

Endosperm of gymnosperm is ontogenetically similar to angiospermic embryo sac.

In Pinus, the gametophyte is not independent or free living. In gymnosperms, male and female gametophytes are present within sporangia located on sporophyte. In Bryophytes, the sporophyte is not independent or free living.

Male gametes are flagellated in **ECTOCARPUS**.

Upper oogonium and lower antheridium on the same plant is shown by monoecious plant of Chara.

Fucus shows oogamy and it exhibits diplontic lifecycle. The stored food is Mannitol i.e. Mannitol is the stored food in brown algae.

Gymnosperms are called soft wood spermatophytes because they lack xylem fibers. Cycas and Adiantum resemble each other in having mobile sperms.

Sporophyte in liverwort is less elaborate than mosses.  
Pinus is monoecious, male and female cones are borne on same tree.



Salvinia



Ginkgo

Wheat - Diplontic

Funaria - Haplo-diplontic

Polytrichum - Haplodiplontic

Ustilago - Haplontic

Riccia, Dryopteris and Cycas have flagellated male gametes.

In gymnosperms, pollen chamber represents a **cavity in the ovule** in which **pollen grains** are **stored** after pollination.

Spore dissemination in some liverworts is aided by **elaters**.