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Class 11<sup>th</sup>

Sub. Biology

Date:- 28.11.20

## **Types of Bryophytes**

The bryophytes are generally classified into two main groups

### **i. Liverworts**

Liverworts (Hepaticopsida) usually grow in moist, shady places such as banks of streams, marshy ground, damp soil, bark of trees and deep in the woods.

(a) **Thallus** The plant body of a liverwort is thalloid, e.g, Marchantia,. The thallus is dorsoventral and closely appressed to the substrate. The leafy members have tiny leaf like appendages in two rows on the stem like structure.

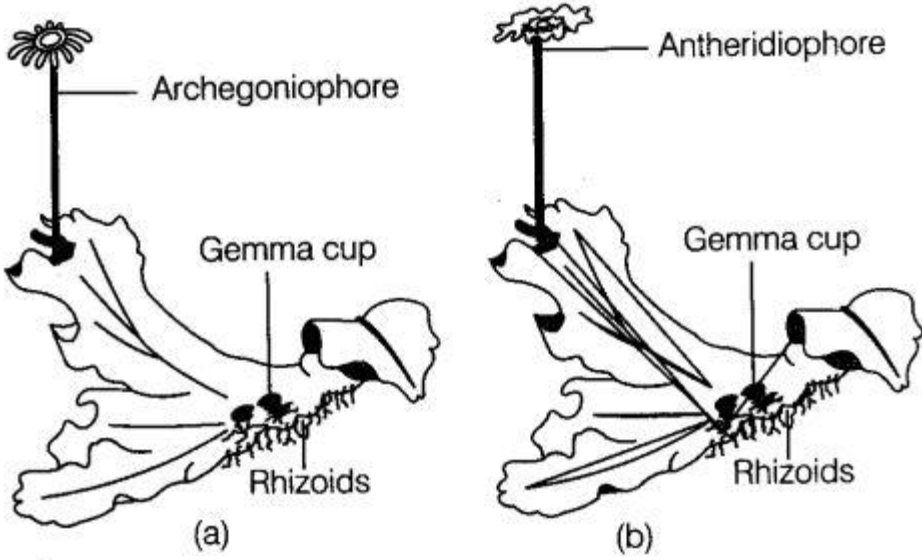
(b) **Rhizoids** These are unicellular. These may be of two types in some liverworts, i.e. smooth walled and tuberculate.

(c) **Reproduction** It may occur both by asexual and sexual means.

- **Asexual Reproduction** It occurs by fragmentation of thalli or by the formation of specialised structures called gemmae (sing, gemma). Gemmae are green, multicellular, asexual buds which develop in small receptacles called gemma cups located on the thalli. The gemmae become detached from the parent body and germinate, forming new individuals.

- **Sexual Reproduction** During this male and female sex organs are produced either on the same or on different thalli. The sporophyte is differentiated into a foot, seta and capsule. After meiosis, spores are produced within the capsule.

- These spores germinate to form free-living gametophytes, e.g., Riccia, Marchantia, Pellia, Porella, etc.



**Fig 3.5** A liverwort (*Marchantia*) (a) Female thallus  
(b) Male thallus