

Life Science 7

Ch 11-3

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“Fungi”

Objectives

- Describe the characteristics of Kingdom Fungi
- Distinguish between the four main groups of fungi
- Define *lichen*

Fungus General Characteristics

- Heterotrophic
 - some _____
 - extremely important ecological role, without decomposers, waste products/dead organisms would pile up and lock up nutrients
 - **symbiotic**- many fungi _____, may benefit or harm host
 - **parasitic**- host is _____ (ex: rusts, smuts, Athlete's foot)
 - **mutualistic**- host is _____ (ex: some fungi live among plant roots, break down minerals for plant)
 - Fungi cells have _____

Fungus General Characteristics

- Variety of body plans (multicellular, unicellular, coenocytic)
- typically, fungus is a collection of filamentous _____
group of hyphae combines to form main body of fungus
 - = _____
 - hyphae used to anchor fungus, absorb nutrients, and for sexual reproduction
 - hyphae may or may not have divisions between cells,

Fungus General Characteristics

- reproduction through _____
 - spores produced from a structure called _____
 - spores generally very resistant to extreme conditions
- Fusion of cells does occur (ie: _____),
 - generally, two mating strains of **hyphae** join to form a sexual spore, which

usually then undergoes meiosis to form spores

Fungus Classification

- based on characteristics of spores and fruiting bodies
- Four main divisions + lichens

- _____
- _____
- _____
- _____

Threadlike Fungi (Division Zygomycota) (**zygomycetes**)

- includes _____ (*Rhizopus nigricans*)
- Can reproduce sexually or asexually

Sac Fungi (Division Ascomycota)

- includes _____ (large group!)
- Some multicellular, others unicellular
- sexual spores are produced in an _____

Ascomycota Images

Club Fungi (Division Basidiomycota)

- includes _____
- The “mushroom” is the _____ body of the fungus
- Most of the fungus is actually _____!

Basidiomycota images

Division Deuteromycetes

- (imperfect fungi)
- called “imperfect”, because _____ has been observed

- reproduce through the asexual production of _____ (like the sac fungi)
- Diverse group, includes _____

Lichens

- Lichens are a symbiotic organism
- consist of a _____ and an _____
- generally one of the first organisms to populate a new environment
(=_____)
- found in all types of biomes, resistant to temperature extremes, and hardy
- cannot excrete minerals they absorb, thus are sensitive to _____
- reproduction typically asexual through _____ - a piece of lichen breaks off and grows into a new lichen

Economical Importance of Fungi

- Ecological importance- many fungi are **decomposers**- recycle nutrients
- Food source-
 - _____ important for producing CO₂ for bread making, ethyl alcohol for alcoholic beverages
- *Penicillium* used to make _____, Roquefort cheese, as well as antibiotics
- Many basidiomycetes are edible (_____), others very poisonous!

Economical Importance of Fungi

- _____ are sac fungi
- Some mushrooms cause intoxication/hallucinations,
 - used in religious ceremonies by Central American Indians, or illegally as drugs
- Plant pathogens
 - Fungi may cause stunting of growth, warts, or outright killing of the plant
 - some sac fungi cause many crop diseases (_____ etc)

- club fungi can also cause crop diseases (_____)

- Animal pathogens

- _____, _____, thrush, yeast infections
- Some diseases are superficial, others may penetrate deep into the body tissues