**Classification of Bryophytes:**

According to the latest recommendations of ICBN (International Code of Botanical Nomenclature), bryophytes have been divided into three classes.

1. Hepaticae ( Hepaticopsida = Liverworts). Eg. Riccia, Marchantia, Pelia, Porella

2. Anthocerotae (Anthocertopsida= Hornworts). Eg. Anthroceros, Notothylus.

3. Musci (Bryopsida= Mosses). Eg. Polytrichum, Pogonatum.



**Class 1. Hepaticae or Hepaticopsida:**

1. Gametophytic plant body is either thalloid or foliose. If foliose, the lateral appendages (leaves) are without mid-rib. Always dorsiventral.

2. Rhizoids without septa.

3. Each cell in the thallus contains many chloroplasts; the chloroplasts are without pyrenoi.

4. Sex organs are embedded in the dorsal surface.

5. Sporophyte may be simple (e.g., Riccia) having only a capsule, or differentiated into root, seta and capsule (e.g., Marchantia, Pallia and Porella etc.)

6. Capsule lacks columella.

7. It has 4 orders: (i) Calobryales, (ii) Jungermanniales, (iii) Spherocarpales, (iv) Marchantiales.

**Class 2. Anthocerotae or Anthocerotopsid:**

1. Gametophytic plant body is simple, thalloid; thallus dorsiventra without air cambers, shows no internal differentiation of tissues.

2. Scales are absent in the thallus.

3. Each cell of the thallus possesses a single large chloroplast with a pyrenoid.

4. Sporophyte is cylindrical only partly dependent upon gametophyte for its nourishment. It is differentiated into bulbous foot and cylindrical capsule. Seta is meristematic.

5. Endothecium forms the sterile central column (i.e., columella) in the capsule (i.e. columella is present).

6. It has only one order-Anthocerotales.

**Class 3. Musci or Bryopsida:**

1. Gametophyte is differentiated into prostrate protonema and an erect gametophores

2. Gametophore is foliose, differentiated into an axis (=stem) and lateral appendages like leaves but without midrib.

3. Rhizoids multi-cellular with oblique septa.

4. Elaters are absent in the capsule of sporangium.

5. The sex organs are produced in separate branches immersed in a group of leaves.

6. It has only three orders: (i) Bryales, (ii) Andriales and (iii) Sphagnales.