

INVASION OF LAND

***dioecious**

Gymnosperms... [Cyclades*
Ginkogales*
Gnetales]

Coniferals -

1)Pinaceae

2)Taxodiaceae

3)Cupressaceae

4)Taxaceae

The height of a tree

monoecious*

having the anther (male) and carpels (female) in separate flowers on same individual.

Dioecious* male and female on separate individuals.

- Ability of the organism to start growing on land required a whole range of different adaptations. Large shift from marine to land organisms- Example chara; from marine to land.
- Sporophyte- diploid protected inside a gametophyte —> idea of Embryophyta
- Think about the various aspects of being able to transport water - stelar Anatomy. Complexity of the vascular system is then embedded in the idea of “leaf anatomy”. - ability to branch vascular strands [microphylls and megaphylls]
- In ferns you start to see the megaphyll. Some microphylls are very large and thus size is misleading.
- Root and soil- invasion of land required soil- its biogenic and appeared with the action of organisms. It wasn't just present.

Gymnosperms

- **Cyclades-** are dioecious in nature.

Ginkoglaes

- Have a male and female aspect to it. Term used to describe this is dioecious. The counterpart of this is monoecious where the male and females are on