

Pellia:

Vegetative Structure:

Plant body is thin, dorsiventral, prostrate, dichotomously branched, with somewhat wavy margin. The dorsal surface is almost smooth and a median midrib is prominent. On the ventral surface numerous smooth, unicellular rhizoids are borne from under the midrib.

In T.S. through the thallus, following layers can be noticed:

(a) Upper and lower epidermis are present lower epidermis is with numerous smooth rhizoids,

(b) In between the two epidermal layers there are compact parenchymatous, chloroplast containing cells with a few scattered fibrous cells. Usually the midrib portion is thicker (8 – 16 layers in depth) than margins (2-5 layers in depth) (Fig 5.11).

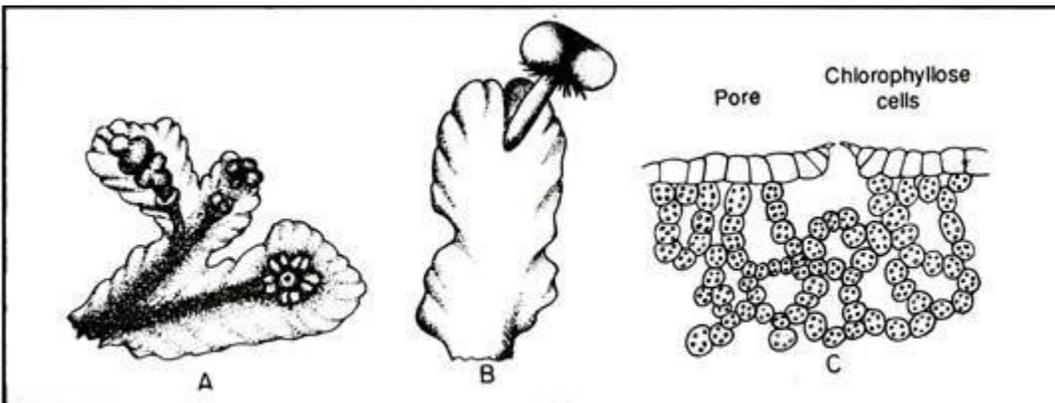


Fig 5.10. *Plagiochasma Sp.*: A & B – Male and female gametophyte, C – Section through gametophytic thallus.

Reproductive Structure:

Plants are either monoecious or dioecious. In the dioecious forms, the male plant bears antheridia all along the dorsal surface of the midrib while the archegonia develop in a cluster just behind the growing tip on the dorsal side of the female plant. In monoecious forms, the antheridia are behind the archegonia.

The mature antheridium is globose with a jacket one cell in thickness and a multicellular short stalk. It lies at the bottom of the antheridial chamber which is open on the dorsal surface by a pore. The mature

archegonium shows a venter containing the egg, a ventral canal cell and 4 to 6 neck canal cells.

Sporogonium:

Sporophyte is covered by involucre and calyptra. Each sporophyte has a distinct foot, seta and globose capsule. Capsule has two-layered jacket cells of outer layer larger with radial walls thickened and cells of inner layer with inner tangential wall thickened and numerous spores and elaters. There is a distinct elaterophore (formed by a group of elaters) at the base of each capsule (Fig 5.11).

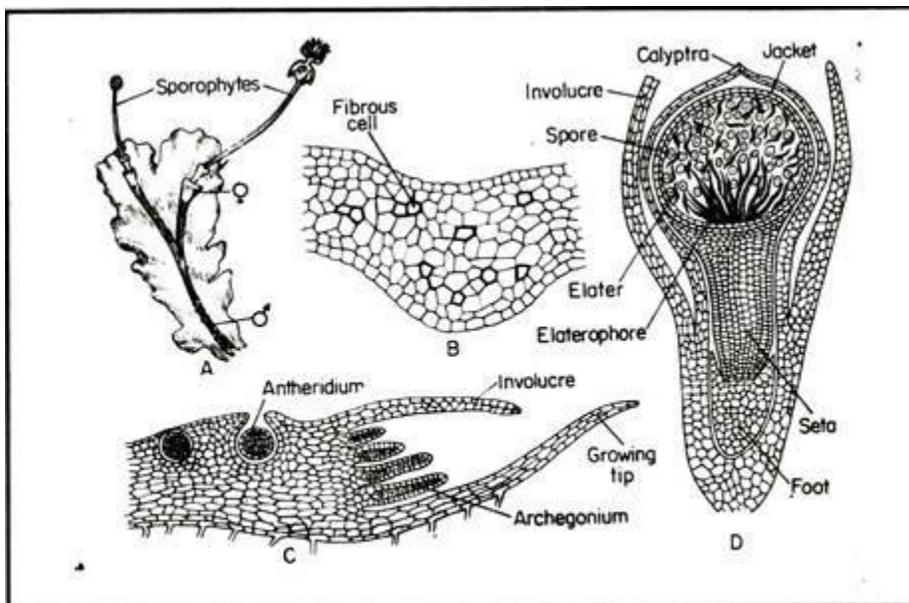


Fig 5.11. *Pellia Sp.* : A – Gametophytic thallus (Dorsal view), B – Section through gametophytic thallus, C – Section through the apical growing region of gametophyte showing sex organs ; D – Section through mature sporophyte.

Identification:

Thallus dorsiventrally flattened and prostrate, sporophyte simple and with limited growth, columella absent.