

PROTISTA: ALGAE AND PROTOZOANS

3/9/98, 5 March 2001, 12 March 2003, 11 March 05, 11Mar09, 5Mar12

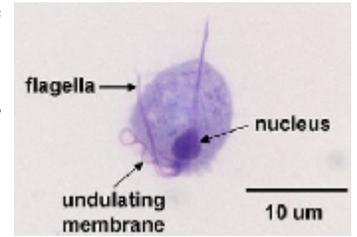
See p 543 for table, Freeman, p. 535 (2002), Campbell 6th: 546-572, 7th: 549-571, Sadava: p 582-608, Campbell 9th: 575-598

Protista developed **organelles** (archeozoan hypothesis) and “invented” **sexual reproduction**,

DIPLOMONADIDA & PARABASALA lack mitochondrial DNA, **two separate nuclei**, multiple flagella

580 **Diplomonadida** *Giardia lamblia*: 2x nuclei, multiple flagella, causes GI-itis

Parabasala *Trichomonas vaginalis*: very sens. to drying, STD, also towels, toilet facilities (30% of pop colonized). Can ingest Lactobacilli, result in raised pH fr 3-4.5



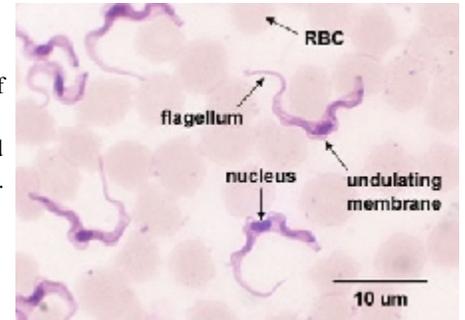
EUGLENOZOA flagellates, possible photosynthetic, Euglena, Trypanosoma

581 *Trypanosoma gambiense*: sleeping sickness, spread by tsetse fly

ALVEOLATA subsurface cavities under flagellum

582 **dinoflagellates** (whirling) abundant phytoplankton, marine and fresh, foundation of most marine food chains.

Can be toxic, *Pfiesteria piscicida* cause **red tides**, poisonous to fish and people, accumulate in clams & mussels, paralytic shellfish poisoning. Also bioluminescent: “fire algae.”



583 **apicomplexa** parasites disseminated via sporozoites:

Plasmodium vivax, cause of **malaria**:

REPRODUCTION:

ring stage in RBC lyses to release **merozoites**. These migrate to liver, infect, reproduce by schizogony. *Anopheles* mosquito draws blood, sexual reproduction occurs in mosquito, **sporozoites** form in salivary glands

584 **ciliates** diverse, ciliated, multiple cilia, often seen in fresh water: *Paramecium*

STRAMENOPILA (Straw hairs), fine hairs from flagella

588 oomycota water molds, ich on tropical fish

585 Diatoms chrysoophyta **golden algae**, Marine and fresh water, Form cysts which survive drying

587 Phaeophyta **brown dusky**, most marine, cool climate, laminaria, soups kombu, medicine, **kelps**

591 Rhodophyta **red algae** warm marine waters: **nor**i, to wrap **sushi** in, dulce also edible
Chlorophyta **green algae** mostly fresh, Chlorella, Spirogyra, Volvox, common in ponds

PROTOZOANS

Rhizopoda (SARCODINA) (flesh-whip):

Entamoeba histolytica, amoebic “dysentery,” spread by fecal contam. of food or water (cysts)

Toxoplasma gondii: toxoplasmosis world wide, microbial **teratogen**, 50% of US pop. Rarely causes visual impair, ment. retard. Cats harbor, shed cysts in feces. **trophozoites**: feeding form of organism

MASTIGOPHORA: (whip-bearing) undulating membrane

