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New Checklist of the Bryophytes of Italy

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ABSTRACT

The bryophyte flora of Italy sums up 1191 species, 18 subspecies and 35 varieties. Among them, hornworts and liverworts are represented by 297 species, 5 subspecies and 4 varieties, united in 99 genera and 54 families, while mosses totalize 894 species, 13 subspecies and 31 varieties, grouped into 253 genera and 77 families. The lists include tabular distributional data by region, based on literature records and herbarium material, especially for rare and doubtful species. Similarly, it differentiates between reports before and after 1968, using the most recently published information when appropriate. Critical notes on distributional and taxonomical issues are included.

RÉSUMÉ

Nouvelle Checklist des Bryophytes d'Italie.

La flore des bryophytes de l'Italie comprend 1191 espèces, 18 sous-espèces et 35 variétés. Parmi elles, les Anthocérotes et Hépatiques sont représentées par 297 espèces, 5 sous-espèces et 4 variétés, réunies en 99 genres et 54 familles, tandis que les mousses le sont par 894 espèces, 13 sous-espèces et 31 variétés, regroupées en 253 genres et 77 familles. La liste principale comprend des données de distribution tabulaires par région, basées en partie sur les documents de la littérature et principalement sur le matériel d'herbier, en particulier pour les espèces rares et douteuses. La liste différencie les rapports publiés avant et après 1968, et au cas échéant, nous avons utilisé les informations contenues dans les publications plus récentes. Des notes critiques sur les problèmes de distribution et de taxonomie sont incluses.

KEY WORDS

Hornworts,
liverworts,
mosses,
Italie,
Vatican City State,
Republic of San Marino.

MOTS CLÉS

Anthocérotes,
hépatiques,
mousses,
Italie,
Cité du Vatican,
République de Saint-Marin.

INTRODUCTION

Ten years after the publication of the Checklist of the Hornworts, Liverworts and Mosses of Italy (Aleffi *et al.* 2008), the authors propose a new edition of the Checklist of the Bryophytes of Italy. The compilation of a new checklist is necessary, not only because in recent years numerous studies have increased the bryological knowledge of the Italian country, but also because the publications of the two Checklist of the Mosses and the Hepaticas and Anthocerotes of the Mediterranean basin (Ros *et al.* 2007, 2013), the World Checklist of Hornworts and Liverworts (Söderström *et al.* 2016) and the Checklist of Bryophytes of Europe, Macaronesia and Cyprus (Hodgetts *et al.* 2020) have changed the systematic and taxonomy of the European bryophyte flora.

On the other side, recent molecular and taxonomic works have yielded several changes to the systematics, and nomenclature of many species, genera, and even entire families, especially referred to the pleurocarpous mosses and liverworts. Thus, while the general framework of the volume remains unaltered, a comparison of this new edition of the checklist, and the previous one would prove difficult both quantitatively and qualitatively.

A complete list of the Hornworts, Liverworts and Mosses known to date in the different regions of Italy (defined by their current political borders) is herein provided. Reports from the Republic of San Marino and the Vatican City State were also included.

MATERIAL AND METHODS

The present checklist is based on information from literature, studies and, in particular for species from taxonomically difficult genera or groups of species of doubtful occurrence, revision of bryological collections from several Italian and foreign institutional or private herbaria, from the author's recent observations and reports, and those of numerous European bryologists.

Regional distribution is reported for each taxon (Appendix 1); the tabular representation follows that of the previous editions of the checklists. The Italian regions are arranged from north to south and designated with the following abbreviations (Fig. 1):

AOS	Val d'Aosta
PIE	Piemonte
LOM	Lombardia
TRA	Trentino-Alto Adige
VEN	Veneto
FRV	Friuli-Venezia Giulia
LIG	Liguria
EMR	Emilia-Romagna
SMR	Republic of San Marino
TOS	Toscana
MAR	Marche
UMB	Umbria
LAZ	Lazio

SCV	Vatican City State
ABR	Abruzzo
MOL	Molise
CAM	Campania
PUG	Puglia
BAS	Basilicata
CAL	Calabria
SAR	Sardegna
SIC	Sicilia

Each report uses the following symbols:

- report based on collections published before 1968
- report based on collections published during or after 1968
- (○) doubtful report based on collections published before 1968
- (●) doubtful report based on collections published during or after 1968
- + report without precise collection data or locality

Nomenclature follows Söderström *et al.* (2016) and the Checklist of Bryophytes of Europe, Macaronesia and Cyprus (Hodgetts *et al.* 2020). The bibliography is published with updates until May 2020. It covers all the works published by Italian and foreign scholars reporting on bryophytes for the Italian territory. The bibliography provides a general list of the bibliographic entries in alphabetical order by author, including the general works about Italy overall, and which do not report localities, but molecular, taxonomical, or biogeographic works that indirectly concern the Italian bryoflora.

LIST OF ABBREVIATIONS CITED IN THE NOTES

J.V.	J. Váňa
M.A.	M. Aleffi
R.G.	R. Grolle
R.S.	R. Schumacker
conf.	confirmavit
det.	determinavit
in litt.	in litteris
leg.	legit
per	with the erroneous name of
rev.	revised by
s.l.	sensu lato
s.str.	sensu stricto
sub	with the synonym of
v.	vidit

ABBREVIATIONS OF HERBARIA FOLLOW VITT ET AL. (1985)

[BER]	Bergamo
[BI]	Bari (Santarelli Herbarium)
[BM]	London (British Museum of Natural History)
[BR]	Bruxelles (National Botanical Garden)
[CAME]	Camerino
[CHER]	Cherbourg
[DUIS]	Münstereifel (Düll Herbarium)
[FI]	Firenze (Cryptogamic Herbarium)
[G]	Genève



FIG. 1. — The administrative borders of the Italian regions with the indication of the abbreviations of the regions shown in the taxa distribution tables.

[GJO]	Universalmuseum Joanneum, Graz, Austria
[GZU]	Graz
[JE]	Jena
[LGHF]	Herbarium University of Liege – Station Scientifique des Hautes-Fagnes
[PC]	Paris
[PI]	Pisa
[RO]	Roma (De Notaris Herbarium)
[S]	Stockholm
[SIENA]	Siena
[TO]	Torino (Plant Biology Department)
[MRSN]	Torino (Regional Museum of Natural Sciences)
[TR]	Trento (Venturi Herbarium)
[VER]	Verona (Massalongo Herbarium)
[W]	Wien

RESULTS

Bryophyte taxa so far recorded in Italy are listed in a table where species records made in the different regions are indicated. In total, the Italian bryophyte flora comprises 1191 species, 18 subspecies and 35 varieties. Among them, the hornworts and liverworts list 297 species, 5 subspecies, and 4 varieties, included in 99 genera and 54 families of which, according to Söderström *et al.* (2016), three species, one subspecies and one variety present serious doubts about the value of the taxon and have been marked in the table with an asterisk (*). The mosses include 894 species, 13 subspecies, and 31 varieties, grouped into 253 genera and 77 families.

The checklist also provides critical annotations on some important misidentifications, nomenclatural and taxonomical problems, as well as species for which only one report is known.

37 species of liverworts and 13 species of mosses are excluded from the Italian flora, either due to revision of herbarium specimens, or to the impossibility of tracing and checking the herbarium specimens, or due to their doubtful ecology and chorology.

An appendix of liverworts and mosses lists taxonomically unclear binomials, together with species having doubtful ecology and chorology, and whose herbarium specimens could not be traced and checked, or those considered absent from the Italian flora due to revision of herbarium specimens. Bibliographic sources are cited for each species.

ANNOTATIONS

Hornworts and Liverworts

1. The report from TRA refers to a specimen gathered by Wolfskeel (July, 1993) at the Picco di Vallandro (Dürrensteinhütte, Bolzano) (*det. R.S. & J.V., 1994*).
2. Only reported by Cortini Pedrotti (1980) (*sub A. mandonii*) from the Island of Montecristo. *A. caucasicus* Steph. 1914 and *A. mandonii* Steph. 1916 are conspecific, as has been shown by Sérgio (1987).
3. The revision by R.S. & J.V. of herbarium specimens [VER] gathered by Carestia at Lake Combal (Courmayeur, Aosta, 21 July, 1885) confirmed its presence

in AOS. Given the lack of herbarium specimens, the reports from TRA and FRV are considered dubious.

4. The report from SAR by Bischler & Jovet-Ast (1971-72) refers to a herbarium specimen [PC] collected by De Notaris and identified as *Marchantia commutata* (synonym of *Preissia quadrata*).
5. The report from SAR by Moris (1829), lacking confirmation by herbarium specimens, is considered uncertain by Bischler & Jovet-Ast (1971-72). The herbarium specimens from VEN (Colli Euganei) and UMB (Trasimeno Lake) correspond to *C. fissa*; those from VEN (M. Baldo) and PIE (Riva Valsesia) correspond to *C. neesiana*. Herbarium specimens from TOS reviewed to date correspond to *C. fissa* and *C. neesiana*. Reports from LIG, EMR, LAZ and CAM [*sub C. trichomanis*] are considered dubious.
6. The report by Cappelletti (1927) from PIE (Val Maira) is confirmed neither by Zodda (1934) nor by Müller (1951-58) and is considered dubious given the species' ecology.
7. In Italy the species was wrongly reported in the past from PIE (*leg. Cesati 1857*, along the Sesia River near Vercelli) and TOS (*leg. Sommier 19 February, 1901*, Elba Island, FI; *leg. Levier 1885*, "Firenze La Concezione", VER), but after a revision of herbarium specimens these reports were referred to *Cephalozia calyculata* (Aleffi *et al.*, 2008). Therefore, the discovery of *C. integrerrima* in the Gavia Pass (Tacchi *et al.* 2014) is the first confirmed for Italy.
8. Ligrone & Duckett (2005) have reported the finding of a population of *Cyathodium foetidissimum* Schiffn. in the Ferriere Valley, near Amalfi (Campania).
9. The specimen, gathered by Rossetti in 1891 at the Forno Volasco (Apuan Alps), and identified as *D. obtusifolium*, then later revised by Massalongo as *D. taxifolium*, corresponds to *D. obtusatum* (*rev. R.S. 1991, conf. J.V. 1991*).
10. *Fossombronia maritima* was recently found in Campania (the ancient city of Pompei) during the excursion of the British Bryological Society (Preston & Blockeel 2006).
11. *Fossombronia mittenii* was recently found (*sub F. crozalsii*) on the Island of Linosa (Pelagian Islands, Sicily) associated with *Exormotheca pustulosa* (Carratello & Aleffi 1999).
12. Stephani (1911) reports *Frullania calcarifera* generically for Northern Italy. *Frullania calcarifera* was placed in synonymy of *F. tamarisci* by Hattori (1972) but shown to be a species separate from it by Heinrichs *et al.* (2010) and Vilnet *et al.* (2014).
13. Only reported from TRA (in the environs of Merano) collected by Schiffner in 1899 and by Schwab in 1976. *Frullania inflata* Gottsche as treated in Söderström *et al.* (2016) is a species complex. *Frullania inflata* s.str. is confined to North America and reports from Europe belongs to the segregate *Frullania cleistostoma* (Mamontov *et al.* 2018).
14. Only reported from LOM by Giacomini (1938). Konstantinova *et al.* (2009) considered *Pleurocladula*

- islandica* (Nees) Grolle to be a synonym of *P. albescens* (Hook.) Grolle, but we follow Söderström *et al.* (2002) and maintain it at the rank of variety. This variety is found from Greenland and Baffin Island to Quebec. It is also in northern Europe south to Switzerland. According to Söderström *et al.* (2016) there are doubts about the value of the taxon.
15. Only reported by Aleffi *et al.* (2004) from PIE (Stura di Demonte Valley, Western Alps).
 16. *Gymnocolea inflata* subsp. *acutiloba* is a problematic taxon that sometimes has been treated as conspecific with *Gymnocolea inflata*, sometimes as a separate species. According to Söderström *et al.* (2016) there are doubts about the value of the taxon.
 17. Only reported from PIE (Riva Valsesia, Alpe Rizzolo at Lago Bianco) by Massalongo & Carestia (1882) (conf. J.V., 1993).
 18. Only reported by Glowacki (1915) from TRA (Val di Lazzago near Vipiteno, 1900 m a.s.l.). The herbarium specimen [TO] from LOM (*leg.* Davies, 1903 or 1893, Santa Caterina at the feet of Mt. Sobretta) corresponds to *G. concinnum* (rev. R.S. & J.V., 1994).
 19. Only reported from TRA: Val Passiria by Düll (1991) and South Tirol by Spitale *et al.* (2015). Recent molecular studies (Roo *et al.* 2007) show that *Lophozia silvicola* H.Buch is a species well separated from *L. ventricosa* (Dicks.) Dumort.
 20. According to Söderström *et al.* (2016) there are doubts about the value of the taxon.
 21. The report from AOS (Valsavarenche, Pian de la Pesse) by Buffa & Miserere (2004) corresponds to *Barbilophozia sudetica*. The report from SAR (Aritzo) by Moris (1829), not being confirmed by herbarium specimens, is considered uncertain by Bischler & Jovet-Ast (1971-72).
 22. Only reported for Italy by G. Brusa and V. Hugonnot (Acquafrredda, Lenno, Tremezzina, Province of Lecco, Lombardy; *leg.* G. Brusa, 6 February 2019) (Ellis *et al.* 2019b).
 23. According to Söderström *et al.* (2016) there are doubts about the value of the taxon.
 24. According to Söderström *et al.* (2016), there are doubts about the value of the taxon.
 25. Only reported by Jack (1898) from TRA (Merano).
 26. Only reported by Rossetti (1888) from TOS (Miniere del Bottino near Serravezza) (see Cortini Pedrotti *et al.* 1991).
 27. Only reported by Müller (1906-16) from TRA (Lago di Braies "am kleinen See", 1906 *v.* Degen, *det.* Schiffner).
 28. Only reported by Jones (1969) from TRA (Passo di Costalunga). The report from AOS (Valsavarenche, Pian de la Pesse) by Buffa & Miserere (2004) corresponds to *Lophozia sudetica*. Probably overlooked.
 29. Only reported by Cortini Pedrotti *et al.* (1991) from TOS (Apuan Alps). As Heinrichs, Grolle & Drehwald (1998) have pointed out, the neotropical *P. bifaria* and the European *P. killarniensis* are conspecific.
 30. Only reported by Cortini Pedrotti *et al.* (1991) from TOS (Apuan Alps: Seravezza; Renara di Gronda).
 31. Aleffi *et al.* (2004b) have conducted some searches in the two localities of *Radula visianica*: on the Colli Euganei in VEN (Massalongo 1904) and in the Bosco Welsperg (Fiera di Primiero, Val Cismòn) in TRA (Gerola 1938). These searches did not reveal the species again. However the species has recently been found in Austria by Köckinger (2016). The Holotypus of *Radula visianica* ["nei Colli Euganei «prov. di Padova» al mt. Sengiari (sulla terra o sul tronco degli alberi?) sopra Torreglia, non lungi dal luogo dove trovansi la villa che un giorno possedeva il defunto professore R. De Visiani; 23 febbraio 1878"; conf. R.S., 1994] is preserved in the Massalongo Herbarium of the Civic Museum of Natural History in Verona [VER].
 32. The report from SIC (Palermo Botanical Gardens) by Dia & Aiello (1992) corresponds to *R. palmata* (rev. R.S., 1994).
 33. Only reported by Düll (1968) for FRV (Tagliamento River near Latisana, Udine).
 34. Only reported by Baudoin *et al.* (1984) for SIC (Pachino).
 35. Only reported by Ellis *et al.* (2018b) for SAR (Pauli Murtas, Oristano; *leg.* R. Becker, *det.* Th. Homm, 10 July, 2017).
 36. Reported by Müller (1901) for VEN (Revoltto, Verona: *leg.* Massalongo, 21 September, 1878 "ad trunco emarginato Pini piceae, prope Revoltto", VER; conf. R.G., 1975) and by Massalongo (1902) for VEN (Revoltto, Verona) and confirmed by Grolle (conf. R.G., 1975). This rare species has been found in abundance in the Gran Paradiso National Park (AOS) (Schumacker *et al.* 1999).
 37. Only reported by Schumacker *et al.* (1999) for AOS (Gran Paradiso National Park: Urtier Valley, Lago Ponton, 2600 m a.s.l.).
 38. Only reported for AOS (Gran Paradiso National Park: Eaux-Rouges Valley, 2375-2630 m a.s.l.) by Schumacker *et al.* (1999).
 39. Only reported for AOS (Gran Paradiso National Park: Cogne and Valeille Valley, environs of Lillaz, 1700 m a.s.l.; Urtier Valley, Alpe Broillot, 2400 m a.s.l.) and PIE (Gran Paradiso National Park: Orco Valley, Chia-pili di sotto, 1700 m a.s.l.; Piantonetto Valley, Lago di Teleccio, 1950 m a.s.l.) by Schumacker *et al.* (1999).
 40. Only reported for TRA by Bisang (1991): refers to a specimen gathered by Suse, 4 September, 1896 (Hb Möller, S) at Karereseehotel (Carezza al Lago).

Mosses

41. Only reported (*sub Phascum bulbosum* var. *piligerum*) by De Notaris (1838) near Cagliari.
42. Only reported from SAR (near Cagliari) (De Notaris 1838).
43. *Atracylocarpus alpinus* (Milde) Lindb. is endemic to Europe and had so far only been known from a few collections in Norway, Switzerland and Austria.

- Recently it was collected the first time in Italy (Funes Valley, between Bressanone and Chiusa, 1520 m a.s.l.). Because of its rareness, it is a protected species in the European Union (Frahm *et al.* 2007).
44. Other European species of *Barbula* were moved to the reinstated genera *Hydrogonium* and *Streblotrichum* and the newly described genus *Gymnobarbula* by Kučera *et al.* (2013).
 45. *Bartramia aprica* is the correct name for the Mediterranean and western North American species historically recognized as *Bartramia stricta* (Müller 2014).
 46. Only reported at Pessé and Machaby (Capra 1905).
 47. Only reported from TRA (near Molina, Ledro Lake) between 840 and 940 m a.s.l. (Gos & Ochyra 1994).
 48. Only reported from LOM on the dolomitic cliffs of the Mt. Sobretta (Val dell'Alpe), at about 2500 m a.s.l. (Giacomini 1939).
 49. Only reported (*sub Bruchia trobasiana*) by De Notaris (1865-1867) from PIE (near Trobaso in Intrasca Valley).
 50. Only reported from PIE by Blockeel *et al.* (1999) at Vallone di Arnas (1425-1500 m a.s.l.) and Aleffi *et al.* (2018) in the Maritime Alps.
 51. The reports for Italy refers some herbarium specimens by Artaria (LOM, Porto Ceresio, Como: *leg.* Artaria, 8.11.1897, 9.10.1898, 13.11.1898; Cuasso al Piano, Lago di Lugano: *leg.* Artaria, 20.12.1903) and Breidler (FRV, fra Moggio e Venzone, *leg.* J. Breidler, 25.08.1884) (Holyoak & Köckinger 2010).
 52. Many reports of species belonging to the *B. erythrocarpum complex* have been erroneously assigned to *B. blindii*, which occurs only in a few Italian regions (AOS, PIE, LOM, TRA, FRV). *Bryum blindii* was reported from Sicily by Dia *et al.* (1987) but it should be excluded from the Sicilian bryoflora.
 53. Only reported from TRA (near Calliano, Trento) along the Cavallo River (*leg.* F. Prosser, 18 March 2018) (Ellis *et al.* 2018b).
 54. Only reported from SIC by Lo Giudice (1996) in Contrada Arcia (240 m a.s.l.) and Piano Stravolata (230 m a.s.l.) near Niscemi (Caltanissetta) and Linosa Island (Privitera & Puglisi 2006).
 55. Only reported from CAM by Preston & Blockeel (2006) in Vietri sul Mare.
 56. Only reported (*sub C. sommieri*) from SIC by Bottini (1907) on Pantelleria Island. Recently found by Privitera & Puglisi (2009) in some locations on the island.
 57. Only reported from VEN (near Chiapuzza, Belluno, along the Musigo River at 975 m a.s.l.) (Zodda 1907).
 58. Only reported for Italy by Frahm *et al.* (2008) (SAR: between Genna Silana and the Gorropu Canyon).
 59. Only reported for Italy by Puntillo (2004) (CAL: at the base of Timpa del Salto, Marchesato, Crotone).
 60. Only reported from CAL (on the Aspromonte Massif, at the base of Papagallo Mountain) (Privitera & Puglisi 2000).
 61. Only reported from SIC at Solunto (Dia & Campisi 2009) and Gela (Puglisi *et al.* 2013a).
 62. The reports by Raimondo & Dia (1978-79) from PIE, TRA, VEN, LIG, EMR are based on old herbarium specimens or old literature data.
 63. Only reported by Lindberg (1881) from TOS (on the banks of the Arno River, near Pisa).
 64. Only reported from FRV by Scopoli (1772) along the Timavo River (Biasoletto 1827) and by Berini (1826) along the Isonzo River, Mucile Lake and Timavo River.
 65. Only reported from TRA: Lazzago Valley near Vipiteno (Glowacki 1915) and Rabbi Valley (Tacchi 2006).
 66. Only reported from LOM: Valfurva by Giacomini (1939) and the Retiche Alps (Mt. Parè) by Anzi (1877).
 67. Only reported by Trautmann (1911) from TRA on the Italian side of the Stelvio Pass.
 68. All records of *Didymodon glaucus* from Italy refers to specimens identified as *Eucladium verbanum* Nicholson & Dixon. *D. glaucus* subsp. *glaucus* has not yet been found in Italy.
 69. Only reported by Spitale *et al.* (2012) from TRA at Dolomiti di Brenta (Mt. Peller and Piani della Nana, 2100 m a.s.l.).
 70. Only reported by Jimenez *et al.* (2003) from LAZ at Foro Italico (Rome).
 71. Only reported from SIC: by Hébrard & Lo Giudice (1996) (*sub Physcomitrium maroccanum*) in Contrada Canalotto, near Mazzarino and by Privitera & Puglisi (2006) at Linosa Island.
 72. Only reported by Privitera & Puglisi (2002) at Siracusa. The report by Sotti (1977) in Val Sangone (Vallone Rocciavrè) was excluded because the only existing herbarium specimen does not correspond to this species (Pistarino *et al.* 2005).
 73. Only reported from SAR by Frahm *et al.* (2008) at Lotzorai (Nuoro).
 74. Only reported (*sub F. cavareana*) by Farneti (1894) from LOM in the environs of the city of Pavia.
 75. Only reported from SIC: by Carratello & Aleffi (1998) along the seashore of Capaci (Palermo) and Campisi & Provenzano (2004) at Selinunte.
 76. Only reported (*sub Dubyella italica*) by De Notaris (1869) from TOS at Massa, near the town of Carrara.
 77. Only reported for Italy from TRA (Pfitsch, between Gliederscharte and Wiener Neustatt (2400 m a.s.l., *leg.* Kiebacher) (Ellis *et al.* 2018a).
 78. Only reported from AOS in Veny Valley (Mt. Bianco) by O'Shea (2004).
 79. Only reported for Italy from PIE (Villa San Remigio Garden, Pallanza) (Aleffi *et al.* 2010).
 80. Only reported from SIC by Privitera *et al.* (2008) at Lipari Island.
 81. Only reported from SIC by Draper *et al.* (2003). The report refers to herbarium specimen by Lo Giudice (Nebrodi Mountains, 1300 m a.s.l., on *Prunus lusitanica* L., *leg.* Lo Giudice, 20-IX-2001).
 82. Only generically reported (*sub Leskea subnervis*) by Garovaglio (1844).

83. Only reported from CAL by Lara *et al.* (2004b) at Fossiata (Sila Grande 1260 m a.s.l.).
84. T.Kiebacher & Lüth (2017) describe a new species of *Orthotrichum* from the European Alps: *O. dentatum* T.Kiebacher & Lüth. *Orthotrichum dentatum* grows as an epiphyte on a variety of deciduous trees. So far, the new species has only been found in Italy (Type: Trentino-Alto Adige, South Tyrol, Feldthurns, Tschiffnon, in a garden on bark at the stem of a solitary *Juglans regia* tree, 01 August 2014, leg. T. Kiebacher) and Switzerland.
85. Only reported by Lara *et al.* (2004a) from SIC on the Nebrodi Mountains.
86. The report from SAR by Herzog (1926) is considered uncertain, according to Lara & Garilletti (*in litt.* 2018).
87. Only reported from LOM by Brusa (*in litt.*, 08 April 1999) at Monate Lake (Varese) and Orobic Alps.
88. Only reported by Brusa & Townsend (2002) from LOM at Mt. Lema (Varese).
89. Only reported from VEN in some localities of the Belluno Province between 1050 and 2200 m a.s.l. (Zodda 1912).
90. Only reported from SIC by Dia & Campisi (2006) in the archaeological area of Solunto.
91. Only reported from LOM (along irrigation ditch near Monate Lake, Varese, 273 m a.s.l. (leg. G. Brusa, 8.4.1999).
92. Only reported from TRA (Pinzolo) by Philippi (*in litt.*, 4.01.1994).
93. Only reported from SIC (sub *P. nigricans* var. *albidens*) by Zodda (1911) in the environs of Catania.
94. During review of the herbarium sample [VER] by Sotti (1979-80), material for the species was not found (Pistarino *et al.* 2005). For this reason, the report from PIE should be excluded. Therefore, the report by Podpera (1942-1973) from SAR (Cagliari, leg. Ascherson & Reinhardt 1863) is the only one for Italy.
95. Only reported by Bottini (1913) at Campello-Monti and Aleffi *et al.* (2018) at Maritime Alps. The report by Sotti (1978) in Sangone Valley (Giaveno, Fraz. Ponte Pietra), lacking confirmation by herbarium specimens, is considered uncertain.
96. Only reported by Miserere & Brusa (2003) from PIE (Alta Valle Pesio, Cuneo) and LOM (Veddasca Valley, Varese).
97. The report from LOM (Ballone Lake in Val di Lei, Sondrio, leg. et det. G. Brusa, 1996) is by Brusa (*in litt.*, 1996); the reports from TRA (Malga Binasia, 2225 m a.s.l. and Passo del Rombo, 2575 m a.s.l., leg. G. Bergamo De Carli, det. F. Sguazzin, 2017; Ochsenberg, Curon Venosta, BZ, 2140 m a.s.l., leg. et det. F. Sguazzin, 2019) are by Sguazzin (*in litt.*, 2019).
98. Based on the taxonomic revision of the *Schistidium apocarpum* group (Blom 1996), the occurrence of the genus *Schistidium* in Italy has much changed with respect to the previous check-lists. The genus distribution has been exclusively deduced by reference to the Italian records reviewed by Blom and kept in different herbaria [BM, CAME, DUIS, Greven priv. herb, GZU, PI, S, W], and by reports made after 1996. Bibliographic data previous to this date and not confirmed by revision of the herbarium specimens, are considered uncertain.
99. *Schistidium elegantulum* subsp. *wilsonii* H.H. Blom was reported from Italy in Blom (1996) based on a specimen collected by Martelli in July 1903 on the Mt. Velino [PI].
100. Only reported by Ellis *et al.* (2017b) from TRA (St. Martin in Thurn, Mt. Peitlerkofel, 2870 m a.s.l.; leg. T. Kiebacher, det. H. Kockinger).
101. Only reported from TRA by Pokorny *et al.* (2004a) (Trento, Gocciadoro Park) and Tacchi (2006) (Val di Rabbi).
102. Only reported from TRA by Pokorny *et al.* (2004b) (Trento, Gocciadoro Park).
103. The report from TRA refers a herbarium specimen collected by Glowacki (Stilfserjochhöhe, 26 August 1909, Glowacki, GJO), and examined by H. Blom. This species is new to Europe.
104. The report from TRA by Ellis *et al.*, (2020) refers a herbarium specimens collected by T. Kiebacher in many localities of South Tirol and Trentino between 2017 and 2018 and a herbarium specimen by Venturi (Monte San Vigilio, leg. Venturi, det. H. Blom, PI).
105. Only reported from TRA by Kiebacher (2020) (St. Ulrich, Mt. Seceda, 2450 m a.s.l., leg. M. Lüth 02 Sep 2002, det. T. Kiebacher & H. H. Blom). The species is new to Europe.
106. Only reported by Molendo (1865) from VEN in Livinallongo on the Mt. Padon, at 1863 m a.s.l. (*sub Hypnum ornellanum*).
107. Only reported by D. Spitale (Blockeel *et al.* 2010a) in Stelvio National Park (TN): Val de la Mare, near Lake Careser, 2654 m a.s.l. (11 August 2008, leg. D. Spitale, conf. I. Draper).
108. Only reported by Müller (2010) from SIC near Noto (Cava Grande del Cassibile, Siracusa).
109. Only reported by Ellis *et al.* (2014b) from ABR (Gran Sasso-Laga National Park, Mt. Prena, 1868 m, leg. R. Tacchi, 23 September 2013; det. R. Ochyra, 2014).
110. Only reported from TRA by Düll (2006) at Alpe di Siusi, Bolzano (leg. Lauer 1971) and Düll-Wunder (2008) at Sciliar.
111. Molecular and experimental studies have revealed genetic structure within *S. magellanicum*, and morphological differences associated with these genetic groups. On the base of molecular and morphological evidence all European records of *Sphagnum magellanicum* are referable to *Sphagnum divinum* or *Sphagnum medium* (Hassel *et al.* 2018). *Sphagnum magellanicum* s.str. is confined to southern South America. A systematic revision of the herbarium specimens is necessary. *Sphagnum magellanicum* was reported from Sicily by Bottini (1919) (*sub Sphagnum magellanicum* var. *laxum* Röll) but the species seems to be extinct in Sicily since it can no longer be found there (Raimondo & Dia 1978).

112. Only reported from PIE (Meugliano Lake and Condove, Susa Valley) by Tosco (1951-62).
113. Only reported from TRA by Ellis *et al.* (2012a) (Adamello Brenta Natural Park, Madonna di Campiglio, 1950 m a.s.l., *leg.* Spitali 6 July 2011; Lago Valbona, 2050 m a.s.l., *leg.* Philippi, July 2000).
114. Only reported by Preston & Blockeel (2006) from CAM (Vesuvio).
115. Only reported from TRA at Terme del Brennero about 1300 m a.s.l. (Röhl 1897).
116. Only reported by Düll (2006) from TRA (Südtirol, Bolzano Province, without any precise locality, *leg.* Kockinger 1989).
117. Only reported by Campisi *et al.* (2006) from SIC in Rocca Busambra ("Bosco della Ficuzza" Natural Reserve).
118. Only reported from SIC at "Bosco della Ficuzza" Natural Reserve, about 10 km south from Marineo (Blockeel 2000) and Erei Mountains and Troina (Lo Giudice & Cristaudo 2004; Lo Giudice & Bonanno 2010).
119. Only reported from TRA by Kern (1913) at Rifugio Cevedale and Glowacki (1915) at Lago Nero (S. Martino al Montenevoso, 2600 m a.s.l.).
120. Only reported by Mastracci (2003) from ABR on the Bosco Martese (Laga Mountains).
121. Only reported from AOS (Champorcher). The report refers to a specimen from 1905 kept in the Duke herbarium.
122. Only reported from TRA (Vigo di Fassa, Kleine Latemarscharte) and VEN (Tofana di Rozes, Cortina d'Ampezzo) by T. Kiebacher (Ellis *et al.* 2020).
123. Only reported (*sub Systegium multicapsularis*) by Geheeb (1886) on Giannutri Island. Its occurrence is still uncertain, as Bottini could not validate the species identification because of the poor state of the herbarium specimen (Tanfani 1890).

EXCLUDED OR DOUBTFUL TAXA
Hornworts and Liverworts

Cephalozia lucens (A.Evans) Steph.

Reported by Rodegher (1896) for LOM (along the Brembo River at Olmo and near Averara, *sub Jungermannia lucens*). The herbarium specimen [BER] could not be found. The species is excluded from the liverwort flora of Italy.

Drepanolejeunea hamatifolia (Hook.) Schiffn.

Reported by De Notaris (1869) for LOM (Carena, Brumano, Aralatta and Mt. Resegone, *sub Lejeunea hamatifolia* Dum.). However, the herbarium specimens (*leg.* Rota, BER) could not be found. *D. hamatifolia* is excluded from the liverwort flora of Italy; it is an eu-oceanic species which lives only on the Atlantic coasts of Portugal, Spain, France, Ireland, England, and Macaronesia.

Exormotheca bulbosa (Link ex Lindenb.) K.Müll.

Incorrectly reported by Zodda (1934) for SIC (Aci Castello). The error was later reported by Müller (1951-58) and Bischler (1976). See also note 25 regarding *Exormotheca pustulosa*.

Fimbriaria blumeana Nees

Reported by Tassi (1901) for TOS (Siena Botanical Gardens). The herbarium specimen [SIENA] could not be found. The species is excluded from the liverwort flora of Italy; it lives only in Java and in the Himalayas.

Fimbriaria raddii Corda

Regarding this species, Zodda (1934) writes: "Specie dubbia, scoperta da Raddi presso Firenze e descritta da Corda, ma non più ritrovata né ivi, né altrove; né è stato possibile rintracciare gli esemplari autotipi". Müller (1906-16) writes of never having seen the original specimen and adds that the description was done by Nees, with a specimen at hand.

Fimbriaria stablii Steph.

Reported by Tassi (1901) for TOS (Siena Botanical Gardens). The herbarium specimen [SIENA] could not be found. The species is excluded from the liverwort flora of Italy; it lives only in Mexico and Guatemala.

Frullania teneriffae (F.Weber) Nees

Reported by Herzog (1905) for SAR (Canale d'Inferno, S. Pietro). The herbarium specimen corresponds to *F. tamarisci* (rev. R.G.).

Herbertus sendtneri (Nees) Lindb.

Reported by Zodda (1934) for TRA (Alto Adige between Merano and Bolzano at the Passo della Croce, *sub Schisma sendtneri* Nees). Zodda erroneously reports the data by Dalla Torre & Sarnthein (1904) "im Anstieg zum Kreuzjoch" [*sub Herberta straminea* (Dum.) Trevisan], located in Austrian territory. In fact, Müller (1906-16) reports the data by Dalla Torre & Sarnthein among the Austrian sites of the species and later (Müller 1951-58) affirms that *Herberta straminea* is found "In den Ostalpen in einem kleinen Gebiet westlich und östlich von Innsbruck, auf einer Strecke von nur 120 km Luftlinie", enriching the site list with a map of the species' distribution. Thus Zodda confused the Austrian toponym with the Italian one existing between Bolzano and Merano.

Heteroscyphus integrifolius (Lehm. & Lindenb.) Fulford

Reported by Rodegher (1896) for LOM (Val Brembana, *sub Jungermannia integrifolia*). The species is excluded from the liverwort flora of Italy; it lives only in Peru and Chile. However, the herbarium specimen [BER] could not be found.

Jungermannia brembana Rota

Only reported by Rodegher (1896) for LOM (Bergamo and Val Brembana). The herbarium specimen [BER] corresponds to *Cephaloziella divaricata* (rev. R.S., 1993).

Jungermannia caespiticia Lindenb.

The herbarium specimen [BER] for LOM (Val Camonica) by Rodegher (1896) corresponds to *Nardia geoscyphus* (rev. R.S., 1993). The report for PIE by Cappelletti (1927) refers to a herbarium specimen (*leg.* Gola 1900, Piedimulera, TO) corresponding with *J. atrovirens* (rev. R.S., 1994). The reports for TOS (Appennino Pistoiese at the Laghetto del Greppo) by Barsali (1907) and for PIE (Mt. Rocciacotello) by Filipello (1964), lacking confirmation by herbarium specimens, are to be considered as uncertain.

Jungermannia equisetifolia

The report for PIE (Vagna, Domodossola) by Gagliardi (1884) refers to a binomial unknown to liverwort taxonomy. The herbarium specimen has not been found.

Jungermannia horkii Nees

Only reported by Rodegher (1896) for LOM (Sarnico). The herbarium specimen [BER] corresponds to *Cephaloziella* sp. (rev. R.S., 1993).

Jungermannia microcarpa Carringt.

The report for PIE (Valsesia) by Gallo (1892) refers to a binomial unknown to liverwort taxonomy. The herbarium specimen has not been found.

Jungermannia minima Scop.

Reported by Scopoli (1772) for Carnia in Austrian territory and doubtfully by Viviani (1804) for LIG (Polcevera) and LAZ (Agro Romano). Viviani, referring to Scopoli's report, notes: "A Scopolio tam imperfecte descripta, ut sine dubitationis nota eiusdem synonimon recipere non auserim".

Jungermannia rorata Rota

Only reported by Rodegher (1896) for LOM (Val Camonica and Val Brembana). The herbarium specimens [BER] correspond to *Cephalozia bicuspidata* (rev. R.S., 1993).

Jungermannia subulata A.Evans

The herbarium specimen [TO] gathered by Gola in 1905 in PIE (near Piedimulera) corresponds to *J. atrovirens*. The generic report for Italy by Váňa (1973), which refers to a herbarium specimen [BM] gathered by Strickland in 1899 (*sub J. lanceolata*), corresponds to a location on Austrian territory (Váňa *in litt.*, May, 1994).

Kurzia pauciflora (Dicks.) Grolle

The reports for PIE correspond to *K. sylvatica* and *K. trichoclados* (rev. H. Hürlimann). The gatherings of Carestia (Riva Valsesia, Gola Rossa, Ovago d'Otto and Cramisei) correspond to *K. trichoclados*. Farneti (1894) reports the species doubtfully for LOM (Agro di Como). The reports for TRA by Dalla Torre & Sarnthein (1904) (*sub Lepidozia setacea*) correspond to *K. trichoclados*. Even though the herbarium specimen is sterile, Gerdol's determination (*leg.* Gerdol 1987, Oberrasen Antholz – Rasun Anterselva above) is almost certainly incorrect given the species' ecology. All reports for TOS, after revision of the herbarium specimens (Cortini Pedrotti *et al.* 1991), correspond to *K. sylvatica*. All the specimens examined were confused with *K. sylvatica* or *K. trichoclados*. For the determination of *Kurzia*, see Stieberaere & Schumacker (1986).

Lejeunea flava (Sw.) Nees subsp. *moorei* (Lindb.)
R.M.Schust.

Reported by Massalongo & Carestia (1882) for PIE (Alpe Casera in Valsesia, *sub L. moorei*). According to Müller (1951–58) and Düll (1983) the identification appears clearly incorrect. Schuster (1966–1992) notes the species in Central and South America and the subsp. *moorei* for Ireland. Probably confusion with yellow forms of *L. cavifolia*.

Lejeunea patens Lindb.

Following revision of the herbarium specimens, all the reports for Italy correspond to *L. lamacerina* and *L. cavifolia*. *L. patens* only lives along the Atlantic coasts of Europe. For the distinction between *L. patens*, *L. lamacerina* and *L. cavifolia* see Müller (1951–58) and Geissler (1987).

Lepidozia cupressina (Sw.) Lindenb.

The report for FRV (Mt. Cretabianca) by Gortani (1955), not being confirmed by herbarium specimens, is to be considered as uncertain. *L. cupressina* is a markedly oceanic species that lives in isolated locations (Vosges, Black Forest) under oceanic influences.

Leptoscyphus cuneifolius (Hook.) Mitt.

Reported by Rodegher (1896) for LOM (Ca' S. Marco in Val Brembana, *sub Jungermannia cuneifolia*). The herbarium specimen [BER] corresponds to *Cephalozia bicuspidata* (rev. R.S., 1993).

Lophozia elongata Steph.

The report for AOS (Alpi Graie, Passo Garin alle creste dell'Eco, det. Bryhn) by Levier (1905), corresponds to *Lophoziopsis longidens* (Müller, 1906-1916).

Marsupella apiculata Schiffn.

The report by Düll (1991) for TRA is incorrect. In fact, he reports data of Müller (1951-58) for Macugnaga (not Macagnaga!) referring it to South Tirol. Nevertheless, this locality is in PIE. However, the reports for PIE by Cappelletti (1929), not being confirmed by herbarium specimens, are considered as uncertain.

Metzgeria temperata Kuwah.

The report for ABR (Vallone di Cacciagrande, Abruzzo National Park) by Mastracci & Düll (1991), corresponds to *M. furcata* (rev. M.A., 1994).

Nardia insecta Lindb.

Reported by Levier (1905) for AOS (leg. Vaccari, Piccolo S. Bernardo, det. Bryhn, *sub Alicularia geoscypha* De Not. fo. *insecta* (Lindb.) K.Müll.). Following revision by Schumacker *et al.* (1986), the herbarium specimen corresponds to *N. geoscyphus*.

Phaeoceros carolinianus (Michx.) Prosk.

The report for TRA by Düll (1983) (*sub P. laevis* subsp. *carolinianus*) is excluded by the author (*in litt.*, 1993).

Plagiochila spinulosa (Dicks.) Dum.

All herbarium specimens for PIE, LOM, FRV and TOS were confused with *P. killarniensis* and *P. poreloides*. *P. spinulosa* is a North-Atlantic/Macaronesian species (Grolle & Schumacker 1982). In Italy only *P. killarniensis* exists, with a South-Atlantic/Macaronesian distribution (Cortini Pedrotti *et al.* 1991). For identification of the *Plagiochila* species, see Schumacker & Lecointe (1989).

Pleurozia purpurea Lindb.

The report by Scopoli (1772) (*sub Jungermannia purpurea*) refers to a location in Austrian territory, which furthermore is erroneous, this species being restricted to the British Isles, the Färöer and SW-Norway.

Porella canariensis (F. Weber) Bryhn

The report for SAR by Herzog (1905), not being confirmed by herbarium specimens, is considered uncertain by Bischler & Jovet-Ast (1971-72). In fact, it is *P. obtusata*, owing to nomenclatural confusion (Düll *in litt.*, January, 1995).

Porella platyphyloidea (Schwein.) Lindenb.

The herbarium specimen (Hb De Notaris, RO), gathered by Bonnay in 1837 “*in valle augustana*” (AOS) corresponds to *P. platyphylla* (rev. M.A., 1993). The herbarium specimen (Hb De Notaris, RO) gathered by Cesati in 1837 “*ad Verbanum*” (PIE) corresponds to *P. obtusata* (rev. M.A., 1993). The herbarium specimens [TR] of Venturi for TRA (Rabbi e Nogaré) correspond to *P. platyphylla* (rev. R.S., 1994). The report for TOS (Montieri, Grosseto) by Murgia & Sassi (1982) is incorrect. The report for SAR (leg. Gennari 1858, Monte Sette Fratelli, *sub Madotheca thuja*, Hb De Notaris, RO) by Bertoloni (1858-62) corresponds to *P. obtusata*. The reports for LIG (De Notaris 1846), VEN (Trevisan, 1840) and LOM (De Notaris, 1859) appear dubious. At present, as shown by Therrien *et al.* (1998), *P. platyphyloidea* (Schwein.) Lindenb. is considered conspecific with *P. platyphylla* (L.) Pfeiff. For the molecular, morphological and taxonomical differences of the European species of the genus *Porella*, consult also Boisselier-Dubayle & Bischler (1994) and Bischler & Boisselier-Dubayle (1998).

Prasanthus suecicus (Gottsche) Lindb.

Massalongo (1923) refers to the species: “*In Italia trovato dal Corbière nelle Alpi marittime: rive del lago Tre Colpas (2150 m.s.m.) ed alla Madonna (2250 m.s.m.)*”. These localities are in French territory. The species has not been found in Italy to date.

Radula aquilegia (Hook.f. & Taylor) Gott. et al.

Reported by Rodegher (1896) for LOM (Val Brembana). The herbarium specimen [BER] corresponds to *R. complanata* (rev. R.S., 1993).

Riccardia incurvata Lindb.

The reports for LOM by Andreis & Rotondi (1982) and Ferranti & Zavagno (1999) correspond to *R. multifida* (rev. R.S., 1994). The report for TOS (Island of Montecristo) by Cortini Pedrotti (1980) corresponds to *R. chamedryfolia* (rev. R.S. & J.V., 1994).

Riccia melitensis C.Massal.

Reported incorrectly by various authors for SIC. Actually, “*Insula Gozo, prope Sicilia, leg. Sommier, 1906 (G)*” is written on the holotype. It is well known that the Island of Gozo belongs to the independent Maltese archipelago; hence the species, at least in terms of strict national boundaries, cannot be ascribed to the Italian flora, although Malta is included in Italy by Flora Europea and in Red Data Book for threatened Bryophytes in Europe and Macaronesia (Schumacker & Martiny 1995).

Scapania degenerii Schiffn. ex Müll.Frib.

The species has been reported from Italy by Potemkin (2002) *sub S. brevicaulis*, and this is the only report for the Mediterranean area. Because the author did not give any indication of the locality, the report should be considered doubtful until specimens can be checked.

Telaranea nematodes (Gottsche ex Austin) M.Howe

Reported by Ferrarini & Marchetti (1983) for TOS (Apuan Alps). All the herbarium specimens correspond to *Blepharostoma trichophyllum* and *Kurzia sylvatica* (Cortini Pedrotti et al. 1991).

Mosses

Ceratodon heterophyllus Kindb.

Ceratodon purpureus var. *rotundifolius* Berggr. has been reported from Italy and this name is considered at present a synonym of *Ceratodon heterophyllus* Kindb. According to Hill et al. (2006) European records of *C. heterophyllus* are based on plants that lack capsules and according to the account of Burley & Pritchard (1990) are not reliable. Consequently *Ceratodon heterophyllus* should also be excluded from the Mediterranean area.

Cinclidotus pachylomoides Bizot

Only reported by Düll (1991) (Südtirol, without any precise locality, leg. Schwab 1976). Taxon insufficiently known because not revised since its pre-1962 publication; that is to say we have no more information about the species than *Index Muscorum*; merely relisted without additional specimens in a checklist since 1963; may have been treated in a checklist, flora, or revision with specimens before 1962. (Crosby et al. 1999). This species should be excluded from the flora of the Italy.

Cyrtomnium hymenophyllum (Bruch & Schimp.) Holmen

The report of its occurrence (*sub Cinclidium hymenophyllum*) near the Gran Ghiacciaio in the Forno Valley (Lombardia) by Venturi (1899) must be considered erroneous, as the author took this information from Limprecht (1895) who had reported this species in the Forno Valley from Switzerland. This species should be excluded from the flora of the Italy.

Pelekium minutulum (Hedw.) Touw

The report of its occurrence on the Mt. Rocciacotello in PIE by Filipello (1964) (*sub Thuidium minutulum*) cannot be confirmed because of the poor state of the herbarium record. This species should be excluded from the flora of the Italy.

Pohlia sphagnicola (Bruch & Schimp.) Broth.

The report of *Bryum sphagni* by Rota on the Lombardian side of the Tonale Pass (De Notaris 1869) is erroneously assigned to *Pohlia sphagnicola*: *Bryum sphagni* correspond, in fact, to *Bryum weigelii*. The report by Raimondo & Dia (1978) on the Madonie Mountains, following the revision of the herbarium specimens (rev. Nordhorn-Richter), corresponds to *Pohlia nutans*. This species should be excluded from the flora of the Italy.

Ptychostomum bornholmense (Wink. & R.Ruthe)
Holyoak & N.Pedersen

Only reported by Mazzoleni et al. (1993) at Capri. The report, not being confirmed by herbarium specimens, is considered uncertain. This species should be excluded from the flora of the Italy.

Ptychostomum minii (Podp. ex Guim.) D.Bell & Holyoak

Only reported in Guspini (Cagliari) on wet rocks (Giacomini 1938). The report not being confirmed by herbarium specimens, is to be considered as uncertain.

***Ptychostomum warneum* (Röhl.) J.R.Spence**

Only reported on moist sandlands, close to the permanent snow cover of the Azzarini and Pisgana mountains (De Notaris 1869). However, in the absence of any herbarium specimen, the taxonomic identification is unreliable by reference to the previously mentioned site conditions, which do not match the ecological preferences of this species. The report of its occurrence at Solda in TRA by Nicholson (1909) (*sub B. mamillatum*) is to be disregarded, as the revision of the herbarium specimen [BM] revealed that it was erroneously identified. This species should be excluded from the flora of the Italy.

***Schistidium maritimum* (Sm. ex R.Scott) Bruch & Schimp.**

The report of its occurrence (*sub Grimmia maritima*) in LAZ by Brizi (1897) is not reliable because it is not supported by a herbarium specimen. In addition, the distribution area of this species is limited to north-western Europe (Bremer 1980) and its presence in the central Apennines seems for the moment to be unlikely.

***Schistidium strictum* (Turner) Loeske ex Martensson**

The occurrence of *Schistidium strictum* in most areas of the Mediterranean (comprises Italy, Sardinia and Sicily) is doubtful because it is a strongly oceanic species and its presence is usually based on reports of *Grimmia apocarpa* var. *gracilis* Röhl., *Schistidium apocarpum* var. *gracile* (Röhl.) Bruch & Schimp., and *Schistidium gracile* (Röhl.) Limpr. There are uncertainties about the correct interpretation of these names and their synonymy with *Schistidium strictum* or *S. apocarpum* (Blom 1996). In the absence of revision of the herbarium specimens the presence in these areas should be considered doubtful.

***Sphagnum recurvum* P.Beauv.**

Sphagnum recurvum is exclusively a New World species, not growing in Europe (McQueen & Andrus 2006). Flatberg (1992) stated that *S. recurvum* is endemic to northern South America, Central America and the southeastern part of the United States. In Europe the *S. recurvum* complex consists of a group of five closely related and similar species (*S. angustifolium*, *S. fallax* and *S. flexuosum*, common in the Mediterranean basin, and *S. brevifolium* and *S. isoviitiae*, more northerly distributed) (Såstad & Flatberg 1994), but *S. recurvum* in the strict sense is not thought to occur in Europe (Hill *et al.* 2006). In the absence of revision of the herbarium specimens the presence in these areas should be considered doubtful and all the regional occurrences are covered by *S. fallax*.

***Vesicularia galericulata* (Duby) Broth. and *V. reimersiana* Bizot & P. de la Varde**

V. galericulata was reported from Malta by Reimers in 1934 (*sub V. sphaerocarpa*). According to Corley *et al.* (1981), *V. sphaerocarpa* is a synonym of *V. galericulata*. Düll (1984-1985) listed the Maltese plant as *V. reimersiana*, but also asserted that *V. galericulata* had been found in mainland Italy. However, the report by Düll is not supported by any herbarium specimens. Therefore, no species of *Vesicularia* are listed for Italy by Cortini Pedrotti (2001). It seems likely that *V. galericulata* has never been found in Europe and *V. reimersiana* is not present in Italy.

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APPENDIX 1. — Regional distribution of Italian Bryophytes.

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>Clevea</i> Lindb. (Cleveaceae)																						
<i>hyalina</i> (Sommerf.) Lindb.	●	●	○	●	●	○	○															
<i>spathysii</i> (Lindenb.) Müll.Frib.																						●
<i>Cololejeunea</i> (Spruce) Steph. (Lejeuneaceae)	●	●	●	●	●	●																
<i>calcarea</i> (Lib.) Steph.				●	●																	
<i>rossettiana</i> (C.Massal.) Schiffn.						●																
<i>Conocephalum</i> Hill (Conocephalaceae)	●	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	
<i>conicum</i> (L.) Dumort.					●	●																
<i>salebrosum</i> Szweyk., Buczk. & Odrzyk.						●	●															
<i>Corsinia</i> Raddi (Corsiniaceae)	○	●	○		●																	
<i>coriandrina</i> (Spreng.) Lindb.																						
<i>Crossocalyx</i> Meyl. (Anastrophyllaceae)	○		●	○																		
<i>hellerianus</i> (Nees ex Lindenb.) Meyl.																						
<i>Cyathodium</i> Kunze (Cyathodiaceae)																						
<i>foetidissimum</i> Schiffn. [8]																						
<i>Diplophyllum</i> (Dumort.) Dumort. (Scapaniaceae)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>albicans</i> (L.) Dumort.																						
<i>obtusatum</i> (R.M.Schust.) R.M.Schust. [9]																						
<i>obtusifolium</i> (Hook.) Dumort. subsp. <i>obtusifolium</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>taxifolium</i> (Wahlenb.) Dumort. var. <i>taxifolium</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Dumontiera</i> Nees (Dumontieraceae)																						
<i>hirsuta</i> (Sw.) Nees subsp. <i>hirsuta</i>									(●)	●												
<i>Eremnotus</i> Lindb. & Kaal. ex Pearson (Jungermanniaceae)	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>myriocarpus</i> (Carrington) Lindb. & Kaal. ex Pearson																						
<i>Exormotheca</i> Mitt. (Exormothecaceae)																						
<i>pustulosa</i> Mitt.																						
<i>Fossombronia</i> Raddi (Fossombroniaceae)																						
<i>angulosa</i> (Dicks.) Raddi																						
<i>caespitiformis</i> (Raddi) De Not. ex Rabenh. subsp. <i>caespitiformis</i>	○		●		○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
subsp. <i>multispira</i> (Schiffn.) J.R.Bray & Cargill			●		○		○															
<i>echinata</i> Macvicar						●																
<i>foveolata</i> Lindb.									(○)	○												
<i>maritima</i> (Paton) Paton [10]																						
<i>mittenii</i> Tind. [11]																						
<i>pusilla</i> (L.) Nees																						
<i>wondraczekii</i> (Corda) Dumort. ex Lindb.									○													
<i>Frullania</i> Raddi (Frullaniaceae) [12]																						
<i>cleistostoma</i> Schiffn. & W.Wollny [13]										●												
<i>dilatata</i> (L.) Dumort.											●											
<i>fragilifolia</i> (Taylor) Gottsche, Lindenb. & Nees												●										
<i>jackii</i> Gottsche													●									
<i>parvistipula</i> Steph.														●								
<i>riparia</i> Hampe															●							
<i>tamarisci</i> (L.) Dumort.																●						
<i>Fuscocephaloziopsis</i> Fulford (Cephalozziaceae)																						
<i>albescens</i> (Hook.) Váňa & L.Söderstr. var. <i>albescens</i>																						
*var. <i>islandica</i> (Nees) Váňa & L.Söderstr. [14]																						
<i>catenulata</i> (Huebener) Váňa & L.Söderstr. subsp. <i>catenulata</i>																						
<i>connivens</i> (Dicks.) Váňa & L.Söderstr. subsp. <i>Connivens</i>																						
<i>leucantha</i> (Spruce) Váňa & L.Söderstr.																						
<i>loitlesbergeri</i> (Schiffn.) Váňa & L.Söderstr.																						
<i>lunulifolia</i> (Dumort.) Váňa & L.Söderstr.																						
<i>macrostachya</i> (Kaal.) Váňa & L.Söderstr. subsp. <i>macrostachya</i> [15]																						
<i>pleniceps</i> (Austin) Váňa & L.Söderstr. var. <i>pleniceps</i>																						
<i>Geocalyx</i> Nees (Geocalycaceae)																						
<i>graveolens</i> (Schrad.) Nees																						
<i>Gongylanthus</i> Nees (Southbyaceae)																						
<i>ericetorum</i> (Raddi) Nees																						
<i>Gymnocolea</i> (Dumort.) Dumort. (Anastrophyllaceae)																						
<i>inflata</i> (Huds.) Dumort. subsp. <i>Inflata</i>																						
*subsp. <i>acutiloba</i> (Schiffn.) R.M.Schust. ex L.Söderstr. & Váňa [16]																						
<i>Gymnomitrium</i> Corda (Gymnomitriaceae)																						
<i>adustum</i> Nees [17]																						
<i>alpinum</i> (Gottsche ex Husn.) Schiffn.																						
<i>brevisimum</i> (Dumort.) Warnst.																						
<i>commutatum</i> (Limpf.) Schiffn.																						
<i>concinnum</i> (Lightf.) Corda																						
<i>coralliooides</i> Nees																						
<i>obtusum</i> Lindb. [18]																						
<i>revolutum</i> (Nees) H.Philib. subsp. <i>revolutum</i>																						

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>Haplomitrium</i> Nees (Haplomitriaceae)																						
<i>hookeri</i> (Lyell ex Sm.) Nees var. <i>hookeri</i>	● (○) (○)																					
<i>Harpalejeunea</i> (Spruce) Schiffn. (Lejeuneaceae)																						
<i>molleri</i> (Steph.) Grolle subsp. <i>molleri</i>										●												
<i>Harpanthus</i> Nees (Harpanthaceae)																						
<i>flotovianus</i> (Nees) Nees							○	●														
<i>scutatus</i> (F.Weber & D.Mohr) Spruce							○	+	●	○	○											
<i>Hygrobiella</i> Spruce (Hygrobiellaceae)																						
<i>laxifolia</i> (Hook.) Spruce							○		○													
<i>Isopaches</i> H.Buch (Anastrophylaceae)																						
<i>bicrenatus</i> (Schmidel ex Hoffm.) H.Buch							○	●	●	○	○			●								
<i>decolorans</i> (Limpr.) H.Buch							●	●														
<i>Jungermannia</i> L. (Jungermanniaceae)																						
<i>atrovirens</i> Dumort.							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>borealis</i> Damsh. & Váňa							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>eucordifolia</i> Schlikov							○	○	○	●	○											
<i>polaris</i> Lindb.							●	●	○	+	○											
<i>pumila</i> With.							●	●	○	○	●	○										
<i>Kurzia</i> G.Martens (Lepidoziaceae)																						
<i>sylvatica</i> (A.Evans) Grolle							○															
<i>trichoclados</i> (Müll.Frib.) Grolle							○	○	●													
<i>Lejeunea</i> Lib. (Lejeuneaceae)																						
<i>cavifolia</i> (Ehrh.) Lindb.							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>lamacerina</i> (Steph.) Schiffn. subsp. <i>lamacerina</i>							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Lepidozia</i> (Dumort.) Dumort. (Lepidoziaceae)																						
<i>reptans</i> (L.) Dumort.							○	●	●	●	●	●	○		●		○					
<i>Lioclaena</i> Nees (Jungermanniaceae)																						
<i>lanceolata</i> Nees							○	○	○	●	○	●	●	●	●	●	○	○	○	○	○	○
<i>Lophocolea</i> (Dumort.) Dumort. (Lophocoleaceae)																						
<i>bidentata</i> (L.) Dumort.							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>fragrans</i> (Moris & De Not.) Gottsche, Lindenb. & Nees subsp. <i>fragrans</i>																						
<i>heterophylla</i> (Schrad.) Dumort. subsp. <i>heterophylla</i>							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>minor</i> Nees							●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Lophozia</i> (Dumort.) Dumort. (Lophoziaaceae)																						
<i>ascendens</i> (Warnst.) R.M.Schust.							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>guttulata</i> (Lindb. & Arnell) A.Evans							○	+	●	○						+						
<i>longiflora</i> (Nees) Schiffn.							●	●	○	○	●	●	●	●	●	●	●	●	●	●	●	●
<i>silvicola</i> H.Buch [19]																						
<i>ventricosa</i> (Dicks.) Dumort.							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>wenzelii</i> (Nees) Steph. [20]							●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Lophozopsis</i> Konstant. & Vilnet (Lophoziaaceae)																						
<i>excisa</i> (Dicks.) Konstant. & Vilnet var. <i>excisa</i> [21]							○	●	●	●	●	●	●	●	●	●	●	●	●	●	(○)	●
<i>longidens</i> (Lindb.) Konstant. & Vilnet subsp. <i>longidens</i>							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Lunularia</i> Adans. (Lunulariaceae)																						
<i>cruciata</i> (L.) Dumort. ex Lindb. subsp. <i>cruciata</i>							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Mannia</i> Corda (Aytoniaceae)																						
<i>androgyna</i> (L.) A.Evans							○	○	○	○	○	○	○	○	○	●	●	●	●	●	●	●
<i>californica</i> (Gottsc.) L.C.Wheeler [22]								●														
<i>fragrans</i> (Balb.) Frye & L.Clark subsp. <i>fragrans</i>							●	○	●	●	○	○	○	○	○							
<i>gracilis</i> (F.Weber) D.B.Schill & D.G.Long							●	●	○	●	●	●	●	●	●							
<i>pilosa</i> (Hornem.) Frye & L.Clark							●															
<i>triandra</i> (Scop.) Grolle							○	●	●	○	○	○	○	○	○							
<i>Marchantia</i> L. (Marchantiaceae)																						
<i>paleacea</i> Bertol.							○	○	●	○	●	●	●	●	●	●	●	●	●	●	●	●
<i>polymorpha</i> L. subsp. <i>polymorpha</i>							●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●
subsp. <i>montivagans</i> Bischl. & Boissel.-Dub.							●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●
subsp. <i>ruderalis</i> Bischl. & Boissel.-Dub.							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>quadrata</i> (Scop.) subsp. <i>quadrata</i>							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Marchesinia</i> Gray (Lejeuneaceae)																						
<i>mackaii</i> (Hook.) Gray								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Marsupella</i> Dumort. (Gymnomitriaceae)																						
<i>boeckii</i> (Austin) Lindb. ex Kaal.							○															
<i>condensata</i> (Ångstr. ex C.Hartm.) Lindb. ex Kaal.								○	+													
<i>emarginata</i> (Ehrh.) Dumort.							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>funcikii</i> (F.Weber & D.Mohr) Dumort.							●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>sparsifolia</i> (Lindb.) Dumort. subsp. <i>Sparsifolia</i>							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>sphaecelata</i> (Gieseke ex Lindemb.) Dumort.							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>sprucei</i> (Limpr.) Bernet							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Mesoptychia</i> (Lindb.) A.Evans (Jungermanniaceae)																						
<i>badensis</i> (Gottsche ex Rabenh.) L.Söderstr. & Váňa							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>bantriensis</i> (Hook.) L.Söderstr. & Váňa subsp. <i>bantriensis</i>	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
* <i>collaris</i> (Nees) L.Söderstr. & Váňa [23]	○	○	●	●	●	●	●	○														
<i>gillmanii</i> (Austin) L.Söderstr. & Váňa var. <i>gillmanii</i>	●	●																				
<i>heterocolpos</i> (Thed. ex Hartm.) L.Söderstr. & Váňa var. <i>heterocolpos</i>	●	●	○	●	●					○		●	●									
<i>turbinata</i> (Raddi) L.Söderstr. & Váňa	○	○	○	○	○	●	○	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●
<i>Metzgeria</i> Raddi (Metzgeriaceae)																						
<i>conjugata</i> Lindb.	○	●	●	●	●	●	●	●		●				●		○				●	●	●
<i>furcata</i> (L.) Corda	●	●	●	●	●	●	●	●		●				●		●	●	●	●	●	●	●
<i>pubescens</i> (Schrank) Raddi	●	●	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●
* <i>simplex</i> Lorb. ex Müll.Frib. [24]										●												
<i>violacea</i> (Ach.) Dumort.							●	○	●													
<i>Microlejeunea</i> (Spruce) Steph. (Lejeuneaceae)																						
<i>ulicina</i> (Taylor) Steph.								●	●										●	●		
<i>Moerckia</i> Gottsche (Moerckiaceae)																						
<i>blyttii</i> (Morch) Brockm.	●	●	+	○																		
<i>hibernica</i> (Hook.) Gottsche	○		●		●					○						●						
<i>Mylia</i> Gray (Myliaceae)																						
<i>anomala</i> (Hook.) Gray	●	○	○	●	●	●	○									○						
<i>taylorii</i> (Hook.) Gray		(○)	●	●	●																	
<i>Myriocoleopsis</i> Schiffn. (Lejeuneaceae)																						
<i>minutissima</i> (Sm.) R.L.Zhu, Y.Yu & Pócs subsp. <i>minutissima</i>	○			○						●		●		●	●	●	●	●	●	●	●	●
<i>Nardia</i> Gray (Gymnomitriaceae)																						
<i>breidleri</i> (Limpr.) Lindb.	●		○	●																		
<i>compressa</i> (Hook.) Gray	●	○	○	●																		
<i>geoscyphus</i> (De Not.) Lindb. var. <i>geoscyphus</i>	●	●	●	●	●	●	○		●	(○)					●							○
<i>scalaris</i> Gray var. <i>scalaris</i>	●	●	●	●	●	●	○		●	●	○	●	●	○					●	●	●	
<i>Neoorthocaulis</i> L.Söderstr. (Anastrophyllaceae)																						
<i>attenuatus</i> (Mart.) L.Söderstr., De Roo & Hedd.	○	○	○	●	●	●	○								○							
<i>floerkei</i> (F.Weber & D.Mohr) L.Söderstr., De Roo & Hedd.	●	●	●	●	●	●	○	○							○							●
<i>Notothylas</i> Sull. (Notothyladaceae)									○													
<i>orbicularis</i> (Schwein.) Sull. [25]																						
<i>Nowellia</i> Mitt. (Cephaloziaceae)																						
<i>curvifolia</i> (Dicks.) Mitt.	○	○	●	●	●	●	●								○	●	●	●			●	
<i>Obtusifolium</i> S.W.Arnell (Cephaloziellaceae)																						
<i>obtusum</i> (Lindb.) S.W.Arnell	●	○	●												●							
<i>Odontoschisma</i> (Dumont.) Dumort. (Cephaloziaceae)																						
<i>denudatum</i> (Mart.) Dumort. subsp. <i>denudatum</i>	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>elongatum</i> (Lindb.) A.Evans	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>fluitans</i> (Nees) L.Söderstr. & Váňa																						
<i>francisci</i> (Hook.) L.Söderstr. & Váňa [26]																○						
<i>macounii</i> (Austin) Underw. [27]																○						
<i>sphagni</i> (Dicks.) Dumort.																○						
<i>Oleolophozia</i> L.Söderstr., De Roo & Hedd. (Cephaloziellaceae)																						
<i>perssonii</i> (H.Buch & S.W.Arnell) L.Söderstr., De Roo & Hedd. [28]										●												
<i>Oxymitra</i> Bisch. ex Lindenb. (Oxymitraceae)																						
<i>incrassata</i> (Brot.) Sérgio & Sim-Sim	●	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Pallavicinia</i> Gray (Pallaviciniaceae)																						
<i>lyellii</i> (Hook.) Gray										○					●							
<i>Pedinophyllum</i> Lindb. ex Nordst. (Plagiochilaceae)																						
<i>interruptum</i> (Nees) Kaal.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Pellia</i> Raddi (Pelliaceae)																						
<i>epiphylla</i> (L.) Corda subsp. <i>epiphylla</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>neesiana</i> (Gottsche) Limpr.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Peltolepis</i> Lindb. (Cleveaceae)															●	○	●					
<i>quadrrata</i> (Saut.) Müll.Frib.																						
<i>Petalophyllum</i> Nees & Gottsche (Petalophyllaceae)																●						
<i>ralfsii</i> (Wilson) Nees & Gottsche																						
<i>Phaeoceros</i> Prosk. (Notothyladaceae)																						
<i>laevis</i> (L.) Prosk.															○	○	●	●	●	●	●	●
<i>Phymatoceros</i> Stotler (Phymatocerotaceae)																						
<i>bulbiculosus</i> (Brot.) Stotler, W.T.Doyle & Crand.-Stotl.															●	○	●	●	○		●	●
<i>Plagiochasma</i> Lehm. (Athyriaceae)																						
<i>rupestre</i> (J.R.Forst. & G.Forst.) Steph. var. <i>rupestre</i>															●		●	●	●	●	●	●
<i>Plagiochila</i> (Dumont.) Dumort. (Plagiochilaceae)																						
<i>asplenoides</i> (L.) Dumort.																						
<i>bifaria</i> (Sw.) Lindenb. var. <i>bifaria</i> [29]																						
<i>exigua</i> (Taylor) Taylor [30]																						
<i>poreloides</i> (Torr. ex Nees) Lindenb. var. <i>poreloides</i>															●	●	●	●	●	●	●	●
<i>Porella</i> L. (Porellaceae)																						
<i>arboris-vitae</i> (With.) Grolle subsp. <i>arboris-vitae</i>	+ ○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC	
<i>baueri</i> (Schiffn.) C.E.O.Jensen	○	○	○	●	●								●			●	●	●	●	●	●	+	
<i>cordaeana</i> (Huebener) Moore	●	●	●	○	○	●																	
<i>obtusata</i> (Taylor) Trevis.	○	○	○	●	○	○	○																
<i>platyphylla</i> (L.) Pfeiff.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
<i>Ptilidium</i> Nees (Ptilidiaceae)																							
<i>ciliare</i> (L.) Hampe	●	●	●	○	●	●	●																
<i>pulcherrimum</i> (Weber) Vain.	●	●	●	●	●	●	●																
<i>Radula</i> Dumort. (Radulaceae)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
<i>complanata</i> (L.) Dumort.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
<i>lindenbergiana</i> Gottsche ex C.Hartm.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
<i>visianica</i> C.Massal. [31]							○	○															
<i>Reboulia</i> Raddi (Athyriaceae)	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
<i>hemisphaerica</i> (L.) Raddi subsp. <i>hemisphaerica</i>																							
<i>Riccardia</i> Gray (Aneuraceae)	●	●	●	○	○																		
<i>chamedryfolia</i> (With.) Grolle	●	●	●	○	○																		
<i>latifrons</i> (Lindb.) Lindb. subsp. <i>latifrons</i> [32]	○			●	●	●																	
<i>multifida</i> (L.) Gray subsp. <i>multifida</i>	●	○	●	●	●	●	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●		
<i>palmata</i> (Hedw.) Carruth.	○	○	○	●	●	●																	
<i>Riccia</i> L. (Ricciaceae)																							
<i>atromarginata</i> Levier var. <i>atromarginata</i>																				(○)	●		
<i>beyrichiana</i> Hampe	○	●	○																				
<i>bicarinata</i> Lindb.																							
<i>bifurca</i> Hoffm.	○	○	○	●	○																		
<i>breidleri</i> Jur. ex Steph.	●	●	●	●	+																		
<i>canaliculata</i> Hoffm.	○	○	○	○	○																		
<i>cavernosa</i> Hoffm.	●	●	●	●	●																		
<i>ciliata</i> Hoffm.	●	●	●	○	○																		
<i>ciliifera</i> Link	●	○	●	●	●																		
<i>crinita</i> Taylor																							
<i>crozalsii</i> Levier	●																						
<i>crystallina</i> L.	○	○	○	●	●																		
<i>duplex</i> Lorb. ex Müll.Frib. var. <i>duplex</i> [33]																							
<i>fluitans</i> L.	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
<i>frostii</i> Austin var. <i>frostii</i>	○	●	●																				
<i>glauca</i> L. var. <i>glauca</i>	○	○	●	●	●	●	○	○	○	○	○	○	●	●	●	●	●	●	●	●	●		
var. <i>ciliaris</i> Warnst.	○																						
<i>gougetiana</i> Durieu & Mont. var. <i>gougetiana</i>																							
var. <i>armatissima</i> Levier ex Müll.Frib.																							
<i>huebeneriana</i> Lindenb. subsp. <i>huebeneriana</i>																							
<i>lamellosa</i> Raddi																							
<i>ligula</i> Steph.																							
<i>macrocarpa</i> Levier																							
<i>michelii</i> Raddi																							
<i>nigrella</i> DC.																							
<i>papillosa</i> Moris																							
<i>perennis</i> Steph.																							
<i>sommieri</i> Levier																							
<i>sorocarpa</i> Bisch. subsp. <i>sorocarpa</i>	●	○	●	●	●	○																	
<i>subbifurca</i> Warnst. ex Croz.	○																						
<i>trabutiana</i> Steph. [34]																							
<i>warnstorffii</i> Limpr. ex Warnst.	●	○	○	●																			
<i>Ricciocarpos</i> Corda (Ricciaceae)																							
<i>natans</i> (L.) Corda	○	○	●	○																			
<i>Riella</i> Mont. (Riellaceae)																							
<i>helicophylla</i> (Bory & Mont.) Mont. var. <i>helicophylla</i> [35]																							
<i>notarisii</i> (Mont.) Mont.																							
<i>Saccobasis</i> H.Buch (Scapaniaceae)																							
<i>polita</i> (Nees) H.Buch	●	●	○	●	●																		
<i>Saccogyna</i> Dumort. (Saccogynaceae)																							
<i>viticulos</i> (L.) Dumort.	+	+			●		○		●														
<i>Sauteria</i> Nees (Cleveaceae)																							
<i>alpina</i> (Nees) Nees	●	●	○	●	○																		
<i>Scapania</i> (Dumort.) Dumort. (Scapaniaceae)																							
<i>aequiloba</i> (Schwägr.) Dumort.	●	●	○	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>apiculata</i> Spruce	○	○		●	○																		
<i>aspera</i> M.Bernet & Bernet	○	●	●	●	●	●	●	●															
<i>calcicola</i> (Arnell & J.Perss.) Ingham	●	●	●	●	●	●	●	●															
<i>carinthiaca</i> J.B.Jack ex Lindb. var. <i>massalongi</i> Müll.Frib. [36]	●	●	●	●	●	●	●	●															
<i>compacta</i> (Roth) Dumort.	○	○	●	●	○		●																
<i>crassiretis</i> Bryhn	●	●	○	●	●		●																
<i>curta</i> (Mart.) Dumort. var. <i>curta</i>	●	●	○	●	●		●																

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>cuspiduligera</i> (Nees) Müll.Frib. var. <i>cuspiduligera</i>	●	●	○	●	●	●							●	●								
<i>glaucocephala</i> (Taylor) Austin var. <i>glaucocephala</i>		●		●	●	○																
<i>gracilis</i> Lindb.				(○)	●	●																
<i>gymnostomophila</i> Kaal.		●																				
<i>helvetica</i> Gottsche	●	●	○	●	○	○	●															
<i>irrigua</i> (Nees) Nees subsp. <i>irrigua</i>	●	●	●	●	●	●	●															
<i>lingulata</i> H.Buch var. <i>lingulata</i>	●																					
<i>mucronata</i> H.Buch	●	○	●	●	●																	
<i>nemorea</i> (L.) Grolle	●	●	●	●	●	●	●															
<i>obscura</i> (Arnell & C.E.O.Jensen) Schiffn. [38]	●																					
<i>paludicola</i> Loeske & Müll.Frib. var. <i>paludicola</i>	●																					
<i>paludosa</i> (Müll.Frib.) Müll.Frib.	●																					
<i>praetervisa</i> Meyl. [39]	●	●																				
<i>scandica</i> (Arnell & H.Buch) Macvicar var. <i>scandica</i>	●	●																				
<i>subalpina</i> (Nees ex Lindenb.) Dumort. var. <i>subalpina</i>	●	●	○	●	●																	
<i>uliginosa</i> (Lindenb.) Dumort.	○	●	○	●	●																	
<i>umbrosa</i> (Schrad.) Dumort.	○	○	●	●	●																	
<i>undulata</i> (L.) Dumort.	●	●	●	●	●																	
<i>verrucosa</i> Heeg		●	○																			
<i>Schistochilopsis</i> (N.Kitag.) Konstant. (Scapaniaceae)																						
<i>grandiretis</i> (Lindb. ex Kaal.) Konstant. [40]							○															
<i>incisa</i> (Schrad.) Konstant.		●	●	●	●	●	●															
<i>opacifolia</i> (Culm. ex Meyl.) Konstant.		●	●	●	●	●		●														
<i>Schljakovia</i> Konstant. & Vilnet (Anastrophyllaceae)																						
<i>kunzeana</i> (Huebener) Konstant. & Vilnet		○	●	●	●	●		○														
<i>Schljakovianthus</i> Konstant. & Vilnet (Anastrophyllaceae)																						
<i>quadrilobus</i> (Lindb.) Konstant. & Vilnet		(○)	●	●	●	●		○														
<i>Solenostoma</i> Mitt. (Solenostomataceae)																						
<i>confertissimum</i> (Nees) Schljakov		●	●	○																		
<i>gracillimum</i> (Sm.) R.M.Schust.		●	●	●	●	●		●														
<i>hyalinum</i> (Lyell) Mitt.		●	●	●	●	●	○	○	○													
<i>obovatum</i> (Nees) C.Massal.		●	●	○	○	○		●														
<i>sphaerocarpum</i> (Hook.) Steph.		●	●	○	●	○		●														
<i>Southbya</i> Spruce (Southbyaceae)																						
<i>nigrella</i> (De Not.) Henriq.							●	○	●	○												
<i>tophacea</i> (Spruce) Spruce							○	●	●	○	○											
<i>Sphaerocarpos</i> Boehm. (Sphaerocarpaceae)																						
<i>europaeus</i> Lorb.		○	○																			
<i>micheli</i> Bellardi		○	○	●	○	○		○	○													
<i>Sphenolobus</i> (Lindb.) Berggr. (Anastrophyllaceae)																						
<i>minutus</i> (Schreb. ex D.Crantz) Berggr.		●	●	●	●	○	●	○	○													
<i>saxicola</i> (Schrad.) Steph.							○	●														
<i>Syzygiella</i> Spruce (Adelanthaceae)																						
<i>autumnalis</i> (DC.) K.Feldberg, Váňa, Hentschel & Heinrichs																						
<i>Targionia</i> L. (Targioniaceae)																						
<i>hypophylla</i> L. subsp. <i>hypophylla</i>		○	○	●	●	○		○	○	○												
<i>lorbeeriana</i> Müll.Frib.		○	○	●	○	○		●	●	●												
<i>Tetralophozia</i> (R.M.Schust.) Schljakov (Anastrophyllaceae)																						
<i>setiformis</i> (Ehrh.) Schljakov		(○)	○																			
<i>Trichocolea</i> Dumort. (Trichocoleaceae)																						
<i>tomentella</i> (Ehrh.) Dumort.		○	○	●	●	●	●															
<i>Trilophozia</i> (R.M.Schust.) Bakalin (Lophoziaeae)																						
<i>quinquedentata</i> (Huds.) Bakalin var. <i>quinquedentata</i>		●	●	●	●	●	●	●														
<i>Tritomaria</i> Schiffn. ex Loeske (Lophoziaeae)																						
<i>exsecta</i> (Schmidel.) Schiffn. ex Loeske subsp. <i>exsecta</i>		●	●	●	●	●	●															
<i>exsectiformis</i> (Bridel.) Schiffn. ex Loeske subsp. <i>exsectiformis</i>		●	●	○	●	●	●															
<i>scitula</i> (Taylor) Jörg.		●	●	●	●																	
Mosses																						
<i>Abietinella</i> Müll.Hal. (Thuidiaceae)																						
<i>abietina</i> (Hedw.) M.Fleisch. var. <i>abietina</i>		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
var. <i>hystricosa</i> (Mitt.) Sakurai																						
<i>Acaulon</i> Müll.Hal. (Pottiaceae)																						
<i>fontquierianum</i> Casas & Sérgio																						
<i>mediterraneum</i> Limpr.																						
<i>muticum</i> (Hedw.) Müll.Hal.		●	●	○	○			●														
<i>piligerum</i> (De Not.) Limpr. [41]																						
<i>triquetrum</i> (Spruce) Müll.Hal.																						
<i>Alleniella</i> S.Olsson, Enroth & D.Quandt (Neckeraceae)		●	●	●	●	●	●															
<i>besseri</i> (Lobarz.) S.Olsson, Enroth & D.Quandt		●	●	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>complanata</i> (Hedw.) S.Olsson, Enroth & D.Quandt		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>Aloina</i> Kindb. (Pottiaceae)																						
<i>aloides</i> (Koch ex Schultz) Kindb.	○	○	○	○	○	○	○	●	○	●	●	○	○	○	●	●	○	●	●	●	●	●
<i>ambigua</i> (Bruch & Schimp.) Limpr.	○	○	○	○	○	○	○	○	○	●	●	●	○	○	○	●	●	○	●	●	●	○
<i>bifrons</i> (De Not.) Delgad. [42]				●		+																
<i>brevirostris</i> (Hook & Grev.) Kindb.	○	○	○	●	●	○	○	○	○	●	●	●	●	○	●	●	○	●	●	●	●	●
<i>rigida</i> (Hedw.) Limpr.	○	○	○	●	●	○	○	○	○	●	●	●	●	○	●	●	○	●	●	●	●	●
<i>Amblyodon</i> P.Beauv. (Meesiaceae)																						
<i>dealbatus</i> (Hedw.) P.Beauv.	●	●	○	○	○	○	○															
<i>Amblystegium</i> Schimp. (Amblystegiaceae)																						
<i>serpens</i> (Hedw.) Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Amphidium</i> Schimp. (Amphidiaceae)																						
<i>lapponicum</i> (Hedw.) Schimp.	●	●	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	●	●	●
<i>mougeotii</i> (Schimp.) Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Anacamptodon</i> Brid. (Amblystegiaceae)																						
<i>splachnoides</i> (Froel. ex Brid.) Brid.	○	○	○																			
<i>Anacolia</i> Schimp. (Bartramiaceae)																						
<i>webbi</i> (Mont.) Schimp.																						
<i>Andreaea</i> Hedw. (Andreaeaceae)																						
<i>alpestris</i> (Thed.) Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>crassinervia</i> Bruch	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>frigida</i> Huebener																						
<i>heinemannii</i> Hampe & Müll.Hal. subsp. <i>heinemannii</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>hookeri</i> Schimp.	○	○																				
<i>nivalis</i> Hook.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>rothii</i> F.Weber & D.Mohr subsp. <i>rothii</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
subsp. <i>falcata</i> (Schimp.) Lindb.	○	○																				
<i>rupestris</i> Hedw. var. <i>rupestris</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
var. <i>papillosa</i> (Lindb.) Podp.	●	○																				
<i>Anoectangium</i> Schwägr. (Pottiaceae)																						
<i>aestivum</i> (Hedw.) Mitt.	●	●	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<i>Anomobryum</i> Schimp. (Bryaceae)																						
<i>concinnum</i> (Spruce) Lindb.	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>julaceum</i> (Schrad. ex P.Gaertn., E.Mey & Scherb.) Schimp.	●	●	●	○	●	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Anomodon</i> Hook. & Taylor (Anomodontaceae)																						
<i>longifolius</i> (Schleich. ex Brid.) Hartm.	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>rugelii</i> (Müll.Hal.) Keissl.	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>tristis</i> (Ces.) Sull. & Lesq.	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>viticulosus</i> (Hedw.) Hook. & Taylor	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Antitrichia</i> Brid. (Antitrichiaceae)																						
<i>californica</i> Sull.	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<i>curtipendula</i> (Hedw.) Brid.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Aongstroemia</i> Schimp. (Aongstroemiaceae)																						
<i>longipes</i> (Sommerf.) Bruch & Schimp.	●	●	○	●	●	○	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Archidium</i> Brid. (Archidiaceae)																						
<i>alternifolium</i> (Hedw.) Mitt.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Arctoa</i> Schimp. (Rhabdoweisiaceae)																						
<i>fulvella</i> (Dicks.) Bruch & Schimp.	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Aschisma</i> Lindb. (Pottiaceae)																						
<i>carniolicum</i> (F.Weber & D.Mohr) Lindb.																						
<i>Atractylcarpus</i> Mitt. (Leucobryaceae)																						
<i>alpinus</i> (Schimp. ex Milde) Lindb. [43]																						
<i>Atrichum</i> P.Beauv. (Polytrichaceae)																						
<i>angustatum</i> (Brid.) Bruch & Schimp.	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>flavisetum</i> Mitt.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>tenellum</i> (Röhl.) Bruch & Schimp.	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>undulatum</i> (Hedw.) P.Beauv.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Aulacomnium</i> Schwägr. (Aulacomniaceae)																						
<i>androgynum</i> (Hedw.) Schwägr.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>palustre</i> (Hedw.) Schwägr.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Barbula</i> Hedw. (Pottiaceae) [44]																						
<i>unguiculata</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Bartramia</i> Hedw. (Bartramiaceae)																						
<i>apraca</i> Müll.Hal. [45]	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>breviseta</i> Lindb. [46]	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>halleriana</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>ithyphylla</i> Brid.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>pomiformis</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>subulata</i> Bruch & Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Blindia</i> Bruch & Schimp. (Seligeriaceae)																						
<i>acuta</i> (Hedw.) Bruch & Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>caespiticia</i> (F.Weber & D.Mohr) Müll.Hal.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>Blindiadelphus</i> (Lindb.) Fedosov & Ignatov (Seligeriaceae)																						
<i>campylopodus</i> (Kindb.) Fedosov & Ignatov [47]								●														
<i>diversifolius</i> (Lindb.) Fedosov & Ignatov [48]							○															
<i>recurvatus</i> (Hedw.) Fedosov & Ignatov							●	●	○	○	●	●	●	●	●	●	●	●	●	●	●	●
<i>Brachydontium</i> Fürnr. (Ptychomitriaceae)																						
<i>trichodes</i> (F.Weber) Milde							○															
<i>Brachytheciastrum</i> Ignatov & Huttunen (Brachytheciaceae)																						
<i>collinum</i> (Schleich. ex Müll.Hal.) Ignatov & Huttunen																						
<i>olympicum</i> (Jur.) Vanderp. et al.																						
<i>salicinum</i> (Schimp.) J.D.Orgaz, M.J.Cano & J.Guerra							●	●	○	●	●	○	○	○	○	○	○	○	○	○	○	●
<i>trachypodium</i> (Brid.) Ignatov & Huttunen							●	●	○	●	●	○	○	○	○	○	○	○	○	○	○	●
<i>velutinum</i> (Hedw.) Ignatov & Huttunen							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Brachythecium</i> Schimp. (Brachytheciaceae)																						
<i>albicans</i> (Hedw.) Schimp.							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>campestre</i> (Müll.Hal.) Schimp.							○	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>capillaceum</i> (F.Weber & D.Mohr) Giacom.							○	●														
<i>cirrosum</i> (Schwägr.) Schimp.							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>erythrorrhizon</i> Schimp.							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>geheebii</i> Milde							●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>glareosum</i> (Bruch ex Spruce) Schimp.							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>laetum</i> (Brid.) Schimp.							●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>mildeanum</i> (Schimp.) Schimp.							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>rivulare</i> Schimp.							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>rutabulum</i> (Hedw.) Schimp. var. <i>rutabulum</i>							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>salebrosum</i> (Hoffm. ex F.Weber & D.Mohr) Schimp.							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>tenuicaule</i> (Spruce) Kindb.							●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>tommasinii</i> (Sendtn. ex Boulay) Ignatov & Huttunen							●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>turgidum</i> (Hartm.) Kindb.							●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Braunia</i> Bruch & Schimp. (Hedwigiacae)																						
<i>alopecura</i> (Brid.) Limpr.							○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>imberbis</i> (Sm.) N.Dalton & D.G.Long							●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Bruchia</i> Schwägr. (Bruchiaceae)																						
<i>flexuosa</i> (Schwägr.) Müll.Hal. [49]																						
<i>Bryoerythrophyllum</i> P.C.Chen (Pottiaceae)																						
<i>alpinum</i> (Venturi) P.C.Chen																						
<i>ferruginascens</i> (Stirt.) Giacom. [50]																						
<i>recurvirostrum</i> (Hedw.) P.C.Chen																						
<i>rubrum</i> (Jur. ex Geh.) P.C.Chen																						
<i>Bryum</i> Hedw. (Bryaceae)																						
<i>argenteum</i> Hedw.																						
<i>bavaricum</i> Warnst. [51]																						
<i>blindii</i> Bruch & Schimp. [52]																						
<i>canariense</i> Brid.																						
<i>dichotomum</i> Hedw.																						
<i>gemmiferum</i> R.Wilczek & Demaret [53]																						
<i>gemmiflora</i> R.Wilczek & Demaret [54]																						
<i>gemmiparum</i> De Not.																						
<i>klingeraeffii</i> Schimp.																						
<i>radiculosum</i> Brid.																						
<i>ruderale</i> Crundw. & Nyholm																						
<i>sauteri</i> Bruch & Schimp.																						
<i>versicolor</i> A.Braun ex Bruch & Schimp.																						
<i>violaceum</i> Crundw. & Nyholm [55]																						
<i>Bucklandia</i> D.Rios, M.T.Gallego & J.Guerra (Pylaisiaceae)																						
<i>vaucheriana</i> (Lesq.) D.Rios, M.T.Gallego & J.Guerra																						
<i>Buxbaumia</i> Hedw. (Buxbaumiaceae)																						
<i>aphylla</i> Hedw.																						
<i>viridis</i> (Moug. ex Lam. & DC.) Brid. ex Moug. & Nestl.																						
<i>Callicladium</i> H.A.Crum (Callicladiaceae)																						
<i>haldanianum</i> (Grev.) H.A.Crum																						
<i>imponens</i> (Hedn.) Hedenäs, Schlesak & D.Quandt																						
<i>Calliergon</i> (Sull.) Kindb. (Calliergonaceae)																						
<i>cordifolium</i> (Hedw.) Kindb.																						
<i>giganteum</i> (Schimp.) Kindb.																						
<i>richardsonii</i> (Mitt.) Kindb.																						
<i>Calliergonella</i> Loeske (Pylaisiaceae)																						
<i>cuspidata</i> (Hedw.) Loeske																						
<i>lindbergii</i> (Mitt.) Hedenäs																						
<i>Calymperes</i> Michx. (Calymperaceae)																						
<i>erosum</i> Müll.Hal. [56]																						

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>Crossidium</i> Jur. (Pottiaceae)																						
<i>aberrans</i> Holz. & E.B.Bartram [59]	○	○			○	●				○					●	●	●	○	●	●	●	●
<i>crassinervium</i> (De Not.) Jur.																						
<i>geheebii</i> (Broth.) Broth. [60]																						
<i>laxe filamentosum</i> W.Frey & Kürschner [61]																						
<i>squamiferum</i> (Viv.) Jur. var. <i>squamiferum</i>																						
var. <i>pottioideum</i> (De Not.) Mönk.	●	○	○	○	○	○									●	○	●	○	●	●	●	●
<i>Cryphaea</i> D.Mohr (Cryphaeaceae)																						
<i>heteromalla</i> (Hedw.) D.Mohr [62]	○	●	○	○	●	○	○	+		●	○	●	●	●	●	○	●	●	●	●	●	●
<i>Ctenidium</i> (Schimp.) Mitt. (Myuriaceae)																						
<i>molluscum</i> (Hedw.) Mitt.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Cynodontium</i> Bruch & Schimp. (Rhabdoweisiaceae)																						
<i>bruntonii</i> (Sm.) Bruch & Schimp.	●	●	●	○		●	○			●	●	●	●							●	●	
<i>fallax</i> Limpr.	●	●		●																		
<i>gracilescens</i> (F.Weber & D.Mohr) Schimp.	●	●	○	●	●	○	●		●													
<i>polycarpon</i> (Hedw.) Schimp.	●	●	●	●	●	●	●		●	●			○									○
<i>strumiferum</i> (Hedw.) Lindb.	●	●	○	●	●	●	●		●	●												
<i>tenellum</i> (Schimp.) Limpr.	○	○	○	●	○	●	●		●	●												○
<i>Cyrtomnium</i> Holmen (Mniaceae)																						
<i>hymenophylloides</i> (Huebener) T.J.Kop.	○	●	○	○	●	●	●															
<i>Dendrocyphaea</i> Broth. (Cryphaeaceae)																	○					
<i>lamiana</i> (Mont.) P.Rao [63]																	○					
<i>Dialytrichia</i> (Schimp.) Limpr. (Pottiaceae)																						
<i>mucronata</i> (Brid.) Broth.																						
<i>Dichelyma</i> Myrin (Fontinalaceae)																						
<i>capillaceum</i> (L. ex Dicks.) Myrin [64]																	○					
<i>Dichodontium</i> Schimp. (Aongstroemiaceae)																						
<i>flavescens</i> (Dicks.) Lindb.	●	○	○	○					○													
<i>pellucidum</i> (Hedw.) Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Dicranella</i> (Müll.Hal.) Schimp. (Dicranellaceae)																						
<i>cerviculata</i> (Hedw.) Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>crispa</i> (Hedw.) Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>grevilleana</i> (Brid.) Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>heteromalla</i> (Hedw.) Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>howei</i> Renaud & Cardot	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>humilis</i> R.Ruthe	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>rufescens</i> (Dicks.) Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>schreberiana</i> (Hedw.) Dixon	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>staphylina</i> H.Whitehouse																						
<i>subulata</i> (Hedw.) Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>varia</i> (Hedw.) Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Dicranodontium</i> Bruch & Schimp. (Leucobryaceae)																						
<i>asperulum</i> (Mitt.) Broth.	●	○	○	●																		
<i>denudatum</i> (Brid.) E.Britton	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>uncinatum</i> (Harv.) A.Jaeger [65]																						
<i>Dicranoweisia</i> Milde (Rhabdoweisiaceae)																						
<i>cirrata</i> (Hedw.) Lindb.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Dicranum</i> Hedw. (Dicranaceae)																						
<i>bonjeanii</i> De Not.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>brevifolium</i> (Lindb.) Lindb.	○	○	○	●					○													
<i>crassifolium</i> Sérgio, Ochyra & Séneca																						
<i>elongatum</i> Schleich. ex Schwägr.	○	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>flagellare</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>flexicaule</i> Brid.																						
<i>fragilifolium</i> Lindb. [66]																						
<i>fulvum</i> Hook.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>fuscescens</i> Sm.	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>groenlandicum</i> Brid. [67]																						
<i>leioneuron</i> Kindb.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>majus</i> Sm.	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>montanum</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>muehlenbeckii</i> Bruch & Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>polysetum</i> Sw. ex anon.	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>scoparium</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>spadiceum</i> J.E.Zetterst.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>spurium</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>tauricum</i> Sapjegin	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>undulatum</i> Schrad. ex Brid.	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>viride</i> (Sull. & Lesq.) Lindb.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Didymodon</i> Hedw. (Pottiaceae)																						
<i>acutus</i> (Brid.) K.Saito	○	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>asperifolius</i> (Mitt.) H.A.Crum, Steere & L.E.Anderson	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>australasiae</i> (Hook. & Grev.) R.H.Zander																						●
<i>cordatus</i> Jur.																						
<i>fallax</i> (Hedw.) R.H.Zander	●	●																				
<i>ferrugineus</i> (Schimp. ex Besch.) M.O.Hill	●	●	○																			
<i>giganteus</i> (Funck) Jur.	●	○	●																			
<i>glaucus</i> Ryan subsp. <i>verbanus</i> (W.E.Nicholson & Dixon) Jan Kučera [68]	○	○																				
<i>icmadophilus</i> (Schimp. ex Müll.Hal.) K.Saito	○					●	○															
<i>insulanus</i> (De Not.) M.O.Hill	●	●	●				●															
<i>johanssenii</i> (R.S.Williams) H.A.Crum [69]	●	●	●				●															
<i>luridus</i> Hornsch.																						
<i>nicholsonii</i> Culm. [70]																						
<i>rigidulus</i> Hedw.																						
<i>sinuosus</i> (Mitt.) Delogne	●						●															
<i>spadiceus</i> (Mitt.) Limpr.	●	●	○				●															
<i>tophaceus</i> (Brid.) Lisa subsp. <i>tophaceus</i>	●	●	●				●															
subsp. <i>siccculus</i> (M.J.Cano, Ros, García-Zam. & J.Guerra) Jan Kučera																						
<i>umbrosus</i> (Müll.Hal.) R.H.Zander														●	●							
<i>validus</i> Limpr.	○	●	○				●	○														
<i>vinealis</i> (Brid.) R.H.Zander	○	●	○				●	○														
<i>Diobelonella</i> Ochyra (Aongstroemiaceae)																						
<i>palustris</i> (Dicks.) Ochyra	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Diphyscium</i> D.Mohr (Diphysciaceae)	●	●	●	●	●	●	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>foliosum</i> (Hedw.) D.Mohr	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Distichium</i> Bruch & Schimp. (Distichiaceae)																						
<i>capillaceum</i> (Hedw.) Bruch & Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>inclinatum</i> (Hedw.) Bruch & Schimp.	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Ditrichum</i> Timm ex Hampe (Ditrichaceae)																						
<i>heteromallum</i> (Hedw.) E.Britton	●	●	○	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>lineare</i> (Sw.) Lindb.	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>pallidum</i> (Hedw.) Hampe	○	●	○	●	●	●	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>pusillum</i> (Hedw.) Hampe	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>subulatum</i> Hampe																						
<i>zonatum</i> (Brid.) Kindb.	●	○	○				●															
<i>Drepanium</i> (Schimp.) C.E.O.Jensen (Amblystegiaceae)	●																					
<i>fastigiatum</i> (Hampe) C.E.O.Jensen	●	○	●	●	●	○																
<i>Drepanocladus</i> (Müll.Hal.) G.Roth (Amblystegiaceae)																						
<i>aduncus</i> (Hedw.) Warnst.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>lycopodioides</i> (Brid.) Warnst.	○	○	○	○	○	○																
<i>polygamus</i> (Schimp.) Hedenäs	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>sendtneri</i> (Schimp. ex H.Müll.) Warnst.	○	○	●	●	●	●																
<i>trifarius</i> (F.Weber & D.Mohr) Broth. ex Paris	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>turgescens</i> (T.Jensen) Broth.	●	○	○	●																		
<i>Encalypta</i> Hedw. (Encalyptaceae)																						
<i>affinis</i> R.Hedw. subsp. <i>affinis</i>	●	●	○	○	○	○																
<i>alpina</i> Sm.	●	●	●	●	●	●																
<i>ciliata</i> Hedw.	●	●	●	●	●	●																
<i>longicolla</i> Bruch	●	●	●	●	●	●																
<i>microstoma</i> Bals.-Criv. & De Not.	●	●	●	●	●	●																
<i>rhaftocarpa</i> Schwägr.	●	●	●	●	●	●																
<i>spathulata</i> Müll.Hal.	●	●	●	●	●	●																
<i>streptocarpa</i> Hedw.	●	●	●	●	●	●																
<i>trachymitria</i> Ripart																						
<i>vulgaris</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Entodon</i> Müll.Hal. (Entodontaceae)																						
<i>cladorrhizans</i> (Hedw.) Müll.Hal.	○	○	○	○	○	●	○															
<i>concinnum</i> (De Not.) Paris	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>schleicheri</i> (Schimp.) Demet.	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Entosthodon</i> Schwägr. (Funariaceae)																						
<i>attenuatus</i> (Dicks.) Bryhn	○	○					○				●											
<i>convexus</i> (Spruce) Brugués		●					○				○											
<i>duriæi</i> Mont.	○	●	○	○	○	○	○			●	●	●	●	●	●	●	●	●	●	●	●	●
<i>fascicularis</i> (Hedw.) Müll.Hal.	○	●	○	○	○	○	○			●	●	●	●	●	●	●	●	●	●	●	●	●
<i>hungaricus</i> (Boros) Loeske [71]	○	●	○	○	○	○	●	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>muhlenbergii</i> (Turner) Fife	○	●	○	○	○	○	○	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>obtusus</i> (Hedw.) Lindb.	○	○	○	○	○	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>pulchellus</i> (H.Philb.) Brugués	○	○	○	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Ephemerum</i> Hampe (Pottiaceae)	○	○																				
<i>cohaerens</i> (Hedw.) Hampe																			●	○	●	

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>crassinervium</i> (Schwägr.) Hampe subsp. <i>rutheanum</i> (Schimp.)	(●)																					
Holyoak [72]																						
subsp. <i>sessile</i> (Bruch) Holyoak		○								○	●	●			●				●	●	○	
<i>recurvifolium</i> (Dicks.) Boulay	●									○	●				●			●	○	●		
<i>serratum</i> (Hedw.) Hampe	○	○	○	○					○	●	○									●	●	
<i>Epipterygium</i> Lindb. (Mniaceae)																						
<i>tozeri</i> (Grev.) Lindb.	○	○	○	○	○				●		●				●				●	●	●	
<i>Eucladium</i> Bruch & Schimp. (Pottiaceae)	●	●	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	
<i>verticillatum</i> (With.) Bruch & Schimp.																						
<i>Eurhynchiastrum</i> Ignatov & Huttunen (Brachytheciaceae)																						
<i>diversifolium</i> (Schimp.) J.Guerra	●	●	○	●	○				●						●			●				
<i>pulchellum</i> (Hedw.) Ignatov & Huttunen	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Eurhynchium</i> Bruch & Schimp. (Brachytheciaceae)																						
<i>angustirete</i> (Broth.) T.J.Kop.	○	●	●	●	●	●	●	●			●											
<i>striatum</i> (Hedw.) Schimp.		○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Exsertotheca</i> S.Olsson, Enroth & D.Quandt (Neckeraceae)																						
<i>crispa</i> (Hedw.) S.Olsson, Enroth & D.Quandt	●	●	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	
<i>Fabronia</i> Raddi (Fabroniaceae)																						
<i>ciliaris</i> (Brid.) Brid.	○	●	●	●	●	●	●	●	●	○		○			●			●	●	●	●	
<i>pusilla</i> Raddi	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Fissidens</i> Hedw. (Fissidentaceae)																						
<i>adianthoides</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>bryoides</i> Hedw. var. <i>bryoides</i>	●	●	●	●	●	●	●	●	●	○	○				●			●	●	●	●	
var. <i>caespitans</i> Schimp.																						
<i>celticus</i> Paton [73]																						
<i>crassipes</i> Wilson ex Bruch & Schimp. subsp. <i>crassipes</i>										○	●	●	●	●	●	●	●	●	●	●	●	
subsp. <i>warnstorffii</i> (M.Fleisch.) Brugg.-Nann.										○												
<i>crispus</i> Mont.	○									●	○											
<i>curvatus</i> Hornsch.											○											
<i>dubius</i> P.Beauv. var. <i>dubius</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>exilis</i> Hedw.																						
<i>fontanus</i> (Bach.Pyl.) Steud.																						
<i>gracilifolius</i> Brugg.-Nann. & Nyholm																						
<i>gymnandrus</i> Buse																						
<i>incurvus</i> (Starke ex Röhl.)																						
<i>osmundoides</i> Hedw.																						
<i>ovatifolius</i> R.Ruthe																						
<i>polyphyllus</i> Wilson ex Bruch & Schimp.																						
<i>pusillus</i> (Wilson) Milde																						
<i>rivularis</i> (Spruce) Schimp.																						
<i>rufulus</i> Bruch & Schimp.																						
<i>serrulatus</i> Brid.																						
<i>taxifolius</i> Hedw.																						
<i>viridulus</i> (Sw.) Wahlenb.																						
<i>Flexitrichum</i> Ignatov & Fedosov (Flexitrichaceae)																						
<i>flexicaule</i> (Schwägr.) Hampe	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>gracile</i> (Mitt.) Kuntze	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Fontinalis</i> Hedw. (Fontinalaceae)																						
<i>antipyretica</i> (Hedw.) subsp. <i>antipyretica</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
subsp. <i>gracilis</i> (Lindb.) Schimp.	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
subsp. <i>kindbergii</i> (Renauld & Cardot) Cardot	○																					
<i>dalecarlica</i> Schimp. [74]																						
<i>hypnooides</i> C.Hartm. var. <i>hypnooides</i>																						
var. <i>duriæi</i> (Schimp.) Kindb.																						
<i>squamosa</i> Hedw.																						
<i>Funaria</i> Schwägr. (Funariaceae)																						
<i>hygrometrica</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>microstoma</i> Bruch ex Schimp.	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	○	○	○	○	
<i>Funariella</i> Sérgio (Funariaceae)																						
<i>curviseta</i> (Schwägr.) Sérgio	○																					
<i>Gigaspermum</i> Lindb. (Gigaspermaceae)																						
<i>mouretii</i> Corb. [75]																						
<i>Grimmia</i> Hedw. (Grimmiaceae)																						
<i>alpestris</i> (F.Weber & D.Mohr) Schleich.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>anodon</i> Bruch & Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>anomala</i> Hampe ex Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>arenaria</i> Hampe																						
<i>atrata</i> Miel. ex Hornsch.																						
<i>caespiticia</i> (Brid.) Jur.																						
<i>capillata</i> De Not.																						
<i>crinita</i> Brid.																						

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>decipiens</i> (Schultz) Lindb.	●	○	○	●	●	○	○	●	○	●	●	○			●	○	●	●	●	●	●	●
<i>dissimulata</i> E.Maier																		○				●
<i>donniana</i> Sm.	●	●	●	●	●	○	○	○										○				●
<i>elatior</i> Bruch ex Bals.-Criv. & De Not.	●	●	●	●	●	○	○	○										○				●
<i>elongata</i> Kaulf.	●	○	○	●														○				●
<i>funalis</i> (Schwägr.) Bruch & Schimp.	●	●	○	●	●	○	○	○		●	○	+						○				○
<i>fuscolutea</i> Hook.	○	○		●																		●
<i>hartmanii</i> Schimp.	●	●	●	●	●	○	●	●		●	○	○									●	●
<i>incurva</i> Schwägr.	●	●	○																			●
<i>laevigata</i> (Brid.) Brid.	●	●	●	●	●	●	●	●		●	○										●	●
<i>lisae</i> De Not.	●					●	●	●		●	●	●						●	●	●	●	●
<i>longirostris</i> Hook.	+	●	●	●														●	●	●	●	●
<i>meridionalis</i> (Müll.Hal.) E.Maier																						●
<i>mollis</i> Bruch & Schimp.																						●
<i>montana</i> Bruch & Schimp.																						●
<i>muehlenbeckii</i> Schimp.																						○
<i>orbicularis</i> Bruch ex Wilson																						●
<i>ovalis</i> (Hedw.) Lindb.																						●
<i>pulvinata</i> (Hedw.) Sm.																						●
<i>ramondii</i> (Lam. & DC.) Margad.	○	●	●	○		○	●	●		●	●	○										●
<i>reflexidens</i> Müll.Hal.	●	●	●	●																		+
<i>teretinervis</i> Limpr.																						
<i>tergestina</i> Tomm. ex Bruch & Schimp.	●	●	●	●	●	●	●	●		●	○						●	●	●	●	●	●
<i>torquata</i> Drumm.											●											
<i>trichophylla</i> Grev.	●	●	●	●	●	●	●	●		●	●	●										●
<i>triformis</i> Carestia & De Not.	○	○	○	○	○	●	●	●		●	●	●										●
<i>unicolor</i> Hook.	●	●	○	○	○	○	○	○														
Gymnobarbula Jan Kučera (Pottiaceae) (nota Barbula)																						
<i>bicolor</i> (Bruch & Schimp.) Jan Kučera	●	●	●	●	●	●	●	●									●					●
Gymnostomum Nees & Hornsch. (Pottiaceae)																						
<i>aeruginosum</i> Sm. var. <i>aeruginosum</i>																						
<i>calcareum</i> Nees & Hornsch. var. <i>calcareum</i>																						
<i>viridulum</i> Brid.																						
Gyroweisia Schimp. (Pottiaceae)																						
<i>reflexa</i> (Brid.) Schimp.																						
<i>tenuis</i> (Hedw.) Schimp.	●	●	●	●	●	●	●	●		●	●	●					○				●	●
Habrodon Schimp. (Habrodontaceae)																						
<i>perpusillus</i> (De Not.) Lindb.																						
Hamatocaulis Hedenäs (Scorpidiaceae)																						
<i>vernicosus</i> (Mitt.) Hedenäs																						
Haplocladium (Müll.Hal.) Müll.Hal. (Thuidiaceae)																						
<i>angustifolium</i> (Hampe & Müll.Hal.) Broth.																						
<i>virginianum</i> (Brid.) Broth.																						
Hedwigia P.Beauv. (Hedwigiaceae)																						
<i>ciliata</i> (Hedw.) P.Beauv.																						
<i>emodica</i> Hampe ex Müll.Hal.																						
<i>stellata</i> Hedenäs																						
Helicodontium Schwägr. (Brachytheciaceae)																						
<i>capillare</i> (Hedw.) A.Jaeger [76]																	○					
Hennediella Paris (Pottiaceae)																						
<i>heimii</i> (Hedw.) R.H.Zander var. <i>heimii</i>																	○					
Herzogiella Broth. (Plagiotheciaceae)																						
<i>seligeri</i> (Brid.) Z.Iwats.																						
<i>striatella</i> (Brid.) Z.Iwats.																						
Heterocladiella Ignatov & Fedosov (Heterocladiellaceae)																						
<i>dimorpha</i> (Brid.) Ignatov & Fedosov																					○	●
Heterocladium Schimp. (Lembophyllaceae)																						
<i>heteropterum</i> (Brid.) Schimp.																						
Heterophyllum (Schimp.) Kindb. (Pyłaisiadelphaceae)																						
<i>nemorum</i> (W.D.J.Koch ex Brid.) Kindb.																						
Homalia (Brid.) Bruch. & Schimp. (Neckeraceae)																						
<i>lusitanica</i> Schimp.																						
<i>trichomanoides</i> (Hedw.) Brid.																						
Homalothecium Schimp. (Brachytheciaceae)																						
<i>aureum</i> (Spruce) H.Rob.																	○					
<i>lutescens</i> (Hedw.) H.Rob. var. <i>lutescens</i>																						
var. <i>fallax</i> (H.Philib. ex Schimp.) Düll																						
<i>philipeanum</i> (Spruce) Schimp.																						
<i>sericeum</i> (Hedw.) Schimp.																						
Homomallium (Schimp.) Loeske (Pylaisiaceae)																						
<i>incurvatum</i> (Schrad. ex Brid.) Loeske																	+		●	●	○	

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>Hookeria</i> J.E.Sm. (Hookeriaceae)																						
<i>lucens</i> (Hedw.) Sm.	●	●		●	●					●			+			○						
<i>Hydrogonium</i> (Müll.Hal.) A.Jaeger (Pottiaceae) (nota Barbula)																						
<i>bolleanum</i> (Müll.Hal.) A.Jaeger	○	●								○	●	●	●									●
<i>consanguineum</i> (Thwaites & Mitt.) Hilp. var. <i>kurilense</i>						○																
<i>croceum</i> (Brid.) Jan Kučera	●	●	●	●	●	●				●			●		●	●						
<i>Hygroamblystegium</i> Loeske (Amblystegiaceae)																						
<i>fluviatile</i> (Hedw.) Loeske	●	●	●	●	●	●	○				●	●	●	●	●							
<i>humile</i> (P.Beauv.) Vanderp., Goffinet & Hedenäs	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	●	●	●	
<i>tenax</i> (Hedw.) Jenn.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>varium</i> (Hedw.) Mönk.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Hygrohypnum</i> Lindb. (Amblystegiaceae)																						
<i>luridum</i> (Hedw.) Jenn.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>styriacum</i> (Limpr.) Broth. [77]							●															
<i>Hygrohypnella</i> Ignatov & Ignatova (Scorpidiaceae)																						
<i>ochracea</i> (Turner ex Wilson) Ignatov & Ignatova	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>polaris</i> (Lindb.) Ignatov & Ignatova [78]	●																					
<i>Hylocomiadelpus</i> Ochyra & Stebel (Hylocomiaceae)																						
<i>triquetrus</i> (Hedw.) Ochyra & Stebel	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Hylocomiastrum</i> Broth. (Hylocomiaceae)																						
<i>pyrenaicum</i> (Spruce) M.Fleisch.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>umbratum</i> (Hedw.) M.Fleisch.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Hylocomium</i> Schimp. (Hylocomiaceae)																			○	●	●	+ ○
<i>splendens</i> (Hedw.) Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Hymenoloma</i> Dusén (Hymenolomataceae)																						
<i>compactum</i> (Schleich. ex Schwägr.) Ochyra	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>crispulum</i> (Hedw.) Ochyra	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Hymenostylium</i> Brid. (Pottiaceae)																						
<i>recurvirostrum</i> (Hedw.) Dixon var. <i>recurvirostrum</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Hyophila</i> Brid. (Pottiaceae)																						
<i>involuta</i> (Hook.) A.Jaeger																						
<i>Hypnum</i> Hedw. (Hypnaceae)																						
<i>andoi</i> A.J.E.Sm.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>cupressiforme</i> Hedw. var. <i>cupressiforme</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
var. <i>filiforme</i> Brid.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
var. <i>lacunosum</i> Brid.	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
var. <i>subjulaceum</i> Molendo	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>jutlandicum</i> Holmen & E.Warncke	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>resupinatum</i> Taylor	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Hypopterygium</i> Brid. (Hypopterygiaceae)																						
<i>tamarisci</i> (Sw.) Brid. ex Müll.Hal. [79]							●															
<i>Imbribryum</i> N.Pedersen (Bryaceae)																						
<i>alpinum</i> (Huds. ex With.) N.Pedersen	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>mildeanum</i> (Jur.) J.R.Spence	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>muehlenbeckii</i> (Bruch & Schimp.) N.Pedersen	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>subapiculatum</i> (Hampe) D.Bell & Holyoak																						
<i>tenuisetum</i> (Limpr.) D.Bell & Holyoak																						
<i>Isopterygiopsis</i> Z.Iwats. (Plagiotheciaceae)																						
<i>muelleriana</i> (Schimp.) Z.Iwats.							○	○	○	○	●											
<i>pulchella</i> (Hedw.) Z.Iwats.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Isopterygium</i> Mitt. (Pylaisiadelphaceae)																						
<i>tenerum</i> (Sw.) Mitt.																	○					
<i>Isothecium</i> Brid. (Lembophyllaceae)																						
<i>alopecuroides</i> (Lam. ex Dubois) Isov.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>interludens</i> Stirt. [80]																						
<i>myosuroides</i> Brid.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Jochenia</i> Hedenäs, Schlesak & D.Quandt (Jocheniaceae)																						
<i>pallescens</i> (Hedw.) Hedenäs, Schlesak & D.Quandt							●	●	●								●					
<i>Kiaeria</i> I.Hagen (Rhabdoweisiaceae)																						
<i>blyttii</i> (Bruch & Schimp.) Broth.																						
<i>falcata</i> (Hedw.) I.Hagen																						
<i>starkei</i> (F.Weber & D.Mohr) I.Hagen																		○				
<i>Kindbergia</i> Ochyra (Brachytheciaceae)																						
<i>praelonga</i> (Hedw.) Ochyra	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Leptobarbula</i> Schimp. (Pottiaceae)																						
<i>berica</i> (De Not.) Schimp.																						
<i>Leptobryum</i> (Bruch & Schimp.) Wilson (Meesiaceae)																						
<i>pyriforme</i> (Hedw.) Wilson																						
<i>Leptodictyum</i> (Schimp.) Warnst. (Amblystegiaceae)																						
<i>riparium</i> (Hedw.) Warnst.																						
<i>Leptodon</i> D.Mohr (Neckeraceae)																						
<i>smithii</i> (Hedw.) F.Weber & D.Mohr																						

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>Leptodontium</i> (Müll.Hal.) Hampe (Pottiaceae)				●		○																
<i>styriacum</i> (Jur.) Limpr.																						
<i>Lescuraea</i> Bruch & Schimp. (Pseudoleskeaceae)																						
<i>incurvata</i> (Hedw.) E.Lawton	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>mutabilis</i> (Brid.) Lindb. ex I.Hagen	○	○	○	○	●	○	●	●	●	○								○				
<i>patens</i> Lindb.	●	●	○	●	●		●	●	●									●				
<i>plicata</i> (Schleich. ex F.Weber & D.Mohr) Broth.	●	●	○	●	●	●	○	●	●									●	●	●	●	●
<i>radicosa</i> (Mitt.) Mönk.	●	●	●	●	●	○	●	●	●	○								●	●	●	●	●
<i>saviana</i> (De Not.) E.Lawton	●	●	●	●	●	●	●	●	●	●								●				
<i>saxicola</i> (Schimp.) Molendo	●	●	○	●	●	●	○	●	●	●									○	●		
<i>Leskea</i> Hedw. (Leskeaceae)																						
<i>polycarpa</i> Hedw.	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Leucobryum</i> Hampe (Leucobryaceae)																						
<i>glaucum</i> (Hedw.) Ångstr.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>juniperoides</i> (Brid.) Müll.Hal.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Leucodon</i> Schwägr. (Leucodontaceae)																						
<i>sciuroides</i> (Hedw.) Schwägr.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Lewinskya</i> F.Lara, Garilleti & Goffinet (Orthotrichaceae)																						
<i>acuminata</i> (H.Philib.) F.Lara, Garilleti & Goffinet	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>affinis</i> (Schrad. ex Brid.) F.Lara, Garilleti & Goffinet	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>breviseta</i> (F.Lara, Garilleti & Mazimpaka) F.Lara, Garilleti & Goffinet [81]	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>laevigata</i> (J.E.Zetterst.) F.Lara, Garilleti & Goffinet	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>rupestris</i> (Schleich. ex Schwägr.) F.Lara, Garilleti & Goffinet	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>shawii</i> (Wilson) F.Lara, Garilleti & Goffinet	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>speciosa</i> (Nees) F.Lara, Garilleti & Goffinet	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>striata</i> (Hedw.) F.Lara, Garilleti & Goffinet	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Loeskeobryum</i> Broth. (Hylocomiaceae)																						
<i>brevirostre</i> (Brid.) M.Fleisch.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Meesia</i> Hedw. (Meesiaceae)																						
<i>longisetia</i> Hedw.	○	○	○																			
<i>triquetra</i> (L. ex Jolycl.) Ångstr.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>uliginosa</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Microbryum</i> Schimp. (Pottiaceae)																						
<i>curvicolle</i> (Hedw.) R.H.Zander	○	○	○																			
<i>davallianum</i> (Sm.) R.H.Zander var. <i>davallianum</i>	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
var. <i>commutatum</i> (Limpr.) R.H.Zander	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
var. <i>conicum</i> (Schleich. ex Schwägr.) R.H.Zander	○	○	○	○	○	○	○	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●
<i>floerkeanum</i> (F.Weber & D.Mohr) Schimp.	●	○	○	○	○	○	○	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●
<i>rectum</i> (With.) R.H.Zander	○	+	○	○	○	○	○	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●
<i>starckeanum</i> (Hedw.) R.H.Zander	○	○	○	○	○	○	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Microeurhynchium</i> Ignatov & Vanderp. (Brachytheciaceae)																						
<i>pumilum</i> (Wilson) Ignatov & Vanderp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Microhypnum</i> Jan Kučera & Ignatov (Amblystegiaceae)																						
<i>sauteri</i> Schimp.	●	○	●																			
<i>Mielichhoferia</i> Nees & Hornsch. (Mniaceae)																						
<i>elongata</i> (Hoppe & Hornsch. ex Hook.) Hornsch.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>mielichhoferiana</i> (Funck) Loeske	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Mnium</i> Hedw. (Mniaceae)																						
<i>hornum</i> Hedw.	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>lycopodioides</i> Schwägr.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>marginatum</i> (Dicks.) P.Beauv. var. <i>marginatum</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
var. <i>dioicum</i> (H.Müll.) Crundw.	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<i>spinulosum</i> (Voit) Schwägr.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>spinulosum</i> Bruch & Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>stellare</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>thomsonii</i> Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Molendoa</i> (Müll.Hal.) Hampe (Pottiaceae)																						
<i>hornschlorhiza</i> (Hook.) Lindb. ex Limpr.	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Myrinia</i> Schimp. (Myriiniaceae)																						
<i>pulvinata</i> (Wahlenb.) Schimp. [82]	○																					
<i>Myurella</i> Bruch & Schimp. (Plagiotheciaceae)																						
<i>juracea</i> (Schwägr.) Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>sibirica</i> (Müll.Hal.) Reimers	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<i>tenerima</i> (Brid.) Lindb.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Neckera</i> Hedw. (Neckeraceae)																						
<i>menziesii</i> Drumm.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>oligocarpa</i> Bruch	○																					
<i>pennata</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>pumila</i> Hedw.	+	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>Nogopterium</i> Crosby & W.R.Buck (Leucodontaceae)	○	●	●	●	○	●	○	●	●	●	●	●	●	○	●	●	●	●	●	●	●	
<i>gracile</i> (Hedw.) Crosby & W.R.Buck																						
<i>Nyholmia</i> Holmen & E.Warncke (Orthotrichaceae)	●	●	○	●	●	○				●			●		●							○
<i>gymnostoma</i> (Bruch ex Brid.) Holmen & E.Warncke [83]																						
<i>obtusifolia</i> (Brid.) Holmen & E.Warncke																						
<i>Oligotrichum</i> DC. (Polytrichaceae)	●	●	●	●	●	○	●	○														
<i>hercynicum</i> (Hedw.) Lam. & DC.																						
<i>Oncophorus</i> (Brid.) Brid. (Rhabdoweisiaceae)	●	●	○	●	●	●	●	●	●	●	○	+	●	●						●	○	
<i>virens</i> (Hedw.) Brid.			○	○	●	●																
<i>wahlenbergii</i> Brid.																						
<i>Oreas</i> Brid. (Rhabdoweisiaceae)																						
<i>martiana</i> (Hoppe & Hornsch.) Brid.	○	○	○	●	○																	
<i>Oreoweisia</i> (Bruch & Schimp.) De Not. (Rhabdoweisiaceae)	○																					
<i>torquescens</i> (Hornsch. ex Brid.) Wijk & Margad.		○	●																			
<i>Orthothecium</i> Bruch & Schimp. (Plagiotheciaceae)																						
<i>chryseon</i> (Schwägr.) Schimp.	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>intricatum</i> (Hartm.) Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>rufescens</i> (Dicks. ex Brid.) Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>strictum</i> Lorentz	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Orthotrichum</i> Hedw. (Orthotrichaceae)																						
<i>alpestre</i> Bruch & Schimp.	●	●	○	●	○	○	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	
<i>anomalum</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>cupulatum</i> Brid. var. <i>cupulatum</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
var. <i>fuscum</i> (Venturi) Boulay		○																				
var. <i>riparium</i> Huebener	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
<i>dentatum</i> T.Kiebacher & Lüth [84]		●																				
<i>diaphanum</i> Brid.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>macrocephalum</i> F.Lara, Garilletti & Mazimpaka [85]	○																					
<i>microcarpum</i> De Not.	○																					
<i>pallens</i> Bruch ex Brid.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>patens</i> Bruch ex Brid. [86]	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
<i>philibertii</i> Venturi	○																					
<i>pulchellum</i> Brunt.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>pumilum</i> Sw. ex anon.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>rogeri</i> Brid.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>scanicum</i> Grönvall	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>schimperi</i> Hammar	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>stellatum</i> Brid.	○																					
<i>stramineum</i> Hornsch. ex Brid.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>tenellum</i> Bruch ex Brid.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>urnigerum</i> Myrin	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Oxyrrhynchium</i> (Schimp.) Warnst. (Brachytheciaceae)																						
<i>hians</i> (Hedw.) Loeske	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>schleicheri</i> (R.Hedw.) Röll.	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>speciosum</i> (Brid.) Warnst.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Paludella</i> Brid. (Meesiaceae)																						
<i>squarrosa</i> (Hedw.) Brid.	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Palustriella</i> Ochyra (Amblystegiaceae)																						
<i>commutata</i> (Hedw.) Ochyra	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>decipiens</i> (De Not.) Ochyra	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>falcata</i> (Brid.) Hedenäs	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Paraleucobryum</i> (Limp.) Loeske (Dicranaceae)																						
<i>enerve</i> (Thed.) Loeske	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>longifolium</i> (Hedw.) Loeske	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>sauteri</i> (Bruch & Schimp.) Loeske	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Philonotis</i> Brid. (Bartramiaceae)																						
<i>caespitosa</i> Jur.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>calcarea</i> (Bruch & Schimp.) Schimp.	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>capillaris</i> Lindb.	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>fontana</i> (Hedw.) Brid.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>marchica</i> (Hedw.) Brid.	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>rigida</i> Brid.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>seriata</i> Mitt.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>tomentella</i> Molendo	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Physcomitrium</i> (Brid.) Brid. (Funariaceae)																						
<i>eurystomum</i> Sendtn. subsp. <i>eurystomum</i>	○	○	○																			
<i>patens</i> (Hedw.) Mitt.	○	●	●																			
<i>pyriforme</i> (Hedw.) Bruch & Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>sphaericum</i> (C.F.Ludw. ex Schkuhr) Brid.	○	○																				
<i>Plagiomnium</i> T.J.Kop. (Mniaceae)																						
<i>affine</i> (Blandow ex Funck) T.J.Kop.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>cuspidatum</i> (Hedw.) T.J.Kop.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>elatum</i> (Bruch & Schimp.) T.J.Kop.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>ellipticum</i> (Brid.) T.J.Kop.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>medium</i> (Bruch & Schimp.) T.J.Kop.	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>rostratum</i> (Schrad.) T.J.Kop.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>undulatum</i> (Hedw.) T.J.Kop. var. <i>undulatum</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Plagiopus</i> Brid. (Bartramiaceae)																						
<i>oederianus</i> (Sw.) H.A.Crum & L.E.Anderson var. <i>oederianus</i>	●	●	○	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
var. <i>alpinus</i> (Schwägr.) Ochyra	○	○	○																			
<i>Plagiothecium</i> Bruch & Schimp. (Plagiotheciaceae)																						
<i>cavifolium</i> (Brid.) Z.Iwats.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>curvifolium</i> Schleip. ex Limpr.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>denticulatum</i> (Hedw.) Schimp. var. <i>denticulatum</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
var. <i>obtusifolium</i> (Turner) Moore	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
var. <i>undulatum</i> R.Ruthe ex Geh.	○	○	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>laetum</i> Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>latebricola</i> Schimp. [87]	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>nemorale</i> (Mitt.) A.Jaeger	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>piliferum</i> (Sw.) Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>platyphyllum</i> Mönk.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>succulentum</i> (Wilson) Lindb.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>undulatum</i> (Hedw.) Schimp.	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Plasteurhynchium</i> M.Fleisch. (Brachytheciaceae)																						
<i>meridionale</i> (Schimp.) M.Fleisch.	○	○	●	●	●	●	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	
<i>striatulum</i> (Spruce) M.Fleisch.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Platydictya</i> Berk. (Plagiotheciaceae)																						
<i>jungermannioides</i> (Brid.) H.A.Crum	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Platygyrium</i> Bruch & Schimp. (Pylaisiadelphaceae)																		○	○	○	○	
<i>repens</i> (Brid.) Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Platyhypnum</i> Loeske (Amblystegiaceae)																						
<i>alpestre</i> (Hedw.) Ochyra	○	○	○																			
<i>alpinum</i> (Lindb.) Loeske	●	○	○																			
<i>cochlearifolium</i> (Venturi) Ochyra	●	●	○	○																		
<i>duriusculum</i> (De Not.) Ochyra	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>molle</i> (Dicks. ex Hedw.) Loeske	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>smithii</i> (Sw.) Ochyra	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Pleuridium</i> Rabenh. (Ditrichaceae)																						
<i>acuminatum</i> Lindb.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>subulatum</i> (Hedw.) Rabenh.	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Pleurozium</i> Mitt. (Hylocomiaceae)																						
<i>schreberi</i> (Willd. ex Brid.) Mitt.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Pogonatum</i> P.Beauv. (Polytrichaceae)																						
<i>aloides</i> (Hedw.) P.Beauv.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>nanum</i> (Hedw.) P.Beauv.	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>urnigerum</i> (Hedw.) P.Beauv.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Pohlia</i> Hedw. (Mniaceae)																						
<i>andalusica</i> (Höhn.) Broth.	●	●	●																			
<i>andrewsii</i> A.J.Shaw	●	●	●																			
<i>annotina</i> (Hedw.) Lindb.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>atropurpurea</i> (Wahlenb.) H.Lindb.	○	○	○																			
<i>bulbifera</i> (Warnst.) Warnst.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>cruda</i> (Hedw.) Lindb.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>drummondii</i> (Müll.Hal.) A.L.Andrews	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>elongata</i> Hedw. var. <i>elongata</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
var. <i>acuminata</i> (Hornsch.) Huebener	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
var. <i>greenii</i> (Brid.) A.J.Shaw	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>filum</i> (Schimp.) Mårtensson	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>flexuosa</i> Harv. var. <i>flexuosa</i> [88]	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>lescuriana</i> (Sull.) Ochi	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>longicolla</i> (Hedw.) Lindb.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>ludwigii</i> (Spreng. ex Schwägr.) Broth.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>lutescens</i> (Limpr.) H.Lindb.	○	○	○																			
<i>melanodon</i> (Brid.) A.J.Shaw	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>nutans</i> (Hedw.) Lindb. subsp. <i>nutans</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>obtusifolia</i> (Vill. ex Brid.) L.F.Koch	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>prolignera</i> (Kindb.) Lindb. ex Broth.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>vexans</i> (Limpr.) H.Lindb.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>wahlenbergii</i> (F.Weber & D.Mohr) A.L.Andrews var. <i>wahlenbergii</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
var. <i>calcarea</i> (Warnst.) E.F.Warb.	○	○	○																			
var. <i>glacialis</i> (Brid.) E.F.Warb.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>Polytrichastrum</i> G.L.Sm. (Polytrichaceae)																			○	●	○	
<i>alpinum</i> (Hedw.) G.L.Sm.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>sexangulare</i> (Brid.) G.L.Sm.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>Polytrichum</i> Hedw. (Polytrichaceae)																						
<i>commune</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	○		○	○	○	●	●	●	●	
<i>formosum</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	○		●	●	●	●	●	●	●	
<i>juniperinum</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	
<i>longisetum</i> Sw. ex Brid.	○	●	●	●	●	●	●	●	●	●	●	●	○									
<i>pallidisetum</i> Funck	●																					
<i>piliferum</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	
<i>strictum</i> Menzies ex Brid.	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	
<i>swartzii</i> Hartm. [89]																						
<i>Pottiopsis</i> Blockeel & A.J.E.Sm. (Pottiaceae)																						
<i>caespitosa</i> (Brid.) Blockeel & A.J.E.Sm.	(●)	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	
<i>Pseudanomodon</i> (Limpr.) Ignatov & Fedosov (Neckeraceae)																						
<i>attenuatus</i> (Hedw.) Ignatov & Fedosov	○	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	
<i>Pseudephemerum</i> (Lindb.) I.Hagen (Ditrichaceae)																						
<i>nitidum</i> (Hedw.) Loeske	●																					
<i>Pseudoamblystegium</i> Vanderp. & Hedenäs (Amblystegiaceae)																						
<i>subtile</i> (Hedw.) Vanderp. & Hedenäs	●	○	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	
<i>Pseudobryum</i> (Kindb.) T.J.Kop. (Mniaceae)																						
<i>cincidioides</i> (Huebener) T.J.Kop.	○																					
<i>Pseudocampylium</i> Vanderp. & Hedenäs (Amblystegiaceae)																						
<i>radicale</i> (P.Beauv.) Vanderp. & Hedenäs	●	○	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	
<i>Pseudocrossidium</i> R.S.Williams (Pottiaceae)																						
<i>hornschtchianum</i> (Schultz) R.H.Zander	●	○	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	
<i>obtusulum</i> (Lindb.) H.A.Crum & L.E.Anderson [90]																						
<i>replicatum</i> (Taylor) R.H.Zander																						
<i>revolutum</i> (Brid.) R.H.Zander																						
<i>Pseudohydrogyrophnum</i> Kanda (Pyłaisiaceae)																						
<i>eugyrium</i> (Schimp.) Kanda [91]																						
<i>fertile</i> (Sendtn.) Jan Kučera & Ignatov																						
<i>Pseudoleskeopsis</i> Broth. (Leskeaceae)																						
<i>artariae</i> (Thér.) Thér.																						
<i>Pseudoleskeella</i> Kindb. (Pseudoleskeellaceae)																						
<i>catenulata</i> (Brid. ex Schrad.) Kindb.	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	
<i>nervosa</i> (Brid.) Nyholm																						
<i>tectorum</i> (Funck ex Brid.) Kindb. ex Broth.	●	○	●	●	●	●	●	●	●	●	●	●	●									
<i>Pseudomalia</i> Enroth (Echinodiaceae)																						
<i>webbiana</i> (Mont.) Enroth [92]																						
<i>Pseudorhynchostegiella</i> Ignatov & Vanderp. (Brachytheciaceae)																						
<i>duriae</i> (Mont.) Ignatov & Vanderp.																						
<i>Pseudoscleropodium</i> (Limpr.) M.Fleisch. (Brachytheciaceae)																						
<i>purum</i> (Hedw.) M.Fleisch.	○	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	
<i>Pseudostereodon</i> (Broth.) M.Fleisch. (Pyłaisiaceae)																						
<i>procerrimus</i> (Molendo) M.Fleisch.	○	○	○	●	○	○	○	●	●	●	●	●	●		●	●	●	●	●	●	●	
<i>Pseudotaxiphyllum</i> Z.Iwats. (Plagiotheciaceae)																						
<i>elegans</i> (Brid.) Z.Iwats.	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	
<i>Pterigynandrum</i> Hedw. (Pterigynandraceae)																						
<i>filiforme</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	
<i>Pterygoneurum</i> Jur. (Pottiaceae)																						
<i>lamellatum</i> (Lindb.) Jur.		○	○	○	○	○	○	○	○	○	○	○	○									
<i>ovatum</i> (Hedw.) Dixon		○	●	○	○	○	○	○	○	○	○	○	○		○	○	○	○	○	○	○	
<i>subsessile</i> (Brid.) Jur.																						
<i>Ptilium</i> De Not. (Pyłaisiaceae)																						
<i>crista-castrensis</i> (Hedw.) De Not.		○	○	●	●	●	●	●	●	●	●	●	●		○	○	○	○	○	○	○	
<i>Ptychomitrium</i> Fürnr. (Ptychomitriaceae)																						
<i>incurvum</i> (Schwägr.) Spruce																						
<i>nigrescens</i> (Kunze) Wijk & Margad. [93]																						
<i>polyphyllum</i> (Dicks. ex Sw.) Bruch & Schimp.																						
<i>Ptychostomum</i> Hornsch. (Bryaceae)																						
<i>arcticum</i> (R.Br.) J.R.Spence ex Holyoak & N.Pedersen																						
<i>calophyllum</i> (R.Br.) J.R.Spence [94]																						
<i>capillare</i> (Hedw.) Holyoak & N.Pedersen																						
<i>cellulare</i> (Hook.) D.Bell & Holyoak																						
<i>cernuum</i> (Hedw.) Hornsch.																						
<i>compactum</i> Hornsch. var. <i>compactum</i>																						
<i>creberrimum</i> (Taylor) J.R.Spence & H.P.Ramsay																						
<i>demissum</i> (Hook.) Holyoak & N.Pedersen																						
<i>donianum</i> (Grev.) Holyoak & N.Pedersen																						
<i>elegans</i> (Nees) D.Bell & Holyoak																						
<i>funkii</i> (Schwägr.) J.R.Spence																						
<i>imbricatum</i> (Müll.Hal.) Holyoak & N.Pedersen																						
<i>inclinatum</i> (Sw. ex Brid.) J.R.Spence																						

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>intermedium</i> (Brid.) J.R.Spence	●	●	+	○	●	○	○			●	●			●	●	○			○	●	●	
<i>kunzei</i> (Hornschr.) J.R.Spence				○	●																	
<i>moravicum</i> (Podp.) Ros & Mazimpaka	●	●	●	●	●	●	●	●														
<i>pallens</i> (Sw. ex anan.) J.R.Spence	●	●	●	●	●	●	●	●														
<i>pallescens</i> (Schleich. ex Schwägr.) J.R.Spence	●	●	●	●	●	●	●	●														
<i>pseudotriquetrum</i> (Hedw.) J.R.Spence & H.P.Ramsay var. <i>pseudotriquetrum</i>	●	●	●	●	●	●	●	●														
var. <i>bimum</i> (Schreb.) Holyoak & N.Pedersen	●	●	○	○	○	○	●			●								○	●			
<i>rubens</i> (Mitt.) Holyoak & N.Pedersen	●	●	●	●	●	●	●	●														
<i>schleicheri</i> (DC.) J.R.Spence ex D.Bell & Holyoak var. <i>schleicheri</i>	●	●	●	●	●	●	●	●														
<i>torquescens</i> (Bruch & Schimp.) Ros & Mazimpaka	●	●	●	●	●	●	●	●														
<i>turbinatum</i> (Hedw.) J.R.Spence	●	●	●	●	●	●	●	●														
<i>weigelii</i> (Biehler) J.R.Spence	●	●	○	●	●	○	○	●		●												
<i>zieri</i> (Hedw.) Holyoak & N.Pedersen	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Pulvigera</i> Plášek, Sawicki & Ochyra (Orthotrichaceae)																						
<i>lyellii</i> (Hook. & Taylor) Plášek, Sawicki & Ochyra	○	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Pylaisia</i> Schimp. (Pylaisiaceae)	○	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●
<i>polyantha</i> (Hedw.) Schimp.																						
<i>Pyramidula</i> Brid. (Funariaceae)	●	○	○																			
<i>tetragona</i> (Brid.) Brid.																						○
<i>Racomitrium</i> Brid. (Grimmiaceae)	○	●	○	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●
<i>aciculare</i> (Hedw.) Brid.																						
<i>affine</i> (F.Weber & D.Mohr) Lindb.																						
<i>aquaticum</i> (Brid. ex Schrad.) Brid.																						
<i>canescens</i> (Hedw.) Brid. subsp. <i>canescens</i>																						
<i>elongatum</i> Ehrh. ex Frisvoll																						
<i>ericoides</i> (Brid.) Brid.																						
<i>fasciculare</i> (Hedw.) Brid.																						
<i>heterostichum</i> (Hedw.) Brid.																						
<i>lanuginosum</i> (Hedw.) Brid.																						
<i>macounii</i> Kindb. subsp. <i>macounii</i>																						
<i>subsp. alpinum</i> (E.Lawton) Frisvoll																						
<i>microcarpon</i> (Hedw.) Brid.																						
<i>obtusum</i> (Brid.) Brid. [95]																						
<i>sudeticum</i> (Funck) Bruch & Schimp.																						
<i>Rhabdoweisia</i> Bruch & Schimp. (Rhabdoweisiaceae)																						
<i>crenulata</i> (Mitt.) H.Jameson [96]																						
<i>crispata</i> (Dicks.) Lindb.																						
<i>fugax</i> (Hedw.) Bruch & Schimp.																						
<i>Rhizomnium</i> (Broth.) T.J.Kop. (Mniaceae)																						
<i>magnifolium</i> (Horik.) T.J.Kop.																						
<i>pseudopunctatum</i> (Bruch & Schimp.) T.J.Kop.																						
<i>punctatum</i> (Hedw.) T.J.Kop. var. <i>punctatum</i>																						
<i>Rhodobryum</i> (Schimp.) Limpr. (Bryaceae)																						
<i>ontariense</i> (Kindb.) Kindb.																						
<i>roseum</i> (Hedw.) Limpr.																						
<i>Rhynchosstegiella</i> (Schimp.) Limpr. (Brachytheciaceae)																						
<i>curviseta</i> (Brid.) Lindb.																						
<i>litorea</i> (De Not.) Limpr.																						
<i>tenella</i> (Dicks.) Limpr.																						
<i>teneriffae</i> (Mont.) Dirkse & Bouman																						
<i>Rhynchostegium</i> Bruch & Schimp. (Brachytheciaceae)																						
<i>confertum</i> (Dicks.) Schimp.																						
<i>megapolitanum</i> (Blandow ex F.Weber & D.Mohr) Schimp.																						
<i>murale</i> (Hedw.) Schimp.																						
<i>riparioides</i> (Hedw.) Cardot																						
<i>rotundifolium</i> (Scop. ex Brid.) Schimp.																						
<i>strongylense</i> (Bott.) W.R.Buck & Privitera																						
<i>Rhytidadelphus</i> (Limpr.) Warnst. (Hylocomiaceae)																						
<i>loreus</i> (Hedw.) Warnst.																						
<i>squarrosum</i> (Hedw.) Warnst.																						
<i>subpinnatus</i> (Lindb.) T.J.Kop.																						
<i>Rhytidium</i> (Sull.) Kindb. (Rhytidiacae)																						
<i>rugosum</i> (Hedw.) Kindb.																						
<i>Roaldia</i> P.E.A.S.Câmara & Carv.-Silva (Pylaisiaceae)																						
<i>dolomitica</i> (Milde) Hedenäs, Schlesak & D.Quandt																						
<i>revoluta</i> (Mitt.) P.E.A.S.Câmara & M.Carvalho-Silva																						
<i>Saelania</i> Lindb. (Saelaniaceae)																						
<i>glaucescens</i> (Hedw.) Broth.																						
<i>Sanionia</i> Loeske (Scorpidiaceae)																						
<i>uncinata</i> (Hedw.) Loeske																						

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>Sarmentypnum</i> Tuom. & T.J.Kop. (Calliergonaceae)																						
<i>exannulatum</i> (Schimp.) Hedenäs	●	●	●	●	●	●	●	●	●	●					●			○			●	
<i>sarmentosum</i> (Wahlenb.) Tuom. & T.J.Kop.	●	●	●	●	●	●	●	●														
<i>trichophyllum</i> (Warnst.) Hedenäs [97]																						
<i>Schistidium</i> Bruch & Schimp. (Grimmiaceae)																						
<i>agassizii</i> Sull. & Lesq.	●	●	○	○	○											○						
<i>apocarpum</i> (Hedw.) Bruch & Schimp. [98]	●	●	●	●	(●)	●	(○)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>atrofuscum</i> (Schimp.) Limpr.	○	(○)	(○)	(○)	(○)	(○)	(●)															
<i>brunnescens</i> Limpr. subsp. <i>brunnescens</i>	(●)	(●)																				
subsp. <i>griseum</i> (Nees & Hornsch.) H.H.Bлом																						
<i>confertum</i> (Funck) Bruch & Schimp.	●	●	(●)	●	●	(○)	(○)	(○)	(○)	●	●	●	●	+	●	●	●	●	●	●	●	●
<i>crassipilum</i> H.H.Bлом	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>dupretii</i> (Thér.) W.A.Weber	○	○	●	●	●	●	●	●	●	●	●	●	●	●								
<i>elegantulum</i> H.H.Bлом subsp. <i>elegantulum</i>																						
subsp. <i>wilsonii</i> H.H.Bлом [99]																						
<i>flaccidum</i> (De Not.) Ochyra	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>grande</i> Poelt [100]																						
<i>helveticum</i> (Schkuhr) Deguchi																						
<i>lancifolium</i> (Kindb.) H.H.Bлом [101]																						
<i>marginale</i> H.H.Bлом, Bedn.-Ochyra & Ochyra																						
<i>papillosum</i> Culm.																						
<i>platyphyllum</i> (Mitt.) H.Perss.																						
<i>pruinosum</i> (Wilson ex Schimp.) G.Roth																						
<i>pulchrum</i> H.H.Bлом [102]																						
<i>rivulare</i> (Brid.) Podp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	(○)	●	●
<i>robustum</i> (Nees & Hornsch.) H.H.Bлом																						
<i>sordidum</i> I.Hagen																						
<i>subconfertum</i> (Broth.) Deguchi [103]																						
<i>subflaccidum</i> (Kindb.) H.H.Bлом [104]																						
<i>succulentum</i> Ignatova & H.H.Bлом [105]																						
<i>trichodon</i> (Brid.) Poelt var. <i>trichodon</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Schistostega</i> D.Mohr (Schistostegaceae)																						
<i>pennata</i> (Hedw.) F.Weber & D.Mohr	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Sciuro-hypnum</i> (Hampe) Hampe (Brachytheciaceae)																						
<i>curtum</i> (Lindb.) Ignatov																						
<i>flotolianum</i> (Sendtn.) Ignatov & Huttunen																						
<i>glaciale</i> (Schimp.) Ignatov & Huttunen																						
<i>latifolium</i> (Kindb.) Ignatov & Huttunen																						
<i>ornellanum</i> (Molendo) Ignatov & Huttunen [106]																						
<i>plumosum</i> (Hedw.) Ignatov & Huttunen																						
<i>populeum</i> (Hedw.) Ignatov & Huttunen																						
<i>reflexum</i> (Starke) Ignatov & Huttunen																						
<i>starkei</i> (Brid.) Ignatov & Huttunen																						
<i>tromsoeense</i> (Kaurin & Arnell) Draper & Hedenäs [107]																						
<i>Scleropodium</i> Bruch & Schimp. (Brachytheciaceae)																						
<i>cespitanus</i> (Wilson ex Müll.Hal.) L.F.Koch																						
<i>touretii</i> (Brid.) L.F.Koch																						
<i>Scopelophila</i> (Mitt.) Lindb. (Pottiaceae)																						
<i>ligulata</i> (Spruce) Spruce																						
<i>Scorpidium</i> (Schimp.) Limpr. (Scorpidiaceae)																						
<i>cossonii</i> (Schimp.) Hedenäs																						
<i>revolvens</i> (Sw. ex anon.) Rubers																						
<i>scorpioides</i> (Hedw.) Limpr.																						
<i>Scorpiurium</i> Schimp. (Brachytheciaceae)																						
<i>circinatum</i> (Bruch) M.Fleisch. & Loeske																						
<i>deflexifolium</i> (Solms) M.Fleisch. & Loeske																						
<i>sendtneri</i> (Schimp.) M.Fleisch.																						
<i>Seligeria</i> Bruch & Schimp. (Seligeriaceae)																						
<i>acutifolia</i> Lindb.																						
<i>calcarea</i> (Hedw.) Bruch & Schimp.																						
<i>calycina</i> Mitt. ex Lindb. [108]																						
<i>donniana</i> (Sm.) Müll.Hal.																						
<i>irrigata</i> (H.K.G.Paul) Ochyra & Gos [109]																						
<i>pusilla</i> (Hedw.) Bruch & Schimp.																						
<i>trifaria</i> (Brid.) Lindb. var. <i>trifaria</i>																						
<i>Sematophyllum</i> Mitt. (Sematophyllaceae)																						
<i>adnatum</i> (Michx.) E.Britton																						
<i>demissum</i> (Wilson) Mitt.																						
<i>substrumulosum</i> (Hampe) E.Britton																						
<i>Serpoleskea</i> (Limpr.) Loeske (Amblystegiaceae)																						
<i>confervoides</i> (Brid.) Schimp.																						

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>Sphagnum</i> L. (Sphagnaceae)																						
<i>affine</i> Renaud & Cardot	●	●	●	●	●	●	○	○	●	●												
<i>angustifolium</i> (C.E.O.Jensen ex Russow) C.E.O.Jensen	●	●	●	●	●	●	●	●	●	●								○	●	●	●	●
<i>auriculatum</i> Schimp.	●	●	●	●	●	●	●	●	●	●												
<i>balticum</i> (Russow) C.E.O.Jensen [110]			●																			
<i>capillifolium</i> (Ehrh.) Hedw.	●	●	●	●	●	●	●	●	●	●							○	○	●			
<i>centrale</i> C.E.O.Jensen	●	●	●	●	●	●	●	●	●	●								○				
<i>compactum</i> Lam. & DC.	●	●	●	●	●	●	●	●	●	●												
<i>contortum</i> Schultz	●	●	●	●	●	●	●	●	●	●								○				●
<i>cuspidatum</i> Ehrh. ex Hoffm. var. <i>cuspidatum</i>	●	●	●	●	●	●	●	●	●	●												
<i>fallax</i> (H.Klinggr.) H.Klinggr. var. <i>fallax</i>	●	●	●	●	●	●	●	●	●	●									●			
<i>fimbriatum</i> Wilson	●	●	●	●	●	●	●	●	●	●												
<i>flexuosum</i> Dozy & Molk.	●	●	●	●	●	●	●	●	●	●												
<i>fuscum</i> (Schimp.) H.Klinggr.	●	●	●	●	●	●	●	●	●	●												
<i>girgensohnii</i> Russow	●	●	●	●	●	●	●	●	●	●												
<i>inundatum</i> Russow	●	○	●	●	●	●	●	●	●	●								●				○
<i>magellanicum</i> Brid. [111]	●	●	●	●	●	●	●	●	●	●												
<i>majus</i> (Russow) C.E.O.Jensen var. <i>majus</i>	○	○	●	●	●	●	●	●	●	●												
<i>molle</i> Sull.	●	●	●	●	●	●	●	●	●	●												
<i>obtusum</i> Warnst.	●	●	●	●	●	●	●	●	●	●								○	○	○	●	
<i>palustre</i> L.	●	●	●	●	●	●	●	●	●	●												
<i>papillosum</i> Lindb.	●	●	●	●	●	●	●	●	●	●												
<i>platyphyllum</i> (Lindb. ex Braithw.) Warnst.	●	●	●	●	●	●	●	●	●	●												
<i>quinquefarium</i> (Braithw.) Warnst.	●	●	●	●	●	●	●	●	●	●												
<i>riparium</i> Ångstr. [112]	○																					
<i>rubellum</i> Wilson	●	●	●	●	●	●	●	●	●	●												
<i>russowii</i> Warnst.	●	●	●	●	●	●	●	●	●	●												
<i>squarrosum</i> Crome	●	●	●	●	●	●	●	●	●	●												
<i>subfulvum</i> Sjörs subsp. <i>subfulvum</i> [113]																						
<i>subnitens</i> Russow & Warnst. subsp. <i>subnitens</i>	●	●	●	●	●	●	●	●	●	●												
<i>subsecundum</i> Nees	●	●	●	●	●	●	●	●	●	●												
<i>tenellum</i> (Brid.) Pers. ex Brid.	●	○	●	●	●	●	●	●	●	●												
<i>teres</i> (Schimp.) Ångstr.	●	●	●	●	●	●	●	●	●	●												
<i>warnstorffii</i> Russow	●	●	●	●	●	●	●	●	●	●												
<i>Splachnobryum</i> Müll.Hal. (Pottiaceae)																						
<i>obtusum</i> (Brid.) Müll.Hal. [114]																						●
<i>Splachnum</i> Hedw. (Splachnaceae)																						
<i>ampullaceum</i> Hedw.	○	○	○	○	○	○	○	○	○	○												
<i>sphaericum</i> Hedw.	●	●	○	○	○	○	○	○	○	○												
<i>vasculosum</i> Hedw. [115]																						
<i>Stegonia</i> Venturi (Pottiaceae)																						
<i>latifolia</i> (Schwägr.) Venturi ex Broth. var. <i>latifolia</i>	●	●	●	●	●	●	●	●	●	●												
<i>Stereodon</i> (Brid.) Mitt. (Stereodontaceae)																						
<i>callichrous</i> (Brid.) Lindb.	○	○	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	
<i>hamulosus</i> (Schimp.) Lindb.	●	●	○	●	●	●	●	●	●	●								(○)				
<i>pratinum</i> (W.D.J.Koch ex Spruce) Warnst.	●	●	●	●	●	●	●	●	●	●												
<i>Straminergon</i> Hedenäs (Calliergonaceae)																						
<i>stramineum</i> (Dicks. ex Brid.) Hedenäs	●	●	●	●	●	●	●	●	●	●												
<i>Streblotrichum</i> P.Beauv. (Pottiaceae) (nota Barbula)																						
<i>convolutum</i> (Hedw.) P.Beauv. var. <i>convolutum</i>	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	
var. <i>commutatum</i> (Jur.) J.J.Amann												○	○	●	●	●	●	●	●	●	●	
<i>enderesii</i> (Garov.) Loeske																						
<i>Syntrichia</i> Brid. (Pottiaceae)																						
<i>calcicola</i> J.J.Amann	○	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	
<i>caninervis</i> Mitt. var. <i>caninervis</i> [116]																						
var. <i>gypsophila</i> (J.J.Amann ex G.Roth) Ochyra																						
<i>echinata</i> (Schiffn.) Herrnst. & Ben-Sasson [117]																						
<i>fragilis</i> (Taylor) Ochyra																						
<i>handelii</i> (Schiffn.) S.Agnew & Vondr. [118]																						
<i>laevipila</i> Brid.																						
<i>latifolia</i> (Bruch ex Hartm.) Huebener																						
<i>montana</i> Nees var. <i>montana</i>																						
<i>norvegica</i> F.Weber																						
<i>papillosa</i> (Wilson) Jur.																						
<i>papilloissima</i> (Copp.) Loeske																						
<i>princeps</i> (De Not.) Mitt.																						
<i>ruralis</i> (Hedw.) F.Weber & D.Mohr var. <i>ruralis</i>																						
<i>ruraliformis</i> (Besch.) Mans.																						
<i>sinensis</i> (Müll.Hal.) Ochyra																						
<i>virescens</i> (De Not.) Ochyra																						

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>Taxiphyllum</i> M.Fleisch. (Taxiphylaceae)																						
<i>wissgrillii</i> (Garov.) Wijk & Margad.	●	●	●	●	●	●	●	●	●	●	○	○			●							
<i>Tayloria</i> Hook. (Splachnaceae)																						
<i>acuminata</i> Hornsch.			○	○																		
<i>froelichiana</i> (Hedw.) Mitt. ex Broth.	●	●	○	●	●	●	○															
<i>hornschorchii</i> (Grev. & Arn.) Broth. [119]						○																
<i>lingulata</i> (Dicks.) Lindb.	●	●	●	●	●	●																
<i>serrata</i> (Hedw.) Bruch & Schimp.					○	●	●	●														
<i>splachnooides</i> (Schleich. ex Schwägr.) Hook.			○	○	●																	
<i>tenuis</i> (Dicks.) Schimp.			○	○	○	○	○															
<i>Tetraphis</i> Hedw. (Tetraphidaceae)																						
<i>pellucida</i> Hedw.	●	●	●	●	●	●	●	●	●	○	●	●	●									
<i>Tetraplodon</i> Bruch & Schimp. (Splachnaceae)																						
<i>angustatus</i> (Hedw.) Bruch & Schimp.			●	●						○												
<i>mnioides</i> (Hedw.) Bruch & Schimp.		○	●	●																		
<i>urceolatus</i> (Hedw.) Bruch & Schimp.		○	○																			
<i>Thamnobryum</i> Nieuwl. (Neckeraceae)																						
<i>alpecurum</i> (Hedw.) Gangulee	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>neckeroides</i> (Hook.) E.Lawton [120]		○	●	●																		
<i>Thuidium</i> Bruch & Schimp. (Thuidiaceae)																						
<i>assimile</i> (Mitt.) A.Jaeger	●	●	●	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●
<i>delicatulum</i> (Hedw.) Schimp.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>recognitum</i> (Hedw.) Lindb.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>tamariscinum</i> (Hedw.) Schimp.	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Timmia</i> Hedw. (Timmiaceae)																						
<i>austriaca</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>bavarica</i> Hessl.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>megapolitana</i> Hedw. [121]	○																					
<i>norvegica</i> J.E.Zetterst.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Timmella</i> (De Not.) Limpr. (Timmiellaceae)																						
<i>anomala</i> (Bruch & Schimp.) Limpr.	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>barbuloides</i> (Brid.) Mönk.	○	○																				
<i>flexiseta</i> (Bruch) Limpr.																						
<i>Tomentypnum</i> Loeske (Amblystegiaceae)																						
<i>nitens</i> (Hedw.) Loeske	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Tortella</i> (Müll.Hal.) Limpr. (Pottiaceae)																						
<i>alpicola</i> Dixon [122]	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>densa</i> (Lorentz & Molendo) Crundw. & Nyholm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>flavovirens</i> (Bruch) Broth. var. <i>flavovirens</i>		○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
var. <i>papillosum</i> Sérgio & Casas		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>fragilis</i> (Drumm.) Limpr.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	(○)	●	●	●	●	●	●
<i>humilis</i> (Hedw.) Jenn.	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>inclinata</i> (R.Hedw.) Limpr.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>inflexa</i> (Bruch) Broth.		●																				
<i>nitida</i> (Lindb.) Broth.		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>squarrosa</i> (Brid.) Limpr.		○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>tortuosa</i> (Hedw.) Limpr.		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>Tortula</i> Hedw. (Pottiaceae)																						
<i>acaulon</i> (With.) R.H.Zander var. <i>acaulon</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
var. <i>pilifera</i> (Hedw.) R.H.Zander	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
var. <i>schreberiana</i> (Dicks.) R.H.Zander	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<i>atrovirens</i> (Sm.) Lindb.	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>bolanderi</i> (Lesq. & James) M.Howe	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>brevisima</i> Schiffn.																						
<i>canescens</i> Mont.	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>caucasica</i> Broth.	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>cernua</i> (Huebener) Lindb.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>cuneifolia</i> (Dicks.) Turner	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>freibergii</i> Dixon & Loeske																						
<i>guepinii</i> (Bruch & Schimp.) Broth.																						
<i>hoppeana</i> (Schultz) Ochyra	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>inermis</i> (Brid.) Mont.	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>israelis</i> Bizot & F.Bilewsky	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>laureri</i> (Schultz) Lindb.																						
<i>leucostoma</i> (R.Br.) Hook. & Grev.	●																					
<i>lindbergii</i> Broth.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>marginata</i> (Bruch & Schimp.) Spruce	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>mucronifolia</i> Schwägr.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>muralis</i> Hedw. subsp. <i>muralis</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
var. <i>aestiva</i> Hedw.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
subsp. <i>obtusifolia</i> (Schwägr.) Culm.	○	○																				

Taxa	AOS	PIE	LOM	TRA	VEN	FRV	LIG	EMR	RSM	TOS	MAR	UMB	LAZ	SCV	ABR	MOL	CAM	PUG	BAS	CAL	SAR	SIC
<i>pallida</i> (Lindb.) R.H.Zander																					○	●
<i>probryoides</i> R.H.Zander	○	○	○	○	○	○	○	●	○	○	●	○			○	○					●	●
<i>revolvens</i> (Schimp.) G.Roth							●		○													
<i>schimperi</i> M.J.Cano, O.Werner & J.Guerra	●	●	○	●	○	○	○		○													
<i>solmsii</i> (Schimp.) Limpr.																						
<i>subulata</i> Hedw.	●	●	○	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
<i>systyla</i> (Schimp.) Lindb.					○	○																
<i>truncata</i> (Hedw.) Mitt.	●	●	○	●	●	○	○	○	●	○	●	●	●		○	○	○	○	○	●	●	
<i>vahliana</i> (Schultz) Mont.							●		●	●	●				●		○	○	●	●	●	
<i>viridifolia</i> (Mitt.) Blockeel & A.J.E.Sm.																						
<i>wilsonii</i> (Hook.) R.H.Zander										○										●	●	●
<i>Trematodon</i> Michx. (Bruchiaceae)																						
<i>ambiguus</i> (Hedw.) Hornsch.							●	○	●							(○)						
<i>brevicollis</i> Hornsch.	○	●			○																	
<i>longicollis</i> Michx.																●						
<i>Trichodon</i> Schimp. (Ditrichaceae)																						
<i>cylindricus</i> (Hedw.) Schimp.																						
<i>Trichostomum</i> Bruch (Pottiaceae)																						
<i>brachydontium</i> Bruch																						
<i>crispulum</i> Bruch																						
<i>Ulota</i> D.Mohr (Orthotrichaceae)																						
<i>bruchii</i> Hornsch. ex Brid.							●	○	○		●											
<i>coarctata</i> (P.Beauv.) Hammar							○	○	○	●												
<i>crispa</i> (Hedw.) Brid.							○	●	●	○	○	○										
<i>crispula</i> Bruch							○	○	○	○												
<i>hutchinsiae</i> (Sm.) Hammar							○	●	●	●	○	○										
<i>intermedia</i> Schimp.							○	○	○	○												
<i>Voitia</i> Hornsch. (Splachnaceae)																						
<i>nivalis</i> Hornsch.	●									○												
<i>Warnstorffia</i> Loeske (Calliergonaceae)																			○	○		
<i>fluitans</i> (Hedw.) Loeske										○												
<i>pseudostaminea</i> (Müll.Hal.) Tuom. & T.J.Kop.										○												
<i>Weissia</i> Hedw. (Pottiaceae)																						
<i>brachycarpa</i> (Nees & Hornsch.) Jur.							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<i>condensa</i> (Voit) Lindb. var. <i>condensa</i>							○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	●
<i>controversa</i> Hedw. var. <i>controversa</i>							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
var. <i>crispata</i> (Nees & Hornsch.) Nyholm							○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
var. <i>densifolia</i> (Bruch & Schimp.) Wilson							○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<i>levieri</i> (Limpr.) Kindb.																						
<i>longifolia</i> Mitt.																						
<i>rostellata</i> (Brid.) Lindb.							(●)	○		●												
<i>rutilans</i> (Hedw.) Lindb.							●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<i>wilsonii</i> D.A.Callaghan [123]																						
<i>wimmeriana</i> (Sendtn.) Bruch & Schimp.							●	●	○	○	●	○	○	○	●	●	●	●	●	●	●	●
<i>Zygodon</i> Hook. & Taylor (Orthotrichaceae)																						
<i>conoideus</i> (Dicks.) Hook. & Taylor var. <i>conoideus</i>															○							
<i>gracilis</i> Wilson															(○)							
<i>rupestris</i> Schimp. ex Lorentz															●	●	●	●	●	●	●	●
<i>viridisimus</i> (Dicks.) Brid.																						●