Skeleton to Rarely Branched (mostly acrocarpous) Mosses of the West Coast

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†
Aulacomnium†
Bryoxiphium
Catoscopium
Conostomum
Distichium
Erpodium
Fissidens
Meesia†
Paludella
Plagiomnium
Schistostega
Triquetrella

Group A2 – Shoots julaceous both wet and dry

Group A2

Anomobryum
Aongstroemia
Aulacomnium†
Bryum†
Conostomum
Plagiobryum
Pleuridium†

Group A3 – Stems densely tomentose

Group A3

Anacolia
Aulacomnium†
Cinclidium
Dicranum†
Paludella
Polytrichum†
Rhizomnium†
Scopelophila†
Zygodon†

Group A4 – Stems red

Group A4

Anacolia
Anomobryum
Aongstroemia
Blindia
Bryum†
Cinclidium
Epipterygium
Mnium†
Philonotis†
Plagiobryum
Pohlia†
Rhizomnium†
Roellia
Trachycystis

Group A5 – Leaves squarrose-recurved

Group A5

Barbula†
Dicranella†
Geheebia
Leptodontium
Paludella
Pleurochaete
Rhexophyllum
Tortula†
Trichodon
Triquetrella

Group A6 – Leaves falcate-secund

Group A6

Andreaeobryum
Dicranella†
Dicranum†
Kiaeria†
Paraleucobryum†

Group A7 – Leaves subulate / setaceous

Group A7

Anacolia
Archidium†
Arctoa
Bartramia†
Blindia
Brachydontium
Bruchia†
Campylopus†
Dicranella†
Dicranodontium
Dicranoweisia
Dicranum†
Ditrichum†
Eccremidium
Kiaeria
Leptobryum
Oncophorus†
Orthodontium†
Paraleucobryum
Pleuridium†
Pseudoditrichum
Seligeria†
Symblepharis
Trematodon†
Trichodon

Group A8 – Leaves dimorphic

Group A8

Epipterygium
Erpodium

Group A9 – Leaves with hair-points or awns

Group A9

Acaulon†
Aloina†
Brachymenium†
Bryum†
Campylopus†
Coscinodon
Crossidium
Desmatodon†
Encalypta†
Erpodium†
Grimmia†
Jaffueliobryum
Lorentziella
Orthotrichum†
Phascum
Polytrichum†
Pseudocrossidium†
Pterygoneurum
Pyramidula
Schistidium†
Splachnum†
Stegonia†
Tetraplodon†
Tortula†
Ulota†
Venturiella
Voitia

Group A10 – Leaves with lamellae, ridges, or filaments

Group A10

Aloina
Atrichum†
Bartramiopsis
Campylopus†
Crossidium
Dicranum†
Dryptodon
Lyellia
Oligotrichum
Pogonatum
Polytrichastrum
Polytrichum
Psilopilum
Pterygoneurum
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†
Bryobrittonia
Bryum
Catoscopium
Dicranella
Discelium
Ditrichum
Entosthodon
Funaria
Mielichhoferia
Orthodontium†
Physcomitrium
Pohlia†
Seligeria†
Splachnobryum
Tayloria
Tetrodontium

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
Andreaea†
Anoectangium
Aulacomnium†
Barbula†
Cynodontium†
Desmatodon†
Dichodontium
Didymodon†
Encalypta
Geheebia
Gymnostomum
Gyroweisia†
Hymenostylium
Leptodontium
Molendoa
Orthotrichum†
Pseudocrossidium
Rhexophyllum
Timmia†
Tuerckheimia
Ulota†
Zygodon

Group A26 – Cells short and smooth (or indistinctly ornamented#)

Group A26

Andreaea†
Andreaeobryum
Barbula†
Campylostelium
Ceratodon
Crumia
Cynodontium†
Desmatodon†
Didymodon†
Diphyscium
Globulinella
Grimmia
Gyroweisia†
Hyophila
Meesia
Neohyophila
Oncophorus
Oreas
Orthotrichum†
Plagiopus
Pottia†
Ptychomitrium
Pyrrhobryum
Rhabdoweisia
Rhacithecium
Schistidium
Scopelophila
Scouleria
Seligeria†
Stegonia
Tetraphis
Timmia†
Timmiella
Tortula†
Trichostomopsis†
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.