***Skeleton to Rarely Branched Mosses -- MidWest***

*Revised through 27 January 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 and 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***†

***Dicranella***† ***Pleurochaete Trichodon***

*Geheebia**Rhexophyllum**Triquetrella*

***Leptodontium***

***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 and 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 Pohlia***†

***Meesia***† ***Plagiomnium*** *Triquetrella*

***Mnium***

***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 and at the end of this section.*

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

**Group A21**

*Orthodontium*†***Pohlia*†**

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

**Group A22**

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

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

**Group A23**

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

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

***Group A24 – Cells intermediate and smooth (or indistinctly ornamented#)***

**Group A24**

***Bruchia***† ***Ditrichum* *Pohlia***†

*Bryobrittonia* ***Entosthodon* *Seligeria***†

***Bryum Funaria*** *Splachnobryum*

***Catoscopium Mielichhoferia*** *Tayloria*

***Dicranella*** *Orthodontium*† ***Tetrodontium***

***Discelium Physcomitrium***

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

***Group A25 – Cells short (<2:1) and 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 and smooth (or indistinctly ornamented#)***

**Group A26**

***Andreaea***† ***Gyroweisia***†*Rhacithecium*

*Andreaeobryum* ***Hyophila Schistidium***

***Barbula***† ***Meesia* *Scopelophila***

***Campylostelium*** *Neohyophila**Scouleria*

***Ceratodon Oncophorus Seligeria***†

*Crumia**Oreas**Stegonia*

***Cynodontium***† ***Orthotrichum***† ***Tetraphis***

***Desmatodon***† ***Plagiopus Timmia***†

***Didymodon***† ***Pottia***†*Timmiella*

***Diphyscium Ptychomitrium Tortula***†

*Globulinella**Pyrrhobryum**Trichostomopsis*†

***Grimmia Rhabdoweisia Ulota***†

# Cells bulging, mammillose (both bulging and papillose) or indistinctly papillose, i.e. low papillae.

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

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

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

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.

End.