

FUNGAL TISSUES:

Plectenchyma : (plekein=to weave+enchyma=infusion)

Fungal tissues are called plectenchyma i.e., mycelium becomes organized into loosely or compactly woven tissue. This tissue compose various types of vegetative and reproductive structures.

Types of plectenchyma:

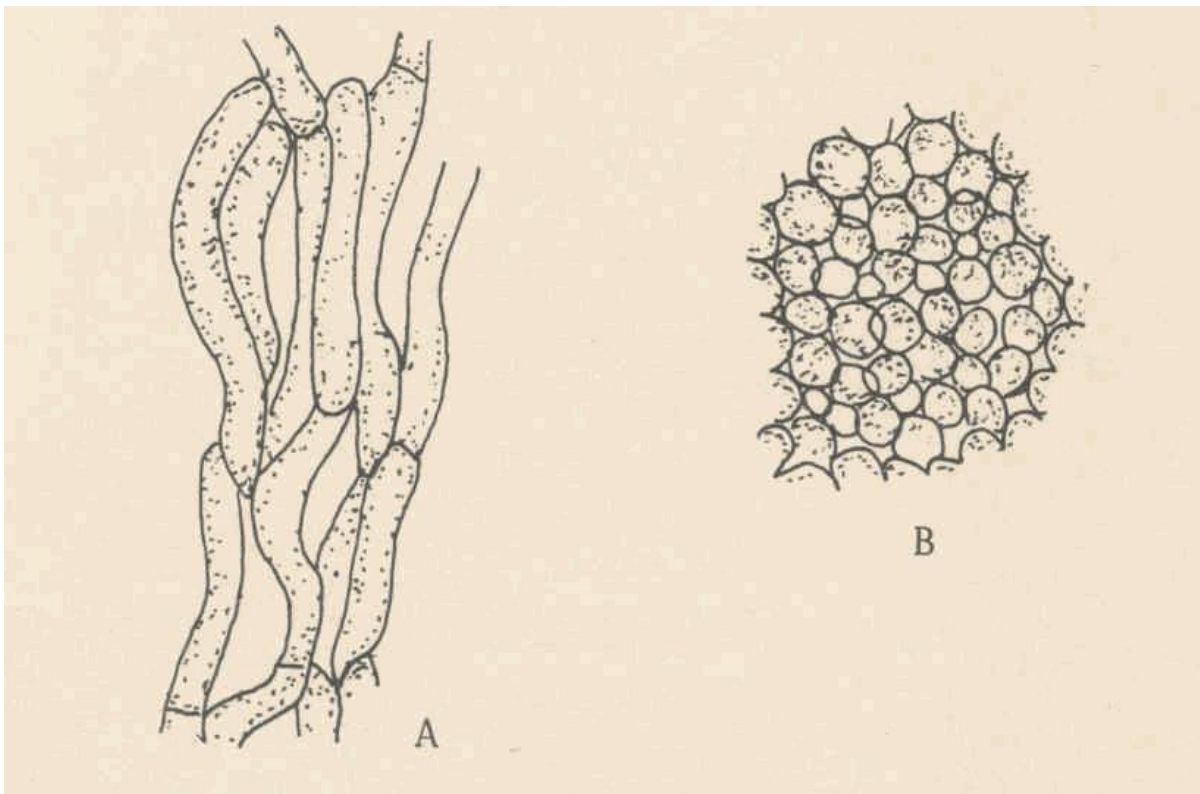
1. Prosenchyma: It is a loosely woven tissue. The component hyphae retain their individuality which can be easily distinguishable as hyphae and lie parallel to one another.

Eg. Trauma in Agaricus.

2. Pseudoparenchyma:It is compactly woven tissue. It consists of closely packed cells which are isodiametric or oval in shape resembling parenchymatous cells of plants and hence the name. The component hyphae lose their individuality and are not distinguishable as hyphae. Eg. Sclerotial bodies of Sclerotium and rhizomorph of Armillariella.

A. Prosenchyma

B. Pseudoparenchyma



3. MODIFICATION OF MYCELIUM/ SPECIALISED SOMATIC STRUCTURES

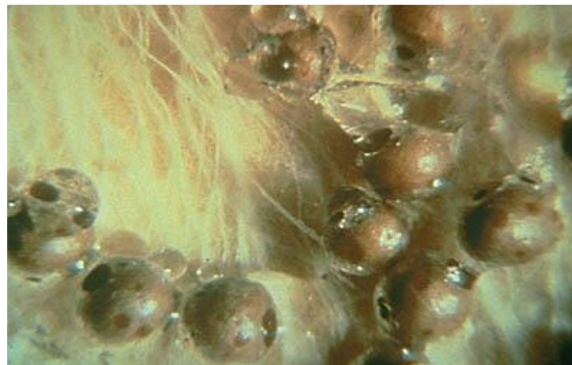
Purpose: 1. to obtain nourishment i. e., for nutrition . 2. to resist or tolerate unfavourable conditions for their survival i.e., over wintering, over summering. 3. for reproduction.

1.Rhizomorphs: (rhiza=root, morph=shape) Thick strands of somatic hyphae in which the hyphae lose their individuality and form complex tissues that are resistant to adverse conditions and remain dormant until favourable conditions return. The structure of growing tip of rhizomorphs resemble that of a root tip, hence the name rhizomorph.

Eg. *Armillariella mellea*.

2. Sclerotium: (skleron=hard) pl.sclerotia: It is a hard, round (looks like mustard seed)/ cylindrical or elongated (*Claviceps*) dark coloured (black or brown)resting body formed due to aggregation of mycelium, the component hyphae lose their individuality , resistant to unfavourable conditions and remain dormant for a longer period of time and germinate on the return of favourable conditions.

Eg. *Sclerotium*, *Rhizoctonia* .



3. Stroma: (stroma=mattress) pl.stromata. It is a compact somatic structure looks like a mattress or a cushion on which or in which fructifications (spores or fruiting bodies) are usually formed.

a. Sub stomatal stroma: cushion like structure formed below epidermis in sub stomatal region from which sporophores are produced. Eg. *Cercospora personata*.

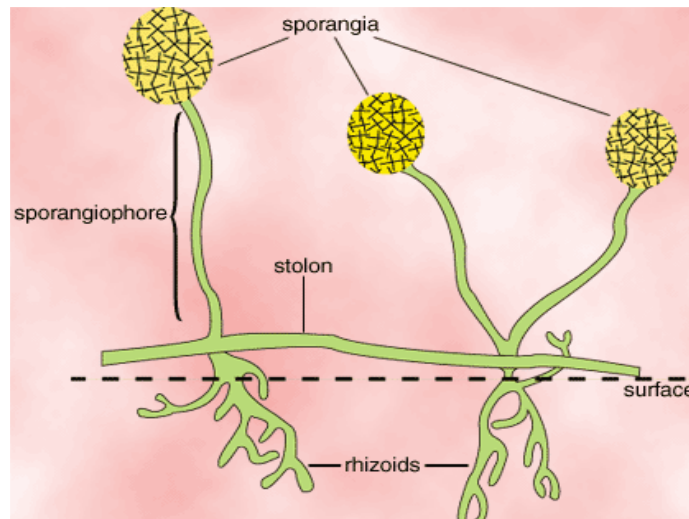
b. Perithecial stroma: When reproductive bodies like perithecia of some fungi are embedded characteristically throughout periphery of stroma, such stroma are called perithecial stroma. Eg.*Claviceps*, *Xylaria*.

4. Haustorium: (hauster=drinker) pl.haustoria.It is a outgrowth of somatic hyphae regarded as special absorbing organ produced on certain hyphae by parasitic fungi for obtaining nourishment by piercing into living cells of host. They may be knob like(*Albugo*), elongated (*Erysiphe*, *Uncinula*), finger like (*Peronospora*).



5. Rhizoids: (rhiza=root, oides=like) These are slender root like branched structures found in the substratum produced by some fungi which are useful for anchoring the thallus to substratum and for obtaining nourishment from the substrate.

Eg. *Rhizopus stolonifer*.



6. Appressorium: (apprimere=to press against) pl.appressoria A flattened tip of hyphae or germ tube acting as pressing organ by attaching to the host surface and gives rise to a minute infection peg which usually grows and penetrates the epidermal cells of the host.

Eg. *Puccinia*, *Colletotrichum*, *Erysiphe*.

