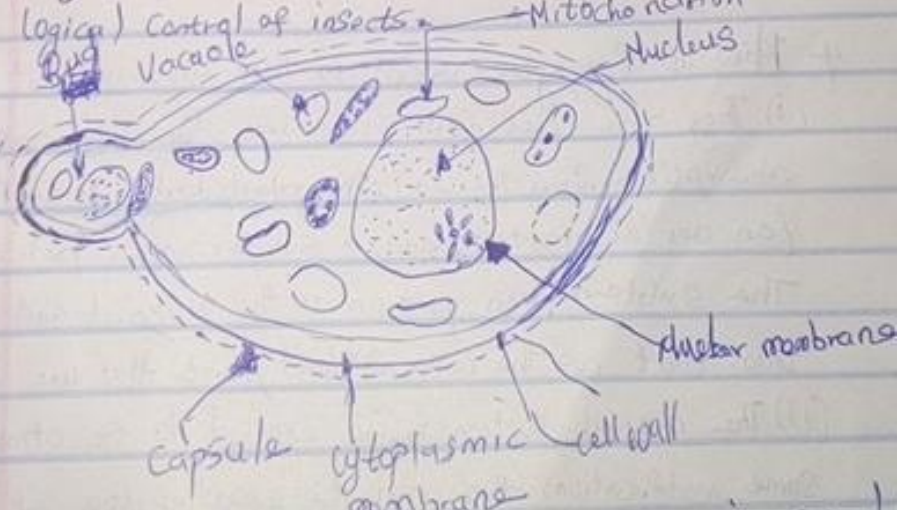
BIO 102

1 How are fungi important to mankind

They are very important to the terrestrial ecosystem.
in material cycling and to man.
They are responsible for the mediation of decay of
organic matter
Fungi are important in food industry eg
Mushroom are eaten by human societies.
Fungi mediate the spoiling of wood, clothes and papers.
They are decomposers
They use fungi for fermentation
They are used to manufacture antifungal.
They produce foul smell
They act as parasite to insect they can be used as b
logical control of insects.

2.



The structure of Saccharomyces cerevisiae Yeast undergoing asexual Reprod

3 Outline the Sexual reproduction in a typical filamentous form of fungi.

Rhizopus Stolonifer is a filamentous form of fungi. Sexual reproduction occurs when two mating types of hyphae grow in the same medium. Chemical interaction in the two mating medium types of hyphae induces growths perpendicular to the hyphae in opposite directions. The growths delimited by a cell 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 meiosis independently. The zygote germinates under favourable conditions to produce a fruiting which at maturity liberates the haploid spores.

4 How do Bryophytes adapt to their environment

(i) They have definite structures for water and nutrient absorption from the soil, the plant body is divided into an aerial portion and a subterranean portion. The subterranean portion is the rhizoid and is not true root as the case of land plants that are advanced.

(ii) The aerial portion being exposed to the atmosphere has some modifications that prevents excessive loss of water.

through the body surface.

(iii) 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 the plants.

5. (a) Eustales (b) Atactostle (c) Siphonostele (d) Dictyostele

(A) Eustles :- In herbaceous dicotyledonous plants the eustales are vascular bundles are discrete, concentric collateral bundles of xylem and phloem

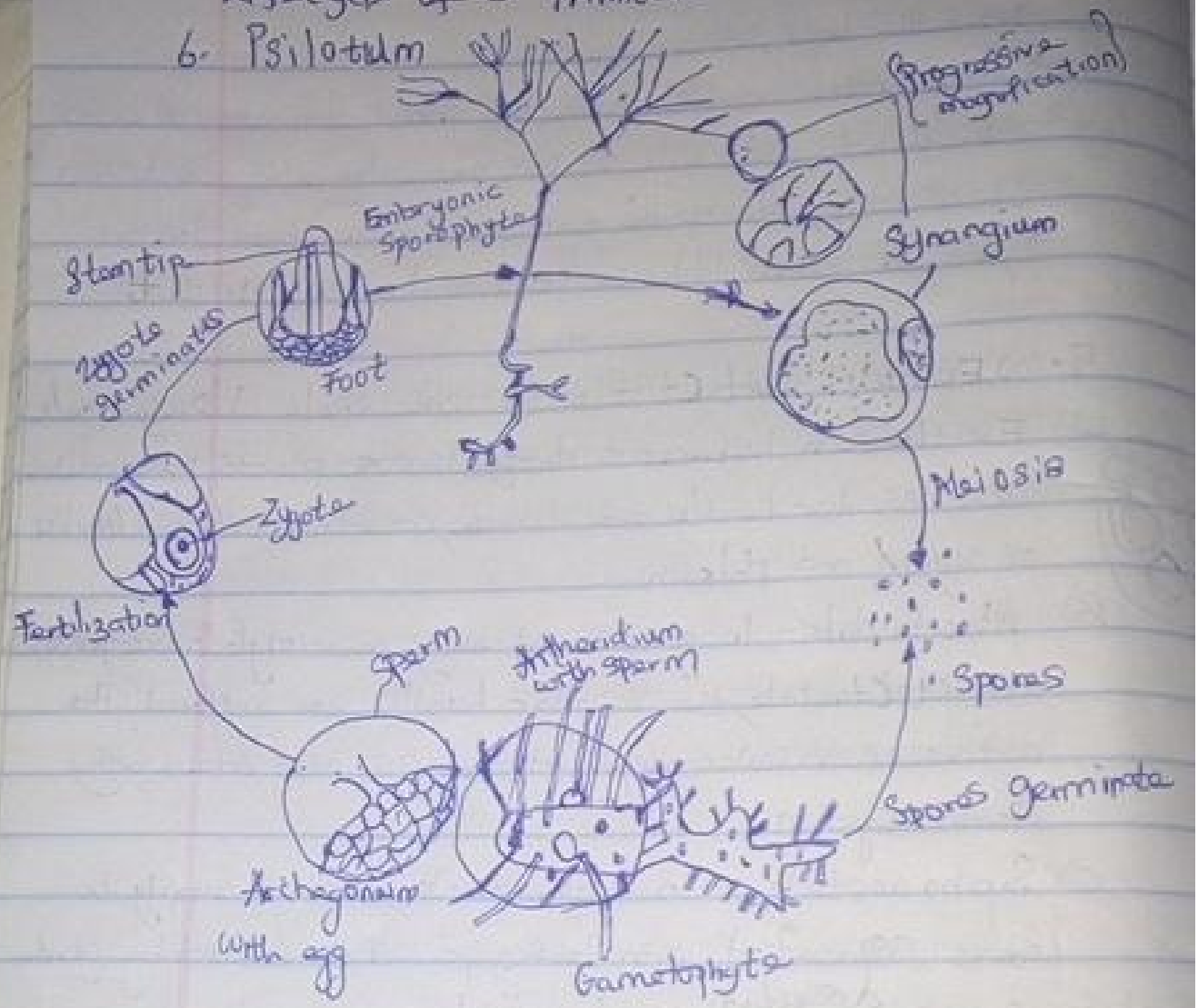
(B) Atactostele:- In grasses and many monocotyledonous plants, the atactostele, the vascular bundles are scattered. The nature of vascular supply to leaves is also note worthy element system.

(C) Siphonostele :- In Siphonostele, Vascular supply to leaves associated with leaf gaps and the conducting cylinder is ~~a dorsiv~~ dissected on dictyostele

(D) Dictyostele :- A Stele in which the vascular cylinder is broken up into a longitudinal series of network of vascular strands ground a central pith (as many ferns)

Lifecycle of a Primitive Vasaular plant

6. Psilotum



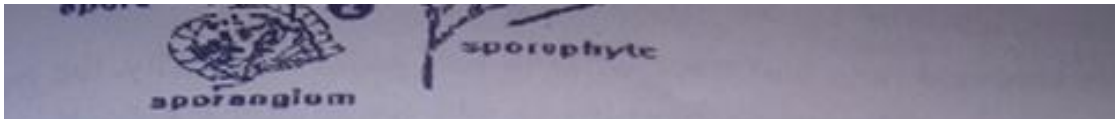


Fig. 20: A sketched Life cycle of *Psilotum*

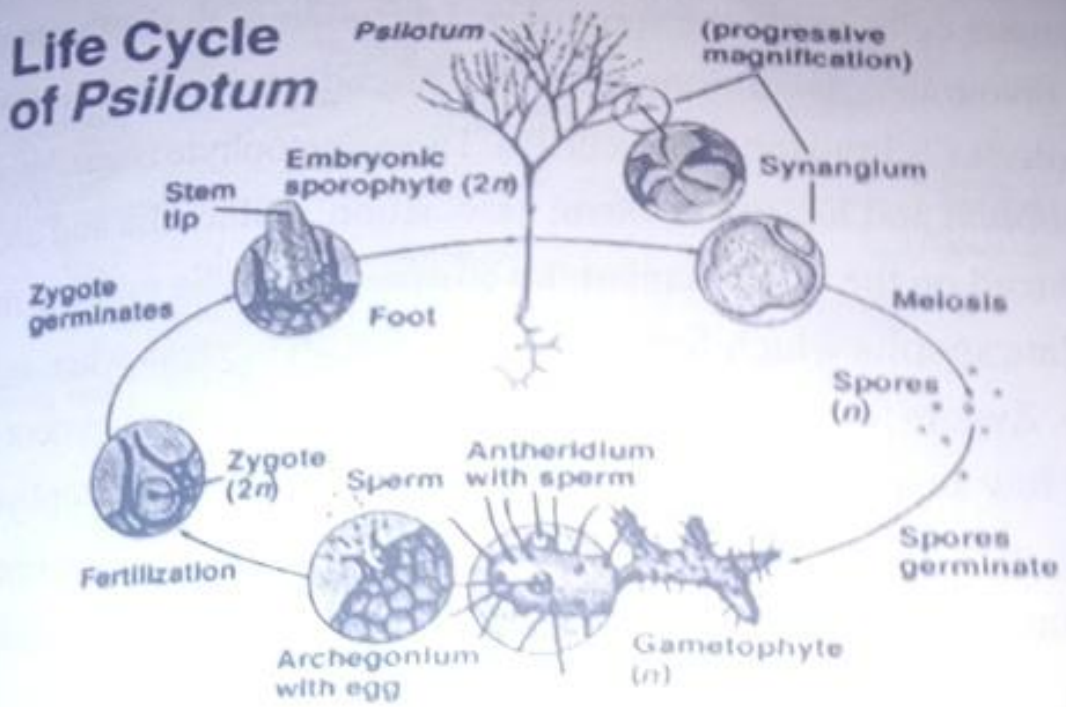


Fig. 21: A real Life cycle of *Psilotum*