

Course: B.Sc. Botany (H) Part-1

Paper-1

Topic- Fungi

Prepared By:(Prof.) Dr. Shyam Nandan Prasad

Peziza

(1)

Systematic Position

class — Ascomycetes

order — Pezizales

family — Pezizaceae

Genus — Peziza

Habit and Habitat/occurrence:

Peziza is a large cup fungus which is saprophyte. It generally grow on decaying wood, animal dung or heavily manured soil, green houses.

STRUCTURE:

The mycelium is composed of profusely branched, uninucleate and septate hypha which develop extensively inside the substratum forming a complex net work extracting nourishment from the substratum. The fruiting bodies are developed above the ground.



Apothecium

Hyphae of Peziza

Hyphae of Peziza and Fruiting body Apothecium

NUTRITION

It is saprophyte. It takes food from

REPRODUCTION

i) Asexual Reproduction

ii) Sexual Reproduction

(i) Asexual Reproduction: It

It takes place by means of conidia and chlamydospores.

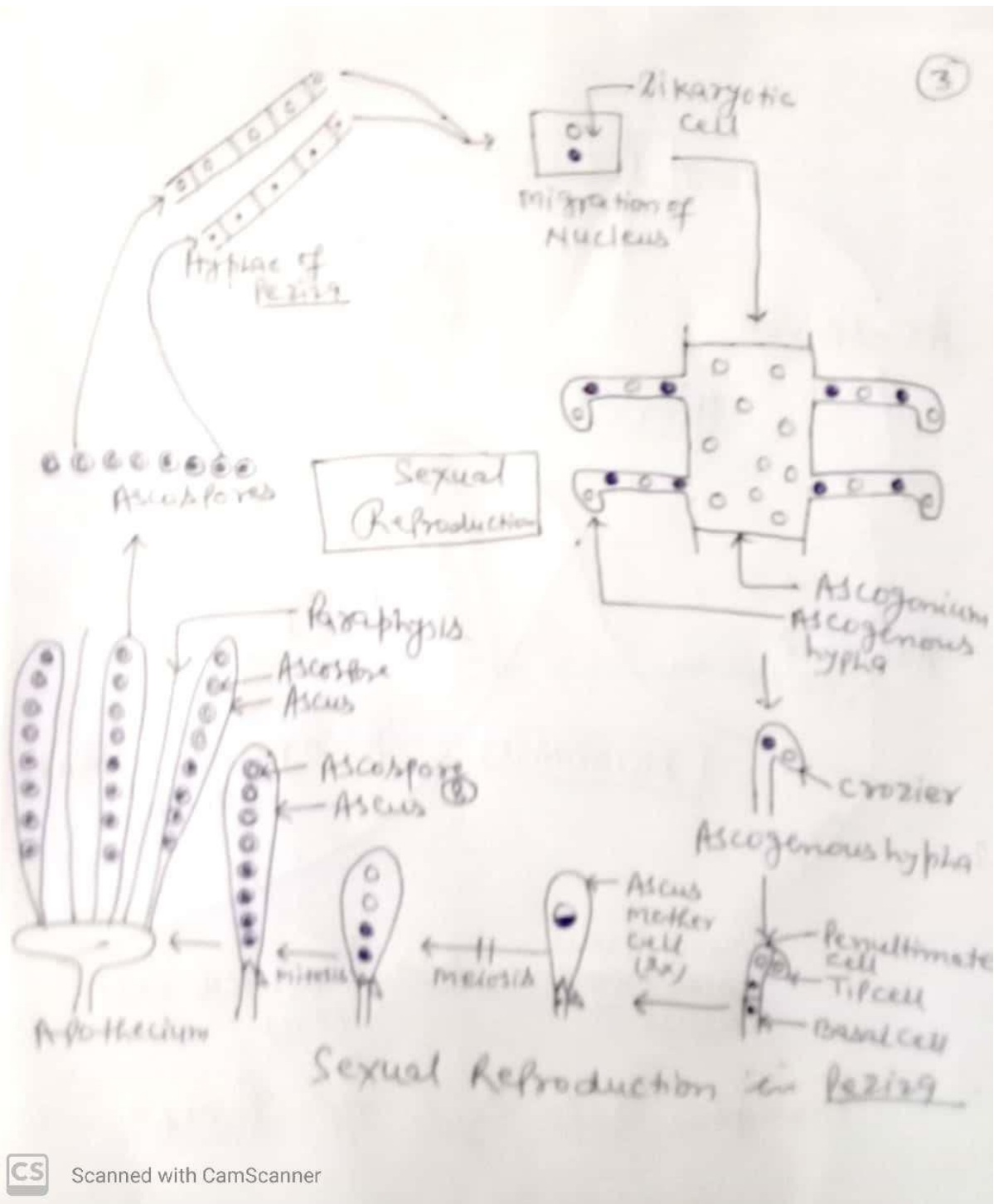
11) Sexual Reproduction

(2)

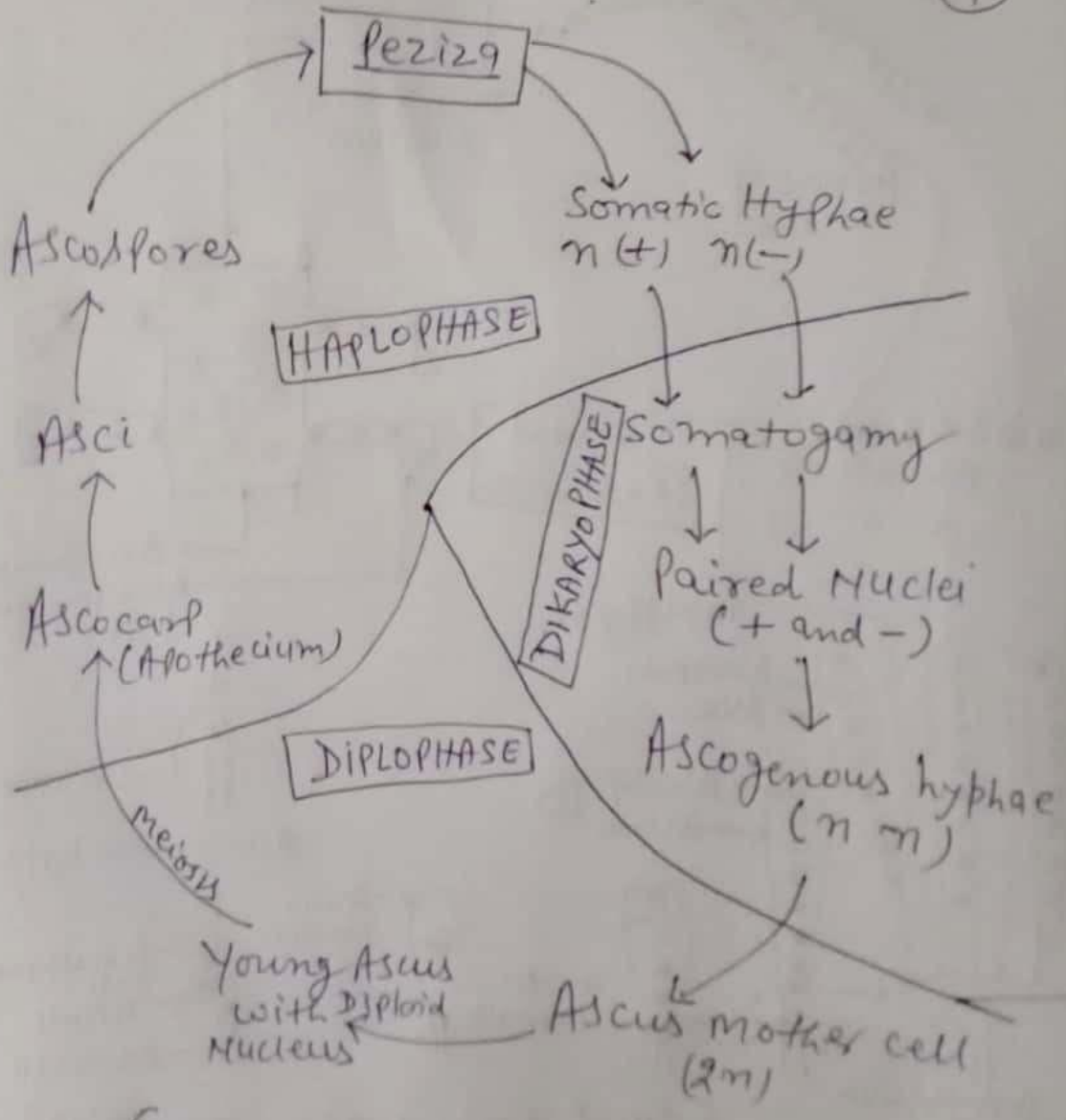
Sex organs are completely absent and the reproduction takes place by somatogamy i.e. 2 Nuclei of vegetative cell fuse to form a diploid nucleus.

At the time of reproduction, the mycelium forms a tangled mass and in the centre of the mass, some of the vegetative cells copulate and nucleus of one cell migrates into the other and nuclei remain in pairs and form a dikaryon. The binucleate cell forms a number of ascogenous hyphae showing hook at the tip. The ascogenous hyphae and dikaryotic cell represent the dikaryotic phase in the life cycle of Peziza. The tip of the ascogenous hyphae forms Crozier. The nuclei of the ascogenous hyphae divide and 4 nuclei. Septa are then formed resulting in the formation of a uninucleate terminal cell, a binucleate penultimate cell behave as an ascus mother cell. The nuclei of the ascus mother cell fuse and form a diploid nucleus. The diploid nucleus of the ascus mother cell divides meiotically and then after mitotically resulting the formation of 8 (eight) haploid nuclei. Each nucleus is surrounded by a little cytoplasm and form a ascospore. Many sterile hyphae develop around the asci and are called paraphyses.

The type of Ascocarp is Apothecium. Each apothecium is a cup shaped structure. Ascospores are liberated by an apical pore formed at the tip of the ascus and germinate to give rise a new mycelium of Peziza.



4



Graphic life cycle of Pezizia