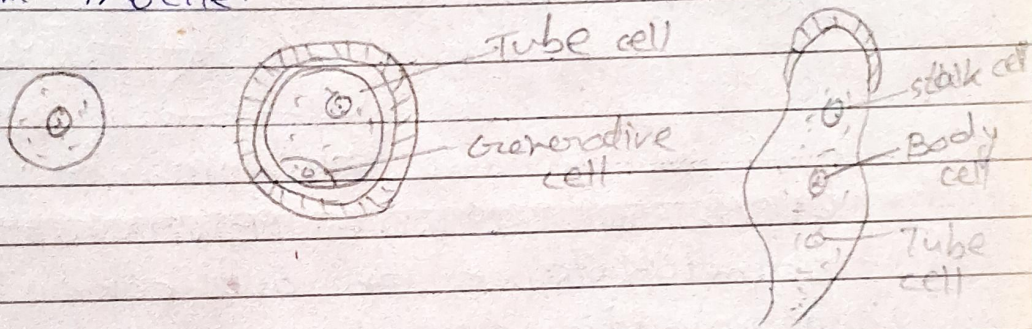


Taxus → In Taxus, the pollen is released in uninucleate condition and starts germinating as the new cells. Its nucleus divides into a tube cell and a generative cell. No prothallial cells are formed. The tube cell develops into a stent.

pollen tube - The tube nucleus moves into the pollen tube.

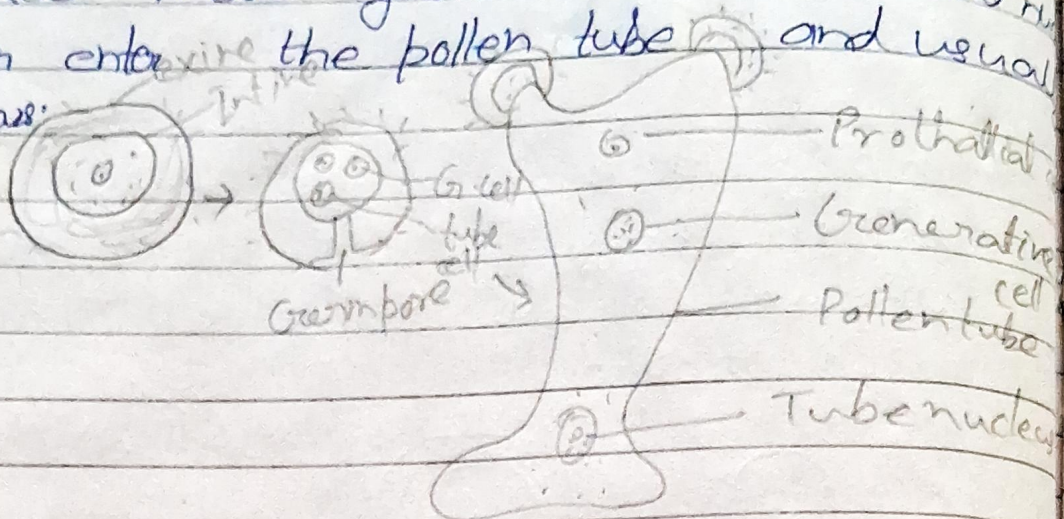
The generative cell divides into a stalk cell and body cell. The nuclei of the body cell divide to give rise two unequal male gametes. They are non-motile.



Male gametophyte of *Taxus barcata*.

GNETUM → In Gnetum the microspore or pollen granules are uninucleate and roughly spherical. The microspore nucleus divides into two daughter nuclei which lie free in the cytoplasm. One nucleus again divides to form three nuclei. These are named as prothalooid nucleus, generative nucleus and the tube nucleus. At this stage pollen grains are released and finally germination is effected in the pollen chamber. The exine ruptures and the intine goes into a pollen tube. The tube nucleus migrates first into the pollen tube. The generative nucleus also migrates into the pollen tube and later divides into two

unequal male gametes. The prothallial cells never enter the pollen tube and usually disappear:



Gnetum ula.

EVOLUTIONARY SIGNIFICANCE → The male gametophyte is an out come of the germination of the microspore. The germination is partially ~~in~~ precautions and partially it takes place on the cells of the ovule. It is an extremely reduced structure as compare to Bryophytes and Pteridophytes. It is divide of any ordinary arrangement of cells. The structure of male gametophyte in modern gymnosperm reveal that there has been a gradual reduction in the size and contain the male gametophyte. In Wolwitschia, the male prothallial cells are all together wanting.