

2/26 Biology Notes

Plant Diversity continued:

Flowering Plants (Angiosperms)

- seed
- flowers and fruits

Q: What is the advantage to having fruit?

A: Better dispersal of young

Fungal Diversity:

Q: How are fungi and animal similar?

A: Both are heterotrophs

Q: How are fungi and animals different in their mode of nutrition?

A: animals ingest nutrients while fungi absorb

What are fungi?

- eukaryotic
- multicellular
- heterotrophic (absorptive)

Q: What makes up the structure of fungi?

A: The body is made of mycelium, which is an interwoven mass of hyphae filaments

Important Fungal Structures:

- Hyphae
 - Fungal bodies consist of slender threads
 - Typically one cell layer thick
 - Hyphae of most species are divided into many cells by partitions called septa
 - each cell possesses one or more nuclei
- Mycelium
 - A mass of hyphae
 - The body of the fungus
- Reproductive structures and process
 - Most fungal propagation is through spores
 - Most fungi can reproduce both asexually and sexually
 - Asexual reproduction:
 - Generally, asexual reproduction occurs under stable conditions
 - A haploid mycelium produces haploid asexual spores by mitosis

- Sexual reproduction:
 - Neighboring haploid mycelia come into contact with each other
 - The two different hyphae fuse so that the nuclei share a common cell
 - The different haploid nuclei fuse to form a diploid zygote
 - The zygote undergoes meiosis to form haploid sexual spores

- Fungi are classified into five phyla
 - Chytridiomycota (chytrids)
 - Most are aquatic
 - They are distinguished from other fungi by forming flagellated spores that require water for dispersal
 - Zygomycota (zygomycetes)
 - Most zygomycetes live in soil or on decaying plant or animal material
 - During asexual reproduction:
 - Haploid spores are produced in black spore cases called sporangia
 - Glomeromycota (glomeromycetes)
 - Live in intimate contact with the roots of plants
 - economically really important
 - The interaction forms a beneficial relationship called a mycorrhiza
 - Basidiomycota (basidiomycetes)
 - They are called club fungi because they produce club-shaped reproductive structures
 - These fungi typically reproduce sexually
 - Each fruiting body contains numerous club shaped structures called basidia
 - Ascomycota

Q: Fungi can reproduce both asexually and sexually. When of they reproduce sexually?

A: Only when conditions are unfavorable or stressful

Q: What does the diameter of a fairy ring indicate?

A: the age of the fungus