

ANATOMY OF THALLI OF HEPATICOPSIDA

The internal structure of the thalli of Hepaticopsida shows unique distribution of photosynthetic tissue. They vary greatly in its internal structure.

In its simplest form the thallus is composed of 1 to several layers of nearly uniform cells without any internal differentiation of tissue. This has been reported in Anthoceros thalloid Jungesmanniales and some genera of Marchantiales. Such as Dumortiera and Monoclea. In all these members is green cells contain a single large chloroplast.

But in other thalloid members of Marchantiales, the thalli exhibit high degree of anatomical differentiation of the tissues. The ventral region of the thallus is composed of large, colourless, compact, parenchymatous cell containing starch. They serves mainly for the storage of food reserves. The dorsal surface in Riccia is consist of a vertical row of chlorophyll containing cells separated by narrow vertical air canals. They open on the dorsal surface by simple pores. The terminal cells of each row becomes enlarged to form the epidermis like layer. These cells are non-green. In aquatic form of Ricciocarpos, the thallus consist mainly of network of large air chamber separa

-ted by one celled thick partition of chlorophyll containing cells.

But in other members of Hepaticopsida, the dorsal surface has a single horizontal layer of air chambers. They are separated by one another usually by vertical chambers. Each chamber contains branched or unbranched filaments for photosynthesis. This occurs in Marchantia, Lunularia, Cyathochaeta, Targuiolia and others.

In other genera Reboulia, Asterella and Plagiochasma the air chambers are in several rows. They are separated by a single layer of chlorophyll containing cells. These may be further subdivided by secondary partition. The air chambers are empty in Riboulia, Asterella and Plagiochasma. In Athalamia, Sauteria and Cyathochaeta the air chamber contain simple or branched filament containing chlorophyll containing cells. —

The air chamber opens to the dorsal surface by simple pores in Riccia but the pores are compound in Marchantia, Plagiochasma and Reboulia.