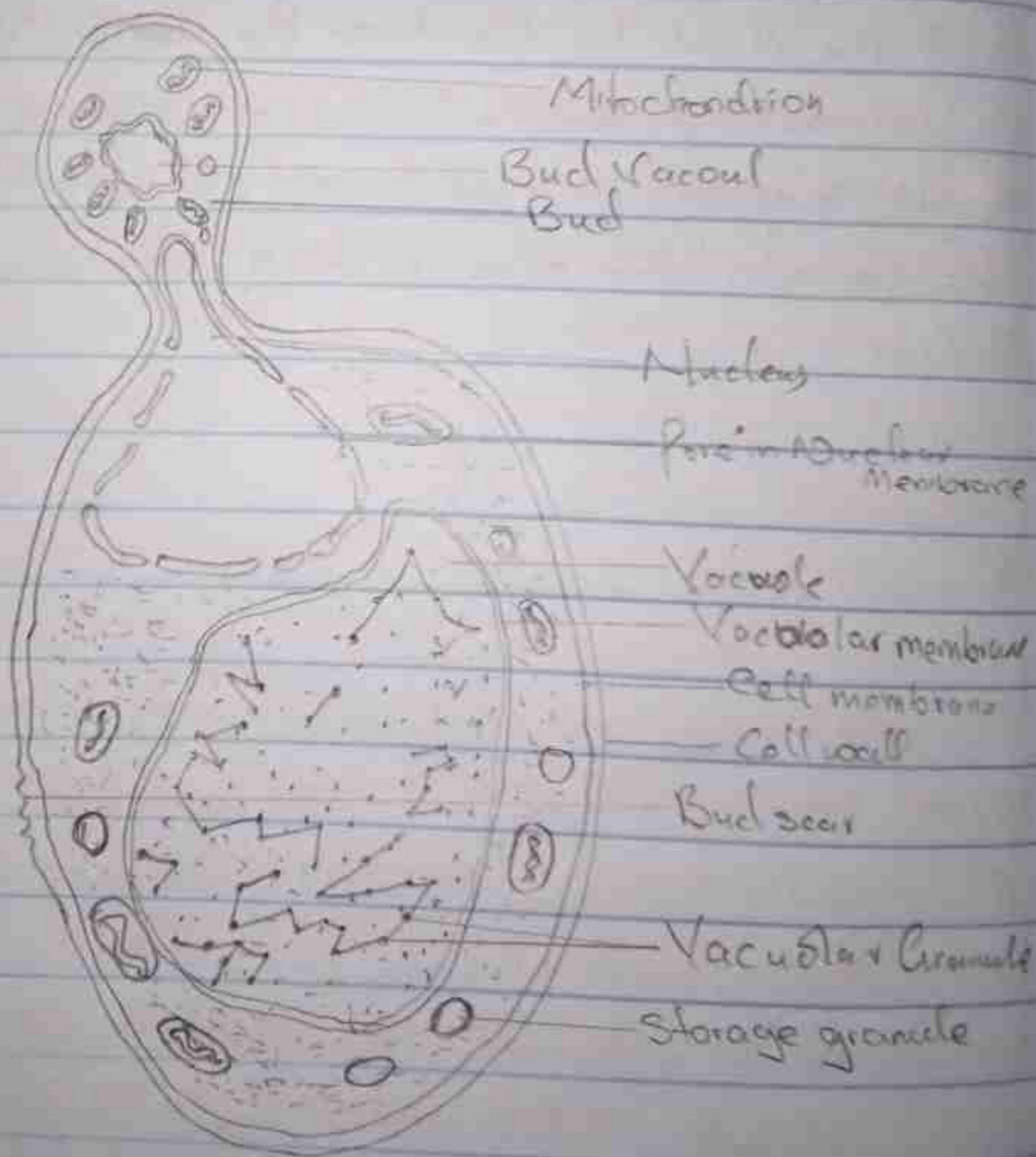


- Fungi are responsible for the mediation of decay of organic matter i.e. it aids material cycling to ~~man~~ ^{ecosystem}
- They are important in food industries (yeast)
- They produce important antibiotics eg penicillium, rotatum
- Mushrooms are eaten by many human societies



Structure of *Saccharomyces cerevisiae* (Yeast):
 Undergoing asexual reproduction (Budding)

3) Sexual reproduction in *Rhizopus* (filamentous fungi) occurs when two mating types of hyphae grow in the same medium. Chemical interaction in the two mating types of hyphae induces growths perpendicular to the hyphae in opposite directions. These growths are delimited by a wall such that many nuclei are isolated in what is called a gametangium.

The two gametangia fuse (plasmogamy) and a zygote is formed which may undergo prolonged dormancy or resting stage. The nuclei in the zygote fuse in two and undergo meiosis independently.

The zygote germinates under favourable conditions to produce a fruiting which at maturity liberates the haploid spores.

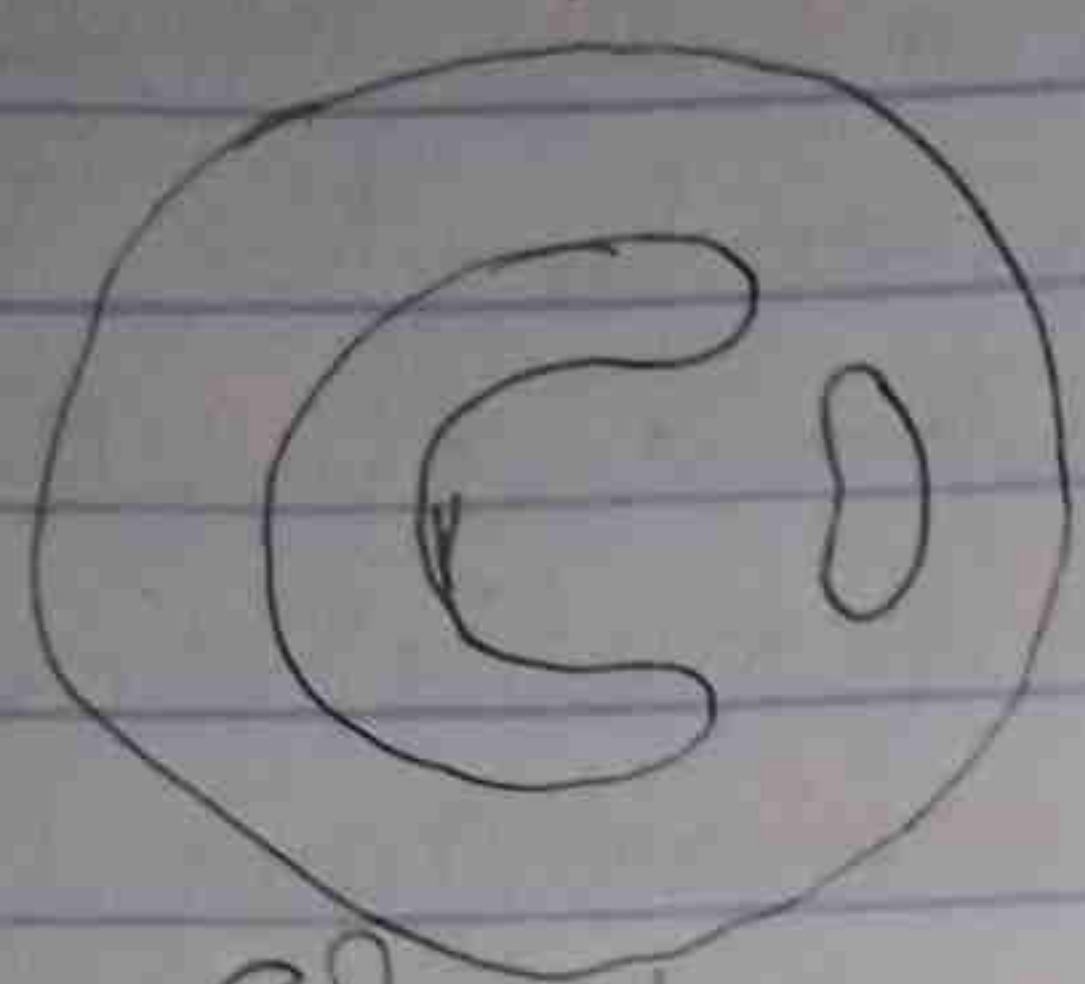
4) Bryophytes adapt to land habitat via

a) definite structures for water & nutrient absorption from the soil; therefore the plant body is divided into two; an aerial portion and subterranean portion which is the rhizoid and isn't a true root.

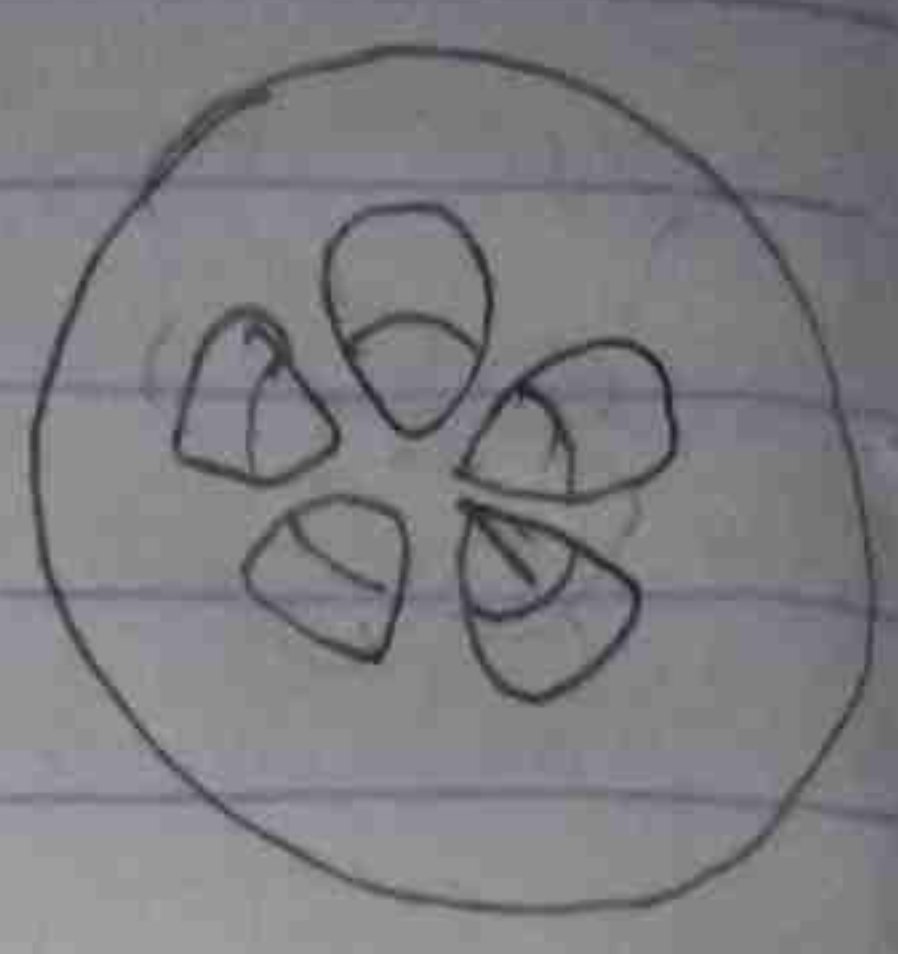
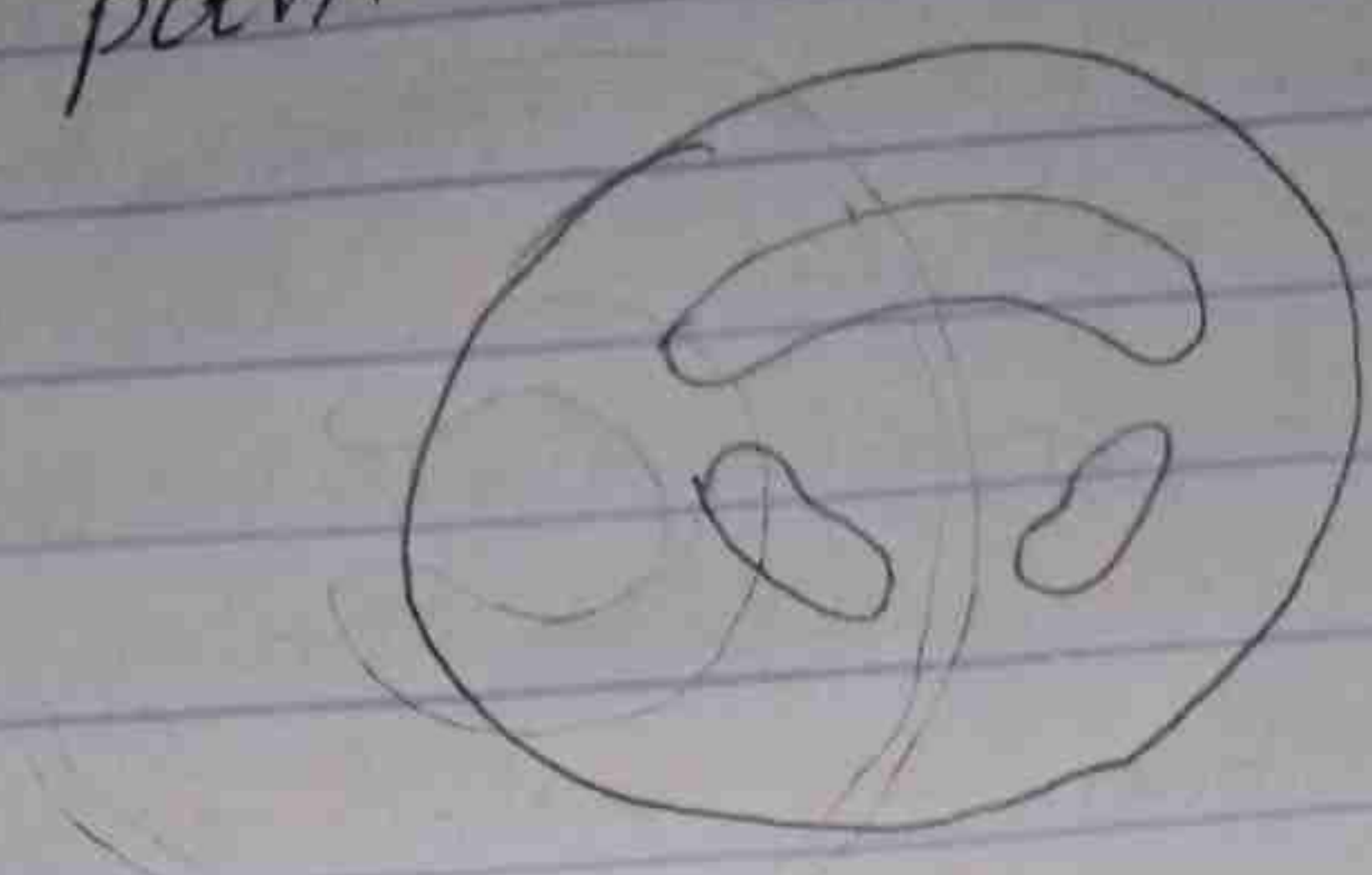
b) the aerial portion being exposed to the atmosphere demands some modifications that prevent excessive loss of water through the body surface, i.e. desiccation.

c) some other modifications that permit elimination of excess water from the plant body and not only exchange of gases between the internal parts of the plant and the atmosphere therefore openings are available on the aerial parts of plants.

Siphonostele: The stele is a cylinder enclosing parenchymatous pith.

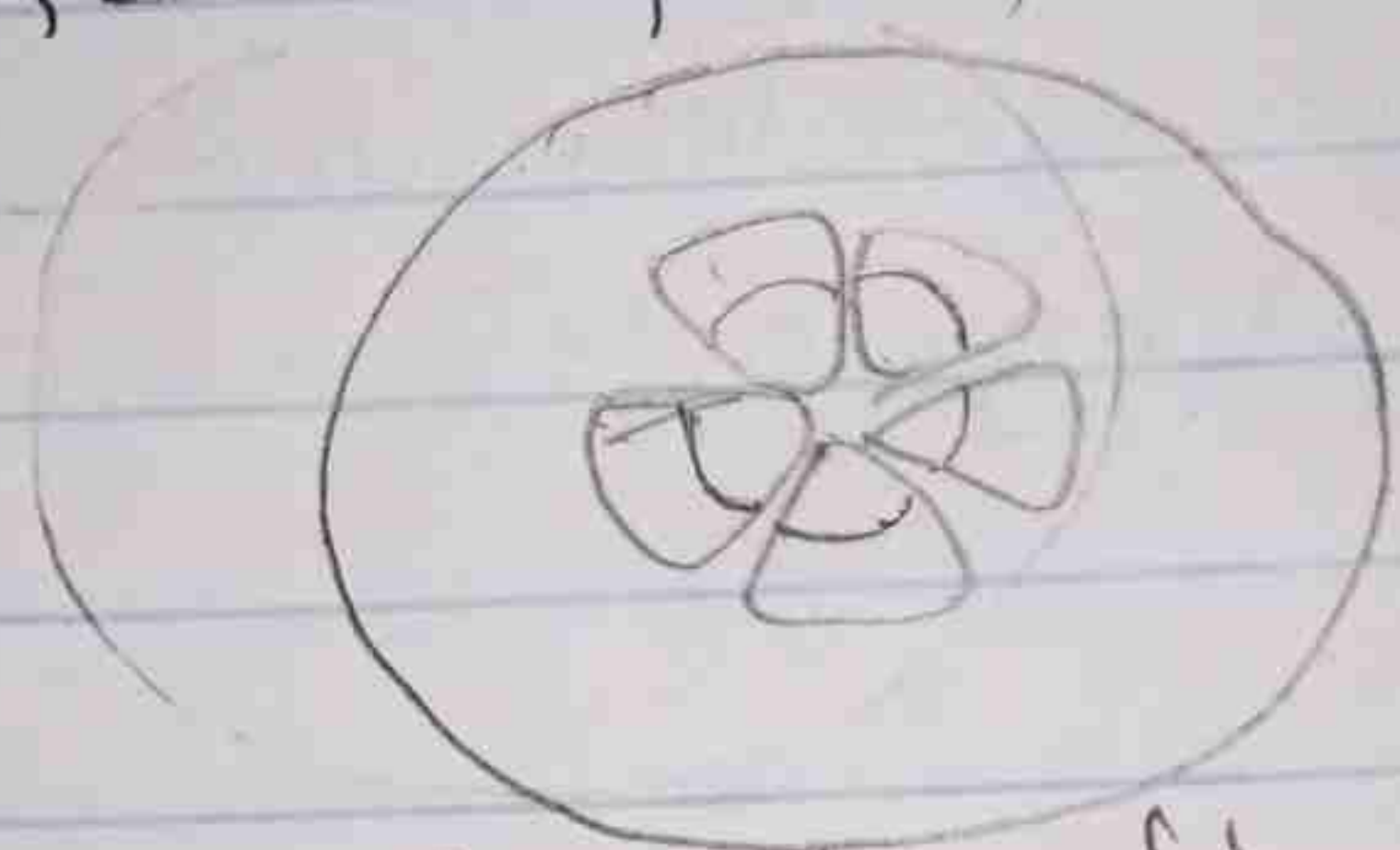


Solenostyle

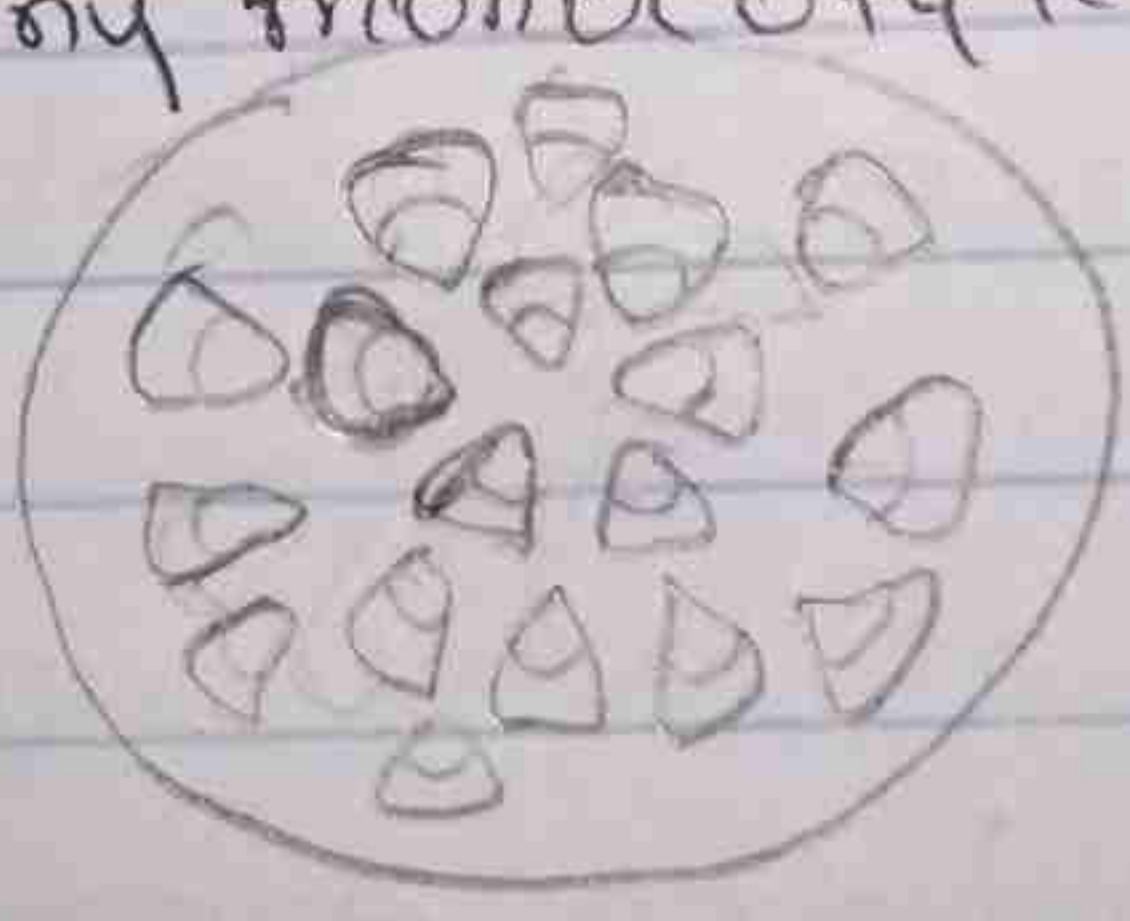


Types of Siphonostele

Eusteles: The vascular bundles are discrete, concentric collateral bundles of xylem and phloem (in herbaceous dicotyledonous plants)

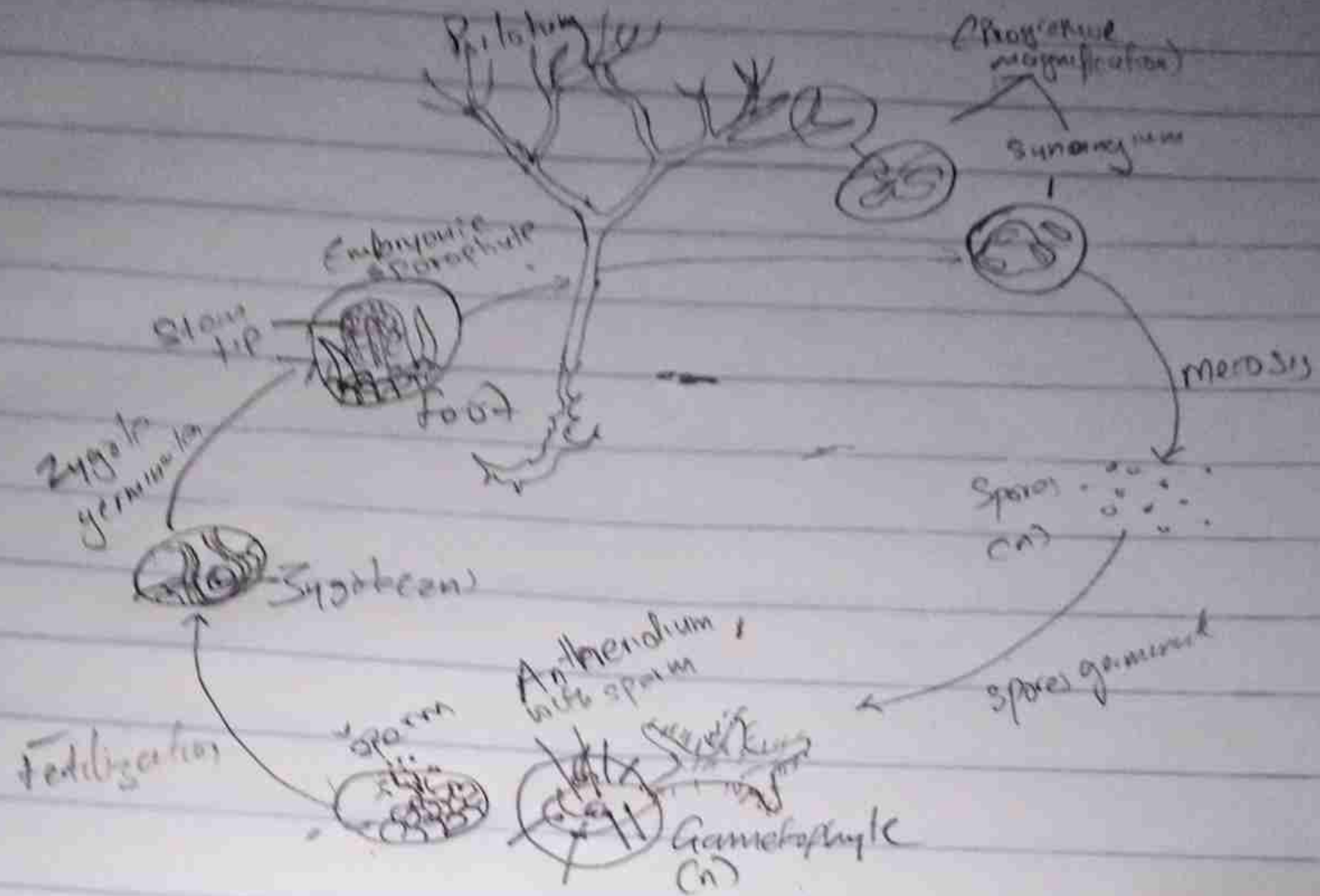


Atactostyle: The vascular bundles are scattered (grasses and many monocotyledons)



Diactostele: Vascular supply to leaves is associated with leaf gaps and the conducting cylinder is a dissected





Life Cycle of a Primitive Vascular Plant (*Psilotum*)