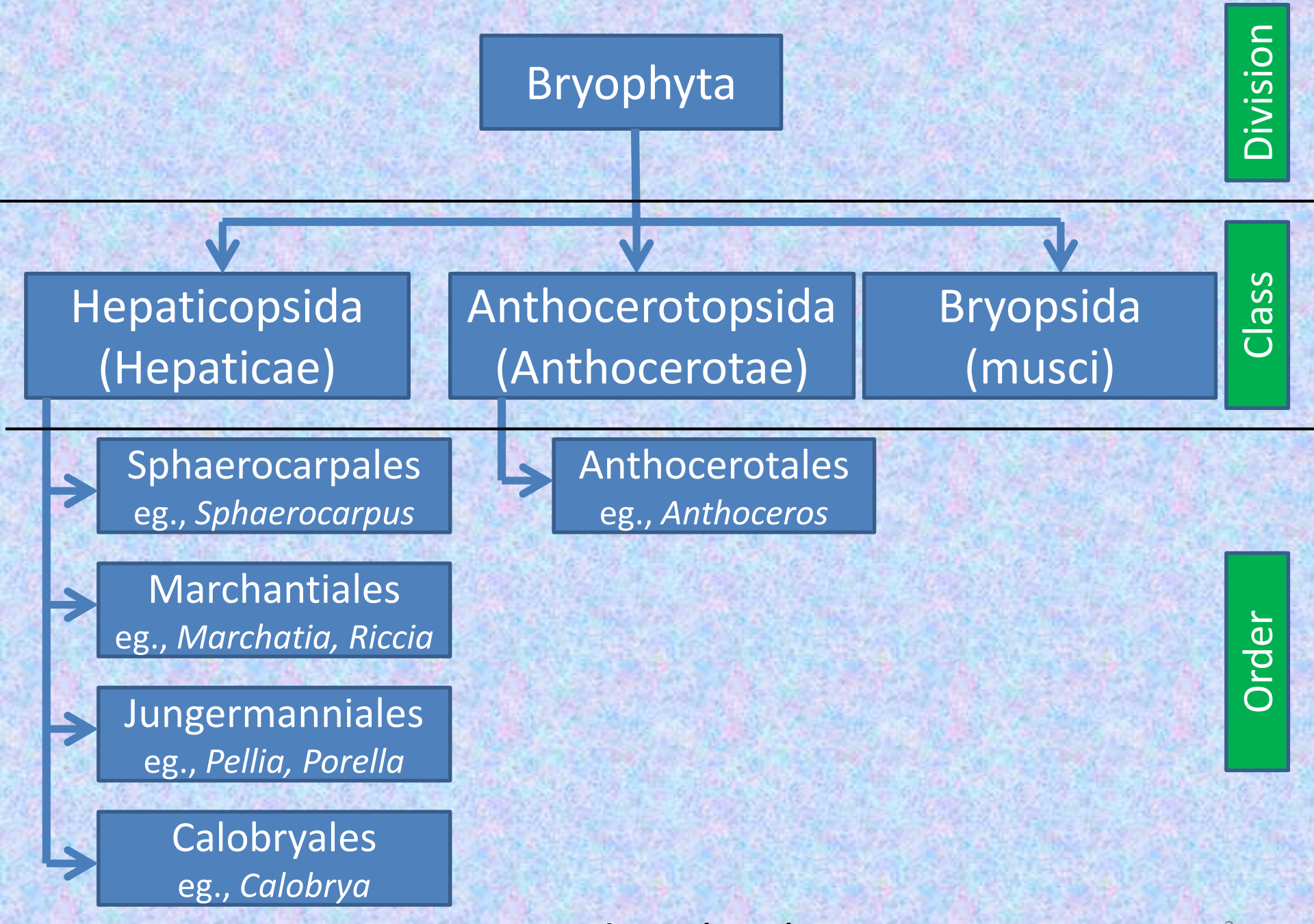
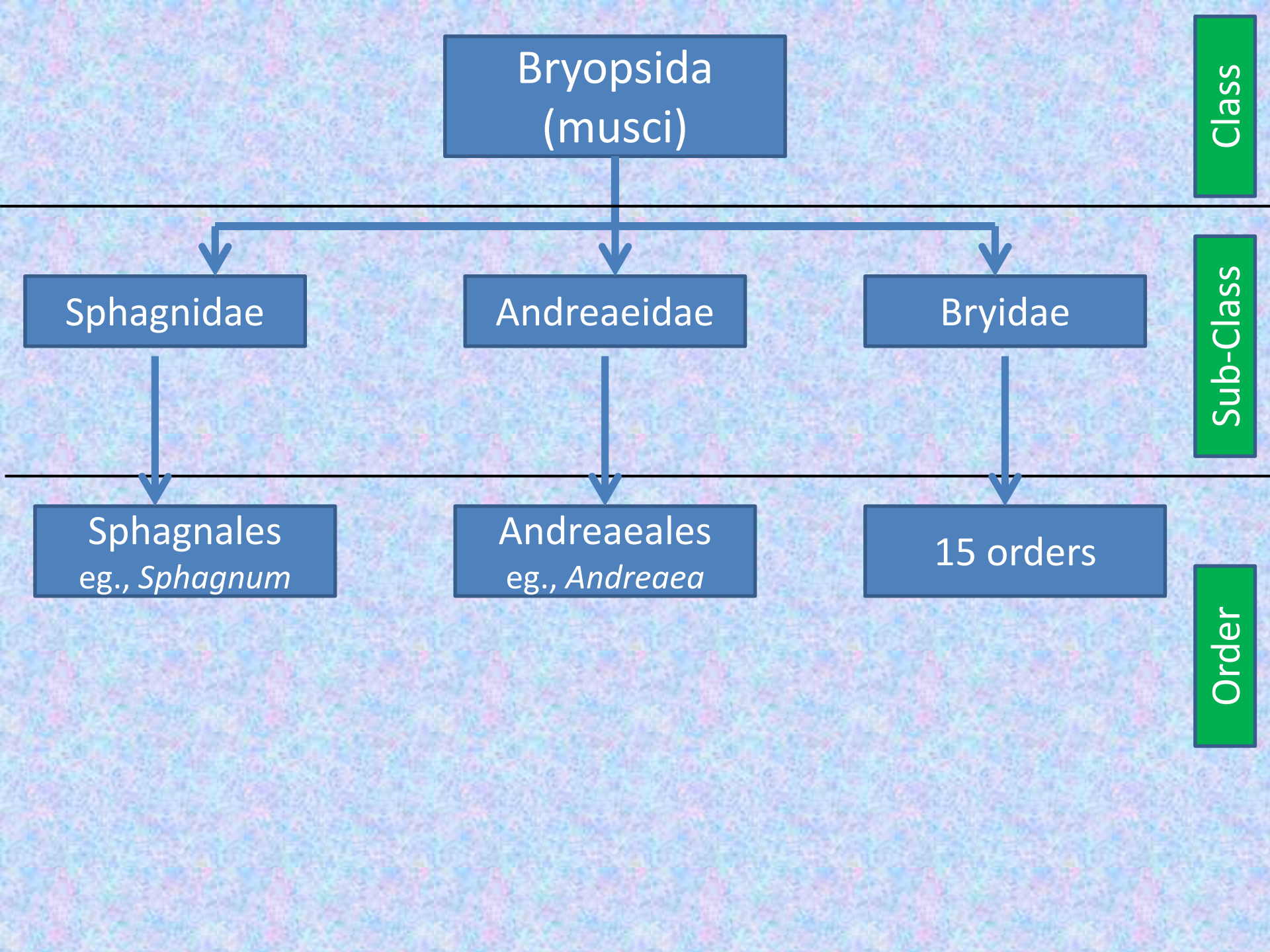
Classification of Bryophyta

- According to Proskauer (1957) the division Bryophyta is divided into three classes v.i.z., Hepaticopsida, Anthocerotopsida and Bryopsida.
- Hepaticopsida and Anthocerotopsida are further divided into orders whereas Bryopsida is divided into sub-class followed by orders.
- The outline classification is as follows:



Proskauer (1957)


Bryopsida
(musci)
Class
Sphagnidae
Andreaeidae
Bryidae
Sub-Class
Sphagnales
eg., Sphagnum
Andreaeales
eg., Andreaea
15 orders
Order

Bryidae : 15 orders	
1.Tetraphidales	9. Grimmiales
2. Buxbaumiales	10. Encalyptales
3. Polytrichales	11. Funariales
4. Dawsoniales	12. Eubryales
5. Archidiales	13. Isobryales
6. Dicranales	14. Hookeriales
7. Fissidentales	15. Hypnobryales
8. Pottiales	

Characteristics: Hepaticopsida

- Gametophyes dorsiventrally differentiated, either simple thallose or with leaf like appendages (foliose).
- May or may not be internally differentiated into various tissues (homogeneous).
- Sex organs are situated on the dorsal side of the plant body.
- Sporophytes may be simple or with foot, seta and capsule.
- Sporogenous tissue derives from endothecium of an embryo.

Characteristics: Anthocerotopsida

- Gametophytes are dorsiventrally differentiated, thallus-like.
- Internal tissue differentiation is absent i.e., internally homogeneous.
- Sex organs are embedded in the gametophytic tissue.
- Sporophytes are differentiated into foot and capsule only – the lower portion of the capsule is meristematic.
- Sporogenous tissue derives from amphithecium of an embryo, endothecium contributes in the formation of sterile columella.

Characteristics: Bryopsida

- Gametophyes having two stages of development *viz.*, (a) prostrate protonemal stage (b) erect gametophore stage.
- Gametophore differentiated into stem like cauloid (equal axis), leaf like phylloid and rhizoids.
- The gametophore bear sex organs.
- Sex organs situated superficially forming a cluster at the apex of the stem.
- Sporophytes differentiated into foot and capsule or into foot, seta and capsule.
- Sporogenous tissue derives from either endothecium or from amphithecium.
- Sporogenous tissue encircles a sterile columella.
- Sterile cells i.e., elaters are absent.