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CLADISTIC ANALYSIS OF THE FAMILY CRYPHAEACEAE (BRYOPHYTA) WITH EMPHASIS ON *CRYPHAEA*: A STUDY BASED ON A COMPREHENSIVE MORPHOLOGICAL DATASET

SUPPLEMENTARY APPENDIX

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SPECIMENS EXAMINED

Cryphaea apiculata Schimp.: *M. Schiavone 2535, 3302* (LIL); *G. Suárez 482* (LIL); *G. Suárez & M. Schiavone 97* (LIL).

Cryphaea brevipila Mitt.: *A. Hüebschmann 1* (NY), *M. Schiavone* et al. *2711*(LIL); *G. Suárez 162, 522* (LIL); *A. Schinini 24788B* (NY).

Cryphaea furcinervis Müll. Hal.: *M. Schiavone & B. Biasuso 838, 1597* (LIL); *G. Suárez & M. Schiavone 49* (LIL).

Cryphaea jamesonii Taylor.: *M. Schiavone & B. Biasuso 2154, 3086* (LIL); *M. Schiavone, B. Biasuso & S. P. Churchill 2797* (LIL).

Cryphaea lorentziana Müll. Hal.: *M. Schiavone & B. Biasuso 1597* (LIL).

Cryphaea patens Hornsch.: *G. Suárez 159, 522* (LIL); *M. Schiavone & B. Biasuso 837* (LIL); *G. Suárez & M. Schiavone 05* (LIL).

Cryphaea rhacomitriodes Müll. Hal.: *G. Suárez & M. Schiavone 04,36, 83, 101* (LIL); *G. Suárez 151, 152, 153, 166* (LIL); *M. Schiavone & B. Biasuso 579, 580, 593, 1366, 2201* (LIL); *M. Schiavone 661* (LIL); *B. Biasuso 684, 997* (LIL).

Cryphaeophilum molle (Dusén) M. Fleisch.: *Dusén 536* (NY, LIL); *Dusén 440, 529* (HBr, LIL).

Cryphidium leucocoleum (Mitt.) A. Jaegger.: *Lorentz* s/n (H-BR) as *Cryphaea aurantiorum*.; *G. Suárez, M. Dematteis, E. Meza-Torres & A. Vega 1337, 1435* (LIL, NY); *Sehnem* 229 (NY). *Neimeyer* s/n (NY 01817302).

Cyclodictyon albicans (Hedw.) Kuntze: *M. Schiavone 3303* (LIL).

Cyclodictyon lorentzii (Müll.) Buck & Schiavone: *M. Schiavone 1265* (LIL).

Cyclodictyon varians (Sull.) Kuntze: *Costa* et al. *5073* (RB); *M. S. Dias s/n* (RB 453018).

Dendrocryphaea cuspidata (Sull.) Broth.: *Künhnemann 5176* (BA, LIL); *Porter 1901* (NY, LIL, HBr); *Crosby 11702* (NY, LIL); *Dusén 23* (NY, LIL).

Dendrocryphaea gorveana (Mont.) Paris & Schimp.: *Montagne s/n* (NY, LIL); *Lechler s/n* (PC, LIL).

Dendrocryphaea tasmanica (Mitt.) Broth.: *A. Fife 6725* (CHR, LIL).

Forsstroemia coronata (Mont.) Paris: *Pierotti s/n* (LIL); *G. Suárez & M. Schiavone 15, 35, 86, 88* (LIL); *G. Suárez 57, 67, 72* (LIL).

Haplocladium microphyllum (Hedw.) Broth.: *William R. Buck 26078* (NY, LIL).

Herpetineuron toccae (Sull. & Lesq.) Cardot: *Hosseus 69, 231, 266* (LIL).

Lepidopilum polytrichoides (Hedw.) Brid.: *S. P. Churchill & I. Sastre De-Jesús 13744* (NY).

Lepyrodon tomentosus (Hook.) Mitt.: *Perez-Moreau s/n* (BA, LIL); *Aarnokalela b 224 d* (BA, LIL); *Theirot 1770* (Isotypes: BA, LIL)

Meteoridium remotifolium (Müll.) Manuel: *S. P. Churchill & M. Schiavone 20083* (MO).

Meteorium deppei (Müll.) Mitt. : *William R. Buck 26042* (LIL); *William R. Buck 26087* (NY).

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Neckera villa-ricae Besch.: *G. Suárez, Dematteis, M, Meza, E & Vega, A 1404, 1419* (LIL, NY); *G. Suárez 1123* (LIL); *G. Suárez, M. Dematteis, E. Meza, & A. Vega 1228* (CTES, LIL, NY); *G. Suárez, M. Dematteis, E. Meza, & A. Vega 1234, 1341* (LIL).

Neckeropsis undulata (Hedw.) Reichardt.: *M. Schiavone 3273* (LIL); *Michelle J. Price & B. Biasuso* et al. *1634* (MO); *S. P. Churchill & M. Schiavone 20040* (MO); *G. Suárez 150a* (LIL).

Orthostichopsis tenuis (A. Jaeger) Broth.: *S. P. Churchill, M. Serrano* et al. *23660*, *23240* (LIL, MO).

Phyllogonium viscosum (P. Beauv.) Mitt.: *S. P. Churchill, Marcos Decker & Fabiana Mogro 21070* (LIL); *S. P. Churchill, Magombo, Price 19865* (LIL); *S. P. Churchill & Toapanta 21035* (LIL).

Prionodon densus (Sw. ex Hedw.) Müll. Hal.: *S. P. Churchill & Arroyo 21159* (LIL); *S. P. Churchill* et al. *23762* (LIL); *Schäfer-Verwimp & Verwimp 10018* (LIL).

Pterobryon densum Hornsch.: *Vargas* et al. *1485* (LIL); *S. P. Churchill & Arroyo 21226* (LIL).

Rauiella praelonga (Schimp. Ex Besch.) Wijk and Margad.: *S. P. Churchill, Serrano* et al. *23331* (MO).

Schoenobryum concavifolium (Griff.) Gangulee.: *G. Suárez 193, 210, 221, 251* (LIL); *M. Schiavone 2536, 53114* (LIL).

Thuidium delicatulum (Hedw.) Schimp.: *S. P. Churchill* et al. *22068* (MO).

CHARACTERS DESCRIPTION

Description of the new characters included, remaining characters are described in Rao (2001). Continuous and additive characters are marked with "*" and "**", respectively. Note that measures were made in scale units such as not to exceed the maximum value allowed by TNT (maximum value: 60).

Gametophyte characters:

6.- Stem leaf length (cm)*. The full length of leaves was measured from the apex up to the most basal part of the lamina. In decurrent leaves, wings were also included in total length measure.

7.- Stem leaf width (cm)*. Measured in the widest part of the leaves.

8.- Pseudoparaphyllia extension (mm)*. The length of the pseudoparaphyllia was measured under light microscope along the longest axis, regardless of the pseudoparaphyllia shape.

9.- Alar cell size (micrometer)*. Alar cells size was measured along the longest axis of the cell.

48.- Pseudoparaphyllia: (0) absent; (1) filamentous; (2) foliose.

49.- Paraphyllia: (0) absent; (1) present.

50.- Basal cell of axillary hair: (0) one; (1) two.

51.- Distal cells of axillary hair: (0) one; (1) two; (2) more than two**. Specimens where two states (1 or 2) were observed were exhaustively inspected. Polymorphic scores were considered only when the frequencies of both states were near 50% along more than 10 samples. Otherwise, a single state was scored.

52.- Differentiation of central strand: (0) undifferentiated; (1) differentiated. Central strand is characterized by the presence of elongated (sometimes colourful) thin-walled cells. A typical central strand is observed in *Thuidium delicatulum* (Hedw.) Schimp.

53.- Leaf dimorphism: (0) no; (1) yes. Dimorphism is evaluated at the same insertion point. A classical dimorphism is found in *Cyclodictyon* sp. Here, the leaves can be differentiated in shape, ornamentation, placement and/or size.

54.- Differentiation of secondary stem: (0) undifferentiated; (1) differentiated. A secondary stem is differentiated when the main axis (primary stem) turns up near 90° and becomes (generally) devoid of rhizoids. A representative secondary stem is present in most of Cryphaeaceae members.

55.- Hyalodermis: (0) undifferentiated; (1) differentiated.

57.- Condition of stem leaves when dry: (0) contorted;(1) strongly appressed; (2) erect and spreading. The general aspect of stem leaves when dry is a traditional character widely used in bryological taxonomy and is related to strategies to overcome water-stress conditions. A contorted state applies when leaves aspect is tortuous. Strongly appressed leaves are those whose margins are tightly overlapped, as is the case of most Cryphaeaceae. On the other hand, spreading leaves are those whose main axis form a ٥٤° angle with the stem. *Pterobryon densum, Lepyrodon tomentosus* and *Prionodon densus* have erect-spreading leaves when dried.

58.- Margins of stem leaves: (0) undifferentiated; (1) differentiated. A differentiated margin is found in some Pilotrichaceae. Leaf margins can be distinguished by being constituted by rows of elongated cells. Those cells are markedly narrower than that of the lamina.

60.- Apex margins of the internal perichaetial bracts (IPB): (0) entire; (1) serrulate. The apex margins condition (entire or serrulate) was examined up to the upper half of the first third of the leaf extension.

66.- Alar cell differentiation: (0) indistinct; (1) slightly differentiated; (2) sharply differentiated. Alar cells tend to be quadrate and sometimes with slightly thick walls. However, alar cells are often inconspicuously differentiated from laminal cells. Cases where alar region is relatively small and cells are hardly defined were considered as state 0. By contrast, a situation where alar region and cells are considerably extended was scored as state 1. In extreme cases, alar cells may not only be distinguished by their shape but also by the color and the thick walls.This last condition (state 2) is distinctive of some species of Meteoriaceae.

67.- Stem (secondary stem)-Branch leaves differentiation: (0) no; (1) yes. When differences in aspect (colour, shape and/or size) were observed between leaves of the branches and the secondary-stem, the character was scored as 1. When no secondary stem was developed, "stem" was simply intended as the main axes.

68.- Creeping secondary stem (stipe) differentiation: (0) indistinct; (1) differentiated. A stipe is defined as an erect secondary stem lacking leaves at its most basal part. This differentiates it from a classical secondary stem of remaining pleurocarpic mosses (e.g Cryphaeaceae).

69.- Leaves of primary and secondary stem: (0) equal; (1) differentiated. As in other characters, the leaves may differ in size, shape or colour.

70.- Stem leaf orientation: (0) spirally; (1) complanate.

71.- Capsule/Perichaetial leaves: (0) immersed; (1) exserted. An exerted capsule is considered as such only when all of its extension fully overcomes the level of the perichaetial leaves. Otherwise, the leaves were considered as immersed.

Sporophyte characters:

46.- Endostome ornamentation: (0) smooth; (1) papillose above, smooth below; (2) entirely papillose. Cases where only the endostome membrane was ornamented, endostome teeth ornamentation was considered as smooth.

47.- Endostome cilia: (0) absent; (1) present.

56.- Endostome cross-walls: (0) depressed; (1) non-depressed. Endostome walls of some Pilotrichaceae are somewhat incurved, giving them a "baffle-like" aspect (sensu Buck 1998). This is distinctive of some species of *Cyclodictyon*.

59.- Capsule position: (0) erect; (1) sideward or pendent. A sideward capsule was scored as such when the drop (slope) angle fell down 45°.

61.- Exothecial cell form: (0) irregular; (1) somewhat quadrate.

62.- Width of the exothecial cell wall: (0) thin walled; (1) thick walled; (2) collenchymatous.

63.- Aspect of the upper exothecial cells: (0) similar to the lower ones; (1) colour differentiated; (2) form differentiated.

64.- Minimum number of upper exothecial cell rows: (0) one; (1) two; (2) three; (3) four; (4) five**. To establish the minimum number of upper exothecial cells, mode was computed for each species. At least, ten specimens were observed per species.

SENSITIVITY ANALYSIS

Under implied weighting, a concave function is used to define the relationship between homoplasy of each character and the corresponding weight. By changing a concavity constant (*K*), it is possible to modify how strong homoplasious characters are downweighted. Selection of *K* values was made in relation to the Fit of a "mean character" (Mirande, 2009); that is, a character with a mean amount of homoplasy over a reference tree (Tree length/number of characters), in this case a cladogram obtained with equal weighted ("non-weighted") characters. By considering the Fit equation [F: $K / (S + K)$; where S is the step number of a character], the *K* values chosen were those which assigned to a "mean character" 50, 52, 54, 56, 58, 60, 62, 64, 66 and 68% the fit of a perfectly adjusted binary character (Fig. 1).

COMPARISON OF CONSTRAINED AGAINST NON-CONSTRAINED TREES

In order to compare the score of constrained and non-constrained trees, only one specific fit value of those obtained along the *K* value range must be considered. To do this, first, a topology (or group of) was selected on the base of its stability (see above). Then, as several trees (and so fit scores) might be identified as equally stable, a middle K value (K = 5.529, in this case) was selected to perform the comparison between constrained and non-constrained trees.

Table S1. Dataset consisting in continuous characters (0-9). Polymorphic entries delimited by square brackets, missing entries as "?".

Taxon/Char.	0	1	2	3	4	5	6	7	8	9
Pilotrichopsis dentata	12	0.014-0.017	1.500-2.000	?	0.3	0.040-0.080	0.25	0.09	?	?
Spherotheciella koponenii	4.000-6.000	0.008-0.016	0.900-1.100	0.010-0.014	0.280-0.320	?	0.125-0.150	0.060-0.080	0.070-0.090	?
Spherotheciella pinnata	7	0.013-0.024	0.900-1.300	?	0.400-0.580	?	0.120-0.180	0.060-0.090	?	?
Dendroalsia abietina	5.000-10.000	0.017-0.025	2.000-2.250	0.200-0.225	0.480-0.600	0.017-0.022	0.129-0.153	0.032-0.049	?	12.500-17.700
Dendropogonella rufescens	0.000-34.000	0.020-0.045	1.000-1.300	?	0.256-0.288	0.021-0.027	0.220-0.320	0.035-0.050	?	9.000-14.000
Schoenobryum concavifolium	2.000-3.000	0.012	1.000-1.500	?	?	0.025	?	?	?	10.000-12.000
Cyptodontopsis leveillei	?	?	?	0.08	?	?	?	?	?	?
Dendrocryphaea lamyana	5.000-11.000	0.006-0.008	1.400-1.800	0.025-0.035	0.350-0.390	0.018-0.022	0.140-0.170	0.080-0.110	0.080-0.120	6.000-8.000
Cryphaea acuminata	1.500-4.500	0.010-0.016	1.820-1.980	0.016-0.019	0.320-0.400	0.020-0.034	0.090-0.130	0.045-0.065	0.060-0.140	8.000-12.000
Cryphaea amurensis	1.500-2.400	0.020-0.030	0.9	0.012-0.020	0.170-0.180	0.022-0.029	0.150-0.170	0.060-0.070	0.100-0.150	8.000-14.000
Cryphaea apiculata	0.500-7.000	0.009-0.015	1.550-2.100	0.012-0.025	0.440-0.460	0.026-0.058	0.110-0.200	0.060-0.130	0.050-0.400	8.000-14.000
Cryphaea attenuata	0.500-10.000	0.018-0.028	1.760-1.990	0.007-0.011	0.350-0.360	0.030-0.037	0.160-0.220	0.050-0.090	0.080-0.120	8.000-14.000
Cryphaea brevipila	3.000-5.000	0.015-0.020	1.800-2.200	?	0.360-0.400	0.017-0.026	0.180-0.230	0.100-0.120	0.100-0.150	8.000-14.000
Cryphaea chlorophyllosa	4.000-6.000	0.010-0.015	1.700-2.000	0.003-0.006	0.230-0.250	0.018-0.024	0.150-0.190	0.060-0.080	0.100-0.150	8.000-12.000
Cryphaea clandestina	1.000-5.000	0.020-0.030	0.800-1.100	0.005	0.24	0.022-0.025	0.170-0.200	0.050-0.070	?	?
Cryphaea consimilis	2.000-3.000	0.020-0.030	1.610-1.750	?	0.360-0.400	0.018-0.022	0.080-0.110	0.036-0.050	0.090-0.120	8.000-14.000
Cryphaea filiformis	1.000-4.000	0.020-0.040	0.850-1.750	0	0.320-0.380	0.018-0.034	0.090-0.160	0.040-0.085	0.100-0.150	8.000-14.000
Cryphaea glomerata	0.500-2.000	0.015-0.035	?	?	?	0.018-0.038	?	?	0.080-0.120	8.000-14.000
Cryphaea gracillima	0.500-5.000	0.018-0.030	1.660-1.800	0.007-0.015	0.300-0.320	0.034-0.060	0.130-0.170	0.065-0.080	0.090-0.120	8.000-12.000
Cryphaea heteromalla	0.800-3.500	0.007-0.014	1.400-2.000	0.015-0.020	0.360-0.390	0.010-0.020	0.150-0.180	0.050-0.090	0.100-0.140	8.000-14.000
Cryphaea hygrophila	1.000-8.000	0.008-0.014	2.700-3.800	0.025-0.035	0.520-0.600	0.018-0.024	0.100-0.150	0.062-0.092	0.090-0.170	8.000-10.000
Cryphaea jamesonii	0.500-7.000	0.018-0.035	1.200-2.000	0.009-0.012	0.360-0.430	0.015-0.026	0.130-0.250	0.050-0.110	0.070-0.120	8.000-14.000
Cryphaea lanceolata	1.500-2.000	0.010-0.016	1.2	0.015	0.250-0.270	0.025-0.035	0.180-0.200	0.036-0.040	0.1	?
Cryphaea nervosa	1.000-3.000	0.009-0.015	0.900-1.430	0.010-0.013	0.200-0.230	0.016-0.029	0.110-0.165	0.042-0.058	0.100-0.180	6.000-8.000
Cryphaea obovatocarpa	4	0.008-0.010	0.800-1.000	0.008	0.25	0.045-0.050	0.220-0.240	0.100-0.130	0.200-0.250	?
Cryphaea omeiensis	3	0.009-0.012	1	0.003-0.005	0.180-0.210	0.024-0.030	0.120-0.140	0.055-0.070	0.05	?
Cryphaea orizabae	2.000-5.500	0.010-0.018	1.400-1.700	?	0.360-0.420	0.020-0.035	0.110-0.150	0.050-0.150	0.090-0.140	8.000-14.000
Cryphaea ovalifolia	4.000-6.000	0.015-0.025	1.700-2.100	0.006-0.008	0.270-0.380	0.018-0.024	0.130-0.180	0.085-0.105	0.100-0.150	8.000-14.000
Cryphaea parvula	3.000-5.000	0.010-0.016	1.420-1.610	?	0.300-0.500	0.018-0.022	0.110-0.160	0.045-0.075	0.090-0.120	10.000-14.000
Cryphaea patens	6.000-7.000	0.006-0.014	1.500-1.960	0.002-0.005	0.350-0.400	0.026-0.035	0.120-0.200	0.050-0.110	0.100-0.140	6.000-12.000
Cryphaea pilifera	7.000-10.000	0.012-0.018	2.300-2.600	0.010-0.018	0.380-0.420	0.020-0.036	0.170-0.250	0.060-0.110	0.090-0.140	8.000-14.000
Cryphaea protensa	4.000-10.000	0.018-0.035	2.380-2.560	0.011-0.017	0.510-0.570	0.038-0.052	0.160-0.210	0.090-0.122	0.050-0.120	8.000-14.000
Cryphaea ragazzii	0.500-6.000	0.025-0.040	2.260-2.490	0.010-0.012	0.430-0.450	0.042-0.050	0.190-0.240	0.090-0.132	0.080-0.120	8.000-14.000
Cryphaea ramosa	1.000-10.000	0.010-0.025	2.700-3.200	0.018-0.032	0.480-0.560	0.024-0.037	0.140-0.210	0.070-0.110	0.090-0.180	6.000-12.000
Cryphaea rhacomitrioides	0.500-8.000	0.018-0.025	1.900-2.500	0.003-0.008	0.380-0.520	0.020-0.029	0.180-0.230	0.070-0.110	0.130-0.200	13.000-16.000

Table S1. (Continuation). Dataset consisting in continuous characters (0-9). Polymorphic entries delimited by square brackets, missing entries as "?".

Taxon/Char.	0	1	2	3	4	5	6	7	8	9
Cryphaea rutenbergii	4.000-7.000	0.018-0.022	2.150-2.350	0	0.320-0.400	0.026-0.036	0.170-0.240	0.090-0.140	0.100-0.150	12.000-18.000
Cryphaea songpanensis	1.5	0.005-0.007	1.000-1.400	0.02	0.27	0.030-0.040	0.080-0.090	0.035-0.040	0.100-0.150	?
Cryphaea tenella	1.500-4.000	0.012-0.022	1.150-1.450	0.003-0.009	0.150-0.200	0.016-0.022	0.110-0.150	0.036-0.052	0.090-0.150	7.000-9.000
Cryphaea lorentziana	5.500-7.000	0.008-0.009	1.000-1.200	0.020-0.030	0.275-0.290	0.025-0.030	0.100-0.110	0.050-0.080	?	7.000-8.000
Cryphaea furcinervis	3.000-6.000	0.012-0.015	1.800-2.000	0.002-0.003	0.280-0.300	0.025-0.030	0.100-0.140	0.050-0.070	?	8.750-12.500
Cryphidium leucocoleum	2.000-4.000	0.009-0.012	1.500-1.700	0.011-0.015	0.201-0.225	0.018-0.021	0.150-0.170	0.100-0.110	?	10.000-12.500
Dendrocryphaea tasmanica	?	0.012-0.016	1.044-1.248	0.036-0.039	0.350-0.375	0.016-0.018	0.153-0.165	0.204-0.210	?	?
Dendrocryphaea cuspidata	2.300-3.500	0.009-0.012	1.020-1.260	0.024-0.030	0.350-0.400	0.012-0.018	0.01	0.192-0.195	?	8.750-11.250
Dendrocryphaea latifolia	0.800-7.000	0.010-0.014	1.000-1.500	0.040-0.050	0.400-0.425	0.021-0.026	0.150-0.200	0.100-0.120	?	?
Cryphaeophilum molle	?	0.025-0.031	1.320-1.560	0.026-0.030	0.400-0.450	0.031-0.035	0.180-0.184	0.060-0.068	?	15.000-17.500
Dendrocryphaea gorveana	4.100-6.000	0.016-0.017	0.475-0.500	0.025-0.027	0.600-0.625	0.022-0.025	0.156-0.162	0.054-0.084	?	8.750-12.500
Forsstroemia coronata	?	0.017-0.038	1.400-2.460	0.100-0.274	?	0.015-0.037	0.094-0.182	0.050-0.116	?	?
Cyclodictyon lorentzii	0.500-1.500	0.045-0.086	0.120-0.144	1.800-2.000	0.325-0.475	0.015-0.020	0.140-0.170	0.080-0.100	0	?
Cyclodictyon albicans	2.700-3.200	0.061-0.063	1.000-1.500	1.200-1.800	0.450-0.460	0.011-0.013	?	?	0	?
Cyclodictyon varians	0.500-3.000	0.060-0.075	1.300-2.000	1.200-1.800	0.210-0.240	0.090-0.120	0.117-0.171	0.039-0.042	?	?
Lepidopilum polytrichoides	2.860-10.000	0.081-0.100	1.000-2.000	0.300-0.400	?	0.011-0.013	0.350-0.500	?	?	?
Daltonia stenophylla	0.500-1.200	?	0.900-1.300	0.500-0.900	?	0.012-0.018	0.210-0.300	?	?	?
Haplocladium microphyllum	2.000-3.000	0.009-0.012	1.000-2.000	1.700-3.000	?	0.011-0.015	0.140-0.900	?	?	?
Rauiella praelonga	2.000-4.000	0.005-0.012	1.500-2.000	1.000-1.500	?	0.010-0.012	0.050-0.060	?	?	?
Thuidium delicatulum	6.000-8.000	0.015-0.024	1.800-4.000	1.500-4.500	?	0.012-0.018	0.060-0.140	?	?	?
Leskeodon palmarum	0.500-1.000	?	0.400-1.000	0.140-0.900	?	0.020-0.028	0.100-0.130	?	?	?
Meteoridium remotifolium	7.850-9.050	0.078-0.087	1.500-2.000	0.250-0.300	?	0.017-0.022	0.150-0.230	?	?	?
Meteorium deppei	5.000-10.000	0.042-0.048	0.500-1.500	0.150-0.300	?	0.014-0.022	0.180-0.240	?	?	?
Neckeropsis undulata	3.880-7.500	0.021-0.030	0.975-1.105	0.025-0.550	0.165-0.219	0.013-0.020	0.152-0.211	0.078-0.117	?	?
Neckera villa ricae	5.030-7.160	0.062-0.065	1.632-1.680	0.200-0.215	0.450-0.485	0.020-0.024	0.160-0.168	0.072-0.096	?	?
Prionodon densus	5.000-6.000	0.012-0.025	?	0.100-0.150	?	0.018-0.020	0.100-0.170	0.132-0.144	?	?
Herpetineuron toccae	5.400-7.210	0.006-0.010	2.000-3.000	0.900-1.500	?	0.011-0.017	0.001	0.030-0.042	0	?
Pterobryon densum	10	?	2	0.05	?	0.028-0.045	0.3	?	?	0
Anomodon attenuatus	5	?	0.200-0.300	1.300-2.700	?	0.008-0.017	0.050-0.070	?	?	?
Thelia hirtella	5	?	1.500-2.500	0.500-1.200	?	0.012-0.018	0.100-0.130	?	?	?
Orthostichopsis tenuis	5.360-6.290	0.037-0.047	1.000-1.260	?	?	0.025-0.031	0.168-0.180	0.072-0.078	?	?
Phyllogonium viride	4.000-35.000	?	1.500-2.500	0.040-0.080	?	0.045-0.072	0.300-0.400	?	?	?
Lepyrodon tomentosus	?	0.06	3	0.1	0	0.014-0.017	0.070-0.100	?	0	?
Leucodon julaceus	2	?	1.100-1.500	0.250-0.400	?	0.031-0.043	0.090-0.130	?	?	?

Table S2. Dataset consisting in discrete characters (10-74). Polymorphic entries delimited by square brackets, missing entries as "?".

Taxon/Char.	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
Pilotrichopsis dentata	1	2	1	0	1	1	1	1	1	0	0	2	1	?	2	?	?	0	0	?	?	0	1	?	2	2	?	0	?	1	0	1	1
Spherotheciella koponenii	1	2	0	0	1	1	0	1	1	3	1	2	1	0	2	3	3	0	0	1	1	1	1	?	?	?	?	0	1	1	0	1	?
Spherotheciella pinnata	1	2	1	0	1	1	1	0	1	0	0	2	1	0	2	0	3	0	0	1	[12]	0	1	?	0	0	0	0	?	1	0	?	?
Dendroalsia abietina	1	2	0	0	1	1	2	1	1	2	0	2	1	1	1	2	2	0	0	1	[12]	0	1	?	2	?	0	0	?	1	0	[01]	0
Dendropogonella rufescens	1	2	0	0	1	1	2	2	1	0	1	2	1	0	2	2	1	1	0	1	?	0	1	?	0	0	0	0	?	1	0	[01]	?
Schoenobryum concavifolium	1	2	0	1	2	1	1	2	1	1	0	0	0	0	2	3	3	0	2	1	2	0	1	0	0	1	0	2	1	1	0	1	2
Cyptodontopsis leveillei	0	0	1	0	1	1	1	0	1	3	0	2	1	1	2	3	3	0	2	0	1	0	1	1	0	1	0	2	0	1	0	1	2
Dendrocryphaea lamyana	0	0	0	0	2	1	1	0	1	0	0	1	0	1	2	3	3	1	1	0	1	0	1	0	0	1	0	1	1	1	1	1	1
Cryphaea acuminata	1	2	0	1	2	1	1	2	0	1	0	2	1	1	3	3	1	0	1	1	2	1	1	1	0	1	1	0	0	1	0	0	2
Cryphaea amurensis	1	2	0	1	2	2	3	2	3	2	1	2	1	1	2	3	1	2	2	0	0	0	1	1	0	1	0	1	1	1	1	0	0
Cryphaea apiculata	1	3	0	1	2	1	1	2	1	2	2	2	1	1	0	1	1	0	1	1	2	1	1	0	0	1	0	0	1	1	0	1	1
Cryphaea attenuata	1	2	2	1	1	1	3	2	3	2	1	2	1	1	2	1	0	0	1	0	0	2	1	1	0	1	0	0	1	1	0	0	1
Cryphaea brevipila	1	2	2	0	1	1	2	0	1	1	0	2	1	1	2	1	1	0	1	1	1	0	0	1	0	0	0	2	0	1	0	0	1
Cryphaea chlorophyllosa	1	1	0	0	1	1	2	0	2	1	2	1	0	1	1	1	1	2	2	0	0	1	1	1	0	1	1	0	0	0	1	0	0
Cryphaea clandestina	1	3	1	1	0	1	3	2	2	1	0	1	0	1	3	3	0	1	1	0	0	0	1	1	0	0	0	1	1	1	0	1	0
Cryphaea consimilis	1	3	0	0	0	1	1	0	0	0	0	2	1	1	2	1	1	0	1	1	0	0	1	0	0	1	0	0	0	1	0	0	2
Cryphaea filiformis	1	2	0	0	2	1	1	0	1	2	0	2	1	1	2	1	1	1	2	1	2	2	1	1	0	1	0	0	1	1	0	1	1
Cryphaea glomerata	1	2	0	0	2	1	1	0	1	1	2	2	1	1	1	3	1	0	1	1	1	2	1	0	0	1	0	0	1	1	0	1	2
Cryphaea gracillima	1	3	0	1	2	1	3	2	3	2	0	2	1	1	2	1	1	0	2	1	1	1	1	1	0	1	0	0	0	1	0	1	2
Cryphaea heteromalla	1	1	0	1	2	1	1	0	1	1	0	2	1	1	2	3	1	0	1	1	1	0	1	0	0	1	1	0	0	1	0	0	1
Cryphaea hygrophila	1	1	0	1	2	1	1	0	1	1	2	2	1	1	0	0	2	0	1	1	0	2	1	0	1	1	1	1	0	1	2	0	1
Cryphaea jamesonii	1	3	1	1	1	1	1	2	3	1	0	2	1	1	3	1	0	0	1	1	0	0	1	1	0	1	0	0	0	1	0	0	2
Cryphaea lanceolata	1	2	0	1	1	1	1	2	1	1	1	2	1	1	1	3	0	0	2	1	1	2	1	1	?	?	?	0	0	1	0	0	2
Cryphaea nervosa	1	2	2	1	1	1	1	2	1	2	0	2	1	1	2	3	1	2	2	0	1	0	1	1	0	1	1	0	0	1	0	1	1
Cryphaea obovatocarpa	1	2	0	0	2	1	1	0	1	1	0	2	1	1	3	2	1	2	2	0	1	1	1	1	0	0	0	0	1	1	0	0	2
Cryphaea omeiensis	1	3	1	1	1	1	1	0	1	0	1	2	1	1	2	1	1	1	2	1	1	0	1	1	0	0	1	0	0	1	0	0	1
Cryphaea orizabae	1	2	0	0	2	1	1	2	1	2	0	2	1	1	1	1	3	0	2	1	2	2	1	0	0	1	0	1	1	1	0	1	2
Cryphaea ovalifolia	1	0	0	0	1	1	2	0	1	1	2	1	0	1	0	3	1	2	2	0	1	0	1	1	0	0	0	2	0	0	1	0	0
Cryphaea parvula	1	3	0	0	0	1	1	2	0	0	0	2	1	1	1	1	0	0	2	1	0	0	1	1	0	1	0	2	0	1	0	0	1
Cryphaea patens	1	1	2	1	1	1	1	0	1	0	0	2	1	1	3	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	0	0	2
Cryphaea pilifera	1	3	2	0	0	1	1	2	1	1	1	2	1	1	3	1	0	0	2	1	1	0	1	1	0	1	0	0	0	1	0	0	1
Cryphaea protensa	1	2	0	1	2	1	1	2	1	1	0	2	1	1	1	3	1	0	2	1	1	1	1	0	0	1	0	0	0	1	0	1	2
Cryphaea ragazzii	1	2	0	1	2	1	3	2	3	1	2	2	1	1	1	3	1	0	1	1	1	1	1	1	0	1	0	0	1	1	0	1	2
Cryphaea ramosa	1	2	0	1	2	1	1	2	1	1	0	2	1	1	1	0	1	0	1	1	0	2	1	0	1	1	1	0	1	1	2	0	1
Cryphaea rhacomitrioides	1	2	2	0	1	1	2	1	1	1	2	2	1	1	2	1	1	0	1	1	1	0	0	1	0	1	0	0	1	1	0	0	2

Table S2. (Continuation). Dataset consisting in discrete characters (10-74). Polymorphic entries delimited by square brackets, missing entries as "?".

Taxon/Char.	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
Cryphaea rutenbergii	1	2	2	0	1	1	2	1	1	1	0	2	1	1	1	0	1	0	2	1	1	0	0	1	0	0	1	0	0	1	0	0	2
Cryphaea songpanensis	1	3	0	1	2	2	1	2	2	2	1	1	0	1	3	3	1	1	1	0	1	2	1	1	?	?	?	2	1	1	0	0	2
Cryphaea tenella	1	2	0	0	1	1	2	1	1	1	0	1	0	1	1	3	1	2	1	0	0	0	1	1	0	1	0	0	0	0	1	0	0
Cryphaea lorentziana	1	2	1	0	1	1	1	2	1	0	0	2	0	1	2	1	1	0	2	1	2	2	0	1	0	0	0	0	0	1	0	1	1
Cryphaea furcinervis	1	2	1	0	1	1	1	2	1	0	0	2	0	0	2	1	1	0	0	1	1	0	1	1	0	1	1	0	0	1	0	1	1
Cryphidium leucocoleum	0	0	0	1	1	2	1	0	1	0	0	2	0	0	1	3	2	1	0	?	?	0	0	1	0	1	1	0	0	1	0	?	?
Dendrocryphaea tasmanica	0	1	1	0	1	1	1	0	1	0	0	1	0	0	1	3	3	0	1	0	0	2	1	1	0	?	?	0	1	1	1	0	1
Dendrocryphaea cuspidata	0	?	0	0	1	1	1	0	1	0	0	1	0	0	1	3	3	0	0	0	0	0	1	1	0	1	1	2	1	1	0	0	1
Dendrocryphaea latifolia	0	1	0	0	1	1	1	?	1	0	0	1	0	?	1	3	3	?	0	0	?	0	1	?	0	?	?	0	?	1	0	?	?
Cryphaeophilum molle	1	2	1	1	?	0	2	1	0	0	?	2	1	1	2	3	0	0	0	0	0	0	1	1	0	0	?	0	1	1	0	0	1
Dendrocryphaea gorveana	0	1	0	0	1	1	1	0	1	0	0	1	0	0	1	3	3	0	0	0	0	0	1	1	0	1	1	2	0	1	0	0	2
Forsstroemia coronata	1	1	1	1	2	1	1	1	0	0	0	2	1	1	1	2	2	0	0	0	0	2	1	1	2	2	0	3	0	1	0	1	1
Cyclodictyon lorentzii	1	2	1	0	1	3	0	1	0	0	0	2	1	0	2	2	1	1	0	0	0	0	0	1	0	?	?	2	?	0	0	2	1
Cyclodictyon albicans	1	2	1	0	1	3	0	1	0	0	0	2	1	0	2	2	2	1	0	0	0	0	0	1	0	0	1	2	?	0	0	2	1
Cyclodictyon varians	1	2	1	0	2	3	0	1	0	0	0	2	1	0	2	2	2	1	0	0	0	0	0	1	0	0	1	2	?	0	0	2	1
Lepidopilum polytrichoides	1	2	1	0	2	3	0	1	0	0	0	2	1	1	2	0	1	1	0	0	0	0	0	0	0	2	1	2	?	1	0	2	1
Daltonia stenophylla	1	2	?	0	?	?	?	?	0	0	0	2	1	?	2	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Haplocladium microphyllum	1	2	1	0	2	1	4	2	0	3	0	2	1	0	1	3	1	0	0	0	0	0	0	?	2	0	0	2	?	1	?	1	?
Rauiella praelonga	1	2	1	0	1	1	4	2	0	3	0	2	1	0	2	3	1	0	0	0	0	0	0	?	2	0	0	2	?	1	?	1	?
Thuidium delicatulum	1	2	1	1	1	1	2	2	0	3	0	2	1	0	2	2	?	?	0	0	0	0	0	?	2	0	0	2	?	1	0	1	?
Leskeodon palmarum	1	2	0	0	1	1	2	?	0	0	0	2	1	0	2	2	2	1	0	0	0	0	0	?	0	0	?	2	?	0	1	0	1
Meteoridium remotifolium	1	2	1	0	2	1	3	2	1	0	0	2	?	0	1	3	3	0	0	1	0	1	0	?	2	0	0	2	?	1	?	?	?
Meteorium deppei	1	2	1	0	2	1	3	2	1	3	0	2	?	0	2	3	?	0	0	?	?	0	0	?	2	?	0	?	?	0	?	?	?
Neckeropsis undulata	1	0	1	0	1	1	1	0	1	0	0	2	1	1	1	2	1	0	0	0	0	1	0	1	[01]	0	?	0	1	?	0	1	0
Neckera villa ricae	1	0	1	0	?	0	2	0	0	1	0	2	1	1	1	2	1	0	0	0	0	0	0	1	?	?	?	0	1	?	0	1	0
Prionodon densus	1	1	1	0	1	1	2	2	0	3	0	2	1	0	2	2	0	0	0	0	0	1	0	?	2	1	?	3	?	1	0	0	0
Herpetineuron toccae	1	1	1	0	2	1	2	2	0	0	0	2	1	?	?	3	1	0	0	0	0	0	0	?	2	0	?	0	?	0	0	0	?
Pterobryon densum	1	2	1	0	2	1	3	1	0	0	2	2	1	1	2	2	3	0	0	0	0	1	1	1	0	0	1	2	?	1	0	1	?
Anomodon attenuatus	1	2	1	0	2	1	2	1	0	3	0	2	1	0	?	1	1	0	0	0	0	0	0	?	2	0	?	3	?	0	0	0	?
Thelia hirtella	1	1	1	0	2	1	2	2	0	3	0	2	1	0	?	0	1	0	0	0	0	0	0	?	2	0	?	3	?	0	0	0	?
Orthostichopsis tenuis	1	2	1	1	1	1	2	1	0	0	0	2	1	1	1	1	3	0	0	1	0	0	0	1	2	0	0	2	?	0	0	0	?
Phyllogonium viride	1	1	0	1	2	[03]	3	1	0	0	0	2	1	?	?	2	3	0	0	0	0	1	0	1	2	2	0	3	?	1	0	0	?
Lepyrodon tomentosus	1	2	1	0	?	0	3	2	0	0	2	2	1	?	?	[03]	3	0	0	?	?	1	0	1	2	0	0	3	?	1	0	?	?
Leucodon julaceus	1	2	1	0	?	0	2	1	0	1	?	2	1	?	?	0	2	0	0	0	0	1	0	1	2	0	0	3	?	0	0	0	1

Table S2. (Continuation). Dataset consisting in discrete characters (10-74). Polymorphic entries delimited by square brackets, missing entries as "?".

Taxon/Char.	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
Pilotrichopsis dentata	1	1	1	0	0	?	?	?	?	0	0	1	0	1	1	0	0	1	?	0	?	?	?	1	0	0	1	0	0	0	1	?
Spherotheciella koponenii	1	?	1	0	0	1	0	?	?	0	0	1	0	1	1	0	0	0	0	0	?	?	?	1	0	0	1	0	0	1	0	?
Spherotheciella pinnata	1	?	1	0	0	?	?	?	?	0	0	1	0	1	1	0	0	0	?	?	?	?	?	1	0	0	1	0	0	1	0	?
Dendroalsia abietina	2	2	1	2	0	0	1	?	?	0	0	1	0	1	1	0	0	1	1	1	?	?	?	1	0	1	1	0	1	0	0	?
Dendropogonella rufescens	0	1	1	0	0	1	0	?	?	0	0	1	0	1	1	0	0	1	1	1	?	?	?	1	0	0	1	0	0	0	1	[12]
Schoenobryum concavifolium	1	2	0	?	0	2	0	0	2	0	0	1	0	1	1	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1
Cyptodontopsis leveillei	1	2	0	?	0	?	?	?	?	0	0	1	0	1	1	0	0	?	?	?	?	?	?	?	0	0	1	0	0	0	0	0
Dendrocryphaea lamyana	1	1	1	1	0	1	0	?	?	0	0	1	0	1	1	0	0	0	?	?	?	?	?	1	0	0	1	0	0	0	0	0
Cryphaea acuminata	2	2	1	2	0	1	0	0	?	0	0	1	0	1	1	0	0	0	0	0	1	1	0	1	0	0	1	0	0	0	0	1
Cryphaea amurensis	0	2	1	1	0	?	?	0	?	0	0	1	0	1	1	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1
Cryphaea apiculata	2	1	1	2	0	1	0	0	2	0	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1
Cryphaea attenuata	2	1	1	2	0	1	0	0	?	0	0	1	0	1	1	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Cryphaea brevipila	2	1	1	2	0	1	0	0	2	0	0	1	0	1	1	0	0	0	0	0	2	3	2	1	0	0	1	0	0	0	0	1
Cryphaea chlorophyllosa	0	2	1	0	0	1	0	0	?	0	0	1	0	1	1	0	0	0	0	0	1	3	2	1	0	0	1	0	0	0	0	1
Cryphaea clandestina	2	1	1	2	0	?	?	0	?	0	0	1	0	1	1	0	0	0	0	0	0	0	0	?	0	0	1	0	0	0	0	2
Cryphaea consimilis	2	2	1	2	0	1	0	0	?	0	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Cryphaea filiformis	1	2	1	2	0	2	0	1	2	0	0	1	0	1	1	0	0	1	0	0	1	2	1	1	0	0	1	0	0	0	0	1
Cryphaea glomerata	2	2	1	2	0	1	0	?	?	0	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Cryphaea gracillima	1	1	1	2	0	1	0	?	?	0	0	1	0	1	1	0	0	0	0	0	1	2	1	1	0	0	1	0	0	0	0	2
Cryphaea heteromalla	1	1	1	[02]	0	1	0	?	?	0	0	1	0	1	1	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	1
Cryphaea hygrophila	1	1	1	2	0	1	0	?	?	0	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Cryphaea jamesonii	2	2	1	1	0	1	0	0	2	0	0	1	0	1	1	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	[12]
Cryphaea lanceolata	1	1	1	2	0	?	?	?	?	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Cryphaea nervosa	1	2	1	1	0	1	0	0	?	0	0	1	0	1	1	0	0	1	0	0	1	2	1	1	0	0	1	0	0	0	0	1
Cryphaea obovatocarpa	1	2	1	2	0	?	?	0	?	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1
Cryphaea omeiensis	0	1	1	0	0	?	?	0	?	0	0	1	0	1	1	0	0	0	0	0	0	0	0	?	0	0	1	0	0	0	0	1
Cryphaea orizabae	2	2	1	2	0	1	0	0	?	0	0	1	0	1	1	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	1
Cryphaea ovalifolia	0	2	1	0	0	1	0	0	?	0	0	1	0	1	1	0	0	0	0	0	1	3	2	1	0	0	1	0	0	0	0	1
Cryphaea parvula	2	1	1	2	0	1	0	0	?	0	0	1	0	1	1	0	0	0	0	0	1	1	0	1	0	0	1	0	0	0	0	1
Cryphaea patens	2	1	1	2	0	1	0	0	2	0	0	1	0	1	1	0	0	1	0	0	1	2	2	1	0	0	1	0	0	0	0	1
Cryphaea pilifera	1	2	1	1	0	1	0	0	?	0	0	1	0	1	1	0	0	0	0	0	1	2	1	1	0	0	1	0	0	0	0	1
Cryphaea protensa	2	1	1	2	0	1	0	0	?	0	0	1	0	1	1	0	0	0	0	0	2	?	?	1	0	0	1	0	0	0	0	1
Cryphaea ragazzii	2	1	1	2	0	1	0	0	?	0	0	1	0	1	1	0	0	0	0	1	1	3	2	1	0	0	1	0	0	0	0	2
Cryphaea ramosa	2	2	1	2	0	1	0	0	?	0	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Cryphaea rhacomitrioides	2	0	1	1	0	1	0	0	2	0	0	1	0	1	1	0	0	1	0	0	1	1	0	2	0	0	1	0	0	0	0	1

Table S2. (Continuation). Dataset consisting in discrete characters (10-74). Polymorphic entries delimited by square brackets, missing entries as "?"..

Taxon/Char.	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
Cryphaea rutenbergii	2	1	1	2	0	2	0	?	?	0	0	1	0	1	1	0	0	0	0	0	2	4	3	2	0	0	1	0	0	0	0	1
Cryphaea songpanensis	1	2	1	1	0	?	?	?	?	0	0	1	0	1	1	0	0	0	1	0	0	0	0	?	0	0	1	0	0	0	0	2
Cryphaea tenella	0	2	1	0	0	1	0	?	?	0	0	1	0	1	1	0	0	1	0	0	1	3	2	1	0	0	1	0	0	0	0	1
Cryphaea lorentziana	2	2	1	2	0	1	0	0	2	0	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Cryphaea furcinervis	2	0	1	1	0	1	0	0	2	0	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Cryphidium leucocoleum	?	1	1	2	0	?	?	?	?	0	0	1	0	1	1	0	0	0	1	1	[12]	3	2	1	0	0	1	0	0	0	0	0
Dendrocryphaea tasmanica	2	0	1	2	0	?	?	?	?	0	0	1	0	1	1	0	0	0	1	1	1	0	0	1	0	0	1	0	0	0	0	0
Dendrocryphaea cuspidata	2	0	1	?	0	?	?	?	?	0	0	1	0	1	1	0	0	0	1	1	2	3	2	1	0	0	1	0	0	0	0	0
Dendrocryphaea latifolia	1	0	1	2	0	?	?	?	?	0	0	1	0	1	1	0	0	0	?	?	?	?	?	1	0	0	1	0	0	0	0	0
Cryphaeophilum molle	2	2	1	1	0	?	?	?	?	0	0	1	0	1	1	0	0	0	[12]	0	1	1	0	2	0	0	1	0	0	0	0	1
Dendrocryphaea gorveana	2	1	1	2	0	?	?	?	?	0	0	1	0	1	1	0	0	0	1	1	2	3	2	1	0	0	1	0	0	0	0	0
Forsstroemia coronata	2	0	1	?	0	2	0	0	2	0	0	1	0	1	1	0	0	0	?	1	?	?	?	2	0	0	0	0	1	0	0	?
Cyclodictyon lorentzii	1	1	1	2	0	0	0	0	0	0	1	0	1	0	0	1	1	1	1	2	0	0	0	0	0	0	0	1	1	0	0	?
Cyclodictyon albicans	1	1	1	2	0	0	0	0	0	0	1	0	1	1	0	1	1	1	1	2	0	0	0	0	0	0	0	1	1	0	0	?
Cyclodictyon varians	1	1	1	2	0	2	0	0	0	0	1	0	1	1	0	1	1	1	1	2	0	0	0	0	0	0	0	1	1	0	0	?
Lepidopilum polytrichoides	2	1	1	2	0	2	0	0	0	0	1	0	1	0	0	1	1	1	1	2	0	0	0	0	0	0	0	1	1	0	0	?
Daltonia stenophylla	?	?	?	?	0	?	?	0	1	0	0	0	0	1	0	1	0	0	1	2	2	1	2	0	0	0	0	0	1	0	0	?
Haplocladium microphyllum	1	1	1	2	1	2	1	0	1	1	0	0	0	1	2	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	?
Rauiella praelonga	1	1	1	2	1	2	1	0	1	1	0	0	0	1	2	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	?
Thuidium delicatulum	2	1	1	2	1	2	1	0	0	1	1	0	0	1	1	0	1	1	1	1	2	?	?	0	0	0	0	0	1	0	0	?
Leskeodon palmarum	?	1	1	?	0	0	0	0	2	0	1	0	0	0	0	1	0	0	1	2	0	0	0	0	0	0	0	0	1	0	0	?
Meteoridium remotifolium	1	1	1	2	0	2	0	1	2	1	0	0	0	1	0	0	0	1	1	1	0	0	0	2	0	0	0	0	1	0	0	?
Meteorium deppei	1	1	1	2	0	2	0	1	2	1	0	0	0	1	1	0	0	0	1	0	2	0	0	2	0	0	0	0	1	0	0	?
Neckeropsis undulata	2	0	1	2	0	2	0	1	2	0	0	0	0	1	2	0	0	1	1	1	2	2	2	0	0	0	0	1	0	0	0	?
Neckera villa ricae	2	2	1	2	0	?	?	?	?	0	0	0	0	1	2	0	0	1	1	1	2	4	3	0	0	0	0	1	?	0	0	?
Prionodon densus	2	1	1	2	0	2	0	1	0	0	0	1	0	0	2	0	0	1	2	1	2	1	2	2	0	0	0	0	1	0	0	?
Herpetineuron toccae	2	2	1	2	0	0	0	1	2	1	0	1	0	1	2	0	0	0	1	0	2	2	2	0	1	0	1	0	1	0	0	?
Pterobryon densum	0	0	1	0	0	1	0	0	2	0	0	1	0	1	2	0	0	1	1	2	0	0	0	0	0	1	1	0	0	0	0	1
Anomodon attenuatus	2	2	1	2	0	0	0	0	2	0	0	1	0	0	2	0	0	0	1	0	0	2	2	2	1	0	0	0	1	0	0	?
Thelia hirtella	2	2	1	2	0	0	1	0	1	1	0	1	0	0	1	0	0	1	1	0	2	1	1	2	1	0	0	0	1	0	0	?
Orthostichopsis tenuis	0	1	?	?	0	1	0	1	1	0	0	1	0	?	2	0	0	1	1	[01]	2	?	?	2	0	1	1	0	?	0	0	?
Phyllogonium viride	0	1	?	?	0	2	0	0	2	0	0	1	0	?	2	0	0	1	1	2	2	0	0	2	0	0	0	1	0	0	0	1
Lepyrodon tomentosus	?	1	1	2	0	0	0	0	2	0	0	1	0	0	2	0	0	1	1	1	2	?	?	2	0	0	1	0	1	0	0	?
Leucodon julaceus	2	2	1	2	0	2	0	1	1	0	0	1	0	0	1	0	0	0	1	1	2	3	3	2	0	0	0	0	1	0	0	?