a slug
 - Individual cells of slug mobilized to form a stalk with a capsule at the top
 - Spores released





Fungus-like



Myxomycota

- Plasmodial slime molds
- Grow as a single, spreading mass (plasmodium) feeding on decaying vegetation



Fungus-like

Oomycota

- Includes water molds, downy mildews, and white rusts
- Either parasites or saprobes
- Like fungi, forms filaments (hyphae)
- Filaments lack septa, or cross walls (coenocytic)
- Cell walls are made of cellulose



Diversity of Protist

