1.1 Describe the systematic position, occurrence, structure and reproduction in PEZIZA?

Ans:- Systematic Position →

Class - Ascomycetes
Sub class - Euascomycetes
Order - Pezizales
Family - Peziza ceae
Genus - Peziza
Species - Vesiculosa

Occurrence & structure of Thallus → It is a saprophytic fungi, which frequently grows on dung, rotting wood, rich humus of forest soil and on the leaves of grapes. Some species of this genus grow on burnt wood. It is always septed branched, hyaline with reserve food matariel like glycogen and oil drop. Cell wall is made up of chitin and the comman species of India is Peziza vesiculosa. According to Rulter and Bisby (1958) 50 species have been reported so far, out of the 18 species found in India. Peziza vesiculosa is well developed perenial thallus. Which consist a dence network of hyphae. The hyphae are branched, septate uninucleate and some vacuole are also develops within the substratum. They form a complete structure extract nourishment from the substratum. So they are heterotrophic. Some fruiting bodies are also found above the ground, which is known as Apothecia. The presence of apothecia above the substratum recognized by the cup shaped whitish and brownish in colour. To see the apothecia we recognized Peziza species on the field.

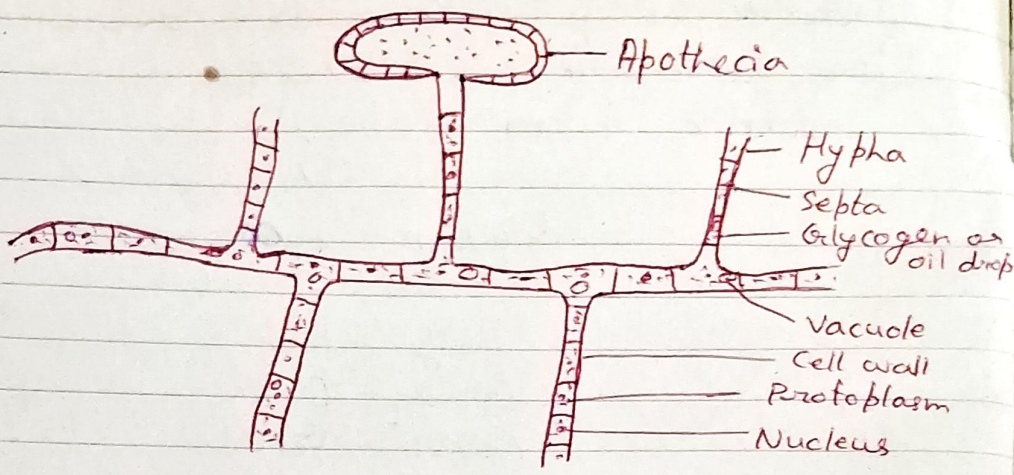
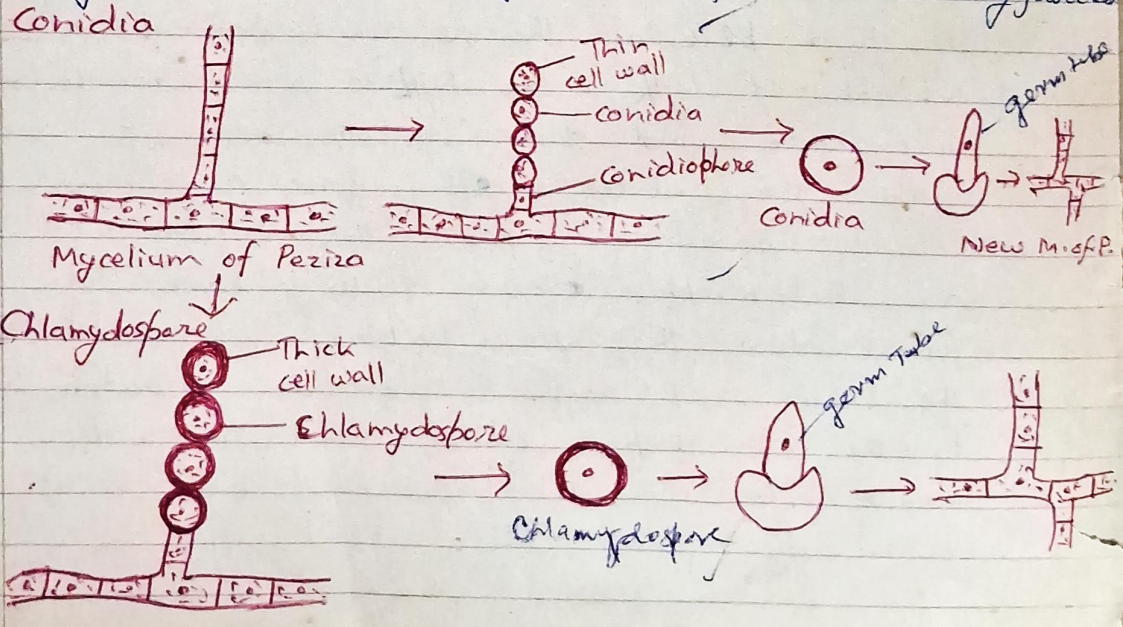


Fig - Mycelium of Peziza

Reproduction →

1. Asexual Reproduction → It takes place by the formation of conidia or chlamydospores in favourable condition. The vegetative part of mycelium grows above the growing point at it starts constriction and forms beaded cells. Each beaded cell is known as conidia and the mycelium where conidia are found is known as conidiophore. After maturity conidia get detached from the mycelium and they lay down on the ground. After returning favourable

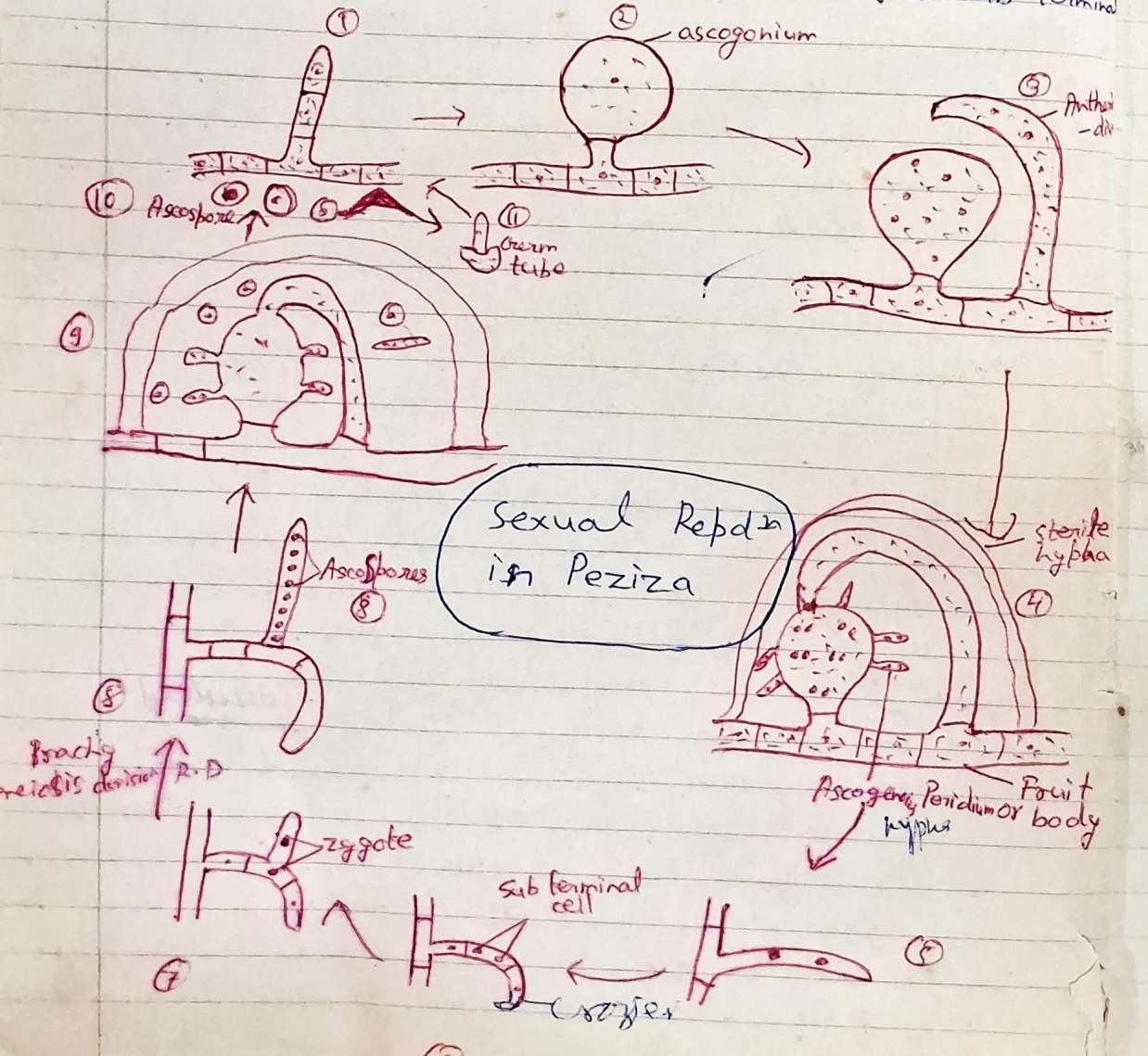


condition each conidia germinate and forms a germ tube. And after some time each germ tube forms a new mycelium of Peziza. In P. resiculasa, P. reperdu and P. confluence forms chlamydospores. which are like conidia and each chlamydospores under favourable condition germinate and forms the thallus of Peziza.

2: Sexual Reproduction → There is complete absence of sex organ of Peziza. Hence the sexuality may be define as the act of fusion between the two nuclei (+) strain and (-) strain followed by meiotic division. But according to Debarry and Tulsane (1808) discovered the sexual repd in Peziza confluence. here the sexual organs like antheridium and ascogonium arises ~~unicellular but multi nucleate~~ close together from the asending hyphae. The antheridium and ascogonium are unicellular but multinucleate in structure. Dikaryotic ascogenous hypha is responsable for forming asci and ascospore. In somatogammae they simply forms a dicaryon cell which occur between (+) and (-) strain nuclei.

The terminal portion of a hypha swells and forms vesicle like structure known as asco-gonia and the antheridia arises as a club shaped structure from one of the cell of the same branch benith the ascogonia. After some time antheridial tip ~~units~~ unites with the ascogonium and the wall between the two at the point of contact ~~destroyed~~ dissolved so that a passage is formed for the transfer of male nuclei in the ascogonium. Lastly the male nuclei pass through the trichogyne like structure to the ascogonium and fuse with the female nuclei. In is not known that weather the male and female nuclei fuse or they simple remain associated together. In any case

they divides in pairs. And in this time many sterile hyphae grows arround them and forms a fruit body known as peridium. At the same time the ascogonium gives rise to a number of out growths known as ascogenous hyphae. In each ascogenous hyphae a pair of nuclei (Dikaryotic) enters from the ascogonium. This ascogenous hyphae undergoes many septation and each septa contance a pair of nuclei and ~~each septa~~ finally these ascogenous hyphae whi contance a pair of nuclei forms a hook like structure which is known as crozier. In crozier four cell are form through mitotic cell division of which middle two cells are known as sub terminal



Sexual Repdn in Peziza

cells - which later on forms the ascus mother cell. The subterminal cell after some time fuse and farms zygote cell and remaining two cell of crozier degenerate. Zygote tookes two reduction cell division which forms 8 haploid ascospores by the brachy meiosis method. After maturit each ascopore is oblong or round uninucle and arranged in a straight single row. After maturity the fruit body brust by a small apical opening which lastly forms a apothecia. The diameter of a apothecia is o to several inches under damp condition. The ascospores are coming out through a term pore. And these are dispersed by wind an after returning suitable condition or in cont with the suitable substratum they germinate directly and forms a germ tube and last each germ tube produce new mycelium o Peziza. Again these mycelium produce white buff coloured apothecia. So that we recogn Peziza usually on the ground.

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