

NE Sub-Guide to Initial Groups

Revised through 12 January 2009

Reminder: A dagger (†) indicates that not all of the species within the given genus have the character(s) defining that Group. Abbreviations for the **distribution** of taxa are found at the end of the Concordance.

Group A – Plants on persistent protonemata

| | Group A |
|---|---------------------|
| Leaves 2-ranked & distichous (attached in two rows on opposite sides of the stem). | |
| Leaves cleft at anterior edge and clasping posterior edge of next leaf; WS | <i>Fissidens</i> † |
| Leaves decurrent & confluent ; protonemata luminous ; “Goblin Gold”; WS* | <i>Schistostega</i> |
| Leaves with longitudinal lamellae ; setae long ; capsules cylindrical ; epiphragm present; WS | <i>Pogonatum</i> † |
| Leaves serrate to spinose-dentate ; capsules sessile , \pm globose & cleistocarpous ; WS | <i>Ephemerum</i> |
| Leaves acute, lacking the above unique characteristics. | |
| Plants growing on soil ; costa weak at base; capsules exserted ; WS* | <i>Discelium</i> |

Group B – Plants minute with immersed capsules

| | Group B |
|--|------------------------|
| Leaves with a hair-point or awn. | |
| Leaves with ridge-like lamellae on upper surface of costa; WS | <i>Pterygoneurum</i> |
| Leaves with recurved (at apex), serrate margins; cells \pm smooth ; WS* | <i>Acaulon</i> |
| Leaves subulate / setaceous at least on perichaetial leaves. | |
| Setae straight ; capsules immersed & cleistocarpous . | |
| Capsules pyriform with conspicuous, stomatose neck; spores small ; WS | <i>Bruchia</i> † |
| Capsules globose to ovoid with no neck. | |
| Calyptrae mitrate or cucullate ; spores numerous & small ; WS | <i>Pleuroidium</i> |
| Calyptrae rudimentary ; spores few & large (>100 μ); E | <i>Archidium</i> |
| Leaves cuspidate to long-apiculate with reflexed tips; bulbiform ; WS* | <i>Acaulon</i> |
| Leaves involute when wet, crisped & contorted when dry; E | <i>Astomum</i> |
| Leaves serrate to spinose-dentate ; protonemata persistent ; WS | <i>Ephemerum</i> |
| Leaves acute to acuminate, lacking the above unique characteristics. | |
| Capsules clearly operculate . | |
| Operculum short -beaked; exothecial cells collenchymatous ; WS | <i>Aphanorrhagma</i> |
| Operculum long -beaked; exothecial cells not collenchymatous; WS | <i>Physcomitrium</i> † |
| Capsules cleistocarpous or rupturing irregularly. | |
| Capsules pyriform with conspicuous, stomatose neck; spores small ; WS | <i>Bruchia</i> † |
| Capsules globose . | |
| Calyptrae mitrate ; spores numerous & small ; WS | <i>Physcomitrella</i> |
| Calyptrae rudimentary . | |
| Costa strong ; spores few & large (>100 μ); E | <i>Archidium</i> |
| Costa lacking ; spores medium to large (up to ~80 μ); WS | <i>Micromitrium</i> |

Group C – Plants dendroid or frondose from an erect stipe.

Plants **dendroid**Stems with dense **paraphyllia**, **green**, filiform, & branched; on rich **soil**; EStems **lacking** paraphyllia.Leaves **not** bordered & ovate to lanceolate.Leaf singly or doubly **serrate** above; apical cells **rhombic**; WSLeaf with **alternate** large & small **teeth**; alar cells distinctly subquadrate; E, WCPlants **frondose**.Leaves **falcate-secund**; plant regularly pinnate; WS***Group C***Climacium**Thamnobryum**Isothecium*[†]*Ptilium crista-castrensis*

Group D – Plants with pendulous branches

Group DLeaves **lanceolate** to oblong-lanceolate.Leaf margins coarsely **serrate** in upper third; upper cells **±prorulose**; WS*Isothecium myosuroides*[†]

Group E – Plants growing horizontally or as “fish-hooks”

Group EPlants growing **horizontally**; sticking **±straight out** from vertical surface.Leaves **complanate** & **undulate**; **ecostate**; paraphyllia **lacking**; WS*Leaves **neither** complanate **nor** undulate.Shoots distinctly **julaceous**; costa long & single; cells short; SEShoots **not** julaceous.Alar cells subquadrate in **large** groups; EPlants growing as “**fish-hooks**”; secondary branches **curved upwards** when dry.Costa **long** & **single**; leaf cells **papillose**; ECosta **short** & **double** to lacking; leaf cells **smooth**.Leaf cells **>5:1**; **5-20** quadrate alar cells at the **basal angles**; WS*Leaf cells **~3:1**; **numerous** oblate alar cells extending up **leaf margins**; E, AZ*Neckera*[†]*Cryphaea**Forsstroemia**Anomodon viticulosus*[†]*Pylaisiella**Leucodon*

Group F – Plants growing on dung

Group FHypophysis **turbinate**, **globose** or **skirt-like**, and **colored**; leaves obtuse to acuminate; N, CP & SAHypophysis **pyriform** & **±urn-colored**; leaves elongate-**subulate** to **hair-pointed**; NHypophysis evident, but **±narrower** than urn & **wrinkled** when dry; leaves obtuse to acuminate.Capsules **cylindric**; setae **brownish**; calyptrae **constricted** above base; N**Splachnum**Tetraplodon**Tayloria*[†]

End.