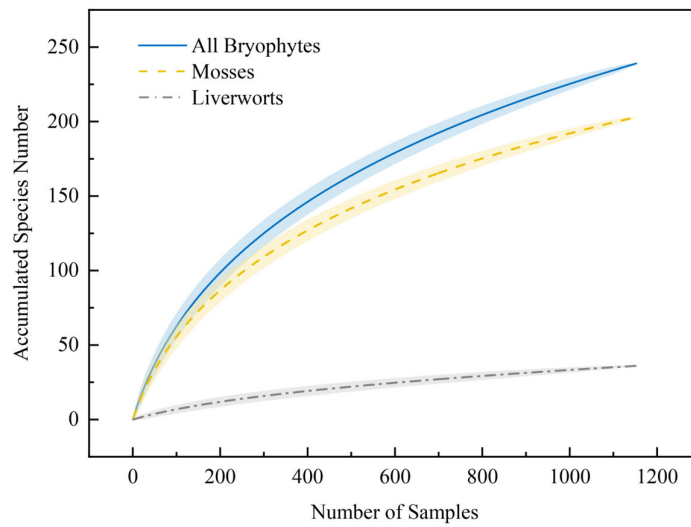
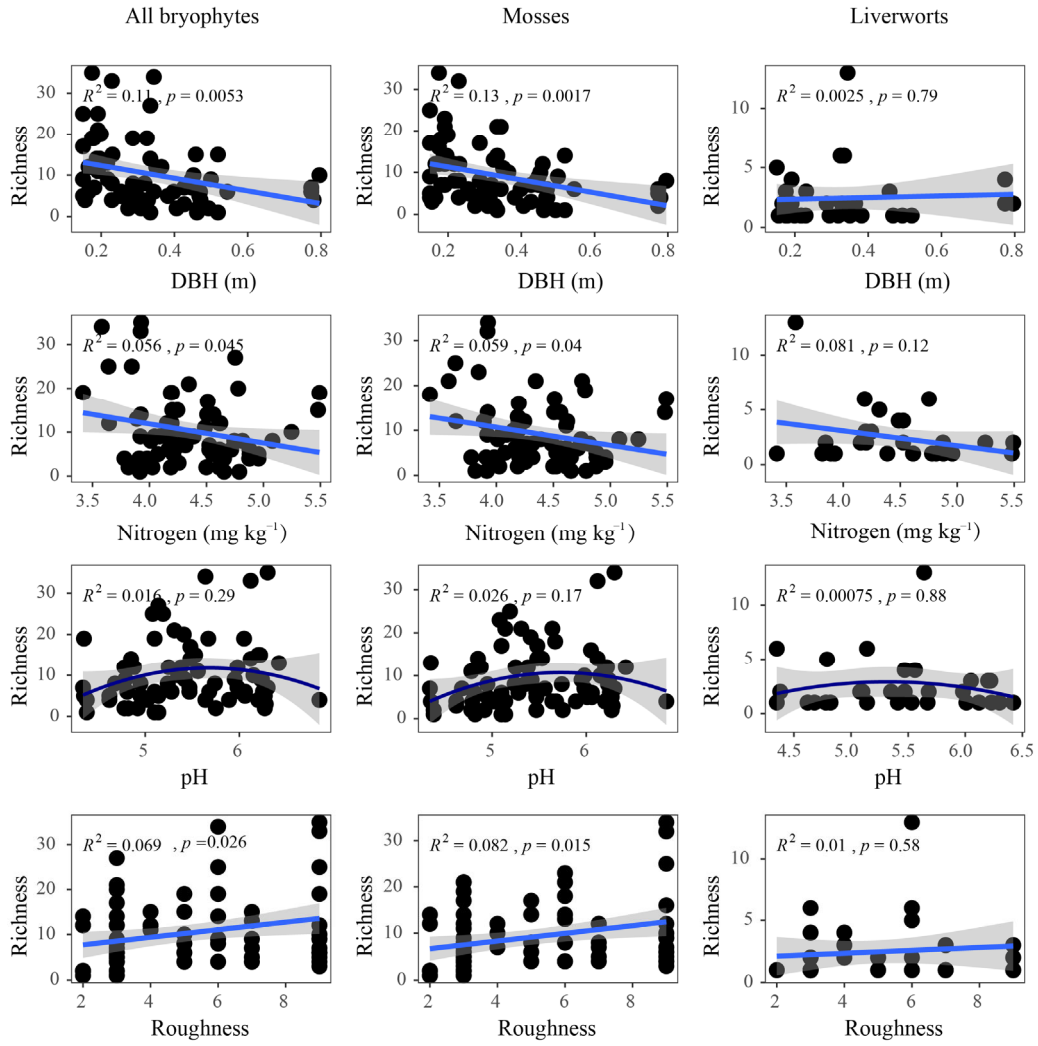


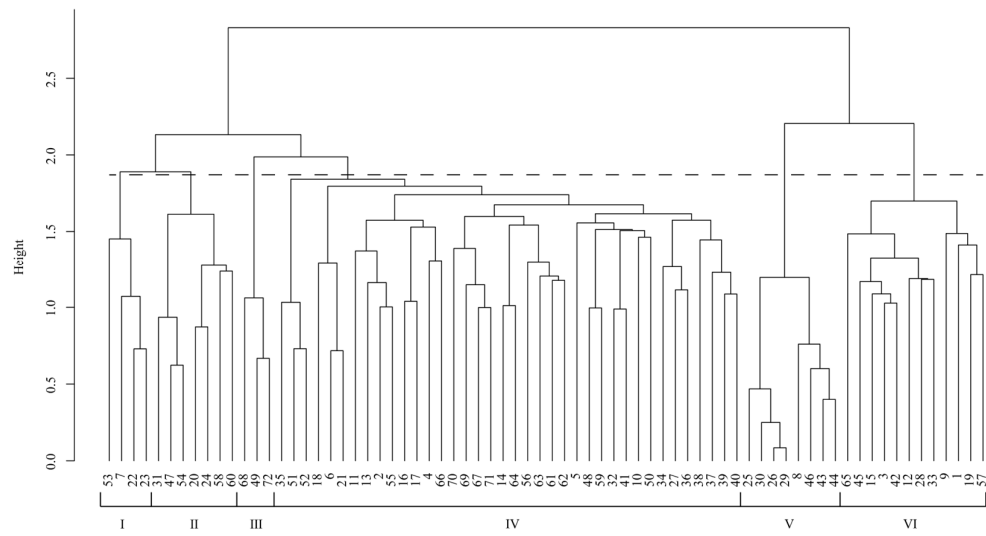
**Figure S1.** Correlations with environmental factors. Pairwise comparisons of environmental factors are shown, with a color gradient denoting Pearson's correlation coefficient. pH, potential of hydrogen; DBH, diameter at breast height. \*,  $0.01 < p \leq 0.05$ ; \*\*,  $0.001 < p \leq 0.01$ ; \*\*\*,  $p \leq 0.001$ .



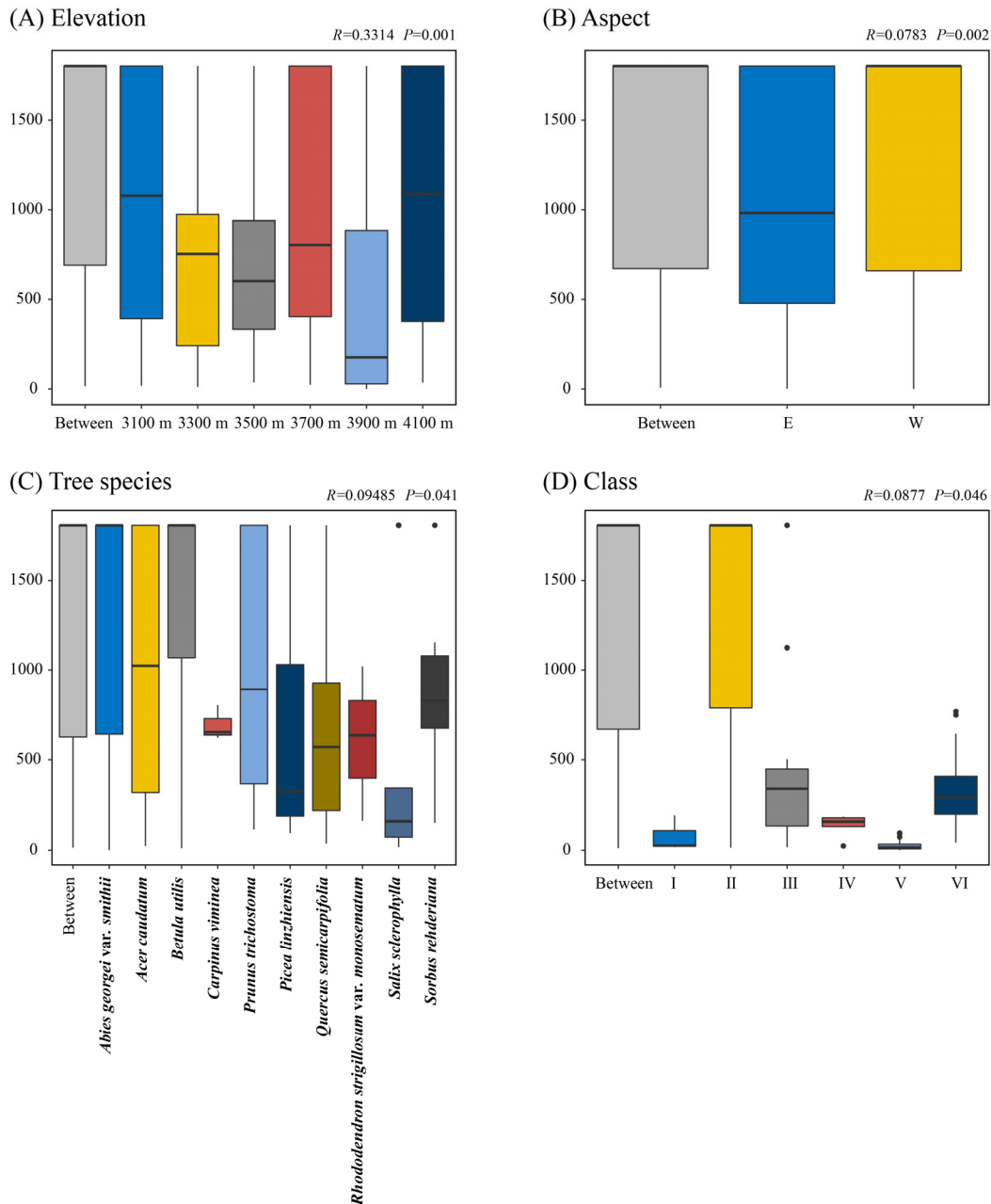
**Figure S2.** Richness (y-axis) as the species accumulation curve for the number of sample squares (x-axis), pooled in random order. Color stripe represents error.



**Figure S3.** Relationships between tree properties (tree nitrogen of barks, pH, DBH, and roughness) and the richness of all bryophytes, mosses, and liverworts based on 72 trees. Different lines represent the environmental conditions: DBH, nitrogen, pH, roughness. Different columns represent type: all bryophytes, mosses, and liverworts. pH, potential of hydrogen; DBH, diameter at breast height.



**Figure S4.** Results of cluster analysis (classification) on species composition data (437 species in total) from the 72 trees (based on the Bray-Curtis similarity measure); bryophyte assemblages that are most similar cluster together and six clusters are identified (I - VI).



**Figure S5.** Results of dissimilarities between bryophyte assemblage composition from the 72 trees (based on the Bray-Curtis similarity measure) using analyses of similarity (ANOSIM). (A) based on dissimilarities among different elevation; (B) based on dissimilarities among different aspect; (C) based on dissimilarities among different tree species; (D) based on dissimilarities among different class (shown as letters I - VI corresponding to their classification). Outliers are values that do not fall within 1.5 times the interquartile range of the first and third quartiles (indicated by the whiskers). In each box, the horizontal black line represents the median.

**Table S1.** Species of epiphytic bryophytes.

No.	Species	No.	Species
1	<i>Acrolejeunea sandvicensis</i> (Gottsche) Steph.	39	<i>Bryoerythrophyllum recurvirostrum</i> (Hedw.) P. C. Chen
2	<i>Actinothuidium hookeri</i> (Mitt.) Broth.		
3	<i>Amblystegium serpens</i> (Hedw.) Schimp.	40	<i>Bryoerythrophyllum yunnanense</i> (Herzog) P. C. Chen
4	<i>Anastrepta orcadensis</i> (Hook.) Schiffn.		
5	<i>Anoetangium thomsonii</i> Mitt.	41	<i>Bryonoguchia molkenboeri</i> (Sande Lac.) Z. Iwats. & Inoue
6	<i>Apometzgeria pubescens</i> (Schränk) Kuwah.	42	<i>Campylopus sublatus</i> Schimp.
7	<i>Atrichum rhystophyllum</i> (Müll. Hal.) Paris	43	<i>Cephalozia leucantha</i> Spruce
8	<i>Blepharostoma minus</i> Horik.		
9	<i>Blepharostoma trichophyllum</i> (L.) Dumort.	44	<i>Chiloscyphus minor</i> (Nees) J. J. Engel & R. M. Schust.
10	<i>Brachythecium amnicola</i> Müll. Hal.		
11	<i>Brachythecium brotheri</i> Paris	45	<i>Cirriphyllum cirrosum</i> (Schwägr.) Grout
12	<i>Brachythecium buchananii</i> (Hook.) A. Jaeger	46	<i>Cirriphyllum piliferum</i> (Hedw.) Grout
13	<i>Brachythecium coreanum</i> Cardot	47	<i>Claopodium assurgens</i> (Sull. & Lesq.) Cardot
14	<i>Brachythecium erythrorrhizon</i> Schimp.		
15	<i>Brachythecium fasciculirameum</i> Müll. Hal.	48	<i>Cynodontium gracilescens</i> (F. Weber & D. Mohr) Schimp.
16	<i>Brachythecium piligerum</i> Cardot	49	<i>Diaphanodon blandus</i> Renaud & Cardot
17	<i>Brachythecium planiusculum</i> Müll. Hal.	50	<i>Dicranella amplexans</i> Jaeger
18	<i>Brachythecium plumosum</i> (Hedw.) Schimp.	51	<i>Dicranodontium caespitosum</i> (Mitt.) Paris
19	<i>Brachythecium populeum</i> (Hedw.) Schimp.	52	<i>Dicranodontium denudatum</i> (Brid.) E. Britton
20	<i>Brachythecium procumbens</i> (Mitt.) A. Jaeger	53	<i>Dicranodontium didymodon</i> Paris
21	<i>Brachythecium pulchellum</i> Broth. & Paris	54	<i>Dicranodontium subintegrifolium</i> Broth.
22	<i>Brachythecium rotaceum</i> De Not.	55	<i>Dicranum drummondii</i> Müll. Hal.
23	<i>Brachythecium rutabulum</i> (Hedw.) Schimp.	56	<i>Dicranum flagellare</i> Hedw.
24	<i>Brachythecium salebrosum</i> (Hoffm. ex F. Weber & D. Mohr) Schimp.	57	<i>Dicranum fuscescens</i> Turner
25	<i>Brachythecium thraustum</i> Müll. Hal.	58	<i>Dicranum japonicum</i> Mitt.
26	<i>Brachythecium uncinifolium</i> Broth. & Paris	59	<i>Didymodon constrictus</i> var. <i>flexicuspis</i> (P. C. Chen) Saito
27	<i>Brachythecium velutinum</i> (Hedw.) Schimp.	60	<i>Didymodon japonicus</i> K. Saito
28	<i>Brachythecium viridefactum</i> Müll. Hal.	61	<i>Drepanocladus aduncus</i> (Hedw.) Warnst.
29	<i>Brachythecium novae-angliae</i> (Sull. & Lesq.) A. Jaeger	62	<i>Ectropothecium wangianum</i> P. C. Chen
30	<i>Brothera leana</i> (Sull.) Müll. Hal.	63	<i>Entodon cladorrhizans</i> (Hedw.) Müll. Hal.
31	<i>Brotherella erythrocaulis</i> (Mitt.) M. Fleisch.	64	<i>Entodon concinnus</i> (De Not.) Paris
32	<i>Brotherella fauriei</i> (Cardot) Broth.	65	<i>Entodon longifolius</i> (Müll. Hal.) A. Jaeger
33	<i>Brotherella nictans</i> (Mitt.) Broth.	66	<i>Entodon luridus</i> (Griff.) A. Jaeger
34	<i>Bryhnia novae-angliae</i> (Sull. & Lesq.) Grout	67	<i>Entodon macropodus</i> (Hedw.) Müll. Hal.
35	<i>Bryhnia trichomitria</i> Dixon & Thér.	68	<i>Entodon pylaisioides</i> R. L. Hu & Y. F. Wang
36	<i>Bryoerythrophyllum alpinum</i> (Vent.) P. C. Chen	69	<i>Entodon schensianus</i> Müll. Hal.
37	<i>Bryoerythrophyllum ferruginascens</i> (Stirt.) Giacom.	70	<i>Entodon sullivantii</i> (Müll. Hal.) Lindb.
38	<i>Bryoerythrophyllum gymnostomum</i> (Broth.) P. C. Chen	71	<i>Entodon viridulus</i> Cardot
		72	<i>Eurhynchium angustirete</i> (Broth.) T. J. Kop.
		73	<i>Eurhynchium coarctum</i> Müll. Hal.
		74	<i>Eurhynchium eustegium</i> (Besch.) Dixon

No.	Species	No.	Species
75	<i>Eurhynchium kirishimense</i> Takaki	116	<i>Isopterygium albescent</i> (Hook.) A. Jaeger
76	<i>Eurhynchium savatieri</i> Schimp. ex Besch.	117	<i>Isopterygium minutirameum</i> (Müll. Hal.) A. Jaeger
77	<i>Floribundaria setschwanica</i> Broth.	118	<i>Kindbergia arbuscula</i> (Broth.) Ochyra
78	<i>Forsstroemia yezoana</i> (Besch.) S. Olsson, Enroth & D. Quandt	119	<i>Lejeunea subacuta</i> Mitt.
79	<i>Frullania bolanderi</i> Austin	120	<i>Lepidozia reptans</i> (L.) Dumort.
80	<i>Frullania fuscovirens</i> Steph.	121	<i>Leptodontium flexifolium</i> (Dicks.) Hampe
81	<i>Frullania inouei</i> S. Hatt.	122	<i>Leptodontium handelii</i> Thér.
82	<i>Frullania pallidevirens</i> Steph.	123	<i>Lescurea incurvata</i> (Hedw.) E. Lawton
83	<i>Frullania parvistipula</i> Steph.	124	<i>Lescurea radicata</i> (Mitt.) Mönk.
84	<i>Frullania physantha</i> Mitt.	125	<i>Leskea polycarpa</i> Ehrh. ex Hedw.
85	<i>Frullania schensiana</i> C. Massal.	126	<i>Leucodon exaltatus</i> Müll. Hal.
86	<i>Frullania sinensis</i> Steph.	127	<i>Leucodon secundus</i> var. <i>strictus</i> (Harv.) Akiyama
87	<i>Frullania yunnanensis</i> Steph.	128	<i>Lewinskya brassii</i> (E. B. Bartram) F. Lara, Garilleti & Goffinet
88	<i>Frullania zangii</i> S. Hatt. & P. J. Lin	129	<i>Lewinskya dasymitria</i> (Lewinsky) F. Lara, Garilleti & Goffinet
89	<i>Gammiella pterogonioides</i> Broth.	130	<i>Lewinskya hookeri</i> (Wilson ex Mitt.) F. Lara, Garilleti & Goffinet
90	<i>Gollania clarescens</i> (Mitt.) Broth.	131	<i>Lewinskya sordida</i> (Sull. & Lesq.) F. Lara, Garilleti & Goffinet
91	<i>Gollania cylindricarpa</i> (Mitt.) Broth.	132	<i>Lewinskya speciosa</i> (Nees) F. Lara, Garilleti & Goffinet
92	<i>Haplocladium angustifolium</i> (Hampe & Müll. Hal.) Broth.	133	<i>Lindbergia brachyptera</i> (Mitt.) Kindb.
93	<i>Haplocladium microphyllum</i> (Hedw.) Broth.	134	<i>Lindbergia brevifolia</i> (C. Gao) C. Gao
94	<i>Herbertus dicranus</i> (Taylor) Trevis.	135	<i>Lindbergia serrulatus</i> (C. Gao) C. Gao
95	<i>Herzogiella perrobusta</i> (Broth. ex Cardot) Z. Iwats.	136	<i>Lophozia lacerata</i> Kitag.
96	<i>Herzogiella seligeri</i> (Brid.) Z. Iwats.	137	<i>Lophozia wenzelii</i> (Nees) Steph.
97	<i>Herzogiella striatella</i> (Brid.) Z. Iwats.	138	<i>Macromitrium ferriei</i> Cardot & Thér.
98	<i>Heterophyllum affine</i> M. Fleisch.	139	<i>Meteorium subpolytrichum</i> Broth.
99	<i>Homomallium simlaense</i> (Mitt.) Broth.	140	<i>Neckera borealis</i> Nog.
100	<i>Homomallium yuennanense</i> Broth.	141	<i>Neckera decurrens</i> Broth.
101	<i>Hylocomium splendens</i> (Hedw.) Schimp.	142	<i>Neckera humilis</i> Mitt.
102	<i>Hypnum calcicola</i> Ando	143	<i>Neckera laevidens</i> Broth. ex P. C. Wu & Y. Jia
103	<i>Hypnum callichroum</i> Brid.	144	<i>Neckera pennata</i> Hedw.
104	<i>Hypnum circinale</i> Hook.	145	<i>Neobarbella comes</i> Nog.
105	<i>Hypnum cupressiforme</i> L. ex Hedw.	146	<i>Neodiciadiella pendula</i> W. R. Buck
106	<i>Hypnum densirameum</i> Ando	147	<i>Oncophorus virens</i> Brid.
107	<i>Hypnum fertile</i> Sendtn.	148	<i>Oncophorus wahlenbergii</i> Brid.
108	<i>Hypnum fujiyamae</i> (Broth.) Paris	149	<i>Oreoweisia weisioides</i> Broth.
109	<i>Hypnum hamulosum</i> Schimp.	150	<i>Orthoamblystegium spuriosubtile</i> (Broth. & Paris) Kanda & Nog.
110	<i>Hypnum pallescens</i> (Hedw.) P. Beauv.	151	<i>Orthodicranum flagellare</i> (Hedw.) Loesk.
111	<i>Hypnum plumaeforme</i> Wilson		
112	<i>Hypnum revolutum</i> (Mitt.) Lindb.		
113	<i>Hypnum subimponens</i> Lesq.		
114	<i>Hypnum vaucheri</i> Lesq.		
115	<i>Isopterygiopsis pulchella</i> (Hedw.) Z. Iwats.		

No.	Species	No.	Species
152	<i>Orthotrichum callistomum</i> Fisch.-Oost. ex Bruch & Schimp.	192	<i>Pylaisia levieri</i> (Müll. Hal.) Arikawa
153	<i>Orthotrichum ibukiense</i> Toyama	193	<i>Pylaisia polyantha</i> (Hedw.) Schimp.
154	<i>Orthotrichum revolutum</i> Müll. Hal.	194	<i>Pylaisiadelpha yokohamae</i> (Broth.) W. R. Buck
155	<i>Pallavicinia lyellii</i> (Hook.) Gray	195	<i>Radula lindenbergiana</i> Gottsche ex Hartm.
156	<i>Paraleucobryum enerve</i> (Thed.) Loeske	196	<i>Regmatodon longinervis</i> C. Gao
157	<i>Plagiochila biondiana</i> C. Massal.	197	<i>Rhodobryum ontariense</i> Kindb.
158	<i>Plagiochila duthiana</i> Steph.	198	<i>Rhynchostegium fauriei</i> Cardot
159	<i>Plagiochila erlangensis</i> M. L. So	199	<i>Rhynchostegium pallenticaula</i> Müll. Hal.
160	<i>Plagiomnium arbusculum</i> T. J. Kop	200	<i>Rhynchostegium pallidifolium</i> (Mitt.) A. Jaeger
161	<i>Plagiomnium cuspidatum</i> T. J. Kop.	201	<i>Rhynchostegium serpenticaula</i> (Müll. Hal.) Broth.
162	<i>Plagiomnium medium</i> T. J. Kop.	202	<i>Rhytidium rugosum</i> (Hedw.) Kindb.
163	<i>Plagiomnium vesicatum</i> T. J. Kop.	203	<i>Sanionia uncinata</i> (Hedw.) Loeske
164	<i>Plagiomnium affine</i> (Blandow ex Funck) T.J. Kop.	204	<i>Scapania apiculata</i> Spruce
165	<i>Plagiothecium handelii</i> Broth.	205	<i>Scapania gaochii</i> X. Fu ex T. Cao
166	<i>Plagiothecium laetum</i> Schimp.	206	<i>Scapania nemorea</i> (L.) Grolle
167	<i>Plagiothecium latebricola</i> Schimp.	207	<i>Scapania nepalensis</i> Nees
168	<i>Plagiothecium neckeroideum</i> Schimp.	208	<i>Scapania orientalis</i> Steph. ex K. Müll.
169	<i>Plagiothecium nemorale</i> (Mitt.) A. Jaeger	209	<i>Scapania verrucosa</i> Heeg
170	<i>Plagiothecium piliferum</i> (Sw.) Schimp.	210	<i>Schwetschkeopsis formosana</i> Nog.
171	<i>Platydictya jungermannioides</i> (Brid.) Crum	211	<i>Sciuro-hypnum plumosum</i> (Hedw.) Ignatov & Huttunen.
172	<i>Platygyriella aurea</i> W. R. Buck	212	<i>Sciuro-hypnum reflexum</i> (Starke) Ignatov & Huttunen.
173	<i>Platygyrium repens</i> (Brid.) Schimp.	213	<i>Sematophyllum phoeniceum</i> (Müll. Hal.) M. Fleisch.
174	<i>Pohlia cruda</i> (Hedw.) Lindb.	214	<i>Sematophyllum subhumile</i> (Müll. Hal.) M. Fleisch.
175	<i>Pohlia crudoides</i> Broth.	215	<i>Symblepharis reinwardtii</i> (Dozy & Molk.) Mitt.
176	<i>Pohlia drummondii</i> Andr.	216	<i>Symblepharis vaginata</i> (Hook.) Wijk & Marg.
177	<i>Pohlia elongata</i> Hedw.	217	<i>Syntrichia sinensis</i> Ochyra
178	<i>Pohlia longicolla</i> (Hedw.) Lindb.	218	<i>Tayloria indica</i> Mitt.
179	<i>Pohlia lutescens</i> (Limpr.) H. Lindb.	219	<i>Tayloria serrata</i> (Hedw.) Bruch & Schimp.
180	<i>Pohlia macrocarpa</i> Da C. Zhang, X. J. Li & Higuchi	220	<i>Thuidium cymbifolium</i> (Dozy & Molk.) Dozy & Molk.
181	<i>Pohlia laticuspes</i> P. C. Chen ex Redf. et Tan	221	<i>Thuidium plumulosum</i> (Dozy & Molk.) Dozy & Molk.
182	<i>Pseudokindbergia dumosa</i> (Mitt.) M. Li, Y.F. Wang, B.C. Tan & Ignatov, comb. nov.	222	<i>Thuidium tamariscinum</i> (Hedw.) Schimp.
183	<i>Pseudoleskeella catenulata</i> (Brid. ex Schrad.) Kindb.	223	<i>Tortella fragilis</i> (Hook. & Wilson) Limpr.
184	<i>Pseudoleskeella tectorum</i> (Brid.) Kindb.	224	<i>Trachyphyllum inflexum</i> (Harv.) A. Gepp
185	<i>Pseudolophozia sudetica</i> (Nees ex Huebener) Konstant. & Vilnet	225	<i>Trichostomum brachydontium</i> Bruch
186	<i>Ptilium crista-castrensis</i> (Hedw.) De Not.	226	<i>Trichostomum hattorianum</i> B. C. Tan & Z. Iwats.
187	<i>Ptychomitrium gardneri</i> Lesq.	227	<i>Trichostomum tenuirostre</i> Lindb.
188	<i>Pylaisia brotheri</i> Besch.	228	<i>Tritomaria exsecta</i> (Schmidel ex Schrad.) Schiffn. ex Loeske
189	<i>Pylaisia cristata</i> Cardot	229	<i>Ullota crispa</i> Brid.
190	<i>Pylaisia extenta</i> Jaeger		
191	<i>Pylaisia falcata</i> Schimp.		

No.	Species	No.	Species
230	<i>Ullota gigantospora</i> F. Lara, Caparrós & Garilleti	234	<i>Zygodon brevisetus</i> Wilson ex Mitt.
231	<i>Ullota reptans</i> Mitt.	235	<i>Zygodon reinwardtii</i> Braun
232	<i>Ullota robusta</i> Mitt.	236	<i>Zygodon viridissimus</i> var. <i>rupestris</i> Hartm.
233	<i>Ullota yunnanensis</i> F. Lara, Caparrós & Garilleti	237	<i>Zygodon viridissimus</i> var. <i>dentatus</i> Limpricht.

**Table S2.** Relative coverage, relative frequency, and importance values of dominant species in different classes.

Class	Dominant species	Relative coverage	Relative frequency	Important value
I	<i>Pseudoleskeella tectorum</i>	0.4567	0.1667	0.3117
	<i>Entodon sullivantii</i>	0.1701	0.0556	0.1129
II	<i>Trichostomum tenuirostre</i>	0.0471	0.0231	0.0351
	<i>Hypnum plumaeforme</i>	0.0438	0.0205	0.0322
III	<i>Thuidium plumulosum</i>	0.2586	0.0469	0.1528
	<i>Entodon concinnus</i>	0.1699	0.0938	0.1318
IV	<i>Thuidium cymbifolium</i>	0.4699	0.1333	0.3016
	<i>Meteorium subpolytrichum</i>	0.0880	0.0333	0.0607
V	<i>Ptilium crista-castrensis</i>	0.5897	0.1778	0.3837
	<i>Thuidium cymbifolium</i>	0.1675	0.1111	0.1393
VI	<i>Ptilium crista-castrensis</i>	0.2311	0.0632	0.1471
	<i>Floribundaria setschwanica</i>	0.0741	0.0105	0.0423