

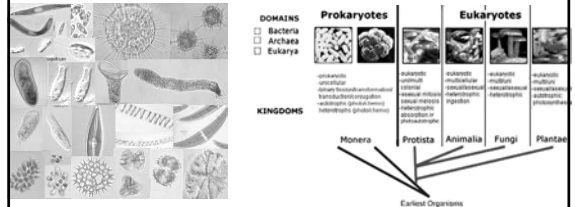
Ch. 9 Protists and Fungi



Coach, I now understand why you cut your hair short. Your hair makes you look like a big old mushroom head. No one wants their hair looking like fungi.

Section 1 Protists

- "junk drawer" because the organisms that don't fit anywhere – all are eukaryotes – all live in moist surroundings – very in size and shape – can be heterotrophs or autotrophs – some can move and some can not



3 categories of Protists=

- * Animal-like
- * Funguslike
- * Plantlike

All I want for Christmas is to see the MPEG for Protists and Fungi! I hope I was good this year!

We all hoped you would of been.

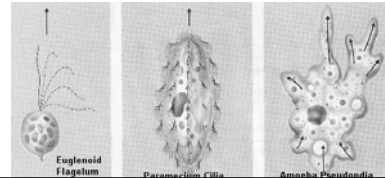


Animal-like Protists

– can move – called protozoans – heterotrophs – unicellular

Protozoans with Pseudopods – move through temporary bulges of the cell – pseudopod = "false foot" – also use pseudopod to capture food

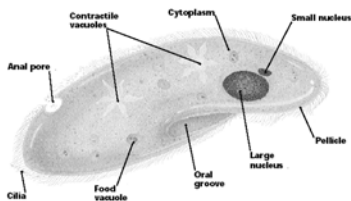
ex. Amebas



Protozoans with Cilia

Cilia = hairlike projections that move with a wavelike pattern – will use cilia to sweep food into the cell

ex. Paramecium – have two nuclei – one for everyday use and one for reproduction – usually reproduce by binary fission but can do conjugation



Protozoans With Flagella

-called zooflagellates – use flagella to move –

-**SYMBIOSIS**- a close relationship where at least one of the organisms benefits (other not hurt) – when both can benefit = **mutualism**

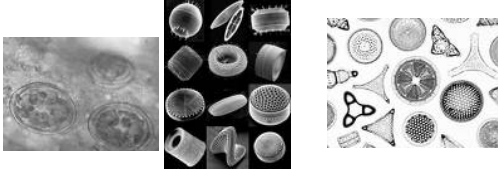
-Ex. Termites and zooflagellates in intestine

-Sometimes harmful (parasite)- ex. Giardia



Diatoms

Unicellular protists – found in salt and fresh water – food source for heterotrophs in water – when die their cell walls collect on the bottom of lakes/oceans to form diatomaceous – used in toothpaste, household cleaning products, pool filters and insecticide because sharp edges puncture the sides of insects



Green Algae = green seaweed

Red Algae = seaweed found 260 meters deep – used in ice cream, hair products and eaten

Brown Algae = make up the large kelp beds – used as thickeners in food



Section 2 Algal Blooms

= rapid growth of a population of algae

-known for “red tides” and for killing whales

-Caused by an increase in nutrients in the water

-Red tides are dangerous when the toxins of the algae become concentrated in the bodies of the organisms that consume algae (ex. Shellfish) – will make you sick

-Happening more frequently now than a decade ago



Freshwater Blooms

Eutrophication = nutrients build up that cause an increase in algae growth – can happen naturally or by man

- ex. Farming runoff



Consequences of eutrophication:

1) Algae prevents sunlight from reaching plants/algae below the surface

2) Bacteria increase to break down dead plants

3) Bacteria use up oxygen in water

4) Fish and other organisms die



Section 3 Fungi

3 important characteristics:

- eukaryotes

- use spores to reproduce

- heterotrophs

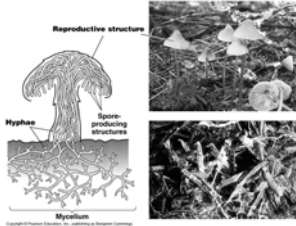
-live in moist, warm places

-Thrive on moist foods, damp tree bark, moist lawns, etc.



Cell Structure

- except for yeast are arranged in structures called hyphae = branching threadlike tubes – substances move freely through the hyphae – shape of the fungi depends on the hyphae



Obtaining Food

-grows hyphae into the food source – digestive fluids are excreted from the hyphae into the food to break down the large substances into smaller ones – small substances absorbed by the hyphae

-Some fungi feed on decaying organisms other on live organisms

-Ex. Athletes foot

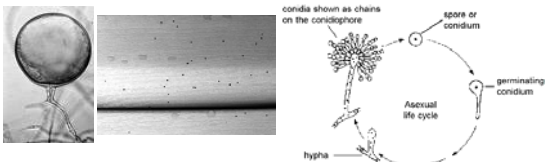


Reproduction

-reproduce through spores – can be carried through air or water – must fall where the conditions are suitable for growth = lot more produced than will ever survive – spores are everywhere

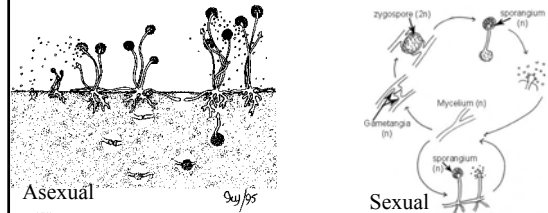
- spores produced in fruiting bodies = reproductive hyphae

-Most fungi can reproduce both sexually and asexually



Asexual fungi reproduction = when conditions are suitable will produce asexually by fruiting bodies and releasing spores

Sexual reproduction = when growing conditions are unfavorable – two hyphae of two fungi grow together – spores are produced that are different from either parent



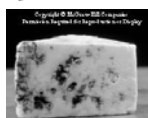
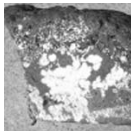
Classification of Fungi = 4 groups – based on shape

threadlike

sac fungi

club fungi

imperfect fungi



Affects on humans

Environmental Recycling = decomposers – break down dead plant matter and returns nutrients to the soil

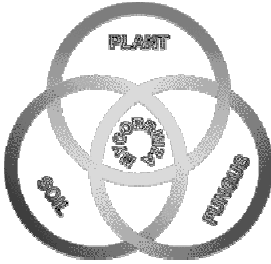
Food – yeast in bread = allow bread to rise – cheese – also eating whole (don't eat wild mushrooms)

Disease-Causing = affect crops – athletes foot – ringworm –



Disease-Fighting = Penicillian and other antibiotics

Plant Root Association = fungi absorb water and nutrients and allow plants to tap into it = mutualistic relationship because fungi feed on dead plant materials



Lichens = consist of fungus and either algae or autotrophic bacteria - have a mutualistic relationship - bacteria/algae produce food and fungus holds water and minerals - will breakdown rock over time for other organisms to grow - sensitive to pollution

