***NE Skeleton to Rarely Branched (mostly acrocarpous) Mosses***

*Revised through 17 May 2010*

***Reminder****: a dagger* (†) *indicates that not all of the species within the given genus have the character(s) defining that Group.*

***Group A1 – Shoots flattened or angular, i.e., not round***

Group A1

***Acaulon*† *Distichium* *Paludella***

***Aulacomnium*†** *Erpodium* ***Plagiomnium***

*Bryoxiphium* ***Fissidens Schistostega***

*Catoscopium* ***Meesia***† *Triquetrella*

***Conostomum***

***Group A2 – Shoots julaceous both wet & dry***

Group A2

***Anomobryum******Bryum*† *Plagiobryum***

*Aongstroemia* ***Conostomum******Pleuridium***†

***Aulacomnium***†

***Group A3 – Stems densely tomentose***

Group A3

*Anacolia* ***Dicranum*† *Rhizomnium***†

***Aulacomnium*† *Paludella*** *Scopelophila*†

***Cinclidium Polytrichum***†***Zygodon***†

***Group A4 – Stems red***

Group A4

*Anacolia* ***Cinclidium******Pohlia***†

***Anomobryum*** *Epipterygium* ***Rhizomnium***†

*Aongstroemia* ***Mnium***† *Roellia*

***Blindia******Philonotis***† *Trachycystis*

***Bryum***†*Plagiobryum*

***Group A5 – Leaves squarrose-recurved***

Group A5

***Barbula*† *Paludella* *Tortula***†

*Geheebia Pleurochaete Trichodon*

*Leptodontium Rhexophyllum Triquetrella*

***Group A6 – Leaves falcate-secund***

Group A6

*Andreaeobryum* ***Dicranum*† *Paraleucobryum***†

***Dicranella***† *Kiaeria*†

***Group A7 – Leaves subulate / setaceous***

Group A7

*Anacolia* ***Dicranodontium*** *Orthodontium*†

***Archidium***†***Dicranoweisia Paraleucobryum***

*Arctoa* ***Dicranum***† ***Pleuridium***†

***Bartramia***† ***Ditrichum***† *Pseudoditrichum*

***Blindia*** *Eccremidium* ***Seligeria***†

***Brachydontium*** *Kiaeria Symblepharis*

***Bruchia***†***Leptobryum Trematodon***†

*Campylopus*† ***Oncophorus***† *Trichodon*

***Dicranella***†

***Group A8 – Leaves dimorphic***

Group A8

*Epipterygium Erpodium*

***Group A9 – Leaves with hair-points or awns***

Group A9

***Acaulon***† *Erpodium*† *Pyramidula*

*Aloina*†***Grimmia*† *Schistidium***†

*Brachymenium*† *Jaffueliobryum* ***Splachnum*†**

***Bryum*†** *Lorentziella Stegonia*†

*Campylopus*†***Orthotrichum*† *Tetraplodon***†

*Coscinodon* ***Phascum Tortula***†

*Crossidium* ***Polytrichum*† *Ulota*†**

***Desmatodon*†***Pseudocrossidium*† *Venturiella*

***Encalypta*† *Pterygoneurum*** *Voitia*

***Group A10 – Leaves with lamellae, ridges or filaments***

Group A10

*Aloina* ***Dicranum*† *Polytrichastrum***

***Atrichum*†***Dryptodon* ***Polytrichum***

*Bartramiopsis Lyellia Psilopilum*

*Campylopus*† *Oligotrichum* ***Pterygoneurum***

*Crossidium* ***Pogonatum Saelania***

***Group A11 – Leaves undulate***

Group A11

***Atrichum*† *Aulacomnium*† *Dicranum*†**

***Group A12 – Leaves involute***

**Group A12**

*Aloina Indusiella* ***Polytrichum***†

***Astomum*** *Neohyophila* ***Weissia***

***Hyophila***

***Group A13 – Leaves all costa***

**Group A13**

***Leucobryum*** *Octoblepharum*

***Group A14 – Leaves with a broad, single costa***

**Group A14**

*Amblyodon**Campylopus* ***Leptobryum***

*Brothera* ***Dicranella*† *Meesia*†**

*Campylopodiella* ***Dicranodontium Paraleucobryum***

***Reminder****: The costa in Groups A15 through A19 is long & single.*

***Group A15 – Leaves with expanded, sheathing bases***

Group A15

*Bartramia*† *Oligotrichum*† *Rhexophyllum*

*Bartramiopsis Oncophorus*† *Symblepharis*

*Dicranella*† *Pogonatum Timmia*

*Ditrichum*† *Polytrichastrum Trematodon*

*Indusiella Polytrichum Trichodon*

*Lyellia Pseudoditrichum*

***Group A16 – Leaves with long decurrencies***

**Group A16**

***Bryum*† *Paludella*** *Triquetrella*

***Meesia***†***Pohlia***†

***Group A17 – Leaves with a defined group of hyaline cells***

**Group A17**

***Bryoerythrophyllum******Hedwigia Pottia***†

***Bryum***† *Luisierella Syrrhopodon*

*Calymperes* ***Oxystegus Tortella***

***Desmatodon*†***Paraleptodontium Tortula*†

***Encalypta***†***Plagiobryum***† *Trichostomopsis*†

*Eucladium Pleurochaete Trichostomum*

***Group A18 – Leaves with a distinct border***

**Group A18**

***Atrichum Desmatodon***† *Psilopilum*

*Bartramiopsis Entosthodon*†***Rhizomnium***

*Brachymenium*† *Epipterygium* ***Rhodobryum***

***Bryum*†** *Leptodontium*† *Roellia*

***Buxbaumia Mnium*†** *Scouleria*

*Calymperes*† *Oedipodium Splachnobryum*

***Cinclidium Plagiomnium*** *Syrrhopodon*†

*Crumia* ***Pseudobryum Tortula*†**

***Cyrtomnium*** *Pseudocrossidium*† *Trachycystis*

***Group A19 – Leaves with distinct alar cells***

**Group A19**

*Arctoa* ***Dicranodontium Grimmia*†**

***Blindia Dicranoweisia***† *Kiaeria*

*Campylopus* ***Dicranum Paraleucobryum***

***Group A20 – Leaves with costa extremely reduced to lacking***

**Group A20**

***Andreaea*† *Micromitrium Tetrodontium*†**

***Ephemerum*† *Schistostega*** *Venturiella*

*Erpodium* ***Sphagnum***

***Reminder****: Definitions for cell length to breadth ratios are found in the Introduction, the Overview & at the end of this section.*

***Group A21 – Cells long (>5:1) & smooth***

**Group A21**

*Orthodontium*†***Pohlia***†

***Group A22 – Cells intermediate (2-5:1) & distinctly papillose***

**Group A22**

***Bartramia***† *Gymnostomiella* ***Philonotis***†

***Group A23 – Cells intermediate & distinctly prorulose***

**Group A23**

***Bartramia*† *Bruchia*† *Ephemerum***†

*Bartramidula* ***Conostomum*** ***Philonotis***†

***Group A24 – Cells intermediate & smooth (or indistinctly ornamented\*)***

**Group A24**

***Bruchia*†*****Ditrichum*** ***Physcomitrium***

*Bryobrittonia Entosthodon* ***Pohlia***†

***Bryum Funaria******Seligeria***

***Catoscopium Meesia*** *Splachnobryum*

***Dicranella* *Mielichhoferia******Tayloria***

***Discelium*** *Orthodontium*† ***Tetrodontium***

\*: Cells bulging, mammillose (both bulging & papillose) or indistinctly papillose, i.e. low papillae

***Group A25 – Cells short (<2:1) & distinctly papillose***

**Group A25**

***Amphidium Didymodon***†***Orthotrichum***†

***Andreaea***† ***Encalypta*** *Pseudocrossidium*

*Anoectangium Geheebia Rhexophyllum*

***Aulacomnium***†***Gymnostomum******Timmia***†

***Barbula***†*Gyroweisia*†*Tuerckheimia*

***Cynodontium***†***Hymenostylium******Ulota***†

***Desmatodon***† *Leptodontium* ***Zygodon***

***Dichodontium*** *Molendoa*

***Group A26 – Cells short & smooth (or indistinctly ornamented\*)***

**Group A26**

***Andreaea*† *Grimmia*** *Rhacithecium*

*Andreaeobryum Gyroweisia*†***Schistidium***

***Barbula*† *Hyophila*** *Scopelophila*

*Campylostelium Neohyophila Scouleria*

***Catoscopium Oncophorus*** *Stegonia*

*Ceratodon Oreas* ***Tetraphis***

*Crumia* ***Orthotrichum*† *Timmia***†

***Cynodontium*† *Plagiopus*** *Timmiella*

***Desmatodon*† *Pottia*† *Tortula*†**

***Didymodon*† *Ptychomitrium*** *Trichostomopsis*†

***Diphyscium*** *Pyrrhobryum* ***Ulota***†

*Globulinella* ***Rhabdoweisia***

\*: Cells bulging, mammillose (both bulging & papillose) or indistinctly papillose, i.e. low papillae

Bulging: *Diphyscium, Hyophila, Neohyophila, Ptychomitrium*†*, Timmia & Timmiella*

Cuticular ridges: *Amphidium*, *Grimmia & Plagiopus*

Length to breadth ratios of medial, laminal cells:

Long cells: >5:1; commonly termed linear.

Intermediate cells: 2-5:1; commonly termed elongated, rectangular, hexagonal or rhomboidal.

Short cells: <2:1; commonly termed isodiametric, quadrate, rounded-quadrate or sub-quadrate.

Cells = medial, laminal cells; cells ~2/3 of the way from insertion to apex, midway between the costa & the margin.

End