

INVASION OF LAND

- Sporophyte is fed by protective gametophytic tissue- serves as a protection for the sporophyte.
- Evolution from 500 million years ago to 150 is when sporophyte comes dominant. Begin to see equisetum and angiosperms as the diploid form. Concurs as a selective advantage on these organisms- not known if its true or not.
- **Spermatophyte-** the seed is crucial for the ability of the organism to survive.
- **Gymnosperm- Archegonial life structure that is important.** Get microspores- male and megaspores- egg. Within sporophyte structure of the gymnosperm- surrounded by meiotic protective layer. In the archegonia get the meiotic process occurring - get development of multicellular gametophyte never leaves- always protected. always inside the sporophyte- fertilization occurs when the microspore enters where a diploid is protected within a haploid which is protected by a diploid- result of that is a presence of a seed. get zygote embryo multicellular surrounded by a seed coat which is provided by the parental sporophyte. Both gametophyte and initial sporophyte provide protection and nutrients to the new diploid embryo inside. Crucial in terms of how these organisms have been successful in the invasion of land. - in terms of ecology of the higher plant. Seed trait of gymnosperm have been around for 350 million years. Angiosperm for 150 million years.
- **Ferns have retained dominant state. Gymnosperm not so dominant. Angiosperm beats all of em in dominance**
- **Bryophytes-** have around 22,400 species. Ferns- around 9000. Gymnosperms seeded- 750. Angiosperms- 220,000 species. Dominance is partially in context of species- abundance - maximal coverage on land of the above mentioned species.
- Why are there many species associated with angiosperms- not clear as to the reason why. Darwin described this explosion of species as an abominable mystery. sex-central theme.

The flowers, trees , birds and bees- speciation event.

Angiosperms in context of the angiosperms

- think about developmental patterns- how it actually occurs. Gametophyte is relatively small- represents only 8 cells- megagametogenesis.
- Microgametogenesis- microspores that are carried by insects to the female that