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CHECKLIST AND COUNTRY STATUS OF EUROPEAN BRYOPHYTES – UPDATE 2020

Nick Hodgetts & Neil Lockhart

An Roinn Cultúir, Oidhreachta agus Gaeltachta
Department of Culture, Heritage and the Gaeltacht

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Front cover, small photographs from top row, left to right:

Buxbaumia viridis, Neil Lockhart; *Marchantia polymorpha*, Neil Lockhart; *Marchantia quadrata*, Nick Hodgetts; *Marchesinia mackaii*, Nick Hodgetts; *Orthothecium rufescens*, Nick Hodgetts; *Paludella squarrosa*, Neil Lockhart; *Ptychostomum cernuum*, Neil Lockhart; *Sphagnum wulfianum*, Neil Lockhart; *Splachnum luteum*, Nick Hodgetts; *Syntrichia norvegica*, Neil Lockhart

Main photograph:

Riccia huebeneriana, Neil Lockhart

Checklist and country status of European bryophytes – update 2020

Nick Hodgetts[1] & Neil Lockhart[2]

[1]Cuillin Views, Portree, Isle of Skye, UK;
[2]National Parks and Wildlife Service, 90 North King Street, Dublin 7, D07 N7CV, Ireland.

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Department of Culture, Heritage and the Gaeltacht, 90 North King Street, Smithfield, Dublin 7, D07 N7CV

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Tables listing all the bryophyte species recorded in Europe, along with their distribution and Red List status by country/territory, are presented. Status notes give short explanations, justifications, references, *etc*. for country occurrences in the distribution tables. Taxon details list the naming authorities for each taxon and provide notes and references on nomenclature and synonymy. Nomenclature follows the recently published annotated checklist of bryophytes of Europe, Macaronesia and Cyprus. An extensive bibliography and literature list are provided, followed by an appendix with useful references for Europe as a whole, European regions and individual European countries or territories. Appendices with lists of European bryological societies, journals, floras and the country contacts of the European Committee for Conservation of Bryophytes are presented at the end of the report.

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Bryophytes know no borders. This project would not have been possible without the international cooperation and input by bryologists from across all the states and territories of Europe. We would like to thank the members of the European Committee for Conservation of Bryophytes (ECCB) and other bryologists Europe-wide who contributed to this report by generously providing information for the European Red List and Checklist projects. We have tried to be comprehensive in our acknowledgements, and apologise to any contributing bryologists who may have inadvertently been omitted from the following list:

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1 Introduction

The first edition of this publication (Hodgetts, 2015) was presented at a European Committee for the Conservation of Bryophytes (ECCB) conference in Montenegro in May 2016. Its purpose was to collate all the existing known relevant data gathered since the first European bryophyte Red Data Book (European Committee for the Conservation of Bryophytes, 1995), and to galvanise action towards a new Red List. This initiative was successful, and led to collaboration with the International Union for the Conservation of Nature (IUCN) to produce, over a three-year period, a new Red List of bryophytes for Europe (Hodgetts *et al*., 2019). The collaborative Red List project was managed through an EU LIFE programme funded by the European Commission and other donors (LIFE14 PRE BE 001 – LIFE European Red Lists). On completion of the European Red List, and as a follow-on from that project, a new European Checklist was published in the *Journal of Bryology* (Hodgetts *et al*., 2020). This burst of activity meant that the original country distribution tables (Hodgetts, 2015) were now out of date. The purpose of the current Irish Wildlife Manual (IWM) is to update the country distribution and red list status tables with new information, and to ensure that the taxonomy, nomenclature and other data are consistent with the newly published European Red List and European Checklist.

As a background, this report very briefly summarises the work of the European Red List and European Checklist projects. This is followed by two checklist and country status tables; one for liverworts/hornworts and one for mosses. Each is preceeded by a legend that explains the symbols used in the tables, and each is followed by 'Status notes' and 'Taxon details'. Status notes give short explanations, justifications, references, *etc*. for county occurrences identified with a darker fill on the distribution tables. Taxon details list the naming authorities for each taxon and provide notes and references on nomenclature and synonymy. An extensive bibliography and literature list are provided, followed by an appendix with useful references for Europe as a whole, European regions and individual European countries or territories. Appendices with lists of European bryological societies, journals, floras and ECCB country contacts is presented at the end of the report.

This work was financially supported by the Irish National Parks and Wildlife Service (NPWS) of the Department of Culture, Heritage and the Gaeltacht. The report was compiled by Nick Hodgetts and Neil Lockhart, with technical support and analysis by Edwin Wymer. It would not have been possible without the generous help of ECCB country representatives, who have contributed with current information regarding checklists, Red Lists and bryophyte conservation generally in each European country. This report is also available in PDF format and the checklists will be made available as downloadable Excel files on the NPWS website (https://www.npws.ie/) and on the ECCB website (http://eccbbryo.nhmus.hu/).

1.1 The European Red List

The European Red List (Hodgetts *et al*., 2019) is a review of the conservation status of the European species of mosses, liverworts and hornworts, collectively known as bryophytes, according to IUCN's regional Red Listing guidelines (IUCN, 2012a, 2012b, 2014). It identifies those species that are threatened with extinction at a European level, so that appropriate conservation action can be taken to improve their status. All bryophytes considered native to Europe (excluding the Caucasus; a total of 1,829 species), were assessed for the Red List.

Two spreadsheets, one for mosses, the other for liverworts and hornworts, listing the European species with country data on distribution and Red List status, were produced by Nick Hodgetts, who was appointed as project co-ordinator, with extensive input from other ECCB members. The spreadsheets were based on existing checklists (Hill *et al*., 2006 for mosses, Söderström *et al*., 2002, 2007 for liverworts and hornworts), but were continuously updated according to new information. These spreadsheets were used as the 'raw material' for the European Red List assessments. Eleven 'regional assessors' were

appointed, each of whom was assigned a portion of the European bryophyte flora. The assessors each produced a list of preliminary assessments, which were discussed and finalised at a series of five regional workshops, each attended by bryologists in the ECCB network.

Red List assessments were made at two regional levels: for geographical Europe, and for the then 28 Member States of the European Union. The final Red List was published by IUCN in September 2019 (Hodgetts *et al*., 2019). Overall, 22.5% of European bryophyte species assessed were considered threatened in Europe, with two species classified as Extinct (EX) and six assessed as Regionally Extinct (RE). A further 9.6% (173 species) were considered Near Threatened and 63.5% (1,140 species) were assessed as Least Concern. For 93 species (5.3%), there was insufficient information available to be able to evaluate their risk of extinction and thus they were classified as Data Deficient (DD). Further information on the IUCN threat categories and criteria are available in Hodgetts *et al*. (2019), and specific information on how the IUCN criteria were adapted for and applied to bryophytes in Bergamini *et al*. (2019). As well as providing useful data to inform conservation agencies and managers, scientists and the general public, the Red List specified a number of recommendations for the future conservation of bryophytes in Europe. These included integrating bryophyte data into broader conservation policy, establishing a monitoring programme for targeted species, and developing the concept of 'Important Bryophyte Areas' in Europe with a view to ensuring adequate site-based protection for bryophytes, a project which is now under way.

1.2 The European Checklist

The European Checklist project followed on directly from the Red List, when it was realised that relatively little extra work would be required to produce a new checklist, and that this would be a useful service. The last published annotated checklist for mosses in Europe was Hill *et al*. (2006), while for liverworts and hornworts it was Grolle & Long (2000), although a checklist with distributional records was produced by Söderström *et al*. (2002) and updated by Söderström *et al*. (2007). In addition, Séneca & Söderström (2009) published a checklist of the Sphagnophyta of Europe and Macaronesia with distribution data. The nomenclature of liverworts and hornworts in particular has changed considerably in recent years, as recorded in the recent World Checklist (Söderström *et al*., 2016), which, however, did not contain synonyms. Also, the great amount of new molecular work on bryophytes made a new checklist highly desirable.

Following work on the Red List, funding was secured from the Irish government's National Parks and Wildlife Service to enable author Nick Hodgetts to co-ordinate a new checklist project. A Steering Group was set up consisting of Tom Blockeel, Steffen Caspari, Nick Hodgetts, Misha Ignatov, Nadya Konstantinova, Neil Lockhart, Beáta Papp, Christian Schröck, Manuela Sim-Sim and Lars Söderström. Communication took place largely through e-mail, but the Steering Group met once in Budapest, in November 2018, to coincide with the final Red List meeting. After this meeting, Nick Hodgetts led on the moss part of the checklist and Lars Söderström led on the liverworts and hornworts.

The existing network of ECCB contacts was crucial to the project, and a large number of bryologists in Europe contributed, with those making major contributions included in the authorship. The first step was to compare the Red List spreadsheets, which had been kept up-to-date taxonomically and nomenclaturally, with Hill *et al*. (2006) and Grolle & Long (2000). Differences between these checklists and current concepts were highlighted and marked for comment. These spreadsheets were then examined closely, species by species, at the Steering Group meeting, with two sub-groups convened, one for mosses, the other for liverworts and hornworts. A team of experts on particular taxonomic groups of mosses was recruited to advise on their particular areas of expertise. It was less crucial to have specialist advice on taxonomic groups of liverworts, as much of the work had been done previously for the World Checklist (Söderström *et al*., 2016). The provisional spreadsheets were also sent to other bryologists for further expert advice (see Hodgetts *et al*., 2020).

2 Checklist and country status of bryophytes in Europe

The taxa including in the following tables match those in the published European Checklist (Hodgetts *et al.*, 2020), with the addition of taxa known in Europe only from the Caucasus. They therefore represent a 'snapshot' of the European bryophyte flora as it stands in 2020, with the nomenclature and taxonomy exactly following the published Checklist, and distribution and conservation status information correct as far as is known. The distribution and conservation status data have been maintained and updated as far as possible, but there will no doubt be errors and omissions.

2.1 Liverworts and hornworts – legend and checklist table

Common categories

●	Occurrence of species confirmed - either Least Concern or no information about status
■	Occurrence of infraspecific taxon confirmed
□	At least some reports of the species presumably refer to this infraspecific taxon, although not positively confirmed in any source
?	Some doubt about occurrence
-	Taxon recorded in some literature but later rejected
RE	Regionally Extinct
CR	Critically Endangered
EN	Endangered
VU	Vulnerable
NT	Near Threatened
DD	Data Deficient
DD*	Data Deficient but recently recorded
NE	Not Evaluated
NA	Not Applicable

Country-specific categories

Germany

Germany has its own system of threat categories, which have been broadly translated into the IUCN categories for the purposes of this spreadsheet. However, some of the German categories are not directly translatable, and these have been retained:

0	Ausgestorben oder verschollen (Regionally Extinct; ± ≡ IUCN Regionally Extinct)
1	Vom Aussterben bedroht (Critically Endangered; ± ≡ IUCN Critically Endangered)
2	Stark gefährdet (Endangered; ± ≡ IUCN Endangered)
3	Gefährdet (Vulnerable; ± ≡ IUCN Vulnerable)
V	Zuruckgehend (Near Threatened; ± ≡ IUCN Near Threatened)
D	Daten ungenugend (Data Deficient; ± ≡ IUCN Data Deficient)
G	Gefährdung anzunehmen (Risk assumed; no IUCN equivalent)
R	Extrem selten (Extremely rare; no IUCN equivalent)

Netherlands

The Netherlands has its own system of threat categories, which have been broadly translated into the IUCN categories for the purposes of this spreadsheet:

EB	Ernstig bedreigd (Highly Endangered; ± ≡ IUCN Critically Endangered)
BE	Bedreigd (Endangered; ± ≡ IUCN Endangered)
KW	Kwetsbaar (Vulnerable; ± ≡ IUCN Vulnerable)
GE	Gevoelig (Susceptible; ± ≡ IUCN Near Threatened)

Latvia

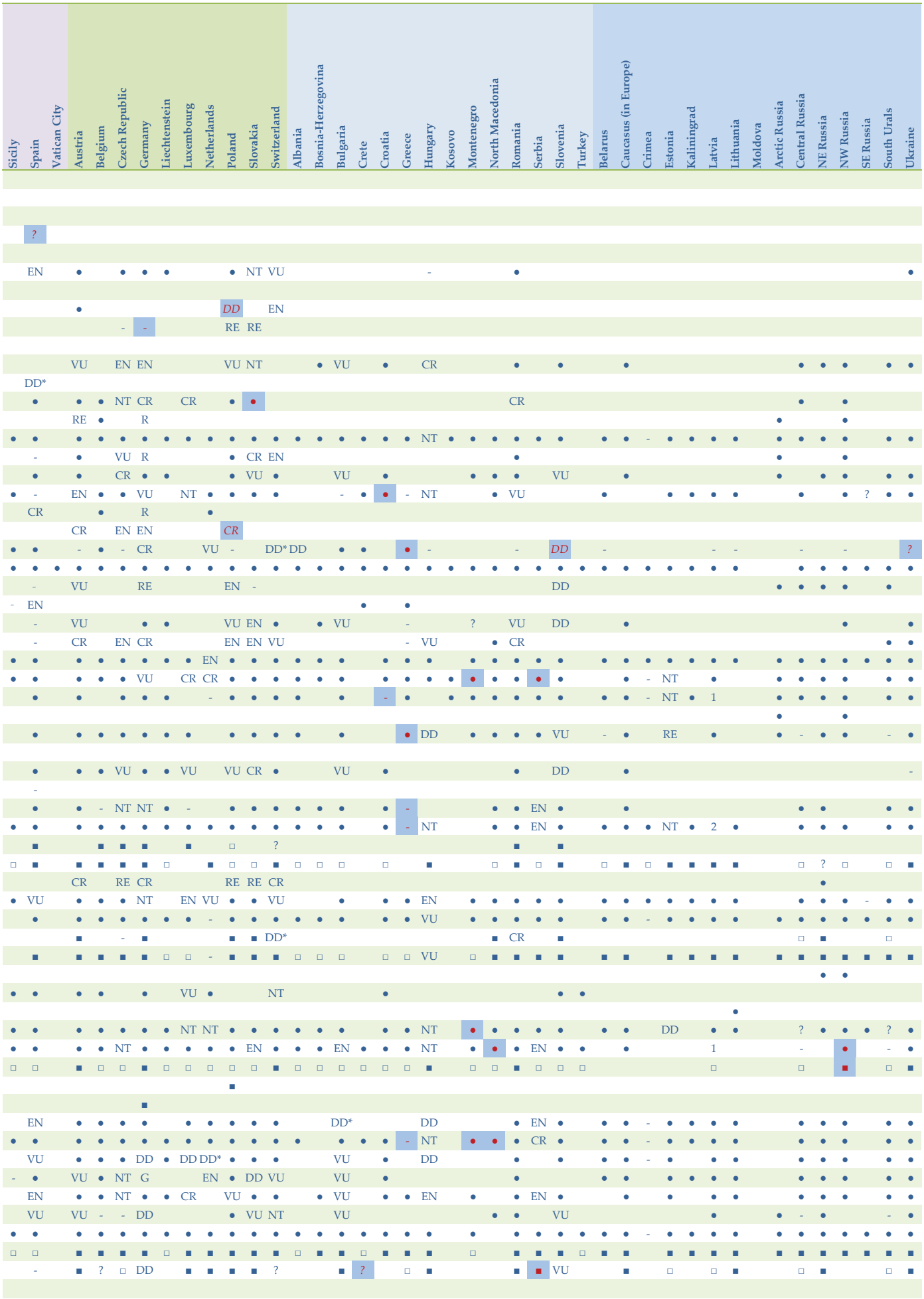
0	Extinct
1	Endangered
2	Vulnerable
3	Rare
4	Little known or insufficiently explored species

Ukraine

R	Rare

● Species confirmed; LC/status unknown
■ Infraspecific taxon confirmed
□ Unconfirmed infraspecific taxon
? Some doubt about occurrence
- Literature record but later rejected
Status values italicised in red with a darker fill have an associated note

Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia
Acanthocoleus aberrans	EN															●		VU					●					
Acrobolbus azoricus	EN	E														●												
Acrobolbus madeirensis	EN	E																					VU					
Acrobolbus wilsonii	VU	E		●								VU	VU	-		●							VU					
Adelanthus lindenbergianus	EN											VU	VU															
Anastrepta orcadensis	LC			●			●		VU			●	●	●								●	EN					
Anastrophyllum alpinum	NT											NT																
Anastrophyllum assimile	LC						●														?	EN						
Anastrophyllum donnianum	NT			●			NT		-			●																
Anastrophyllum joergensenii	VU						EN					VU																
Anastrophyllum michauxii	NT				EN		●		NT													-	EN					
Aneura latissima	EN																						●			DD		
Aneura maxima	DD		●		VU		-		●			?			●				●		●					DD		
Aneura mirabilis	NT		●		CR		●		●			●	VU								●					VU		
Aneura pinguis	LC		●	●	●	●	●	●	●	●		●	●	●	NT	●		VU	●		●	NT	NT			●		DD
Anthelia julacea	LC			●	●	●	●	●	●			●	●	●							●	EN						
Anthelia juratzkana	LC			●	●	●	●	●	●			●	NT	NT	●						●	NT						
Anthoceros agrestis	NT		●	-	●	-	●		●			VU	VU	VU		●		●			●	VU	NT			CR		DD
Anthoceros caucasicus	LC															●		●				CR	●			VU		
Anthoceros neesii	EN	E																										
Anthoceros punctatus	LC		-	-	-		-		-	●		●	●	●		●		●	●		●	NT	●			●		CR
Apopellia endiviifolia	LC		●	●	●	●	●		●	●		●	●	●	●	-	●		●	●	●	NT	●	●		●	NT	●
Arnellia fennica	LC				NT		NT	●	NT												●	DD						
Asterella africana	VU															●		NT	●		-		●			CR		DD
Asterella lindenbergiana	LC				EN		●		●												●	VU						
Asterella saccata	EN																				?	VU						
Barbilophozia barbata	LC		●	●	●	●	●	●	●			●	CR	CR	●				●		●	NT				VU		
Barbilophozia hatcheri	LC		●	●	●	●	●	●	●			●			●				●		●	NT				NT		DD
Barbilophozia lycopodioides	LC		●	●	●	●	●	●	●			NT			●				●		●	NT				CR		
Barbilophozia rubescens	DD		●	●	NT		DD	-	●																			
Barbilophozia sudetica	LC		●	●	●	●	●	●	●			●	●	●	●				●		●	NT	VU			EN		
Bazzania azorica	EN	E														●							-					
Bazzania flaccida	LC											-			●						●	VU						
Bazzania pearsonii	NT											●	VU															
Bazzania tricrenata	LC			●	VU		●		●			●	●	●	VU	-					●	NT						
Bazzania trilobata	LC		●		NT		●		●	●		●	●	●		-					●	NT	NT			RE		
Bazzania trilobata var. *depauperata*							■														■							
Bazzania trilobata var. *trilobata*			■		■		■		■	■		■	■	■							■	■	■			■		
Biantheridion undulifolium	EN		●		CR		CR		RE			EN									●							
Blasia pusilla	LC		●	●	●	●	●	●	●			●	●	●				-	●		●	NT	●			RE		-
Blepharostoma trichophyllum	LC		●	●	●	●	●	●	●			●	●	●	●	●			●		●	●						
Blepharostoma trichophyllum subsp. *brevirete*					■	■	■	■	■			■									■	CR						
Blepharostoma trichophyllum subsp. *trichophyllum*			■	□	■	■	■	□	■			■	■	■	□	□			□		■	NT						
Calycularia laxa	CR																											
Calypogeia arguta	LC		●	●	-		●		NT	●		●	●	●		●		●	●		●	NT	●			●		CR
Calypogeia azorica	EN	E														●		-					●					
Calypogeia azurea	LC		●	●	-	-	●		NT			●	●	●	●	-		-	●		●	NT	-			NT		?
Calypogeia fissa	LC		●	●	NT	●	●		●	●		●	●	●	●	●	-	●	●		●	NT	●			●		NT
Calypogeia fissa subsp. *fissa*			■	□	□	□	■		■	□		■	■	■	□	□		□	□		■	■	□			□		□
Calypogeia fissa subsp. *neogaea*																												
Calypogeia fissa var. *paludosa*			■	■			■		■																			
Calypogeia integristipula	LC		●		●	-	●		●			VU	EN	EN	EN	●					●	NT	-					
Calypogeia muelleriana	LC		●	●	●	●	●		●	●		●	●	●	●	●		-			●	NT	VU			EN		
Calypogeia neesiana	LC		●		●		●		●			●	●	●	VU	●					●	NT						CR
Calypogeia sphagnicola	LC		●	-	●	●	●		●			●	●	●	●	●		DD			●	VU	EN			EN		
Calypogeia suecica	LC		-		EN		●		VU			NT	RE	RE		●		DD			●	NT				CR		
Cephalozia ambigua	LC				●	●	●	●	●			DD									●	NT						
Cephalozia bicuspidata	LC		●	●	●	●	●	●	●	●		●	●	●	●	●		NT	●		●	●	●			●		CR
Cephalozia bicuspidata subsp. *bicuspidata*			■	■	■	■	■	□	■	■		■	■	■	□	■		□	□		■	NT	□			■		□
Cephalozia bicuspidata subsp. *lammersiana*			■	?	□	■	■		□			■	■	■		■		?			■	VU	□			■		□
Cephalozia crossii	LC																	●										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Serbia
Slovenia
Turkey
Belarus
Caucasus (in Europe)
Crimea
Estonia
Kaliningrad
Latvia
Lithuania
Moldova
Arctic Russia
Central Russia
NE Russia
NW Russia
SE Russia
South Urals
Ukraine

● Species confirmed; LC/status unknown
■ Infraspecific taxon confirmed
□ Unconfirmed infraspecific taxon
? Some doubt about occurrence
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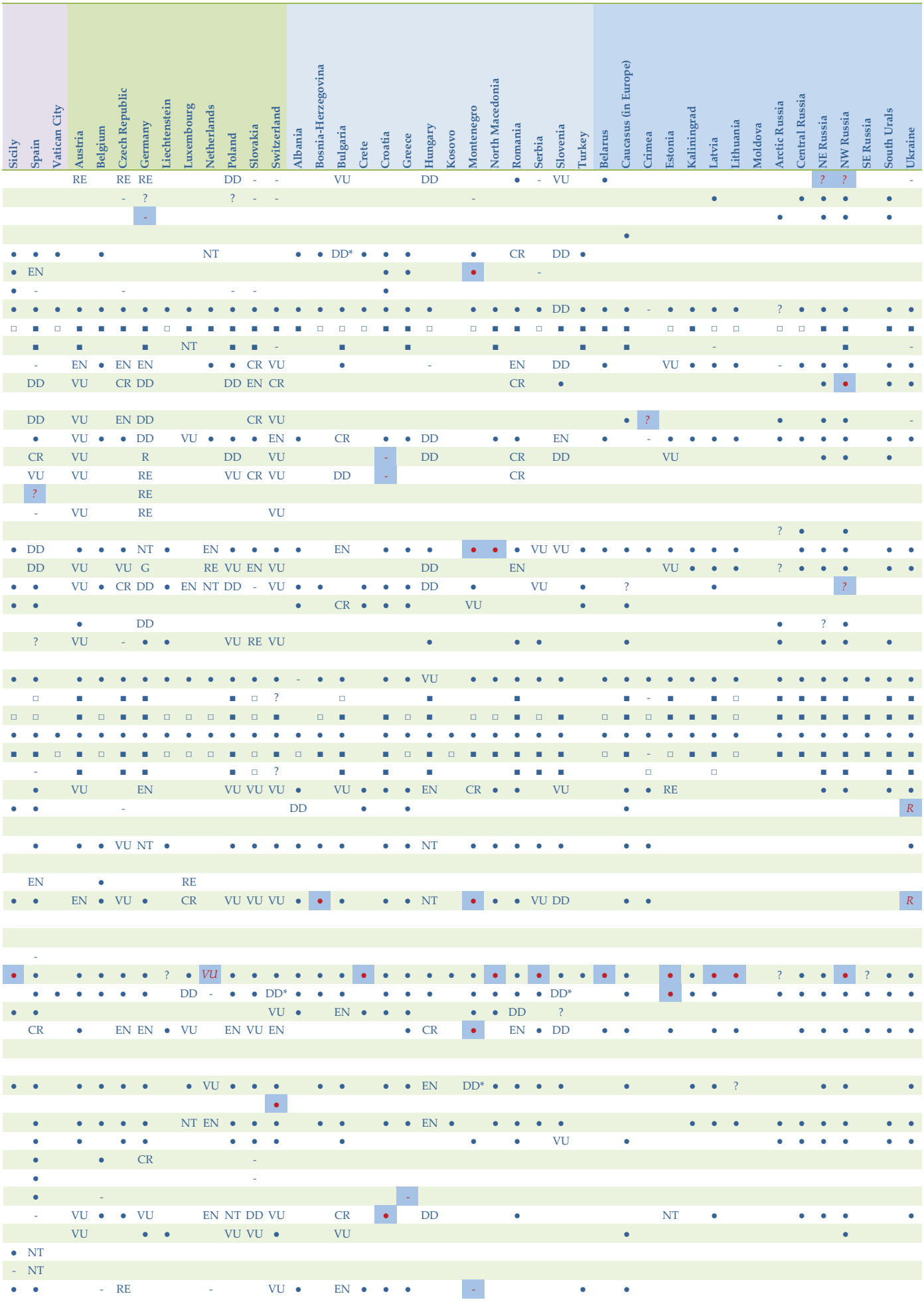
Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia
Cephalozia lacinulata	CR				EN				●			-									●							
Cephalozia macounii	CR				CR	-	-		CR																			
Cephaloziella arctogena	VU				*DD*	●	DD	●																				
Cephaloziella aspericaulis	CR						NE		●																			
Cephaloziella baumgartneri	LC											EN			●	●	●	●	●	●	●	NT	VU	●		●		DD
Cephaloziella calyculata	NT											EN				●		NT	●	●	●	VU				VU		CR
Cephaloziella dentata	EN		●			●			DD			CR				●		DD	-		●	VU	VU			-		NT
Cephaloziella divaricata	LC		●	●	●	●	●	-	●	●		●	●	●	●	●		●	●	●	●	NT	●			●		●
Cephaloziella divaricata var. *divaricata*			■	□	□	■	□	-	■	□		■	■	■	■	□		□	■	□	■	■	■			■		□
Cephaloziella divaricata var. *scabra*			■		■		■		■			-			■			?	■		■	■	■			■		□
Cephaloziella elachista	VU		●		●		?		●			DD	DD								●	●				EN		
Cephaloziella elegans	DD		*?*		NE		●		●									-			●	DD						
Cephaloziella granatensis	EN																						VU					
Cephaloziella grimsulana	DD				DD		●	-	●						●						●	CR				-		
Cephaloziella hampeana	LC		●	●	●	●	●	-	●			●	●	●		●	●	DD			●	NT	VU					NT
Cephaloziella integerrima	EN		●		DD	●	●	●	●			EN	VU								●	●						
Cephaloziella massalongi	EN				DD	●	DD		DD			EN	VU						●		●	VU				DD		
Cephaloziella nicholsonii	EN	E										EN	VU															
Cephaloziella phyllacantha	CR						DD		-												●	VU						
Cephaloziella polystratosa	EN							●																				
Cephaloziella rubella	LC		●	●	●	●	●	-	●	●		DD	VU	VU		●		DD	●		●	NT	VU			VU		●
Cephaloziella spinigera	NT		●	●	●	●	●	-	●			DD	DD								●							
Cephaloziella stellulifera	LC		●		DD		DD	-	DD	●		VU	NT	-			●	DD	●	●	●	NT	●			●		DD
Cephaloziella turneri	LC									●		EN	VU			●		●	●	●	●	NT	●			●		DD
Cephaloziella uncinata	NT							●	DD												●							
Cephaloziella varians	LC			●	●	●	●	●	●												●	DD						
Cheilolejeunea cedercreutzii	EN	E														●							●					
Chiloscyphus pallescens	LC		●	●	●	●	●	-	●			●	●	●	●	●			●		●	NT	VU			EN		DD
Chiloscyphus pallescens var. *fragilis*			■		■	■	■		■			□									■							
Chiloscyphus pallescens var. *pallescens*			■	□	□	□	■	-	■			□	□	□	□	□			□		■	■	□			□		□
Chiloscyphus polyanthos	LC		●	●	●	●	●	-	●	●		●	●	●	●	●			●		●	NT	●			●	VU	NT
Chiloscyphus polyanthos var. *polyanthos*			■	■	■	■	■	-	■	□		□	□	□	□	□			□		■	■	□			■	□	□
Chiloscyphus polyanthos var. *rivularis*			□	■	■		■	-	■			-				□					■							
Clevea hyalina	LC				EN		●	●	●			CR			●		●				●	CR						
Clevea spathysii	NT										●						●	●	●		-	CR	-			RE		-
Cololejeunea azorica	VU	E														●							VU					
Cololejeunea calcarea	LC		●	●	CR		●		NT			●	●	●		-	●	-			●	NT	VU			-		CR
Cololejeunea madeirensis	EN	E														●		-					VU					
Cololejeunea microscopica	LC			●								●	●	●		●		VU			●		●					
Cololejeunea rossettiana	LC											●	●	●			●	-	●		●	NT	-			●		CR
Cololejeunea schaeferi	VU	E														●		●					VU					
Cololejeunea sintenisii	EN															●		EN					EN					
Colura calyptrifolia	LC						DD					●	●	●		●		VU			●		EN					
Conocephalum conicum	LC		●	-	EN	?	●		●	●		●	●	●	NT	?	●	EN	●		●	NT	●			●	NT	●
Conocephalum salebrosum	LC		●	●	VU	?	●		●			●	●	●		●			●		●	DD	●			DD		
Corsinia coriandrina	LC										●					●	●	●	●	●	●	NT	●			●		●
Crossocalyx hellerianus	LC		●		VU		●		NT			●		RE	CR						●	CR				●		
Cryptocolea imbricata	CR							●	DD																			
Cyathodium foetidissimum	CR																					CR						
Diplophyllum albicans	LC		●	●	●	●	●	●	●	●		●	●	●	●	●	-	NT	●		●	NT	●			●		CR
Diplophyllum obtusatum	DD																					CR						
Diplophyllum obtusifolium	LC		●		●	●	●		●			●	NT	NT	●						●	NT	●			DD		
Diplophyllum taxifolium	LC				●	●	●	●	●			●			●				●		●	NT				EN		
Douinia ovata	LC			●	CR		●		●			●	NT	NT	●				●		●		-			●		
Drepanolejeunea hamatifolia	LC											●	●	●		●		●			●		●			CR		
Dumortiera hirsuta	NT											CR	NT	NT		●		VU			●	CR	●			VU		
Endogemma caespiticia	LC		●		●	●	●		●			EN									-							
Eremonotus myriocarpus	NT			●	CR	●	●	-	●			●	NT	NT							●	CR						
Exormotheca pustulosa	NT															●		●			●	DD	●			CR		
Exormotheca welwitschii	EN																									EN		
Fossombronia angulosa	LC						-			●		EN	●	-		●	●	●	●	●	●	NT	●			●		●


Sicily
Spain
Vatican City
Austria
Belgium
Czech Republic
Germany
Liechtenstein
Luxembourg
Netherlands
Poland
Slovakia
Switzerland
Albania
Bosnia-Herzegovina
Bulgaria
Crete
Croatia
Greece
Hungary
Kosovo
Montenegro
North Macedonia
Romania
Serbia
Slovenia
Turkey
Belarus
Caucasus (in Europe)
Crimea
Estonia
Kaliningrad
Latvia
Lithuania
Moldova
Arctic Russia
Central Russia
NE Russia
NW Russia
SE Russia
South Urals
Ukraine

● Species confirmed; LC/status unknown
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Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia
Fossombronia caespitiformis	LC									●	●	DD	DD			●	●	●	●	●	●	●	●	●		●		●
Fossombronia caespitiformis subsp. *caespitiformis*											□	■				■	■	■	■	■	■	NT	■	□		■		■
Fossombronia caespitiformis subsp. *multispira*										■		■	■			■	■	■	■	■	■	CR	■	□		■		■
Fossombronia crispa	NE																									●		
Fossombronia echinata	NT															●	?	DD	●	●	●	NT	●	●		VU		DD
Fossombronia fimbriata	LC	E										●	VU															
Fossombronia fleischeri	DD	E			●																							
Fossombronia foveolata	LC		●		●	●	●		●			●	●	●					●		●	DD			EN		
Fossombronia incurva	LC	E	●		RE				VU	●		●	●	●							-						
Fossombronia leucoxantha	NT																									●		
Fossombronia maritima	LC	E								●		EN	NT				●		●		●	CR				DD		
Fossombronia mittenii	DD											*VU*						-			●					*?*		
Fossombronia pusilla	LC		●						RE	●		●	●	●		●	●	●	●	●	●	NT	●	●		●		CR
Fossombronia wondraczekii	LC		●		●	●	●		●	●		●	●	●		●	●		●	?	●	CR				●	DD	-
Frullania acicularis	NT	E														●							●			●		
Frullania azorica	LC	E														●		●					●			RE		
Frullania bolanderi	NT						VU		EN																			
Frullania calcarifera	NT	E															●	●				●				●		
Frullania cleistostoma	EN	E																				CR						
Frullania dilatata	LC		●	-	●	●	●		●	●	●	●	●	●	●	-	●	●	●	●	●	NT	●			●		●
Frullania ericoides	LC																	●					●					
Frullania fragilifolia	LC		●	●	VU	●	●		●	●		●	●	●	●	-		DD	●		●	NT	-			●		DD
Frullania jackii	VU	E		-			●														●	NT						
Frullania microphylla	LC	E		-			-					●	●	●		●		●			●		●			VU		
Frullania oakesiana	EN				CR		EN		EN									-								EN		
Frullania parvistipula	CR																					VU						
Frullania polysticta	VU	E														-		●					NT					
Frullania riparia	EN																●	-			●	NT	-					
Frullania sergiae	CR	E																					VU					
Frullania stylifera																												
Frullania subarctica	DD																											
Frullania tamarisci	LC		●	●	VU	●	●		●	●		●	●	●	●	●	●	●	●		●	NT	●			●		●
Frullania teneriffae	LC			●		-				●		●	●	●		●		●			●		●			VU		-
Fuscocephaloziopsis affinis	NT				-		●		NT				-								●							
Fuscocephaloziopsis albescens	LC			●	●	●	●	●	●			NT									●	●						
Fuscocephaloziopsis albescens var. *albescens*				□	□	■	■	-	■			■									■	VU						
Fuscocephaloziopsis albescens var. *islandica*					□	■	■	■	□			□										DD						
Fuscocephaloziopsis catenulata	LC		●		CR	-	●	-	NT			●	●	●				-			●	NT	*EN*					
Fuscocephaloziopsis connivens	LC		●		●		●		●	●		●	●	●	DD	●			●		●	NT	●			VU		
Fuscocephaloziopsis crassifolia	LC											-	EN			●		-					VU					
Fuscocephaloziopsis leucantha	LC		●		●		●	-	●			VU	●	●							●	DD						
Fuscocephaloziopsis loitlesbergeri	LC				●		●		●			●	VU	-							●	CR						
Fuscocephaloziopsis lunulifolia	LC		●	-	●	-	●	●	●			●	●	●	●	●			●		●	NT	VU			CR		
Fuscocephaloziopsis macrostachya	LC		●				●		●			●	●	●							●	CR						-
Fuscocephaloziopsis macrostachya var. *macrostachya*			■				■		■			■	■	■							■	■						
Fuscocephaloziopsis macrostachya var. *spiniflora*			■				■		■			■	DD								■							
Fuscocephaloziopsis pleniceps	LC		●	●	●	●	●	●	●			●	VU	VU	VU						●	CR	-			-		
Geocalyx graveolens	NT		●	-	VU		●		●			VU	EN	EN		●		-	-		●	DD	?					
Gongylanthus ericetorum	LC									●		CR				●	●	●	●	●	●	NT	●			●		●
Gymnocolea borealis	LC				DD		●		●																			
Gymnocolea fascinifera	DD																											
Gymnocolea inflata	LC		●	●	●	●	●	●	●	●		●	●	●	●	●		DD	●		●	●	CR			VU		-
Gymnocolea inflata subsp. *acutiloba*							■	-	■			DD										DD						
Gymnocolea inflata subsp. *inflata*			■	□	□	□	■	■	■	■		■	■	■	□	□		■	□		■	NT	□			□		
Gymnomitrion adustum	LC	E?		●		●	●		●			●	●	●		●					●	DD	NT			CR		
Gymnomitrion alpinum	VU						●					NT			DD						●	DD				-		
Gymnomitrion brevissimum	LC			●	●	●	●		●			●			VU						●	NT				-		
Gymnomitrion commutatum	LC					●														-	●	NT						
Gymnomitrion concinnatum	LC			●	●	●	●	●	●			●	EN	EN	●						●	NT						
Gymnomitrion corallioides	LC			●	●	●	●	●	●			VU	CR	CR	CR						●	NT				-		
Gymnomitrion crenulatum	LC	E			-		●					●	●	●							●					EN		

Sicily	Spain	Vatican City	Austria	Belgium	Czech Republic	Germany	Liechtenstein	Luxembourg	Netherlands	Poland	Slovakia	Switzerland	Albania	Bosnia-Herzegovina	Bulgaria	Crete	Croatia	Greece	Hungary	Kosovo	Montenegro	North Macedonia	Romania	Serbia	Slovenia	Turkey	Belarus	Caucasus (in Europe)	Crimea	Estonia	Kaliningrad	Latvia	Lithuania	Moldova	Arctic Russia	Central Russia	NE Russia	NW Russia	SE Russia	South Urals	Ukraine
●	●	●		●	?							DD	●	●	CR	●	●	●			●	●				●														
■	■	■		-	?							DD	□	■		■	■	■																						
■	■			■								DD			■	■	■	■			■	□				■														
	DD								-							●	●	●																						
						R			●																															
						●				●																														
			CR	●	EN	VU			●	VU	CR	*RE*						-	DD					●		DD		●	-		VU	●	1	●		●	●	●	●	?	●
			VU	●		EN			●	DD		VU							●														●			●		●			
	●																									?														
●	●					-																																		
●	●		EN	●	DD	NT		NT	NT	DD	EN	VU	●		●	●	●	●	VU		●	●	●	●	DD	●									?		?			●
●	●		VU	●	●	●		VU	●	NT	NT	VU	●		●	●	●	●	DD				EN	●	DD		●			NT		4	●			●		●			●
																												●							●	●	●		●	
																		●											●												
			VU		EN							VU	DD					-	EN		●				DD*			●												
●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●		●	●	●	●
●	●		VU	●	CR	VU	●	NT	RE	CR	VU	●	DD	●	VU		●	●	EN	●	●		●	CR	●		●					●	●				●			●
			●			G				CR	EN	NT			EN				DD		●		VU		EN		●													●
	●					RE																																		
	EN		●																																	●		●			
●	-		CR									CR											CR				●													-
	-																																							
	DD		CR									VU			CR										VU		●													
																																			●					
																																						●			
●	●		VU	●	NT	VU	●	●	EN	VU	●	NT	●	●	●	●	●	●	NT	●	●	●	●	●	●	-	●	●	●	EN	●	2	●		-			●			●
	VU																								-																
			-			?					●																	●								●	?	●		●	
	VU		●		-	R	●			●	●	●		●			-							EN		-		●								●		●	●		●	*R*
	□		■			□	□			■	NT	■		□			-							■				□									■	■		■	□
			VU							■	DD	■												■															■			
	*DD**		●	●	NT	●	●	VU	DD*	VU	●	●		●	EN		●	●	DD			●		●	VU	●	●	●		EN	●	●	●		●		-			●
	●		EN	●	●	NT	●	EN	VU	●	NT	NT		●	VU	●		●				●	●	●		VU		●		●	●	●	●		?	●	●	●		●	●
	VU																																								
	-		●		NT	NT				NT	●	EN		●				●						●		●					●		●		●	●	●	●			●
	VU		VU	-	VU	G				EN	CR	VU			CR									VU		VU	●			●	●		●		●	●	●	●	●	●	●
	●		●	●	●	●	●	●	●	●	●	●		●	●		●	●	DD		●	●	●	●	●		●	●	-	●	●	●	●	●		●	●	●	●	●	●	●
	-		CR	●	VU	EN			EN	NT		VU							DD												●		●				●		●			-
			□	□	□	■				■	□								DD												□	□	■			□		□			
						■				■																						□									
	VU		●	●	VU	EN	●		RE	●	●	●	●		DD				DD			-	●	●		NT		●	●	-	●	●	●	●		●	●	●	●		●	●
	CR		VU		VU	VU		EN	-	NT	RE	CR						-						CR				●	●		●	●	4	●		●	●	●	●		●	●
●	●												●		DD*	●	●	●																							
																																					●				
	●		●	●	●	NT		EN	●	●	VU	●			NE			-	EN			●	●	●	VU		●	●	●	NT	●	●	●		●	●	●	●		●	●
			■			CR				-													■												□						
	□		■	□	■	NT		□	■	■	■	■			■			-	■			□	■	□	□		□	■	□	□	■	■	□		■	■	■	■		■	□
			VU		RE	RE				VU	EN	VU			VU																									●
	●		VU		EN	RE				VU	EN	VU			VU								CR																	
	VU		●		RE	R				●	EN	●			VU								VU				●									●	●			
			●			-				●	EN	VU											CR																	
	●		●	●	●	●				●	●	●			●						●	●	●	●	DD		●								●		●	●		●	●
	CR		●		CR	R				●	EN	NT			VU			-				EN		DD		●									●		●	●			●
	CR																																								

● Species confirmed; LC/status unknown
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Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia
Gymnomitrion obtusum	LC			●	NT		●		●			●	NT	NT	●						●	DD			VU		
Gymnomitrion revolutum	NT				-	-	●		DD			-									●	EN					
Haplomitrium hookeri	LC		●	●	CR	●	NT	●	VU			●	●	●	RE						●	CR					
Harpalejeunea molleri	LC	E		●			DD					●	●	●		●		●	●		●	VU	●		EN		
Harpanthus flotovianus	LC				●	●	●	●	●			●									●	CR					
Harpanthus scutatus	LC				CR	-	●	-	VU			NT	●	●							●	DD					
Herbertus azoricus	EN	E?														●											
Herbertus borealis	VU	E					-					VU															
Herbertus hutchinsiae	NT	E		●			NT		-			●	●	●													
Herbertus norenus	VU	E					VU					VU															
Herbertus sendtneri	EN															-											
Herbertus stramineus	LC			●		●	VU					●															
Heterogemma capitata	VU		●		CR		CR	-	NT			VU	-								●						
Heterogemma laxa	VU		●		VU	-	VU		●												●						
Heteroscyphus denticulatus	NT	E														●		NT					NT				
Heteroscyphus fissistipus	NA												NE														
Hygrobiella laxifolia	LC			●	VU	●	●		●			●	●	●		●					●	DD	VU		-		
Isopaches alboviridis	DD																										
Isopaches bicrenatus	LC		●		●	●	●	●	●	●		NT	●	●	NT	●		VU	●		●	NT	VU		●		
Isopaches decolorans	VU						EN														●	VU					
Jubula hutchinsiae	LC			-			-					●	●	●		●		VU	●		●		●		-		
Jubula hutchinsiae subsp. *caucasica*		E																									
Jubula hutchinsiae subsp. *hutchinsiae*		E		-			-					■	■	■		■		■	■		■		■		-		
Jungermannia atrovirens	LC		●	●	EN	●	●	-	●			●	●	●	●	●	●	DD	●		●	NT	VU		DD		NT
Jungermannia borealis	LC			●	-	●	DD	●	●			●	-								?	VU					
Jungermannia calcicola	DD																										
Jungermannia eucordifolia	LC			●	●	●	●	-	●			●	●	●	●				●		●	VU			DD		
Jungermannia polaris	LC			-	VU	●	●	●	●			VU			●						●	VU					
Jungermannia pumila	LC		-	●	●	●	●	-	●			●	●	●		●		VU	●		●	NT	NT		EN		
Kurzia pauciflora	LC		●	●	●	●	●		●	●		●	●	●		●					●	-	●		EN		
Kurzia sylvatica	LC		●				DD		EN	●		●	NT	NT							●	CR					
Kurzia trichoclados	LC				CR		●		VU			●	●	●							●	CR			-		
Lejeunea canariensis	VU	E																●					VU				
Lejeunea cavifolia	LC		●	●	●	●	●		●			●	●	●	●	-	●	DD	●	●	●	NT	●		●		●
Lejeunea eckloniana	LC	E?										CR	NT			●		●			●		●		DD		
Lejeunea flava	NT												VU			●		VU					●				
Lejeunea hibernica	NT	E											NT			●		-					●				
Lejeunea lamacerina	LC		-	?			DD			●		●	●	●		●		●	●		●	CR	●		●		●
Lejeunea mandonii	VU	E										CR	EN					●					VU		CR		
Lejeunea patens	LC			●			●			-		●	●	●		●	?	-	-		●		●		VU		●
Lepidozia cupressina	LC			-			●					●	●	●		●		VU			●		NT				
Lepidozia pearsonii	LC						●		●			●	●	●		●											
Lepidozia reptans	LC		●		●	●	●		●	●		●	●	●	●	?			●		●	NT	NT		EN		
Lepidozia stuhlmannii	EN															●											
Leptoscyphus cuneifolius	LC						CR		-			●	●	●		●							VU				
Leptoscyphus porphyrius	EN															●											
Liochlaena lanceolata	LC		●		NT	-	●		●			CR			●			DD	●		●	NT	VU		-		-
Liochlaena subulata	NT				-	-	-		●												●						
Lophocolea bidentata	LC		●	●	EN	●	●		●	●		●	●	●		●	●	●	●		●	NT	●		●		●
Lophocolea bispinosa	NA											●		NE													
Lophocolea brookwoodiana	DD	E?										NE															
Lophocolea coadunata	LC		●	●	●	●	●		●	●		●	●	●		●	-	●	●		●	●	●		●		●
Lophocolea fragrans	LC						VU			●		●	●	●		●		●	●		●	EN	●		EN		
Lophocolea heterophylla	LC		●		●		●		●	●		●	●	●	●	●	●	●	●		●	NT	●		●		●
Lophocolea minor	LC		●		●	●	●		●						●	-		-	●		●	NT	VU		DD		
Lophocolea semiteres	NA											●		NE							●						
Lophozia ascendens	LC				EN		●		VU						EN						●	VU			-		
Lophozia ciliata	NT				EN		●		●																		
Lophozia fuscovirens	NE							●																			
Lophozia guttulata	LC		-	-	VU	-	●	-	NT			DD	-	-	●	●			●		●	NT	-		EN		-
Lophozia lantratoviae	NE																										

Sicily	Spain	Vatican City	Austria	Belgium	Czech Republic	Germany	Liechtenstein	Luxembourg	Netherlands	Poland	Slovakia	Switzerland	Albania	Bosnia-Herzegovina	Bulgaria	Crete	Croatia	Greece	Hungary	Kosovo	Montenegro	North Macedonia	Romania	Serbia	Slovenia	Turkey	Belarus	Caucasus (in Europe)	Crimea	Estonia	Kaliningrad	Latvia	Lithuania	Moldova	Arctic Russia	Central Russia	NE Russia	NW Russia	SE Russia	South Urals	Ukraine
	•		-		RE	•				VU	RE	VU																-	-							-			•		
			•			-					*EN*	CR			-																										
	RE		VU	•	CR	EN			NT	EN	•	VU												VU														•	•		EN
	•											VU					-																								
	-		•	•	VU	EN				•	EN	VU							-					CR		EN				VU		1			•	•	•	•	•	•	
	EN		VU	•	EN	NT		•		EN	•	EN		•	?		•		-		•			•		DD		•		RE		•	-			•	•	•		•	
			VU			RE																																			
			-																																					
	-		•	•	VU	NT		EN	•	VU	-																				•	1	•			•	•	•			
			EN	-		CR			-	EN	CR	EN																•		VU		•	-			•	•	•			
	-		VU		VU	R					-	VU																										•			
																																					•				
	•		•	•	NT	NT		•	EN	•	EN	VU			DD*		•	•	NT		•	•	•	•	•	EN	•	•		•		•	•		•	•	•	•		•	•
			VU			-						•			VU													•											•		
	•																											•													
																												■													
	■																																								
•	•		•	•	VU	•	•	•		•	•	•	•	•	•	•	•	•	DD		•	•	•	•	•	•		•	-	VU		•	•		•	•		•			•
			VU			R				EN	CR	VU												-				•										•		•	
													•															•													
•	•		VU	•		VU				VU	CR	VU			VU									EN				•								•		•	•			
-	•		VU			DD				•	VU	•	•				•	?			•		VU	VU				•								•		•	•			
•	•		•	•	NT	NT		VU		•	VU	VU	•	•	VU		•		DD		•	•	•	•	•			•								•	•	•	•		•	•
	NT		VU	•	VU	EN			CR	•	CR	EN												EN		NT		•			•	•	•	•			•	•	•			•
	EN			•	•	EN			•	EN																															
	VU		•	•	EN	VU	•	-		EN	EN	VU																		?												
•	•		•	•	•	•	•	•	RE	•	•	•	•	•	•	•	•	•	NT	•	•	•	•	•	•	•	•	•	•	•	2	•			•		•		•	•
	VU																																								
	•			•		R			DD*			VU					-																									
	VU																																								
-	•					?																	-	-	-			?				-								
	EN				-	R		CR							-																										
	-																															?									
	•		•	•	•	•	•	•	•	•	•	•		•	•		•	•	•		•	•	•	•	•			•	•	•	•	•	•		•	•	•	•	•	•	•
					-																																				
	DD		•	•	NT	•	•	•	-	•	•	VU	•	•	•		•	•	EN		•	•	•	•	•		•	•		•		•	•		•	•	•	•		•	•
			VU		CR	R				EN		-							DD					CR		•		•		RE		•	•			•		•	•		•	•
•	•		•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•		•	•	•	•	•		•	•	•	•	•	•	•		-	•	?	•		•	•
	•																																								
•	•		•	•	•	*DD*	•	•	•	•		?		•	•		•		•				•	•	•			?				•	•			?		•			•
	•					R		EN																																		
•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•		•	•	•	•	•	•	•		?	•	•	•	•	•	•
•	•		•	•	•	•		•	CR	•	•	•	•	•	•		•	•	•		•	•	•	•	•		•	•	•	•	•	3	•	•	•	•	•	•	•	•	•
				•		•			•																																
	EN		•		EN	•	•			VU	•	•	•		VU		•		EN		•			VU	VU	DD*		•	•		VU		•			•	•	•		•	•
																													?								•	•			
	•		•	•	•	•	•	EN	-	•	•	•		•	VU		?	•	EN		•		•	•	EN		•	•		•	•	•	•		•	•	•	•		•	•
																												•										-			

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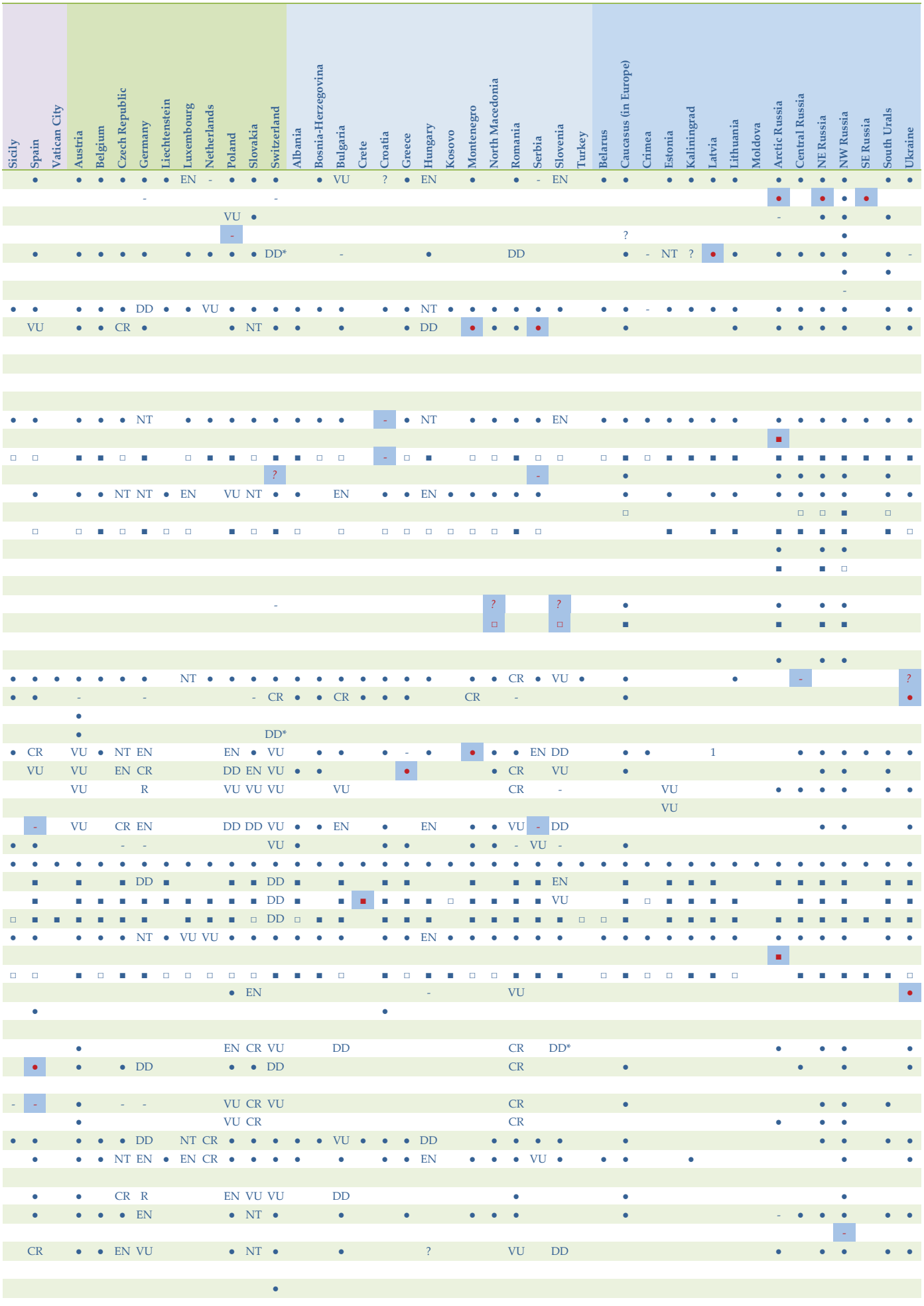
Lophozia longiflora	LC		-	-	NT	-	●	-	NT			DD	-	-	●	●			●		●	NT	-			EN		-
Lophozia murmanica	DD				*NE*	-	*EN*	●	-			-																
Lophozia savicziae	VU				DD		●	●	●																			
Lophozia schusteriana	LC							-																				
Lophozia silvicola	LC		●	●	●		●	●	●			●	●	●							●	CR						?
Lophozia silvicoloides	DD							●																				
Lophozia subapiculata	DD							●																				
Lophozia ventricosa	LC		●	●	●	●	●	●	●	●		●	●	●	●	●	-		●		●	NT				VU		?
Lophozia wenzelii	LC		●	●	●	●	●	●	●			DD	DD		VU						●	NT				VU		
Lophozia wenzelii var. *lapponica*																												
Lophozia wenzelii var. *litoralis*																												
Lophozia wenzelii var. *massularioides*																												
Lophozia wenzelii var. *wenzelii*																												
Lophoziopsis excisa	LC		●	●	●	●	●	●	●	●		●	●	●	●			●	●		●	NT				VU		●
Lophoziopsis excisa var. *elegans*								■																				
Lophoziopsis excisa var. *excisa*			■	□	■	■	■	■	■	■		■	■	■	□			□	□		□	■				□		□
Lophoziopsis jurensis	LC				NE		-	●	●																			
Lophoziopsis longidens	LC		●		●	●	●	●	●			●			●				●		●	NT						
Lophoziopsis longidens subsp. *arctica*								?	■																			
Lophoziopsis longidens subsp. *longidens*			■		■	■	■	□	■			□			□				□		□	■						
Lophoziopsis pellucida	VU				*CR*		EN	●	EN												-							
Lophoziopsis pellucida var. *minor*								■																				
Lophoziopsis pellucida var. *pellucida*					□		□	■	■																			
Lophoziopsis polaris	LC				VU		EN	●	NT																			
Lophoziopsis polaris var. *polaris*					□		□	■	□																			
Lophoziopsis polaris var. *sphagnorum*								■																				
Lophoziopsis rubrigemma	DD							●																				
Lunularia cruciata	LC		●	●	●		●		●	●	●	●	●	●		●	●	●	●	●	●	NT	●	●		●	NT	●
Mannia androgyna	LC										●					●	●	●	●	●	●	EN	●			●	EN	●
Mannia californica	EN																				●	●						
Mannia controversa	EN																				●							
Mannia fragrans	VU				CR		CR		●												●	EN	●					
Mannia gracilis	LC				●	●	●		●						VU	-		-			●	CR						
Mannia pilosa	LC				CR		●	-	●												●	CR						
Mannia sibirica	CR				CR		CR																					
Mannia triandra	VU							●	●									-			●	EN						
Marchantia paleacea	VU															●	●	EN	●		●	NT	VU			-		
Marchantia polymorpha	LC		●	●	●	●	●	●	●	●	●	●	●	●	NT	●	-	VU	●	?	●	NT	●	●		●		●
Marchantia polymorpha subsp. *montivagans*			■	■	■	■	■	■	■			■	EN		■			■			■	■	□					
Marchantia polymorpha subsp. *polymorpha*			■	■	■	■	■		■		□	■	■	■		□		■	■	-	■	■	■	□		■		■
Marchantia polymorpha subsp. *ruderalis*			■	■	■	■	■	■	■	■		■	■	■		□		■	■	□	■	■	□			■		□
Marchantia quadrata	LC		●	●	●	●	●	●	●			●	●	●	●	-			●		●	NT	-			EN		●
Marchantia quadrata subsp. *hyperborea*			■	■	■		■	■	□																			
Marchantia quadrata subsp. *quadrata*			■	■	□	□	■	■	■			■	■	■	□				□		■	■				□		□
Marchantia romanica	VU							●																				
Marchesinia mackaii	LC						-					●	●	●		●	●	●	●		●	VU	●			EN		
Marsupella andreaeoides	NT	E					●		●																			
Marsupella apiculata	LC			●	NT	●	●	●	●			VU									●	-						
Marsupella aquatica	LC			●	VU	●	●		●			●	●	●		●			-		●	●				●		
Marsupella arctica	VU							●	DD			EN																
Marsupella boeckii	LC				●		●	●	●			EN									●	DD		?				
Marsupella condensata	VU				VU	●	●	●	●			VU									●	EN						
Marsupella emarginata	LC		●	●	VU	●	●		●	●		●	●	●	●	●		●	●		●	NT	●			●		●
Marsupella funckii	LC		●	●	CR	●	●		DD	●		●	NT	NT	NT	●		VU	●		●	NT	VU			●		
Marsupella profunda	VU	E										EN				●		-					EN			NT		
Marsupella sparsifolia	NT			-	NT	●	●		●			VU			DD	●					●	CR						
Marsupella sphacelata	LC				VU	-	●		●			NT	VU	VU	●	●			●		●	CR				●		
Marsupella spiniloba	DD			●		●	DD		●																			
Marsupella sprucei	LC			●	CR	●	●	●	●			●	VU	VU	CR						●	NT	VU			EN		
Marsupella stableri	NT	E?					-					NT																
Marsupella subemarginata	LC																											


Sicily
Spain
Vatican City
Austria
Belgium
Czech Republic
Germany
Liechtenstein
Luxembourg
Netherlands
Poland
Slovakia
Switzerland
Albania
Bosnia-Herzegovina
Bulgaria
Crete
Croatia
Greece
Hungary
Kosovo
Montenegro
North Macedonia
Romania
Serbia
Slovenia
Turkey
Belarus
Caucasus (in Europe)
Crimea
Estonia
Kaliningrad
Latvia
Lithuania
Moldova
Arctic Russia
Central Russia
NE Russia
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South Urals
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Marsupella tubulosa	LC																											
Mastigophora woodsii	NT			●								●	NT															
Mesoptychia badensis	LC		●		EN	●	●	●	●			●	●	●	DD						●	NT				●		
Mesoptychia bantriensis	LC		●	●	VU	●	●	-	●			●	NT	NT	●						●	NT	VU					?
Mesoptychia bantriensis subsp. *bantriensis*			■	□	□	□	■		■			■	■	■	□						□	■	□					□
Mesoptychia bantriensis subsp. *wallfischii*																												
Mesoptychia collaris	LC		●	●	EN	●	●	●	●			●	●	●	●				●		●	NT						●
Mesoptychia fitzgeraldiae	NT	E										VU	NT	NT														
Mesoptychia gillmanii	VU				●	●	●	●	●			NT	VU								●	CR						
Mesoptychia gillmanii var. *gillmanii*					■	■	■	■	■			■	■								■	■						
Mesoptychia gillmanii var. *laxa*		E							■			■																
Mesoptychia heterocolpos	LC		●	●	●	●	●	●	●			●		CR	VU			VU	●		●	NT	●					
Mesoptychia heterocolpos var. *arctica*					?		□	■	■																			
Mesoptychia heterocolpos var. *harpanthoides*						-		■	□																			
Mesoptychia heterocolpos var. *heterocolpos*			■	□	□	■	■	■	■			□		□	□			□	□		■	■	□					
Mesoptychia rutheana	NT		●		●	●	●	●	●			EN	EN															
Mesoptychia sahlbergii	DD							●																				
Mesoptychia turbinata	LC											●	●	●	NT		●	VU	●	●	●	NT	●	●		●		●
Metzgeria conjugata	LC		●	●		●	●		NT			●	●	●	NT	-		VU			●	NT	VU			VU		●
Metzgeria consanguinea	LC									●		●	●	●		●		●			●		●					
Metzgeria furcata	LC		●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	NT	●			●		●
Metzgeria leptoneura	LC			●								VU	NT	NT		●		VU					●			-		
Metzgeria pubescens	LC						●		EN			●		VU	●				●		●	NT						
Metzgeria simplex	DD											-									?	CR						
Metzgeria violacea	LC		●	●			NT		●	●		●	●	●		●					●	VU	●			-		
Microlejeunea ulicina	LC						●			●		●	●	●		●		●	●		●	VU	●			VU		
Mnioloma fuscum	VU															●												
Moerckia blyttii	VU			●	CR	●	●		●			EN									●	CR						
Moerckia flotoviana	NT		●		●		●		●			VU	●	●	●						●							
Moerckia hibernica	VU		●	●	*NT*	●	●		●			VU	DD	DD	-						-	*EN*						
Mylia anomala	LC		●	●	●	-	●	-	●			●	●	●	VU						●	NT				-		
Mylia taylorii	LC			●	NT		●	●	●			●	●	●		-					●	EN						
Myriocoleopsis minutissima	LC		●							●		●	●	●		●		●	●		●	NT	●			●		
Nardia breidleri	LC				VU	●	●	●	●			●			CR						●	VU						
Nardia compressa	LC				VU	-	●	-	●			●	●	●	●				●		●	VU				NT		
Nardia geoscyphus	LC		●	●	●	●	●	●	●			DD	NT	-	NT	●	-	VU	●		●	NT	VU			EN		
Nardia geoscyphus var. *bifida*																												
Nardia geoscyphus var. *geoscyphus*			■	□	□	□	■	□	■			□	□		□	□		□	□		□	■	□			□		
Nardia geoscyphus var. *suberecta*			■		■		■																					
Nardia insecta	LC				VU	-	●		●			EN									●	-						
Nardia japonica	LC				*DD*																							
Nardia pacifica	LC																											
Nardia scalaris	LC		●	●	●	●	●	-	●	●		●	●	●	●	●		VU	●		●	NT	●			NT		
Neoorthocaulis attenuatus	LC		●		●		●	-	●	●		●	●	●	●	●			●		●	NT						
Neoorthocaulis binsteadii	LC				●	-	●	●	●																			
Neoorthocaulis floerkei	LC		●	●	●	●	●	-	●			●	●	●	●	-			-		●	NT				VU		
Neoorthocaulis hyperboreus	VU							●																				
Notothylas orbicularis	EN																					DD						
Nowellia curvifolia	LC		●		NT		●		●			●	●	●	●	●			●		●	VU	VU					
Obtusifolium obtusum	LC			●	●	●	●	-	●			●			VU				●		●	CR						
Odontoschisma denudatum	LC		●	-	EN	-	●	-	NT			●	●	●		●					●	EN	EN					
Odontoschisma elongatum	LC		●	●	●	●	●	●	●			●	NT		●	●					●	CR						
Odontoschisma fluitans	LC		●		●		●		●			●	●	●		-			-		●	VU	-			DD		
Odontoschisma francisci	NT		●		●	●	●	●	●			VU	VU	VU		●					●	DD	●					
Odontoschisma macounii	LC				VU	●	●	●	●			VU										DD						
Odontoschisma sphagni	LC		●	●		●	●	-	●			●	●	●	-	●		-	●		●	VU	●					
Oleolophozia perssonii	LC		●		CR		NT	●	NT			●	DD*		DD						●	CR						
Orthocaulis atlanticus	LC		●	-	●	●	●		●			●	EN	EN							-					DD		
Orthocaulis cavifolius	DD				CR		DD	-	DD																			
Oxymitra incrassata	LC										●						●	●	●	●	●	CR	●	●		●		●
Pallavicinia lyellii	VU		●						RE			●	EN			●	-				●	CR	●			VU		


Sicily
Spain
Vatican City
Austria
Belgium
Czech Republic
Germany
Liechtenstein
Luxembourg
Netherlands
Poland
Slovakia
Switzerland
Albania
Bosnia-Herzegovina
Bulgaria
Crete
Croatia
Greece
Hungary
Kosovo
Montenegro
North Macedonia
Romania
Serbia
Slovenia
Turkey
Belarus
Caucasus (in Europe)
Crimea
Estonia
Kaliningrad
Latvia
Lithuania
Moldova
Arctic Russia
Central Russia
NE Russia
NW Russia
SE Russia
South Urals
Ukraine

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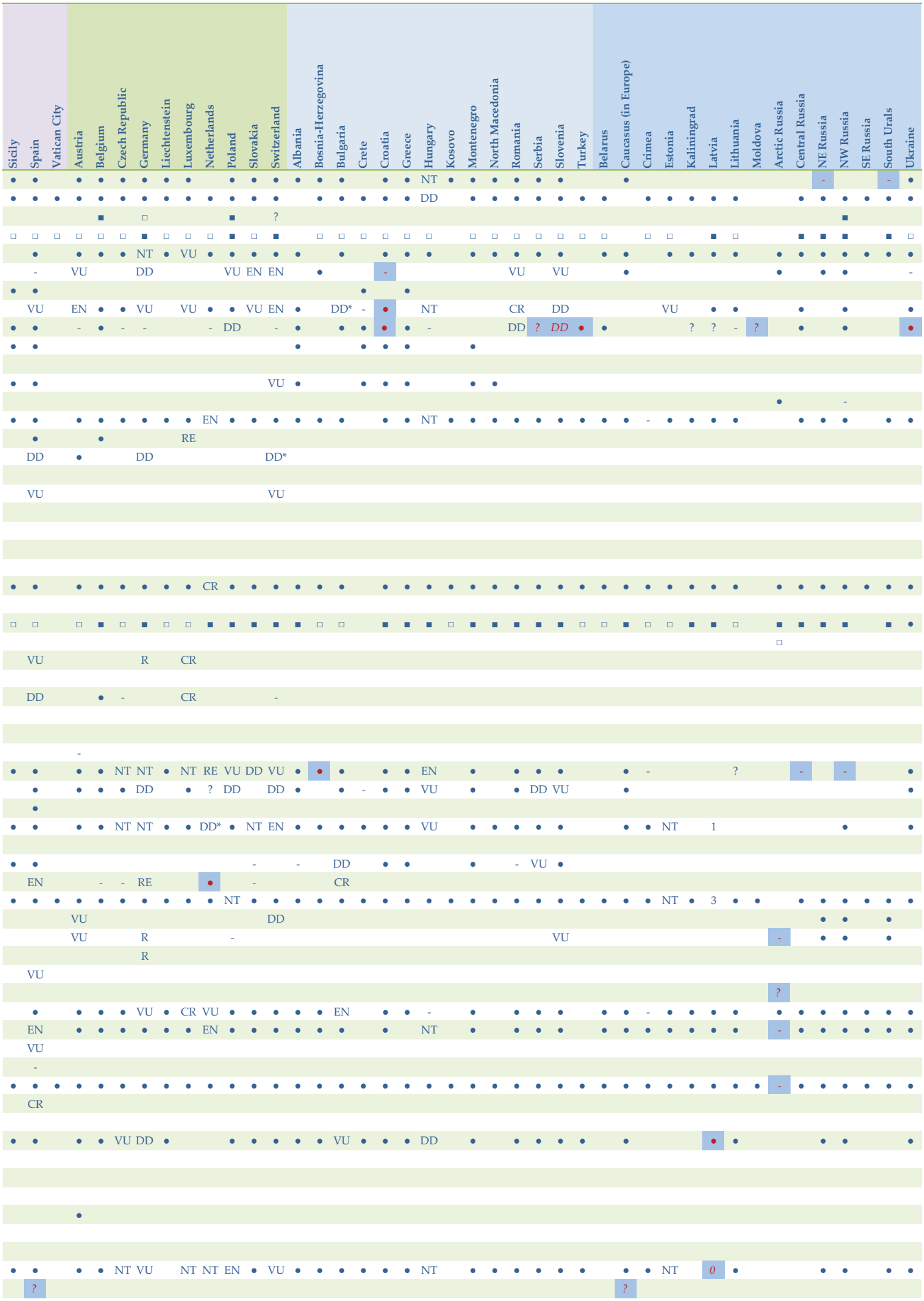
Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia
Pedinophyllum interruptum	LC						-		-			VU	●	●	●				●		●	NT						●
Pellia epiphylla	LC		●	●	●		●		●	●		●	●	●	●	●	-		●	●	●	NT	●			●		●
Pellia epiphylla subsp. *borealis*			■		□		□		■			□	-								■							
Pellia epiphylla subsp. *epiphylla*			■	□	■		□		■	■		■	■	■	□	□			□	□	■	■	□			□		□
Pellia neesiana	LC		●	●	●	●	●		●	●		●	●	●	●	-					●	NT				EN		
Peltolepis quadrata	LC				NT	●	●	●	●												●	CR						
Petalophyllum ralfsii	LC											●	●	●		-	●			●		NT		●		EN	-	●
Phaeoceros carolinianus	NT		●		CR	●	NT		NT			EN				●		●			●		●			●		
Phaeoceros laevis	LC		-		-	-	-			●		●	●	●		●	●	●	●	●	●	NT	●	?		●		●
Phymatoceros bulbiculosus	LC											-				●	-	●	●	●	●	NT	●	●		●		●
Plagiochasma appendiculatum	VU																●											
Plagiochasma rupestre	LC										●					●	●	●	●	●	●	VU	●			●		●
Plagiochila arctica	DD					-	-		-																			
Plagiochila asplenioides	LC		●	-	●		●		●	●		●	●	●	●	-	-	-	●		●	NT	-			DD	DD	●
Plagiochila bifaria	LC									●		●	●	●		●		●			●	EN	●			EN		
Plagiochila britannica	LC	E										●	●	●							?							
Plagiochila carringtonii	NT	E (subsp	●									●	EN															
Plagiochila exigua	LC						NT					●	●	●		●		●			●	VU	●			-		
Plagiochila heterophylla	LC											●	EN								●							
Plagiochila longispina	EN															●												
Plagiochila maderensis	EN	E																VU					NT					
Plagiochila papillifolia	CR															●												
Plagiochila porelloides	LC		●	●	●	●	●	-	●	●		●	●	●	NT	-	●	EN	●		●	NT	●			●		●
Plagiochila porelloides var. *norvegica*		E					EN		■			DD																
Plagiochila porelloides var. *porelloides*			■	■	■	■	■		■			■	■	■	■		□	□	□		■	■	□			□		□
Plagiochila porelloides var. *subarctica*					□	■	■		□																			
Plagiochila punctata	LC			●			●					●	●	●		●		●			●		●			DD		
Plagiochila retrorsa	EN															●							●					
Plagiochila spinulosa	LC	E		●			VU	-		-		●	●	●	*DD**	-		-			●		VU			-		
Plagiochila stricta	EN																	VU					●					
Plagiochila virginica	EN																	●					●					
Pleurozia purpurea	LC		-	●			●	-				●	●	●								-						
Porella arboris-vitae	NT		●	-		-	●		EN	●		●	●	●	●	-	●	-	●		●	NT	-			DD		●
Porella baueri	DD	E?					?		?						●						●	DD						
Porella canariensis	LC	E														●		●			?		●			VU		-
Porella cordaeana	LC		●	●	EN	●	●		●			●	NT	NT	●			-	●	●	●	NT	VU			●		●
Porella inaequalis	EN	E																					VU					
Porella obtusata	LC			●			EN		-	●		●	●	●		●	●	NT	●	●	●	NT	●			●	DD	●
Porella pinnata	LC								-			●	●	●							●		-			VU		
Porella platyphylla	LC		●	●	EN	-	●		●	●		●	●	●	●	-	●	?	●	●	●	NT	-			VU	DD	●
Prasanthus suecicus	LC		-		VU	-	●	●	●												●							
Protolophozia elongata	VU		-	-	DD	-	EN	-	DD			-																
Protolophozia herzogiana	CR											CR																
Pseudomarsupidium decipiens	LC						-		-			●	●	●		●					●		VU					
Pseudotritomaria heterophylla	DD																											
Ptilidium ciliare	LC		●	●	●	●	●	●	●			●	●	●	●				●		●	VU						
Ptilidium pulcherrimum	LC		●		●	-	●	-	●			●	RE	*RE*	EN						●	VU						
Radula aquilegia	LC			●			●					●	●			●		VU					●			-		
Radula carringtonii	NT	E					-					VU	NT		-	●		EN					●					
Radula complanata	LC		●	●	●	●	●		●	●		●	●	●	●	-	●	-	●	●	●	NT	-			●		●
Radula holtii	NT	E										EN	NT			●		EN			●		●			VU		
Radula jonesii	EN	E																CR					EN					
Radula lindenbergiana	LC		●	●	VU	●	●		●	●		●	●	●	●	●	●	●	●		●	NT	●			●		●
Radula nudicaulis	VU															●							●					
Radula nudicaulis var. *delicatula*																■												
Radula nudicaulis var. *nudicaulis*																-							■					
Radula visianica	CR	E																				*DD*						
Radula voluta	NT											NT	●															
Radula wichurae	NT	E														●		CR					NT					
Reboulia hemisphaerica	LC		●		EN	●	●		●	●		●	●	●	●	●	●	●	●	●	●	NT	●			●	DD	●
Reboulia hemisphaerica subsp. *australis*			?																							?		


Sicily
Spain
Vatican City
Austria
Belgium
Czech Republic
Germany
Liechtenstein
Luxembourg
Netherlands
Poland
Slovakia
Switzerland
Albania
Bosnia-Herzegovina
Bulgaria
Crete
Croatia
Greece
Hungary
Kosovo
Montenegro
North Macedonia
Romania
Serbia
Slovenia
Turkey
Belarus
Caucasus (in Europe)
Crimea
Estonia
Kaliningrad
Latvia
Lithuania
Moldova
Arctic Russia
Central Russia
NE Russia
NW Russia
SE Russia
South Urals
Ukraine

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Reboulia hemisphaerica subsp. *dioica*																		?										
Reboulia hemisphaerica subsp. *hemisphaerica*			■		■	■	□		■	□		□	□	□	□	□	□	■	■	□	■	■	■			■	□	■
Riccardia chamedryfolia	LC		●	●	●	●	●		●	●		●	●	●	●	●		NT	●		●	VU	●			VU		●
Riccardia incurvata	LC		●	●	NT	●	●		●			●	●	●							●		-					
Riccardia latifrons	LC		●	●	●	●	●		●	●		●	●	●	●	●			●		●	VU	●			RE		
Riccardia latifrons subsp. *arctica*			■	■	DD		■		■																			
Riccardia latifrons subsp. *latifrons*			■	■	■	■	■		■	□		□	□	□	□	□			□		□	■	□			□		
Riccardia multifida	LC		●	●	VU	●	●		●	●		●	●	●		●		EN	●		●	NT	NT			●		●
Riccardia palmata	LC		●		VU		●		●			●	●	●	●	●			●		●	NT	●			-		-
Riccia atlantica	CR	E																					VU					
Riccia atromarginata	EN																●	●		●	●	CR	NT			VU		?
Riccia beyrichiana	LC		●	●	EN	●	●		●	●		VU	●	●		●	●		●		●	CR		●		●		●
Riccia bicarinata	LC																●	●	●	●	●	CR		●		●		●
Riccia bifurca	LC				CR	-	EN		●			EN				●	●	DD			●	NT	●			●		●
Riccia boumanii	LC																	●										
Riccia breidleri	VU																				●	VU						
Riccia canaliculata	LC		●		CR		EN		●			EN						-	●		●	EN				DD		●
Riccia cavernosa	LC		●		CR	●	EN		●	●		●	●	●		-	●	●	●		●	EN	NT	●		CR		-
Riccia ciliata	DD				CR		CR		VU			-			●		●	●	●		●	NT	NT	●		●		●
Riccia ciliifera	LC								EN			-				-		●	●	●	●	NT	●	●		●		●
Riccia crozalsii	LC									●		DD	EN			●	●	●	●	●	●	EN	NT	●		●		●
Riccia crustata	VU																●			●	●					-		
Riccia crystallina	LC		-		-		-		-			NE				●	●	●			●	NT	●	●		●		●
Riccia duplex	DD		?						-			-										CR				RE		
Riccia fluitans	LC		●		●		NT		●			●	●	●			●		●		●	NT				CR		
Riccia frostii	LC																					CR						
Riccia glauca	LC		●		●	-	●		VU	●		●	●	●		●	●	DD	●		●	VU	●	●		CR		●
Riccia glauca var. *ciliaris*					■		□		□										■		■							■
Riccia glauca var. *glauca*			■		□		■		□	□		□	□	□		□	■	■	■		■	■	□	□		□		■
Riccia gothica	NT	E							●												?							
Riccia gougetiana	LC																●	●	●		●	●	●			●		●
Riccia gougetiana var. *armatissima*																		?			■	DD				■		□
Riccia gougetiana var. *gougetiana*																	■	■	□		■	NT	□			■		■
Riccia huebeneriana	LC		●		CR		EN		EN			VU	DD			●					●	VU				VU		
Riccia lamellosa	LC										●						●	●	●	●	●	CR	●	●		●		●
Riccia ligula	EN															●		DD			●	VU	VU			-		●
Riccia macrocarpa	LC																●	●	●		●	EN	●			●		●
Riccia michelii	LC																	-	●	?	●	NT				●		●
Riccia nigrella	LC									●		CR				●	●	●	●	●	●	NT	●			●		●
Riccia papillosa	LC																●	●	●		●	NT				VU		●
Riccia perennis	LC															-			●		●	DD				NT		●
Riccia rhenana	LC		?		●				●			NE	NE								●					-		
Riccia rhenana var. rhenana					□				□			□	□								□							
Riccia rhenana var. violacea																												
Riccia sommieri	NT																		●			DD				●		●
Riccia sorocarpa	LC		●		●	●	●	-	●	●		●	●	●	●	●	●	●	●	●	●	NT	●	●		●		●
Riccia sorocarpa subsp. *arctica*																												
Riccia sorocarpa subsp. *erythrophora*																												
Riccia sorocarpa subsp. *sorocarpa*																												
Riccia subbifurca	LC								●			DD	●	●		-		●	●		●	NT	●			NT		
Riccia trabutiana	LC																●	●		●	●		NT			●		
Riccia warnstorfii	VU						-		VU	-		-	-	-		●		-	●		●	NT	●			●		?
Ricciocarpos natans	LC		●		●		●		●			VU	NT								●	NT						
Riella affinis	EN																	EN										
Riella battandieri	NE																											
Riella bialata	DD																											
Riella cossoniana	NT																	●			●							
Riella echinata	EN																●	●										
Riella gallica	NE																											
Riella helicophylla	NT																●			●	●	●		●		RE		
Riella helicophylla var. *helicophylla*																	■			■	■	■		■		■		

Sicily	Spain	Vatican City	Austria	Belgium	Czech Republic	Germany	Liechtenstein	Luxembourg	Netherlands	Poland	Slovakia	Switzerland	Albania	Bosnia-Herzegovina	Bulgaria	Crete	Croatia	Greece	Hungary	Kosovo	Montenegro	North Macedonia	Romania	Serbia	Slovenia	Turkey	Belarus	Caucasus (in Europe)	Crimea	Estonia	Kaliningrad	Latvia	Lithuania	Moldova	Arctic Russia	Central Russia	NE Russia	NW Russia	SE Russia	South Urals	Ukraine
	■																																								■
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•	•		VU	•	VU	NT		EN	•	EN	RE	VU		•	•	•	•	•	DD		?	•	•		•		?	•	•	•	•	1	•			•	•	•			•
	VU		VU	•	VU	VU			•	VU	CR	VU	•		VU		•		DD		•	•	EN	•			•			VU		1	•			•	•	•			•
-	•		•	•	•	•	•	NT	NT	•	•	•		•	•		•	•	EN		•		•	•	•		•	•		•	•	•	•			•	•	•			•
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	□		□	□	□	□	□	□	■	□	□	□		□	□		□	□	□		□		■	□	□		□	■		□	■	■	□			■	■	■		■	□
•	•		•	•	•	VU	•	NT	CR	•	DD	•	•	•	VU	•	•	-	EN		•		•	•	•		•	•		•		•	•			•	•	•			•
RE	•		•	•	•	•	•		DD*	•	•	•	•	•	•		•	•	NT		•	•	•	•	•		•	•		•	•	3	•			•	•	•			•
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	•			•	?	G			•	DD					DD*		•	•				•					•			EN						•		•			
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•	•		EN	•	•	G		EN	•	•	VU	CR	•			•	•	•	DD			•	EN		EN			•		•	•	•	•			•		•			•
			VU									VU																													
	•		RE	•	DD	VU			•	•	RE	RE				•		•	DD				DD	•	DD		•					•	•			•			•	•	•
•	•		EN	•	NT	VU	•	NT	•	•	NT	CR					•		NT		•		*DD**				•	•		•	•	3	•			•	•	•	•	•	•
•	•		EN	•	NT	EN			-	DD	EN	VU	•	•	•	•	•	•	VU		•	•	VU	•	DD	•	•		-	NT		1	•			•		•	•	•	•	•
•	•		EN	•	NT	CR		CR		EN	•	VU	•	•	•		•	•	NT		•	•	•	•																•	•
•	CR		-	•		DD		EN	RE			VU	•	•		•	•	•	CR		•					•															
	•														CR																										
•	•				-	-			•	DD	-	-	•		EN	•	•	•	DD				DD	•									?	•			•		-		•	•
	•					-			-	DD									?																						
	VU		VU	•	•	NT		VU	•	•	NT	VU		•	•		•	•	•		•	•	•	•	NT		•			NT	•	•	•			•	•	•	•	•	•
	DD		RE						-						-		•		DD				CR	•				•									•			•	•	•
•	•		•	•	•	G	•	•	•	•	•	•	•	•	EN	?	•	-	NT		•		•	•	DD	•	•			•	•	•	•	•		•		•	?	•	•
	■		■			DD			■			-						-					■															?		•
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						DD																																			
•	•				DD	-					EN	VU		•	•	•	•	•	NT		•	•	CR	•		•															•
	■														■			■																							
□	■				■						□	■		□	■	□	□	■	□		□	□	■	□		□															■
	VU		•	•	EN	VU		EN	•	DD		EN							DD								•	•				3	•			•		•	•	•	•
•	•													-			•		•									•											•		•
	-											VU																													
•	•												•			•	•	•			•																				
•	•				?	RE					-	VU	•	•		•	•	•			•																				
•	•											VU	•	•	•	•	•	•			•			•		•															
•	•		RE		CR	RE					CR		•	•	EN	•	•	•	EN		•		EN																		•
	•																	•																							-
			•	•	NT	DD		CR	•	•	EN	DD			•				EN		•		DD									•				•		•	•	•
			□	□	□	■		□	□	□	□	□			□				□		□		□									□							□	□
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	•															•		•																							
•	NT	-	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	DD	•	•	•	•	•	•	•	•			•		•	•	•	•
																								■																	
	•		EN	•		DD		VU	•		DD	VU	•		•	•	•	-	DD		•	•																			
•	•					CR							•			•		•			•																					
•	•		EN	•	VU	VU		EN	RE	•	-	VU					•		DD		•		DD							VU											
	EN		EN	•	NT	EN		CR	•	•	VU	VU		•	DD		•	•	NT		•	•	•	•	CR		•		-	•	•	1	•			•	•	•	•	•	•
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	•																																								
	EN																											-													
	•																																								
	EN																																								
	□																																								

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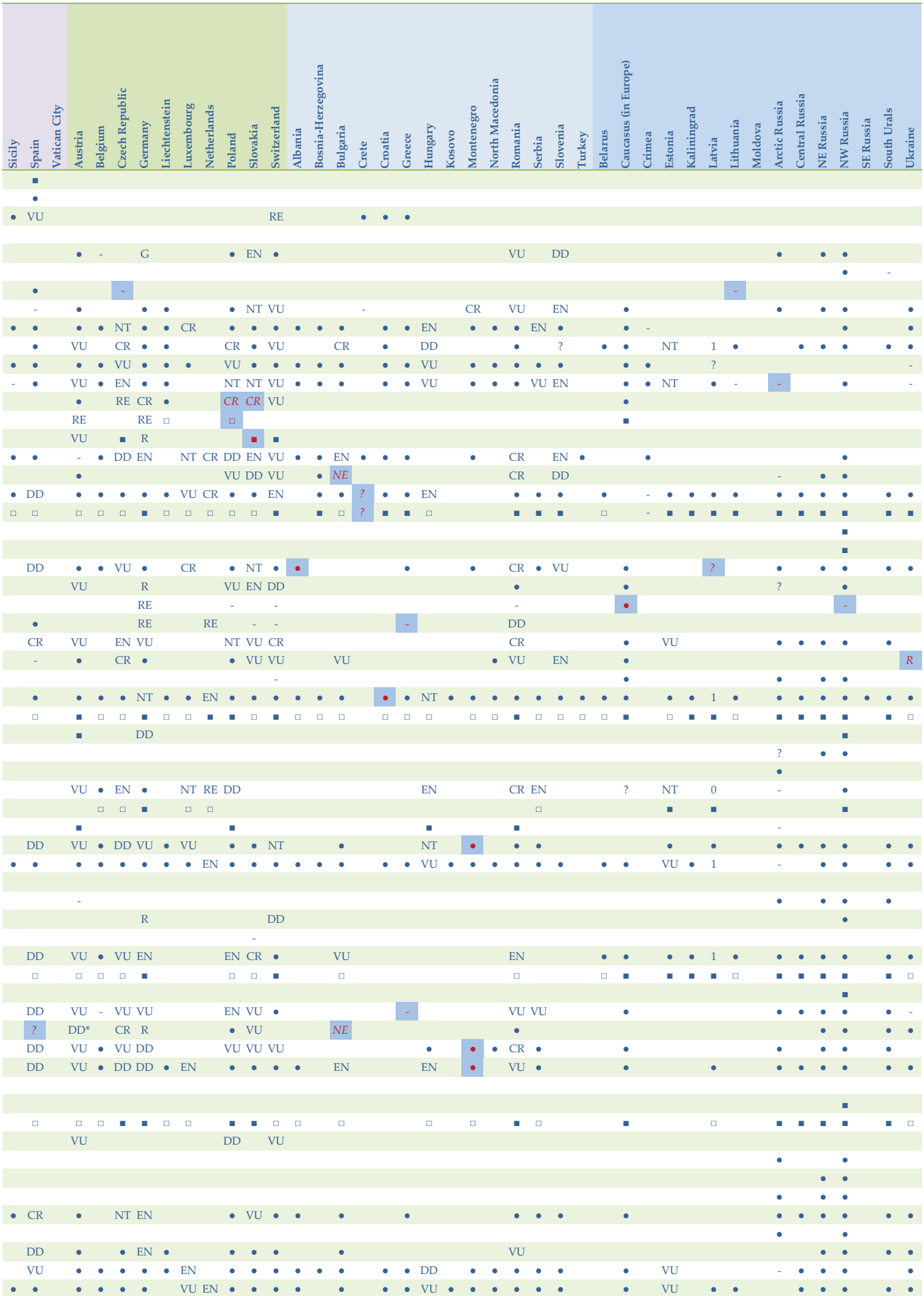
Riella helicophylla var. *macrocarpa*																												
Riella mediterranea	DD																●			●				●				
Riella notarisii	NT																●	DD	●		●	●				EN		●
Riella reuteri	NE																											
Saccobasis polita	LC				●	●	●	●	●			●									●	NT						
Saccobasis polymorpha	LC					●		●																				
Saccogyna viticulosa	LC			●			●		-	●		●	●	●		●		●	●		●	VU	●			●		?
Sauteria alpina	LC				VU	●	●	●	●								-				●	EN						
Scapania aequiloba	LC				EN		●		●			●	●	●	●				●		●	NT					DD	
Scapania apiculata	LC				CR		VU		EN						DD						●	DD						
Scapania aspera	LC		●	●			●		●			●	●	●	●		●		●		●	NT				-		?
Scapania calcicola	LC		●	●	CR	●	●	●	●			VU			●		-				●	NT						
Scapania carinthiaca	EN				CR		VU		EN						DD							CR						
Scapania carinthiaca var. *carinthiaca*															□							■						
Scapania carinthiaca var. *massalongi*					■		■		■													■						
Scapania compacta	LC		●	-	CR		●		●	●		●	●	●	●	●		●	●		●	NT	●			●		●
Scapania crassiretis	LC				CR		NT		VU			-										EN						
Scapania curta	LC		●	-	●	●	●	●	●			VU	VU			●		VU	●		●	NT	VU			EN		
Scapania curta var. *curta*			■	-	■	■	■	■	■			□	□			□		□	□		■	■	□			□		
Scapania curta var. *grandiretis*																					?							
Scapania curta var. *isoloba*																												
Scapania cuspiduligera	LC				CR	●	●	●	●			●	VU		DD						●	NT						
Scapania degenii	NT				-	●	●		●			●									●	NT						
Scapania glaucocephala	EN				CR		EN		DD																			
Scapania gracilis	LC		●	●			●		VU	●		●	●	●		●		●	●		●	VU	●			●		
Scapania gymnostomophila	LC				VU	●	●	●	●			VU	VU	●	CR						●	CR						
Scapania helvetica	LC	E						-	-												●	CR						
Scapania hyperborea	LC			●	●	●	●	●	●																			
Scapania irrigua	LC		●	●	●	●	●	●	●			●	●	●	●				●		●	NT	-	-				
Scapania irrigua subsp. *irrigua*	LC		■	□	□	■	■	□	■			□	□	□	□				□		□	■						
Scapania irrigua subsp. *rufescens*	LC				VU	-	■	■	■												■							
Scapania kaurinii	VU				EN		VU	●	DD																			
Scapania ligulifolia	DD					-		●																				
Scapania lingulata	NT		●	●	●	●	●	-	●			●	DD	DD							●	EN						
Scapania lingulata var. *lingulata*			□	□	■	■	■	-	□			□	□	□							□	■						
Scapania lingulata var. *microphylla*																												
Scapania mucronata	LC		●		●	-	●	?	●			-						-	●		●	NT	-					
Scapania nemorea	LC		●		EN	-	●	-	●	●		●	●	●		●		●	●		●	NT	●			●		
Scapania nimbosa	NT						EN					●	EN															
Scapania obcordata	LC				DD	●	●	●	●																			
Scapania obscura	DD				CR	●	●		●													CR						
Scapania ornithopodioides	NT			●			●					●	VU															
Scapania paludicola	LC		●		●	●	●	●	●			DD			●						●	NT						
Scapania paludicola var. *paludicola*			■		□	□	■	□	■			□			■						■	■						
Scapania paludicola var. *rotundiloba*																												
Scapania paludosa	LC			●	VU	●	●		●			●							●		●	NT						
Scapania parvifolia	NT						●	●	●			DD																
Scapania praetervisa	LC				VU	●	●	●	●			DD			DD						●	CR				-		
Scapania scandica	LC		●	●	●	●	●	-	●			●	●	●	DD	●			●		●	NT				EN		
Scapania scandica var. *argutedentata*					■		□		■																			
Scapania scandica var. *grandiretis*																												
Scapania scandica var. *scandica*			■	■	□	■	■	-	■			■	■	■	□	□			□		□	■				□		
Scapania scapanioides	CR	E																				EN						
Scapania simmonsii	VU				-			●																				
Scapania sphaerifera	CR				-																							
Scapania spitsbergensis	VU				VU		EN	●	NT																			
Scapania subalpina	LC			●	●	●	●	●	●			●	DD	DD	CR				●		●	NT	EN			NT		
Scapania tundrae	LC				CR		EN	●	●																			
Scapania uliginosa	LC			●	NT	●	●	●	●			VU	-								●	NT						
Scapania umbrosa	LC		●		●		●		●			●	●	●	VU	-			●		●	NT	VU			-		
Scapania undulata	LC		●	●	●	●	●	-	●	●		●	●	●	●	●		DD	●		●	NT	●			●	DD	●


Sicily
Spain
Vatican City
Austria
Belgium
Czech Republic
Germany
Liechtenstein
Luxembourg
Netherlands
Poland
Slovakia
Switzerland
Albania
Bosnia-Herzegovina
Bulgaria
Crete
Croatia
Greece
Hungary
Kosovo
Montenegro
North Macedonia
Romania
Serbia
Slovenia
Turkey
Belarus
Caucasus (in Europe)
Crimea
Estonia
Kaliningrad
Latvia
Lithuania
Moldova
Arctic Russia
Central Russia
NE Russia
NW Russia
SE Russia
South Urals
Ukraine

● Species confirmed; LC/status unknown
■ Infraspecific taxon confirmed
□ Unconfirmed infraspecific taxon
? Some doubt about occurrence
- Literature record but later rejected
Status values italicised in red with a darker fill have an associated note

Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia
Scapania verrucosa	VU						-								RE						●	VU						
Scapania zemliae	DD																											
Schistochilopsis grandiretis	LC		●		EN	●	●	●	●												●	DD						
Schistochilopsis hyperarctica	DD						EN	●																				
Schistochilopsis incisa	LC		●	●	●	●	●	-	●			●	●	●	VU	●					●	NT						
Schistochilopsis opacifolia	LC				NT	●	●	●	●			●	VU		VU						●	CR						
Schizophyllopsis sphenoloboides	EN				CR			●	DD																			
Schljakovia kunzeana	LC		●	●	●	●	●	●	●			NT	RE		NT						●	CR						
Schljakovianthus quadrilobus	LC				●	●	●	●	●			NT									●	CR						
Solenostoma callithrix	NT															●		DD					NT					
Solenostoma caucasicum	NE																											
Solenostoma confertissimum	LC				DD	●	●	●	●			●			EN						●	CR						
Solenostoma gracillimum	LC		●	●	●	●	●	-	●	●		●	●	●	●	●		DD	●		●	NT	●			●		●
Solenostoma handelii	CR																											
Solenostoma hyalinum	LC		●	-	●	●	●		●			●	●	●	NT	●		VU	●		●	NT	●			●		●
Solenostoma obovatum	LC			●	NT	●	●	-	●			●	●	●	●				●		●	NT				EN		
Solenostoma paroicum	LC	E		●								●	NT	NT							●							
Solenostoma sphaerocarpum	LC		●	●	●	●	●	●	●	●		●	NT	NT	●				-		●	NT				●		?
Solenostoma subellipticum								●																				
Southbya nigrella	LC											CR			NT		●	VU	●	●	●	NT	VU	●		●		●
Southbya tophacea	LC											CR	CR			●	●	●	●	●	●	NT	●			●		●
Sphaerocarpos europaeus	LC									●		VU				●	●	VU	●		●	CR				●		?
Sphaerocarpos michelii	LC									●		VU					●	VU	●	●	●	NT		●		●		●
Sphaerocarpos stipitatus	NA																									CR		
Sphenolobopsis pearsonii	LC			●		●	●					●	NT	NT														
Sphenolobus minutus	LC		●	-	●	●	●	●	●			●	●	●	●	●			●		●	NT	●					
Sphenolobus saxicola	LC			-	●	●	●		●			VU									-	DD						
Syzygiella autumnalis	LC		●		EN	-	●		●			●				-			●		●	CR	-					
Syzygiella rubricaulis	EN															●												
Targionia hypophylla	LC								-	●	●	EN	RE	RE		●	●	●	●	●	●	NT	●	●		●	DD	●
Targionia lorbeeriana	LC															●	●	●	●	●	●	CR	●	●		●	-	●
Telaranea azorica	EN	E														●		EN										
Telaranea europaea	LC											CR	NT			●		VU			●		NT			CR		
Tetralophozia filiformis	CR																				-							
Tetralophozia setiformis	LC				●	●	●	●	●			●									?	DD						
Trichocolea tomentella	NT		●		VU		●		●			●	●	●		●		-	●		●	NT		-		EN		
Tricholepidozia lindenbergii												●																
Tricholepidozia tetradactyla	NA											NE	-															
Trilophozia quinquedentata	LC		●	●	●	●	●	●	●			●	●	●	●				●		●	NT				VU		
Tritomaria exsecta	LC		●		-		●		EN			●	VU	-	NT			VU	●		●	NT	●					
Tritomaria exsectiformis	LC		●	●	NT		●	●	●			●	●	●	●				●		●	NT				DD		
Tritomaria exsectiformis subsp. *arctica*								?																				
Tritomaria exsectiformis subsp. *exsectiformis*			■	■	□		■	□	■			□	□	□	□				□		■	■				□		
Tritomaria scitula	LC				●	●	●	●	●						DD						●	NT						

Sicily	Spain	Vatican City	Austria	Belgium	Czech Republic	Germany	Liechtenstein	Luxembourg	Netherlands	Poland	Slovakia	Switzerland	Albania	Bosnia-Herzegovina	Bulgaria	Crete	Croatia	Greece	Hungary	Kosovo	Montenegro	North Macedonia	Romania	Serbia	Slovenia	Turkey	Belarus	Caucasus (in Europe)	Crimea	Estonia	Kaliningrad	Latvia	Lithuania	Moldova	Arctic Russia	Central Russia	NE Russia	NW Russia	SE Russia	South Urals	Ukraine
	RE		VU		-					-	-	VU		•	EN		•						VU		•		•														•
																																			•						
			VU	•	VU	•			RE		CR	VU																							•			•			
																																				-	•	•			
	VU		•	•	•	EN	•	VU	RE	•	•	•	•	•	•		•	•	DD		•	•	•	•	•		•	•		NT	•	•	•		•	•	•	•	•	•
	VU		•		DD	DD	•			•	EN	•						•			•		EN					•		RE					•		•	•	•	-
																																			-		•	•			
	VU		•	•	EN	EN	•	CR	EN	NT	DD	•			VU								EN							NT	•	0	•		•	•	•	•		•	-
	-		•		EN	•				VU	NT	NT											EN		VU			•					•		•		•	•		•	•
																												•													
	EN		•		VU	DD				•	VU	NT			VU							•		•	-	VU		•		EN				•		•	•		•	•
•	•		•	•	•	NT	•	•	•	•	•	•	•	•	VU	-	•	•	NT	•	EN	•	•	•	•		•	•		RE		•	•		-	•	•	•		•
	CR															•		-																						
•	•		•	•	NT	VU		VU	NT	•	•	•	•	•	•	•	•	•	EN		•	•	•	•	•			•		VU	•	•			•	•	•	•		•	•
•	•		•	•	•	VU				•	•	•			•		•	•					•	•	•			•								•	•	•		•	•
	-			•		RE					-																														
•	•		•	•	•	NT				•	•	•			•				EN	•	•	•	•	•	•		•	•		VU		•	•		•	•	•	•		•	•
•	•			•									•	•	DD*	•	•	•			•				-																
•	•												•		DD*	•	•	•			•				-	•		•													-
•	•		•	•		NT		EN	NT			EN				•	•	•	DD																						
•	•	•	RE	•		NT			NT	NA					DD*	•	•	•	-																						
	-																																								
																																			-		-				
	•		•	•	•	•	•	NT	CR	•	•	•			•		•		EN	•	•		•	•	•			•		VU		3	?		•	•	•	•		•	•
			RE		VU	VU				CR	RE	-											CR															•	•		•	-
	VU		•	•	VU	•	•	NT		•	•	EN			•		•	•	NT			•	•	•	VU		•	•	•	•	•	3	•			•	•	•	•	•
•	•		-	•	CR	VU		RE	RE			VU	•	•	•	•	•	•			•	•	DD		-	•			•												-
•	•														DD*	•	•	•			•																				
	VU																																								
	EN																																								
	-		VU	•	VU	EN				•	CR	-																							•	-	•	•		•	
	•		•	•	•	VU	•	VU	•	•	•	•			EN		•	-	EN		-	•	•	EN	•		•	•		•		2	•			•		•			•
	•		•	•	•	•	•	•	RE	•	•	•	•	•	•		•	•	NT		•	•	•	•	•		•	•		NT		1	•		•	•	•	•		•	•
	•		•	•	•	•	•	•	-	•	•	•		•	•		•		VU		•		•	•	•		•	•				•			•	•	•	•		•	•
	•		•	•	•	NT	•	•	CR	•	VU	NT		•	•		-	•	DD			•	•		EN		•	•		NT	•	•	•		•	•	•	•		•	•
	□		■	□	□	■	□	□	□	□	□	■		□	□		-	□	□			■	■		■		□	■		□	■	■	□			■	■	■		■	□
	DD		•		?	R				CR	CR	•			•			-					VU					•							-		•	•		•	•

2.1.1 Status notes - Liverworts and hornworts

Status notes (Status values italicised in red with a darker background fill**)**

Taxon	Country	Note
Acrobolbus wilsonii	SPAIN	Report by Düll is questionable (L. Söderström *pers. comm.* June 2018).
Anastrophyllum assimile	FRANCE	● (at risk) but presence uncertain
Anastrophyllum assimile	POLAND	This record must be questioned as it is an old report and no voucher seems to exist (L. Söderström *pers. comm.* June 2018.
Anastrophyllum donnianum	GERMANY	There is an old report but it should probably be rejected (L. Söderström *pers. comm.* June 2018).
Aneura latissima	MADEIRA	Dirkse *et al.*, 2018 (as *A. pseudopinguis*)
Aneura maxima	NORWAY	Shown to be an error (L. Söderström *pers. comm.* June 2018)
Aneura maxima	SLOVAKIA	● (DD suggested)
Aneura maxima	SWEDEN	Tomas Hallingbäck (*pers. comm.* 9 Feb. 2018)
Anthoceros agrestis	CROATIA	Rimac *et al.*, 2019
Anthoceros neesii	POLAND	Four hisotric localities, including type locality, but not confirmed since 1900 (IUCN assessors, 2017).
Anthoceros punctatus	GREECE	Ikaria (Blockeel, in prep.)
Anthoceros punctatus	SLOVENIA	Although Martinčič (2016) refers to these very old records as *A. punctatus,* it is more likely they are *A. agrestis*. No herbarium specimens have been traced.
Anthoceros punctatus	UKRAINE	Included by Boiko (2014) but considered doubtful (discussion in C-E workshop, Jan. 2017).
Asterella saccata	FRANCE	Probably erroneous (V. Hugonnot *pers. comm.* Jan. 2019)
Barbilophozia hatcheri	MONTENEGRO	Low risk
Barbilophozia hatcheri	SERBIA	Low risk
Barbilophozia lycopodioides	CROATIA	Deleted: all localities are on the Montenegran side of the border (Antun Alegro *pers. comm.* May 2020).
Barbilophozia sudetica	GREECE	Blockeel (2018a)
Bazzania tricrenata	GREECE	Deleted. Published by Sabovljević *et al.* (2008) but with no supporting information.
Bazzania trilobata	GREECE	Deleted. The only report is by Gottsche (in Juratzka 1861) based on collections by Mazziari from Cephalonia and Corfu and is scarcely plausible.
Bazzania trilobata var. *depauperata*	FRANCE	V. Hugonnot *pers. comm.* Jan. 2019
Calypogeia azurea	MONTENEGRO	Papp *et al.* (2013)
Calypogeia fissa	NORTH MACEDONIA	Papp & Erzberger (2012)
Calypogeia fissa	NW RUSSIA	Potemkin (2018)
Calypogeia integristipula	FRANCE	● (at risk)
Calypogeia muelleriana	GREECE	Deleted. There is a report from the island of Samothraki in Biel & Tan (2014), but the voucher specimen seen by T.L. Blockeel is *C. fissa*.
Calypogeia muelleriana	NORTH MACEDONIA	Papp & Erzberger (2012)
Calypogeia muelleriana	MONTENEGRO	Papp *et al.* (2013)

Taxon	Country	Note
Calypogeia sphagnicola	FRANCE	● (at risk)
Cephalozia bicuspidata subsp. *lammersiana*	CRETE	Gradstein (1970) 'aff. var. *lammersiana*', so the record may not be correct.
Cephalozia bicuspidata subsp. *lammersiana*	FAROE ISLANDS	Doubtful record (Damsholt via Irina Goldberg *pers. comm.* Feb. 2016)
Cephalozia bicuspidata subsp. *lammersiana*	SERBIA	Papp *et al.* (2012)
Cephalozia lacinulata	FRANCE	Bailly *et al.* (2009)
Cephalozia lacinulata	RUSSIA	Dubious (Konstantinova & Bakalin, 2009)
Cephaloziella arctogena	FINLAND	Tomas Hallingbäck *pers. comm.* 2017
Cephaloziella arctogena	GERMANY	Deleted (Tomas Hallingbäck *pers. comm.* 2017)
Cephaloziella aspericaulis	SWEDEN	Old (1962) specimen of *C. massalongi* redetermined as this species (T. Hallingbäck *pers. comm.* 2017)
Cephaloziella calyculata	FRANCE	● (at risk)
Cephaloziella calyculata	MONTENEGRO	Dragićević & Veljić (2006)
Cephaloziella divaricata	CYPRUS	Kaufmann & Berg (2014)
Cephaloziella elachista	FRANCE	● (at risk)
Cephaloziella elegans	DENMARK	Not completely rejected, but questioned (Irina Goldberg *pers. comm.* Jan. 2019)
Cephaloziella elegans	NW RUSSIA	Potemkin & Rozantseva (2015)
Cephaloziella grimsulana	CRIMEA	Very doubtful (Christian Schröck, *pers. comm.* 2017)
Cephaloziella grimsulana	FRANCE	● (at risk)
Cephaloziella integerrima	CROATIA	Deleted; erroneously added to previous checklists, but unsupported by literature or specimens (Antun Alegro *pers. comm.* May 2020).
Cephaloziella integerrima	FRANCE	● (at risk)
Cephaloziella massalongi	CROATIA	Deleted; erroneously added to previous checklists, but unsupported by literature or specimens (Antun Alegro *pers. comm.* May 2020).
Cephaloziella massalongi	FRANCE	● (at risk)
Cephaloziella nicholsonii	SPAIN	Unconfirmed
Cephaloziella phyllacantha	FRANCE	● (at risk)
Cephaloziella rubella	MONTENEGRO	Papp *et al.* (2013)
Cephaloziella rubella	SVALBARD	Deleted; all records are referred to *C. uncinata* or require confirmation (N. Konstantinova *pers. comm.* Jan. 2019).
Cephaloziella rubella	NORTH MACEDONIA	Papp & Erzberger (2012)
Cephaloziella spinigera	FRANCE	● (at risk)
Cephaloziella spinigera	SVALBARD	Deleted; all records are referred to *C. uncinata* or require confirmation (N. Konstantinova *pers. comm.* Jan. 2019).
Cephaloziella stellulifera	NW RUSSIA	Dubious, as identification may not have been correct (N. Konstantinova *pers. comm.* Jan. 2019).
Cephaloziella turneri	CYPRUS	Frahm *et al.* (2009)
Cephaloziella varians	FRANCE	● (at risk)
Clevea spathysii	FRANCE	Delete (V. Hugonnot *pers. comm.* Jan. 2019)
Clevea spathysii	UKRAINE	Rare
Cololejeunea rossettiana	BOSNIA & HERZEGOVINA	Pantović *et al.* (2016)
Cololejeunea rossettiana	MONTENEGRO	Low risk
Cololejeunea rossettiana	UKRAINE	Rare

Taxon	Country	Note
Conocephalum conicum	BELARUS	*s.l.*?
Conocephalum conicum	CORSICA	*s.l.*?
Conocephalum conicum	CRETE	*s.l.*?
Conocephalum conicum	DENMARK	*s.l.*?
Conocephalum conicum	ESTONIA	Both *C. conicum* & *C. salebrosum* confirmed (Nele Ingerpuu *pers. comm.* Jan. 2019)
Conocephalum conicum	LATVIA	*s.l.*?
Conocephalum conicum	LITHUANIA	*s.l.*?
Conocephalum conicum	NORTH MACEDONIA	*s.l.*?
Conocephalum conicum	MADEIRA	More frequent in Madeira than *C. salebrosum* (M. Sim-Sim *pers. comm.* Jan. 2019)
Conocephalum conicum	NETHERLANDS	*s.l.*?
Conocephalum conicum	NW RUSSIA	*s.l.*?
Conocephalum conicum	SARDINIA	*s.l.*?
Conocephalum conicum	SERBIA	*s.l.*?
Conocephalum conicum	SICILY	*s.l.*?
Crossocalyx hellerianus	MONTENEGRO	Dragićević *et al.* (2017)
Diplophyllum obtusatum	SWITZERLAND	Urmi (2017a)
Diplophyllum obtusifolium	MADEIRA	Dirkse *et al.* (2018)
Douinia ovata	FRANCE	● (at risk)
Drepanolejeunea hamatifolia	FRANCE	● (at risk)
Dumortiera hirsuta	FRANCE	● (at risk)
Dumortiera hirsuta	GREECE	Delete. The only reports are from the island of Evvia (Fröhlich, 1961) and are errors (the voucher specimens in W belong to *Pellia* spp, rev. Blockeel).
Endogemma caespiticia	CROATIA	Antičević (1962), Boros (1967–1968)
Eremonotus myriocarpus	FRANCE	● (at risk)
Exormotheca pustulosa	FRANCE	● (at risk)
Fossombronia angulosa	MONTENEGRO	Deleted (Dragićević, *pers. comm.* May 2020)
Fossombronia caespitiformis	TURKEY	Natcheva *et al.* (2008)
Fossombronia caespitiformis subsp. *caespitiformis*	CRETE	Urmi (2017b)
Fossombronia fleischeri	GERMANY	The type is from Germany, but the identity of this species in relation to *F. incurva* remains confused.
Fossombronia foveolata	GREECE	Report from Corfu (Shimwell, 1980) is surely an error.
Fossombronia foveolata	SWITZERLND	RE (but refound since)
Fossombronia incurva	FRANCE	Delete (V. Hugonnot *pers. comm.* Jan. 2019)
Fossombronia maritima	CORSICA	Hugonnot & Simont (2018)
Fossombronia maritima	TURKEY	Was included on basis of information received (Mesud Kirmaci via Papp, March 2014), but seems unlikely.
Fossombronia mittenii	FRANCE	● (at risk)
Fossombronia mittenii	GREAT BRITAIN	Critically Endangered (Possibly Extinct) is a tag used by Birdlife International (see https://en.wikipedia.org/wiki/Red-listed), and one that was used for the new British bryophyte Red List.
Fossombronia mittenii	PORTUGAL	Dubious (C. Sérgio *pers. comm.* 2017)
Frullania cleistostoma	GREECE	Delete. The reports are from the early 19th century (Lindenberg, 1829; Bory, 1832) from localities with a Mediterranean climate and are implausible on phytogeographic grounds.

Taxon	Country	Note
Frullania jackii	MONTENEGRO	Andić *et al.* (2013)
Fuscocephaloziopsis albescens	CROATIA	Deleted; erroneously added to previous checklists, but unsupported by literature or specimens (Antun Alegro *pers. comm.* May 2020).
Fuscocephaloziopsis albescens	CZECH REPUBLIC	Deleted (Kučera & Váňa, 2003)
Fuscocephaloziopsis albescens	FRANCE	● (at risk)
Fuscocephaloziopsis albescens	UKRAINE	Rare
Fuscocephaloziopsis catenulata	FRANCE	● (at risk)
Fuscocephaloziopsis catenulata	MADEIRA	Old records from Persson (1939) (C. Sergio *pers. comm.*)
Fuscocephaloziopsis catenulata	SPAIN	DD-vanished
Fuscocephaloziopsis leucantha	KALININGRAD	Nadya Konstantinova (*pers. comm.* 2017)
Fuscocephaloziopsis loitlesbergeri	FRANCE	● (at risk)
Fuscocephaloziopsis pleniceps	FRANCE	● (at risk)
Fuscocephaloziopsis pleniceps	NORTH MACEDONIA	Papp & Erzberger (2012)
Fuscocephaloziopsis pleniceps	MONTENEGRO	Deleted (Dragićević, *pers. comm.* May 2020)
Geocalyx graveolens	GREECE	Delete; the reports are from the early 19th century (Lindenberg, 1829; Bory, 1832) from localities with a Mediterranean climate and are implausible on phytogeographic grounds
Gymnocolea inflata	GREECE	Delete; the records are from the early/mid 19th century and are unconfirmed. Düll (1995) considers them doubtful.
Gymnomitrion brevissimum	FRANCE	● (at risk)
Gymnomitrion commutatum	FRANCE	● (at risk)
Gymnomitrion obtusum	FRANCE	● (at risk)
Gymnomitrion revolutum	SLOVAKIA	old records only (1921) & probably extinct - Górski & Váňa (2014)
Harpalejeunea molleri	FRANCE	● (at risk)
Harpanthus flotovianus	FRANCE	● (at risk)
Harpanthus scutatus	MONTENEGRO	Papp *et al.* (2013)
Herbertus azoricus	AZORES	There are actually two species in the Azores, one of them (*H. azoricus*) is *H. juniperoideus*, or very close to it; the other is closely related to *H. borealis.* The idea that Azorean material is *H. sendtneri* (Feldberg *et al.*, 2004) is not accepted: see Juslén (2006).
Heterogemma laxa	LATVIA	A. Opmanis *pers. comm.* (via A. Mežaka & S. Caspari), Dec. 2018.
Hygrobiella laxifolia	FRANCE	● (at risk)
Isopaches bicrenatus	NORTH MACEDONIA	Papp & Erzberger (2012)
Jungermannia borealis	FRANCE	Needs verification (V. Hugonnot *pers. comm.* Jan. 2019)
Jungermannia borealis	SVALBARD	Only on Jan Mayen; reports from Svalbard are all questionable (L. Söderström *pers. comm.* Dec. 2018).
Jungermannia polaris	FRANCE	● (at risk)
Jungermannia polaris	GREECE	The only record is from the island of Evvia (Krause *et al.*, 1963) and is doubtful. According to Düll (1995) the specimen was confirmed by Váňa, but Jiri Váňa (*pers. comm.* to T.L. Blockeel, Dec. 2017) has no record or recollection of seeing the specimen.
Jungermannia pumila	CROATIA	Alegro *et al.* (2014)

Taxon	Country	Note
Jungermannia pumila	MONTENEGRO	Very old record only (Dragićević *pers. comm.* May 2020)
Kurzia sylvatica	FRANCE	● (at risk)
Kurzia trichoclados	FINLAND	Juutinen *et al.* (2018)
Kurzia trichoclados	FRANCE	● (at risk)
Lejeunea cavifolia	CYPRUS	Frahm *et al.* (2009), Kaufmann & Berg (2014)
Lejeunea cavifolia	NORTH MACEDONIA	Papp & Erzberger (2012)
Lejeunea patens	CAUCASUS	Duda & Vezda (1981); however, all other records of this species from Eastern Europe have proved to be *L. cavifolia*, and the Caucasus specimen needs re-examining (L. Söderström, N. Konstantinova *pers. comm.* Jan. 2019).
Lejeunea patens	FRANCE	● (at risk)
Lepidozia cupressina	FRANCE	● (at risk)
Lophocolea bidentata	ARCTIC RUSSIA	Deleted, as record of Zinovjeva (1973) is dubious (N. Konstantinova *pers. comm.* Jan. 2019).
Lophocolea coadunata	All countries	*L. coadunata* probably occurs in most countries and territories, but country occurrences for *L. bidentata* and *L. coadunata* have to be treated with caution. *L. coadunata* has been treated differently across Europe, from not being recognised at all to having detailed records separate from *L. bidentata*.
Lophocolea fragrans	FRANCE	● (at risk)
Lophozia ascendens	FRANCE	● (at risk)
Lophozia guttulata	CROATIA	One literature record (Düll *et al*., 1999), later synonymised, probably incorrectly, with *L. longiflora*; therefore it is not certain which species occurs (Antun Alegro *pers. comm.* 2020).
Lophozia murmanica	FINLAND	Now confirmed for Finland (Lars Söderström *pers. comm.* Dec. 2018).
Lophozia murmanica	NORWAY	Now two reliable reports from mainland Norway (Lars Söderström *pers. comm.* July 2018).
Lophozia murmanica	RUSSIA	Added for 3 regions (N. Konstantinova *pers. comm.* Jan. 2019).
Lophozia schusteriana	POLAND	Delete (L. Söderström *pers. comm.* Nov. 2018)
Lophozia silvicola	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Lophozia wenzelii	MONTENEGRO	Papp *et al.* (2013)
Lophozia wenzelii	SERBIA	Reported by Pantović *et al.* (2020)
Lophoziopsis excisa	CROATIA	Deleted: the locality is in Montenegro (Antun Alegro *pers. comm.* May 2020).
Lophoziopsis excisa var. *elegans*	ARCTIC RUSSIA	N. Konstantinova *pers. comm.* Jan. 2019
Lophoziopsis jurensis	SERBIA	Rejected (Pantović *et al*., 2020)
Lophoziopsis jurensis	SWITZERLND	*L. latifolia* is a synonym
Lophoziopsis pellucida	FINLAND	Confirmed record (L. Söderström *pers. comm.* Dec. 2018)
Lophoziopsis pellucida	FRANCE	Delete (V. Hugonnot *pers. comm.* Jan. 2019)
Lophoziopsis polaris	NORTH MACEDONIA	Reported by Sabovljević & Nacheva (2006), but very improbable records for this poorly known arctic species.

Taxon	Country	Note
Lophoziopsis polaris	SLOVENIA	Reported by Sabovljević & Nacheva (2006), but very improbable records for this poorly known arctic species.
Lophoziopsis rubrigemma	RUSSIA NORTH	Deleted (N. Konstantinova *pers. comm.* Nov. 2018)
Lunularia cruciata	CENTRAL RUSSIA	Only in greenhouse in Moscow, so rejected (N. Konstantinova *pers. comm.* Jan. 2019).
Lunularia cruciata	UKRAINE	Reported by Düll (1983) and again in Boiko (2014), but without any support. However, the record is not so unlikely that it must be discounted.
Mannia androgyna	UKRAINE	Borovichev & Nyporko (2014)
Mannia controversa	FRANCE	● (at risk)
Mannia fragrans	MONTENEGRO	Papp *et al.* (2019)
Mannia gracilis	GREECE	This is unpublished for Greece, but occurs on the northern mainland (Blockeel, 2013).
Mannia triandra	SERBIA	Rejected (Pantović *et al.*, 2020)
Mannia triandra	SPAIN	Deleted (Brugués *et al.*, 2011).
Mannia triandra	SVALBARD	Borovichev (2010)
Marchantia polymorpha	CYPRUS	Reported by Sibthorp & Smith *(Flora Graeca,* 1816) but not since (L. Söderström *pers. comm.* July 2018).
Marchantia polymorpha subsp. *polymorpha*	CRETE	Düll & Düll-Hermanns (1973); also C. Schröck *pers. comm.* (1999); record for subsp. *ruderalis* deleted.
Marchantia quadrata subsp. *hyperborea*	DENMARK	Irina Goldberg *pers. comm.* Jan. 2019
Marchantia quadrata subsp. *hyperborea*	ARCTIC RUSSIA	N. Konstantinova *pers. comm.* Nov. 2018
Marchantia romanica	UKRAINE	Old unlocalised herbarium record only (Sorin Ştefănuţ, *pers. comm.* 2017)
Marsupella andreaeoides	SWEDEN	Old (1938) record only
Marsupella aquatica	FRANCE	L. Söderström *pers. comm.* Jan. 2019
Marsupella aquatica	ITALY	L. Söderström *pers. comm.* Jan. 2019
Marsupella boeckii	FRANCE	● (at risk)
Marsupella boeckii	SPAIN	Deleted (Brugués *et al.*, 2011)
Marsupella condensata	FRANCE	● (at risk)
Marsupella spiniloba	NW RUSSIA	Deleted (N. Konstantinova *pers. comm.* Nov. 2018)
Mesoptychia bantriensis	CROATIA	Deleted; erroneously added to previous checklists, but unsupported by literature or specimens (Antun Alegro *pers. comm.* May 2020).
Mesoptychia bantriensis	DENMARK	Reinstated by I. Goldberg (*pers. comm.* Feb. 2016)
Mesoptychia bantriensis	GREECE	Blockeel (2018a)
Mesoptychia gillmanii	FRANCE	● (at risk)
Mesoptychia heterocolpos var. *arctica*	SLOVAKIA	Deleted (L. Söderström *pers. comm.* Jan. 2019)
Mesoptychia heterocolpos var. *harpanthoides*	FRANZ JOSEF LAND	Confirmed (N. Konstantinova *pers. comm.* Nov. 2018)
Mesoptychia turbinata	BULGARIA	Papp *et al.* (2011)
Metzgeria conjugata	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Metzgeria consanguinea	SERBIA	Rejected (Pantović *et al.*, 2020)
Metzgeria leptoneura	UKRAINE	Listed in the Ukraine checklist (Boiko, 2014) but seems extremely improbable.

Taxon	Country	Note
Metzgeria simplex	AUSTRIA	Hardly recognisable and not included in Köckinger (2017), but listed by Düll (1991) (Köckinger *pers. comm.* Nov. 2018).
Metzgeria simplex	FRANCE	Needs verification (V. Hugonnot *pers. comm.* Jan. 2019)
Moerckia blyttii	FRANCE	● (at risk)
Moerckia flotoviana	EASTERN EUROPE	All records almost certainly refer to *M. flotoviana*, although historically they have been assigned to *M. hibernica*; see Mamontov *et al.* (2015); also N. Konstantinova *pers. comm.* Jan. 2019.
Moerckia flotoviana	FRANCE	● (at risk)
Moerckia flotoviana	HUNGARY	*M. hibernica s.l.* but most likely to be *M. flotoviana.*
Moerckia flotoviana	NORWAY	Confirmed (L. Söderström *pers. comm.* Nov. 2018)
Moerckia hibernica	EASTERN EUROPE	*Moerckia flotoviana* was synonymised with *Moerckia hibernica* by De Sloover (1959) and subsequently usually treated as such in the European literature. However, Crandall-Stotler & Stotler (2007) showed that they are distinct taxa. Thus, many reports of *Moerckia hibernica* belong to *Moerckia flotoviana.*
Moerckia hibernica	AUSTRIA	Deleted (Köckinger *pers. comm.* Nov. 2018)
Moerckia hibernica	FAROE ISLANDS	*s.l.*?
Moerckia hibernica	FINLAND	*sens. lat.*
Moerckia hibernica	FRANCE	Delete (V. Hugonnot *pers. comm.* Jan. 2019)
Moerckia hibernica	GREECE	The only record (in Gottsche *et al.,* 1844–1847) is unlocalised and unsubstantiated.
Moerckia hibernica	ICELAND	*s.l.*?
Moerckia hibernica	ITALY	*s.l.*?
Moerckia hibernica	SLOVAKIA	*s.l.*?
Mylia taylorii	FRANCE	● (at risk)
Myriocoleopsis minutissima	CORSICA	V. Hugonnot *pers. comm.* Jan. 2019
Myriocoleopsis minutissima	SERBIA	Rejected (Pantović *et al.,* 2020)
Nardia breidleri	ROMANIA	Deleted (Ştefănuţ. 2014)
Nardia breidleri	SVALBARD	Jan Mayen only
Nardia compressa	GREECE	Delete: only reported by Mazziari (1851) from the Ionian islands. The record is not credible on phtyogeographic grounds and is clearly an error.
Nardia insecta	AUSTRIA	Deleted (Köckinger *pers. comm.* Nov. 2018)
Nardia insecta	FRANCE	● (at risk)
Nardia insecta	LATVIA	A. Opmanis *pers. comm.* (via A. Mežaka & S. Caspari), Dec. 2018
Nardia japonica	FINLAND	Needs to be checked v. *N. pacifica* (Bakalin & Klimova, 2016) - N. Konstantinova *pers. comm.* Nov. 2018.
Nardia japonica	RUSSIA NORTH	Needs to be checked v. *N. pacifica* (Bakalin & Klimova, 2016) - N. Konstantinova *pers. comm.* Nov. 2018.
Nardia pacifica	NW RUSSIA	Bakalin & Klimova (2016)
Neoorthocaulis attenuatus	ARCTIC RUSSIA	Deleted (N. Konstantinova *pers. comm.* Jan. 2019).
Neoorthocaulis attenuatus	CORSICA	L. Söderström *pers. comm.* Jan. 2019
Neoorthocaulis binsteadii	SVALBARD	Jan Mayen only
Neoorthocaulis floerkei	FRANCE	● (at risk)

Taxon	Country	Note
Neoorthocaulis floerkei	SERBIA	Low risk
Neoorthocaulis hyperboreus	NOVAYA ZEMLYA	Old record only (Konstantinova & Potemkin, 1996)
Neoorthocaulis hyperboreus	POLAND	Deleted (Górski & Váňa, 2014)
Neoorthocaulis hyperboreus	SVALBARD	Nadia Konstantinova *pers. comm.* 2017
Notothylas orbicularis	CROATIA	Rimac *et al.* (2019)
Obtusifolium obtusum	NORTH MACEDONIA	Papp & Erzberger (2012)
Odontoschisma elongatum	AZORES	Feldberg *et al.* (2016)
Odontoschisma elongatum	FRANCE	● (at risk)
Odontoschisma francisci	LATVIA	Strazdiņa *et al.* (2017)
Odontoschisma sphagni	SVALBARD	Deleted (L. Söderström & N. Konstantinova *pers. comm.* Nov. 2018)
Oleolophozia perssonii	FRANCE	● (at risk)
Orthocaulis atlanticus	ARCTIC RUSSIA	Deleted (N. Konstantinova *pers. comm.* Jan. 2019).
Orthocaulis atlanticus	FRANCE	Delete (V. Hugonnot *pers. comm.* Jan. 2019)
Oxymitra incrassata	FRANCE	● (at risk)
Pallavicinia lyellii	GREECE	The only records are from the 19th century (Bory, 1832; Haussknecht, 1899) and have not been confirmed subsequently.
Pedinophyllum interruptum	S. URALS & NE RUSSIA	Deleted, as no source for records found (N. Konstantinova *pers. comm.* Jan. 2019).
Peltolepis quadrata	CROATIA	Deleted; erroneously added to previous checklists, but unsupported by literature or specimens (Antun Alegro *pers. comm.* May 2020).
Peltolepis quadrata	FRANCE	● (at risk)
Phaeoceros carolinianus	CROATIA	Rimac *et al.* (2019)
Phaeoceros laevis	CROATIA	Regarded as reliably recorded in Croatia (Antun Alegro *pers. comm.* 2020)
Phaeoceros laevis	E. EUROPE	Many probably refer to *P. carolinianus*
Plagiochasma rupestre	FRANCE	● (at risk)
Plagiochila arctica	NORWAY	Deleted (L. Söderström & N. Konstantinova *pers. comm.* Nov. 2018)
Plagiochila bifaria	FRANCE	● (at risk)
Plagiochila britannica	FRANCE	Reported from the Vosges (Frahm, 2010) but subsequently not included by Frahm (2013), and photo in the former looks like *P. porelloides*, so presence in France remains doubtful.
Plagiochila exigua	FRANCE	● (at risk)
Plagiochila spinulosa	ANDORRA	DD-vanished
Porella arboris-vitae	BOSNIA & HERZEGOVINA	Pantović *et al.* (2016)
Porella arboris-vitae	CENTRAL & NW RUSSIA	Deleted (N. Konstantinova *pers. comm.* Jan. 2019).
Porella baueri	ANDORRA	Sotiaux & Vanderpoorten (2017)
Porella canariensis	FRANCE	Needs verification (V. Hugonnot *pers. comm.* Jan. 2019)
Porella pinnata	NETHERLANDS	Old (pre-1905) record only
Prasanthus suecicus	FRANCE	● (at risk)
Protolophozia elongata	ARCTIC RUSSIA	Deleted (N. Konstantinova *pers. comm.* Jan. 2019)

Taxon	Country	Note
Pseudotritomaria heterophylla	ARCTIC RUSSIA	The specimen is so poor that it cannot be identified with certainty (Konstantinova & Potemkin, 1996), but Potemkin apparently recorded it again more recently, and its presence is to be expected.
Ptilidium pulcherrimum	ARCTIC RUSSIA	Deleted (N. Konstantinova *pers. comm.* Jan. 2019)
Ptilidium pulcherrimum	NORTHERN IRELAND	Still officially listed as RE in Ireland as a whole, but rediscovered in N. Ireland in 2012.
Radula complanata	ARCTIC RUSSIA	Deleted (N. Konstantinova *pers. comm.* Jan. 2019).
Radula complanata	CYPRUS	Kaufmann & Berg (2014)
Radula lindenbergiana	FRANCE	● (at risk)
Radula lindenbergiana	LATVIA	A. Opmanis *pers. comm.* (via A. Mežaka & S. Caspari), Dec. 2018. Also, Ābolina *et al*. (2015).
Radula visianica	ITALY	Accepted for Italy by Köckinger (2016), although the last record was in the 1930s.
Reboulia hemisphaerica	LATVIA	Refound recently, so could be changed to Category 1 (Ābolina *et al*., 2015).
Reboulia hemisphaerica subsp. *australis*	CAUCASUS	N. Konstantinova *pers. comm.* Nov. 2018
Reboulia hemisphaerica subsp. *australis*	DENMARK, PORTUGAL, SPAIN	All dubious (N. Konstantinova *pers. comm.* Nov. 2018)
Reboulia hemisphaerica subsp. *dioica*	UKRAINE	Borovichev & Nyporko (2014)
Riccardia chamedryfolia	NORTH MACEDONIA	Papp & Erzberger (2012)
Riccardia incurvata	FRANCE	● (at risk)
Riccardia incurvata	NORTH MACEDONIA	Papp & Erzberger (2012)
Riccardia incurvata	MONTENEGRO	Papp *et al.* (2019)
Riccia atromarginata	CYPRUS	Frahm *et al.* (2009); Kaufmann & Berg (2014)
Riccia canaliculata	LATVIA	A. Opmanis *pers. comm.* (via A. Mežaka & S. Caspari), Dec. 2018
Riccia cavernosa	CAUCASUS	Sofronova (2018)
Riccia cavernosa	CORSICA	V. Hugonnot *pers. comm.* Jan. 2019
Riccia cavernosa	ROMANIA	DD (now confirmed)
Riccia ciliata	MALTA	Schäfer-Verwimp & Verwimp (2019)
Riccia ciliifera	CYPRUS	Frahm *et al.* (2009); Kaufmann & Berg (2014)
Riccia crozalsii	AUSTRIA	Deleted: the only Austrian report is based on a plant which is *R. subbifurca* (Köckinger *pers. comm.* Nov. 2018)
Riccia crystallina	LATVIA	Nothing known about this species in Latvia. A. Opmanis *pers. comm.* (via A. Mežaka & S. Caspari), Dec. 2018
Riccia duplex	DENMARK	Reported but regarded as doubtful (Irina Goldberg *pers. comm.* Jan. 2019)
Riccia duplex	GERMANY	Delete (Steffen Caspari *pers. comm.*, 2017)
Riccia duplex	SWEDEN	Delete (Hallingbäck *pers. comm.*, 2017)
Riccia frostii	CAUCASUS	Sofronova (2018)
Riccia glauca	CRETE	Record by Düll & Düll-Hermans (1973) but must be considered doubtful.

Taxon	Country	Note
Riccia glauca	GREECE	Delete; the only report is by Gottsche (1861) based on collections by Mazziari from the Ionian Islands and is very dubious, being reported from 'all the islands'. This is hardly credible for a species with no other known localities in these islands or in mainland Greece.
Riccia glauca var. *ciliaris*	GREECE	Delete. Düll (2014) states 'in Greece according to Blockeel only var. *ciliaris*' but this comment is completely erroneous and was not made by Blockeel.
Riccia gothica	FRANCE	Needs verification (V. Hugonnot *pers. comm.* Jan. 2019)
Riccia huebeneriana	CAUCASUS	Sofronova (2018)
Riccia lamellosa	FRANCE	● (at risk)
Riccia macrocarpa	FRANCE	● (at risk)
Riccia papillosa	BALEARIC IS.	Pericà & Rossello (2009)
Riccia papillosa	FRANCE	● (at risk)
Riccia rhenana	LATVIA	Strazdiņa *et al.* (2017)
Riccia sorocarpa subsp. *sorocarpa*	SERBIA	Pantović *et al.* (2020)
Riccia trabutiana	FRANCE	● (at risk)
Riella cossoniana	CANARY IS.	Ros *et al.* (2007)
Riella notarisii	CORSICA	V. Hugonnot *pers. comm.* Jan. 2019
Saccogyna viticulosa	CZECH REPUBLIC	Deleted, as highly dubious (L. Söderström *pers. comm.* Nov. 2018)
Saccogyna viticulosa	LITHUANIA	Deleted, as highly dubious (L. Söderström *pers. comm.* Nov. 2018)
Sauteria alpina	FRANCE	● (at risk)
Scapania calcicola	ARCTIC RUSSIA	Deleted (Konstantinova & Bakalin, 2009)
Scapania carinthiaca	POLAND	Only >70 years old records (Jiri Váňa *pers. comm.* 2017)
Scapania carinthiaca	SLOVAKIA	Only >70 years old records (Jiri Váňa *pers. comm.* 2017)
Scapania carinthiaca var. *massalongi*	SLOVAKIA	Only >70 years old records (Jiri Váňa *pers. comm.* 2017)
Scapania crassiretis	BULGARIA	There is one record, in 1999 by Duell, det. Duda (comm. Natcheva March 2014)
Scapania curta	CRETE	There is only one record (in Duell, 1979), cited as *S. curta s.l.*, and it may refer to the broader *S. curta* complex.
Scapania cuspiduligera	ALBANIA	Puglisi *et al.* (2013)
Scapania cuspiduligera	LATVIA	A. Opmanis *pers. comm.* (via A. Mežaka & S. Caspari), Dec. 2018. Also, Ābolina *et al*. (2015).
Scapania glaucocephala	CAUCASUS	Sofronova (2018). N. Konstantinova *pers. comm.* Nov. 2018
Scapania glaucocephala	NW RUSSIA	Deleted (Sofronova, 2018)
Scapania gracilis	GREECE	Delete. The only report is from the island of Evvia (Fröhlich, 1961) and is implausible on phytogeographic grounds. T.L Blockeel has searched the locality and found only abundant *S. compacta* there. No voucher specimen could be found in W.
Scapania helvetica	UKRAINE	Rare
Scapania irrigua	CROATIA	Alegro *et al.* (2014)
Scapania lingulata	DENMARK	Recently found - Irina Goldberg *pers. comm.* Jan. 2019
Scapania mucronata	MONTENEGRO	Papp *et al.* (2013)

Taxon	Country	Note
Scapania paludicola	FRANCE	● (at risk)
Scapania paludosa	FRANCE	● (at risk)
Scapania paludosa	GREECE	Delete. The only record (in Anagnostidis 1968) was unconfirmed even at the time of publication (cited with '?').
Scapania parvifolia	BULGARIA	There is one record, in 1999 by Duell, det. Duda (comm. Natcheva March 2014)
Scapania parvifolia	SPAIN	Unconfirmed
Scapania parvifolia	SWEDEN	Tomas Hallingbäck (*pers. comm*. 9.2.18)
Scapania praetervisa	MONTENEGRO	Papp *et al.* (2013)
Scapania scandica	MONTENEGRO	Papp *et al.* (2013)
Scapania tundrae	FINLAND	Juutinen *et al.* (2018)
Scapania verrucosa	CZECH REPUBLIC	Deleted (Kučera & Váňa, 2003)
Schistochilopsis hyperarctica	C. RUSSIA	Deleted (L. Söderström, N. Konstantinova, *pers. comm.* Jan. 2019)
Schistochilopsis opacifolia	GREECE	Blockeel (2018a)
Schistochisopsis opacifolia	MONTENEGRO	Papp *et al.* (2013)
Schljakovia kunzeana	FRANCE	● (at risk)
Solenostoma confertissimum	SERBIA	Rejected (Pantović *et al.*, 2020)
Solenostoma hyalinum	NORTH MACEDONIA	Papp & Erzberger (2012)
Solenostoma hyalinum	MADEIRA	Collected several times in 2004–5 (M. Sim-Sim *pers. comm.* Jan. 2019)
Solenostoma hyalinum	MONTENEGRO	Papp *et al.* (2013)
Solenostoma obovatum	SVALBARD	Deleted; only *S. subellipticum* occurs here.
Solenostoma paroicum	SPAIN	Listed in Ros *et al.* (2007) but not in Blockeel *et al.* (2014); rejected by Brugués *et al.* (2011).
Solenostoma sphaerocarpum	all	*S. pusillum* now synopnymised with this species (Söderström *et al*., 2016); Denmark added as a result.
Solenostoma subellipticum	Most countries unassigned	Reinstated into Checklist at a late stage; European distribution not yet available, but see note for *S. obovatum* for Svalbard.
Sphenolobus minutus	MONTENEGRO	Papp *et al.* (2013)
Sphenolobus minutus	SERBIA	Low risk
Syzygiella autumnalis	CORSICA	Söderström *pers. comm.* Jan. 2019
Targionia hypophylla	AUSTRIA	Deleted (Köckinger *pers. comm.* Nov. 2018)
Targionia hypophylla	TURKEY	Söderström *pers. comm.* Jan. 2019
Targionia lorbeeriana	MALTA	Schäfer-Verwimp & Verwimp (2019)
Telaranea europaea	FRANCE	● (at risk)
Tetralophozia setiformis	FRANCE	needs verification (V. Hugonnot *pers. comm.* Jan. 2019)
Tetralophozia setiformis	C. RUSSIA	Deleted (L. Söderström, N. Konstantinova, *pers. comm.* Jan. 2019)
Trichocolea tomentella	CAUCASUS	Sofronova (2018)
Trichocolea tomentella	GREECE	Delete: only reported by Mazziari (1851) from the Ionian islands. Record is not credible on phtyogeographic grounds and is an error.
Tritomaria exsectiformis	CROATIA	Deleted; erroneously added to previous checklists, but unsupported by literature or specimens (Alegro *pers. comm.* May 2020).
Tritomaria scitula	FRANCE	● (at risk)
Tritomaria scitula	GREECE	Delete. The report in Blockeel (2013) is an error. The specimen is a small form of *Barbilphozia hatcheri*.

2.1.2 Taxon details - Liverworts and hornworts

Genus	Specific/Sub-specific epithets	Authority	Notes
Acanthocoleus	*aberrans*	(Lindenb. & Gottsche) Kruijt	Only var. *laevis* Gradst. in Macaronesia.
Acrobolbus	*azoricus*	(Grolle & H.Perss.) Briscoe	(= *Tylimanthus azoricus*). *Tylimanthus laxus* (Lehm. & Lindenb.) Spruce/*Acrobolbus laxus* (Lehm. & Lindenb.) Briscoe appears to be an American species (Burghardt & Gradstein, 2008; Briscoe *et al.*, 2015; Briscoe *et al.*, 2017; L. Söderström *pers. comm.* July 2018)
Acrobolbus	*madeirensis*	(Grolle & H.Perss.) Briscoe	(= *Tylimanthus madeirensis*). *Tylimanthus laxus* (Lehm. & Lindenb.) Spruce/*Acrobolbus laxus* (Lehm. & Lindenb.) Briscoe appears to be an American species (Burghardt & Gradstein, 2008; Briscoe *et al.*, 2015; Briscoe *et al.*, 2017; L. Söderström *pers. comm.* July 2018)
Acrobolbus	*wilsonii*	Nees	
Adelanthus	*lindenbergianus*	(Lehm.) Mitt.	
Anastrepta	*orcadensis*	(Hook.) Schiffn.	
Anastrophyllum	*alpinum*	Steph.	
Anastrophyllum	*assimile*	(Mitt.) Steph.	
Anastrophyllum	*donnianum*	(Hook.) Steph.	
Anastrophyllum	*joergensenii*	Schiffn.	
Anastrophyllum	*michauxii*	(F.Weber) H.Buch	
Aneura	*latissima*	Spruce	*(= A. pseudopinguis* (Herzog) Pócs, but probably does not occur in Europe (L. Söderström *pers. comm.* June 2018)
Aneura	*maxima*	(Schiffn.) Steph.	
Aneura	*mirabilis*	(Malmb.) Wickett & Goffinet	*(= Cryptothallus mirabilis)*
Aneura	*pinguis*	(L.) Dumort.	
Anthelia	*julacea*	(L.) Dumort.	
Anthelia	*juratzkana*	(Limpr.) Trevis.	
Anthoceros	*agrestis*	Paton	
Anthoceros	*caucasicus*	Steph.	
Anthoceros	*neesii*	Prosk.	
Anthoceros	*punctatus*	L.	
Apopellia	*endiviifolia*	(Dicks.) Nebel & D.Quandt	(= *Pellia endiviifolia* (Dicks.) Dumort. (Schütz *et al.*, 2016)
Arnellia	*fennica*	(Gottsche & Rabenh.) Lindb.	
Asterella	*africana*	(Mont.) Underw. ex A.Evans	
Asterella	*lindenbergiana*	(Corda ex Nees) Lindb. ex Arnell	
Asterella	*saccata*	(Wahlenb.) A.Evans	
Barbilophozia	*barbata*	(Schmidel ex Schreb.) Loeske	
Barbilophozia	*hatcheri*	(A.Evans) Loeske	
Barbilophozia	*lycopodioides*	(Wallr.) Loeske	

Genus	Specific/Sub-specific epithets	Authority	Notes
Barbilophozia	*rubescens*	(R.M.Schust. & Damsh.) Kartt. & L.Söderstr.	
Barbilophozia	*sudetica*	(Nees ex Huebener) L. Söderstr., De Roo & Hedd.	*(= Lophozia sudetica)*
Bazzania	*azorica*	H.Buch & Perss.	
Bazzania	*flaccida*	(Dumort.) Grolle	
Bazzania	*pearsonii*	Steph.	
Bazzania	*tricrenata*	(Wahlenb.) Lindb.	var. *tricrenata*
Bazzania	*trilobata*	(L.) Gray	
Bazzania	*trilobata* var. *depauperata*	(Müll.Frib.) Grolle	
Bazzania	*trilobata* var. *trilobata*		
Biantheridion	*undulifolium*	(Nees) Konstant. & Vilnet	*(= Jamesoniella undulifolia)*
Blasia	*pusilla*	L.	
Blepharostoma	*trichophyllum*	(L.) Dumort.	
Blepharostoma	*trichophyllum* subsp. *brevirete*	(Bryhn & Kaal.) R.M.Schust.	
Blepharostoma	*trichophyllum* subsp. *trichophyllum*		
Calycularia	*laxa*	Lindb. & Arnell	
Calypogeia	*arguta*	Nees & Mont.	
Calypogeia	*azorica*	Bischl.	
Calypogeia	*azurea*	Stotler & Crotz	
Calypogeia	*fissa*	(L.) Raddi	
Calypogeia	*fissa* subsp. *fissa*		
Calypogeia	*fissa* subsp. *neogaea*	R.M.Schust.	
Calypogeia	*fissa* var. *paludosa*	(Warnst.) Damsh.	Damsholt (2017) transferred *Calypogeia sphagnicola* f. *paludosa* (Warnst.) R.M.Schust. to *Calypogeia fissa*. Buczkowska *et al*. (2018) included both 'f. *sphagnicola*' and 'f. *paludosa*' in their study on, primarily, the *Calypogeia* species with blue oil bodies. However, in their molecular phylogenetic tree, '*paludosa*' came out distinctly separated from '*sphagnicola*' and closer to *Calypogeia fissa* (supporting Damsholt's view), although far enough from it that it should perhaps deserve recognition at species level. For now, to avoid premature nomenclatural changes we treat it as a variety without affiliation to any of the subspecies pending further research.
Calypogeia	*integristipula*	Steph.	
Calypogeia	*muelleriana*	(Schiffn.) Müll.Frib.	subsp. *muelleriana*
Calypogeia	*neesiana*	(C.Massal. & Carestia) Müll.Frib.	subsp. *neesiana*
Calypogeia	*sphagnicola*	(Arnell & J.Perss.) Warnst. & Loeske	
Calypogeia	*suecica*	(Arnell & J.Perss.) Müll.Frib.	
Cephalozia	*affinis*	Lindb. ex Steph.	

Genus	Specific/Sub-specific epithets	Authority	Notes
Cephalozia	*ambigua*	C.Massal.	
Cephalozia	*bicuspidata*	(L.) Dumort.	
Cephalozia	*bicuspidata* subsp. *bicuspidata*		
Cephalozia	*bicuspidata* subsp. *lammersiana*	(Huebener) R.M.Schust.	
Cephalozia	*crossii*	Spruce	Ellis *et al.* (2018)
Cephalozia	*lacinulata*	(J.B.Jack ex Gottsche & Rabenh.) Spruce	
Cephalozia	*macounii*	(Austin) Austin	
Cephaloziella	*arctogena*	(R.M.Schust.) Konstant.	
Cephaloziella	*aspericaulis*	Jørg.	
Cephaloziella	*baumgartneri*	Schiffn.	
Cephaloziella	*calyculata*	(Durieu & Mont.) Müll.Frib.	
Cephaloziella	*dentata*	(Raddi) Steph.	
Cephaloziella	*divaricata*	(Sm.) Schiffn.	
Cephaloziella	*divaricata* var. *divaricata*		
Cephaloziella	*divaricata* var. *scabra*	(M.Howe) Haynes	
Cephaloziella	*elachista*	(J.B.Jack ex Gottsche & Rabenh.) Schiffn.	
Cephaloziella	*elegans*	(Heeg) Schiffn.	
Cephaloziella	*granatensis*	(J.B.Jack ex Steph.) Fulford	
Cephaloziella	*grimsulana*	(J.B.Jack ex Gottsche & Rabenh.) Lacout.	
Cephaloziella	*hampeana*	(Nees) Schiffn. ex Loeske	
Cephaloziella	*integerrima*	(Lindb.) Warnst.	
Cephaloziella	*massalongi*	(Spruce) Müll.Frib.	
Cephaloziella	*nicholsonii*	Douin	
Cephaloziella	*phyllacantha*	(C.Massal. & Carestia) Müll.Frib.	
Cephaloziella	*polystratosa*	(R.M.Schust. & Damsh.) Konstant.	
Cephaloziella	*rubella*	(Nees) Warnst.	
Cephaloziella	*spinigera*	(Lindb.) Jørg.	
Cephaloziella	*stellulifera*	(Taylor ex Carrington & Pearson) Schiffn.	
Cephaloziella	*turneri*	(Hook.) Müll.Frib.	
Cephaloziella	*uncinata*	R.M.Schust.	var. *uncinata*
Cephaloziella	*varians*	(Gottsche) Steph.	
Cheilolejeunea	*cedercreutzii*	(H.Buch & Perss.) Grolle	
Chiloscyphus	*pallescens*	(Ehrh. ex Hoffm.) Dumort.	
Chiloscyphus	*pallescens* var. *fragilis*	(Roth) Müll.Frib.	
Chiloscyphus	*pallescens* var. *pallescens*		
Chiloscyphus	*polyanthos*	(L.) Corda	
Chiloscyphus	*polyanthos* var. *polyanthos*		
Chiloscyphus	*polyanthos* var. *rivularis*	(Schrad.) Lindb. & Arnell	
Clevea	*hyalina*	(Sommerf.) Lindb.	
Clevea	*spathysii*	(Lindenb.) Müll.Frib.	
Cololejeunea	*azorica*	V.Allorge & Ast	
Cololejeunea	*calcarea*	(Lib.) Schiffn.	
Cololejeunea	*madeirensis*	Schiffn.	
Cololejeunea	*microscopica*	(Taylor) Schiffn.	var. *microscopica*

Genus	Specific/Sub-specific epithets	Authority	Notes
Cololejeunea	*rossettiana*	(C.Massal.) Schiffn.	
Cololejeunea	*schaeferi*	Grolle	
Cololejeunea	*sintenisii*	(Steph.) Pócs	
Colura	*calyptrifolia*	(Hook.) Dumort.	
Conocephalum	*conicum*	(L.) Dumort.	
Conocephalum	*salebrosum*	Szweyk., Buczk. & Odrzyk.	
Corsinia	*coriandrina*	(Spreng.) Lindb.	
Crossocalyx	*hellerianus*	(Nees ex Lindenb.) Meyl.	(= *Anastrophyllum hellerianum*)
Cryptocolea	*imbricata*	R.M.Schust.	
Cyathodium	*foetidissimum*	Schiffn.	
Diplophyllum	*albicans*	(L.) Dumort.	
Diplophyllum	*obtusatum*	(R.M.Schust.) R.M.Schust.	
Diplophyllum	*obtusifolium*	(Hook.) Dumort.	subsp. *obtusifolium*
Diplophyllum	*taxifolium*	(Wahlenb.) Dumort.	subsp. *taxifolium*
Douinia	*ovata*	(Dicks.) H.Buch	
Drepanolejeunea	*hamatifolia*	(Hook.) Schiffn.	
Dumortiera	*hirsuta*	(Sw.) Nees 1824	subsp. *hirsuta*
Endogemma	*caespiticia*	(Lindenb.) Konstant., A.Vilnet & A.V.Troitsky	(= *Jungermannia caespiticia*)
Eremonotus	*myriocarpus*	(Carrington) Lindb. & Kaal. ex Pearson	
Exormotheca	*pustulosa*	Mitt.	
Exormotheca	*welwitschii*	Steph.	
Fossombronia	*angulosa*	(Dicks.) Raddi	
Fossombronia	*caespitiformis*	(Raddi) De Not. ex Rabenh.	
Fossombronia	*caespitiformis* subsp. *caespitiformis*		
Fossombronia	*caespitiformis* subsp. *multispira*	(Schiffn.) J.R.Bray & Cargill	
Fossombronia	*crispa*	Nees	
Fossombronia	*echinata*	Macvicar	
Fossombronia	*fimbriata*	Paton	
Fossombronia	*fleischeri*	Osterwald ex Loeske	
Fossombronia	*foveolata*	Lindb.	
Fossombronia	*incurva*	Lindb.	
Fossombronia	*leucoxantha*	(Lehm.) Lehm. & Lindenb.	
Fossombronia	*maritima*	(Paton) Paton	
Fossombronia	*mittenii*	Tind.	
Fossombronia	*pusilla*	(L.) Nees	
Fossombronia	*wondraczekii*	(Corda) Dumort. ex Lindb.	
Frullania	*acicularis*	Hentschel & von Konrat	Heinrichs *et al.* (2010); Vilnet *et al.* (2014); Hentschel *et al.* (2015)
Frullania	*azorica*	Sim-Sim, Sérgio, Mues & Kraut	
Frullania	*bolanderi*	Austin	
Frullania	*calcarifera*	Steph.	Heinrichs *et al.* (2010); Vilnet *et al.* (2014); Hentschel *et al.* (2015)

Genus	Specific/Sub-specific epithets	Authority	Notes
Frullania	*cleistostoma*	Schiffn. & W.Wollny	This species was formerly known as *F. inflata* Gottsche, which is now regarded as a North American endemic. The species was described from Central Europe near the border of Austria and Italy but then was synonymized with *F. inflata*. The study of type material and molecular studies of recent collections reveal that *F. inflata* is endemic to North America from the pantropical subgenus *Chonanthelia*, which is not present in Europe (N. Konstantinova *pers. comm.* Nov. 2018). See Mamontov *et al*. (2018).
Frullania	*dilatata*	(L.) Dumort.	subsp. *dilatata*
Frullania	*ericoides*	(Nees) Mont.	var. *ericoides*
Frullania	*fragilifolia*	(Taylor) Taylor ex Gottsche, Lindenb. & Nees	
Frullania	*jackii*	Gottsche	
Frullania	*microphylla*	(Gottsche) Pearson	
Frullania	*oakesiana*	Austin	subsp. *oakesiana*
Frullania	*parvistipula*	Steph.	
Frullania	*polysticta*	Lindenb.	
Frullania	*riparia*	Hampe ex Lehm. & Lindenb.	subsp. *cesatiana* comb. ined., according to L. Söderström *pers. comm.* June 2018. Recognised in some areas as a species *F. cesatiana* De Not. (Sim Sim, 1999)
Frullania	*sergiae*	Sim-Sim, Fontinha, Mues & Lion	
Frullania	*stylifera*	(R.M.Schust.) R.M.Schust.	Konstantinova *et al.* (2020)
Frullania	*subarctica*	Vilnet, Borovich. & Bakalin	Heinrichs *et al.* (2010); Vilnet *et al.* (2014); Hentschel *et al.* (2015)
Frullania	*tamarisci*	(L.) Dumort.	
Frullania	*teneriffae*	(F.Weber) Nees	
Fuscocephaloziopsis	*affinis*	(Lindb. ex Steph.) Váňa et L.Söderstr.	(= *Cephalozia affinis* Lindb. ex Steph.)
Fuscocephaloziopsis	*albescens*	(Hook.) Váňa & L.Söderstr.	(= *Pleurocladula albescens* (Hook.) Grolle)
Fuscocephaloziopsis	*albescens* var. *albescens*		(= *Pleurocladula albescens* var. *albescens*)
Fuscocephaloziopsis	*albescens* var. *islandica*	(Nees) Váňa & L.Söderstr.	(= *Pleurocladula albescens* var. islandica (Nees) L.Söderstr. & Váňa)
Fuscocephaloziopsis	*catenulata*	(Huebener) Váňa et L.Söderstr.	subsp. *catenulata* (= *Cephalozia catenulata* (Huebener) Lindb.) var. *catenulata*)
Fuscocephaloziopsis	*connivens*	(Dicks.) Váňa et L.Söderstr.	subsp. *connivens* (= *Cephalozia connivens (*Dicks.) Lindb.) subsp. *connivens*)
Fuscocephaloziopsis	*crassifolia*	(Lindenb. et Gottsche) Váňa et L.Söderstr.	(= *Cephalozia crassifolia* (Lindenb. & Gottsche) Fulford)

Genus	Specific/Sub-specific epithets	Authority	Notes
Fuscocephaloziopsis	*leucantha*	(Spruce) Váňa et L.Söderstr.	(= *Cephalozia leucantha* Spruce)
Fuscocephaloziopsis	*loitlesbergeri*	(Schiffn.) Váňa et L.Söderstr.	(= *Cephalozia loitlesbergeri* Schiffn.)
Fuscocephaloziopsis	*lunulifolia*	(Dumort.) Váňa et L.Söderstr.	(= *Cephalozia lunulifolia* (Dumort.) Dumort.)
Fuscocephaloziopsis	*macrostachya*	(Kaal.) Váňa et L.Söderstr.	subsp. *macrostachya* (= *Cephalozia macrostachya* Kaal. subsp. *macrostachya)*
Fuscocephaloziopsis	*macrostachya* var. *macrostachya*		(= *Cephalozia macrostachya* var. *macrostachya* (Huebener) Lindb.)
Fuscocephaloziopsis	*macrostachya* var. *spiniflora*	(Schiffn.) Váňa et L.Söderstr.	(= *Cephalozia macrostachya* var. *spiniflora* (Schiffn.) Müll.Frib.)
Fuscocephaloziopsis	*pleniceps*	(Austin) Váňa et L.Söderstr.	var. *pleniceps* (= *Cephalozia pleniceps* (Austin) Lindb.) var. *pleniceps*
Geocalyx	*graveolens*	(Schrad.) Nees	
Gongylanthus	*ericetorum*	(Raddi) Nees	
Gymnocolea	*borealis*	(Frisvoll & Moen) R.M.Schust.	
Gymnocolea	*fascinifera*	Potemkin	
Gymnocolea	*inflata*	(Huds.) Dumort.	
Gymnocolea	*inflata* subsp. *acutiloba*	Schiffn.) R.M.Schust. & Damsh. ex L.Söderstr. & Váňa	
Gymnocolea	*inflata* subsp. *inflata*		
Gymnomitrion	*adustum*	Nees	
Gymnomitrion	*alpinum*	(Gottsche ex Husn.) Schiffn.	
Gymnomitrion	*brevissimum*	(Dumort.) Warnst.	
Gymnomitrion	*commutatum*	(Limpr.) Schiffn.	
Gymnomitrion	*concinnatum*	(Lightf.) Corda	
Gymnomitrion	*corallioides*	Nees	
Gymnomitrion	*crenulatum*	Gottsche ex Carrington	
Gymnomitrion	*obtusum*	Lindb.	
Gymnomitrion	*revolutum*	(Nees) H.Philib.	subsp. *revolutum* (= *Apomarsupella revoluta* (Nees). R.M.Schust.)
Haplomitrium	*hookeri*	(Lyell ex Sm.) Nees	var. *hookeri*
Harpalejeunea	*molleri*	(Steph.) Grolle	
Harpanthus	*flotovianus*	(Nees) Nees	
Harpanthus	*scutatus*	(F.Weber & D.Mohr) Spruce	
Herbertus	*azoricus*	(Steph.) P.W.Richards	There are actually two species in the Azores, one of them (*H. azoricus*) is *H. juniperoideus*, or very close to it; the other is closely related to *H. borealis.* The idea that Azorean material is *H. sendtneri* (Feldberg *et al.,* 2004) is not accepted: see Juslén (2006).
Herbertus	*borealis*	Crundw.	
Herbertus	*hutchinsiae*	(Gottsche & Rabenh.) A.Evans	
Herbertus	*norenus*	D.G.Long, D.Bell & H.H.Blom	
Herbertus	*sendtneri*	(Nees) Lindb.	
Herbertus	*stramineus*	(Dumort.) Trevis.	
Heterogemma	*capitata*	(Hook.) Konstant. & Vilnet	(= *Lophozia capitata*)
Heterogemma	*laxa*	(Lindb.) Konstant. & Vilnet	(= *Lophozia laxa*)
Heteroscyphus	*denticulatus*	(Mitt.) Schiffn.	
Heteroscyphus	*fissistipus*	(Hook.f. & Taylor) Schiffn.	
Hygrobiella	*laxifolia*	(Hook.) Spruce	

Genus	Specific/Sub-specific epithets	Authority	Notes
Isopaches	*alboviridis*	(R.M.Schust.) Schljakov	(= *Lophozia alboviridis*)
Isopaches	*bicrenatus*	(Schmidel ex Hoffm.) H.Buch	var. *bicrenatus* (= *Lophozia bicrenata*)
Isopaches	*decolorans*	(Limpr.) H.Buch	(= *Lophozia decolorans*)
Jubula	*hutchinsiae*	(Hook.) Dumort.	
Jubula	*hutchinsiae* subsp. *caucasica*	Konstant. & Vilnet	
Jubula	*hutchinsiae* subsp. *hutchinsiae*		
Jungermannia	*atrovirens*	Dumort.	
Jungermannia	*borealis*	Damsh. & Váňa	
Jungermannia	*calcicola*	Konstant. & Vilnet	
Jungermannia	*eucordifolia*	Schljakov	*J. exsertifolia* subsp. *cordifolia* (Dumort.) Váňa
Jungermannia	*polaris*	Lindb.	
Jungermannia	*pumila*	With.	
Kurzia	*pauciflora*	(Dicks.) Grolle	
Kurzia	*sylvatica*	(A.Evans) Grolle	
Kurzia	*trichoclados*	(Müll.Frib.) Grolle	
Lejeunea	*canariensis*	(Steph.) Steph.	*Lejeunea canariensis* from Madeira was nested within *Lejeunea laetevirens* in the study by Heinrichs *et al*. (2013). However, *Lejeunea laetevirens* seems to be a complex species with several other taxa also nested within it. We keep *Lejeunea canariensis* as a separate species for now, recognizing that it seems to be the only element of the *Lejeunea laetevirens* complex occurring in Macaronesia.
Lejeunea	*cavifolia*	(Ehrh.) Lindb.	
Lejeunea	*eckloniana*	Lindenb.	
Lejeunea	*flava*	(Sw.) Nees	subsp. *moorei* (Lindb.) R.M.Schust.
Lejeunea	*hibernica*	Bischl., H.A.Mill. & Bonner ex Grolle	
Lejeunea	*lamacerina*	(Steph.) Schiffn.	subsp. *lamacerina*
Lejeunea	*mandonii*	(Steph.) Müll.Frib.	
Lejeunea	*patens*	Lindb.	
Lepidozia	*cupressina*	(Sw.) Lindenb.	subsp. *cupressina.* Incl. subsp. *pinnata* (Hook.) Pócs (Pócs *et al.*, 2016)
Lepidozia	*pearsonii*	Spruce	
Lepidozia	*reptans*	(L.) Dumort.	
Lepidozia	*stuhlmannii*	Steph.	
Leptoscyphus	*cuneifolius*	(Hook.) Mitt.	subsp. *cuneifolius*
Leptoscyphus	*porphyrius*	(Nees) Grolle	subsp. *azoricus* (H.Buch & Perss.) Vanderp. & Heinrichs
Liochlaena	*lanceolata*	Nees	(= *Jungermannia leiantha*)

Genus	Specific/Sub-specific epithets	Authority	Notes
Liochlaena	*subulata*	(A.Evans) Schljakov	(= *Jungermannia subulata*). This may be a different taxon from the plant with the same name in Asia (N. Konstantinova *pers. comm.* Nov. 2018)
Lophocolea	*bidentata*	(L.) Dumort.	
Lophocolea	*bispinosa*	(Hook.f. & Taylor) Taylor ex Gottsche, Lindenb. & Nees	
Lophocolea	*brookwoodiana*	Paton & Sheahan	
Lophocolea	*coadunata*	(Sw.) Mont.	
Lophocolea	*fragrans*	(Moris & De Not.) Gottsche, Lindenb. & Nees	subsp. *fragrans*
Lophocolea	*heterophylla*	(Schrad.) Dumort.	subsp. *heterophylla*
Lophocolea	*minor*	Nees	
Lophocolea	*semiteres*	(Lehm.) Mitt.	subsp. *semiteres*
Lophozia	*ascendens*	(Warnst.) R.M.Schust.	
Lophozia	*ciliata*	Damsh., L.Söderstr. & H.Weibull	
Lophozia	*fuscovirens*	Bakalin & Vilnet	
Lophozia	*guttulata*	(Lindb. & Arnell) A.Evans	Although *Lophozia longiflora* (Nees) Schiffn. was considered a good species separate from *L. guttulata* by Bakalin (2016); the relationship between the two, and with *L. ventricosa*, needs further study. They are kept separate in the Checklist (Hodgetts *et al*., 2020) but the country records in the spreadsheet are not distinguished.
Lophozia	*lantratoviae*	Bakalin	
Lophozia	*longiflora*	(Nees) Schiffn.	Although *Lophozia longiflora* (Nees) Schiffn. was considered a good species separate from *L. guttulata* by Bakalin (2016), the relationship between the two, and with *L. ventricosa*, needs further study. They are kept separate in the Checklist (Hodgetts *et al*., 2020) but the country records in the spreadsheet are not distinguished.
Lophozia	*murmanica*	Kaal.	(= *L. groenlandica* (Nees) Macoun) Söderström *et al.* (2013)
Lophozia	*savicziae*	Schljakov	The taxonomic status of this species is uncertain (N. Konstantinova *pers. comm.* Nov. 2018)
Lophozia	*schusteriana*	Schljakov	

Genus	Specific/Sub-specific epithets	Authority	Notes
Lophozia	*silvicola*	H.Buch	Although *Lophozia silvicola* and *L. ventricosa* are retained as separate species in the Checklist (Hodgetts *et al*., 2020), there is disagreement about the relationship between the two taxa, and the matter requires further study.
Lophozia	*silvicoloides*	N.Kitag.	Needs additional study; may not be the same in Europe as in Japan (N. Konstantinova *pers. comm.* Nov. 2018).
Lophozia	*subapiculata*	R.M.Schust. & Damsh.	Konstantinova & Savchenko (2018)
Lophozia	*ventricosa*	(Dicks.) Dumort.	
Lophozia	*wenzelii*	(Nees) Steph.	
Lophozia	*wenzelii* var. *lapponica*	H.Buch & S.W.Arnell	
Lophozia	*wenzelii* var. *litoralis*	(Arnell) Bakalin	
Lophozia	*wenzelii* var. *massularioides*	Bakalin	
Lophozia	*wenzelii* var. *wenzelii*		
Lophoziopsis	*excisa*	(Dicks.) Konstant. & Vilnet	(= *Lophozia excisa*)
Lophoziopsis	*excisa* var. *elegans*	(R.M.Schust.) Konstant. & Vilnet	(= *Lophozia excisa* var. *elegans*)
Lophoziopsis	*excisa* var. *excisa*		(= *Lophozia excisa* var. *excisa*)
Lophoziopsis	*jurensis*	(Meyl. ex Müll.Frib.) Mamontov & Vilnet	(= *Lophozia jurensis* Meyl. ex Müll.Frib., *Lophozia propagulifera* auct. eur., *Lophoziopsis propagulifera* auct. eur., *Lophozia latifolia* R.M.Schust., *Lophoziopsis latifolia* (R.M.Schust.) Köckinger)
Lophoziopsis	*longidens*	(Lindb.) Konstant. & Vilnet	(= *Lophozia longidens*)
Lophoziopsis	*longidens* subsp. *arctica*	(R.M.Schust.) ined.	(= *Lophozia longidens* subsp. *arctica*)
Lophoziopsis	*longidens* subsp. *longidens*		(= *Lophozia longidens* subsp. *longidens*)
Lophoziopsis	*pellucida*	(R.M.Schust.) Konstant. & Vilnet	(= *Lophozia pellucida*)
Lophoziopsis	*pellucida* var. *minor*	(R.M.Schust) L.Söderstr. & Váňa	Varieties and distributions retained on advice of Lars Söderström (*pers. comm.* July 2018): he comments that var. *minor* is not well-known, but he and J. Váňa decided to retain it pending further research.
Lophoziopsis	*pellucida* var. *pellucida*		
Lophoziopsis	*polaris*	(R.M.Schust.) Konstant. & Vilnet	(= *Lophozia polaris*)
Lophoziopsis	*polaris* var. *polaris*		(= *Lophozia polaris* var. *polaris*)
Lophoziopsis	*polaris* var. *sphagnorum*	(R.M.Schust.) Konstant. & Vilnet	(= *Lophozia polaris* var. *sphagnorum*)

Genus	Specific/Sub-specific epithets	Authority	Notes
Lophoziopsis	*rubrigemma*	(R.M.Schust.) Konstant. & Vilnet	(= *Lophozia rubrigemma*). However, it is uncertain whether the specimens identified as *L. rubrigemma* in Europe are conspecific with the species described from North America; it is possible that all European records of this species are erroneous (N. Konstantinova *pers. comm.* Jan. 2019).
Lunularia	*cruciata*	(L.) Dumort. ex Lindb.	subsp. *cruciata*
Mannia	*androgyna*	(L.) A.Evans	
Mannia	*californica*	(Gottsche ex Underw.) L.C.Wheeler	
Mannia	*controversa*	(Meyl.) D.B.Schill	subsp. *controversa*
Mannia	*fragrans*	(Balb.) Frye & L.Clark	subsp. *fragrans*
Mannia	*gracilis*	(F.Weber) D.B.Schill & D.G.Long	(= *Asterella gracilis*)
Mannia	*pilosa*	(Hornem.) Frye & L.Clark	
Mannia	*sibirica*	(Müll.Frib.) Frye & L.Clark	
Mannia	*triandra*	(Scop.) Grolle	
Marchantia	*paleacea*	Bertol.	subsp. *paleacea*
Marchantia	*polymorpha*	L.	
Marchantia	*polymorpha* subsp. *montivagans*	Bischl. & Boissel.-Dub.	
Marchantia	*polymorpha* subsp. *polymorpha*		
Marchantia	*polymorpha* subsp. *ruderalis*	Bischl. & Boissel.-Dub.	
Marchantia	*quadrata*	Scop.	(= *Preissia quadrata* (Scop.) Nees) Long *et al.* (2016)
Marchantia	*quadrata* subsp. *hyperborea*	(R. M. Schust.) Borovich.	(= *Preissia quadrata* subsp. *hyperborea* R.M.Schust.) Sokolova *et al.* (2017)
Marchantia	*quadrata* subsp. *quadrata*		
Marchantia	*romanica*	(Radian) D.G.Long, Crandall-Stotler, L.L.Forrest & Villarreal	(= *Bucegia romanica* Radian) Long *et al.* (2016)
Marchesinia	*mackaii*	(Hook.) Gray	
Marsupella	*andreaeoides*	(Lindb.) Müll.Frib.	
Marsupella	*apiculata*	Schiffn.	
Marsupella	*aquatica*	(Lindenb.) Schiffn.	
Marsupella	*arctica*	(Berggr.) Bryhn & Kaal.	
Marsupella	*boeckii*	(Austin) Lindb. ex Kaal.	
Marsupella	*condensata*	(Ångstr. ex C.Hartm.) Lindb. ex Kaal.	
Marsupella	*emarginata*	(Ehrh.) Dumort.	(= *Marsupella emarginata* var. *pearsonii* (Schiffn. ex Macvicar) Jørg.)
Marsupella	*funckii*	(F.Weber & D.Mohr) Dumort.	
Marsupella	*profunda*	Lindb.	
Marsupella	*sparsifolia*	(Lindb.) Dumort.	subsp. *sparsifolia*
Marsupella	*sphacelata*	(Giesecke ex Lindenb.) Dumort.	
Marsupella	*spiniloba*	R.M.Schust. & Damsh.	

Genus	Specific/Sub-specific epithets	Authority	Notes
Marsupella	*sprucei*	(Limpr.) Bernet	
Marsupella	*stableri*	Spruce	
Marsupella	*subemarginata*	Bakalin & Fedosov	Bakalin *et al.* (2019)
Marsupella	*tubulosa*	Steph.	*M. emarginata* subsp. *tubulosa* (Steph.) N.Kitag. Recorded from Komi Republic (Sofronova *et al.*, 2012). This is a problematic taxon and needs revising.
Mastigophora	*woodsii*	(Hook.) Nees	
Mesoptychia	*badensis*	(Gottsche ex Rabenh.) L.Söderstr. & Váňa	(= *Leiocolea badensis*)
Mesoptychia	*bantriensis*	(Hook.) L.Söderstr. & Váňa	(= *Leiocolea bantriensis*)
Mesoptychia	*bantriensis* subsp. *bantriensis*		
Mesoptychia	*bantriensis* subsp. *wallfischii*	(Ştefănuţ) L.Söderstr. & Váňa	
Mesoptychia	*collaris*	(Nees) L.Söderstr. & Váňa	(= *Leiocolea collaris*)
Mesoptychia	*fitzgeraldiae*	(Paton & A.R.Perry) L.Söderstr. & Váňa	(= *Leiocolea fitzgeraldiae*)
Mesoptychia	*gillmanii*	(Austin) L.Söderstr. & Váňa	(= *Leiocolea gillmanii*)
Mesoptychia	*gillmanii* var. *gillmanii*		
Mesoptychia	*gillmanii* var. *laxa*	(Schiffn. ex Burrell) L.Söderstr. & Váňa	*M. rutheana* var. *laxa (*Schiffn. ex Burrell) Paton ex Damsh.
Mesoptychia	*heterocolpos*	(Thed. ex Hartm.) L.Söderstr. & Váňa	(= *Leiocolea heterocolpos*)
Mesoptychia	*heterocolpos* var. *arctica*	(S.W.Arnell) L.Söderstr. & Váňa	
Mesoptychia	*heterocolpos* var. *harpanthoides*	(Bryhn & Kaal.) L.Söderstr. & Váňa	
Mesoptychia	*heterocolpos* var. *heterocolpos*		
Mesoptychia	*rutheana*	(Limpr.) L.Söderstr. & Váňa	(= *Leiocolea rutheana*)
Mesoptychia	*sahlbergii*	(Lindb. & Arnell) A.Evans	
Mesoptychia	*turbinata*	(Raddi) L.Söderstr. & Váňa	(= *Leiocolea turbinata*)
Metzgeria	*conjugata*	Lindb.	
Metzgeria	*consanguinea*	Schiffn.	(= *M. temperata* Kuwah.) However, Jan Kučera sequenced *M. temperata* from Japan and *M. temperata* from Europe and they are not the same, but what should the European taxon be called? *M. consanguinea* is different, and 'true' *consanguinea* probably does not occur in Europe (L. Söderström *pers. comm.* July 2018).
Metzgeria	*furcata*	(L.) Corda	Incl. var. *expansa* Douin
Metzgeria	*leptoneura*	Spruce	var. *leptoneura*
Metzgeria	*pubescens*	(Schrank) Raddi	
Metzgeria	*simplex*	Lorb. ex Müll.Frib.	
Metzgeria	*violacea*	(Ach. ex F.Weber & D.Mohr) Dumort.	(= *M. fruticulosa* auct.)
Microlejeunea	*ulicina*	(Taylor) A.Evans	
Mnioloma	*fuscum*	(Lehm.) R.M.Schust.	
Moerckia	*blyttii*	(Mørch ex Hornem.) Brockm.	

Genus	Specific/Sub-specific epithets	Authority	Notes
Moerckia	*flotoviana*	(Nees) Schiffn.	
Moerckia	*hibernica*	(Hook.) Gottsche	
Mylia	*anomala*	(Hook.) Gray	(= *Leiomylia anomala* (Hook.) J.J.Engel & Braggins)
Mylia	*taylorii*	(Hook.) Gray	
Myriocoleopsis	*minutissima*	(Sm.) R.L.Zhu, Y.Yu & Pócs	subsp. *minutissima* (= *Cololejeunea minutissima*)
Nardia	*breidleri*	(Limpr.) Lindb.	
Nardia	*compressa*	(Hook.) Gray	
Nardia	*geoscyphus*	(De Not.) Lindb.	
Nardia	*geoscyphus* var. *bifida*	R.M.Schust.	
Nardia	*geoscyphus* var. *geoscyphus*		
Nardia	*geoscyphus* var. *suberecta*	(Lindb. ex Kaal.) Váňa	
Nardia	*insecta*	Lindb.	
Nardia	*japonica*	Steph.	
Narida	*pacifica*	Bakalin	Bakalin & Klimova (2016)
Nardia	*scalaris*	Gray var. scalaris	var. *scalaris*
Neoorthocaulis	*attenuatus*	(Mart.) L.Söderstr., De Roo & Hedd.	(= *Barbilophozia attenuata*)
Neoorthocaulis	*binsteadii*	(Kaal.) L.Söderstr., De Roo & Hedd.	(= *Barbilophozia binsteadii*)
Neoorthocaulis	*floerkei*	(F.Weber & D.Mohr) L.Söderstr., De Roo & Hedd.	(= *Barbilophozia floerkei*)
Neoorthocaulis	*hyperboreus*	(R.M.Schust.) L.Söderstr., De Roo & Hedd.	(= *Barbilophozia hyperborea*)
Notothylas	*orbicularis*	(Schwein.) Sull. ex A.Gray	
Nowellia	*curvifolia*	(Dicks.) Mitt.	
Obtusifolium	*obtusum*	(Lindb.) S.W.Arnell	(= *Lophozia obtusa*)
Odontoschisma	*denudatum*	(Mart.) Dumort.	subsp. *denudatum* var. *denudatum*
Odontoschisma	*elongatum*	(Lindb.) A.Evans	
Odontoschisma	*fluitans*	(Hook.) L.Söderstr. & Váňa	(= *Cladopodiella fluitans* (Nees) Jørg.)
Odontoschisma	*francisci*	(Hook.) L.Söderstr. & Váňa	(= *Cladopodiella francisci* (Hook.) Jørg.)
Odontoschisma	*macounii*	(Austin) Underw.	
Odontoschisma	*sphagni*	(Dicks.) Dumort.	(= *O. prostratum* (Sw.) Trevis. (Gradstein & Ilkiu-Borges, 2015)
Oleolophozia	*perssonii*	(H.Buch & S.W.Arnell) L.Söderstr., De Roo & Hedd.	(= *Lophozia perssonii*)
Orthocaulis	*atlanticus*	(Kaal.) H.Buch	(= *Barbilophozia atlantica*)
Orthocaulis	*cavifolius*	H.Buch & S.W.Arnell	(= *Anastrophyllum cavifolium*)
Oxymitra	*incrassata*	(Brot.) Sérgio & Sim-Sim	
Pallavicinia	*lyellii*	(Hook.) Carruth.	
Pedinophyllum	*interruptum*	(Nees) Kaal.	
Pellia	*epiphylla*	(L.) Corda	
Pellia	*epiphylla* subsp. *borealis*	(Lorb.) Messe	
Pellia	*epiphylla* subsp. *epiphylla*		
Pellia	*neesiana*	(Gottsche) Limpr.	
Peltolepis	*quadrata*	(Saut.) Müll.Frib.	
Petalophyllum	*ralfsii*	(Wilson) Nees & Gottsche ex Lehm.	
Phaeoceros	*carolinianus*	(Michx.) Prosk.	

Genus	Specific/Sub-specific epithets	Authority	Notes
Phaeoceros	*laevis*	(L.) Prosk.	
Phymatoceros	*bulbiculosus*	(Brot.) Stotler, W.T.Doyle & Crand.-Stotl.	(= *Phaeoceros bulbiculosus*)
Plagiochasma	*appendiculatum*	Lehm. & Lindenb.	
Plagiochasma	*rupestre*	(J.R.Forst. & G.Forst.) Steph.	var. *rupestre*
Plagiochila	*arctica*	Bryhn & Kaal.	var. *arctica*
Plagiochila	*asplenioides*	(L.) Dumort.	
Plagiochila	*bifaria*	(Sw.) Lindenb.	var. *bifaria*
Plagiochila	*britannica*	Paton	
Plagiochila	*carringtonii*	(Balf. ex Carrington) Grolle	subsp. *carringtonii*
Plagiochila	*exigua*	(Taylor) Taylor	
Plagiochila	*heterophylla*	Lindenb. ex Lehm.	var. *heterophylla*
Plagiochila	*longispina*	Lindenb. & Gottsche	
Plagiochila	*maderensis*	Gottsche ex Steph.	
Plagiochila	*papillifolia*	Steph.	
Plagiochila	*porelloides*	(Torr. ex Nees) Lindenb.	
Plagiochila	*porelloides* var. *norvegica*	(H H.Blom & Holten) Schumacker & Váňa.	
Plagiochila	*porelloides* var. *porelloides*		
Plagiochila	*porelloides* var. *subarctica*	(Jørg.) Lammes	
Plagiochila	*punctata*	(Taylor) Taylor	
Plagiochila	*retrorsa*	Gottsche	
Plagiochila	*spinulosa*	(Dicks.) Dumort.	
Plagiochila	*stricta*	Lindenb.	
Plagiochila	*virginica*	A.Evans	
Pleurozia	*purpurea*	Lightf. ex Lindb.	
Porella	*arboris-vitae*	(With.) Grolle	subsp. *arboris-vitae*
Porella	*baueri*	(Schiffn.) C.E.O.Jensen	
Porella	*canariensis*	(F.Weber) Underw.	
Porella	*cordaeana*	(Huebener) Moore	
Porella	*inaequalis*	(Gottsche ex Steph.) Perss.	
Porella	*obtusata*	(Taylor) Trevis.	var. *obtusata*
Porella	*pinnata*	L.	
Porella	*platyphylla*	(L.) Pfeiff.	
Prasanthus	*suecicus*	(Gottsche) Lindb.	
Protolophozia	*elongata*	(Steph.) Schljakov	(= *Lophozia elongata*)
Protolophozia	*herzogiana*	(E.A.Hodgs. & Grolle) Váňa & L.Söderstr.	(= *Lophozia herzogiana*)
Pseudomarsupidium	*decipiens*	(Hook.) Grolle	(= *Adelanthus decipiens*)
Pseudotritomaria	*heterophylla*	(R.M.Schust.) Konstant. & Vilnet	(= *Tritomaria heterophylla*)
Ptilidium	*ciliare*	(L.) Hampe	
Ptilidium	*pulcherrimum*	(Weber) Vain.	
Radula	*aquilegia*	(Hook.f. & Taylor) Taylor ex Gottsche, Lindenb. & Nees	
Radula	*carringtonii*	J.B.Jack	
Radula	*complanata*	(L.) Dumort.	
Radula	*holtii*	Spruce	
Radula	*jonesii*	Bouman, Dirkse & K.Yamada	
Radula	*lindenbergiana*	Gottsche ex C.Hartm.	
Radula	*nudicaulis*	Steph.	

Genus	Specific/Sub-specific epithets	Authority	Notes
Radula	*nudicaulis* var. *delicatula*	P.Allorge & V.Allorge	var. *delicatula* P.Allorge & V.Allorge. This weak variety was recognised in the World Checklist (Söderström *et al.*, 2016). If it is recognised, it is possible that the type variety also occurs in the Azores.
Radula	*nudicaulis* var. *nudicaulis*		
Radula	*visianica*	C.Massal.	
Radula	*voluta*	Taylor ex Gottsche, Lindenb. & Nees	
Radula	*wichurae*	Steph.	
Reboulia	*hemisphaerica*	(L.) Raddi	
Reboulia	*hemisphaerica* subsp. *australis*	R.M.Schust.	
Reboulia	*hemisphaerica* subsp. *dioica*	R.M.Schust.	
Reboulia	*hemisphaerica* subsp. *hemisphaerica*		Incl. subsp. *paradoxa* R.M.Schust (L. Söderström *pers. comm.* Nov. 2018)
Riccardia	*chamedryfolia*	(With.) Grolle	
Riccardia	*incurvata*	Lindb.	
Riccardia	*latifrons*	(Lindb.) Lindb.	
Riccardia	*latifrons* subsp. *arctica*	R.M.Schust. & Damsh.	
Riccardia	*latifrons* subsp. *latifrons*		var. *latifrons*
Riccardia	*multifida*	(L.) Gray	subsp. *multifida*
Riccardia	*palmata*	(Hedw.) Carruth.	
Riccia	*atlantica*	Sérgio & Perold	
Riccia	*atromarginata*	Levier	var. *atromarginata*
Riccia	*beyrichiana*	Hampe ex Lehm. & Lindenb.	
Riccia	*bicarinata*	Lindb.	
Riccia	*bifurca*	Hoffm.	
Riccia	*boumanii*	Dirkse, Losada & M.Stech	
Riccia	*breidleri*	Jur. ex Steph.	
Riccia	*canaliculata*	Hoffm.	
Riccia	*cavernosa*	Hoffm.	
Riccia	*ciliata*	Hoffm.	(= *Riccia crinita* Taylor) (Hugonnot, 2010)
Riccia	*ciliifera*	Link ex Lindenb.	incl. *R. melitensis* C.Massal. (Hugonnot, 2015)
Riccia	*crozalsii*	Levier	
Riccia	*crustata*	Trab.	
Riccia	*crystallina*	L.	
Riccia	*duplex*	Lorb.	var. *duplex*
Riccia	*fluitans*	L.	
Riccia	*frostii*	Austin	var. *frostii*
Riccia	*glauca*	L.	
Riccia	*glauca* var. *ciliaris*	Warnst.	
Riccia	*glauca* var. *glauca*		
Riccia	*gothica*	Damsh. & Hallingb.	
Riccia	*gougetiana*	Durieu & Mont.	
Riccia	*gougetiana* var. *armatissima*	Levier ex Müll.Frib.	

Genus	Specific/Sub-specific epithets	Authority	Notes
Riccia	*gougetiana* var. *gougetiana*		
Riccia	*huebeneriana*	Lindenb.	subsp. *huebeneriana*
Riccia	*lamellosa*	Raddi	
Riccia	*ligula*	Steph.	
Riccia	*macrocarpa*	Levier	
Riccia	*michelii*	Raddi	
Riccia	*nigrella*	DC.	
Riccia	*papillosa*	Moris	
Riccia	*perennis*	Steph.	
Riccia	*rhenana*	Lorb. ex Müll.Frib.	
Riccia	*rhenana* var. *rhenana*		
Riccia	*rhenana* var. *violacea*	M.F.Boiko	
Riccia	*sommieri*	Levier	
Riccia	*sorocarpa*	Bisch.	Incl. subsp. *arctica* R.M.Schust. (recorded from Austria) and subsp. *erythrophora* R.M.Schust. (recorded from Russia South). *Riccia sorocarpa* var. *heegii* was accepted with low confidence in the world checklist of liverworts (Söderström *et al*., 2016). In Europe it has been reported from Portugal, Spain, France, Corsica, Sardinia, Austria, Serbia, North Macedonia and Romania as well as from the Canary Islands and Madeira.
Riccia	*sorocarpa* subsp. *arctica*	R.M.Schust. ex Köckinger & L.Söderstr.	
Riccia	*sorocarpa* subsp. *erythrophora*	R.M.Schust. ex Konstant. & L.Söderstr.	
Riccia	*sorocarpa* subsp. *sorocarpa*		
Riccia	*subbifurca*	Warnst. ex Croz.	
Riccia	*trabutiana*	Steph.	
Riccia	*warnstorfii*	Limpr. ex Warnst.	*R. warnstorfii* var. *ciliaris* Warnst.
Ricciocarpos	*natans*	(L.) Corda	
Riella	*affinis*	M.Howe & Underw.	
Riella	*battandieri*	Trab.	
Riella	*bialata*	Trab.	
Riella	*cossoniana*	Trab.	
Riella	*echinata*	(Müller) Segarra-Moragues, Puche & Sabovljević	Segarra-Moragues *et al.* (2014)
Riella	*gallica*	Balansa ex Trab.	
Riella	*helicophylla*	(Bory & Mont.) Mont.	
Riella	*helicophylla* var. *helicophylla*		
Riella	*helicophylla* var. *macrocarpa*	P.Allorge	Described by P. Allorge in 1929 but disregarded thereafter. Probably a synonym of *R. helicophylla* but needs further work.
Riella	*mediterranea*	Segarra, Puche, Sabovl., M.Infante & P.Heras	

Genus	Specific/Sub-specific epithets	Authority	Notes
Riella	*notarisii*	(Mont.) Mont.	This is a species complex which includes *R. battandieri* Trab., *R. gallica* Balansa ex Trab. and *R. reuteri* Mont.; they have normally been included in the synonymy of *R. notarisii* (Privitera & Puglisi, 1997; Ros *et al*., 2007), and this was also advised by José Gabriel Segarra-Moragues (July 2018), but they have been listed in the Checklist (Hodgetts *et al*., 2020) pending further studies.
Riella	*reuteri*	Mont.	
Saccobasis	*polita*	(Nees) H.Buch	
Saccobasis	*polymorpha*	(R.M.Schust.) Schljakov	
Saccogyna	*viticulosa*	(L.) Dumort.	
Sauteria	*alpina*	(Nees) Nees	
Scapania	*aequiloba*	(Schwägr.) Dumort.	
Scapania	*apiculata*	Spruce	
Scapania	*aspera*	M.Bernet & Bernet	
Scapania	*calcicola*	(Arnell & J.Perss.) Ingham	
Scapania	*carinthiaca*	J.B.Jack ex Lindb.	
Scapania	*carinthiaca* var. *carinthiaca*		
Scapania	*carinthiaca* var. *massalongi*	Müll.Frib.	
Scapania	*compacta*	(Roth) Dumort.	
Scapania	*crassiretis*	Bryhn	
Scapania	*curta*	(Mart.) Dumort.	
Scapania	*curta* var. *curta*		
Scapania	*curta* var. *grandiretis*	R.M.Schust.	
Scapania	*curta* var. *isoloba*	R.M.Schust.	
Scapania	*cuspiduligera*	(Nees) Müll.Frib.	var. *cuspiduligera*
Scapania	*degenii*	Schiffn. ex Müll.Frib.	*S. brevicaulis* Taylor is an Arctic species from North America; all European records should be referred to *S. degenii*. Potemkin's treatment of *S. degenii* as conspecific with *S. brevicaulis* (Potemkin, 1999) is rejected (L. Söderström & N. Konstantinova *pers. comm.* Nov. 2018)
Scapania	*glaucocephala*	(Taylor) Austin	var. *glaucocephala*
Scapania	*gracilis*	Lindb.	
Scapania	*gymnostomophila*	Kaal.	
Scapania	*helvetica*	Gottsche	
Scapania	*hyperborea*	Jørg.	
Scapania	*irrigua*	(Nees) Nees	
Scapania	*irrigua* subsp. *irrigua*		
Scapania	*irrigua* subsp. *rufescens*	(Loeske) R.M.Schust.	
Scapania	*kaurinii*	Ryan	
Scapania	*ligulifolia*	R.M.Schust.	
Scapania	*lingulata*	H.Buch	

Genus	Specific/Sub-specific epithets	Authority	Notes
Scapania	*lingulata* var. *lingulata*		
Scapania	*lingulata* var. *microphylla*	(Warnst.) R.M.Schust.	
Scapania	*mucronata*	H.Buch	
Scapania	*nemorea*	(L.) Grolle	
Scapania	*nimbosa*	Taylor ex Lehm.	
Scapania	*obcordata*	(Berggr.) S.W.Arnell	
Scapania	*obscura*	(Arnell & C.E.O.Jensen) Schiffn.	
Scapania	*ornithopodoides*	(With.) Waddell	
Scapania	*paludicola*	Loeske & Müll.Frib.	
Scapania	*paludicola* var. *paludicola*		
Scapania	*paludicola* var. *rotundiloba*	R.M.Schust. [nom. inval.]	
Scapania	*paludosa*	(Müll.Frib.) Müll.Frib.	
Scapania	*parvifolia*	Warnst.	
Scapania	*praetervisa*	Meyl.	
Scapania	*scandica*	(Arnell & H.Buch) Macvicar	
Scapania	*scandica* var. *argutedentata*	H.Buch	
Scapania	*scandica* var. *grandiretis*	(Schljakov) Schljakov	
Scapania	*scandica* var. *scandica*		
Scapania	*scapanioides*	(C.Massal.) Grolle	
Scapania	*simmonsii*	Bryhn & Kaal.	
Scapania	*sphaerifera*	H.Buch & Tuom.	
Scapania	*spitsbergensis*	(Lindb.) Müll.Frib.	
Scapania	*subalpina*	(Nees ex Lindenb.) Dumort.	var. *subalpina*
Scapania	*tundrae*	(Arnell) H.Buch	
Scapania	*uliginosa*	(Sw. ex Lindenb.) Dumort.	
Scapania	*umbrosa*	(Schrad.) Dumort.	
Scapania	*undulata*	(L.) Dumort.	Incl. var. *minor* Lamy ex Husn.-N. Konstantinova *pers. comm.* Nov. 2018.
Scapania	*verrucosa*	Heeg	
Scapania	*zemliae*	S.W.Arnell	
Schistochilopsis	*grandiretis*	(Lindb. ex Kaal.) Konstant.	
Schistochilopsis	*hyperarctica*	(R.M.Schust.) Konstant.	
Schistochilopsis	*incisa*	(Schrad.) Konstant.	
Schistochilopsis	*opacifolia*	(Culm. ex Meyl.) Konstant.	
Schizophyllopsis	*sphenoloboides*		(= *Schizophyllum sphenoloboides*)
Schljakovia	*kunzeana*	(Huebener) Konstant. & Vilnet	
Schljakovianthus	*quadrilobus*	(Lindb.) Konstant. & Vilnet	
Solenostoma	*callithrix*	(Lindenb. & Gottsche) Steph.	
Solenostoma	*caucasicum*	(Váňa) Konstant.	
Solenostoma	*confertissimum*	(Nees) Schljakov	
Solenostoma	*gracillimum*	(Sm.) R.M.Schust.	
Solenostoma	*handelii*	(Schiffn.) Müll.Frib.	
Solenostoma	*hyalinum*	(Lyell ex Hook.) Mitt.	
Solenostoma	*obovatum*	(Nees) C.Massal.	
Solenostoma	*paroicum*	(Schiffn.) R.M.Schust.	
Solenostoma	*sphaerocarpum*	(Hook.) Steph.	

Genus	Specific/Sub-specific epithets	Authority	Notes
Solenostoma	*subellipticum*	(Lindb. ex Heeg) R.M.Schust.	*Solenostoma subellipticum* was nested in *Solenostoma obovatum* in Shaw *et al*. (2015) and thus reduced to a synonym, a treatment followed by Söderström *et al*. (2016). However, as it seems distinct in at least parts of its distribution area we list it here with some hesitation.
Southbya	*nigrella*	(De Not.) Henriq.	
Southbya	*tophacea*	(Spruce) Spruce	
Sphaerocarpos	*michelii*	Bellardi	
Sphaerocarpos	*stipitatus*	Bisch. ex Lindenb.	
Sphaerocarpos	*europaeus*	Lorb.	Clearly distinct from *S. texanus* Austin according to recent molecular studies (Bell *et al*., 2013).
Sphenolobopsis	*pearsonii*	(Spruce) R.M.Schust.	
Sphenolobus	*minutus*	(Schreb. ex Crantz) Berggr.	
Sphenolobus	*saxicola*	(Schrad.) Steph.	
Syzygiella	*autumnalis*	(DC.) K.Feldberg, Váňa, Hentschel & Heinrichs	
Syzygiella	*rubricaulis*	(Nees) Steph.	
Targionia	*hypophylla*	L.	
Targionia	*lorbeeriana*	Müll.Frib.	
Telaranea	*azorica*	H.Buch & Perss.) Pócs ex Schumacker & Váňa	
Telaranea	*europaea*	J.J.Engel & G.L.Merr.	
Tetralophozia	*filiformis*	(Steph.) Urmi	
Tetralophozia	*setiformis*	(Ehrh.) Schljakov	
Trichocolea	*tomentella*	(Ehrh.) Dumort.	
Tricholepidozia	*lindenbergii*	(Gottsche) E.D.Cooper	var. *lindenbergii*
Tricholepidozia	*tetradactyla*	(Hook.f. & Taylor) E.D.Cooper	
Trilophozia	*quinquedentata*	(Huds.) Bakalin	var. *quinquedentata.* Including var. *turgida* (Lindb.) Konstant.
Tritomaria	*exsecta*	(Schmidel ex Schrad.) Schiffn. ex Loeske	var. *exsecta*
Tritomaria	*exsectiformis*	(Breidl.) Schiffn. ex Loeske	
Tritomaria	exsectiformis subsp. *arctica*	R.M.Schust.	
Tritomaria	exsectiformis subsp. *exsectiformis*		
Tritomaria	*scitula*	(Taylor) Jørg.	

2.2 Mosses – legend and checklist table

Common categories

●	Occurrence of species confirmed - either Least Concern or no information about status
■	Occurrence of infraspecific taxon confirmed
□	At least some reports of the species presumably refer to this infraspecific taxon, although not positively confirmed in any source
?	Some doubt about occurrence
-	Taxon recorded in some literature but later rejected
RE	Regionally Extinct
CR	Critically Endangered
EN	Endangered
VU	Vulnerable
NT	Near Threatened
DD	Data Deficient
DD*	Data Deficient but recently recorded
NE	Not Evaluated
NA	Not Applicable

Country-specific categories

Netherlands

The Netherlands has its own system of threat categories, which have been broadly translated into the IUCN categories for the purposes of this spreadsheet:

EB	Ernstig bedreigd (Highly Endangered; ± ≡ IUCN Critically Endangered)
BE	Bedreigd (Endangered; ± ≡ IUCN Endangered)
KW	Kwetsbaar (Vulnerable; ± ≡ IUCN Vulnerable)
GE	Gevoulig (Susceptible; ± ≡ IUCN Near Threatened)

Belgium

Mn	Menacées (Threatened)

Germany

Germany has its own system of threat categories, which have been broadly translated into the IUCN categories for the purposes of this spreadsheet. However, some of the German categories are not directly translatable, and these have been retained:

0	Ausgestorben oder verschollen (Regionally Extinct; ± ≡ IUCN Regionally Extinct)
1	Vom Aussterben bedroht (Critically Endangered; ± ≡ IUCN Critically Endangered)
2	Stark gefährdet (Endangered; ± ≡ IUCN Endangered)
3	Gefährdet (Vulnerable; ± ≡ IUCN Vulnerable)
V	Zuruckgehend (Near Threatened; ± ≡ IUCN Near Threatened)
D	Daten ungenugend (Data deficient; ± ≡ IUCN Data Deficient)
G	Gefährdung anzunehmen (Risk assumed; no IUCN equivalent)
R	Extrem selten (Extremely rare; no IUCN equivalent)

Poland

Ex	Extinct
E	Endangered
V	Vulnerable
R	Rare
I	Indeterminate

Austria

0	Vollständig vernichtet (Completely destroyed - *i.e.* Extinct)
1	Von vollständiger vernichtung bedroht (Seriously threatened with extinction)
2	Stark gefährdet (Highly endangered)
3	Gefährdet (Endangered)

Latvia

0	Extinct
1	Endangered
2	Vulnerable
3	Rare
4	Little known or insufficiently explored species

Lithuania

0	Extinct
1	Critically Endangered
2	Endangered
3	Vulnerable
4	Rare

Belarus

0	Extinct

Ukraine

R	Rare

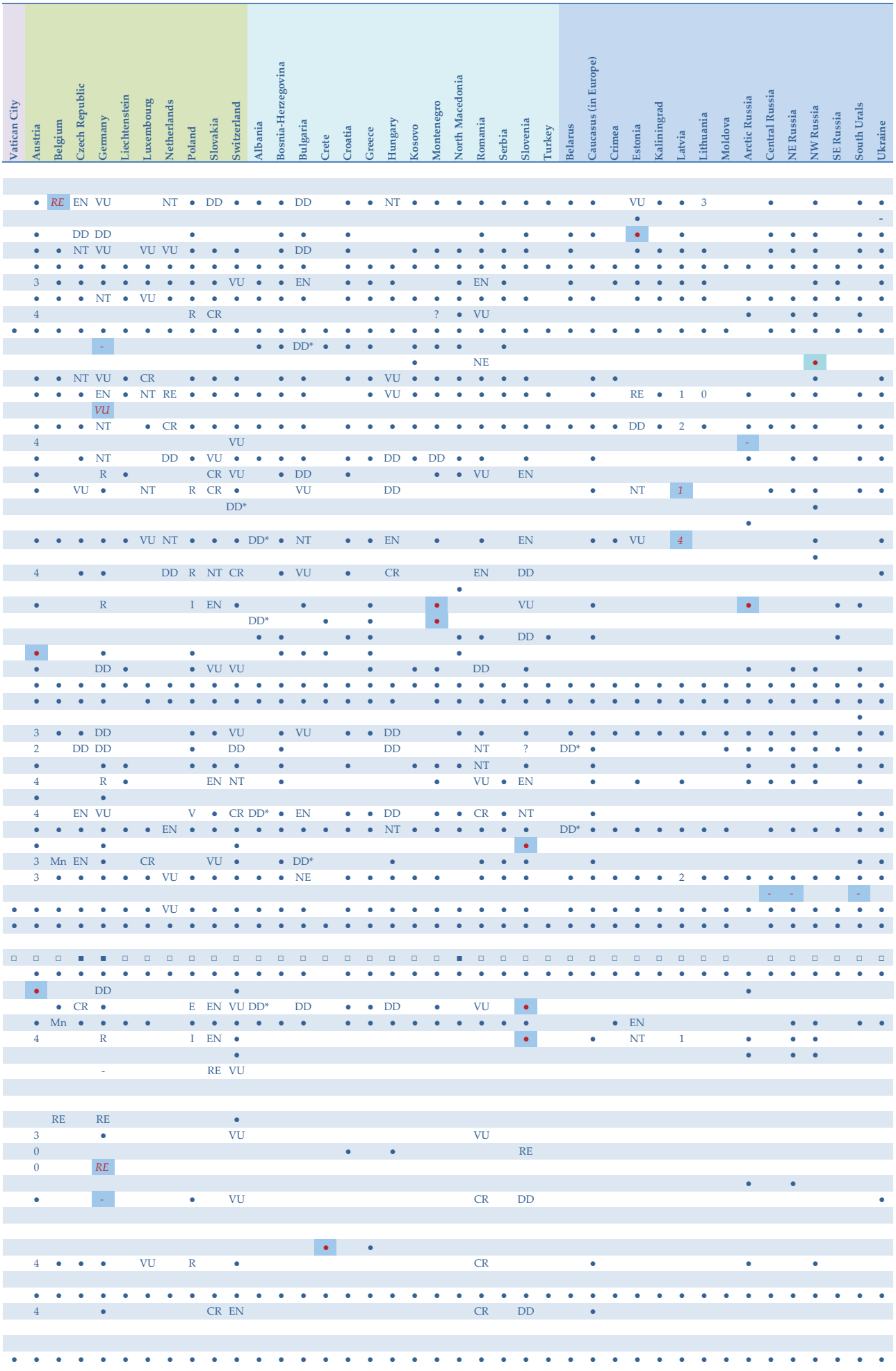
● Species confirmed; LC/status unknown
■ Infraspecific taxon confirmed
□ Unconfirmed infraspecific taxon
? Some doubt about occurrence
- Literature record but later rejected
Status values italicised in red with a darker fill have an associated note

Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia	Sicily	Spain
Abietinella abietina	LC		●		●	●	●	●	●			VU	●	●	●						●	●					●			●
Abietinella abietina var. *abietina*			□		■	□	□	□	■			■	EN	EN	□						■	■					■			■
Abietinella abietina var. *hystricosa*												■	NT	NT							■	DD								■
Acaulon casasianum	NT	E																			●									NT
Acaulon dertosense	EN	E																												●
Acaulon fontiquerianum	NT	E																●	●		●					CR		EN	●	VU
Acaulon mediterraneum	NT						CR		●			DD					●	DD	●		●	DD				VU		DD	●	●
Acaulon muticum	NT		●		CR		EN		●	●		VU	RE	RE				DD	●		●	●	VU	DD		●		●	●	●
Acaulon piligerum	DD	E																										DD	-	
Acaulon triquetrum	LC											EN					●	●	●		●	●	VU	DD		EN		●	DD	●
Achrophyllum dentatum	NA											●																		
Alleniella besseri	LC				VU		●		NT						●		●		●		●	●							●	●
Alleniella complanata	LC		●		●	●	●		●	●		●	●	●	●	●	●	●	●		●	●	●		●	DD	●	●	●
Aloina aloides	LC		●				CR		EN	●		●	●	●			●	●	●	●	●	●	NT	●	●	●	DD	●	●	●
Aloina ambigua	LC		●						EN	●		●	EN	EN	●	●	●	●	●	●	●	●	NT	DD	●	●		●	●	●
Aloina bifrons	NT																				●							DD		●
Aloina brevirostris	LC		●		NA		●	●	●			EN						DD			●	●								VU
Aloina humilis	DD	E																DD												
Aloina obliquifolia	LC								●												●									
Aloina rigida	LC		●	●	NA		●		●			EN	RE	RE	●	●	●	DD		●	●	●	NT	●		EN		●	●	●
Alophosia azorica	NT	E														●							VU							
Amblyodon dealbatus	LC		●		CR	●	●	●	●			VU	●	●	VU						●	●								VU
Amblystegium serpens	LC		●	●	●	●	●	●	●	●		●	●	●	●	●		DD			●	●		●		DD		●	●	●
Amphidium lapponicum	LC			●	●	●	●	●	●			●	VU		NT			●			●	●								VU
Amphidium mougeotii	LC		●	●	●	●	●		●			●	●	●	●	●		●	●		●	●	●			●		●	●	●
Amphidium curvipes	NT	E																●					VU							
Anacamptodon splachnoides	NT											?									●	●								
Anacolia menziesii	VU																			●										NT
Anacolia webbii	LC																	●	●	-	-	●	●			VU		●	●	●
Andoa berthelotiana	VU	E														●		EN					NT							
Andreaea alpestris	DD	E			DD		●		●			DD			●				●		●	●	NT							●
Andreaea alpina	LC				●		●	●	●												?									
Andreaea blyttii	NT				VU	●	NT	●	●			VU									?									
Andreaea crassinervia	EN				●		DD		●									●			?	●								-
Andreaea flexuosa	EN	E (subsp.)																					VU							
Andreaea frigida	VU	E					●					NT			●				●		●	●				EN				●
Andreaea heinemannii	NT														VU			VU			●	●	●			●				VU
Andreaea heinemannii subsp. *crassifolia*		E																VU								■				VU
Andreaea heinemannii subsp. *heinemannii*															□			VU			■	■	VU			VU				VU
Andreaea hookeri	LC			●			●					●	●	●							?	DD								
Andreaea megistospora	LC						●					●	VU	VU												●				VU
Andreaea mutabilis	LC			●								●			VU						●									VU
Andreaea nivalis	NT				EN		●		●			EN			VU						●	●								VU
Andreaea rothii	LC		●	●	●		●		●			●	●	●	●				●		●	●	●			●		●		●
Andreaea rothii subsp. *falcata*			□	□			■		■			■	■	■	■						■	DD				■		■		■
Andreaea rothii subsp. *rothii*					■		■		■			■	■	■	■				□		■	■	■			■				■
Andreaea rupestris	LC		●	●	●	●	●	●	●			●	●	●	●	●			●		●	●	VU			●				●
Andreaea rupestris var. *papillosa*								■	■			■			?						■	■								■
Andreaea rupestris var. *rupestris*			□	□	□	□	□	■	■			■	■	■	□	□			□		■	■	□			□				■
Andreaea sinuosa	VU											VU																		
Anoectangium aestivum	LC			●	VU	●	●		●			●	●	●		●		●	●		●	●	●							DD
Anoectangium angustifolium	NE	E														●		●					●							
Anoectangium handelii	NE																													
Anomobryum apiculatum	LC											DD						-												
Anomobryum concinnatum	LC				VU	●	DD		●			●	●	●							●	●								●
Anomobryum julaceum	LC			●	CR	●	●		●			●	●	●	●	●		●	●		●	●	●			●		DD	NT	●
Anomobryum lusitanicum	VU	E																								VU				VU
Anomobryum notarisii	NT	E														●		●					VU							
Anomodon longifolius	LC		●		●		●		●			EN									●	●								VU
Anomodon rugelii	NT				CR		●		●												●	●								-
Anomodon tristis	VU																				?	●								
Anomodon viticulosus	LC		●		●	●	●		●	●		●	●	●	●		●	DD	●		●	●				CR	●	●	NT	●
Antitrichia californica	LC																●	NT	●	●	●	DD	VU			●		●	●	LC
Antitrichia curtipendula	LC		●	●	●	●	●		●			●	NT	NT		●	●	●	●		●	●	●			●		●	●	●
Aongstroemia longipes	LC				EN	●	●	●	●			VU	CR								●	●								
Aplodon wormskioldii	LC				DD		VU	●	●			CR																		
Aquilonium plicatulum	CR				CR																									
Archidium alternifolium	LC		●	●	EN	●	NT		●	●		●	●	●		●	●	●	●		●	●	●			●		●	●	●
Arctoa anderssonii	VU			●		●	EN	●	VU			CR																		
Arctoa fulvella	LC			●	VU	●	NT	●	●			●	VU		CR						●	●								CR
Arctoa hyperborea	VU				CR		●		●												-									
Arvernella microclada	EN	E																			●									
Aschisma carniolicum	EN																●		●	●	●	●				VU		DD	●	VU
Aschisma cuynetii	VU	E																												VU
Atractylocarpus alpinus	CR						EN														-	●								

Vatican City	Austria	Belgium	Czech Republic	Germany	Liechtenstein	Luxembourg	Netherlands	Poland	Slovakia	Switzerland	Albania	Bosnia-Herzegovina	Bulgaria	Crete	Croatia	Greece	Hungary	Kosovo	Montenegro	North Macedonia	Romania	Serbia	Slovenia	Turkey	Belarus	Caucasus (in Europe)	Crimea	Estonia	Kaliningrad	Latvia	Lithuania	Moldova	Arctic Russia	Central Russia	NE Russia	NW Russia	SE Russia	South Urals	Ukraine
	•	•	•	NT	•	•	CR	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•
	■	□	■	NT	□	■	□	■	□	□	■	□	□		□	■	■	□	□	■	□	□	■		□	□		□	□	□	□	□	□	□	□	□	□	□
	■		DD	DD		EN		■													□		VU							■									
				VU																																			
													DD*	•	•	•			•					•																
	2	•	•	NT		NT	EN	R	•	CR		•	NE	•	•	•	NT		CR		EN		DD	•	•					•	•			•					•
														-	•						DD																	
	2	•	VU	NT			DD	V	VU	VU			•	•	•	•	NT		•		VU	•		•	DD*	•											•	•	•
	•		•	•	•			R	•	EN	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•								•	•	•	•	•
	•	•	•	•	•	•	EN	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	2	•			•	-	•	-	•	•
	DD	•	DD	NT		•	•	R		CR	•	•		•	•	•	NT		•	•		•	DD	•		•					•								
	2	•	EN	•		NT	•	I	RE	DD*	•	•	NT	•	•	•	NT		•		CR	•	DD	•	DD*								•					•	•
			?																							•												
	1		CR	G			NT	I		VU						•	DD			•						•				•				•	•	•		•	•
	NE		•	DD			DD															CR																	
	3	•	•	NT	•	NT	NT	•	•	NT		•	DD	•	•	•	NT		•		•	•	DD		DD*	•		VU		•	•			•	•	•	•	•	•
	•	•	CR	EN	•		RE	E	VU	VU			NE				RE			•	VU		•		0	•		CR	•	•	4		•	•	•	•			•
•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	•		EN	EN				R	VU	•	•	•	VU						?		CR	DD	DD			•							•		•	•			•
	•	•	•	•		•		•	•	•	•	•	•		•	•	VU	•	•	•	•	VU	•			•	•						•		•	•		•	•
	2		EN	VU				E	EN	RE							EN				VU	DD	EN			•													VU
																•																							
	DD			-				•		•			•							•	NT					•							•			•			•
									CR				NE								CR					•							•			•			
								R	CR																											•			
	4		CR	RE				R	CR	VU																•										•			
	•		CR					R	EN	VU											CR																		
	4			R						VU																•													
	■			■						■																□													
	•							I	EN	NT											EN		DD*			•							•		•	•			
	•	•	•	VU			RE	R	EN	•				•				•			CR	CR	DD										-		•	•		?	
	4		■	G			-	■		VU													□																
	4	□	EN	■			■	■	□	VU					■			□			■																□	□		□	
	•	•	•	•	•	CR	VU	•	•	•	•	•	•		•	•	VU	•	•	•	•	•	•		CR	•		NT		1			•		•	•		•	•
	■			□				■									■																■					-	
	■	□	■	□	□	□	□	■	□	□	□					■	■	□	■		■				■	■				□			■		■	■		■	■
	•		EN	R				•	VU	•					•				DD*		NT					•											•			•
																									•	-													
	•	•	CR	NT				•		DD*		•							•				DD			•										•			
	•	RE		-				I	VU	NT	•			•				•	•		CR	•	DD			-										-			•
	•	•	•	•	•	•	•	I	•	•	•	•	•		•	•	NT		DD		•	DD	•		•	•	•	•	•	•	•		•	•	•	•	•	•	•
	3		VU	VU				V	VU	•		EN	VU		•		EN	•	EN	•	•	EN	•			•		VU						•		•		•	•
										VU											CR					•													
•	•	•	•	•	•	•	EN	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•
														•		•				•																			
	3	•	•	VU	•	•	EN	E	NT	•	•	•	•	•	•	•	EN	•	•	•	•	•	•	•	•	•	•	•	•	2	1				•		•	
	3			EN			DD			VU																							-		•				
																												VU					•		•			
																																	•		•	•		•	
	0	•	CR	VU		EN	•	R	EN	CR		•		•	•	•	DD		VU		VU		DD	•							•					•			
																																	•						
	•		RE	-				•	VU	VU											CR													•		•	•		•	
																					CR																		
															•	•							RE																	
	1			R						RE																													

● Species confirmed; LC/status unknown
■ Infraspecific taxon confirmed
□ Unconfirmed infraspecific taxon
? Some doubt about occurrence
- Literature record but later rejected
Status values italicised in red with a darker fill have an associated note

Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia	Sicily	Spain
Atractylocarpus subporodictyon	VU	E										VU																		
Atrichum androgynum	NT															•							NT			DD				
Atrichum angustatum	VU		•			VU			CR			CR	RE	RE		•		VU	•		•	•	NT			•			DD	•
Atrichum crispum	NA											•	•								?									
Atrichum flavisetum	LC						•		•			*NE*									•	•								DD
Atrichum tenellum	LC		•		•	CR	•		•			•	NT	NT		•					•	•								
Atrichum undulatum	LC		•	•	•	•	•		•	•		•	•	•	NT	•		VU	•		•	•	•			•		•	NT	•
Aulacommium androgynum	LC		•		•		•		•			•	VU	VU	•			NT	•	?	•	•				•			•	•
Aulacomnium palustre	LC		•	•	•	•	•	•	•	•		•	•	•	•	•			•		•	•				•		•	•	•
Aulacomnium turgidum	LC			•	•	•	•	•	•			NT																		
Barbula unguiculata	LC		•	•	•	•	•		•	•		•	•	•	•	•	•	•	•		•	•	•	•		•	•	•	•	•
Bartramia aprica	LC									•		EN				•	•	•	•	•	•	•	•			•		•	•	•
Bartramia breviseta	VU					•	DD	•														DD								
Bartramia halleriana	LC				•		•		•			•	*RE*	RE	•				•		•	•						DD		•
Bartramia ithyphylla	LC		•	•	•	•	•	•	•			•	VU	VU	•				•		•	•				VU		•	NT	•
Bartramia laevisphaera	EN																			•										
Bartramia pomiformis	LC		•	•	•		•		•	•		•	•	•	•	DD		NT	•		•	•	•			•		•	•	•
Bartramia subulata	EN																				•	•	-							
Blindia acuta	LC		•	•	•	•	•	•	•			•	•	•	•	•			•		•	•	•			DD				•
Blindia caespiticia	LC				CR		•		•			EN									•	•								
Blindiadelphus campylopodus	NT				EN		EN		VU			VU									•	•								
Blindiadelphus diversifolius	NT				•		•	•	•			CR									•	DD								
Blindiadelphus polaris	VU						-	•																						
Blindiadelphus recurvatus	LC				CR		•		•			•	•	•	•						•	•						•		•
Blindiadelphus subimmersus	EN				EN		EN		VU																					
Brachydontium trichodes	LC						VU					•	EN	EN							•	•				RE				EN
Brachymenium paradoxum	DD																													
Brachytheciastrum collinum	LC				EN	•	•	•	•						•				•		•	•							•	•
Brachytheciastrum dieckei	LC																	?	•	•	•					VU				•
Brachytheciastrum olympicum	VU														-				•	•	•	•				DD		DD	•	-
Brachytheciastrum salicinum	NE														•						•	•				•		•	DD	•
Brachytheciastrum trachypodium	LC				VU		•	•	•			EN									•	•								
Brachytheciastrum velutinum	LC		•		•	•	•		•	•		•	EN	EN	•	•	•	•	•	•	•	•	NT	•		•		•	•	•
Brachythecium albicans	LC		•	•	•	•	•		•	•		•	•	•	•	•		•	•		•	•	NT			•		•	DD	•
Brachythecium buchananii	EN																													
Brachythecium campestre	LC				CR		DD		•												•	•				VU		•	•	•
Brachythecium capillaceum	LC																				•	DD								
Brachythecium cirrosum	LC				CR	•	•	•	VU			EN			CR						•	•							•	CR
Brachythecium erythrorrhizon	LC				•		•		•			CR									•	•								•
Brachythecium funkii	VU	E																				•								
Brachythecium geheebii	VU	E					•		EN												•	•								
Brachythecium glareosum	LC		•		•	•	•		•	•		•	•	•	•		•		•		•	•				DD	•	•	•	•
Brachythecium japygum	LC	E																			•	•								
Brachythecium laetum	LC				*CR*																•	•								EN
Brachythecium mildeanum	LC		•	•	•	•	•		•	•		•	•	•	-	•					•	•				•				VU
Brachythecium novae-angliae	LC						•		VU																					
Brachythecium rivulare	LC		•	•	•	•	•		•	•		•	•	•	•	•	•	DD	•	•	•	•	•			•		•	•	•
Brachythecium rutabulum	LC		•	•	•	•	•		•	•		•	•	•	•	•	•	•	•		•	•	•	•		•	•	•	•	•
Brachythecium rutabulum var. *atlanticum*																■							NT			■				
Brachythecium rutabulum var. *rutabulum*			□	□	■	□	□		□			□	□	□	□	□	□	□	□		■	■	■	□		□	■	□	■	□
Brachythecium salebrosum	LC		•		•	•	•		•			•			•	•	•	DD	•		•	•				•		•	•	•
Brachythecium tauriscorum	LC				VU		DD	•	•																					
Brachythecium tenuicaule	LC	E																			•	•								DD
Brachythecium tommasinii	LC				CR		NT		NT						•				•		•	•						•	•	•
Brachythecium turgidum	LC				•	•	•	•	•												•	•								VU
Brachythecium udum	LC				•				•												?									
Braunia alopecura	VU																				•	•				-				
Braunia imberbis	NT						VU					•	VU	VU							•	DD								DD
Breutelia azorica	EN	E														•														
Breutelia chrysocoma	LC	E			•		•					•	•	•		DD*			•		•									CR
Brotherella lorentziana	NT	E																												
Bruchia flexuosa	CR																					DD								
Bruchia vogesiaca	EN											CR									•					VU				EN
Bryobrittonia longipes	VU							•																						
Bryoerythrophyllum alpigenum	VU						DD		DD												•	•								
Bryoerythrophyllum caledonicum	VU											VU																		
Bryoerythrophyllum campylocarpum	VU																						VU			VU				
Bryoerythrophyllum duellii	VU																			•										
Bryoerythrophyllum ferruginascens	LC				•	CR	•	•		•		•	•	•							•	•								VU
Bryoerythrophyllum inaequalifolium	VU															•		•			•		EN			•				EN
Bryoerythrophyllum recurvirostrum	LC		•	•	•	•	•	•	•	•		•	•	•	•		•	DD	•	•	•	•	•					•	DD	•
Bryoerythrophyllum rubrum	NT								DD												•	•								
Bryoxiphium madeirense	EN	E																					EN							
Bryoxiphium norvegicum	LC						•									•														
Bryum argenteum	LC		•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•		•		•	•	•


Vatican City
Austria
Belgium
Czech Republic
Germany
Liechtenstein
Luxembourg
Netherlands
Poland
Slovakia
Switzerland
Albania
Bosnia-Herzegovina
Bulgaria
Crete
Croatia
Greece
Hungary
Kosovo
Montenegro
North Macedonia
Romania
Serbia
Slovenia
Turkey
Belarus
Caucasus (in Europe)
Crimea
Estonia
Kaliningrad
Latvia
Lithuania
Moldova
Arctic Russia
Central Russia
NE Russia
NW Russia
SE Russia
South Urals
Ukraine

Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia	Sicily	Spain
Bryum bavaricum	VU	E																			•	•								
Bryum blindii	EN						NT		NT													•	•								
Bryum canariense	LC									•		•				•	•	•	•		•	•	•			EN		•	•	•
Bryum caucasicum	NE																													
Bryum demaretianum	DD	E							DD												•									
Bryum dichotomum	LC		•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•		•	DD	•	•	•
Bryum dixonii	NT	E					DD					NT																		
Bryum dyffrynense	NT	E										EN	NT	NT							•									
Bryum gemmiferum	LC						•		•	•		•	•	•	•		•	DD			•	•				•				•
Bryum gemmilucens	LC								•			NT					•	•	•		•					NT			•	•
Bryum gemmiparum	LC											EN	VU			•	•	•	•	•	•	•	•	VU		•		•	•	•
Bryum kikuyense	RE																						•							
Bryum klinggraeffii	LC		•	•	•	•	•		•	•		•	•	•	•						•	•				CR			•	•
Bryum marratii	EN		•	•	CR	•	NT		NT			VU	•	•							•									
Bryum oblongum	NT				DD		DD		NT																					
Bryum radiculosum	LC		•							•		•	•	•		•	•	•	•	•	•	•	•	•		DD		•	•	•
Bryum reyeri	NE	E																												
Bryum riparium	VU						VU					•	EN	EN																
Bryum ruderale	LC		•				DD		•	•		•	•	•	•	•		•			•	•	•			DD			DD	•
Bryum sauteri	LC					CR	DD		DD	•		•	•	•		•		DD			•	•	•			DD				VU
Bryum valparaisense	VU											•						DD			•					EN				DD
Bryum versicolor	EN	E																			•	•						•		
Bryum violaceum	LC		•	•	•	EN	•		•	•		•	•	•				DD			•	•								-
Buckia vaucheri	LC				VU	•	•	•	•			EN			•		•				•	•						•	•	•
Buxbaumia aphylla	LC		•		•		•		•			EN	RE								•	•								EN
Buxbaumia viridis	LC		•		EN		NT		•			VU			VU				•		•	CR								VU
Callicladium haldanianum	LC				NT		NT		•												•	•								-
Callicladium imponens	NT		•		•		•		•			•				•					•	•				-			•	CR
Calliergon cordifolium	LC		•	•	•	•	•		•			•	•	•							•	•								VU
Calliergon giganteum	LC		•	•	•	•	•		•			•	•	•							•	•								EN
Calliergon megalophyllum	LC				•		VU		•												-									
Calliergon richardsonii	LC		•		•	•	•	•	•												•	•								
Calliergonella cuspidata	LC		•	•	•	•	•		•	•		•	•	•	•	•	•	DD	•	?	•	•	•	DD		•		•	NT	•
Calliergonella lindbergii	LC		•		•	•	•		•			•	•	•	•						•	•								•
Calomnion complanatum	NA											-	•																	
Calympores erosum	CR																												•	
Calyptrochaeta apiculata	NA											•	•																	
Campyliadelphus chrysophyllus	LC		•		•	•	•	•	•	•		•	•	•	•		•		•		•	•				DD		•		•
Campyliadelphus elodes	NT		•		NT	DD	NT		•			NT	NT	NT					•		•	•								*RE*
Campylium bambergeri	LC				VU	•	•	•	•			VU									•	•								
Campylium laxifolium	LC				EN	DD	DD		NT																					
Campylium longicuspis	VU						-	•	•																					
Campylium protensum	LC		•	•	•	•	•	•	•			•	•	•	•				•		•	•								•
Campylium stellatum	LC		•	•	•	•	•	•	•	•		•	•	•	•				•		•	•				EN		DD		•
Campylophyllopsis calcarea	LC		•		•		•		•			•	•		•				•		•	•								•
Campylophyllopsis sommerfeltii	LC				•		•		•												-	•								
Campylophyllum halleri	LC				VU		•		•			CR			•						•	•								•
Campylophyllum montanum	VU				CR		VU		VU																					
Campylopus atrovirens	LC			•			•		EN			•	•	•	•	DD					•	•				-		•	•	•
Campylopus brevipilus	LC		•				VU			•		•	•	•		•	•		•		•	•	•			•		•	•	•
Campylopus cygneus	LC															•							•							
Campylopus flaccidus	EN															•														
Campylopus flexuosus	LC		•	•		•	•		•	•		•	•	•	NT	•		EN			•	•	•			•				•
Campylopus fragilis	LC		•	•			•		•	•		•	•	•		•		•	•		•	•	•			•		•		•
Campylopus gracilis	LC			•			•					•	•	•					•		•	•								
Campylopus incrassatus	LC															•							•							
Campylopus introflexus	NA		•	•		VU	•		•	•		•	•	•		•	•	DD	•		•	•	•			•		•	•	•
Campylopus oerstedianus	DD																		•		•	•							•	*VU*
Campylopus pilifer	LC									•		EN	•		•	•	•	•	•		•	•	•			•		•	•	•
Campylopus pyriformis	LC		•			•	VU		•	•		•	•	•		•					•	•	•			NT			•	•
Campylopus schimperi	LC			•		•	•	•	VU			EN	RE								•	•								VU
Campylopus setifolius	LC	E										•	•																	RE
Campylopus shawii	LC											•	NT			•														
Campylopus subulatus	DD			-		•	•		VU	•		•	VU	VU	•	DD				•	•	•	•			DD				•
Campylostelium pitardii	EN																•	VU		•	•	•				CR			•	•
Campylostelium saxicola	VU											NT	EN	EN							•	•								VU
Campylostelium strictum	EN	E																VU	•		•	DD	VU			NT				DD
Catoscopium nigritum	LC		•		•	•	•	•	•			EN	NT	NT	EN						•	•								EN
Ceratodon amazonum	NE	E																												•
Ceratodon conicus	NT				CR		DD		•			DD						•	•		•	•							•	•	-
Ceratodon purpureus	LC		•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•			•		•	•	•
Ceratodon purpureus subsp. *purpureus*			□	□	■	□	□	□	■			□	□	□	■	■	■	■	□	□	■	■	■			■		□	■	■
Ceratodon purpureus subsp. *stenocarpus*																■		■			■	■	?			DD		■	■	-
Cheilothela chloropus	LC											EN				•	•	•	•	•	•	•		•		•		•	•	•
Chenia leptophylla	LC											•				•		•			•	•	•			DD		•		•

• Species confirmed; LC/status unknown
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□ Unconfirmed infraspecific taxon
? Some doubt about occurrence
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Status values italicised in red with a darker fill have an associated note

Vatican City	Austria	Belgium	Czech Republic	Germany	Liechtenstein	Luxembourg	Netherlands	Poland	Slovakia	Switzerland	Albania	Bosnia-Herzegovina	Bulgaria	Crete	Croatia	Greece	Hungary	Kosovo	Montenegro	North Macedonia	Romania	Serbia	Slovenia	Turkey	Belarus	Caucasus (in Europe)	Crimea	Estonia	Kaliningrad	Latvia	Lithuania	Moldova	Arctic Russia	Central Russia	NE Russia	NW Russia	SE Russia	South Urals	Ukraine
	•			R						DD*																														
	2			-						VU								•	•									VU		0										
		•					•				DD	•	VU	•	•	•			•	•			•	DD	•															
																										•														
	4	•		DD			DD		DD	•																													
•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•		•	•	NT	•	•	•	•	•		VU	•	•	•		•	•	•	•	•	•	•
		•					•																																	
	3	•	•	•		NT	•	•		VU						•	NT				CR	VU	•							•									
		•		•		VU				DD*				•		•	DD															•								•
•		•		EN						CR	•	•	VU	•	•	•			•	•	CR	•																	•
	•	•	•	•		•	•	•	•	•	•		NE	•		•	•		•	•	EN		DD		EN			VU	•	•	•		•					•
				CR			VU	Ex	CR																			VU		0										
				DD																											1					•	•			
	3	•	•	•		•	•		•	VU	•	•	VU	•	•	•	•		•		EN	•	DD			•		EN												
	•																																						
	•																																						
•	4	•	DD	•		NT	•	•	•	VU	•		DD*	•	•	•	•				CR	•		•						•	•								•
	2	•	DD	-					•	VU								•	•								•				•								
																•																								
	•			CR			•			•					•								•																
	•	•	•	•		NT	•	•	•	•						•	•		•			•								•	•			•	•	•		•
	•		•	•	•			•	•	•	•	•	NT		•		•	•	•	•	•	•				•	•						•	•	•	•	•	•	•
	3	RE	NT	VU		VU	CR	•	NT	EN	DD	•	EN		•		VU		?	•	•	•	NT		•			NT	•	•	1		•	•	•	•	•	•	•
	2		VU	NT	•			E	VU	NT	DD	•	NT		•	EN	EN	•	CR	•	•	EN	CR	NT			•	VU	•	1									•	
	3		VU	VU			EN	•	VU	VU			VU		•		•		EN	•	•	•	EN	•	•	•		•	•	3		?	•	•	•	•	•	•	•
	4	•	CR	EN			CR	•		VU		•			•					•	•	DD	•	DD	?	•			1	•									•
	3	•	•	•		•	•	•	•	VU		•	•		•		NT	•	DD*	•	•	•	•	•	•		•	•	•	•		•	•	•	•	•	•	•	•
	3	•	VU	EN	•	VU	EN	•	NT	•		•	EN		•	?	CR		VU		•	VU	NT	•	•		•	•	•	•		•	•	•	•	•	•	•	•
			RE	RE			*RE*	E																				VU		1			•	•	•	•			
	3			CR				E		VU												DD		DD			•		NT		*1*	1		•	•	•	•			•
•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	•	•	•	•	•	NT	CR	•	•	•			•		•	?	•		DD		•	DD	•		•	•		•	•	•	•		•	•	•	•	•	•	•
	•	•	•	NT	•	•	VU	•	•	•	•	•	•		•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	2	Mn	DD	EN			EN	R	EN	VU	DD*	•	NE	?	•		CR	•	•	•	•	EN	VU	•		•			•		•	4					•			•
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	•	•	NT	VU	•	VU	VU	•	•	•		•	•		•	•	NT	•	•	•	•	•	•			•	•	•	•	•	•	•	•	•	•	•		•	•
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	•		EN	NT	•			•	•	•		•	NT		•	•		•	•	•	•	•	•			•		•							•	•			•	•
	NE									NT									*VU*																					
		Mn		CR			EN			DD						•																								
	•	•	•	•	•	•	•	I	VU	•	•	•			•		•		*VU*		•		•		DD				•										
	3	•	•	NT	•	•	NT	R	DD	•							•		*VU*		NT		EN			•		VU		•									•
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	DD	RE							RE	VU						•																								
	2	•	•	•	•	•	•	E	DD	•					•		DD		•	•	NT		*RE*					RE	•	•									
	•			DD				E	DD	DD											VU		DD			•													
	3	•	VU	NT		CR	NT	•	EN	EN											EN	•	•			?										•			
														•		•																								
	4	RE	NT	NT				I	CR	EN					•		CR				CR		DD																R
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	•	RE		EN			RE	E	VU	VU										•	CR		VU		0			NT		1			•	•	•	•			
	3	•	?	DD		VU	DD		EN	VU			DD	?	•	?	DD	•	-		CR					•		VU		•									
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	•			•				DD*									•																								

● Species confirmed; LC/status unknown
■ Infraspecific taxon confirmed
□ Unconfirmed infraspecific taxon
? Some doubt about occurrence
- Literature record but later rejected
Status values italicised in red with a darker fill have an associated note

Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia	Sicily	Spain
Chenia ruigtevleia	NE																													●
Chionoloma bombayense	NE																													
Chionoloma cylindrotheca	LC						●					●	●																	
Chionoloma hibernicum	LC	E?					DD					●	●								-									
Chionoloma minus	DD	E										DD																		
Chionoloma recurvifolium	NT											NT	NT																	
Chionoloma tenuirostre	LC		●	●	VU	VU	●		●			●	●	●	●		●		●		●	●	NT			DD		●	●	●
Chionoloma tenuirostre var. *holtii*												■	■								■									
Chionoloma tenuirostre var. *tenuirostre*			□	□		□	□		□			■	■	■	□		□		□		■	□	□			□		□	□	□
Cinclidium arcticum	LC						NT	●	●																					
Cinclidium latifolium	NT							●																						
Cinclidium minutifolium	LC																													
Cinclidium stygium	LC		●		●	●	●	●	●			EN	VU	VU							●	●								
Cinclidium subrotundum	LC				●	●	●	●	●																					
Cinclidotus aquaticus	LC																●				●	●				VU		●	●	●
Cinclidotus danubicus	LC	E																			●	●								-
Cinclidotus fontinaloides	LC		●				CR		NT			●	●	●			●	DD	●		●	●	NT			●		●		●
Cinclidotus riparius	LC											VU	DD		●		●				●	●				VU		●	NT	●
Cinclidotus vivesii	DD	E																												CR
Cirriphyllum crassinervium	LC		●			VU	●		●	●		●	●	●	●		●	●	●		●	●	●			●	DD	●	●	●
Cirriphyllum piliferum	LC		●	●	●	●	●		●	●		●	●	●	●	●					●	●								●
Claopodium rostratum	VU																				●	●								VU
Claopodium whippleanum	LC																●		●		●					●		●		●
Clasmatodon parvulus	RE																													
Cleistocarpidium palustre	VU						DD		EN												●									DD
Climacium dendroides	LC		●	●	●	●	●	●	●			●	●	●	●				●		●	●				CR				●
Cnestrum alpestre	LC				●		NT	●	●												●	DD								
Cnestrum glaucescens	NT				EN		DD	●	DD																					
Cnestrum schisti	LC				●		●		●													DD								
Codonoblepharon forsteri	EN		?									EN							●		●	●	VU			VU		DD	●	●
Conardia compacta	NT		●		CR	●	VU		●			NT	RE						●		●	●								VU
Conostomum tetragonum	LC			●	●		●	●	●			NT			●						●	●								●
Coscinodon cribrosus	LC				VU		●	●	●			●			NT			VU	●	●	●	●				CR		●	NT	●
Coscinodon horridus	DD	E																			●					DD				DD
Coscinodon humilis	DD	E																				●								?
Coscinodon monchiquensis	CR	E																								●				
Cratoneuron curvicaule	LC							●				CR							●		●	●							●	DD
Cratoneuron filicinum	LC		●	●	NT	●	●	●	●	●		●	●	●	NT		●	EN	●	●	●	●	●			EN	●	●	●	●
Crossidium aberrans	LC																	DD			●	●								●
Crossidium crassinervium	LC														●		●	●		●	●	●	VU	DD		EN		●	●	●
Crossidium davidai	LC																	●												
Crossidium geheebii	NT																	●				●								
Crossidium laevipilum	NT																●													●
Crossidium laxefilamentosum	EN																												●	?
Crossidium squamiferum	LC											CR			●		●	●	●	●	●	●	●					●	●	●
Crossidium squamiferum var. *pottioideum*																					■	■								■
Crossidium squamiferum var. *squamiferum*												■					□	□	□	■	■	■	□			□		■	■	
Cryphaea heteromalla	LC		●				EN		CR	●		●	●	●		●	●	●	●		●	●				●		●	●	●
Ctenidium molluscum	LC		●	●	VU	●	●		●	●		●	●	●	●	●	●	DD	●		●	●	-			●	●	●	●	●
Cyclodictyon laetevirens	LC											CR	NT			●		CR			-		●			CR				EN
Cynodontium asperifolium	NT																													
Cynodontium bruntonii	LC		●		VU		●		●	●		●	●	●	●	?		●	●		●	●				●		●	●	●
Cynodontium fallax	NT						●		NT			CR			-						●	●								-
Cynodontium gracilescens	LC						●		EN			-									●	●				EN				●
Cynodontium jenneri	LC		●	●	CR	●	●		NT			●	VU													EN				
Cynodontium polycarpon	LC		●		●		●		●			EN			●				●		●	●				DD		DD		DD
Cynodontium strumiferum	LC		●		●	●	●	●	●			VU			EN						●	●								EN
Cynodontium suecicum	LC	E			VU		●		●																					
Cynodontium tenellum	LC				●		●	●	●			EN									●	●								
Cyrtomnium hymenophylloides	LC				●	VU	●	●	●												●	●								●
Cyrtomnium hymenophyllum	LC				EN		●	●	●																					
Daltonia lindigiana	EN															●							-							
Daltonia splachnoides	LC											VU	●	●									DD							
Dendrocryphaea lamyana	NT	E										VU									●	DD				●				VU
Dialytrichia mucronata	LC											●	*VU*			●	●	●	●	●	●	●	●			●	DD	●	NT	●
Dialytrichia saxicola	LC	E										DD									●		●			●				●
Dichelyma capillaceum	NT		●		EN				NT												●	DD								
Dichelyma falcatum	LC				●	●	●		●												●									CR
Dichodontium flavescens	DD						DD					●	●	●							●	●	●							-
Dichodontium pellucidum	LC		●	●	●	●	●	●	●			●	●	●	●				●		●	●	NT			DD		●	●	●
Dicranella campylophylla	NE																						●							
Dicranella cerviculata	LC		●	●	●	●	●		●			NT	DD	DD							●	●								●
Dicranella crispa	LC		●	-	●	●	●	●	●			DD	EN	EN								●								
Dicranella grevilleana	LC				NT	●	●	●	●			NT	NT		VU						●	●								VU
Dicranella heteromalla	LC		●	●	●	●	●		●	●		●	●	●	●	●		●	●		●	●	●			●		●	●	●

Vatican City	Austria	Belgium	Czech Republic	Germany	Liechtenstein	Luxembourg	Netherlands	Poland	Slovakia	Switzerland	Albania	Bosnia-Herzegovina	Bulgaria	Crete	Croatia	Greece	Hungary	Kosovo	Montenegro	North Macedonia	Romania	Serbia	Slovenia	Turkey	Belarus	Caucasus (in Europe)	Crimea	Estonia	Kaliningrad	Latvia	Lithuania	Moldova	Arctic Russia	Central Russia	NE Russia	NW Russia	SE Russia	South Urals	Ukraine
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	3	•	DD	CR					VU	VU		•	CR		•		NT				NT	VU	•			•														•
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		•		RE						DD			DD		•	•	•		*EN*			EN	•																
	3	•	EN	NT		VU	NT		EN	VU					•	•	DD				DD	•	DD			•			VU		1				•		•		•	**R**
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				VU									DD*	•		•	VU						•																	
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	4	•	?	DD		NT		I	EN	DD*					•				DD*		VU		•													•			**DD**
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	4		DD	EN			RE	•	NT	DD							DD				VU		VU		•			•	•	•	•		•	•	•	•	•	•	•
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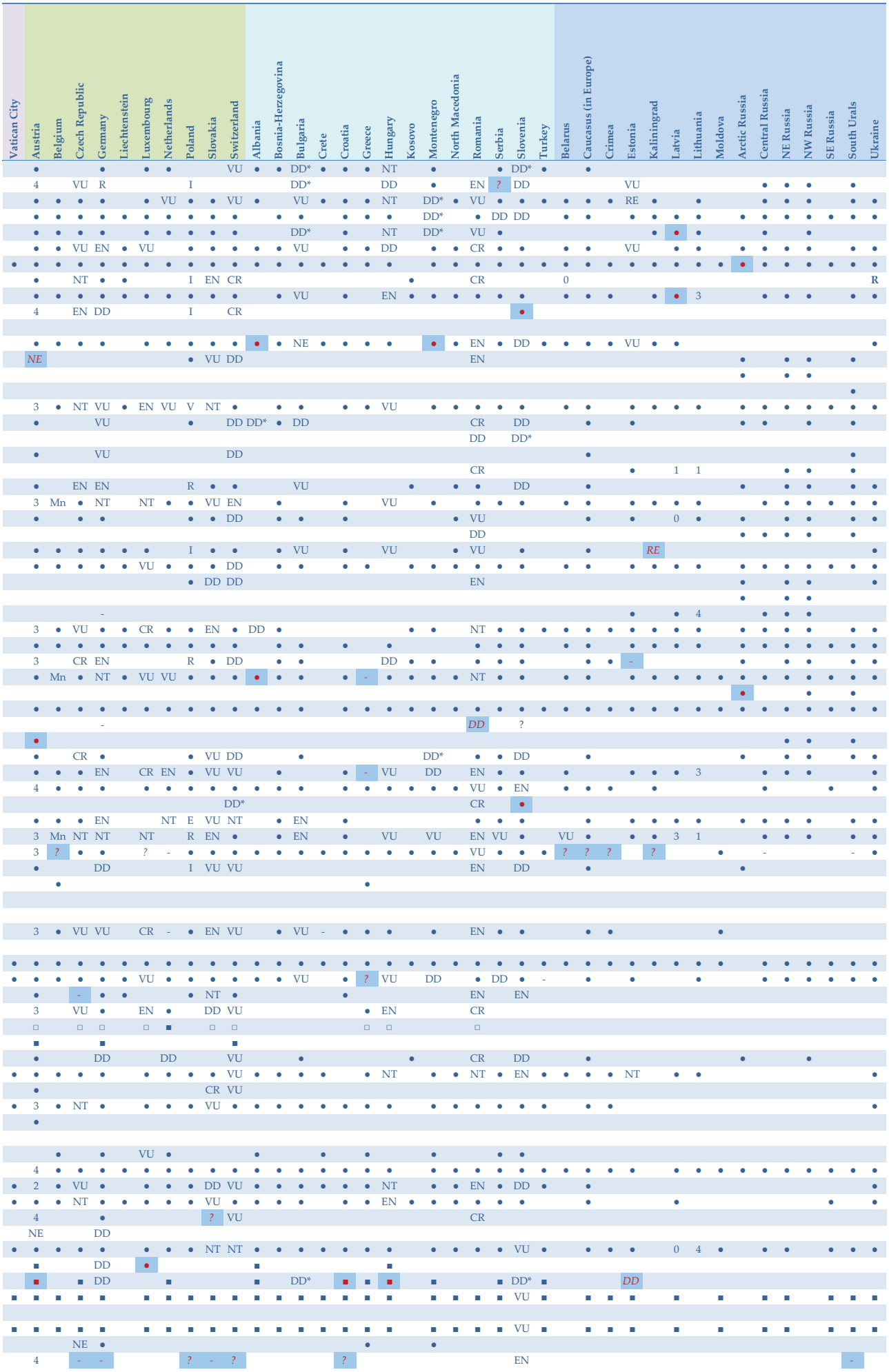
- Species confirmed; LC/status unknown
- Infraspecific taxon confirmed
- Unconfirmed infraspecific taxon
- ? Some doubt about occurrence
- - Literature record but later rejected

Status values italicised in red with a darker fill have an associated note

Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia	Sicily	Spain
Dicranella howei	LC															•	•	•	•	•	•	•	•	•		•		•	•	•
Dicranella humilis	LC				NT		DD		NT												•	•	•					DD	•	
Dicranella rufescens	LC		•		NT	•	•		•	•		•	•	•					•		•	•	EN			VU			•	DD
Dicranella schreberiana	LC		•		•	•	•		•	•		•	•	•	•	•			•		•	•							•	DD
Dicranella staphylina	LC	E	•	•	•		•		•	•		•	•	•				DD			•	•				•				DD
Dicranella subulata	LC		•	•	•	•	•	•	•			•	•	•	•	DD					•	•				EN		•		•
Dicranella varia	LC		•	•	•	•	•	•	•	•		•	•	•	•			DD	•	•	•	•	•	•		DD	DD	•	•	•
Dicranodontium asperulum	LC						•					NT	VU	VU							•	•								CR
Dicranodontium denudatum	LC				EN		•		•			•	•	•	•						•	•						DD		•
Dicranodontium uncinatum	LC						•					•	VU		*CR*						•	•								CR
Dicranoloma menziesii	NA												•																	
Dicranoweisia cirrata	LC		•		NT		•		•	•		•	•	•		•		•	•	•	•	•	•			•		•	•	•
Dicranum acutifolium	LC				•	•	•	•	•												•									
Dicranum angustum	LC				•	•	VU	•	•												-									
Dicranum bardunovii	DD																													
Dicranum bonjeanii	LC		•	•	•	•	•		•	•		•	•	•	•	•			•		•	•							•	•
Dicranum brevifolium	LC				•		•		•						•						•	DD								RE
Dicranum crassifolium	NT	E																				•				•				•
Dicranum dispersum	EN																				•									
Dicranum drummondii	LC				•		•		•																					
Dicranum elongatum	LC				•	•	•	•	•			CR									•	•								
Dicranum flagellare	LC		•		•		•		•			VU				•		DD			•	•	DD							EN
Dicranum flexicaule	LC				•	•	•	•	•			DD									•	•								-
Dicranum fragilifolium	LC		-		•		•		•												-	DD								
Dicranum fulvum	LC		•				•		•												•	•								
Dicranum fuscescens	LC		•	•	•	•	•	•	•			•	•	•	•				•		•	•	NT			-				•
Dicranum groenlandicum	LC				EN		•		•												•	DD								
Dicranum laevidens	LC				CR	•	•	•	•																					
Dicranum leioneuron	LC		•		•		•		•			DD			•						•	•								EN
Dicranum majus	LC		•	•	•	•	•	•	•	•		•	•	•		•					•	•						•		•
Dicranum montanum	LC		•		•		•		•			•							•		•	•	DD							•
Dicranum muehlenbeckii	VU								RE						•						•	•								RE
Dicranum polysetum	LC		•		•		•		•			VU			•						•	•						•		•
Dicranum schljakovii	DD																													
Dicranum scoparium	LC		•	•	•	•	•	•	•	•		•	•	•	NT	•	•	VU	•		•	•	•			•	•	•	NT	•
Dicranum scottianum	LC	E	•				•		VU	•		•	•	•		•		•			•		NT			•				VU
Dicranum septentrionale	NT				•				•																					
Dicranum spadiceum	LC				VU	•	•	•	•			VU							•		•	•								VU
Dicranum spurium	LC		•		•		•		•			VU									•	•								EN
Dicranum tauricum	LC		•		EN	EN	•	•	•			•			•				•		•	•				NT				•
Dicranum transsylvanicum	CR																													
Dicranum undulatum	LC		•		•		•		•			EN	RE								•	•								RE
Dicranum viride	LC				EN		NT		EN												•	•								VU
Didymodon acutus	LC		?	-			-	-	•	?		•	?	?	•	?	•	•	•	•	•	•	?	•		•		•	•	•
Didymodon asperifolius	NT					•	NT	•	EN												•	DD								VU
Didymodon australasiae	LC											•						•		•	•	•	•			DD			DD	•
Didymodon bistratosus	LC																				•					•				VU
Didymodon brachyphyllus	EN					•												•			•									
Didymodon cordatus	LC											CR			•						•	•							DD	•
Didymodon eckeliae	LC																									*DD*				*VU*
Didymodon fallax	LC		•	•	•	•	•	•	•	•		•	•	•	•		•	DD	•	•	•	•	•	•		•	•	•	•	•
Didymodon ferrugineus	LC		•	•	NT	•	•		•			•	•	•	•						•	•						•		•
Didymodon giganteus	LC																				•	•								
Didymodon glaucus	VU						NT		CR			CR									•	DD								
Didymodon glaucus subsp. *glaucus*							□		□			□									□	□								
Didymodon glaucus subsp. *verbanus*																						■								
Didymodon icmadophilus	LC			•		•	VU		DD			DD	RE								•	•								
Didymodon insulanus	LC		•	•	CR	•	•		•	•		•	•	•	•	•	•	•	•	•	•	•	•	DD		•	DD	•	•	•
Didymodon johansenii	VU							•													•	•								
Didymodon luridus	LC		•						RE	•		•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•
Didymodon maschalogenus	EN						EN																							
Didymodon maximus	VU												NT																	
Didymodon nicholsonii	LC											•	•	•			•	DD			•	•				•				•
Didymodon rigidulus	LC		•	•	•	•	•		•	•		•	•	•	•	•	•	DD		•	•	•	•	DD		•	DD	•	•	•
Didymodon sinuosus	LC		•						EN	•		•	•	•			•		•		•	•				DD			•	•
Didymodon spadiceus	LC		•				•		VU			•	•	•	•		•		•	•	•	•				DD		•	NT	•
Didymodon subandreaeoides	NT																				•									
Didymodon tomaculosus	LC	E										•	VU																	
Didymodon tophaceus	LC		•	•	CR	•	DD	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•		•		•	•	•
Didymodon tophaceus subsp. *erosus*																					■					*DD*				VU
Didymodon tophaceus subsp. *sicculus*																DD*	■	■			■	■	■			DD			■	■
Didymodon tophaceus subsp. *tophaceus*			■	■	■	■	DD	■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■		■		■	■	■
Didymodon tophaceus subsp. *tophaceus* var. *anatinus*																					■									
Didymodon tophaceus subsp. *tophaceus* var. *tophaceus*			■	■	■	■	DD	■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■		■		■	■	■
Didymodon umbrosus	LC											•	VU				•	DD			•					CR			DD	•
Didymodon validus	VU						-		-												•	•								


Vatican City
Austria
Belgium
Czech Republic
Germany
Liechtenstein
Luxembourg
Netherlands
Poland
Slovakia
Switzerland
Albania
Bosnia-Herzegovina
Bulgaria
Crete
Croatia
Greece
Hungary
Kosovo
Montenegro
North Macedonia
Romania
Serbia
Slovenia
Turkey
Belarus
Caucasus (in Europe)
Crimea
Estonia
Kaliningrad
Latvia
Lithuania
Moldova
Arctic Russia
Central Russia
NE Russia
NW Russia
SE Russia
South Urals
Ukraine

• Species confirmed; LC/status unknown
■ Infraspecific taxon confirmed
□ Unconfirmed infraspecific taxon
? Some doubt about occurrence
- Literature record but later rejected
Status values italicised in red with a darker fill have an associated note

Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia	Sicily	Spain
Didymodon vinealis	LC		•	•		•			VU	•		•	•	•	•	•	•	•	•	•	•	•	•	•		•	DD	•	•	•
Diobelonella palustris	LC		•	•	•	•	•	•	•			•	•	•	•				•		•	•								•
Diphyscium foliosum	LC		•	•	•	•	•		•			•	•	•	•	•		DD	•		•	•	•			•			•	•
Discelium nudum	LC		•		•		NT		•			DD	NT	NT							•								RE
Distichium capillaceum	LC		•	•	•	•	•	•	•			•	•	•	•		•		•		•	•						•	NT	•
Distichium hagenii	NT				RE		DD	•	VU																					
Distichium inclinatum	LC		•		VU	•	•	•	•			•	•	•	VU			?			•	•						•	•	VU
Distichophyllum carinatum	CR																													
Ditrichum cornubicum	CR	E										CR	CR																	
Ditrichum heteromallum	LC		•	•	•	•	•		•			•	•	•	•				•		•	•				•			•	•
Ditrichum lineare	LC				DD	•	•		•			•	CR	CR							•	•								EN
Ditrichum pallidum	NT		•						RE			CR				•			•		•	•						•	•	-
Ditrichum plumbicola	EN	E										EN	EN								•									
Ditrichum punctulatum	NT															DD							NT							
Ditrichum pusillum	LC		•		•	•	•		•			•	DD	DD				VU			•	•							•	VU
Ditrichum subulatum	LC											EN				•	•	•	•		•	•	VU			•		•	NT	•
Ditrichum zonatum	LC			•	•	VU	•		•			•	EN	*EN*	•						•	•								-
Drepanium fastigiatum	LC				•		•		•												•	•								EN
Drepanocladus aduncus	LC		•	•	•	•	•	•	•	•		•	•	•	•		•	•	•		•	•				NT		DD	•	•
Drepanocladus angustifolius	VU				NT	•	VU	•	•																					
Drepanocladus arcticus	NT						-	•																						
Drepanocladus brevifolius	LC							•																						
Drepanocladus capillifolius	NT		•		•		EN		•																					
Drepanocladus lycopodioides	VU		•		VU	DD	CR		•			EN	NT	NT							•	DD								
Drepanocladus polygamus	LC		•	•	•	•	•	•	•			•	•	•							•	•				EN			•	VU
Drepanocladus sendtneri	VU		•		EN	DD	EN		•			EN	NT	NT							•	•						DD		
Drepanocladus sordidus	NT				•	•	EN		•																					
Drepanocladus trifarius	LC		•	•	•	•	•	•	•			•	VU								•	•								
Drepanocladus turgescens	LC				EN	•	•	•	•			EN									•	•								
Echinodium renauldii	EN	E														•														
Echinodium setigerum	EN	E																					VU							
Echinodium spinosum	EN	E																CR					VU							
Encalypta affinis	DD				•		•	•	•												•	•								VU
Encalypta affinis subsp. *affinis*					VU		□	□	■												■	□								□
Encalypta affinis subsp. *macounii*					EN		■		■																					
Encalypta alpina	LC				EN	•	•	•	•			•	VU		•						•	•								•
Encalypta brevicolla	LC				•		•	•	•			CR																		
Encalypta brevipes	EN				CR	EN	•	•	DD												•									
Encalypta ciliata	LC			•	•	•	•		•			•	*CR*	CR	•				•		•	•				CR		DD	NT	•
Encalypta longicolla	LC				CR		EN	•	VU												•	•								
Encalypta microstoma	LC						VU														•	•								VU
Encalypta mutica	VU				EN		•	•	NT																					
Encalypta pilifera	LC						•		•			DD									•									
Encalypta procera	LC				NT	•	•	•	•																					
Encalypta rhaptocarpa	LC		•	•	•	•	•	•	•			NT	CR	CR	•						•	•							•	•
Encalypta spathulata	VU						EN		EN						•		•				•	•								•
Encalypta streptocarpa	LC		•		•	•	•		•			•	•	•	NT		•	VU	•		•	•				EN	DD	•	NT	•
Encalypta trachymitria	LC		•		DD	•	•		•												•	DD						•	DD	
Encalypta vulgaris	LC		•		NT		VU		•			•	NT		•		•	•	•	•	•	•	VU			NT	DD	•	•	•
Entodon challengeri	NE																													
Entodon cladorrhizans	DD																				•	•								VU
Entodon concinnus	LC		•	•		•	•		•			•	•	•	•						•	•				-	DD		•	•
Entodon schleicheri	LC																				•	•								
Entosthodon abramovae	NE																													
Entosthodon attenuatus	LC			•		•				•		•	•	•		•	•	•	•	•	•	•	•	DD		•		•	•	•
Entosthodon commutatus	EN																	NT					VU							DD
Entosthodon convexus	LC															•	•	•	•	•	•	•	•	DD		•		•	•	•
Entosthodon dagestanicus	NE																													
Entosthodon duriaei	NT																•	DD	•	•		•		•		•			•	NT
Entosthodon fascicularis	LC		•		CR				NT	•		NT	NT	NT		?		DD	•		•	•	•	DD		•		•	•	•
Entosthodon handelii	NE																													
Entosthodon hungaricus	LC																	DD						DD*		•			•	NT
Entosthodon kroonkurk	LC	E																•												DD
Entosthodon mouretii	NT											DD									•					DD				VU
Entosthodon muhlenbergii	NT						CR		NT			NT	*RE*		VU	?		-	•	-	•	•	•	DD			•	DD	•	•
Entosthodon obtusus	LC		•	•		CR	•		VU	•		•	•	•		•	•	•	•		•	•	•			•		•	•	•
Entosthodon pulchellus	LC										•	EN	*EN*			•	•	•	•	•	•	•	NT	•		•		•	•	•
Entosthodon schimperi	NT																•	•			•					DD				VU
Entosthodon stenophyllus	NE																													
Ephemerum cohaerens	VU											EN	VU			•					•	•						DD	•	CR
Ephemerum crassinervium	NT				CR				DD			DD	NT	NT			•		•		•	•	•			•		DD	•	•
Ephemerum crassinervium subsp. *rutheanum*		E										DD	■								■	■							DD	
Ephemerum crassinervium subsp. *sessile*					■				■			DD	■	■			■		■		■	■	■			■		■	■	■
Ephemerum recurvifolium	NT				CR				DD			•	•				•				•	•		•		EN		•	•	•
Ephemerum serratum	LC		•				•		•			•	•	•					•		•	DD				VU		•	DD	•

Vatican City	Austria	Belgium	Czech Republic	Germany	Liechtenstein	Luxembourg	Netherlands	Poland	Slovakia	Switzerland	Albania	Bosnia-Herzegovina	Bulgaria	Crete	Croatia	Greece	Hungary	Kosovo	Montenegro	North Macedonia	Romania	Serbia	Slovenia	Turkey	Belarus	Caucasus (in Europe)	Crimea	Estonia	Kaliningrad	Latvia	Lithuania	Moldova	Arctic Russia	Central Russia	NE Russia	NW Russia	SE Russia	South Urals	Ukraine
•	3	•	EN	•		•	•	•	DD	CR	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	VU			•				•	•	•	•	•
	•	•	•	VU	•		DD	•	•	•	DD*		•		•	•			DD*	•	•	•	NT			•										•			•
	•	•	•	NT	•	•	CR	•	•	•		•	•		•	•	NT		•		•	•	•			•	•	DD	•							•			•
		•	VU	•		EN		V																				CR						•		•			
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	1			R						RE																													
	•	•	•	NT	•	NT	VU	•	•	•	•	•	•		•	•	NT		•	•	•	•	•		•	•					•		•	•	•	•		•	•
	•	•	•	•		CR	•	•	EN	VU			VU				•				CR	•	DD					VU											
	•	Mn	VU	NT	•	•	•	•	VU	EN		•	EN		•		•	•	DD*		NT	•	EN	•			•	VU											•
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	•		EN	R	•			•	EN	NT	DD*		VU																								•			•
	•		CR	•				•	•	•			DD*			•		•	•	•	NT	•	•				•							•		•	•		•	•
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				-																														•		•				
																																		•						
			DD	CR				E	•				NE								NE							NT	•	•	•		•		•	•			
	2	Mn	RE	CR			CR	E	CR	VU							EN		•		EN	-	VU	•	•		•	•	2	1			•	•	•	•			VU
	2	•	VU	VU		CR	•	•	VU	EN	DD*		VU				NT		VU	•	VU	VU	VU	•	•		•	•	•	4	•	•	•	•	•	•	•	•	•
	1	•	CR	DD			CR	R	VU	CR		•	VU				EN				NT	VU	VU	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
	•		RE	DD				V		DD							DD										NT	•					•	•				
	3		CR	EN	•		•	E	CR	NT			VU		•				•		CR	•	NT	•			NT	•	1	2			•	•	•	•			•
	2			EN				•		CR									VU				CR				•	•	•			•			•				
	4		RE	R	•			•		•		•				•		•	DD		CR	DD	•			•							•		•	•		•	
	□		□	■	□			□		CR		□				□		□	□		□	□	□			□							□		□	□		□	
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	•	Mn	VU	EN	•	CR		•	•	•	•	•	•		•	•	VU	•	VU	•	•	VU	•		•	•		VU		1			?	•	•	•	•	•	•
	4			•	•					CR													DD			•													•
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	DD			G									-													•	•								•	•	•		
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	•		EN	R	•			•	NT	•	•	•	•		•	?	•	•	•	•		•	•			•	?	•		•			•	?	•	•		•	?
	2		DD	CR					EN	DD						?				•	CR	•				•	•							-	-	•		•	•
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	•		DD	G							•													•			•							•	•	•	•	•		
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	-									RE											EN				-															
	•	•	•	•	•	•	EN	•	•	•		•	VU		•		CR		•		NT	•	•			•	•						•					•	•
	3		DD	NT	•				RE	VU		•			•						DD		•			•								•				•	
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	3	•	VU	VU	•	VU	EN	R	NT	EN		•	•		•	•	NT	•		•	VU	•	DD		DD	•			•	•	•							•
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	2		•	R					CR				•			•	NT		•		•	EN			•						•					•		•
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	0	Mn	CR	EN				R	VU	CR	DD	•	•	•	•	•	NT	•	•	•	VU	•	EN			•	•								•				•
		Mn		CR			CR	I		CR					•	•			•		EN	•	DD																
	1	•	EN	EN			•			CR	DD*	•		•	•	•	NT		•	•		•	EN				•						-			•	-	
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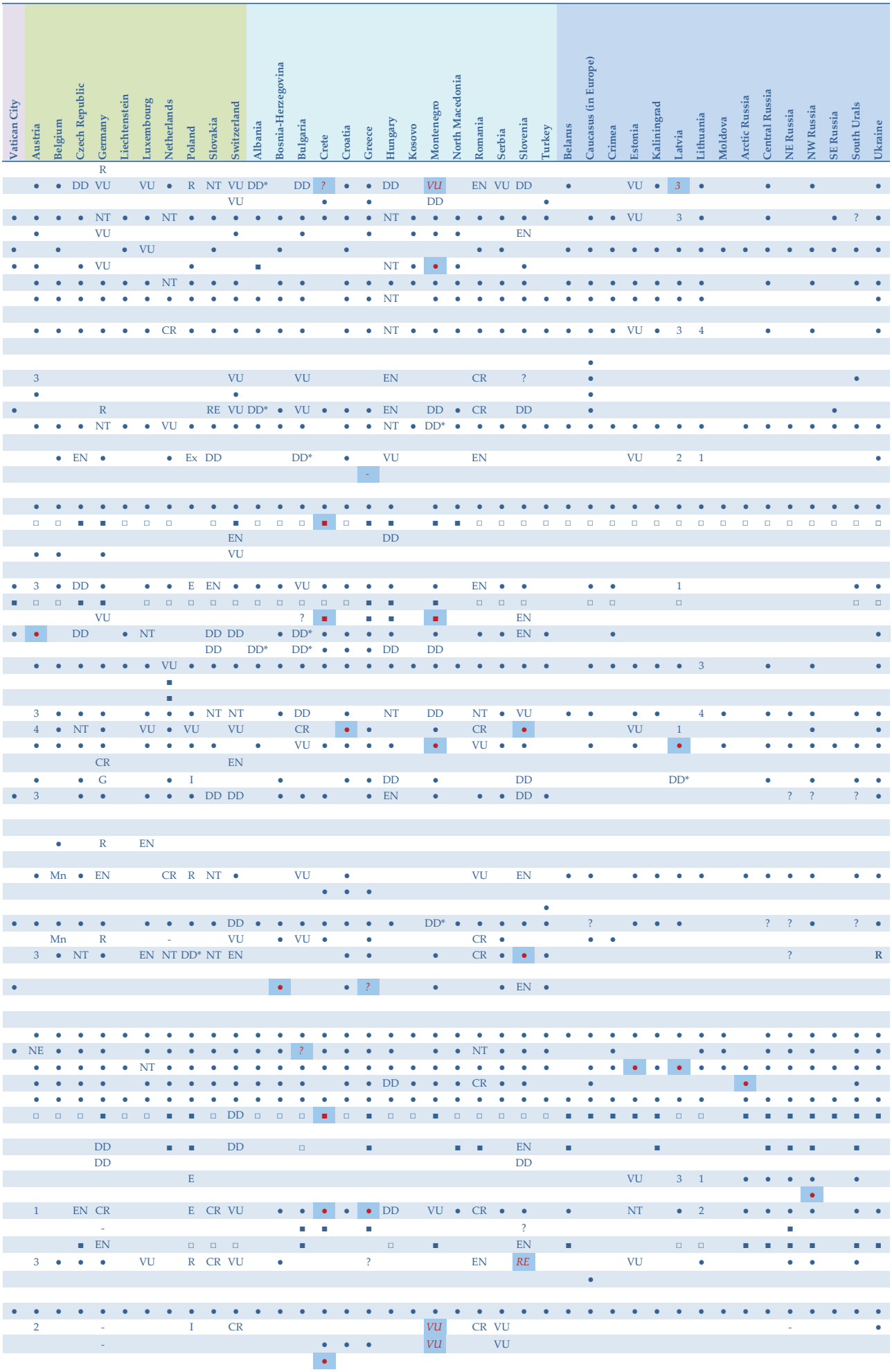
	0	•		•			•	•		-			•	•		•	DD		VU																				•
				R			■	■																															
	■	■		CR			■			-			■	■		■	■		■																				■
	0	Mn	•	VU		NT	VU	E	VU	CR	DD*		CR	•	•		DD		VU		CR																		•
	3	•	•	•		•	•	•	•	•			DD*		•		NT		•											3	•								•

● Species confirmed; LC/status unknown
■ Infraspecific taxon confirmed
□ Unconfirmed infraspecific taxon
? Some doubt about occurrence
- Literature record but later rejected
Status values italicised in red with a darker fill have an associated note

Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia	Sicily	Spain
Ephemerum spinulosum	DD											-	EN	EN							●									CR
Ephemerum stoloniferum	LC		●		CR	VU	EN		●			●	●	●					●		●	●	VU			VU		DD		●
Epipterygium tozeri	LC											●	●	●		●	●	●	●		●	●	●			●		●	●	●
Eucladium verticillatum	LC		●				EN		●	●		●	●	●	●	●	●	●	●	●	●	●	●	●		●	DD	●	●	●
Eurhynchiastrum diversifolium	LC											EN		*RE*					●		●	●							DD	●
Eurhynchiastrum pulchellum s.l.			●	●	●	●	●	●							●											●				
Eurhynchiastrum pulchellum	LC								●										●		●	●						●	●	●
Eurhynchium angustirete	LC		●		●		●		●						VU						●	●								VU
Eurhynchium striatum	LC		●		EN	●	●		●	●		●	●	●	●	●	●	●	●		●	●	VU			●		●	●	●
Exsertotheca baetica	EN	E																												VU
Exsertotheca crispa	LC		●		VU	VU	●		●			●	●	●	●	?	●	DD	●		●	●	EN			●	DD	●	NT	●
Exsertotheca intermedia	VU	E														●		●					NT							-
Fabronia altaica	NE																													
Fabronia ciliaris	VU																				●	●						●		DD
Fabronia major	NE																					●								
Fabronia pusilla	LC														●		●	●	●	●	●	●	NT			●		●	●	●
Fissidens adianthoides	LC		●	●	●	●	●	●	●	●		●	●	●	●	DD		DD	●		●	●	●			●		●	DD	●
Fissidens arcticus	EN							●																						
Fissidens arnoldii	VU																				●									
Fissidens asplenioides	LC											-				●		DD					●			-				
Fissidens azoricus	CR	E														●														
Fissidens bryoides	LC		●		EN	●	●		●	●		●	●	●	●	●	●	●	●	●	●	●	●	DD*		●		●	●	●
Fissidens bryoides var. *bryoides*			□		□	□	□		■	■		■	■	■		-	■	□	■	□	■	■		□		□		■	■	■
Fissidens bryoides var. *caespitans*										■		■	■	■		■			■		■	■	■			■			■	■
Fissidens celticus	LC	E										●	●	●							●							●		●
Fissidens coacervatus	NT	E														●		VU					NT							
Fissidens crassipes	LC						CR		EN			●	●	●	●	?	-	NT	●	●	●	●	NT			●		●	●	●
Fissidens crassipes subsp. *crassipes*							□		■			□	□	□	□	?	-		□	□	■	■				■		■	□	■
Fissidens crassipes subsp. *warnstorfii*																?	-	■			■	■	■			■			NT	■
Fissidens crispus	LC									●		●	DD			●	●	●	●	●	●	●	●	●		●		●	●	●
Fissidens curvatus	DD											EN	RE			●		●	●		●	DD	●			●		●		●
Fissidens dubius	LC		●	●	DD	●	●		●	●		●	●	●	●	●	●	●	●	●	●	●	●			●	DD	●	●	●
Fissidens dubius var. *dubius*																														
Fissidens dubius var. *mucronatus*																														
Fissidens exilis	LC		●		NT		NT		●	●		●	VU	VU				DD			●	●				EN			●	DD
Fissidens fontanus	LC		●		●				●			●	VU	VU			●				●	●	●			●		●	●	●
Fissidens gracilifolius	LC		●		CR	EN	NT		●			●	●	●			●		●		●	●	●	DD*		DD			●	DD
Fissidens grandifrons	LC														-						●					RE				●
Fissidens gymnandrus	LC				VU		●		●												●	●								●
Fissidens incurvus	LC						●		●	●		●	●	●	?	●	●	●	●	●	●	●	●	●		●		●	●	●
Fissidens jansenii	CR	E																			●					CR				
Fissidens microstictus	EX	E																					EX							
Fissidens monguillonii	DD											NT	NT	NT		●					●		DD			DD				DD
Fissidens nobreganus	EN	E																					VU							
Fissidens osmundoides	LC		●	●	●	●	●	●	●			●	●	●	●				●		●	●				DD				●
Fissidens ovatifolius	DD																●	●	●		●	●	CR			EN		●	●	●
Fissidens polyphyllus	LC						VU					●	VU					DD			●	●	EN			●				●
Fissidens pusillus	LC		●		●	●	VU		●			●	●	●		●	●		●		●	●	●	●		DD	DD	●	●	●
Fissidens rivularis	NT									●		●	VU			●	●	DD	●		●	●	DD			EN			●	●
Fissidens rufulus	LC								RE			●	EN	EN							●	●					DD	●		DD
Fissidens serratus	EN															●		EN					●							
Fissidens serrulatus	LC											EN	VU			●			●	●	●	●	●			●		●	●	●
Fissidens sublimbatus	DD																		●				●							
Fissidens sublineaefolius	NT	E														●							NT							
Fissidens taxifolius	LC		●	●	DD		●		●	●		●	●	●	●	●	●	●	●	●	●	●	●	DD		●		●	●	●
Fissidens viridulus	LC		●		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●		●	●	●
Flexitrichum flexicaule	LC		●	●	●	●	●	●	●			●	DD	DD	●		●		●		●	●	NT				DD	●	NT	●
Flexitrichum gracile	LC				EN	●	●	●	●			●	●		●		●				●	●								●
Fontinalis antipyretica	LC		●	●	●	●	●		●	●		●	●	●	●	●	●	DD	●		●	●	VU			●		●	●	●
Fontinalis antipyretica subsp. *antipyretica*			□	□	■	□	■		■	■		■	■	■	□	□	□	■	□		■	■	■			□		■	■	■
Fontinalis antipyretica subsp. *bryhnii*							■																							
Fontinalis antipyretica subsp. *gracilis*					■							■	NT	NT							■	■				DD		■		■
Fontinalis antipyretica subsp. *kindbergii*					■				■												■	■								
Fontinalis dalecarlica	NT		●		●		●		●													DD								-
Fontinalis dichelymoides	NT	E			NT				●																					
Fontinalis hypnoides	LC		●		●	●	●		●								●		●	●	●	●				●	●	●	●	●
Fontinalis hypnoides var. *duriaei*									■								■		■	■	■	■				■	DD	■	NT	■
Fontinalis hypnoides var. *hypnoides*			□		■	□	□		■												■	■						■		-
Fontinalis squamosa	LC				DD		●		●			●	●	●	●				●		●	●				●		●	●	●
Funaria aequidens	NE																													
Funaria arctica	VU							●	DD																					
Funaria hygrometrica	LC		●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●		●	●	●
Funaria microstoma	DD																				●	●							●	
Funariella curviseta	VU										●						●	●	●	●	●	●		●		VU		DD	NT	●
Gigaspermum mouretii	NT																●	●		●									●	●


Vatican City
Austria
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Albania
Bosnia-Herzegovina
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Crete
Croatia
Greece
Hungary
Kosovo
Montenegro
North Macedonia
Romania
Serbia
Slovenia
Turkey
Belarus
Caucasus (in Europe)
Crimea
Estonia
Kaliningrad
Latvia
Lithuania
Moldova
Arctic Russia
Central Russia
NE Russia
NW Russia
SE Russia
South Urals
Ukraine

● Species confirmed; LC/status unknown
■ Infraspecific taxon confirmed
□ Unconfirmed infraspecific taxon
? Some doubt about occurrence
- Literature record but later rejected
Status values italicised in red with a darker fill have an associated note

Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia	Sicily	Spain
Glyphomitrium daviesii	LC	E		●		●	NT					●	●	●		●							-							
Goniomitrium seroi	NT	E																●												EN
Grimmia alpestris	LC				VU	●	●		VU			DD			●				●	?	●	●				-		●	●	●
Grimmia anodon	LC				EN		●	●	VU			CR			●			NT	●	●	●	●						●	DD	●
Grimmia anomala	LC				VU	●	●		NT			VU	DD		●				●		●	●								●
Grimmia arenaria	DD	E			CR		DD					DD			CR						●	●	●							CR
Grimmia atrata	LC				CR		●		VU			NT	EN		VU						●	●								VU
Grimmia caespiticia	LC														●				●	●	●	●				CR		●		●
Grimmia capillata	VU																●		●		●	●						DD	●	VU
Grimmia crinita	VU											VU	RE				●	DD			●	●						●	●	●
Grimmia crinitoleucophaea	LC														●						●									DD
Grimmia curviseta	VU	E				-												VU												
Grimmia decipiens	LC		●		CR		●		NT	●		●	NT		●			●	●	●	●	●	NT			●	DD	●	●	●
Grimmia dissimulata	LC								●			●	VU				●			●	●	●	●			DD		●		●
Grimmia donniana	LC				VU	●	●	●	●			●	NT	NT	●						●	●	VU			●		●	●	
Grimmia elatior	LC				●		●	●	●			VU			●				●	●	●	●						●	●	●
Grimmia elongata	LC				VU	●	●		●			●			NT	●				●	●	●							●	NT
Grimmia funalis	LC			●	●	●	●		●			●	NT	NT	●			DD	●	●	●	●	VU			DD		●		●
Grimmia fuscolutea	VU				NE		NT		VU												●	●							●	
Grimmia hartmanii	LC		●	●	●		●		●			●	●		●	DD*			●	●	●	●				●		●	NT	●
Grimmia incurva	LC				VU		●	●	●			●			NT	?					●	●								NT
Grimmia laevigata	LC		●				VU		NT	●		NT	RE	RE	●	?	●	●	●	●	●	●	●			●		●	●	●
Grimmia lisae	LC									●		●	●			●	●	●	●	●	●	●	●			●		●	●	●
Grimmia longirostris	LC		●	●	●	●	●	●	●			●	RE	RE	●			DD	●		●	●						●	●	●
Grimmia meridionalis	LC															●	?	●	●	●	●	●	●			●		●	●	●
Grimmia mollis	VU				EN		NT		●						VU						●	●								VU
Grimmia montana	LC				NT	●	●		●	●		●			●	?			●	●		●	●	VU		●		●	●	●
Grimmia muehlenbeckii	LC		●		●		●		●			●	DD	DD	VU					●		●	●					●		VU
Grimmia nutans	EN																	VU		●	●					-				
Grimmia orbicularis	LC											NT	EN		NT		●	VU	●	●	●	●	●			●	DD	●	●	●
Grimmia ovalis	LC		●	-	●	●	●		●			NT			●		●	●	●	●	●	●	VU			VU	●	●	NT	●
Grimmia plagiopodia	VU					VU	NT		EN											●	●									
Grimmia pulvinata	LC		●	●	●		●		●	●		●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●	●
Grimmia ramondii	LC		●	●	●		●		●			●	NT	NT	●			DD	●		●	●	●			NT		●	●	●
Grimmia reflexidens	LC				EN	●	●	●	●			CR			●				●		●	●				DD		●		●
Grimmia teretinervis	NT																				●	●								
Grimmia tergestina	LC								VU			●			●		●	DD	●	●	●	●				DD		●	●	●
Grimmia torquata	LC			●	●	●	●	●	●			●	NT	NT	●			●	●		●	●	NT			DD		●	●	●
Grimmia trichophylla	LC		●	●			●		●	●		●	●	●	●		●	●	●	●	●	●	●			●		●	●	●
Grimmia triformis	DD						DD		DD												●	DD								
Grimmia ungeri	EN																	DD		●										
Grimmia unicolor	LC				NT		●		●			VU			●				●		●	●								DD
Gymnobarbula bicolor	VU	E																			●	●								
Gymnostomum aeruginosum	LC		●	●	NT	●	●		●			●	●	●	●			DD	●		●	●	VU					●	DD	●
Gymnostomum aeruginosum var. *aeruginosum*			□	□	■	□	□		■			□	□	□	■			□	□		■	■	□					■	□	■
Gymnostomum aeruginosum var. *obscurum*																														■
Gymnostomum calcareum	LC				CR				EN			●	●	●	●	●	●	●	●	●	●	●	●	●		●		●	●	●
Gymnostomum calcareum var. *atlanticum*																■					■		■			■				■
Gymnostomum calcareum var. *calcareum*					■				■			□	□	□	□	□	■	□	□	□	□	■		□		□		□	□	■
Gymnostomum viridulum	LC									●		●	●		●	●	●	●	●	●	●	●	●			●		●	●	●
Gyroweisia reflexa	NT											CR						●			●	●	●	DD		CR		●	NT	DD
Gyroweisia tenuis	LC		●		CR	VU	NT		VU			●	●	●		●					●	●	●	DD		CR		●	●	DD
Habrodon perpusillus	LC						EN					EN			NT		●	VU	●	●	●	●	●			●		●	●	●
Hageniella micans	NT						EN					EN	NT								●									
Hamatocaulis lapponicus	EN				VU				EN																					
Hamatocaulis vernicosus	VU		●	-	NT		VU	●	NT			NT	NT	NT							●	●								EN
Haplocladium angustifolium	DD																	●												
Haplocladium microphyllum	CR								RE																					
Haplocladium virginianum	CR																					●								
Hedenasiastrum percurrens	EN	E																					VU							
Hedwigia ciliata	LC		●	●	●		●		●			●	VU		●			●	●	●	●	●	NT			●		●	NT	●
Hedwigia emodica	NE				●				●			●			●					●	●	●				●		●	DD	●
Hedwigia mollis	LC																													
Hedwigia nemoralis	DD																													
Hedwigia stellata	LC		●		DD	●	●		●	●		●	●	●	●			●	●	●	●	●	VU			●		●	NT	●
Hedwigia striata	NT						●		●			DD	●						●		●					DD				●
Helicodontium capillare	RE																					DD								
Helodium blandowii	NT		●		●	●	●		●			RE									●								
Hennediella heimii	LC		●	●	●	●	●	●	●	●		●	●	●							●	DD								RE
Hennediella heimii var. *arctica*								■	■																					
Hennediella heimii var. *heimii*			□	□	□	□	□	□	■	□		□	□	□							□	□								□
Hennediella macrophylla	NA											●																		
Hennediella stanfordensis	NA											●	●								●									
Herzogiella seligeri	LC		●		●		●		●			●			●				●		●	●								●
Herzogiella striatella	LC		●		●		●		●			●			EN	●					●	DD								EN

Vatican City	Austria	Belgium	Czech Republic	Germany	Liechtenstein	Luxembourg	Netherlands	Poland	Slovakia	Switzerland	Albania	Bosnia-Herzegovina	Bulgaria	Crete	Croatia	Greece	Hungary	Kosovo	Montenegro	North Macedonia	Romania	Serbia	Slovenia	Turkey	Belarus	Caucasus (in Europe)	Crimea	Estonia	Kaliningrad	Latvia	Lithuania	Moldova	Arctic Russia	Central Russia	NE Russia	NW Russia	SE Russia	South Urals	Ukraine
	•		VU	•	•			•	VU	•	•		•			•		•	DD*	•	CR	•				•									•			•	**VU**	•
	•	•	EN	VU			NT	R	NT	•	•		•	•		•	•		•	•	VU	•	DD			•	•							•		•	•	•	•
	•		VU	•	•			I	EN	NT	•		DD*			•			DD*	•	CR	•				•		VU								•			•	•
	•			CR			•			•											EN																		
	4	•	VU	-						VU			•								EN																		
	•	•	DD	R				•	VU	•	•		•			•		•	VU	•	CR	VU				•													
	0	•	EN	EN		EN	NT	R		EN	DD		VU				CR				VU	•	DD					CR											
	4															•					NE					•	•											•	
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	•		•	NT	•				•	•			•		•				?	•	•	•	DD			•									•	•		•	•
	•		CR	•	•				VU	•		•	VU				EN				VU	•	EN			•								•	•	•	•	•	•
	•	•	NT	•				•	VU	VU			DD					•	•	•	•	•						•											•
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	•			-					EN	VU	•		NT						•	•	CR						•												•
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	•		•	VU					•	•			•								•	•														•	•		•
	•	Mn	•	VU	•	EN	NT	•	•	•	•	•	•	•	•	•	•		•	•	VU	•	DD	•	DD	•	•	VU						•		•	•	•	•
•		•		•		VU	DD		DD	DD	DD*		DD*	•		•	VU		•	•		•	DD				•													
	•	Mn	•	NT	•	VU		•	CR	•	DD*		VU			•	EN			•		•					•		VU					•		•	•		•	•
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	•							•	VU	•	•		VU								CR	•					•									•				
	4	•	•	•		•	NT	•	•	•	•		VU			•	CR	•	•	•	NT	•					•									•			•
	•	•	•	NT		VU		•	•	•	•		VU		•	•	•		DD*	•	VU	•	DD		•	•	•	•	•	•			•	•	•	•		•	•
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	3	•	•	•		NT	•	R	VU	•	•	•	•	•	•	•	•		•	•	•	•	DD	•		•	•												•
	•	•	•	NT	•	NT	NT	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	EN		DD	•	•	•		•	•			•		•	•	•	•
	•		RE	EN					VU								EN			•	CR						•							•			•	•	•
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	•	Mn	•	EN			RE	•	VU	•	•	•	VU		•	•		•	•	•	EN	•								•				•		•			•
	•		VU	•	•			•	VU	•	DD*		•			•		•	DD*	•	EN	•				•										•	•		
	3		CR	VU				DD*	•	VU			VU				DD				EN		DD			•												•		
	•	•	•	NT			NT	•	•	•	•	•	VU	•	•	•	•		•	•	•	•	EN			•	•												•	•
	•	Mn	VU	EN		VU		•	VU	NT			VU			•			DD*		EN	•				•								•		•	•		
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	4		RE	R						NT		•	VU			•					CR	•				•										•		•	
	4			DD						VU												?	DD																	
	•	•	•	•	•	VU	DD	•	•	•	•	•	•	•	•	•	NT	•	•	•	•	•	•	•		•	•	NT	•	•				•	•	•	•	•	•
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	■																																						
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•	3	•	VU	G		CR				VU	•	•	VU	•	•	•	NT				NE	•	EN			•	•													
														•	•	•				•																				
•	4	•	VU	NT		•	•	•	VU	•	•		DD*	•	•	•	NT		•	•	VU	•	EN	•		•	•	•		3	3			•		•	•	•	•
•		•		R			NT			VU	•			•	•	•			•		CR	•	EN			•													
		•		R																																			
				RE																								DD	1			•	•	•	•				
	2	•	VU	EN	•	RE	CR	•	EN	NT		•	VU		•		DD		DD	•	VU	•	NT		•	•		•	•	2	2		•	•	•	•		•	•
						EN					•						CR			DD				?															
				-				I							•										VU									•			•	•
										CR		•									DD		DD																
	•	•	•	•	•	•	VU	•	•	•	•	•	•		•	•	•	•	DD*	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	•		•	DD		NT	DD	•			•					•	•		•	•			VU			•												•	
																										•								•		•	•	•	
																										•								•					
•	•	•	DD	NT		•	CR	I		VU			NE			•	EN			•	•			•				NT											
		•																																					
	1	RE	EN	CR			CR	E	EN	RE		•	CR				DD				VU			•	•		•	•	3	•		•	•	•	•	•	•	**VU**
	2	•	DD	NT			•	I	EN	VU		•					EN	•			EN	•	DD				•		4			•	•		•			**R**
																																	■						
	□	□	■	■				□	□	□		□					■				□	□	□					□		□			■	■		■			■
																•																							
	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•		•	•	•	•	•	•
	4		NT	VU			•	•	EN	EN											EN		•					VU	•			•			•			•

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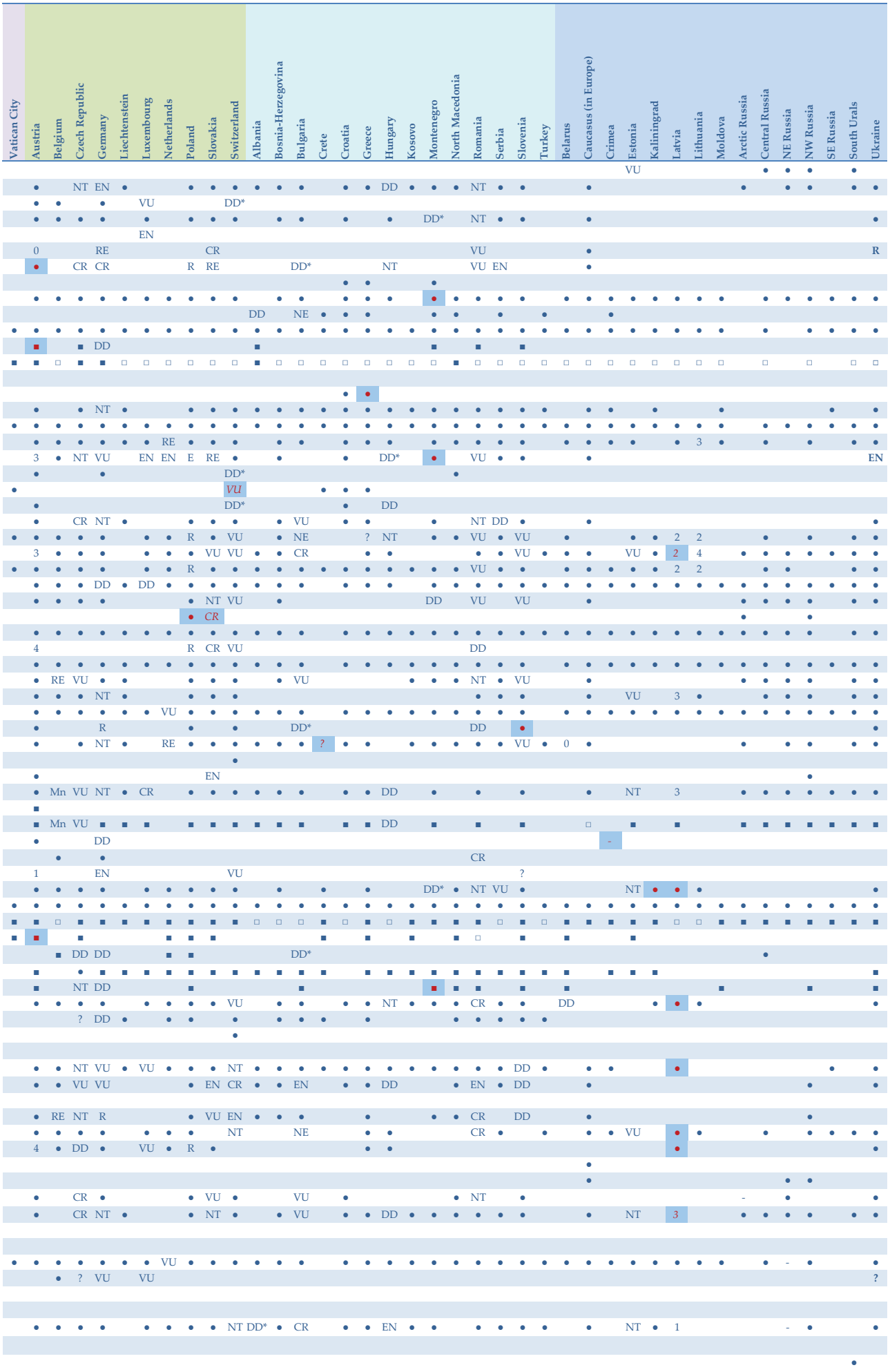
Herzogiella turfacea	NT				VU		NT		●																					
Heterocladiella dimorpha	LC				●	●	●		●			VU			●				●		●	●						●		●
Heterocladium flaccidum	LC	E					●		DD	●		●	●	●		●			●		●					●				DD
Heterocladium heteropterum	LC		●	●			●		●	●		●	●	●	●	●			●		●	●	●			●		●		●
Heterocladium wulfsbergii	LC	E					NT					●	*NT*	NT		●		VU			●		●			DD				●
Heterophyllium nemorosum	DD																				*?*	●								
Hilpertia velenovskyi	CR																													
Homalia lusitanica	NT															?	●	VU	●		●	●	●			VU		●	●	●
Homalia trichomanoides	LC		●		●	●	●		●	●		●	●	●							●	●				RE				●
Homalothecium aureum	LC																●	●	●	●	●	●	VU			●	DD	●	●	●
Homalothecium lutescens	LC		●		NT	●	●		●	●		●	●	●	●		●	DD	●		●	●				EN	●	●	●	●
Homalothecium lutescens var. *fallax*									■												■	■					DD		■	■
Homalothecium lutescens var. *lutescens*			□		■	□	□		■	□		□	□	□	□		□	□	□		■	■				□	■	■	■	■
Homalothecium mandonii	VU															●		●					●							
Homalothecium meridionale	LC	E																●								●				●
Homalothecium philippeanum	LC														●				●	●	●	●						●	●	●
Homalothecium sericeum	LC		●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	DD	●	●	●
Homomallium incurvatum	LC		●		●		●		●			EN			●	?			●		●	●				EN				●
Hookeria lucens	LC		●	●		●	●		NT	●		●	●	●		●			●		●	●	●			NT				●
Hydrogonium amplexifolium	LC														VU						●									
Hydrogonium bolleanum	DD															DD	●			●	●	●	●	DD		CR		●	NT	●
Hydrogonium consanguineum	DD																					●								
Hydrogonium croceum	LC						CR														●	●								VU
Hygroamblystegium fluviatile	LC		●	●	●	●	NT		●	●		●	NT	NT		●					●	●	●	●		DD				●
Hygroamblystegium humile	LC		●		DD		EN		●			●	EN	EN		?					●	●	●	DD*		DD			NT	●
Hygroamblystegium tenax	LC		●		EN	DD	EN		●	●		●	NT	NT		●		DD			●	●	●			DD		●	●	DD
Hygroamblystegium varium	LC		●		●		NT		●	●		●	NT	NT	●	●	●	DD	●		●	●	●			EN			NT	●
Hygrohypnella ochracea	LC			●	●	●	●	●	●			●	●	●	●				●		●	●				NT				●
Hygrohypnella polaris	LC					●	●	●	●			VU									●	●								
Hygrohypnum luridum	LC		●	●	●	●	●	●	●			●	●	●	●	●	●		●		●	●				-			●	●
Hygrohypnum styriacum	EN					●	EN		VU			CR									●	●								DD
Hylocomiadelphus triquetrus	LC		●	●	●	●	●		●	●		●	●	●	●		●		●		●	●	VU			NT		●	NT	●
Hylocomiastrum pyrenaicum	LC			●	●	●	●		●			VU			VU						●	●								VU
Hylocomiastrum umbratum	LC			●	●		●		●			●	NT	NT	VU						●	●								VU
Hylocomium splendens	LC		●	●	●	●	●	●	●	●		●	●	●	●	●	●	DD	●		●	●	●			●			●	●
Hymenoloma compactum	DD				CR		●		●												●	●								
Hymenoloma crispulum	LC			●	●	●	●	●	●			●			●	DD			●	*?*	●	●						DD	●	●
Hymenoloma mulahaceni	DD					●																								●
Hymenostylium gracillimum	EN	E			-		-														-									
Hymenostylium recurvirostrum	LC				●	●	●	●	●			●	●	●	●		●		●		●	●	EN						●	●
Hymenostylium recurvirostrum var. *insigne*												■	NT								■									■
Hymenostylium recurvirostrum var. *recurvirostrum*					■	■	■	■	■			■	■	■	□		■		■		■	■	■						■	■
Hymenostylium xerophilum	LC																													
Hyocomium armoricum	LC			●			NT					●	●	●		●			●		●		VU			●				●
Hyophila involuta	VU																				●	●								●
Hypnum andoi	LC		●		●		●		●	●		●	●	●	●	?		DD			●	●				●		●	NT	●
Hypnum cupressiforme	LC		●	●	●	●	●		●	●		●	●	●	●	●	●	●	●	●	●	●	●			●	DD	●	●	●
Hypnum cupressiforme var. *cupressiforme*			■	□	□	■	□		■	■		■	■	■	□	■	■	■	□	□	■	■	■			■	■	■	■	■
Hypnum cupressiforme var. *filiforme*																	■	■			■	■				■			■	■
Hypnum cupressiforme var. *heseleri*		E										■									■									
Hypnum cupressiforme var. *lacunosum*			■			■	■		■	■		■	■	■	■		■	■			■	■	VU			■		■	■	■
Hypnum cupressiforme var. *subjulaceum*																		■			■	■							NT	■
Hypnum jutlandicum	LC		●	●		●	●		●	●		●	●	●		●		DD		?	●	●	●			●		●	●	●
Hypnum resupinatum	LC		●			●			●	●		●	●	●		●		●	●	●	●	●	●			●		●	NT	●
Hypnum uncinulatum	LC												NT			●		●			●		●			VU				CR
Hypopterygium tamarisci	NA												●								-	●				CR				
Imbribryum alpinum	LC		●	●	●		●		●	●		●	●	●	●	●	●	●	●	●	●	●	●			●		●	●	●
Imbribryum mildeanum	LC				DD		●		●			VU			VU	●			●		●	●	VU	DD		EN		●	DD	VU
Imbribryum miniatum	VU			●																										
Imbribryum muehlenbeckii	LC				●	DD	●		●			NT			●				●		●	●	●			DD		●		DD
Imbribryum subapiculatum	LC		●	?	●	●	NT		●	●		●	●	●		●		DD	●		●	●	●			DD			●	VU
Imbribryum tenuisetum	LC		●		●	●	●		●	●		●	DD			●		DD			●					DD			●	EN
Indusiella thianschanica	NE																													
Isopterygiopsis alpicola	EN				CR		VU		DD																					
Isopterygiopsis muelleriana	LC						●					●	VU		●						●	●				●		●		●
Isopterygiopsis pulchella	LC			●	●	●	●	●	●			●	●	●	●	●	●	●	●		●	●	?			DD			●	●
Isopterygium tenerum	EN															●						●								RE
Isothecium algarvicum	LC	E																VU					NT			VU				VU
Isothecium alopecuroides	LC		●	●	●	●	●		●	●		●	●	●	●	●	●	DD	●		●	●				●		●	●	●
Isothecium holtii	LC						NT					●	●	●							●					●				VU
Isothecium interludens	NE	E?		●			●					●	●	●							●									●
Isothecium montanum	CR	E																					●							
Isothecium myosuroides	LC		●	●	●	●	●		●	●		●	●	●		●		●	●		●	●	VU			●		●	●	●
Isothecium prolixum	VU	E														●							NT							
Iwatsukiella leucotricha	LC																													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Caucasus (in Europe)
Crimea
Estonia
Kaliningrad
Latvia
Lithuania
Moldova
Arctic Russia
Central Russia
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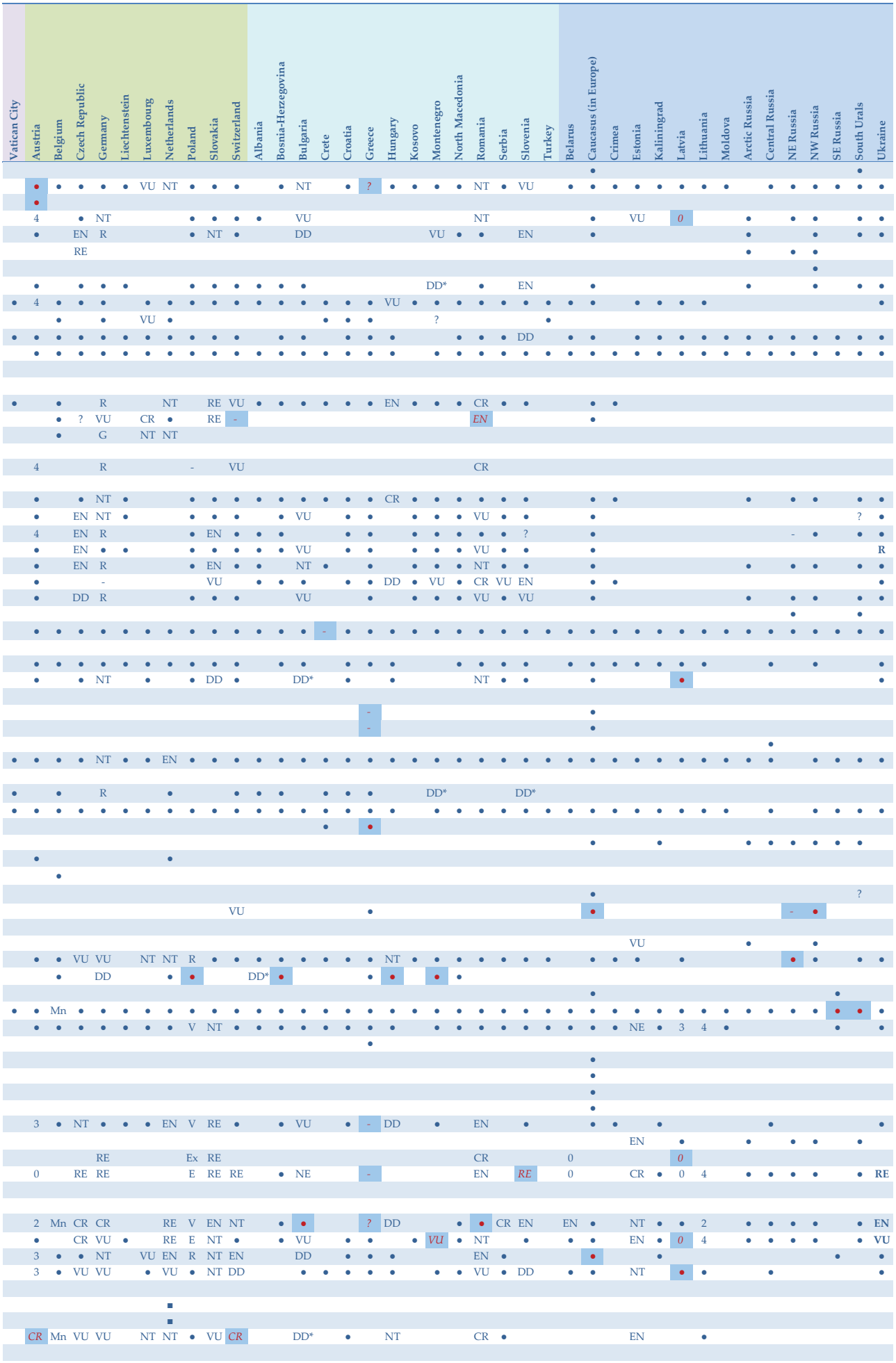
Jaffueliobryum latifolium	NE																													
Jochenia pallescens	LC				●		●		●												●	●								CR
Jochenia protuberans	NE																													
Kiaeria blyttii	LC				●	●	●	●	●			●	●	●		●					●	●				EN				EN
Kiaeria falcata	LC			●	NE	●	●	●	●			●	CR		-						●	●				DD				-
Kiaeria glacialis	LC			●	VU	●	●	●	●			NT																		
Kiaeria riparia	CR				CR	●	VU		NT																					
Kiaeria starkei	LC			●	NT	●	●	●	●			●			●				●		●	●				VU				●
Kindbergia praelonga	LC		●	●	EN	●	●		●	●		●	●	●	●	●	●	●	●	?	●	●	●	DD		●	DD	●	●	●
Leptobarbula berica	LC											●	DD			●	●			●	●	●	●	●		VU			DD	●
Leptobryum pyriforme	LC		●	●	●	●	●	●	●	●		●	●	●		●		VU	●	●	●	●	VU			EN			DD	●
Leptodictyum riparium	LC		●		●	DD	●		●	●		●	●	●		●	●	VU	●	●	●	●	●			●	●	●	●	●
Leptodon corsicus	CR	E																	●											
Leptodon longisetus	VU	E																●					VU							
Leptodon smithii	LC									●		●	EN		●		●	●	●	●	●	●	●			●		●	●	●
Leptodontium flexifolium	NT		●				EN					●	NT	NT							●		-			RE				EN
Leptodontium gemmascens	VU		●									VU									●									
Leptodontium proliferum	NA											●																		
Leptodontium styriacum	VU																					DD								
Leptotheca gaudichaudii	NA											●	●																	
Lescuraea incurvata	LC				EN	●	●	●	●			VU			●		●		●		●	●				EN		●	NT	●
Lescuraea mutabilis	LC														●			DD			●	●							DD	●
Lescuraea patens	LC			●	CR	●	●		DD			VU			●				●		●	●				●		DD		●
Lescuraea plicata	LC				CR	VU	●	●	●			VU			●						●	●					DD			●
Lescuraea radicosa	LC				●	●	●		●						●						●	●							●	●
Lescuraea saviana	LC																		●		●	●								
Lescuraea saxicola	LC				●	●	●		●			CR			●						●	●						●	●	●
Lescuraea secunda	VU																													
Leskea polycarpa	LC		●		NT	●	●		●	●		●	●	●	●			DD			●	●				VU	DD	DD	DD	●
Leucobryum albidum	DD															●		DD			●									
Leucobryum glaucum	LC		●		●		●		●	●		●	●	●	NT	●		VU	●		●	●	NT			DD			RE	●
Leucobryum juniperoideum	LC		●				●		DD			●	●	●		●		DD			●	●	●			NT				●
Leucodon canariensis	NT	E														?		NT					VU							
Leucodon flagellaris	NE																													
Leucodon immersus	NE																													
Leucodon pendulus	NA																													
Leucodon sciuroides	LC		●		●	●	●		●	●		●	●	●	●	●	●	●	●	●	●	●	●			●	DD	●	●	●
Leucodon treleasei	VU	E														●		VU					NT							
Lewinskya acuminata	LC											VU			●		●	●	●	●	●	●	DD			●		●	NT	●
Lewinskya affinis	LC		●		●		●		●	●		●	●	●	●		●	●	●	●	●	●	NT			●		●	●	●
Lewinskya breviseta	LC																			●									●	●
Lewinskya elegans	LC																													
Lewinskya fastigiata	LC																													
Lewinskya iberica	LC	E																	●	●						VU				●
Lewinskya iwatsukii	LC																													
Lewinskya laevigata	VU				CR	●	VU		DD										●		●							●		●
Lewinskya lamyana	LC																													●
Lewinskya pylaisii	LC				●	●	●	●	●																					
Lewinskya rupestris	LC		●	●	●	●	●		●			●	●	●	●		●	●	●	●	●	●	●			●		●	●	●
Lewinskya shawii	LC								●			CR					●		●		●	●				DD			NT	VU
Lewinskya sordida	DD							?																						
Lewinskya speciosa	LC		●		●	●	●	-	●			●	VU		●		●		●	●	●	●				●			NT	●
Lewinskya striata	LC		●		EN	VU	●		●	●		●	●	●	●		●	DD	●	●	●	●	●			●		●	●	●
Lewinskya tortidontia	LC																			●										●
Lewinskya transcaucasica	LC																													
Lewinskya vladikavkana	NE																													
Lindbergia dagestanica	NE																													
Lindbergia grandiretis	NE																													
Loeskeobryum brevirostre	LC		●	●			●		●	●		●	●	●		●			●		●	●				CR				●
Loeskypnum badium	LC				●	●	●	●	●																					
Meesia hexasticha	VU				CR		VU	●	VU												●									
Meesia longiseta	VU		●		EN		EN		NT												●	DD								
Meesia minor							●		●																					
Meesia minutissima							●		●																					
Meesia triquetra	NT		●		●	●	●	●	●				*RE*								●	●								CR
Meesia uliginosa	LC		●		●	●	●	●	●			●	EN		CR						●	●								CR
Microbryum curvicollum	LC		●				CR		NT			NT	RE		●		●				●	DD		DD		●		●	DD	●
Microbryum davallianum	LC		●		CR		EN		●	●		●	●	●			●	DD	●	●	●	●	●	●		●		●	●	●
Microbryum davallianum var. *commutatum*																														
Microbryum davallianum var. *conicum*																														
Microbryum davallianum var. *davallianum*																														
Microbryum floerkeanum	LC		●		EN		EN		NT			NT							●		●	●							●	●
Microbryum fosbergii	NT																									DD				VU
Microbryum longipes	VU	E																								-				VU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Estonia
Kaliningrad
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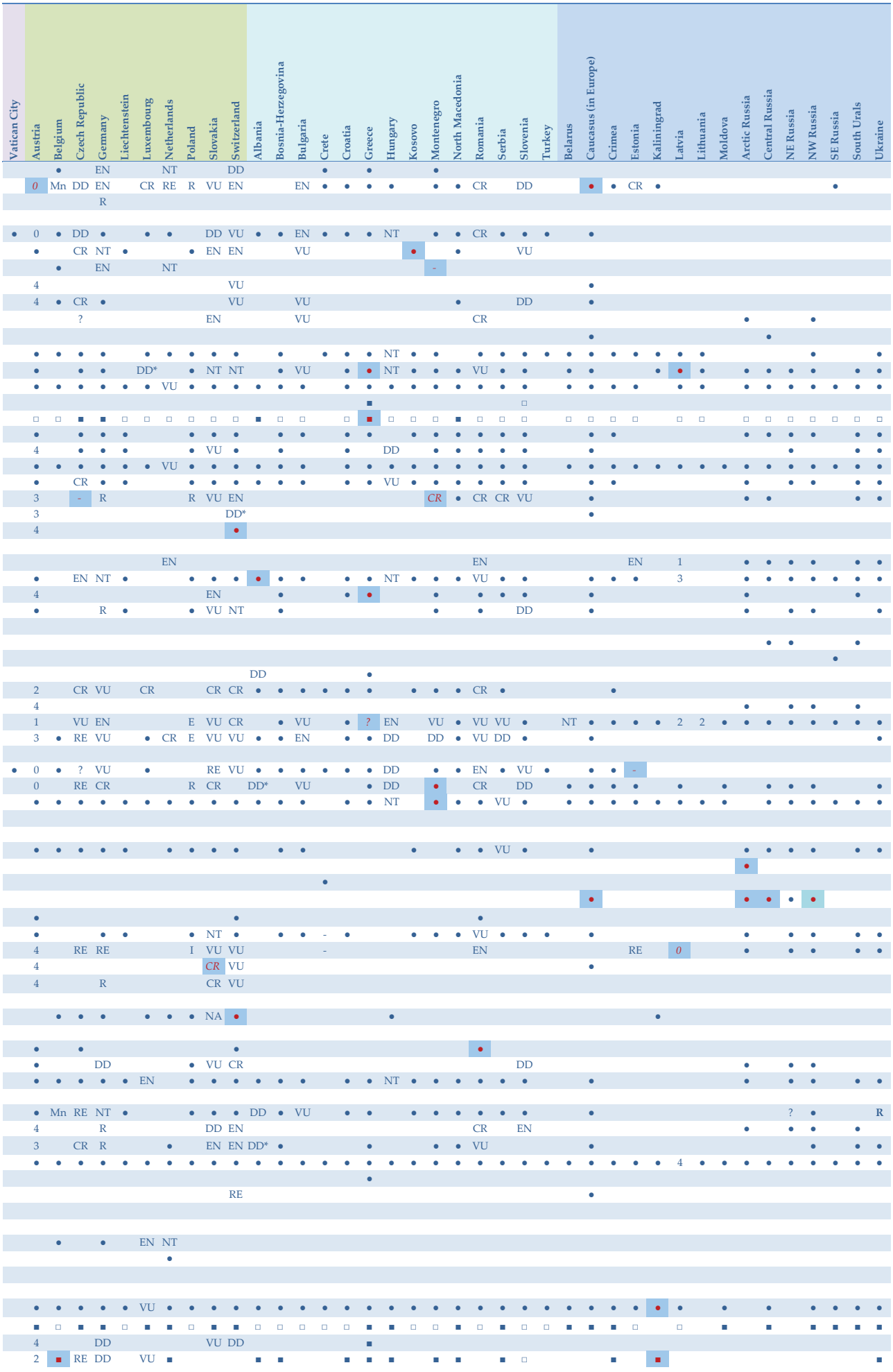
Microbryum rectum	LC		•							•		•	•				•		•		•	•		•		EN		•	•	•
Microbryum starckeanum	LC								RE	•		VU	RE	RE	•		•	•	•	•	•	•	•	•		•		•	•	•
Microbryum vlassovii	EN																													VU
Microcampylopus laevigatus	NT															•		VU					VU							
Microeurhynchium pumilum	LC		•				EN		CR	•		•	•	•		•	•	NT	•		•	•	•			•		•	•	•
Microhypnum sauteri	LC						EN														•	•								
Micromitrium tenerum	EN								EN			CR									•					DD				EN
Mielichhoferia elongata	VU				CR		•	•	VU			VU									•	•							•	VU
Mielichhoferia mielichhoferiana	NT				CR		•		EN			DD			•						•	•				CR			•	•
Mnium blyttii	LC				VU	•	•	•	•																					
Mnium heterophyllum	RE																													
Mnium hornum	LC		•	•	•	•	•		•	•		•	•	•	•	•			•		•	•	•			•		•	NT	•
Mnium lycopodioides	LC			•	NT		•		•			VU			•						•	•								•
Mnium marginatum	LC		•	•	•	•	•	•	•			•	•	•	•		•		•		•	•				-				•
Mnium marginatum var. *dioicum*									■			■									■	■								■
Mnium marginatum var. *marginatum*			□	□	■	□	□	□	■			■	■	■	□		□		□		■	■								■
Mnium spinosum	LC				VU	•	•	•	•			VU			•				•		•	•								•
Mnium spinulosum	LC														NT				•		•	•								NT
Mnium stellare	LC		•	•	•	•	•		•			•	•	•	•				•		•	•				VU			•	•
Mnium thomsonii	LC			•	•	•	•	•	•			•	NT	NT	•						•	•								•
Molendoa hornschuchiana	VU						-	•													•	DD						DD		
Molendoa schliephackei	EN																													
Molendoa taeniatifolia	EN	E																			•									
Molendoa warburgii	LC			•		EN	•		•			•	VU																	
Myrinia pulvinata	NT				NT		NT		VU			EN									•	DD								
Myurella julacea	LC		•	•	•	•	•	•	•			•	EN	EN	•					•	•	•								•
Myurella sibirica	VU																					•								
Myurella tenerrima	LC				NT	•	•	•	•			EN									•	•								
Myurium hochstetteri	LC	E										•	RE			•		VU					•							
Myuroclada longiramea	DD																													
Myuroclada maximowiczii	NA																													
Neckera cephalonica	NT	E														•		•					•							VU
Neckera menziesii	LC																	VU	•		•	•				CR		•	•	•
Neckera oligocarpa	LC				•		•		•													•								
Neckera pennata	LC		•		VU		VU		NT			RE						DD			•	•				DD		DD		
Neckera pumila	LC		•		CR		•		NT	•		•	•	•				•	•		•	•	NT			•		•	NT	•
Nobregaea latinervis	EX	E																					EX							
Nogopterium gracile	LC		•				•	•	VU	•		•	•	•		•	•	•	•	•	•	•	•			•		•	•	•
Nyholmiella gymnostoma	LC		•		VU		•		•			VU									•	•								•
Nyholmiella obtusifolia	LC		•		•	•	•	•	•			•			•						•	•				•			•	•
Oedipodiella australis	EN														VU			VU			•		•							
Oedipodium griffithianum	NT				CR		•		VU			EN	CR																	
Oligotrichum hercynicum	LC		•	•	•	•	•		•			•	•	•	•						•	•								•
Oncophorus demetrii	LC				•		•		•																					
Oncophorus dendrophilus	CR																			•										
Oncophorus elongatus	LC				•		•		•												•									
Oncophorus integerrimus	LC	E			•	•	•		•												•									
Oncophorus virens	LC			•	•	•	•	•	•			EN			•						•	•						•		•
Oncophorus wahlenbergii	LC			•	•	•	•	•	•			EN			CR						•	•						DD		CR
Oreas martiana	VU							•													-	•								
Oreoweisia torquescens	VU						DD														•	•								
Orthodontium gracile	CR											CR		CR							•		EN							
Orthodontium lineare	NA		•						•	•		•	•	•							•									
Orthodontium pellucens	VU																	VU			•		VU							RE
Orthodontium pellucens	VU																													
Orthothecium chryseon	NT				VU	•	•	•	•												•	•								
Orthothecium intricatum	LC		-	•	NT	•	•	•	•			•	•	•	•		•				•	•							•	•
Orthothecium lapponicum	VU				EN		EN	•	VU																					
Orthothecium rufescens	LC				VU	DD	•		•			•	NT	NT							•	•								•
Orthothecium strictum	LC				NT	•	•	•	•												•	•								•
Orthotrichum alpestre	LC				•	•	•	•	•			CR			•			-	•		•	•							•	•
Orthotrichum anomalum	LC		•	•	•	•	•		•	•		•	•	•	•		•	?	•	•	•	•				•	DD	•	•	•
Orthotrichum bistratosum	LC																				•									•
Orthotrichum callistomum	RE																													
Orthotrichum cambrense	DD	E										DD																		
Orthotrichum casasianum	CR	E																												CR
Orthotrichum columbicum	LC											NT							?		•					EN				•
Orthotrichum comosum	LC																	•					•			•			•	•
Orthotrichum consobrinum	CR																													CR
Orthotrichum crenulatum	VU																				•									
Orthotrichum cupulatum	LC		•	•	EN	•	•		•			•	•	•	•		•	NT	•	•	•	•	•			VU	DD	•	•	•
Orthotrichum cupulatum var. *cupulatum*			□	□	■	□	■		■			■	■	■	□		■	□	■	□	■	■	□			□	■	■	■	■
Orthotrichum cupulatum var. *fuscum*							■														■	DD								
Orthotrichum cupulatum var. *riparium*					■		■					■	■	■			■		■		■	DD						■		■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Crete
Croatia
Greece
Hungary
Kosovo
Montenegro
North Macedonia
Romania
Serbia
Slovenia
Turkey
Belarus
Caucasus (in Europe)
Crimea
Estonia
Kaliningrad
Latvia
Lithuania
Moldova
Arctic Russia
Central Russia
NE Russia
NW Russia
SE Russia
South Urals
Ukraine

● Species confirmed; LC/status unknown
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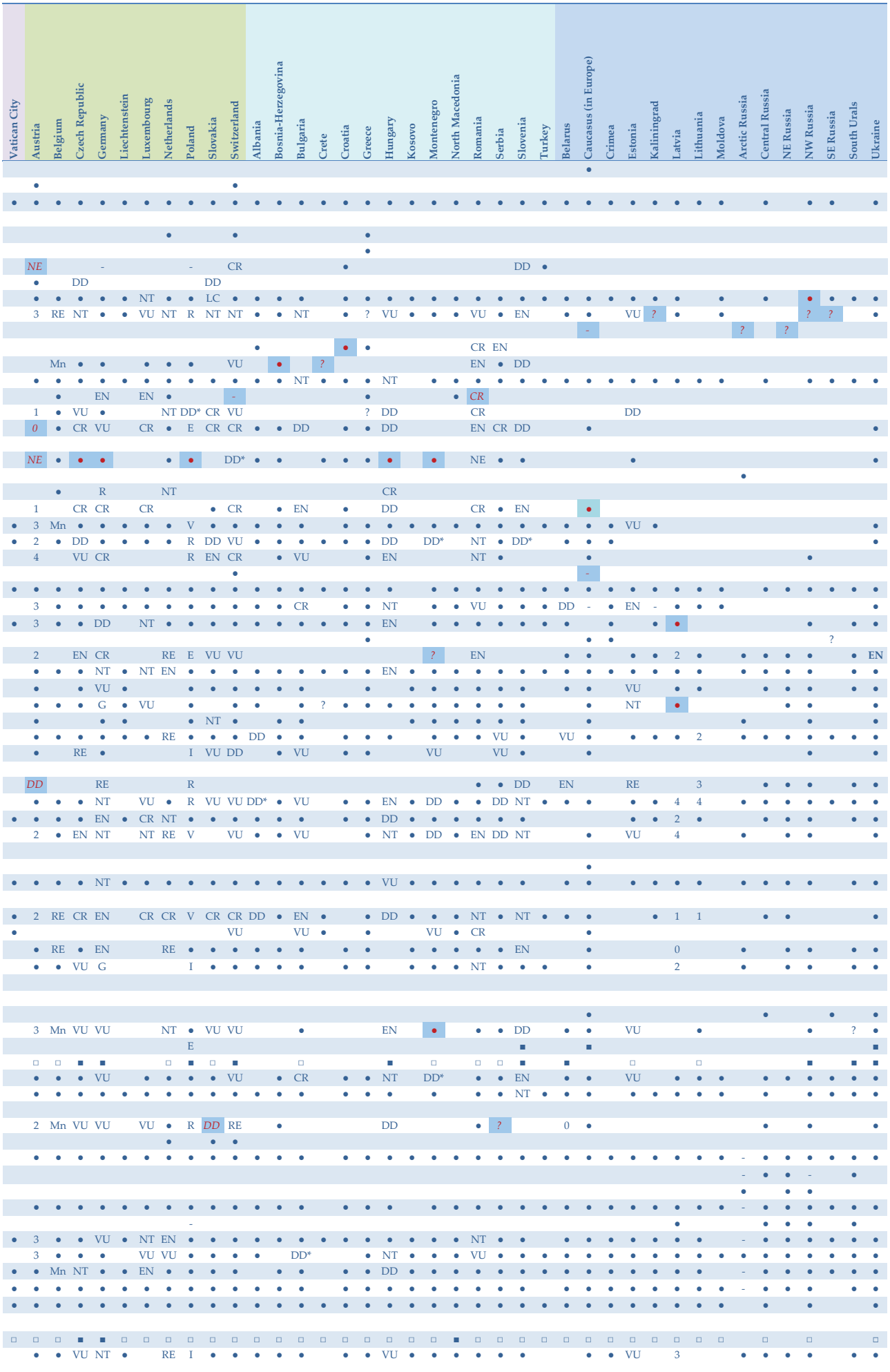
Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia	Sicily	Spain
Orthotrichum dagestanicum	NE																													
Orthotrichum dentatum	VU	E																				●								
Orthotrichum diaphanum	LC		●	●	●		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	DD		●	●	●	●	●
Orthotrichum handiense	CR	E																EN												
Orthotrichum hispanicum	NT																●				●									VU
Orthotrichum macrocephalum	LC																		●	●									●	●
Orthotrichum microcarpum	VU																				-	●								
Orthotrichum moravicum	DD																													
Orthotrichum pallens	LC				●		●	?	NT			EN	EN		●		●		●		●	●	●					●	●	DD
Orthotrichum patens	LC				CR		VU		EN			●							-			●	●				DD	?		CR
Orthotrichum pellucidum	VU				CR		-	●	VU																					
Orthotrichum philibertii	LC						●										●		●	●	●	●				DD		●	NT	VU
Orthotrichum pulchellum	LC		●				●		●	●		●	●	●							●	●							●	VU
Orthotrichum pumilum	LC		●		●		●		●			VU			NT		●	?	●	●	●	●				-		DD	●	●
Orthotrichum rivulare	LC											●	NT	NT							●					NT				●
Orthotrichum rogeri	LC		●				●		CR			EN									●	●								●
Orthotrichum scanicum	LC		●				CR		RE			VU							●		●	●	●			EN			●	VU
Orthotrichum shevockii	LC																	●												
Orthotrichum schimperi	LC				*DD*				●			VU			●			●	●		●	●				CR		●	NT	●
Orthotrichum sibiricum	DD																													
Orthotrichum sprucei	LC											●	VU	VU							●					DD				VU
Orthotrichum stellatum	VU						CR														●	●								DD
Orthotrichum stramineum	LC		●		EN	VU	●		●			●	VU	VU	●		●		●	?	●	●				EN			NT	●
Orthotrichum tenellum	LC		●				●		●	●		●	●	●		●	●	●	●	●	●	●	●			●		●	●	●
Orthotrichum urnigerum	VU				CR		●		NT										●		●	●				-				-
Orthotrichum vittii	NT																				●									●
Oxyrrhynchium hians	LC		●	●	●	●	●		●	●		●	●	●	●	●	●	NT	●	●	●	●	●	●		●	●	●	●	●
Oxyrrhynchium schleicheri	LC		●				●		VU			●	CR		●			DD	●		●	●	CR	DD	VU			●	●	●
Oxyrrhynchium speciosum	LC		●	●	●		DD		NT	●		●	NT	NT		●	●	●	●	●	●	●	●	EN	●			●	●	●
Palamocladium euchloron	EN																													
Paludella squarrosa	LC		●		●	●	●	●	●			RE	CR								●	EN								
Palustriella commutata	LC		●	●	EN	●	●		●	●		●	●	●	●		●		●	●	●	●	CR					●	NT	●
Palustriella decipiens	LC				NT	●	●	●	●			NT			●						●	●								●
Palustriella falcata	LC		●	●	NT	●	●		●			●	●	●	●						●	●	VU			DD		DD	NT	●
Paraleucobryum enerve	LC			●	DD		●		●						VU						●	●								VU
Paraleucobryum longifolium	LC		●	●	●		●		●			VU			●				●		●	●	●							●
Paraleucobryum sauteri	NT	E					●		VU						VU						●	●								VU
Pelekium atlanticum	EN	E																VU					NT							
Pelekium minutulum	EN																				●		●							
Philonotis caespitosa	LC		●		●	●	●		●	●		●	NT	NT	●	●		DD			●	●				●		●	●	●
Philonotis calcarea	NT		●	-	EN		●		NT			●	●	●	NT	●		EN	●		●	●				DD		DD	NT	●
Philonotis capillaris	LC		●	●	NE	●	●		●	●		●	EN	EN	●	●			●		●	●	●			●		●	NT	●
Philonotis cernua	CR											CR	CR																	
Philonotis falcata	NE																													
Philonotis fontana	LC		●	●	●	●	●		●	●		●	●	●	NT	●	●	VU	●		●	●	NT			●		●	●	●
Philonotis hastata	NT															●							VU							
Philonotis marchica	EN		●			VU						CR			●	●	●		●		●	●	●			●			NT	●
Philonotis rigida	VU									●		EN	VU	VU	●	●	●	NT	●		●	●	●			NT		●	NT	●
Philonotis seriata	LC			●	●	●	●		●			NT			●				●		●	●	●			●		●		●
Philonotis tomentella	LC		●		DD	●	●	●	●			NT	VU		●	●		DD	●		●	●				●		●		●
Philonotis uncinata	VU															●														
Philonotis yezoana	LC				CR																									
Physcomitrium arenicola	EN	E																												
Physcomitrium eurystomum	VU		●									CR									●	●							●	
Physcomitrium eurystomum subsp. *acuminatum*																														
Physcomitrium eurystomum subsp. *eurystomum*			□									□									□	□							□	
Physcomitrium patens	LC		●		CR		NT		NT			●	●	●							●	●				●			●	●
Physcomitrium pyriforme	LC		●		●		●		●	●		●	●	●		●	●	DD	●		●	●	NT			EN			DD	●
Physcomitrium readeri	VU											DD									●					DD				●
Physcomitrium sphaericum	VU				CR				RE			EN		VU							●	●								DD
Physcomitrium x *stevensonii*												●																		
Plagiomnium affine	LC		●	-	●		●		●			●	●	●	●		●	DD	●		●	●	●			●		●	DD	●
Plagiomnium confertidens	VU																													
Plagiomnium curvatulum	LC				VU		DD	●	●																					
Plagiomnium cuspidatum	LC		●	●	●	●	●		●			●	NT	NT	●				●		●	●						DD		●
Plagiomnium drummondii	EN				VU																									
Plagiomnium elatum	LC		●		●	●	●		●			●	●	●	●		●				●	●						●	●	●
Plagiomnium ellipticum	LC		●	●	●	●	●	●	●			●	●	●	●				●		●	●								●
Plagiomnium medium	LC		●	●	●	●	●		●			VU			●						●	●	VU			EN		●	●	●
Plagiomnium rostratum	LC		●		VU	●	●		●	●		●	●	●	●	●	●	DD	●		●	●	●			●	DD	●	DD	●
Plagiomnium undulatum	LC		●	●	●	●	●		●	●		●	●	●	●	●	●	●	●		●	●	●			●	DD	●	DD	●
Plagiomnium undulatum var. *madeirense*																■		■					■			DD				
Plagiomnium undulatum var. *undulatum*			□	□	■	□	□		■	□		□	□	□	□	□	□		□		□	■	■			■	■	□	□	□
Plagiopus oederianus	LC		●		●	●	●	●	●			●	CR		●				●		●	●								●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Turkey
Belarus
Caucasus (in Europe)
Crimea
Estonia
Kaliningrad
Latvia
Lithuania
Moldova
Arctic Russia
Central Russia
NE Russia
NW Russia
SE Russia
South Urals
Ukraine

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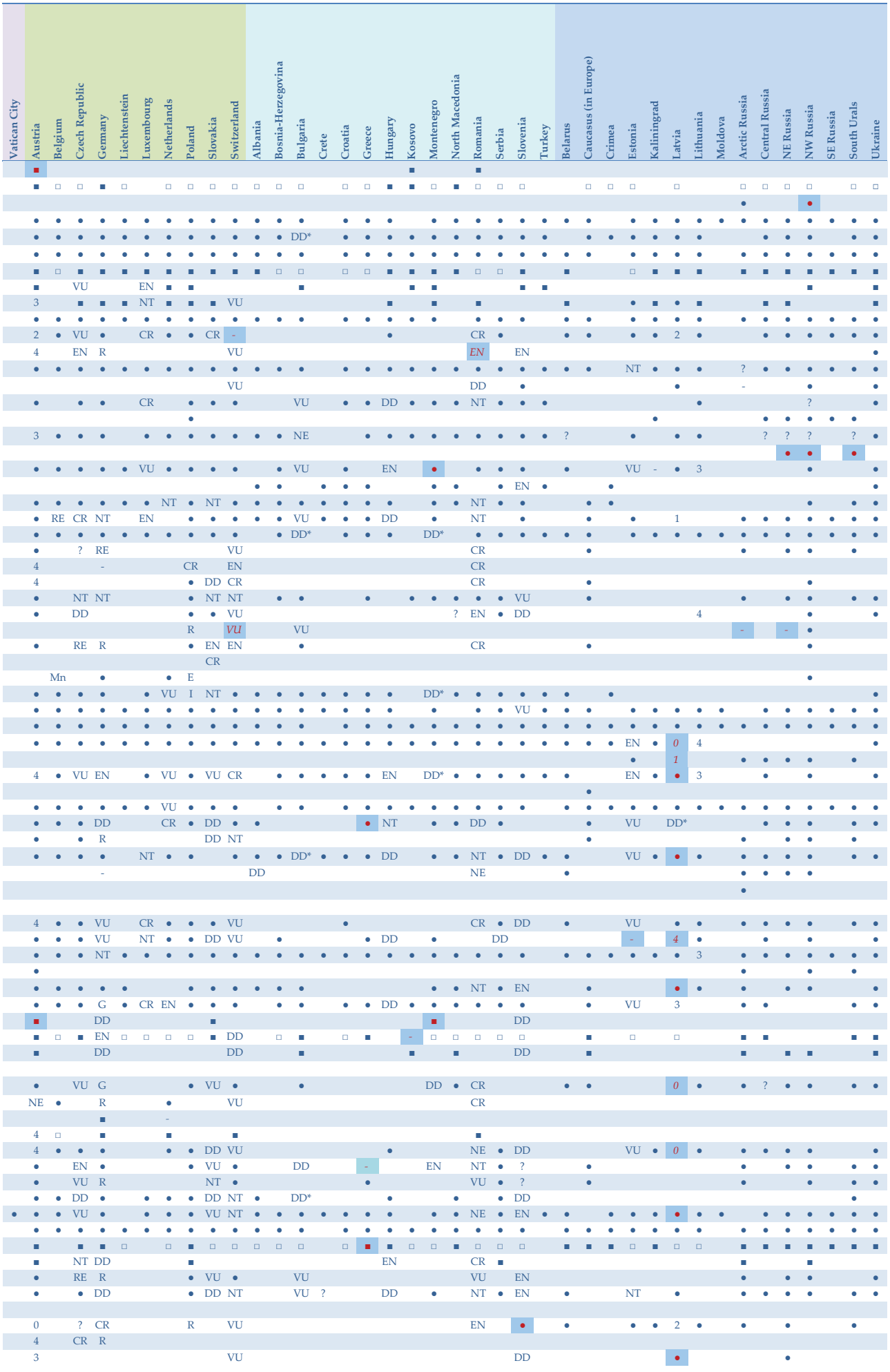
Plagiopus oederianus var. *alpinus*					■				■												■	DD								
Plagiopus oederianus var. *oederianus*			□		■		□	□	■			□	□		□				□		■	■								□
Plagiothecium berggrenianum	VU							●																						
Plagiothecium cavifolium	LC		●	●	●	●	●		●			●	VU		●				●		●	●				EN			●	●
Plagiothecium curvifolium	LC		●		●		●		●	●		●	VU						●		●	●								●
Plagiothecium denticulatum	LC		●	●	●	●	●	●	●	●		●	●	●	●				●		●	●	●			●		●	DD	●
Plagiothecium denticulatum var. *denticulatum*			■	□	■	□	□	□	■	■		■	■	■	□				□		■	■	□			□		■	■	■
Plagiothecium denticulatum var. *obtusifolium*					■				■			■	NT	NT							■	■								■
Plagiothecium denticulatum var. *undulatum*			■		■				■			■									■	■								■
Plagiothecium laetum	LC		●		●		●		●			●	VU	VU	●						●	●				DD				●
Plagiothecium latebricola	LC		●		NT		●		●			●	VU								●	●				DD				
Plagiothecium neckeroideum	VU																					-								
Plagiothecium nemorale	LC		●		NT		●		●	●		●	●	●	●	●		DD	●		●	●	●			●		●	DD	●
Plagiothecium piliferum	LC				●		●		●			CR			●				●		●	●				CR		●		●
Plagiothecium platyphyllum	LC				EN		●		NT			●	VU		VU				●		●	●				●				VU
Plagiothecium rossicum	LC																													
Plagiothecium succulentum	LC		●	●	●	●	●		●	●		●	●	●	●	?		DD	●		●	●	NT			●				●
Plagiothecium svalbardense	DD							●																						
Plagiothecium undulatum	LC		●	●	●		●		●	●		●	●	●							●	●				VU			●	●
Plasteurhynchium meridionale	LC											CR				●	●	●	●		●	●	●			●	DD	●	●	●
Plasteurhynchium striatulum	LC						EN		VU			●	NT				●	DD	●		●	●		●		●		●	NT	●
Platydictya jungermannioides	LC		●		●	●	●	●	●			●	NT	NT	●						●	●								●
Platygyrium repens	LC		●		●		●		●			●									●	●						●		●
Platyhypnum alpestre	LC			●	●	●	●	●	●												?	DD								
Platyhypnum alpinum	LC				EN	●	●		●												●	DD								
Platyhypnum cochlearifolium	EN				EN		VU	●	VU												●	●								RE
Platyhypnum duriusculum	LC			●	●	●	●		●			NT	CR		●				●		●	●								●
Platyhypnum molle	VU			●	VU	●	●		●			VU							●		●	●								VU
Platyhypnum norvegicum	VU				VU		VU		VU																					
Platyhypnum smithii	LC			●	●	●	●		●			VU									●	●								VU
Platyhypnum tatrense	CR																													
Plenogemma phyllantha	LC		●	●	VU	●	●		●	●		●	●	●							●									●
Pleuridium acuminatum	LC		●		CR		EN		●	●		●	●	●	●	●	●	●	●	●	●	●	●			●		●	●	●
Pleuridium subulatum	LC		●		NT	●	●		●	●		●	●	●		?	●	DD	●		●	●	●			●		●	●	●
Pleurozium schreberi	LC		●	●	●	●	●	●	●	●		●	●	●	●	●					●	●	EN			VU				●
Pogonatum aloides	LC		●	●	DD		●		●	●		●	●	●	●	●		●	●		●	●	●			●		●	●	●
Pogonatum dentatum	LC				●		●	●	●																					
Pogonatum nanum	LC		●	●	DD	●	●		●	●		VU	EN	EN		?		●	●		●	●	●			●		●	DD	●
Pogonatum neesii	NE																													
Pogonatum urnigerum	LC		●	●	●	●	●	●	●	●		●	●	●	●	●		DD	●		●	●	VU			VU		●		●
Pohlia andalusica	LC			●	●	●	●		●			EN	EN		VU	?					●	●				DD				VU
Pohlia andrewsii	NT				EN		VU	●													●	●								
Pohlia annotina	LC		●		●	●	●		●	●		●	●	●	NT	●		VU	●		●	●	VU			●			DD	●
Pohlia atropurpurea	NT				CR		VU	●	VU													●						DD	DD	-
Pohlia beringiensis	CR																													
Pohlia bolanderi	EN														VU								●			DD				VU
Pohlia bulbifera	LC		●	●	●	●	●		●			●	●	●	●	●					●	●				DD		DD		
Pohlia camptotrachela	LC		●	●	●		●		●			●	●	●	●						●					●				●
Pohlia cruda	LC		●	●	●	●	●	●	●			●	●	●	NT	?	●	VU	●		●	●	●			●		●	●	●
Pohlia crudoides	VU				VU		●	●	●			CR																		
Pohlia drummondii	LC		●	●	●	●	●	●	●			●	●	●	VU				●		●	●								VU
Pohlia elongata	LC		●	●	●	●	●	●	●			●	●	●	●	?		DD	●		●	●	●			●		●	●	●
Pohlia elongata var. *acuminata*					■							■									■	■				DD				■
Pohlia elongata var. *elongata*			□	■	■	□	□	□	■			■	NT	NT	□	□		□	□		■	■	□					■	□	■
Pohlia elongata var. *greenii*				■	■		■		■			■	EN		■						■	■				DD		DD		■
Pohlia erecta	EN				CR		VU		DD																					
Pohlia filum	LC		●		●	●	●	●	●			EN	NT	NT							●	●				DD				VU
Pohlia flexuosa	LC						DD					●	●	●							●	●								EN
Pohlia flexuosa var. *flexuosa*																					■	■								□
Pohlia flexuosa var. *pseudomuyldermansii*							□					■	□	□							■									?
Pohlia lescuriana	LC		●		●		●		●			●	DD						●		●	●				DD				VU
Pohlia longicolla	LC				●		●		●						VU				●		●	●				EN				VU
Pohlia ludwigii	LC			●	EN	●	●		●			●									●	●								VU
Pohlia lutescens	LC		●						●	●		●	●	●	●				●		●	DD							●	
Pohlia melanodon	LC		●		NT		●		●	●		●	●		●	●	●	●	●	●	●	●	●	●		●	DD	●	●	●	●
Pohlia nutans	LC		●	●	●	●	●	●	●	●		●	●	●	●	●			●		●	●	EN			●		DD	NT	●
Pohlia nutans subsp. *nutans*			□	□	■	□	■	□	■	□		□	□	□	□	□			□		□	■	□			□		□	□	□
Pohlia nutans subsp. *schimperi*							■		■																					
Pohlia obtusifolia	LC				VU	●	●	●	●			DD			VU						●	●								VU
Pohlia proligera	LC		●	●	●	●	●	●	●			VU		RE	●	●			●		●	●	●			EN			●	●
Pohlia scotica	LC	E										DD																		
Pohlia sphagnicola	DD		●		VU		●		●												●									
Pohlia tundrae	DD																													
Pohlia vexans	EN						DD		●												●	●								


Vatican City
Austria
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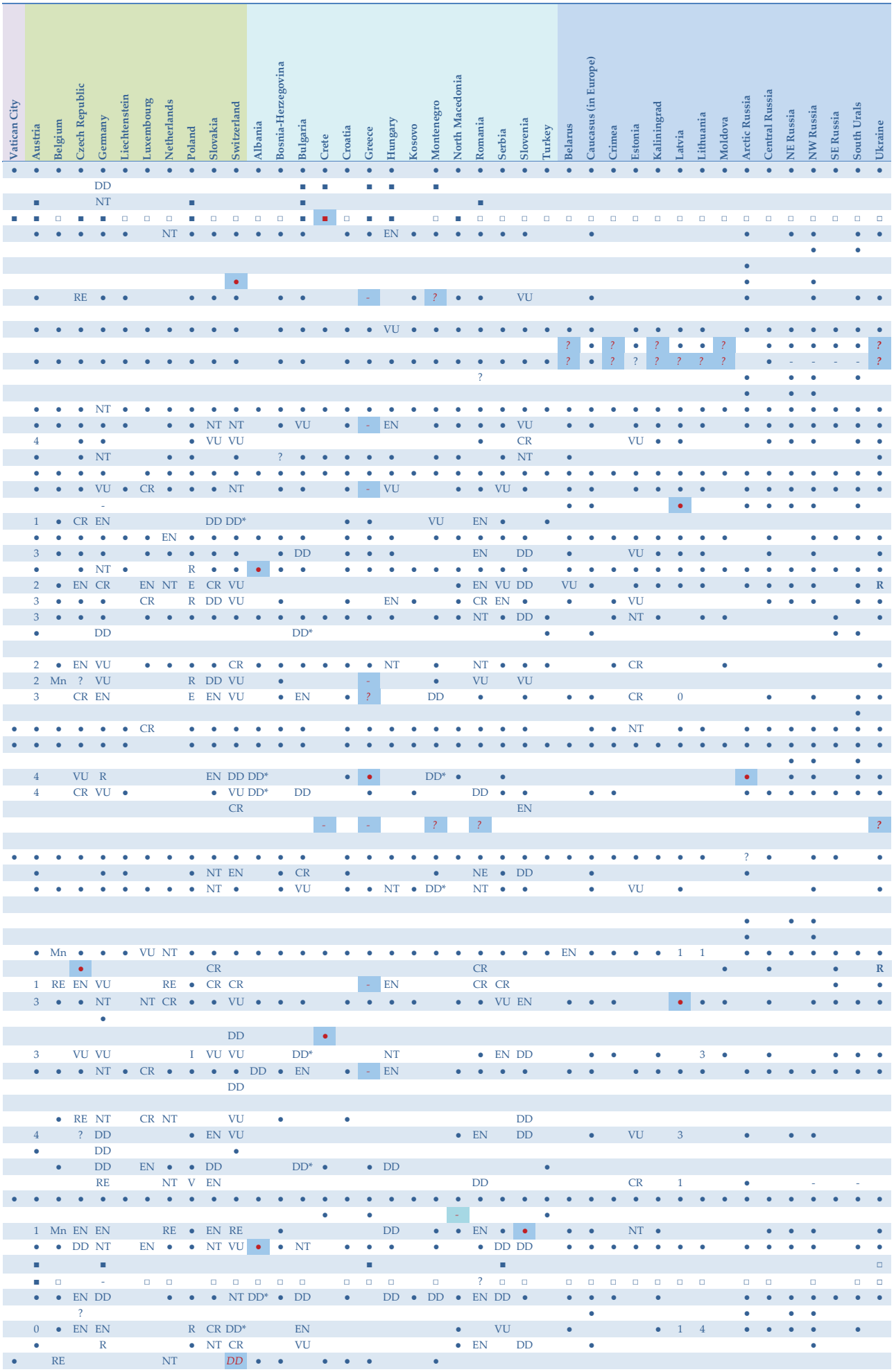
Switzerland
Albania
Bosnia-Herzegovina
Bulgaria
Crete
Croatia
Greece
Hungary
Kosovo
Montenegro
North Macedonia
Romania
Serbia
Slovenia
Turkey
Belarus
Caucasus (in Europe)
Crimea
Estonia
Kaliningrad
Latvia
Lithuania
Moldova
Arctic Russia
Central Russia
NE Russia
NW Russia
SE Russia
South Urals
Ukraine

Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia	Sicily	Spain
Pohlia wahlenbergii	LC		•	•	•	•	•	•	•			•	•	•	NT		•	VU	•	•	•	•				VU		•	•	•
Pohlia wahlenbergii var. *calcarea*												■	DD	DD						■	■	■							■	■
Pohlia wahlenbergii var. *glacialis*					■		■		■			■	RE								■	■								■
Pohlia wahlenbergii var. *wahlenbergii*			□	□	■	□	□	□	■			■	■	■	□		□	□	□		■	■				□		■	■	■
Polytrichastrum alpinum	LC		•	•	•	•	•	•	•			•	•	•	•				•		•	•				•		•	DD	•
Polytrichastrum altaicum	DD				•																									
Polytrichastrum fragile	DD																													
Polytrichastrum septentrionale	DD				•																									
Polytrichastrum sexangulare	NT			•	NT	•	•	•	•			•			VU						•	•								VU
Polytrichastrum sphaerothecium	VU					•																								
Polytrichum commune	LC		•	•	•	•	•		•	•		•	•	•	•	•		VU	•		•	•	•			•		•	NT	•
Polytrichum densifolium	LC				•																									
Polytrichum formosum	LC		•	•	?	•	•		•	•		•	•	•	NT	•		VU	•		•	•	•			•		•	•	•
Polytrichum hyperboreum	LC				•	VU	•	•	•																					
Polytrichum jensenii	LC				•		•	•	•																					
Polytrichum juniperinum	LC		•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•		•	•	•			•		•	•	•
Polytrichum longisetum	LC		•		•	•	•	•	•			•	•	•	CR						•	•							•	CR
Polytrichum pallidisetum	NT				EN		DD		DD												•	•								
Polytrichum perigoniale	LC		•		•		•		•			•	DD		NT				•		•	•				•		•	•	
Polytrichum piliferum	LC		•	•	•	•	•	•	•	•		•	•	•	•	•		•	•		•	•	•			•		•	NT	•
Polytrichum strictum	LC		•	•	•	•	•	•	•			•	•	•	•				•		•	•						•	•	•
Polytrichum swartzii	LC		•		•	•	•	•	•													DD								
Pottiopsis caespitosa	VU											EN			•	•	•				•	•	•			DD		•	DD	DD
Pseudanomodon attenuatus	LC		•		•	•	•		•			CR			•						•	•								•
Pseudephemerum nitidum	LC		•		•		•		•	•		•	•	•		•			•		•	•	-			•				•
Pseudoamblystegium subtile	LC		•		NT		•		•												•	•							•	•
Pseudobryum cinclidioides	LC		•		•	•	•		•			EN									•	DD								
Pseudocampylium radicale	LC		•		VU		EN		•			NT									•	•								
Pseudocrossidium hornschuchianum	LC		•				EN		•	•		•	•	•	•	•	•	•	•	•	•	•		•		•		•	•	•
Pseudocrossidium obtusulum	DD								NT						•						•								•	•
Pseudocrossidium replicatum	EN																					•							•	
Pseudocrossidium revolutum	LC		•						EN	•		•	•	•	•	•	•	•	•	•	•	•	•	DD		•	•	•	•	•
Pseudohygrohypnum eugyrium	NT			•		DD	DD		NT			•	•	•					•		•	•								DD
Pseudohygrohypnum fertile	CR	E																			•	•								
Pseudohygrohypnum subeugyrium	LC						DD		VU			•																		
Pseudoleskeella catenulata	LC						•		•			•			•		•				•	•								•
Pseudoleskeella nervosa	LC		•		•	•	•		•			CR			•				•		•	•							•	•
Pseudoleskeella papillosa	VU				VU		EN		NT																					
Pseudoleskeella rupestris	LC				VU	•	•	•	•			NT					•				•									DD
Pseudoleskeella tectorum	LC				•	VU	•	•	•												•	•								•
Pseudoleskeopsis artariae	EN																					•								
Pseudomalia webbiana	EN	E														•		NT					•							RE
Pseudorhynchostegiella duriaei	NT															•	•		•		•	•	VU			CR		•		EN
Pseudoscleropodium purum	LC		•	•	NT	•	•		•	•		•	•	•	•	•	•	NT	•	?	•	•	•			•	DD	•	•	•
Pseudostereodon procerrimus	LC						•					EN			VU						•	•							•	VU
Pseudotaxiphyllum elegans	LC		•	•	•	•	•		•	•		•	•	•	NT	•		EN	•		•	•	•			•		•	•	•
Pseudotaxiphyllum laetevirens	NT	E														•							•			DD				VU
Psilopilum cavifolium	NT				CR	EN	DD	•	NT																					
Psilopilum laevigatum	LC				CR	•	NT	•	•																					
Pterigynandrum filiforme	LC		•	•	•	•	•	•	•			•	RE	RE	NT			VU	•	•	•	•	NT			•		•	•	•
Pterygoneurum kozlovii	CR																													
Pterygoneurum lamellatum	LC											CR	RE	RE							•	•							•	•
Pterygoneurum ovatum	LC		•		NA		EN		•			EN	RE		•		•	•		•	•	•	•						•	•
Pterygoneurum papillosum	DD	E										EN																		
Pterygoneurum sampaianum	NT																•									RE				•
Pterygoneurum subsessile	LC																	•			•	DD							•	•
Ptilium crista-castrensis	LC		•		•		•		•			•	CR		EN						•	•								EN
Ptychomitrium incurvum	CR																				•	DD								RE
Ptychomitrium nigrescens	LC	E														•		•			•		•			CR			•	
Ptychomitrium polyphyllum	LC	E	•	•			•		RE	•		•	•	•	NT	•		•	•		•	•	•			NT				•
Ptychostomum arcticum	LC		•	•	•	•	•	•	•			VU									•	•								RE
Ptychostomum austriacum	VU	E																												
Ptychostomum bornholmense	LC	E	•				DD		DD			•	NT	NT				•			•					•				•
Ptychostomum calophyllum	EN		•	•		•	NT	-	DD			EN	EN								•	•						-		
Ptychostomum capillare	LC		•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	DD	•	•	•
Ptychostomum cellulare	EN																	DD				•	-						•	
Ptychostomum cernuum	EN		•		VU		DD		DD			CR	EN	EN							•	•				•			•	VU
Ptychostomum compactum	LC		•	•	•	•	•	•	•	•		•	•	•					•		•	•				•		DD	DD	•
Ptychostomum compactum var. *compactum*																					■	■						□	□	□
Ptychostomum compactum var. *rutheanum*			□	□	■	□	□	□	■	■		■	■	■					□		■					□				-
Ptychostomum creberrimum	LC		•	•	•	•	•	•	•			DD	DD		•	•			•		•	•					DD	•	NT	•
Ptychostomum cryophilum	NT				CR	•	•	•	•																					
Ptychostomum cyclophyllum	LC		•		•		•		•			CR									•					-				-
Ptychostomum demissum	EN				CR	DD	•	•	DD			CR									•	•								-
Ptychostomum donianum	LC									•		•	•	•		•	•	NT	•	•	•	•	•	•		•	•	•	•	•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Estonia
Kaliningrad
Latvia
Lithuania
Moldova
Arctic Russia
Central Russia
NE Russia
NW Russia
SE Russia
South Urals
Ukraine

● Species confirmed; LC/status unknown
■ Infraspecific taxon confirmed
□ Unconfirmed infraspecific taxon
? Some doubt about occurrence
- Literature record but later rejected
Status values italicised in red with a darker fill have an associated note

Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia	Sicily	Spain
Ptychostomum elegans	LC		●	●	●	●	●		●			●	VU		●				●	●	●	●			DD		●	●	●
Ptychostomum funkii	VU		●				DD		EN						●			●		●	●	●	-					●	DD
Ptychostomum imbricatulum	LC		●	●	●	●	●		●	●		●	VU	VU	●	●	●	●	●	●	●	●	●	●		●		●	●	●
Ptychostomum inclinatum	LC		●	●	●	●	●	●	●	●		●	●	●	●					?	●	●							●	●
Ptychostomum intermedium	LC		●		*EN*	●	●	●	●			VU	EN	EN							●	●		?				●	●	VU
Ptychostomum knowltonii	VU		●	●	DD	●	●	●	DD			CR	EN								●									
Ptychostomum kunzei	LC						●		●			NT				DD	●	●	●	●	●	●			DD		●	●	●	●
Ptychostomum longisetum	CR				EN	●	NT		●																					
Ptychostomum minii	LC	E																			●	-				●		DD		VU
Ptychostomum moravicum	LC		●		●	●	●		●			●	DD		●			DD			●	●		DD	DD		●	●	●	●
Ptychostomum pallens	LC		●	●	●	●	●	●	●			●	●	●	NT			EN	●		●	●						●	●	●
Ptychostomum pallescens	LC		●	●	●	●	●	●	●	●		●	●	●	●			DD	●	●	●	●		?		EN	DD	●	DD	●
Ptychostomum pseudotriquetrum	LC		●	●	●	DD	●	●	●	●		●	●	●	NT	●	●	VU	●	●	●	●	●	DD		●		●	●	●
Ptychostomum pseudotriquetrum var. *bimum*			■		■				■	■		■	■	■							■	■	■	■				■		■
Ptychostomum pseudotriquetrum var. *pseudotriquetrum*			■	□	■	□	□	□	■			■	■	■	□	□	■	□	□	□	■	■				■		■	■	■
Ptychostomum rubens	LC		●		●		●		●	●		●	●	●	NT	●	●	VU	●		●	●	●	●		DD		●	●	●
Ptychostomum salinum	VU		●		VU	●	●	●	●			DD	CR																	
Ptychostomum schleicheri	LC		●			●						CR			●						●	●				DD		●	●	●
Ptychostomum schleicheri var. *latifolium*																														
Ptychostomum schleicheri var. *schleicheri*																														
Ptychostomum torquescens	LC		●						RE			●	VU	VU	●	●	●	●	●	●	●	●	●	●		●		●	●	●
Ptychostomum turbinatum	VU		●		VU		VU		VU			CR	RE								●	●						●	DD	●
Ptychostomum warneum	VU		●		CR	●	DD		NT			NT	EN								●	DD								
Ptychostomum weigelii	LC				●	●	●	●	●			●			●						●	●						●	●	●
Ptychostomum wrightii	NT				CR		NT	●	VU																					
Ptychostomum zieri	LC			●	EN	●	●	●	●			●	NT	NT	VU					?	●	●								VU
Pulvigera lyellii	LC		●		CR		●		●	●		●	●	●	●		●	●	●	●	●	●	●			●		●	●	●
Pylaisia polyantha	LC		●		●		●		●	●		●			NT			EN			●	●				DD			NT	●
Pylaisia selwynii	LC																													
Pyramidula tetragona	EN				CR		CR		RE									VU			●	●				DD			●	VU
Racomitrium aciculare	LC		●	●	●	●	●		●			●	●	●	NT	●		VU	●		●	●	●			●		●	●	●
Racomitrium affine	LC		●	●	●		●		●			●	●	●	●				●	●	●	●	VU			●			●	●
Racomitrium aquaticum	LC		●	●	●		●		●			●	●	●	NT	●		EN	●		●	●	●			●		DD		●
Racomitrium canescens	LC		●	●	●	●	●	●	●	●		NT	VU	VU	●						●	●						●	NT	●
Racomitrium canescens subsp. *canescens*			□	□	■	□	■	□	■	□		□	□	□	□						□	■						□	□	□
Racomitrium canescens subsp. *latifolium*					●	■		■		■																				
Racomitrium ellipticum	LC				●		●					●	●	●				CR												
Racomitrium elongatum	LC		●	●	●	●	●		●			●	VU	VU	●	●			●		●	●	●			●		●	●	●
Racomitrium ericoides	LC		●	●	●	●	●	●	●			●	●	●		●					●	●						●	●	
Racomitrium fasciculare	LC		●	●	●	●	●	●	●			●	●	●	●	●					●	●	EN			-				●
Racomitrium hespericum	NT	E																								●				●
Racomitrium heterostichum	LC		●	-	●	●	●		●			●	●	●	●	●		●	●		●	●	●			●		●	●	●
Racomitrium himalayanum	VU											VU																		
Racomitrium lamprocarpum	NT																									●				DD
Racomitrium lanuginosum	LC		●	●	●	●	●	●	●			●	●	●	●	●		●	●		●	●	●			●		●	NT	●
Racomitrium lusitanicum	EN	E																								●				
Racomitrium macounii	LC			●	CR	●	●		●			NT	VU		VU				●		●	●				VU				●
Racomitrium macounii subsp. *alpinum*				■	■	□	■		■			■	■		■				■		■	■				■				■
Racomitrium macounii subsp. *macounii*															■				■		■	■				■				VU
Racomitrium microcarpon	LC		●	-	●	●	●		●												●	●						DD		
Racomitrium nivale	VU	E																												
Racomitrium obtusum	LC	E	●				●	●		●		●	●	●	●						●	DD				●				●
Racomitrium panschii	LC								●																					
Racomitrium sudeticum	LC		●	●	●	●	●	●	●			●	●	●	●				●		●	●				VU		●	●	●
Rhabdoweisia crenulata	LC						NT					●	●	●							●	●								VU
Rhabdoweisia crispata	LC				●	EN			●			●	NT	NT				DD			●	●								VU
Rhabdoweisia fugax	LC		●	●	●		●		●			●	VU	VU	●	●		●	●		●	●	●			●		●	●	●
Rhamphidium purpuratum	NT	E														●		VU					●			EN				
Rhizomnium andrewsianum	EN				CR	DD	VU	●	NT																					
Rhizomnium gracile	CR				CR				●																					
Rhizomnium magnifolium	LC				●	●	●		●			●			●				●		●	●				EN				●
Rhizomnium pseudopunctatum	LC		●	●	●	●	●		●			●	NT	NT							●	●								
Rhizomnium punctatum	LC		●	●	●	●	●		●	●		●	●	●	●	●	●		●		●	●	●			●		●	NT	●
Rhizomnium punctatum var. *hermanperssonii*																							■							
Rhizomnium punctatum var. *punctatum*			■	■	■	■	■		■	■		■	■	■	■	■	■		■		■	■				■		■	■	■
Rhodobryum ontariense	LC				CR				●												●	●								●
Rhodobryum roseum	LC		●		●	●	●		●			●	NT	NT	●						●	●								●
Rhynchostegiella azorica	NT	E														●														
Rhynchostegiella bourgaeana	EN	E														-		VU												-
Rhynchostegiella curviseta	LC									●		●	RE	RE		-	●		●	●	●	●	-	●		●		●	●	●
Rhynchostegiella litorea	LC											●				-	●	-	●	●	●	●	-	●		●		●	●	●
Rhynchostegiella pseudolitorea	NT	E																●					●			●				
Rhynchostegiella tenella	LC		●				NT		●	●		●	●	●		-	●		●	●	●	●	-	●		●		●	●	●
Rhynchostegiella teneriffae	LC						CR		EN	●		●	●	●			●	NT	●	●	●	●	●			●		●	DD	●
Rhynchostegiella trichophylla	VU	E																●					●							

Vatican City	Austria	Belgium	Czech Republic	Germany	Liechtenstein	Luxembourg	Netherlands	Poland	Slovakia	Switzerland	Albania	Bosnia-Herzegovina	Bulgaria	Crete	Croatia	Greece	Hungary	Kosovo	Montenegro	North Macedonia	Romania	Serbia	Slovenia	Turkey	Belarus	Caucasus (in Europe)	Crimea	Estonia	Kaliningrad	Latvia	Lithuania	Moldova	Arctic Russia	Central Russia	NE Russia	NW Russia	SE Russia	South Urals	Ukraine
	•	•	NT	•	•	VU		•	•	•	•	•	*VU*	?	•	•	•		•	•	•	•	VU	•	•	•	•	•	•	4			•	•	•	•	•	•	•
	3	•	DD	VU	•				DD	VU		•	DD*	?	•	?	DD		•		EN	•	DD		DD	•		VU		0	3			•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	4	•	EN	NT	•	VU	VU	•	•	VU	•	•	NT		•	-	DD	•	•	•	NT	•	•		•	•	•	•	•	•			•	•	•	•		•	•
	3	•	CR	NT		EN	VU	•	EN	VU			VU	?		?	DD	•	•	•	•	•	VU	•	•	•		•	•	4			•	•	•	•	•	•	•
	1	•	?	EN			EN	•		-											CR		DD		•			CR		4	•		•	•		•			•
	•	•	DD	DD		EN	DD	•	DD	DD	•	•	VU	•	•	•	•		•	•	EN	•	DD			•		DD		•				•				•	•
			RE	RE				•		DD*													?		•				•					•		•			
																?																							
	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	VU	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•
	•	•	•	DD	•	VU	•	•	•	•	•	•	•	•	•	•	DD	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•
	3		■	DD			■	■		■		■	□	■	■	■	■	■	■			■	DD	■	■	■	■	□	■		■	■		■	■	■	■	■	■	■
□	■	□	■	DD	□	□	□	■	□	■	□	■	□	□	■	■	■	■	■	■	□	■	■		■	■	■	□	■	□	■		■	■	■	■	■	■	■
	•	•	•	•	•	•	•	•	•	•	•	•	NE	•	•	•	•		•	•	CR	•	DD	•	•	•		VU	•	•	•		-	•	•		•	•	•
				CR			DD	I																				EN						•			•		•	
	•		CR	•	•			•	NT	•	•	•	•	?		•	DD	•	•	•	NT	•	DD		EN	•				1		•	•	•	•			•
	■																																						
	■																																						
		•	DD	G			EN			•	•	•	VU	•	•	•	VU		•	•	NT	•	*DD*	•		•	•												•
	•	RE	EN	EN	•		RE	I	VU	•	DD*	•	•	•	•	•	DD	•	•	•	NT	•	DD	•	•	•	•	CR	•	*3*	•		•	•	•	•	•	•	•
	0	•	?	CR			VU	V	RE								DD								0			NT	•	*0*				•	•				
	3	RE	•	EN				V	NT	•			VU			•	DD	•	•		NT	•	DD		•	•		CR		1	•		•	•	•	•	•	•	•
									CR																								•						
	•	Mn	EN	NT	•			•	NT	NT	DD*	•	VU		•	•	VU	•	•	•	•	•	•			•							•			•			•
•	•	•	•	•	•	•	•	R	•	•	•		•	•	•	•	•		•	•	•	•	•	•	EN	•		VU	•	2	1	•		•				•
	•	•	•	•	•	•	•	•	•	•	•	•	•		•	?	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
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	0		CR	CR				V	CR	DD							EN				CR	EN												•				•	•
	•	•	•	•		•	VU	•	•	•			•		•	•	DD	•	•	•	•	•	VU			•		EN					•	•	•	•		•	•
	•	•	•	•		VU	DD	•	NT	•	•		VU		•	•	DD		DD*	•	•	•	•		?											•			•
	•	•	•	•	•			•	•	•	•	•	•		•	•	CR		DD*		•	•	NT			•											•		•	•
	•	•	•	NT	•	•	VU	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	■	□	■	■	□	□	□	□	□	■	□	□	□		□	■	□	□	□	■	□	□	□	□	□	□	□	□	□	□	□		□	□	□	□	□	□	□
										■																													
	•	•	•	•		•	VU	•	•	•	•		DD*		•	•		•	DD	•	NE	•	•			•		•	•										•
	•	•		EN		VU	VU	•	•	•	DD		-					•	•	•	EN	•	•	•	?	•		•	•	•			•			•			•
	•	•	•	VU		CR	VU	•	•	VU			DD					•			EN	-	EN					VU	•				•		•	•			
	•	•	•	•	•	•	VU	•	•	•	•	•	•		•	•	EN	•	•	•	•	•	•	•		•	•	•	•	•	•			•	•	•			•
	•	•	•	•		•	EN	•	•	NT		•	•			•	DD		DD*		•	?	•			•		•	•	1			•		•	•		•	•
	•		•	R				•	NT	•			VU								CR					•													•
	■		■	■				■		■			□													■													
	■		EN	DD				I	□	■			■								■																			
	•		•	NT				•	NT	VU			VU				DD*		•	•	EN		EN		•			•		4			•	•	•	•		•	•
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		•		EN		EN	•	V									DD				CR																			
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	•		•	NT	•			•	•	•	•	•	•			•		•	•	•	•	•	•			•	•	VU					•		•	•		•	•
		RE	EN	•						VU											CR		?																	
	•	•	NT	NT				R	DD	EN			VU		•		•				•		VU							*1*					•				•	•
	•	•	•	•	•	•		•	•	•			•		•	•	NT	•	•	•	•	•	•			•	•			2			•		•	•			•
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	•		•	•				•	•	•	•		NE				•	VU	•	•	VU	VU			•		•						•	•	•	•		•	•
	3	Mn	EN	VU	•		VU	•	NT	•	DD*	•	•				•	•	•	•	•	•			•		•	•	2	4			•	•	•	•	•	•	•
	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	•	•	•	NT		CR	DD	•	•	•			•		•		•				VU	•	•			•	•	•		•								•	•
	•	•	•	•	•	•	EN	•	•	•		•	•		•	•	VU	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	3	•		•	•	•	•		CR	CR	•		DD*	•	•	•	VU		•	•	DD	•	EN	•		•													
				DD							•	•		•	•	•			•		•																		
•	3	•	NT	•	•	•	•	•	VU	•	•	•	VU	•	•	•	NT	•	•		•	•	•	•		•	•												•
	4	•	EN	•		•	NT	E	CR	VU	DD*	•	DD*	•	•	•	VU		•		CR	•	EN			•													

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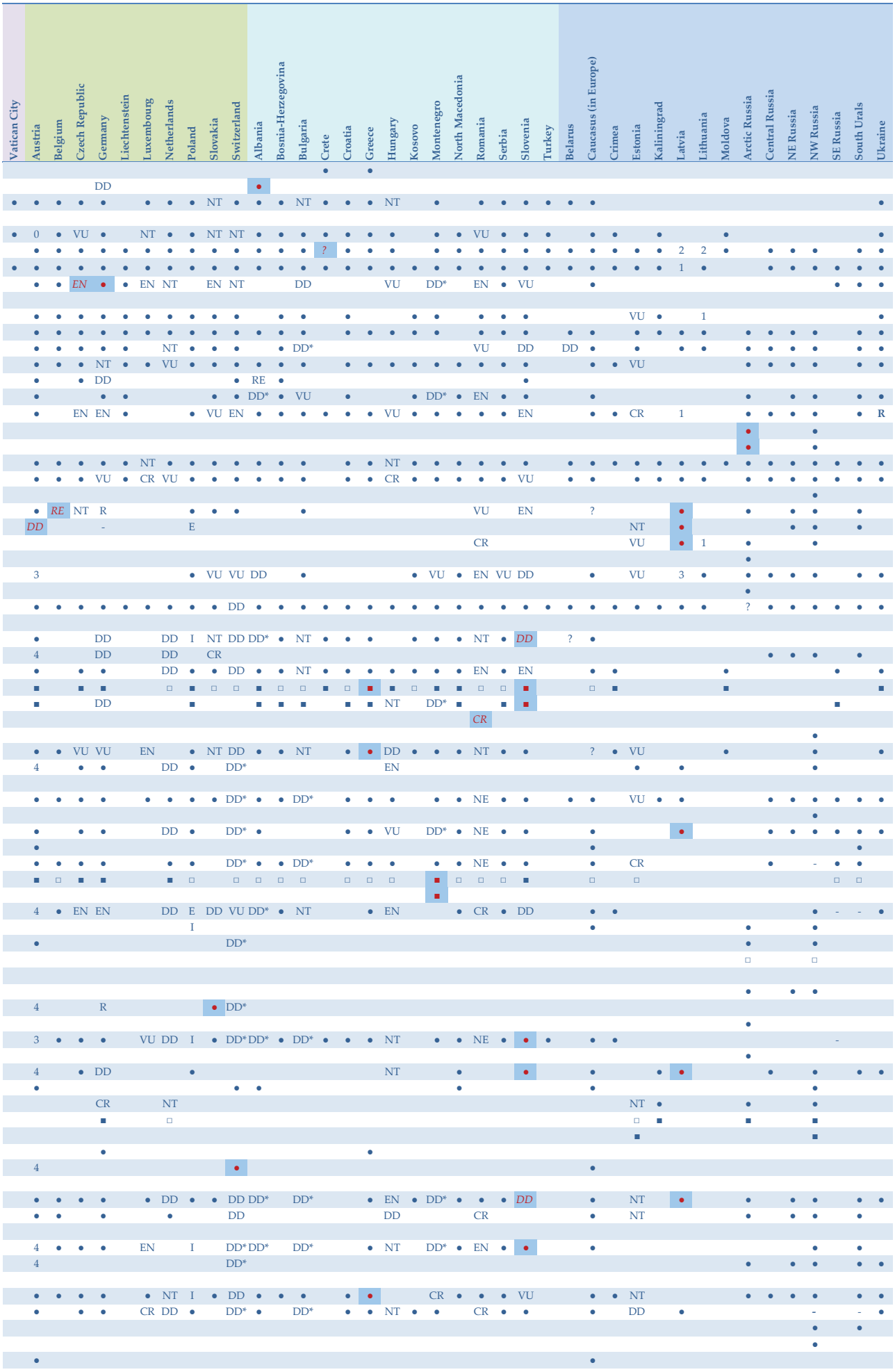
Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia	Sicily	Spain
Rhynchostegiella tubulosa	DD	E																		●						●				
Rhynchostegium alopecuroides	LC	E					VU					●	NT	NT					●		●					●				●
Rhynchostegium confertum	LC		●			DD	NT		EN	●		●	●	●		●	●	●	●	●	●	●	●			●	DD	●	●	●
Rhynchostegium confusum	VU	E																								●				DD
Rhynchostegium megapolitanum	LC		●		CR				EN	●		●	NT	NT		●	●	VU	●	●	●	●	●	●		●		●	●	●
Rhynchostegium murale	LC		●	●	*EN*	DD	●		●	●		●	●	●	●			DD			●	●				VU				●
Rhynchostegium riparioides	LC		●	●	NT	●	●		●	●		●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●	●
Rhynchostegium rotundifolium	LC											CR									●	●							DD	
Rhynchostegium strongylense	EN	E																				EN							●	
Rhytidiadelphus loreus	LC		●	●	●	●	●		●	●		●	●	●	●	●			●		●	●	VU			●				●
Rhytidiadelphus squarrosus	LC		●	●	●	●	●	●	●	●		●	●	●	●	●					●	●	●			●		●	●	●
Rhytidiadelphus subpinnatus	LC				●		●		●			VU	RE		●	●					●	●								
Rhytidium rugosum	LC				●	●	●		●			●		VU	●						●	●								●
Roaldia dolomitica	LC											●							●		●	●								●
Roaldia revoluta	LC				●	●	●	●	●			EN			●						●	●								●
Saelania glaucescens	LC				●	●	●	●	●			EN			●						●	●								●
Sanionia nivalis	NT				EN	●	●	●	●																					
Sanionia orthothecioides	LC			●	DD	●	●	●	●			●																		
Sanionia uncinata	LC		●	●	●	●	●	●	●			●	●	●	●			DD	●		●	●	●			VU		●	●	●
Sarmentypnum exannulatum	LC		●		●	●	●	●	●			●	●	●	●				●		●	●				VU			●	●
Sarmentypnum procerum	LC				●		●		●																					
Sarmentypnum sarmentosum	LC			●	●	●	●	●	●			●	●	●	EN						●	●								EN
Sarmentypnum trichophyllum	LC				●		●		●													●								
Sarmentypnum tundrae	LC				●	●	●	●	●												●									
Schistidium abrupticostatum	LC						●		●																					
Schistidium agassizii	LC				●	●	●		●			●	VU			?			●		●	●	●			DD		DD		●
Schistidium andreaeopsis	DD																													
Schistidium apocarpum	LC		●		●	●	●		●			●	●	●		●		VU	●	●	●	●	NT			DD		●	●	●
Schistidium atrichum	LC																				●									
Schistidium atrofuscum	LC			?		VU	EN		●			VU					●			●	●	●							●	●
Schistidium boreale	LC				●		●		●																					
Schistidium brunnescens	LC		●				●		●								●				●	●				CR				●
Schistidium brunnescens subsp. *brunnescens*			□														■				■	■				■				■
Schistidium brunnescens subsp. *griseum*							■		■												■	■								■
Schistidium bryhnii	VU	E					EN																							
Schistidium canadense	DD																													
Schistidium confertum	LC					●	●		VU			DD	DD	DD	●		●	DD	●	●	●	●				DD		●	●	●
Schistidium confusum	LC				●		●		●												●									
Schistidium convergens	LC																													●
Schistidium crassipilum	LC		●	●	VU	DD	●		●			●	●	●	●		●			●	●	●				VU		●	DD	●
Schistidium crenatum	LC				●		●		●																					
Schistidium dupretii	LC				●	EN	●		●			DD										●	●				●				DD
Schistidium echinatum	EN																				●									
Schistidium elegantulum	LC		●	●	CR		●		●			●	DD	DD			●					●	●			CR				●
Schistidium elegantulum subsp. *elegantulum*			□	□	□		□		■			■	□	□			■					■	■							■
Schistidium elegantulum subsp. *wilsonii*									■			■					■						■			■				■
Schistidium flaccidum	VU					EN	●					DD			●			●		●	●	●	●			EN			●	●
Schistidium flexipile	LC				EN	●	●		●			DD																		
Schistidium frigidum	LC			●	●	●	●	●	●			DD			●			DD												
Schistidium frigidum var. *frigidum*				□	■	□	□	□	■			■			□			■												
Schistidium frigidum var. *havaasii*		E										■																		
Schistidium frisvollianum	VU				DD		●	●	DD																					
Schistidium grande	VU	E																			●	●								
Schistidium grandirete	VU							●	DD																					
Schistidium helveticum	LC						EN		DD			DD			●		●			●	●	●				DD		●	DD	●
Schistidium holmenianum	CR							●																						
Schistidium lancifolium	LC				●		●		●													●								
Schistidium marginale	LC																				●	●								●
Schistidium maritimum	LC		●	●	●	●	●	●	●	●		●	●	●							●									
Schistidium maritimum subsp. *maritimum*			□	□	■	□	■	■	■	□		■	□	□							□									
Schistidium maritimum subsp. *piliferum*					■		■	■	■			■																		
Schistidium memnonium																														●
Schistidium obscurum	DD							●																						
Schistidium occidentale	CR																													CR
Schistidium papillosum	LC		●	●	●	●	●	●	●			DD			●						●	●								DD
Schistidium platyphyllum	LC			?	●	●	●		●			●	VU	VU		?					●	DD							●	DD
Schistidium poeltii	LC				EN		●		●																					
Schistidium pruinosum	LC			●	EN	●	●		●			●		DD	DD					●	●	●								DD
Schistidium pulchrum	LC				●		●	●	●												●	●								-
Schistidium recurvum	LC				VU		●		●																					
Schistidium rivulare	LC		●		●	●	●	●	●			●	●	●	●	?			●		●	●	●			NT		DD	●	●
Schistidium robustum	LC				●		●		●			●	VU							●	●	●								●
Schistidium scandicum	LC	E			DD		●		●																					
Schistidium sibiricum	VU				CR																									
Schistidium sinensiapocarpum	LC																													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Crimea
Estonia
Kaliningrad
Latvia
Lithuania
Moldova
Arctic Russia
Central Russia
NE Russia
NW Russia
SE Russia
South Urals
Ukraine

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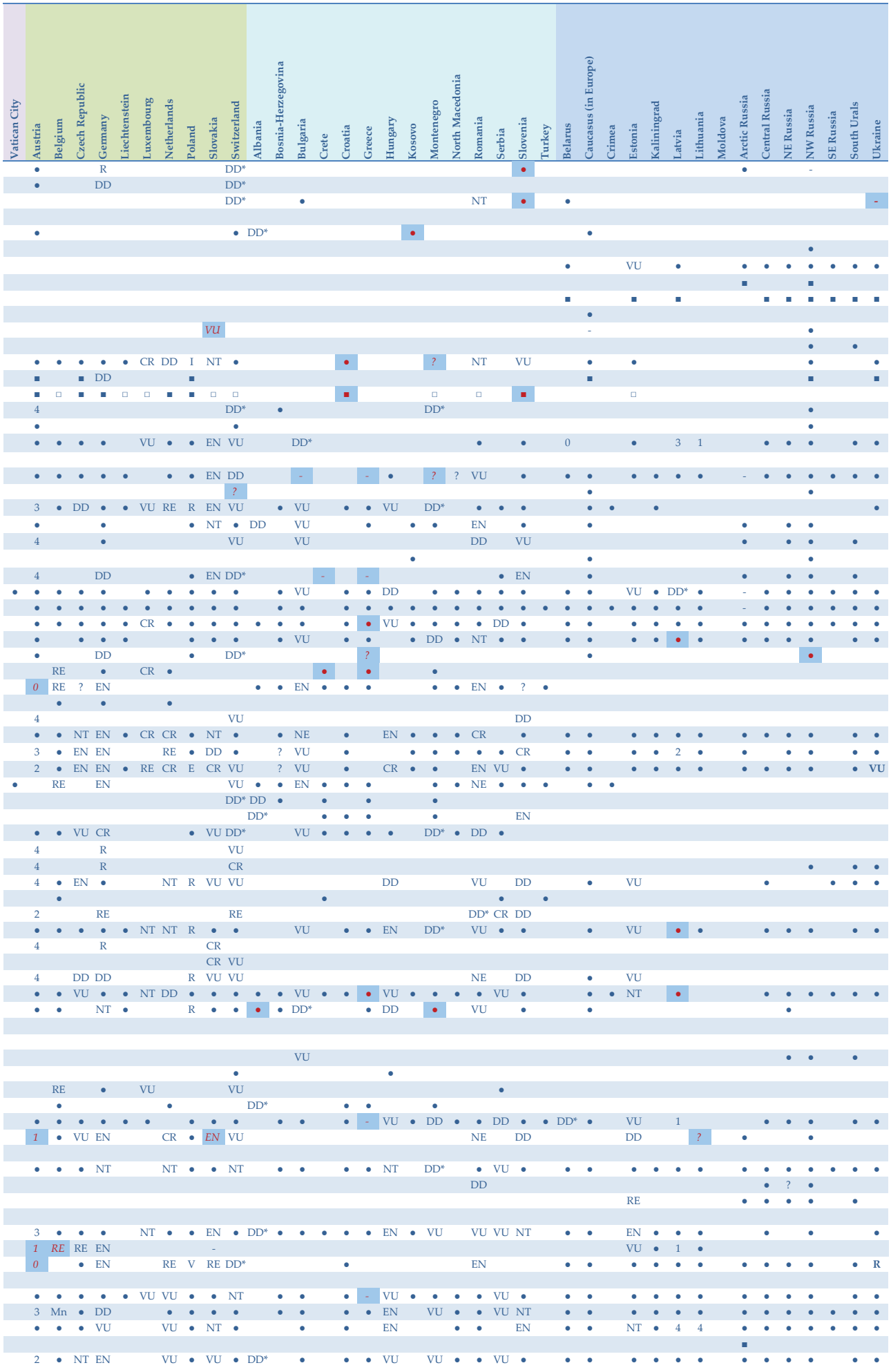
Schistidium sordidum	LC				EN		●		●												●	●								
Schistidium spinosum	CR	E																			●									
Schistidium strictum	LC			●		●	●					●	NT	NT							●	?	CR			-				DD
Schistidium subconfertum	LC																					●								
Schistidium subflaccidum	LC						●														●	●								●
Schistidium subjulaceum	LC				EN		●		●																					
Schistidium submuticum	LC	E			●	●	●	●	●																					
Schistidium submuticum subsp. *arcticum*					■		■	■	■																					
Schistidium submuticum subsp. *submuticum*					■	■	■	-	■																					
Schistidium succulentum	NE																													
Schistidium tenerum	VU				EN	VU	NT	●																						
Schistidium tenuinerve	LC																													
Schistidium trichodon	LC				VU		●		●			●	VU	VU							●	●								
Schistidium trichodon var. *nutans*					■		■		■																					
Schistidium trichodon var. *trichodon*					■		□		■			□	□	□							■	■								
Schistidium umbrosum	LC				EN	●	●	●	●																					
Schistidium venetum	LC				EN	VU	●	●	●																					
Schistostega pennata	LC		●		VU		●		●	●		●									●	●				NT				VU
Schizymenium pontevedrense	VU	E																								NT				VU
Sciuro-hypnum curtum	LC		●		●		●		●												●	DD								DD
Sciuro-hypnum dovrense	VU				CR		●		●												●									
Sciuro-hypnum flotowianum	LC						DD														●	●						●	●	DD
Sciuro-hypnum glaciale	LC			●	EN	●	●	●	●			DD			VU				●		●	●								VU
Sciuro-hypnum latifolium	LC				NT	●	●		●												●	●								
Sciuro-hypnum oedipodium	DD																													
Sciuro-hypnum ornellanum	EN																				●	DD							?	
Sciuro-hypnum plumosum	LC		●	●	●	●	●		●	●		●	●	●	NT	●	●	VU	●	?	●	●	●			NT				●
Sciuro-hypnum populeum	LC		●	●	●	●	●		●	●		●	●	●	●	●			●	?	●	●	EN			DD		●	DD	●
Sciuro-hypnum reflexum	LC		●		●	●	●	●	●			DD			●				●		●	●							●	●
Sciuro-hypnum starkei	LC		●		●	●	●		●			DD			VU						●	●				DD		●	●	VU
Sciuro-hypnum tromsoeense	LC				NT		●		●												●	●								
Scleropodium cespitans	LC									●		●	NT	NT				VU	●	●	●	●				DD		●	●	DD
Scleropodium touretii	LC		●							●		●	EN	EN		●	●	●	●	●	●	●	●	●		●	DD	●	●	●	●
Scopelophila cataractae	EN											EN	VU								●									VU
Scopelophila ligulata	NT						●								NT	●		CR			●	EN								●
Scorpidium cossonii	LC		●	●	●	●	●	●	●			●	●	●	●						●	●								●
Scorpidium revolvens	LC		●	●	●	●	●	●	●			●	●	●							●	●						●		DD
Scorpidium scorpioides	NT		●	●	●	●	●	●	●			●	●	●	EN						●	●								EN
Scorpiurium circinatum	LC									●		●	●			●	●	●	●	●	●	●	●	●		●	DD	●	●	●	●
Scorpiurium deflexifolium	LC																●	EN	●		●	●	VU	?		●		●	●	●	●
Scorpiurium sendtneri	LC																			●	●	●				●		●	●	●	DD
Seligeria acutifolia	LC						VU		NT			●	●	●							●	●				DD			●	●
Seligeria austriaca	VU																													
Seligeria brevifolia	LC				EN	CR	●		●			EN									●									
Seligeria calcarea	LC		●		*CR*				EN			●		VU							●	●								VU
Seligeria calycina	LC											●		DD							●					RE			●	
Seligeria carniolica	EN	E?					CR		EN			CR									●									
Seligeria donniana	LC				EN		●		●			●	●	●	●						●	●								●
Seligeria irrigata	VU	E																			●	●								
Seligeria oelandica	NT						VU	●	VU			CR	VU	VU																
Seligeria patula	LC						VU		EN			DD	NT	NT							●									CR
Seligeria pusilla	LC				*CR*		VU		●			●	●	●	●		●				●	●				CR			●	●
Seligeria trifaria	DD											DD		?							●	●								VU
Seligeria trifaria var. *longifolia*																														
Seligeria trifaria var. *trifaria*																														
Seligeria tristichoides	NT				CR		●	●	VU																					
Sematophyllum adnatum	NA																					●								
Sematophyllum demissum	LC											VU	NT								●	●				-				●
Sematophyllum substrumulosum	LC											●	*VU*	*VU*		●	●	●	●		●	●	●			●			●	NT
Serpoleskea confervoides	LC						●		●			●	NT	NT		?					●	●								NT
Sphagnum affine	LC		●	●	EN	●	●		●			●	VU	VU		●					●	●								
Sphagnum angermanicum	LC					CR	●		NT																					
Sphagnum angustifolium	LC		●	●	●	●	●		●			●	●	●							●	●				EN				●
Sphagnum annulatum	LC				●		●		●																					
Sphagnum aongstroemii	LC				●		●	●	●																					
Sphagnum arcticum	NT							●																						
Sphagnum auriculatum	LC		●	●	●	●	●		●	●		●	●	●	●	●			●		●	●	VU			●		●	●	●
Sphagnum austinii	NT		●				●		●			VU	●	●							●									
Sphagnum balticum	LC		●		●	●	●	●	●			EN									●									
Sphagnum beothuk	LC						●		●			DD	●																		
Sphagnum capillifolium	LC		●	●	●	●	●		●			●	DD	DD	●	●			●		●	●				●		●		●
Sphagnum centrale	LC		●	●	●	●	●		●			●			EN	●			●		●	●				DD				EN
Sphagnum compactum	LC		●	●	●	●	●		●			●	●	●	●	●		DD	●		●	●	EN			●				●
Sphagnum concinnum	LC							■																						
Sphagnum contortum	LC		●	?	NT	●	●		●			●	●	●	VU						●	●				-			●	VU


Vatican City
Austria
Belgium
Czech Republic
Germany
Liechtenstein
Luxembourg
Netherlands
Poland
Slovakia
Switzerland
Albania
Bosnia-Herzegovina
Bulgaria
Crete
Croatia
Greece
Hungary
Kosovo
Montenegro
North Macedonia
Romania
Serbia
Slovenia
Turkey
Belarus
Caucasus (in Europe)
Crimea
Estonia
Kaliningrad
Latvia
Lithuania
Moldova
Arctic Russia
Central Russia
NE Russia
NW Russia
SE Russia
South Urals
Ukraine

● Species confirmed; LC/status unknown
■ Infraspecific taxon confirmed
□ Unconfirmed infraspecific taxon
? Some doubt about occurrence
- Literature record but later rejected
Status values italicised in red with a darker fill have an associated note

Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia	Sicily	Spain
Sphagnum cuspidatum	LC		●	●	●		●		●			●	●	●		●					●	●				●				●
Sphagnum cuspidatum var. *cuspidatum*																														
Sphagnum cuspidatum var. *viride*																														
Sphagnum divinum	LC		●		●		●		●												●									
Sphagnum fallax	LC		●	●	●	●	●		●			●	●	●	●						●	●				DD				●
Sphagnum fallax var. *brevifolium*																														
Sphagnum fallax var. *fallax*																														
Sphagnum fallax var. *isoviitae*																														
Sphagnum fimbriatum	LC		●		●	●	●	●	●			●	●	●	●						●	●								●
Sphagnum flexuosum	LC		●	-	●	●	●		●			●	VU								●	●				EN				●
Sphagnum fuscum	LC		●	●	●		●		●			DD	●	●							●	●								CR
Sphagnum girgensohnii	LC		●	●	●	●	●	●	●			●	NT	NT	●	●			●		●	●				CR				●
Sphagnum inundatum	LC	E?	●	●	EN	●	●		●			●	●	●		●					●	●	●			DD			●	?
Sphagnum jensenii	LC				●		●		●																					
Sphagnum lenense	NT																													
Sphagnum lindbergii	LC		●	●	●	●	●	●	●			●									●									
Sphagnum magellanicum s.l.			●	?	●	VU	●		●			●	●	●	VU	●			●		●	●							*RE*	VU
Sphagnum majus	LC		●		●		●		●			NT									●	●								EN
Sphagnum majus subsp. *majus*			■		□		■		■			□									-	□								□
Sphagnum majus subsp. *norvegicum*			■		■		■		■			■									■									?
Sphagnum medium	LC		●		●		●		●			●	●	●							●									
Sphagnum mirum	LC																													
Sphagnum molle	LC		●	●	EN		●		●			●	●	●	VU						●	●				EN				VU
Sphagnum nitidulum	CR	E														?														
Sphagnum obtusum	LC		●		●	●	●	●	●			RE									●	●								
Sphagnum olafii	VU							●																						
Sphagnum palustre	LC		●	●	●	●	●		●	●		●	●	●	●	●		?	●		●	●				NT				●
Sphagnum papillosum	LC		●	●	●	●	●		●			●	●	●	●	●					●	●				EN				●
Sphagnum platyphyllum	LC		●		●	●	●		●			●	NT	NT	VU						●	●				DD				●
Sphagnum pulchrum	LC		●		●		●		●			●	●	●							●									
Sphagnum pylaesii	EN																				●									●
Sphagnum quinquefarium	LC		●	●	●		●		●			●	●	●	●						●	●								●
Sphagnum recurvum	EN															●														
Sphagnum riparium	LC		●		●	●	●	●	●			●									●	●								
Sphagnum rubellum	LC		●	●	●		●		●			●	●	●	●	●					●	●				VU				●
Sphagnum rubiginosum	LC				-		●																							
Sphagnum russowii	LC		●	●	●	●	●		●			●	NT	NT	●				●		●	●				EN				●
Sphagnum skyense	LC	E										●	DD																	
Sphagnum squarrosum	LC		●	●	●	●	●	●	●			●	●	●	VU	●			●		●	●				EN				VU
Sphagnum strictum	LC		●			EN	●		●			●	DD	DD																
Sphagnum subfulvum	LC				●		●		●													●								
Sphagnum subfulvum subsp. *purpureum*					■		■		■																					
Sphagnum subfulvum subsp. *subfulvum*					■		■		■													■								
Sphagnum subnitens	LC		●	●	NT	●	●		●	●		●	●	●	●	●			●		●	●	VU			●		●		●
Sphagnum subnitens subsp. *ferrugineum*		E				■	■					■	■	■																
Sphagnum subnitens subsp. *subnitens*			□	□	■	■	□		■	■		■	■	■	□	□			□		■	□	□			□		□		□
Sphagnum subsecundum	LC		●	●	●	●	●		●			●	NT		●	DD*			●		●	●				●			DD	●
Sphagnum tenellum	LC		●	●	●	●	●		●			●	●	●	●				●		●	●				●				?
Sphagnum teres	LC		●	●	●	●	●	●	●			●	NT	NT	●				●		●	●								●
Sphagnum tescorum	LC																													
Sphagnum troendelagicum	EN	E					EN																							
Sphagnum tundrae	NT							●																						
Sphagnum venustum	DD						EN																							
Sphagnum warnstorfii	LC		●	●	●	●	●	●	●			●	VU	VU	VU						●	●								VU
Sphagnum wulfianum	LC				●		VU		●																					
Splachnobryum obtusum	VU															●						●								
Splachnum ampullaceum	NT		●	●	●		●		●			●	●	●							●	●								VU
Splachnum luteum	LC				●		●		●																					
Splachnum melanocaulon	EN	E			CR		VU		NT																					
Splachnum pensylvanicum	DD																													
Splachnum rubrum	LC				●		●		●																					
Splachnum sphaericum	LC			●	●	●	●		●			●	●	●							●	●								
Splachnum vasculosum	LC		●		●	●	●	●	●			EN									●	DD	-							
Stegonia latifolia	NT				CR	●	●	●	●			VU			VU						●	●								VU
Stegonia latifolia var. *latifolia*																														
Stegonia latifolia var. *pilifera*																														
Stereodon aemulans	DD	E																												
Stereodon callichrous	LC			●	VU	●	●	●	●			●	NT		VU						●	●								VU
Stereodon hamulosus	LC			●	VU	●	●	●	●			NT			RE				●		●	●								RE
Stereodon holmenii	VU				NT				●																					
Stereodon pratensis	LC		●		●	●	●	●	●												●	●								
Stereodon subimponens	EN				CR																									
Straminergon stramineum	LC		●	●	●	●	●	●	●			●	●	●	●				●		●	●				VU				●
Streblotrichum convolutum	LC		●		●		●		●	●		●	●	●	●	●	●	●	●	●	●	●	●			●		●	●	●
Streblotrichum convolutum var. *commutatum*									■	■		■	■	■			■				■	■				■		■	NT	■

Vatican City	Austria	Belgium	Czech Republic	Germany	Liechtenstein	Luxembourg	Netherlands	Poland	Slovakia	Switzerland	Albania	Bosnia-Herzegovina	Bulgaria	Crete	Croatia	Greece	Hungary	Kosovo	Montenegro	North Macedonia	Romania	Serbia	Slovenia	Turkey	Belarus	Caucasus (in Europe)	Crimea	Estonia	Kaliningrad	Latvia	Lithuania	Moldova	Arctic Russia	Central Russia	NE Russia	NW Russia	SE Russia	South Urals	Ukraine
	3	•	•	•		CR	•	•	NT	NT		•	EN		•	•	EN	•	•		•	VU	•		•	•		•	•	•	•		•	•	•	•		•	•
	NE			•															•									•		•					•	•			
	3	•	•	•		NT	•	•	•	NT		•	VU		•	•	NT	•	•		•	VU	•		•	•		•	•	•	•		•	•	•	•	•	•	•
	3	•	•	•	•	•	•	•	VU	VU		•	NE		•		NT				•		EN		•			•	•	•	•		•	•	•	•		•	•
	3	•	•	•		VU	•	•	•	NT		•	•		•		VU		-		•	VU	•		•	•		•	•	•	•		•	•	•	•	•	•	•
	3	Mn	NT	EN			VU	V	•	VU			•								•	VU	VU		•	•		•	•	•	•		•	•	•	•		•	•
	•	•	•	•	•	VU	CR	•	•	•		•	•		•		EN		•		•	VU	•		•	•		•	•	•	•		•	•	•	•	•	•	•
	3	•	DD	NT		EN	•	•		•		•	•		•		EN		•	•	VU	VU	VU		•	•		NT	•	2	•		•	•	•	•			•
								V													EN				•			VU		0	•		•	•	•	•		•	
																																	•							
	1		•	EN				V																	VU			NT		1			•	•	•	•		•	
	•	•	•	VU	•		•	•	NT	NT		•	•		•		EN	•	•	•	•	VU	•		•	•	•	•	•	•	•		•	•	•	•	•	•	•
	3	•	•	VU			EN	•	RE	•											VU		EN		•			•	•	•	•		•	•	•	•		•	•
	□	□	■	■			□	□	□	□											□		■		□			□	□	□	■		□	□	□	□		□	□
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	NE			•																								•		•									
																																	•						
	1	•	RE	EN			VU	V	DD	VU										•	DD	VU			VU			EN	•	1	2				•			VU
	2	•	NT	EN				•	EN				DD		•		EN				EN	VU			•			•	•	1	•		•	•	•	•		•	•
	•	•	•	•	•	•	•	•	•	•	DD	•	•		•	•	NT		•	•	•	VU	•		•	•		•	•	•	•			•	•	•	•	•	•
	3		•	VU	•		•	I	VU	NT		•	•		•	•					CR	VU	NT		•			•	•	2	•			•	•	•		•	•
	3	Mn	CR	EN		CR	RE	R	EN	•	•	•	•		•	•	VU	•	•	•	NT	VU	VU		•	•		NT	•	•	2		•	•	•	•	•	•	•
	NE			EN			EN		DD												DD		VU		•			NT	•	3	4			•	•	•			
	•	•	•	•	•	•	NT	•	•	•		•	•		•		VU		•		•		•		•	•		NT	•	•	•			•	•	•		•	•
																			-																					
	2	Mn	•	•			EN	•	EN	DD*			CR				CR				•		CR		•			•	•	•	•		•	•	•	•		•	•
	3	•	•	VU		VU	•	•	NT	NT		•			•					•	•	VU	NT		•	•		•	•	•	•		•	•	•	•		•	•
	•	•	•	•		EN	•	•	•	NT		•	•		•		EN		•	•	•	VU	•		•	•		•	•	•	•		•	•	•	•		•	•
	•	•	•	•	•	NT	•	•	•	•		•	•		•	•	NT	VU	•	•	•	VU	•		•	•		•	•	•	•		•	•	•	•	•	•	•
				CR																																			
	•							R		VU			VU															VU		1					•	•			
	■																																						
	■							□		□			□															□		□					□	□			
	2	•	•	NT		NT	VU	•	VU	•	DD*		VU		•	•	DD		VU	•	•	•	VU	•		•			•	•	4	2				•	•		•	EN
	■									■																													
	■	□	■	■		□	□	□	□	■	□		□		□	■	□		□	□	□	□	□		□			□	□	□	□				□	□		□	□
	3	•	•	VU	•	EN	CR	•	•	•	•	•	•		•	•	VU	•	•	•	•	VU	NT		•	•		•	•	•	•		•	•	•	•	•	•	•
	2	•	•	EN		CR	•	V	DD	NT											EN		VU		•	•		•	•	•	•			•	•	•			VU
	3	•	•	VU		NT	VU	•	•	•	DD*	•	•		•	•	CR	•	•	•	•	VU	EN		•	•		•	•	•	•		•	•	•	•	•	•	•
	3	•	•	EN		CR		•	NT	•			•		•		RE	•		•	•	VU	VU		•	•		•	•	•	•		•	•	•	•		•	•
								V									DD				EN				•			•		•	2		•	•	•	•	•	•	EN
	2	RE	NT	EN			RE	V	EN	NT								CR			NT		EN		•			•	•	•	•			•	•	•		•	•
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																					CR							EN		1			-	•	•	•		•	
	•	RE	NT	VU	•			E	EN	•											NT	CR	EN					RE		3			•		•	•			•
				RE																	CR							RE					•		•	•			
	•		RE	•	•			•	VU	•			VU					•		•	NT		DD			•							•						
	•																																						
	•		EN	•	•			•	VU	•	•		VU					•	•		•	•	•			•										•			•
	•			•				•	VU	EN									DD*		VU	•	DD										•		•				•
																																	•		•				
	2	Mn	•	EN	•	CR	•	E	•	•			CR						•		•	•	NT		•			•	•	4	•		-	•	•	•		•	•
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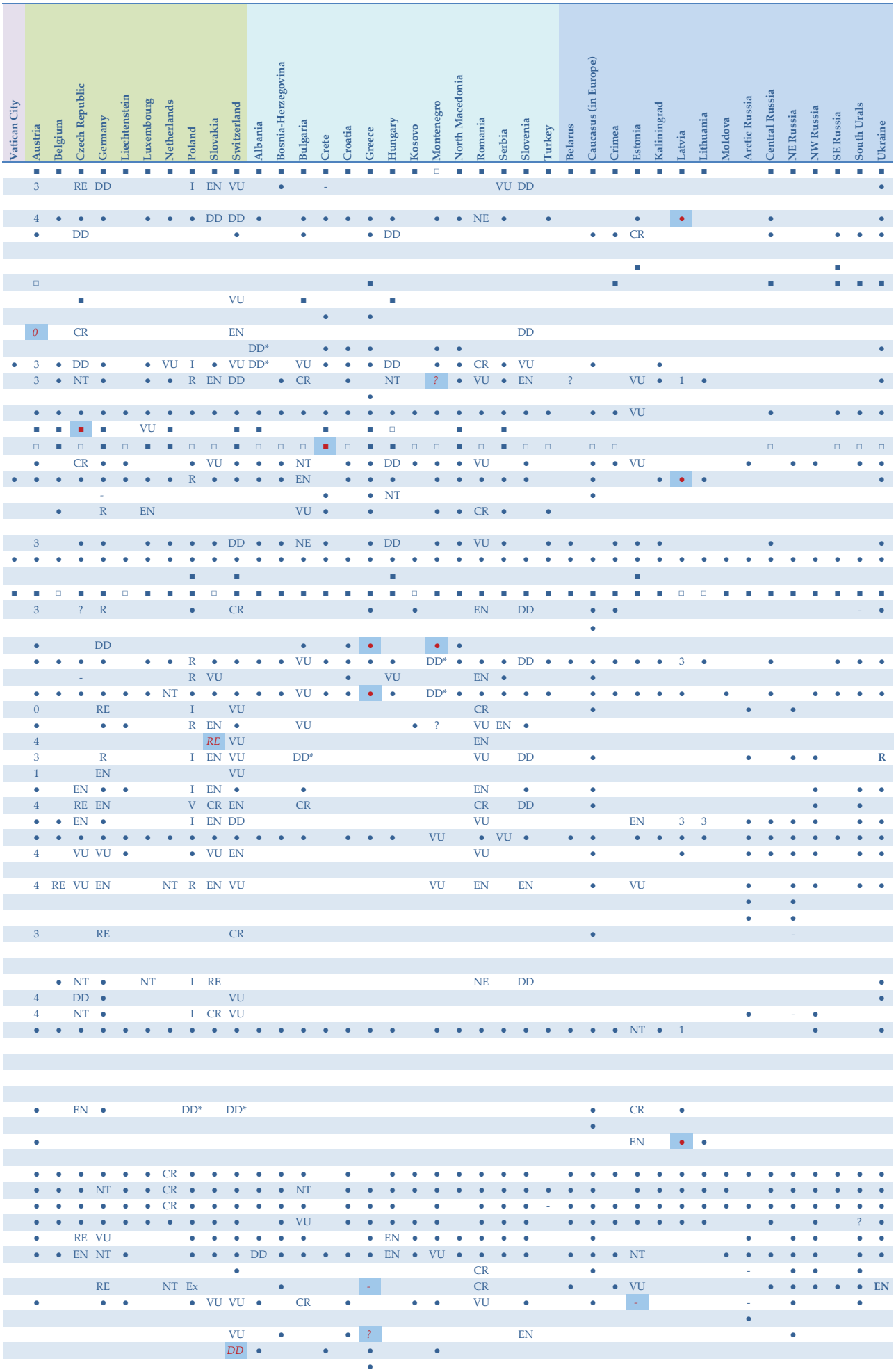
	•	•	•	NT	•	VU	•	•	•	•	•	•	•		•	•	VU	•	•	•	•	•	•		•	•		•	•	•	•		•	•	•	•	•	•	•
	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•
			DD	■		■	■				■			■	■	■							■	VU																

- ● Species confirmed; LC/status unknown
- ■ Infraspecific taxon confirmed
- □ Unconfirmed infraspecific taxon
- ? Some doubt about occurrence
- - Literature record but later rejected

Status values italicised in red with a darker fill have an associated note

Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia	Sicily	Spain
Streblotrichum convolutum var. *convolutum*			■		■		■		■	■		■	■	■	■	■	■	■	■	■	■	■	■			■		■	■	■
Streblotrichum enderesii	VU																					DD								
Syntrichia bogotensis	EN																						VU							
Syntrichia calcicola	LC		●						●						●		●			●	●	●				DD		●	NT	●
Syntrichia caninervis	LC																				●	●								●
Syntrichia caninervis var. *abranchesii*																														RE
Syntrichia caninervis var. *astrakhanica*																					■									
Syntrichia caninervis var. *caninervis*																														■
Syntrichia caninervis var. *gypsophila*																					■	■								■
Syntrichia echinata	VU																			●									●	
Syntrichia fragilis	LC														VU			●			●	●	EN							VU
Syntrichia handelii	DD																●			●	●								●	EN
Syntrichia laevipila	LC		●				VU		EN	●		●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●	●
Syntrichia latifolia	LC		●				EN		●			●	●	●							●	●	●			●			●	●
Syntrichia minor	DD																	DD		●	●									VU
Syntrichia montana	LC		●				VU		●	●		●	●	●	●		●	●	●	●	●	●	●			●	DD	●	●	●
Syntrichia montana var. *calva*	LC											■			■						■		■			■				■
Syntrichia montana var. *montana*	LC		□				□		■	□		■	□	□	■		■	□	□	■	■	□	□			■	□	□	■	■
Syntrichia norvegica	LC				●	●	●	●	●			CR			●				●		●	●	●			-			●	●
Syntrichia papillosa	LC		●				NT		●	●		●	●	●	●			DD	●		●	●				NT			●	●
Syntrichia papillosissima	LC																			●	●					DD		●	●	●
Syntrichia princeps	LC								NT			EN	*RE*	*RE*	●		●	●	●	●	●	●	EN			●		●	●	●
Syntrichia rigescens	CR																				●									
Syntrichia ruraliformis	LC		●		DD*	●	●		●	●		●	●	●	●		●	●		●	●	●	●			●		●	DD	●
Syntrichia ruralis	LC		●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●	●
Syntrichia ruralis var. *epilosa*									■			■									■									
Syntrichia ruralis var. *ruralis*			■	□	■	■	□	□	■	■		■	■	■	■	□	■	□	□	■	■	■	□			■	DD	■	■	■
Syntrichia sinensis	VU																			●	●	●								VU
Syntrichia submontana	LC																													
Syntrichia subpapillosissima	DD														●		●			●	●					DD				●
Syntrichia virescens	LC		●				VU		●			●	DD		●			●	●	●	●	●				DD			●	●
Taxiphyllum densifolium	EN																													
Taxiphyllum wissgrillii	LC		●		●	●	●		●			●	●	●			●				●	●								●
Tayloria acuminata	VU					VU	NT	●													●	DD								
Tayloria froelichiana	NT				CR		●		●												●	●								EN
Tayloria hornschuchii	EN																					DD								
Tayloria lingulata	LC				●	●	●	●	●			VU									●	●								
Tayloria rudolphiana	EN																													
Tayloria serrata	NT						EN		EN												●	●								
Tayloria splachnoides	LC				CR		●		NT												●	●								
Tayloria tenuis	VU				NT		NT		NT			CR		RE	VU						●	DD								VU
Tetraphis pellucida	LC		●		●		●		●			●	●	●	●				●		●	●								●
Tetraplodon angustatus	LC				●		●		●			NT	DD								●	●								
Tetraplodon blyttii	EN						VU	●	EN																					
Tetraplodon mnioides	LC		●	●	●	●	●	●	●			●	●	●							●	●								DD
Tetraplodon pallidus	LC				EN	VU	●	●	●																					
Tetraplodon paradoxus	VU				CR		EN	●																						
Tetraplodon urceolatus	EN																				?	DD								
Tetrastichium fontanum	VU	E														●		VU					NT							CR
Tetrastichium virens	NT	E														●		CR					●							CR
Tetrodontium brownianum	LC				CR		●					●	NT	NT							●									VU
Tetrodontium ovatum	NT				EN		NT		VU												●									
Tetrodontium repandum	LC				VU		●		●			CR									●									
Thamnobryum alopecurum	LC		●	●	VU	●	●		●	●		●	●	●	NT	●	●	VU	●		●	●	●			●	DD	●	●	●
Thamnobryum angustifolium	CR	E										DD																		
Thamnobryum cataractarum	CR	E										DD																		
Thamnobryum fernandesii	VU	E																					VU							
Thamnobryum maderense	NT	E										DD				●		DD			●		●			NT				●
Thamnobryum neckeroides	VU						DD		●												●	●								
Thamnobryum rudolphianum	EN	E														●														
Thamnobryum subserratum	EN								EN																					
Thuidiopsis sparsa	NA																						●							
Thuidium assimile	LC		●		●	●	●		●			●	●	●	●						●	●								●
Thuidium delicatulum	LC		●	●	●	DD	●		●			●	●	●	●	●	●				●	●								●
Thuidium recognitum	LC		●		●	●	●		●			●	VU	VU	●				●		●	●								●
Thuidium tamariscinum	LC		●	●	●	●	●		●	●		●	●	●	●	●			●		●	●	NT			●				●
Timmia austriaca	LC				●	●	●	●	●			EN			VU				●		●	●								VU
Timmia bavarica	LC				EN	●	●	●	●						●		●		●		●	●							DD	●	●
Timmia comata	LC				VU	●	●	●	●												●									
Timmia megapolitana	LC				*CR*							EN									●									CR
Timmia norvegica	LC				CR	●	●	●	●			NT	VU		EN				●		●	●								EN
Timmia sibirica	EN							●	DD																					
Timmiella anomala	LC																	DD			●	●						●	●	CR
Timmiella barbuloides	LC															●	●	●	●	●	●	●	●	●		●		●	●	●
Timmiella flexiseta	DD																	DD				●				EN		●	●	●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Kaliningrad
Latvia
Lithuania
Moldova
Arctic Russia
Central Russia
NE Russia
NW Russia
SE Russia
South Urals
Ukraine

● Species confirmed; LC/status unknown
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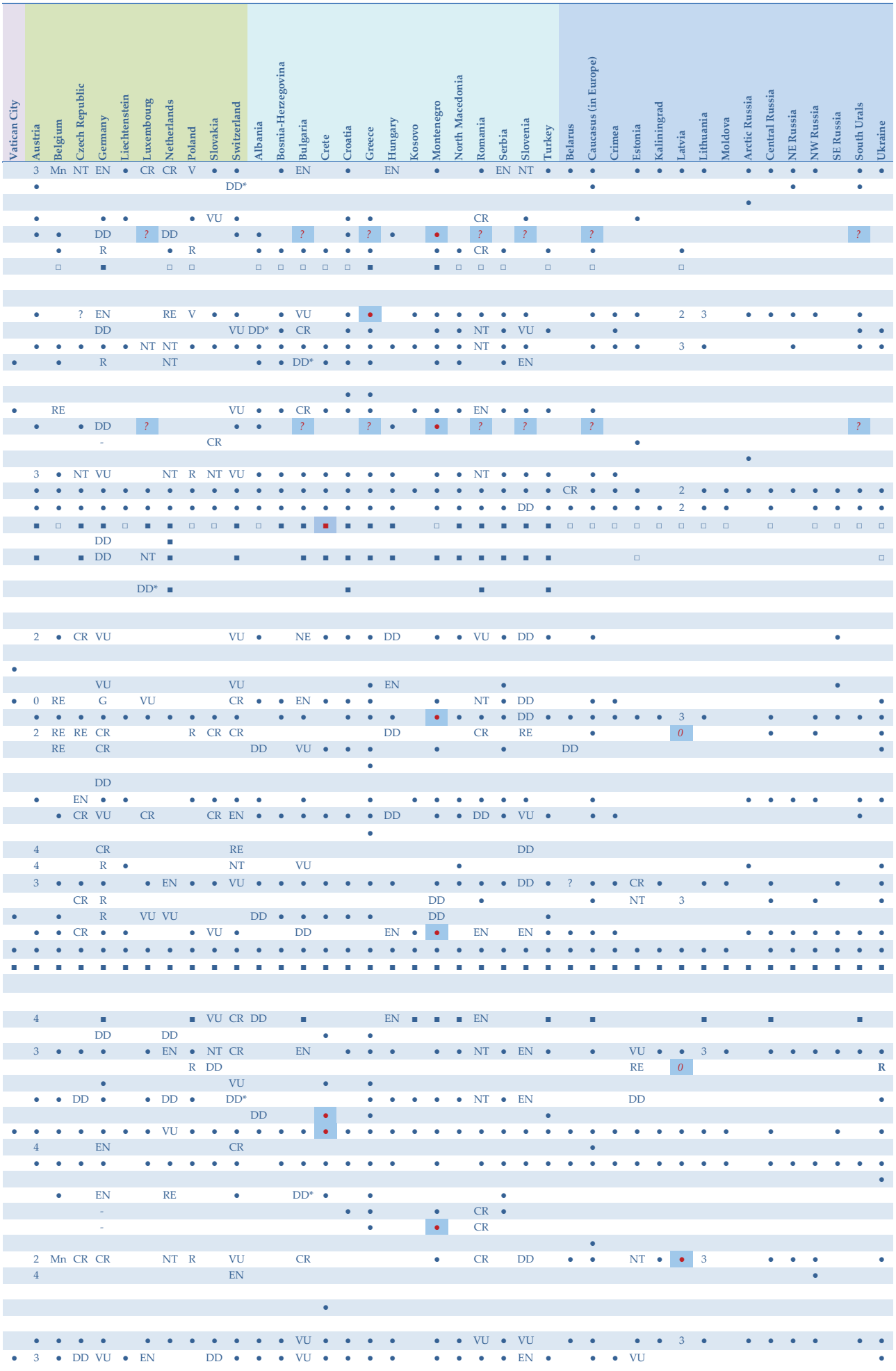
Taxon	European Red List status	Endemic in Europe	Denmark	Faroe Islands	Finland	Iceland	Norway	Svalbard	Sweden	Channel Islands	Gibraltar	Great Britain	Ireland	Northern Ireland	Andorra	Azores	Balearic Islands	Canary Islands	Corsica	Cyprus	France	Italy	Madeira	Malta	Monaco	Portugal	San Marino	Sardinia	Sicily	Spain
Tomentypnum nitens	NT		●		●	●	●	●	●			EN	VU	VU							●	●				-				VU
Tortella alpicola	LC						DD		●									VU			●									EN
Tortella x *cuspidatissima*	EN								●																					
Tortella densa	LC						●		●			●	NT	NT							●	●								●
Tortella fasciculata	LC	E					●		●			●	●					?			●	?	●							●
Tortella flavovirens	LC		●	●			EN		NT	●	●	●	●	●		●	●	●	●	●	●	●	●	●		●	●	●	●	●
Tortella flavovirens var. *flavovirens*			■	□			□		■	□	□	■	□	□		□	■	□	□		■	■	□	□			□	■	■	■
Tortella flavovirens var. *glareicola*			■				■		■			■								■	■				■				■
Tortella flavovirens var. *papillosissima*																								■				■	■
Tortella fragilis	LC		●	-	●	●	●	●	●			EN			●	●		-			●	●				-				●
Tortella humilis	LC																●			●	●	●	●			EN		●	DD	●
Tortella inclinata	LC		●		NT		NT		●			EN	●	●	●		●				●	●		DD		VU		●	●	●
Tortella inflexa	LC											●				●	●	●		●	●	●		●		●		●	●	●
Tortella limbata	VU																	VU					VU							
Tortella mediterranea	LC																													●
Tortella nitida	LC									●		●	●		●	●	●	●	●	●	●	●	●	●		●		●	●	●
Tortella pseudofragilis	LC	E					●		●			●						?			●	?								
Tortella rigens	LC				CR				●																					
Tortella spitsbergensis	EN							●																						
Tortella squarrosa	LC								RE	●		●	NT		●	●	●	●	●	●	●	●	DD	?		●	DD	●	●	●
Tortella tortuosa	LC		●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●		DD	DD	●	●	●
Tortula acaulon	LC		●		●		●		●	●		●	●	●	●		●	●	●		●	●	●	●		●		●	●	●
Tortula acaulon var. *acaulon*			□		■		□		■	■		●	■	■	□		●	□	□		■	■	□	■		□		■	■	■
Tortula acaulon var. *papillosa*					■				■	■		■		DD							■					DD				■
Tortula acaulon var. *pilifera*					■				■	■		■	DD				■				■	■		■		DD		■	■	■
Tortula acaulon var. *retortifolia*																	■				■									■
Tortula acaulon var. *schreberiana*									■			■									■									■
Tortula amplexa	NA											●																		
Tortula ampliretis	LC	E																●												
Tortula atrovirens	LC									●		VU	NT	NT		●	●	●	●	●	●	●	NT			●		●	●	●
Tortula bogosica	NT															●		●												
Tortula bolanderi	EN																	●			●	●	●			DD		●	●	DD
Tortula brevissima	LC																	DD	●		●	●				DD		●	●	●
Tortula canescens	LC											EN	DD		●	●		●	●	●	●	●	VU			●	DD	●	●	●
Tortula caucasica	LC		●		EN	VU	●		●	●		●	VU	VU	●		●		●		●	●		●		●		●	●	●
Tortula cernua	VU				CR	●	EN	●	CR			EN									●	●								
Tortula cuneifolia	LC									●		EN	CR	CR	●	●	●	●	●	●	●	●	VU	●		●		●	●	●
Tortula freibergii	LC	E										●					●				●	●		EN		EN			●	EN
Tortula guepinii	LC																				●	●				VU				VU
Tortula hoppeana	LC				●	●	●	●	●						●				●		●	●							●	●
Tortula inermis	LC											DD			●		●	?	●	●	●	●				EN	●	●	●	●
Tortula israelis	LC																●	DD		●		●				DD		●	●	●
Tortula laureri	CR						CR	●														DD								
Tortula leucostoma	EN						VU	●	VU			CR									●	●								
Tortula lindbergii	LC		●				CR		●			●	CR		●		●	?	●		●	●	VU			VU		●	●	●
Tortula lingulata	VU																													
Tortula marginata	LC									●		●	NT	NT		●	●	●	●	●	●	●	●	●		●		●	●	●
Tortula mucronifolia	NT				CR	●	●	●	DD						●						●	●								●
Tortula muralis	LC		●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●
Tortula muralis subsp. *muralis*			■	■	■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■	■	□	■
Tortula muralis subsp. *muralis* var. *aestiva*																														
Tortula muralis subsp. *muralis* var. *muralis*																														
Tortula muralis subsp. *obtusifolia*						■	VU													■	■	■								
Tortula pallida	LC																●	DD	●	●	●	●	●	●		DD		DD	●	●
Tortula protobryoides	LC		●		*CR*				NT			●	RE	RE			●	DD			●	●						●	DD	●
Tortula randii	EN						EN		EN																					
Tortula revolvens	LC															●	●	NT			●	●					DD		●	●
Tortula schimperi	LC		●						?			●			●				●			●						●	DD	●
Tortula solmsii	LC											EN				●		●		●		●	●	VU		VU		●	●	RE
Tortula subulata	LC		●	●	●	●	●		●			●	●	●	●		●	●	●	●	●	●	VU			●	DD	●	●	●
Tortula systylia	EN				CR		VU	●	NT												●	DD								
Tortula truncata	LC		●		●	VU	●		●	●		●	●	●		●	●	●	●		●	●	VU	●		●		●	●	●
Tortula ucrainica	DD																													
Tortula vahliana	LC											EN	RE			●	●	●		●	●	●	-	DD*		EN		●	DD	●
Tortula viridifolia	LC									●		●	●	●			●	DD			●	●				-		●	●	VU
Tortula wilsonii	LC			●						●		EN	*RE*				●		●		●	●				CR		●	●	●
Trachycystis ussuriensis	NE																													
Trematodon ambiguus	LC		●		●	EN	●		●			CR									●	●								VU
Trematodon brevicollis	VU				CR	VU	NT		VU												●	●								
Trematodon laetevirens	EN				CR		VU		VU																					
Trematodon longicollis	VU																					●							●	
Trematodon perssoniorum	CR	E														●														
Trichodon cylindricus	LC		●	●	●	●	●	●	●	●		●	●	●	VU			VU	●		●	●				VU			●	VU
Trichostomum brachydontium	LC		●	●		●	●		●	●		●	●	●	●	●	●	●	●	●	●	●	●	●		●	DD	●	●	●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Estonia
Kaliningrad
Latvia
Lithuania
Moldova
Arctic Russia
Central Russia
NE Russia
NW Russia
SE Russia
South Urals
Ukraine

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Trichostomum crispulum	LC		●	●			NT	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●		●	DD	●	●	●
Triquetrella arapilensis	NT	E																								●				●
Ulota bruchii	LC	E	●		●		●		●	●		●	●	●							●	●				●				●
Ulota calvescens	LC	E					DD					●	●	●		●		●			●		●			VU				VU
Ulota coarctata	LC		●				●		VU			●	EN								●	●								VU
Ulota crispa s.l.			●	●	NT		●		●	●		●	●	●	●	●		DD			●	●	NT			●			●	●
Ulota crispa	LC				DD		●		●	●		●	●	●							●	●				●				●
Ulota crispula	LC		●				●					●	●								●					●				●
Ulota curvifolia	LC				●		●		●																					
Ulota drummondii	LC		●		CR		●		●			●	DD	DD							●									●
Ulota hutchinsiae	LC		●	●	NT		●		●			●	●	●				●	●		●	●				EN				DD
Ulota intermedia	LC		●				●		●			●	●	●							●					●				●
Ulota macrospora	EN	E																			●									
Ulota rehmannii	CR																				●									
Vesicularia reimersiana	LC																							?						
Voitia hyperborea	VU							●																						
Voitia nivalis	CR																				-	●								
Warnstorfia fluitans	LC		●	●	●	●	●	●	●			●	●	●		●		DD	●		●	●				DD		DD		DD
Warnstorfia pseudostraminea	LC		●		●		DD	●	●												●	DD								
Weissia angustifolia	LC																													
Weissia brachycarpa	LC		●	●	EN		●		●	●		●	●	●	●	●	●		●	●	●	●		DD*		●	DD	●	●	●
Weissia condensa	LC											EN	DD		●	●	●	●	●	●	●	●	●	●		●	DD	●	●	●
Weissia condensa var. *armata*																	■									DD				■
Weissia condensa var. *condensa*												□	□		□	□	■	□	□	□	□	□	□	□		■		□	□	■
Weissia controversa	LC		●	●	●	●	●		●	●		●	●	●		●	●	●	●	●	●	●	●	●		●	DD	●	●	●
Weissia controversa var. *controversa*			□	□	■	□	□		■	■		■	■	■		■	■	□	■		■	■	□	■		□	■	■	■	■
Weissia controversa var. *crispata*					■							■	DD				■		■	■	■	■	■	■		■	■	■	■	■
Weissia controversa var. *densifolia*												■	●									■							DD	
Weissia levieri	LC											DD					●				●	DD				CR			●	●
Weissia longifolia	LC		●		EN		EN		●			●	VU	VU	●		●	●	●		●	●	EN	DD*		●		●	●	●
Weissia x *mittenii*	LC											●																		
Weissia perssonii	LC	E		●			NT		VU	●		●	●	●							●									VU
Weissia rostellata	NT	E	●				CR		VU			●	NT	NT							●	●								
Weissia rutilans	LC		●	●		●	●		VU	●		●	VU	VU			●				●	●						DD		VU
Weissia squarrosa	VU		●		CR		CR		NT			NT					●	●			●									DD
Weissia sterilis	NT	E										DD									●									
Weissia wilsonii	DD											DD									●	DD								
Weissia wimmeriana	LC					EN	●		●			●		VU			●		●		●	●		?		DD		●	●	VU
Zygodon catarinoi	LC																			●						DD				●
Zygodon conoideus	LC		●	●	EN		●		NT	●		●	●	●		●		DD			●		●			VU				DD
Zygodon conoideus var. *conoideus*			■	■	■		■		■	■		■	■	■		■		■			■		■			■				■
Zygodon conoideus var. *lingulatus*												■																		
Zygodon dentatus	LC						VU														●									
Zygodon gracilis	VU											VU									?	EN								
Zygodon rupestris	LC		●		●		●		●			●	●	●		●	●	●	●	●	●	●	●			●		●	●	●
Zygodon sibiricus	DD																													
Zygodon stirtonii	LC		●		CR		VU		●	●		●	●	●							●									CR
Zygodon viridissimus	LC		●	●	CR	●	●		●	●		●	●	●		●		●			●	DD	●			●			●	●

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•	•	•	•	•	•		EN	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•		•	•			•	•	•	•	•	•
	•	•	•	•		•	•	V	NT	•		•	DD*		•		VU		DD*		DD	VU	•		•			•	•	•						•			•
							DD															?																		
	1	Mn	CR	VU	•	EN	NT	E	VU	CR		•			•		DD				NT		DD		•	•		VU	•	•									•
	•	•	•	•	•	•	•	V	•	•	•	•	EN		•	•	NT	•	•		•	•	•		•	•	•	•	•	•	•			•	•	•		•
	•	•		DD			•	V	•	•					•	•	NT				•					•		•											•
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	4			-							?															-			VU				-		•	•		•	
			RE	RE	•		NT	E	EN	DD																			VU	•	•					•			•
	•	RE	EN	EN	•		DD	E	EN	VU		•	EN		•		RE					NT	•	DD			•		NT							•			•
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2.2.1 Status notes - Mosses

Status notes (Status values italicised in red with a darker background fill**)**

Taxon	Country	Note
Acaulon casasianum	FRANCE	V. Hugonnot *pers. comm.* Jan. 2019
Acaulon fontiquerianum	SICILY	● (at risk)
Acaulon muticum	MONTENEGRO	CR (one old record)
Acaulon muticum	SICILY	● (at risk)
Acaulon piligerum	CRETE	Not present (J. Kučera *pers. comm.* 2017)
Acaulon piligerum	SICILY	Not present (J. Kučera *pers. comm.* 2017)
Acaulon triquetrum	SPAIN	● (healthy population - Belén Albertos, 11 February 2014)
Alleniella besseri	SICILY	● (at risk)
Aloina aloides	AUSTRIA	DD (probably no correct reports)
Aloina ambigua	ALBANIA	● (old, no voucher)
Aloina bifrons	FRANCE	● (at risk)
Aloina obliquifolia	AUSTRIA	NE (formerly = *A. rigida*)
Aloina obliquifolia	FRANCE	● (at risk)
Amblystegium serpens	MALTA	Schäfer-Verwimp & Verwimp (2019)
Amphidium mougeotii	SICILY	● (at risk)
Anacamptodon splachnoides	FRANCE	● (at risk)
Anacamptodon splachnoides	SWITZERLAND	RE (but refound in 2010 in one site)
Anacamptodon splachnoides	UK	Old (1873) specimen in Stockholm but provenance doubtful.
Anacolia webbii	FRANCE	Deleted (V. Hugonnot *pers. comm.* Jan. 2019)
Anacolia webbii	GREECE	Blockeel & Nieuwkoop (2016)
Anacolia webbii	SICILY	● (at risk)
Andreaea alpestris	FRANCE	● (at risk)
Andreaea alpina	FRANCE	Doubtful (V. Hugonnot *pers. comm.* Jan. 2019)
Andreaea blyttii	FRANCE	Doubtful (V. Hugonnot *pers. comm.* Jan. 2019)
Andreaea rupestris	GREECE	Blockeel (2018a)
Anoectangium handelii	CRIMEA	The specimen from Crimea in fact represents *Hymenostylium xerophilum* (duplicate in MW); V. Fedosov *pers. comm.* Nov. 2018.
Anomobryum apiculatum	GREAT BRITAIN	The Cornish plants originally assigned to *A. apiculatum* represent an undescribed taxon allied to *Bryum dichotomum*, an account of which is in preparation. (D. Holyoak, *pers. comm.*).
Anomobryum concinnatum	MONTENEGRO	Previously synonymised with *A. julaceum*, but occurs in Montenegro (Dragićević *pers. comm.* May 2020).
Anomodon longifolius	ALBANIA	● (old, no voucher)
Anomodon tristis	FRANCE	Doubtful (V. Hugonnot *pers. comm.* Jan. 2019)
Antitrichia californica	FRANCE	● (at risk)
Antitrichia californica	SICILY	● (at risk)
Archidium alternifolium	AUSTRIA	0 (recently refound)
Arctoa anderssonii	FAROE ISLANDS	Collected by Tomas Hallingbäck 2013, confirming very old record (T. Hallingbäck *pers. comm.* 2017).
Arctoa hyperborea	FRANCE	Deleted (V. Hugonnot *pers. comm.* Jan. 2019)
Atractylocarpus alpinus	FRANCE	Deleted (V. Hugonnot *pers.comm.* 2017)
Atrichum angustatum	BELGIUM	RE?
Atrichum flavisetum	ESTONIA	Nele Ingerpuu (*pers. comm.* May 2020)
Atrichum flavisetum	GREAT BRITAIN	● (NE - not recognised in GB)
Atrichum flavisetum	SWEDEN	● (but not recognised in Se)
Aulacomnium androgynum	SICILY	● (at risk)
Aulacomnium palustre	SICILY	● (at risk)

Taxon	Country	Note
Bartramia aprica	GERMANY	not present (S. Caspari *pers. comm.* 2017)
Bartramia breviseta	NW RUSSIA	Recorded by Fransén (2004) but not included as separate from *B. ithyphylla* in the Moss Flora of Russia (Ignatov *et al.*, 2018a), in which it is synonymised with *B. ithyphylla*, but with a question mark.
Bartramia breviseta	SVALBARD	Fransén (2004)
Bartramia halleriana	IRELAND	Rediscovered (RE)
Bartramia laevisphaera	CYPRUS	Kaufmann & Berg (2014)
Bartramia laevisphaera	GERMANY	present rather than *B. aprica* or *B. stricta* (S. Caspari *pers. comm.* 2017)
Bartramia subulata	MADEIRA	Record from Madeira doubtful (discussion, 28.2.17); also C. France, S. Italy doubtful.
Bartramia subulata	ARCTIC RUSSIA	Record from Arctic Russia doubtful (discussion, 28.2.17); also C. France, S. Italy doubtful.
Blindiadelphus campylopodus	LATVIA	● (v. rare)
Blindiadelphus polaris	NORWAY	Only one very old and unreliable record (H. Blom, *pers. comm.* 2017)
Blindiadelphus recurvatus	LATVIA	● (v. rare)
Brachytheciastrum collinum	ARCTIC RUSSIA	Fedosov *et al.* (2018)
Brachytheciastrum collinum	MONTENEGRO	Papp *et al.* (2019)
Brachytheciastrum collinum	SICILY	● (at risk)
Brachytheciastrum dieckei	CORSICA	Hugonnot (2019)
Brachytheciastrum dieckei	FRANCE	V. Hugonnot *pers. comm.* Jan. 2019
Brachytheciastrum dieckei	MONTENEGRO	Papp *et al.* (2019)
Brachytheciastrum salicinum	AUSTRIA	Given for Austria at varietal rank (Köckinger *pers. comm.* Nov. 2018)
Brachythecium campestre	FRANCE	● (at risk)
Brachythecium campestre	SICILY	● (at risk)
Brachythecium cirrosum	SICILY	● (at risk)
Brachythecium erythrorrhizon	FRANCE	● (at risk)
Brachythecium erythrorrhizon	SPAIN	● (one locality - Belén Albertos, 11 February 2014)
Brachythecium japygum	SLOVENIA	● (2 records; 1 recent) Andrej Martinčič *pers. comm.* May 2020
Brachythecium laetum	FINLAND	Deleted (Lars Hedenäs *pers. comm.* 2017), but reinstated (Juutinen *et al.*, 2019).
Brachythecium novae-angliae	RUSSIA	All records refer to *Myuroclada longiramea* (Ignatov *et al.*, 2015).
Brachythecium rutabulum var. *atlanticum*	PORTUGAL	R. Porley *pers. comm.* Oct. 2018 - conf. L. Hedenäs
Brachytechium tauriscorum	AUSTRIA	Köckinger *pers. comm.* Nov. 2018
Brachythecium tenuicaule	SLOVENIA	● (9 recent records) Andrej Martinčič *pers. comm.* May 2020
Brachythecium tommasinii	SICILY	● (at risk)
Brachythecium turgidum	FRANCE	● (at risk)
Brachythecium turgidum	SLOVENIA	● (2 recent records) Andrej Martinčič *pers. comm.* May 2020
Brachythecium udum	FRANCE	Doubtful (V. Hugonnot *pers. comm.* Jan. 2019)
Breutelia chrysocoma	FRANCE	● (at risk)
Bruchia vogesiaca	GERMANY	In Red List (2018) as Extinct, but refound very recently (S. Caspari, *pers. comm.* Nov. 2018)
Bryoerythrophyllum alpigenum	GERMANY	not present (S. Caspari *pers. comm.* 2017)
Bryoerythrophyllum duellii	CRETE	T. Blockeel *pers. comm.* Nov. 2018
Bryoerythrophyllum ferruginascens	FRANCE	● (at risk)
Bryoerythrophyllum inaequalifolium	PORTUGAL	Ellis *et al.* (2018)
Bryum bavaricum	FRANCE	● (at risk)

Taxon	Country	Note
Bryum demaretianum	NETHERLANDS	D. Holyoak *pers. comm.* Dec. 2018
Bryum demaretianum	SWITZERLAND	Old record only, recently realised (Norbert Schnyder *pers. comm.* 2017).
Bryum dyffrynense	NETHERLANDS	Occurs in the Netherlands, where it is not considered a species (Henk Siebel *pers. comm.* April 2020).
Bryum gemmiferum	LATVIA	S. Caspari, *pers. comm.* Dec. 2019
Bryum gemmiferum	SLOVENIA	● (1 recent record) Andrej Martinčič *pers. comm.* May 2020
Bryum klinggraeffii	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Bryum klinggraeffii	MONTENEGRO	Kalniková *et al.* (2017)
Bryum klinggraeffii	SICILY	● (at risk)
Bryum marratii	LATVIA	● (probably disappeared)
Bryum radiculosum	ALBANIA	● (old, no voucher)
Bryum ruderale	LATVIA	S. Caspari, *pers. comm.* Dec. 2019
Bryum versicolor	FRANCE	● (at risk)
Bryum versicolor	NETHERLANDS	Occurs in the Netherlands, where it is not considered a species (Henk Siebel *pers. comm.* April 2020).
Bryum versicolor	SARDINIA	Only pre-1950 record(s) known (Cortini Pedrotti & Aleffi, 1995)
Bryum versicolor	SLOVENIA	● (5 records; 1 recent) Andrej Martinčič *pers. comm.* May 2020
Bryum violaceum	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Bryum violaceum	MONTENEGRO	Papp *et al.* (2019)
Buckia vaucheri	SICILY	● (at risk)
Buxbaumia aphylla	MONTENEGRO	Although published for Montenegro, and assigned to EN in the Red List, it was growing on decaying spruce wood and has not been refound; it is considered likely that the record was actually of *B. viridis* (Dragićević *pers. comm.* 2020).
Callicladium haldanianum	FRANCE	● (at risk)
Callicladium haldanianum	MONTENEGRO	EN (old data)
Callicladium imponens	FRANCE	● (at risk)
Calliergon giganteum	FRANCE	● (at risk)
Calliergon megalophyllum	NETHERLANDS	RE (but rediscovered in 2014 - Kooijman *et al*, 2015)
Calliergon richardsonii	FRANCE	● (at risk)
Calliergon richardsonii	LATVIA	● (v. rare)
Calliergonella lindbergii	GREECE	The only record is from a calcareous spring (Ade & Koppe, 1955) and is therfore doubtful.
Calymperes erosum	SICILY	● (at risk)
Campyliadelphus elodes	LATVIA	● (v. rare)
Campyliadelphus elodes	SPAIN	Listed in Spanish Red List (2012) as RE, but new records have been made since then (Marta Infante, *pers. comm.* 2017)
Campylium laxifolium	ARCTIC RUSSIA	V. Fedosov *pers. comm.* Nov. 2018
Campylium longicuspis	NORTH MACEDONIA	Deleted (Tomas Hallingbäck *pers. comm.* 2017)
Campylium longicuspis	NORWAY	Deleted (Tomas Hallingbäck *pers. comm.* 2017)
Campylium protensum	AUSTRIA	● (not recognised as valid taxon in Austria)
Campylophyllopsis sommerfeltii	ALBANIA	? (old, no voucher)
Campylophyllopsis sommerfeltii	FRANCE	Deleted (V. Hugonnot *pers. comm.* Jan. 2019)

Taxon	Country	Note
Campylopus atrovirens	MONTENEGRO	This is now considered a doubtful record (M. Sabovljević *pers. comm*. 2017). However, not impossible considering the recent find near Rome (Puglisi *et al*., 2015).
Campylopus flexuosus	MONTENEGRO	VU (one, old data)
Campylopus fragilis	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Campylopus fragilis	MONTENEGRO	VU (one, old data)
Campylopus oerstedianus	GREECE	There has probably been confusion with *C. pilifer.*
Campylopus oerstedianus	SICILY	● (at risk)
Campylopus oerstedianus	SPAIN	VU in the Spanish Red List; Flora Iberica, however (published later the same year), does not recognise this species in Spain. S/SE expert group consider that all records except those from N. Italy and Switzerland are dubious and need confirmation.
Campylopus pyriformis	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Campylopus pyriformis	SICILY	● (at risk)
Campylopus pyriformis	SLOVENIA	RE (if correctly reported)
Campylostelium pitardii	SICILY	● (at risk)
Ceratodon conicus	GREECE	There is a report from the island of Samothraki (Biel & Tan, 2014), but it requires confirmation.
Ceratodon conicus	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Ceratodon conicus	MONTENEGRO	Deleted, as the record was of *C. corsicus* Bruch & Schimp., given by Hill *et al.* (2006) and Ros *et al.* (2013) as a synonym of *C. purpureus* subsp. *stenocarpus* (Dragićević *pers. comm.* May 2020).
Ceratodon purpureus subsp. *stenocarpus*	FRANCE	● (at risk)
Ceratodon purpureus subsp. *stenocarpus*	MONTENEGRO	See note under *C. conicus*
Cheilothela chloropus	FRANCE	● (at risk)
Cheilothela chloropus	MALTA	Schäfer-Verwimp & Verwimp (2019)
Chionoloma tenuirostre	LATVIA	● (v. rare)
Chionoloma tenuirostre	SICILY	● (at risk)
Chionoloma tenuirostre var. *tenuirostre*	GREECE	var. *tenuirostre* is documented for Greece Blockeel (2018b)
Cinclidium stygium	GREECE	Blockeel (2018a)
Cinclidotus aquaticus	SICILY	● (at risk)
Cinclidotus danubicus	GREECE	Included as doubtful by Ros *et al.* (2013) with the comment "reported by Tsakiri & Babalonas (2002) but based on inconclusive material".
Cinclidotus danubicus	ITALY	● (declined - Belén Albertos, 11 February 2014)
Cinclidium stygium	SLOVENIA	● (1 recent record) Andrej Martinčič *pers. comm.* May 2020
Cnestrum alpestre	FRANCE	● (at risk)
Coscinodon horridus	FRANCE	New (Ron Porley *pers. comm.* 2017)
Codonoblepharon forsteri	CORSICA	Hugonnot (2019)
Codonoblepharon forsteri	DENMARK	Query inserted by Lara & Garilleti (*pers. comm.* 26.10.2018).
Codonoblepharon forsteri	MONTENEGRO	EN (if report correct)
Conardia compacta	CROATIA	Alegro *et al.* (2019)
Conostomum tetragonum	FRANCE	● (at risk)
Cratoneuron curvicaule	SICILY	● (at risk)
Crossidium laxefilamentosum	CRETE	Urmi (2017b)
Crossidium laxefilamentosum	SPAIN	Uncertain whether it occurs in Spain or not. According to Guerra (2004–2006), it is synonymous with *C. crassinervium*, but according to Pócs *et al.* (2004) it is clearly different.

Taxon	Country	Note
Crossidium squamiferum var. *squamiferum*	CRETE	var. *squamiferum* occurs in Crete (Herb. Blockeel)
Crossidium squamiferum var. *squamiferum*	CYPRUS	var. *squamiferum* occurs in Cyprus and Crete (Herb. Blockeel)
Cryphaea heteromalla	AUSTRIA	Recently found (Schröck, *pers. comm*. June 2020)
Cryphaea heteromalla	SICILY	● (at risk)
Cyclodictyon laetevirens	FRANCE	Deleted (V. Hugonnot *pers. comm.* Jan. 2019)
Cynodontium bruntonii	CRETE	Blockeel (2012b)
Cynodontium bruntonii	SICILY	● (at risk)
Cynodontium tenellum	CROATIA	Alegro *et al.* (2019)
Cynodontium tenellum	FRANCE	● (at risk)
Cynodontium tenellum	LATVIA	● (v. rare)
Cyrtomnium hymenophylloides	FRANCE	● (at risk)
Dendrocryphaea lamyana	SWITZERLAND	DD (erroneously recorded)
Dialytrichia mucronata	AUSTRIA	Beata Papp has checked the specimen in the herbarium of the Hungarian Natural History Museum as correctly identified (Schröck, *pers. comm*. June 2020).
Dialytrichia mucronata	IRELAND	VU New to Ireland since Red List 2010
Dichelyma capillaceum	GREECE	Only reported by Mazziari (1851) from the Ionian islands. The record is not credible on phtyogeographic grounds and is clearly an error.
Dichelyma falcatum	FRANCE	● (at risk)
Dichelyma falcatum	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Dichodontium flavescens	CROATIA	Alegro *et al.* (2019)
Dichodontium pellucidum	SICILY	● (at risk)
Dicranella cerviculata	FRANCE	● (at risk)
Dicranella grevilleana	FRANCE	● (at risk)
Dicranella grevilleana	LATVIA	Confirmation needed. A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Dicranella grevilleana	SLOVENIA	● (3 recent records) Andrej Martinčič *pers. comm.* May 2020
Dicranella humilis	SERBIA	Dubious' (B. Papp, *pers. comm.* 2017)
Dicranella humilis	SICILY	● (at risk)
Dicranella rufescens	SICILY	● (at risk)
Dicranella schreberiana	SICILY	● (at risk)
Dicranella staphylina	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Dicranella varia	ARCTIC RUSSIA	V. Fedosov *pers. comm.* Nov. 2018
Dicranodontium denudatum	LATVIA	● (v. rare)
Dicranodontium uncinatum	ANDORRA	The occurrence here, previously discounted, is real (A. Vanderpoorten *pers. comm.* 2017)
Dicranodontium uncinatum	FRANCE	Last seen 1966
Dicranodontium uncinatum	SLOVENIA	● (4 recent records) Andrej Martinčič *pers. comm.* May 2020
Dicranoweisia cirrata	MONTENEGRO	Vulević *et al.* (2017)
Dicranoweisia cirrata	SICILY	● (at risk)
Dicranum acutifolium	AUSTRIA	NE (previously included in *D. brevifolium*)
Dicranum angustum	FRANCE	Deleted (V. Hugonnot *pers. comm.* Jan. 2019)
Dicranum bonjeanii	SICILY	● (at risk; if record correct)
Dicranum brevifolium	ANDORRA	Recently added (Sotiaux & Vanderpoorten, 2017)
Dicranum dispersum	FRANCE	● (at risk)
Dicranum fragilifolium	FRANCE	Deleted (V. Hugonnot *pers. comm.* Jan. 2019)
Dicranum fulvum	KALININGRAD	Possibly extinct (Oleg Maslovsky *pers. comm.* 2017)
Dicranum majus	FRANCE	● (at risk)
Dicranum muehlenbeckii	ESTONIA	Deleted (Vellak *et al.*, 2015)
Dicranum polysetum	ALBANIA	● (old, no voucher)

Taxon	Country	Note
Dicranum polysetum	GREECE	Only reported by Mazziari (1851) from the Ionian islands. The record is not credible on phtyogeographic grounds and is clearly an error.
Dicranum schljakovii	ARCTIC RUSSIA	V. Fedosov *pers. comm.* Nov. 2018
Dicranum scottianum	FRANCE	● (at risk)
Dicranum scottianum	PORTUGAL	Recorded in Monchique as *D. canariense* (Ron Porley, *pers. comm.*)
Dicranum scottianum	ROMANIA	Surely an error
Dicranum septentrionale	AUSTRIA	Lang *et al.* (2014)
Dicranum septentrionale	FINLAND	Lang *et al.* (2014)
Dicranum septentrionale	SWEDEN	L. Hedenäs *pers. comm.* 2018
Dicranum spurium	GREECE	Only reported by Mazziari (1851) from the Ionian islands. The record is not credible on phtyogeographic grounds and is clearly an error.
Dicranum transsylvanicum	SLOVENIA	● (1 recent record) Andrej Martinčič *pers. comm.* May 2020
Didymodon acutus	GREAT BRITAIN	Present in S. England (J. Kučera *pers. comm.* Nov. 2018)
Didymodon acutus	SWEDEN	J. Kučera *pers. comm.* Nov. 2018
Didymodon acutus	IRELAND, AZORES, MADEIRA, BELGIUM, EAST EUROPE	It is uncertain whether these records refer to *D. acutus* or *D. icmadophilus* (Jan Kučera *pers. comm.* 2018).
Didymodon australasiae	GREAT BRITAIN	Blockeel & Kučera (2019)
Didymodon bistratosus	FRANCE	● (at risk)
Didymodon eckeliae	PORTUGAL	"After revising all recent Iberian collections in the LISU herbarium, we found that this specices is frequent in the Portugese flora and more widely distributed in Spain than previously thought." (M. Sim-Sim, *pers. comm.* July 2018)
Didymodon eckeliae	SPAIN	"After revising all recent Iberian collections in the LISU herbarium, we found that this specices is frequent in the Portugese flora and more widely distributed in Spain than previously thought." (M. Sim-Sim, *pers. comm.* July 2018)
Didymodon ferrugineus	GREECE	Published in the checklist of Sabovljević *et al.* (2008) with no supporting information.
Didymodon giganteus	CZECH REPUBLIC	Does not occur; an old erroneous record (Jan Kučera *pers. comm.* 2017).
Didymodon johansenii	FRANCE	● (at risk)
Didymodon subandreaeoides	SLOVAKIA	Occurrences reported in Kučera & Köckinger (2000) need to be confirmed (J. Kučera *pers. comm.* 2016).
Didymodon tophaceus subsp. *erosus*	FRANCE	● (at risk)
Didymodon tophaceus subsp. *erosus*	LUXEMBOURG	S. Caspari *pers. comm.* Dec. 2018
Didymodon tophaceus subsp. *erosus*	PORTUGAL	"This species has recently been rediscovered in the same park on the calcareous stones of the old staircase of Fonte Fria cascade. This discovery does not extend the distribution of this rare species but confirms its presence in Buçao Mountain and consequently in Portugal." (M. Sim-Sim *pers. comm.* July 2018)
Didymodon tophaceus subsp. *sicculus*	AUSTRIA	Köckinger *pers. comm.* Nov. 2018
Didymodon tophaceus subsp. *sicculus*	CROATIA	B. Papp *pers. comm.* 2017

Taxon	Country	Note
Didymodon tophaceus subsp. *sicculus*	ESTONIA	J. Kučera *pers. comm.*, 2017
Didymodon tophaceus subsp. *sicculus*	FRANCE	● (at risk)
Didymodon tophaceus subsp. *sicculus*	HUNGARY	B. Papp *pers. comm.* 2017
Didymodon validus	general	Only *D. validus s.s.* acknowledged (J. Kučera *pers. comm.* 2017); records from other countries have yet to be resolved: Norway, Sweden, Czech Republic, Germany, Slovakia, mid-south Urals. Records from Switzerland, Poland and Croatia are thought to be more credible.
Didymodon validus	FRANCE	V. Hugonnot *pers. comm.* Jan. 2019
Diobelonella palustris	GREECE	The sole previous report by Mazziari (1851) from the Ionian islands is not credible on phtyogeographic ground and is clearly an error. However, the species was found on Mt Pieria, North-Central Greece, in 2018 (Blockeel, in prep.)
Diphyscium foliosum	SICILY	● (at risk)
Distichium inclinatum	ALBANIA	Puglisi *et al.* (2013)
Distichium inclinatum	CANARY ISLANDS	*D. cf. inclinatum* (Ellis *et al.*, 2019)
Distichium inclinatum	SICILY	● (at risk)
Distichophyllum carinatum	SWITZERLAND	RE (but refound at one site in 2005)
Ditrichum pallidum	SICILY	● (at risk)
Ditrichum plumbicola	FRANCE	V. Hugonnot *pers. comm.* 2018
Ditrichum pusillum	SICILY	● (at risk)
Ditrichum subulatum	FRANCE	● (at risk)
Ditrichum zonatum	NORTHERN IRELAND	EN (but this is the status for Ireland as a whole: it has not been recorded recently in Northern Ireland)
Drepanocladus aduncus	SICILY	● (at risk)
Drepanocladus arcticus	NORWAY	"I am not aware of any occurrences on the Norwegian mainland" (L. Hedenäs *pers. comm.* 2018)
Drepanocladus lycopodioides	MONTENEGRO	Peterka *et al.* (2017)
Drepanocladus lycopodioides	SERBIA	Deleted (Beáta Papp, *pers. comm.* 30.3.2017)
Drepanocladus polygamus	SICILY	● (at risk)
Drepanocladus sordidus	LATVIA	● (v. rare)
Drepanocladus turgescens	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Drepanocladus turgescens	MONTENEGRO	VU (one, old data)
Encalypta ciliata	IRELAND	CR (EN) - Second record for Ireland in 2011, Status would now be EN
Encalypta mutica	ROMANIA	Old records only, but these are probably errors (Sorin Ştefănuţ, 24 August 2016)
Encalypta mutica	UKRAINE	These records must be regarded as dubious, as this is an Arctic Montane species unlikely to occur in the lowlands of Ukraine.
Encalypta pilifera	AUSTRIA	DD (doubtfully present)
Encalypta pilifera	CRIMEA, SE RUSSIA	V. Fedosov *pers. comm.* Nov. 2018
Encalypta rhaptocarpa	ALBANIA	● (old, no voucher)
Encalypta rhaptocarpa	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Encalypta rhaptocarpa	SICILY	● (at risk)
Encalypta rhaptocarpa	C RUSSIA, CRIMEA, UKRAINE	Doubtful (V. Fedosov *pers. comm.* Nov. 2018)

Taxon	Country	Note
Encalypta trachymitria	AUSTRIA	● (but not recognised as valid taxon in Austria)
Encalypta trachymitria	SE RUSSIA, N URALS	V. Fedosov *pers. comm.* Nov. 2018
Entodon cladorrhizans	BELARUS	Deleted, record is *E. schleicheri* M. Ignatov *pers. comm.* 2017)
Entodon cladorrhizans	AUSTRIA	Deleted, record is *E. schleicheri* (Christian Schröck *pers. comm.* 2017)
Entodon cladorrhizans	FRANCE	Only ancient records and no specimens
Entodon cladorrhizans	ITALY	Only ancient records and no specimens; it is possible that all records except the very old ones from Switzerland (which have sporophytes and have been checked by Patricia Geissler & Heike Hoffman) are incorrect (S/SE expert group).
Entodon concinnus	SICILY	● (at risk)
Entosthodon fascicularis	LATVIA	● (v. rare)
Entosthodon hungaricus	CZECH REPUBLIC	J. Kučera *pers. comm.* Dec. 2018
Entosthodon hungaricus	SICILY	● (at risk)
Entosthodon muhlenbergii	AUSTRIA	0 (recently refound)
Entosthodon muhlenbergii	CANARY ISLANDS	Should be excluded according to Dirkse & Brugués (2010).
Entosthodon muhlenbergii	CYPRUS	Deleted - very old and probably incorrect records (T. Blockeel *pers. comm.* 2017)
Entosthodon muhlenbergii	IRELAND	RE (CR) - refound in Ireland in 2012, status would now be CR.
Entosthodon pulchellus	CENTRAL RUSSIA	Deleted (M. Brugués *pers. comm.*, endorsed by M. Ignatov *pers. comm.* Dec. 2018)
Entosthodon pulchellus	IRELAND	EN New to Ireland since Red List 2010
Ephemerum cohaerens	EASTERN EUROPE	All these records are either doubtful or very old (Dublin workshop).
Ephemerum crassinervium	MONTENEGRO	VU (one, old data)
Ephemerum crassinervium subsp. *rutheanum*	FRANCE	■ (at risk)
Ephemerum crassinervium subsp. *rutheanum*	ITALY	?■ '*serratum* var. *rutheanum*'
Ephemerum crassinervium subsp. *sessile*	SICILY	■ (at risk)
Ephemerum recurvifolium	MALTA	Schäfer-Verwimp & Verwimp (2019)
Ephemerum recurvifolium	MONTENEGRO	VU (one, old data)
Ephemerum recurvifolium	SICILY	● (at risk)
Ephemerum serratum	LATVIA	3? (Latvian Red List says this species, but it may refer to *E. stoloniferum*)
Ephemerum stoloniferum	CRETE	The specimen reported by Blockeel (2012b) lacked mature spores and was idenfiable only as *E. serratum s.lat*.
Ephemerum stoloniferum	LATVIA	3? (Latvian Red List says *E. serratum*, but it may refer to *E. stoloniferum*)
Ephemerum stoloniferum	MONTENEGRO	VU (one, old data)
Eurhynchiastrum diversifolium	NORTHERN IRELAND	Published status of RE but recently refound.
Eurhynchiastrum pulchellum	MONTENEGRO	Several references, including Papp & Erzberger (2007)
Fabronia ciliaris	FRANCE	No recent records; also uncertain in Hungary, Bulgaria, Romania. Only for sure present in Austria, Switzerland and N. Italy. Maybe all the oak/chestnut woodland records (including Spain) are *F. pusilla* (S/SE expert group).

Taxon	Country	Note
Fissidens asplenioides	GREECE	The report by Düll (1995) was unconfirmed even at the time of publication (cited as *Fissidens* cf. *ligulatus*).
Fissidens bryoides	CYPRUS	Kaufmann & Berg (2014)
Fissidens bryoides var. *bryoides*	CRETE	var. *bryoides* occurs in Crete (Herb. Nieuwkoop)
Fissidens bryoides var. *caespitans*	SICILY	■ (at risk)
Fissidens crassipes subsp. *warnstorfii*	CRETE	Bruggeman-Nannenga (1982)
Fissidens crassipes subsp. *warnstorfii*	MONTENEGRO	Papp & Erzberger (2007)
Fissidens crispus	AUSTRIA	Recently found (Schröck, *pers. comm*. June 2020)
Fissidens crispus	SICILY	● (at risk)
Fissidens exilis	FRANCE	● (at risk)
Fissidens fontanus	CROATIA	Alegro *et al.* (2019)
Fissidens fontanus	SICILY	● (at risk)
Fissidens fontanus	SLOVENIA	● (1 recent record) Andrej Martinčič *pers. comm.* May 2020
Fissidens gracilifolius	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Fissidens gracilifolius	MONTENEGRO	Papp *et al.* (2019)
Fissidens gracilifolius	SICILY	● (at risk)
Fissidens jansenii	FRANCE	V. Hugonnot *pers. comm.* 2018
Fissidens ovatifolius	SICILY	● (at risk)
Fissidens rufulus	SLOVENIA	● (4 recent records) Andrej Martinčič *pers. comm.* May 2020
Fissidens serrulatus	BOSNIA-HERZEGOVINA	Pantović *et al.* (2016)
Fissidens serrulatus	GREECE	The records require confirmation. The localities on Rhodes (Rungby, 1966; Brenan, 1973) are calcareous and unsuitable, and the species has not been refound in spite of careful searches.
Fissidens viridulus	BULGARIA	It is uncertain to which species of the *F. viridulum* complex this record belongs.
Flexitrichum flexicaule	DENMARK	● (should this be *gracile*?)
Flexitrichum flexicaule	ESTONIA	Confirmed for Estonia (Nele Ingerpuu, *pers. comm.*, May 2020)
Flexitrichum flexicaule	FAROE ISLANDS	● (should this be *gracile*?)
Flexitrichum flexicaule	LATVIA	● (*D. gracile* not published from Latvia)
Flexitrichum flexicaule	NETHERLANDS	KW (*gracile*?)
Flexitrichum gracile	ARCTIC RUSSIA	V. Fedosov *pers. comm.* Nov. 2018
Fontinalis antipyretica subsp. *antipyretica*	CRETE	Düll (2014)
Fontinalis dichelymoides	NW RUSSIA	Maksimov *et al.* (2018)
Fontinalis hypnoides	CRETE	All published records all refer to var. *duriaei.*
Fontinalis hypnoides	GREECE	All published records all refer to var. *duriaei.*
Fontinalis squamosa	SLOVENIA	RE (if correctly reported)
Funaria microstoma	MONTENEGRO	VU (one, old data)
Funaria microstoma	SICILY	● (at risk)
Funariella curviseta	FRANCE	● (at risk)
Funariella curviseta	MONTENEGRO	VU (one, old data)
Gigaspermum mouretii	CRETE	There are no published records of this species in Greece outside Crete (T. Blockeel *pers. comm.* Jan. 2019).
Gigaspermum mouretii	SICILY	● (at risk)
Glyphomitrium daviesii	MADIERA	There is no evidence that this plant has been recorded in Madeira.
Grimmia alpestris	FRANCE	V. Hugonnot *pers. comm.* 2018

Taxon	Country	Note
Grimmia anomala	FRANCE	● (at risk)
Grimmia caespiticia	CYPRUS	Kaufmann & Berg (2014)
Grimmia curviseta	ICELAND	Report seems to be an error (Ron Porley *pers. comm.* Oct. 2016), who comments, "Possibly it happened because Maier (2010) synonymised it with *G. orbicularis* - but I'd be surprised if that species occurred in Iceland either. It was largely described on the basis of being without a peristome (although original description says 'or nearly so') and indeed Maier describes *G. orbicularis* as sometimes having a rudimentary peristome - so when does 'nearly so' and 'rudimentary' become the same. Certainly, the gametophyte appears to be identical. However, bottom line is as far as I know *G. curviseta* is only reported from Spain (Canaries) so Manuela is correct. Incidentally, I also checked the World synopsis (Muñoz & Pando) and they only give Spain."
Grimmia decipiens	CYPRUS	Kaufmann & Berg (2014)
Grimmia dissimulata	MADEIRA	Old NGH specimen recently redet. Ron Porley
Grimmia donniana	MONTENEGRO	Cited by Düll *et al.* (1999), but there is no supporting data (Dragićević *pers. comm.* 2020).
Grimmia donniana	SICILY	● (at risk)
Grimmia elatior	SICILY	● (at risk)
Grimmia elongata	CYPRUS	Kaufmann & Berg (2014)
Grimmia hartmanii	LATVIA	● (v. rare)
Grimmia longirostris	SICILY	● (at risk)
Grimmia mollis	FRANCE	● (at risk)
Grimmia montana	SICILY	● (at risk)
Grimmia nutans	PORTUGAL	Record rejected by Muñoz *et al*. (in Brugués & Guerra, 2015)
Grimmia ovalis	LATVIA	● (probably disappeared)
Grimmia ovalis	MONTENEGRO	Papp *et al.* (2010)
Grimmia ramondii	LATVIA	● (v. rare)
Grimmia ramondii	SICILY	● (at risk)
Grimmia tergestina	SICILY	● (at risk)
Grimmia torquata	SICILY	● (at risk)
Gymnobarbula bicolor	SERBIA	Unconfirmed record (M. Sabovljević *pers. comm.* 2016)
Gymnostomum aeruginosum	LATVIA	● (v. rare)
Gymnostomum aeruginosum var. *obscurum*	AUSTRIA	■ (doubtful taxon in Austria)
Gymnostomum calcareum	LATVIA	● (v. rare)
Gymnostomum lanceolatum	AUSTRIA	● (doubtful taxon)
Gymnostomum viridulum	CRIMEA	J. Kučera *pers. comm.* 26.11.2019
Hageniella micans	BELGIUM	Presumed extinct (not seen for a long time)
Hedwigia striata	CORSICA	Hugonnot (2019)
Helodium blandowii	BOSNIA-HERZEGOVINA	Very old records only (M. Sabovljević *pers. comm.* 2017)
Helodium blandowii	FRANCE	● (at risk)
Herzogiella striatella	AZORES	Records from 1960s and 70s, but some doubt expressed: revision of material would be desirable (R. Gabriel, *pers. comm.* Feb. 2017).
Herzogiella striatella	FRANCE	● (at risk)
Herzogiella striatella	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018

Taxon	Country	Note
Heterocladium wulfsbergii	IRELAND	NT (●) - Occurrence of species confirmed - either Least Concern or no information about status.
Heterophyllium nemorosum	FRANCE	Doubtful (V. Hugonnot *pers. comm.* 2018)
Hilpertia velenovskyi	AUSTRIA	Zechmeister *et al.* (2017)
Homalia lusitanica	SICILY	● (at risk)
Homalia trichomanoides	MONTENEGRO	Papp *et al.* (2010)
Homalothecium lutescens var. *fallax*	AUSTRIA	■ (if recognised, the dominant var. in Austria)
Homalothecium meridionale	GREECE	Blockeel (2017)
Hookeria lucens	MONTENEGRO	Alegro *et al.* (2019)
Hydrogonium bolleanum	FRANCE	● (at risk)
Hydrogonium bolleanum	SWITZERLAND	VU (specimen thought to be erroneous by Köckinger but confirmed by Kučera)
Hygroamblystegium humile	LATVIA	● (v. rare)
Hygrohypnella ochracea	ITALY	● (declined - Belen Albertos, 11 February 2014)
Hygrohypnella polaris	FRANCE	● (at risk)
Hygrohypnella polaris	ITALY	● (declined - Belén Albertos, 11 February 2014)
Hygrohypnella polaris	CENTRAL EUROPE	all should be checked: often confused with phenotypes of *H. luridum* (L. Hedenäs *pers. comm.* 2018)
Hygrohypnum luridum	SICILY	● (at risk)
Hylocomium splendens	SICILY	● (at risk)
Hymenoloma compactum	SLOVENIA	● (1 recent record) Andrej Martinčič *pers. comm.* May 2020
Hymenoloma crispulum	CYPRUS	The only record (Koppe, 1976) at 1300 m altitude is doubtful.
Hymenoloma crispulum	CRETE	The only report (Düll, 1995, 2014) is improbable, being based on a collection gowing as an epiphyte on Cupressus at 1250 m.
Hymenoloma crispulum	SICILY	● (at risk)
Hymenoloma mulahaceni	ICELAND	Old record only
Hymenoloma mulahaceni	SPAIN	● (not been evaluated but only one locality and clearly CR - Belén Albertos 11 February 2014)
Hymenoloma mulahaceni	SWITZERLAND	Old record only
Hymenostylium recurvirostrum var. *insigne*	FRANCE	V. Hugonnot *pers. comm.* Jan. 2019
Hymenostylium xerophilum	CRIMEA	V. Fedosov. *pers. comm.* Nov. 2018, but later redetermined by him as *Gymnostomum viridulum* (J. Kučera *pers. comm.* 26.11.2019).
Hypnum andoi	KALININGRAD	Reported as *mamillatum* by Klinggraeff (1893), (M. Ignatov *pers. comm.*, May 2020).
Hypnum andoi	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Hypnum cupressiforme var. *filiforme*	AUSTRIA	■ (taxon probably without any value)
Hypnum cupressiforme var. *subjulaceum*	MONTENEGRO	Papp & Erzberger (2010)
Hypnum jutlandicum	LATVIA	● (v. rare)
Hypnum jutlandicum	SICILY	● (at risk)
Hypnum resupinatum	CYPRUS	Puglisi & Privitera (2018)
Hypnum uncinulatum	FRANCE	● (at risk)
Hypopterygium tamarisci	FRANCE	Deleted (V. Hugonnot *pers. comm.* Jan. 2019)
Hypopterygium tamarisci	IRELAND	● LC, if the same as *immigrans.* In a greenhouse, so dubious in list.
Imbribryum alpinum	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Imbribryum subapiculatum	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Imbribryum subapiculatum	SICILY	● (at risk)
Imbribryum tenuisetum	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Imbribryum tenuisetum	SICILY	● (at risk)

Taxon	Country	Note
Isopterygiopsis pulchella	LATVIA	● (v. rare)
Isopterygiopsis pulchella	SICILY	● (at risk)
Jochenia pallescens	AUSTRIA	● (should be divided into 2 spp.)
Jochenia pallescens	FRANCE	● (at risk)
Jochenia pallescens	GREECE	There is only one record (Ganiatsas, 1937), which is unconfirmed. No voucher apparently exists.
Jochenia protuberans	AUSTRIA	This was published as *Hypnum pallescens* var. *pallescens* at a time when it was thought that the type specimen was not identical to var. *reptile* (also published e.g. for Germany, Czech Republic) (Christian Schröck *pers. comm*. June 2020)
Kiaeria blyttii	LATVIA	● (v. rare)
Leptodontium flexifolium	FRANCE	● (at risk)
Leptodontium flexifolium	MADEIRA	Deleted (Sim-Sim *et al.,* 2014)
Leptodontium flexifolium	ROMANIA	All central and eastern European records of this species are doubtful (Christian Schröck *pers. comm.* March 2017)
Leptodontium flexifolium	SWITZERLAND	All records refer to *L. styriacum* (Norbert Schnyder *pers. comm*., March 2017)
Lescuraea radicosa	SICILY	● (at risk)
Lescuraea saxicola	SICILY	● (at risk)
Leskea polycarpa	CRETE	The record is an error (Düll, 2014)
Leucobryum juniperoideum	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Leucodon canariensis	AZORES	Uncertain: could be *L. treseasei* (Hedenäs, 1992)
Leucodon flagellaris	GREECE	Sole voucher (from Corfu) examined by Tom Blockeel, who comments, "The material is an immature growth of a *Leucodon* (mostly consisting of slender primary stems) and it is not identifiable with certainty; but there is nothing to justify the identification as *L. flagellaris* and it is surely *L. sciuroides*." (T. Blockeel *pers. comm.* June 2018)
Leucodon immersus	GREECE	There is only one report from Greece (from Chalkidiki Peninsula); Tom Blockeel, who comments, "...unsubstantiated by a voucher specimen, which was destroyed in Berlin in WW2; the published account (Reimers, 1957) was written in retrospect and from memory. I have searched unsuccessfully at the reported locality. I think the record should be rejected." (T. Blockeel *pers. comm.* June 2018)
Leucodon treleasei	AZORES	Presence previously considered uncertain (Hedenäs, 1992) but Gonzáles-Mancebo *et al.* (2009) seem to be confident it is present.
Lewinskya breviseta	GREECE	Blockeel (2018b)
Lewisnkya laevigata	CAUCASUS	Dubious (Fedosov, 2018)
Lewisnkya laevigata	CORSICA	Hugonnot (2019)
Lewisnkya laevigata	SPAIN	Lara & Garilleti (*pers. comm*. 2018)
Lewisnkya laevigata	RUSSIA	Lara & Garilleti (*pers. comm*. 2018); Caucasus confirmed (V. Fedosov *pers. comm.* 2018)
Lewisnkya rupestris	NE RUSSIA	Lara & Garilleti (*pers. comm*. 2018)
Lewinskya shawii	BALEARIC ISLANDS	Lara & Garilleti (*pers. comm*. 2018)
Lewinskya shawii	POLAND	Lara & Garilleti (*pers. comm*. 2018)
Lewinskya shawii	BOSNIA-HERZEGOVINA	Lara & Garilleti (*pers. comm*. 2018)
Lewinskya shawii	HUNGARY	Lara & Garilleti (*pers. comm*. 2018)
Lewinskya shawii	MONTENEGRO	Papp *et al.* (2019)

Taxon	Country	Note
Lewinskya sordida	SVALBARD	All specimens from Kola Peninsula, previously referred to *L. sordida*, are *L. pylaisii* according to their ITS sequences, so there are doubts about its occurrence in Svalbard (V. Fedosov *pers. comm.* Nov. 2018). Dale Vitt has examined specimens from Svalbard, and all are *L. pylaisii* (M. Lüth *pers. comm.* Jan. 2019).
Lewisnkya speciosa	MIDDLE & SOUTH URALS	Some doubts however (Fedosov, 2018)
Lewisnkya speciosa	SE RUSSIA	Some doubts however (Fedosov, 2018)
Lewinskya speciosa	SVALBARD	Deleted (Fedosov *pers. comm.* Nov. 2018)
Loeskeobryum brevirostre	GREECE	Only reported by Juratzka (1861) from the island of Kythera. The record is not credible on phtyogeographic grounds and is clearly an error.
Meesia hexasticha	LATVIA	● (probably disappeared)
Meesia longiseta	FRANCE	No recent record
Meesia longiseta	GREECE	Only reported by Mazziari (1851) from the Ionian islands. The record is not credible on phtyogeographic grounds and is clearly an error.
Meesia longiseta	SLOVENIA	RE (if correctly reported)
Meesia triquetra	BULGARIA	Probably gone from Bulgaria (Hájková *et al.*, 2007)
Meesia triquetra	GREECE	There is only one record (Ganiatsas, 1937), which is unconfirmed and improbable (the site, now destroyed, was at low altitude, near sea-level). No voucher apparently exists.
Meesia triquetra	IRELAND	RE in published Red List, but refound recently at a single locality.
Meesia triquetra	ROMANIA	"*Meesia triquetra* was reported from 19 localities of Romania, but no more records in the last 50 years" (Sorin Ştefănuţ *pers. comm.* 2017).
Meesia uliginosa	LATVIA	More records in the last 50 years
Meesia uliginosa	MONTENEGRO	VU (two, old)
Microbryum curvicollum	CAUCASUS	V. Fedosov. *pers. comm.* Nov. 2018
Microbryum davallianum	LATVIA	● (probably disappeared)
Microbryum floerkanum	AUSTRIA	Was RE but recently refound (C. Schrock pers.comm. 2017)
Microbryum floerkanum	SWITZERLAND	But no records since 1909
Microbryum starckeanum	AUSTRIA	0 (recently refound)
Microbryum starckeanum	CAUCASUS	V. Fedosov. *pers. comm.* Nov. 2018
Microhypnum sauteri	KOSOVO	present (M. Sabovljević *pers. comm.* 2017)
Micromitrium tenerum	MONTENEGRO	Delete. A literature record was given in Dragićević & Veljić (2006), but now considered unsafe (Dragićević *pers. comm.* May 2020).
Mielichhoferia elongata	FRANCE	No recent observations
Mielichhoferia elongata	SICILY	● (at risk)
Mielichhoferia mielichhoferiana	SICILY	● (at risk)
Mnium lycopodioides	GREECE	Recently confirmed by Blockeel (2018b)
Mnium lycopodioides	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Mnium marginatum var. *marginatum*	GREECE	var. *marginatum* occurs in Greece (Herb. Blockeel)
Mnium stellare	SICILY	● (at risk)
Molendoa hornschuchiana	CZECH REPUBLIC	Records based on errors (Kučera & Váňa, 2003)
Molendoa hornschuchiana	MONTENEGRO	CR (one, old data)
Molendoa taeniatifolia	SWITZERLAND	New locality discovered (N. Schnyder *pers. comm.* 2017)

Taxon	Country	Note
Myurella julacea	ALBANIA	● (1960, no voucher)
Myurella sibirica	GREECE	Papp & Tsakiri (2017)
Myurella tenerrima	FRANCE	● (at risk)
Neckera pennata	GREECE	Recorded from Cephalonia but confusion with *N. cephalonica* is likely. An old record from the island of Kos (de Stefani *et al*., 1895) is not credible on pyhtogeographic grounds and is clearly an error.
Nogopterium gracile	ESTONIA	Deleted (Vellak *et al*., 2015)
Nyholmiella gymnostoma	MONTENEGRO	Alegro *et al*. (2019)
Nyholmiella gymnostoma	SPAIN	Cezón & Muñoz (2013)
Nyholmiella obtusifolia	MONTENEGRO	Papp *et al*. (2019)
Nyholmiella obtusifolia	SICILY	● (at risk)
Oncophorus demetrii	ARCTIC RUSSIA	V. Fedosov. *pers. comm.* Nov. 2018
Oncophorus demetrii	FINLAND	Juutinen *et al*. (2018)
Oncophorus elongatus	FRANCE	V. Hugonnot *pers. comm.* Jan. 2019.
Oncophorus elongatus	RUSSIA	V. Fedosov. *pers. comm.* Nov. 2018
Oncophorus wahlenbergii	LATVIA	● (v. rare)
Oreas martiana	FRANCE	Deleted (V. Hugonnot *pers. comm.* Jan. 2019). The locality is in Switzerland.
Oreas martiana	SLOVAKIA	Newly recorded. CR suggested.
Orthodontium gracile	FRANCE	Last seen in 1963 (S. LeBlond via N. Bell, *pers. comm.* Nov.2018)
Orthodontium lineare	SWITZERLAND	● (not yet found in Ch); found in March 2020 (Ariel Bergamini *pers. comm.* 18.3.20)
Orthodontium pellucens	FRANCE	● (at risk)
Ortholimnobium handelii	ROMANIA	Old herbarium specimen only, so current status unknown (Christian Schröck *pers. comm.* 2017)
Orthothecium intricatum	SICILY	● (at risk)
Orthotrichum alpestre	CANARY ISLANDS	Not present (Lara & Garilleti *pers. comm.* 2018)
Orthotrichum alpestre	SICILY	● (at risk)
Orthotrichum anomalum	CANARY ISLANDS	Not confirmed for the archipelago (Lara & Garilleti *pers. comm.* 2018)
Orthotrichum columbicum	CORSICA	No voucher, probably an error (Lara & Garilleti *pers. comm.* 2018)
Orthotrichum comosum	MADEIRA	Lara & Garilleti (*pers. comm*. 2018)
Orthotrichum cupulatum	NORWAY	Varieties added (Lara & Garilleti *pers. comm.* 2018)
Orthotrichum cupulatum var. *riparium*	BELGIUM	Lara & Garilleti (*pers. comm.* 2018)
Orthotrichum cupulatum var. *riparium*	NETHERLANDS	Lara & Garilleti (*pers. comm*. 2018)
Orthotrichum cupulatum var. *riparium*	KALININGRAD	Lara & Garilleti (*pers. comm.* 2018)
Orthotrichum microcarpum	AUSTRIA	Recently found (Schröck, *pers. comm*. June 2020)
Orthotrichum microcarpum	FRANCE	Dubious (Lara & Garilleti *pers. comm.* 2018); deleted (V. Hugonnot *pers. comm.* Jan. 2018).
Orthotrichum pallens	NW RUSSIA	Deleted (Lara & Garilleti *pers. comm.* 2018) then reinstated by Fedosov & Doroshina (2018), supported by M. Ignatov *pers. comm.* Dec. 2018).
Orthotrichum pallens	SICILY	● (at risk)
Orthotrichum pallens	SVALBARD	According to recent molecular-phylogenetic results (Fedosov *et al*., 2017), Arctic specimens in fact represent other species (*O. sibiricum* and *O. hyperboreum*), so the identity of specimens from Svalbard needs further study (V. Fedosov *pers. comm.* Nov. 2018).

Taxon	Country	Note
Orthotrichum patens	CANARY ISLANDS	Deleted (Lara & Garilleti *pers. comm.* 2018)
Orthotrichum patens	SARDINIA	Dubious (Lara & Garilleti *pers. comm.* 2018)
Orthotrichum patens	RUSSIA	Dubious in regions shown with a '?' (Lara & Garilleti *pers. comm.* 2018)
Orthotrichum pellucidum	NORWAY	No record known outside Svalbard (Lara & Garilleti *pers. comm.* 2018)
Orthotrichum pellucidum	ARCTIC RUSSIA	Reported from Franz Josef Land but regarded as dubious by Lara & Garilleti (*pers. comm.* 2018)
Orthotrichum pellucidum	CAUCASUS	Excluded by Fedosov & Doroshina (2018)
Orthotrichum pellucidum	SUB-POLAR RUSSIA & N URALS	Some doubts however (Fedosov, 2018)
Orthotrichum philibertii	CROATIA	Alegro *et al.* (2019)
Orthotrichum pulchellum	BOSNIA-HERZEGOVINA	Lara & Garilleti (*pers. comm.* 2018)
Orthotrichum pulchellum	CRETE	Düll record, but specimen missing, so must remain doubtful (Blockeel, 2015).
Orthotrichum pulchellum	SICILY	● (at risk)
Orthotricum pumilum	CANARY ISLANDS	Probably erroneous and corresponding to *O. schimperi* (Lara & Garilleti *pers. comm.* 2018)
Orthotrichum rivulare	ROMANIA	Not seen since before 1900 (Sorin Ştefănuţ *pers. comm.* March 2017)
Orthotrichum rivulare	SWITZERLAND	Erroneously recorded
Orthotrichum scanicum	AUSTRIA	0 (recently refound)
Orthotrichum scanicum	SICILY	● (at risk)
Orthotrichum schimperi	AUSTRIA	NE (but not hitherto recognised as a taxon)
Orthotrichum schimperi	CANARY ISLANDS	Lara & Garilleti (*pers. comm.* 2018)
Orthotrichum schimperi	CZECH REPUBLIC	J. Kučera *pers. comm.* Dec. 2018
Orthotrichum schimperi	FINLAND	● (but not separated from *O. pumilum*)
Orthotrichum schimperi	GERMANY	Lara & Garilleti (*pers. comm.* 2018)
Orthotrichum schimperi	MONTENEGRO	Previosuly synonymised with *O. pumilum* (Dragićević *pers. comm.* May 2020).
Orthotrichum schimperi	POLAND	Lara & Garilleti (*pers. comm.* 2018)
Orthotrichum schimperi	HUNGARY	Lara & Garilleti (*pers. comm.* 2018)
Orthotrichum stellatum	CAUCASUS	V. Fedosov *pers. comm.* Nov. 2018
Orthotrichum stramineum	CYPRUS	The only record (Juratzka, 1865) has never been confirmed and is doubtful.
Orthotrichum tenellum	SWEDEN	Recently rediscovered (T. Hallingbäck *pers. comm.* July 2017)
Orthotrichum urnigerum	PORTUGAL	Deleted (Lara & Garilleti *pers. comm.* 2018)
Orthotrichum urnigerum	SPAIN	Deleted (Lara & Garilleti *pers. comm.* 2018)
Orthotrichum vittii	CAUCASUS	Deleted (Lara & Garilleti *pers. comm.* 2018)
Oxyrrhynchium speciosum	FINLAND	Juutinen *et al.* (2018)
Oxyrrhynchium speciosum	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Paludella squarrosa	MONTENEGRO	Record from 1913, but considered questionable by Dragićević & Veljić (2006)
Palustriella falcata	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Paraleucobryum sauteri	NORWAY	● (Kristian Hassel, July 2016 - the only good locality in Norway)
Pelekium minutulum	AUSTRIA	DD (doubtfully recorded)
Philonotis caespitosa	SICILY	● (at risk)
Philonotis rigida	FRANCE	● (at risk)
Physcomitrium eurystomum	MONTENEGRO	Stešević *et al.* (2020)

Taxon	Country	Note
Physcomitrium sphaericum	SERBIA	? (identification was probably wrong - Marko Sabovljević, *pers. comm.*, Sept. 2016)
Physcomitrium sphaericum	SLOVAKIA	Kubinská *et al.* (2001)
Plagiomnium elatum	SICILY	● (at risk)
Plagiomnium medium	SICILY	● (at risk)
Plagiopus oederianus var. *alpinus*	AUSTRIA	■ (dubious taxon)
Plagiothecium berggrenianum	NW RUSSIA	Ignatova *et al.* (2019)
Plagiothecium cavifolium	SICILY	● (at risk)
Plagiothecium latebricola	SWITZERLAND	(erroneously recorded)
Plagiothecium neckeroideum	ITALY	One very old record that is probably an error (Christian Schröck *pers. comm.* 2017)
Plagiothecium neckeroideum	ROMANIA	Doubtful; an old record is an error, a recent one unconfirmed; in published Red List as EN but should be DD (Sorin Ştefănuţ *pers. comm.* 2017)
Plagiothecium platyphyllum	PORTUGAL	Guerra (2018)
Plagiothecium svalbardense	S URALS, NE & NW RUSSIA	Ignatova *et al.* (2019)
Plagiothecium undulatum	MONTENEGRO	Alegro *et al.* (2019)
Plagiothecium undulatum	SICILY	● (at risk)
Platyhypnum norvegicum	RUSSIA - N URALS	Deleted: specimens revised to other spp. (O. Afonina *pers. comm.* 2017)
Platyhypnum norvegicum	SWITZERLAND	Very old records only (probably also applies to Bulgaria and Poland)
Plenogemma phyllantha	SPAIN	Recently rediscovered (Caparrós *et al.*, 2014)
Pogonatum aloides	LATVIA	● (v. rare)
Pogonatum dentatum	LATVIA	● (v. rare)
Pogonatum nanum	LATVIA	● (v. rare)
Pohlia andalusica	FRANCE	● (at risk)
Pohlia andalusica	GREECE	Papp & Tsakiri (2017); Blockeel (2018a)
Pohlia annotina	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Pohlia camptotrachela	ESTONIA	Deleted (Vellak *et al.*, 2015)
Pohlia camptotrachela	LATVIA	● (v. rare)
Pohlia drummondii	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Pohlia elongata	SICILY	● (at risk)
Pohlia elongata var. *acuminata*	AUSTRIA	■ (but not recognised as valid taxon)
Pohlia elongata var. *acuminata*	MONTENEGRO	See Ros *et al.* (2013)
Pohlia filum	LATVIA	● (probably disappeared)
Pohlia lescuriana	LATVIA	● (probably disappeared)
Pohlia longicolla	GREECE	Only reported by Bory (1832) from the Peloponnese. The record is improbable on phytogeographic grounds and is surely an error.
Pohlia lutescens	SICILY	● (at risk)
Pohlia melanodon	LATVIA	● (probably disappeared)
Pohlia nutans subsp. *nutans*	GREECE	subsp. *nutans* occurs in Greece (Herb. Blockeel)
Pohlia proligera	SICILY	● (at risk)
Pohlia sphagnicola	SLOVENIA	● (1 recent record) Andrej Martinčič *pers. comm.* May 2020
Pohlia vexans	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Pohlia wahlenbergii var. *wahlenbergii*	CRETE	var. *wahlenbergii* is documented for Crete by Düll (1979)
Polytrichastrum septentrionale	FINLAND	N. Bell. *pers. comm.* Nov. 2018
Polytrichastrum septentrionale	SWITZERLAND	One old record, 1929 (N. Schnyder *pers. comm.* Nov. 2018)

Taxon	Country	Note
Polytrichastrum sexangulare	GREECE	The record in Lüth (2003) is an error (Lüth, *pers. comm.*). The paper by Gams (1960) cited by Düll (1995) actually refers to the absence, not the presence, of *P. sexangulare* ("*P. norvegicum*") on Mt Olympus.
Polytrichastrum sexangulare	MONTENEGRO	Published in Lakušić (1966), but considered doubtful (Dragićević *pers. comm.* May 2020).
Polytrichum densifolium	RUSSIA *etc.*	Distribution in Russia and Eastern Europe not known in detail since Ivanova *et al.* (2015).
Polytrichum formosum	FINLAND	Distribution in Russia and Eastern Europe not known in detail since Ivanova *et al.* (2015).
Polytrichum formosum	RUSSIA *etc.*	Distribution in Russia and Eastern Europe not known in detail since Ivanova *et al.* (2015).
Polytrichum longisetum	GREECE	The only record (Taylor, 1952) is an error. The voucher specimen (BM) is *P. formosum*, rev. T.L. Blockeel.
Polytrichum longisetum	SICILY	● (at risk)
Polytrichum perigoniale	SICILY	● (at risk)
Polytrichum strictum	GREECE	The report in Gams (1960) cited by Düll (1995) actually refers to *P. juniperinum*. There is no reference to *P. strictum* in Gams' paper. There are no other reports.
Polytrichum strictum	SICILY	● (at risk)
Polytrichum swartzii	LATVIA	● (v. rare)
Pseudoamblystegium subtile	ALBANIA	● (old, no voucher)
Pseudoamblystegium subtile	SICILY	● (at risk)
Pseudocrossidium obtusulum	FRANCE	V. Hugonnot *pers. comm.* Jan. 2019
Pseudohygrohypnum eugyrium	FRANCE	● (at risk)
Pseudohygrohypnum eugyrium	GREECE	The only report is by Athanasiadis (1975) and was based on subfossil material, and in any case the identification was inconclusive.
Pseudohygrohypnum subeugyrium	GREAT BRITAIN	Blockeel *et al.* (2019)
Pseudoleskeella nervosa	SICILY	● (at risk)
Pseudoleskeella rupestris	ARCTIC RUSSIA	Fedosov *et al.* (2018)
Pseudoleskeella rupestris	GREECE	Papp & Tsakiri (2017)
Pseudomalia webbiana	CRETE	Rejected (T. Blockeel *pers. comm.* Dec. 2018)
Pseudomalia webbiana	GREECE	Rejected (T. Blockeel *pers. comm.* Dec. 2018)
Pseudomalia webbiana	MONTENEGRO, ROMANIA, UKRAINE	Reports of this species from E. Europe are surely doubtful (T. Blockeel *pers. comm.* Nov.2018); Dragićević (*pers. comm.* May 2020) suggests deleting the record from Montenegro completely.
Pseudohygrohypnum fertile	GREECE	There is only one record (Taylor, 1952), which is unconfirmed. No voucher has been found in the herbarium at BM.
Pseudotaxiphyllum elegans	SICILY	● (at risk)
Pterygoneurum kozlovii	CZECH REPUBLIC	Kučera *et al.* (2017)
Pterygoneurum lamellatum	GREECE	The report by Düll (1995) was unconfirmed even at the time of publication (cited as '*Pterygoneurum cf. lamellatum*').
Pterygoneurum ovatum	LATVIA	● (v. rare)
Pterygoneurum sampaianum	CRETE	Urmi (2017b)
Pterygoneurum subsessile	FRANCE	V. Hugonnot *pers. comm.* Jan. 2019.
Ptilium crista-castrensis	GREECE	Only reported by Juratzka (1861) from the Ionian islands. The record is not credible on phtyogeographic grounds and is clearly an error.
Ptychomitrium nigrescens	SICILY	● (at risk)

Taxon	Country	Note
Ptychostomum cellulare	NORTH MACEDONIA	Erroneously recorded due to synonymisation (M. Sabovljević *pers. comm*. 2017.
Ptychostomum cellulare	MADEIRA	Deleted (M. Sim-Sim *pers. comm.* Nov. 2018)
Ptychostomum cellulare	SICILY	● (at risk)
Ptychostomum cernuum	SLOVENIA	● (7 recent records; 6 recent; LC) Andrej Martinčič *pers. comm.* May 2020
Ptychostomum compactum	ALBANIA	● (old, no voucher)
Ptychostomum creberrimum	SICILY	NT (doubtful report)
Ptychostomum cyclophyllum	PORTUGAL	Error (D. Holyoak *pers. comm.* Dec. 2018)
Ptychostomum donianum	SWITZERLAND	DD (erroneously recorded)
Ptychostomum elegans	ARCTIC RUSSIA	V. Fedosov *pers. comm.* Nov. 2018
Ptychostomum elegans	BULGARIA	VU (as *B. stirtonii*)
Ptychostomum elegans	CRETE	The record by Laflin (1973) is doubful. The specimem was collected at low altitude and had sporophytes.
Ptychostomum elegans	SICILY	● (at risk)
Ptychostomum funkii	GREECE	There has been nomenclatural confusion with *B. kunzei*, and the records require confirmation.
Ptychostomum funkii	CRETE	There has been nomenclatural confusion with *B. kunzei*, and the records require confirmation.
Ptychostomum funkii	MADEIRA	Deleted (M. Sim-Sim *pers. comm.* Nov. 2018)
Ptychostomum funkii	SICILY	● (at risk)
Ptychostomum inclinatum	GREECE	Only reported by Grisebach (1841) and not certainly within Greek territory.
Ptychostomum intermedium	CRETE	The records in Schiffner (1915) and Taylor (1952) require confirmation (Düll 1995).
Ptychostomum intermedium	FINLAND	● ('subsp. *nitidulum*' regarded as EN)
Ptychostomum intermedium	GREECE	All records from Greece are old and unverified (T. Blockeel *pers. comm.*, 2017). The records in Schiffner (1915) and Taylor (1952) require confirmation (Düll 1995).
Ptychostomum intermedium	SICILY	● (at risk)
Ptychostomum knowltonii	SVALBARD	Tomas Hallingback *pers. comm.* 2017
Ptychostomum knowltonii	SWITZERLAND	Excluded since Red List (2004); the only record was erroneous (Norbert Schnyder *pers. comm.* 14.5.18)
Ptychostomum kunzei	AUSTRIA	● (doubtful taxon, although type from Austria)
Ptychostomum kunzei	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Ptychostomum minii	GREECE	Reported by Biel & Tan (2014) but the voucher material is ambiguous (T. Blockeel *pers. comm.* Jan. 2019)
Ptychostomum minii	ITALY	Deleted (Tom Blockeel could not find the reference, and neither could NGH, Oct. 2017)
Ptychostomum pallens	ALBANIA	● (old, no voucher)
Ptychostomum pallens	SICILY	● (at risk)
Ptychostomum pseudotriquetrum var. *bimum*	CRETE	Düll & Düll-Hermanns (1973); Düll (2014)
Ptychostomum pseudotriquetrum var. *pseudotriquetrum*	GREECE	var. *pseudotriquetrum* is documented for Greece (Papp *et al*., 2011)
Ptrychostomum rubens	MONTENEGRO	Papp *et al.* (2010)
Ptychostomum schleicheri	SICILY	● (at risk)
Ptychostomum torquescens	SLOVENIA	(4 records; 2 recent) Andrej Martinčič *pers. comm.* May 2020
Ptychostomum turbinatum	LATVIA	● (probably disappeared)
Ptychostomum warneum	LATVIA	● (probably disappeared)

Taxon	Country	Note
Ptychostomum zieri	CYPRUS	The only record (Koppe, 1976) ia at very low altitude (150 m) and is doubtful
Ptychostomum zieri	GREECE	Papp & Tsakiri (2017); Blockeel (2018a)
Pyramidula tetragona	SICILY	● (at risk)
Racomitrium affine	CYPRUS	Kaufmann & Berg (2014)
Racomitrium affine	SICILY	● (at risk)
Racomitrium elongatum	SLOVAKIA	Newly recorded. NT suggested.
Racomitrium ericoides	BULGARIA	All specimens are *R. elongata*
Racomitrium ericoides	SICILY	● (at risk)
Racomitrium fasciculare	KOSOVO	And deleted from Serbia *s.s.* (Marko Sabovljević, *pers. comm.* 2017)
Racomitrium microcarpon	FRANCE	● (at risk)
Racomitrium nivale	AUSTRIA	● validly combined in *Racomitrium* in Köckinger *et al*. (2008) as *Racomitrium nivale* (Köckinger, Bednarek-Ochyra & Ochyra) Köckinger
Racomitrium obtusum	FRANCE	● (at risk)
Racomitrium sudeticum	SICILY	● (at risk)
Rhabdoweisia crispata	CROATIA	Alegro *et al.* (2019)
Rhabdoweisia crispata	LATVIA	● (v. rare)
Rhabdoweisia fugax	LATVIA	● (v. rare)
Rhabdoweisia fugax	SICILY	● (at risk)
Rhodobryum ontariense	LATVIA	● (v. rare)
Rhynchostegium alopecuroides	ALBANIA	● (1960, no voucher)
Rhynchostegium confertum	CYPRUS	Kaufmann & Berg (2014)
Rhynchostegium murale	CRETE	The sole record (Medelius, 1927) is considered doubtful by Düll (2014).
Rhynchostegium murale	FINLAND	Juutinen *et al.* (2016)
Rhynchostegium rotundifolium	CZECH REPUBLIC	But recenty found to be common in urban sites.
Rhynchostegium rotundifolium	GERMANY	But recenty found to be common in urban sites.
Rhynchostegium strongylense	SICILY	● (at risk)
Rhytidiadelphus squarrosus	SICILY	● (at risk)
Sanionia nivalis	ARCTIC RUSSIA	Fedosov *et al.* (2018)
Sanionia orthothecioides	ARCTIC RUSSIA	Fedosov *et al.* (2018)
Sanionia uncinata	SICILY	● (at risk)
Sarmentypnum exannulatum	SICILY	● (at risk)
Sarmentypnum sarmentosum	BELGIUM	RE (Sotiaux & Vanderpoorten, 2001)
Sarmentypnum sarmentosum	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Sarmentypnum trichophyllum	AUSTRIA	DD (doubtful for Austria)
Sarmentypnum trichophyllum	LATVIA	● (v. rare)
Sarmentypnum tundrae	LATVIA	● (v. rare)
Schistidium agassizii	FRANCE	● (at risk)
Schistidium apocarpum	CORSICA	●*s.l.*
Schistidium atrofuscum	FAROE ISLANDS	? *s.l.*
Schistidium atrofuscum	SLOVENIA	(4 recent records) Andrej Martinčič *pers. comm.* May 2020
Schistidium brunnescens subsp. *brunnescens*	GREECE	subsp. *brunnescens* is documented for Greece by Blom (1996)
Schistidium brunnescens subsp. *brunnescens*	SLOVENIA	(2 recent records) Andrej Martinčič *pers. comm.* May 2020.
Schistidium brunnescens subsp. *griseum*	NORWAY	H. Blom *pers. comm.* Dec. 2018
Schistidium brunnescens subsp. *griseum*	SLOVENIA	(2 recent records) Andrej Martinčič *pers. comm.* May 2020
Schistidium bryhnii	ROMANIA	90% sure this is incorrect - probably *S. pruinosum* (H. Blom *pers. comm.* 2017)

Taxon	Country	Note
Schistidium confertum	GREECE	There are many confirmed reports (Blockeel, 2010; Blockeel, 2018a; Papp *et al*., 2011; Papp & Tsakiri, 2017)
Schistidium confertum	SICILY	● (at risk)
Schistidium confusum	FRANCE	S. Caspari, *pers. comm.* Dec. 2019
Schistidium dupretii	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Schistidium echinatum	FRANCE	V. Hugonnot *pers. comm.* Jan. 2019
Schistidium elegantulum subsp. *elegantulum*	MONTENEGRO	Papp *et al.* (2008)
Schistidium elegantulum subsp. *wilsonii*	MONTENEGRO	Papp *et al.* (2008)
Schistidium flaccidum	SICILY	● (at risk)
Schistidium grande	SLOVAKIA	H. Blom *pers. comm.* Dec. 2018
Schistidium helveticum	SLOVENIA	(2 recent records) Andrej Martinčič *pers. comm.* May 2020
Schistidium lancifolium	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari) Dec. 2018
Schistidium lancifolium	SLOVENIA	(8 recent records) Andrej Martinčič *pers. comm.* May 2020
Schistidium marginale	FRANCE	V. Hugonnot *pers. comm.* Jan. 2019
Schistidium maritimum	FRANCE	● (at risk)
Schistidium obscurum	SWITZERLAND	● (not yet recorded in Ch)
Schistidium papillosum	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari) Dec. 2018
Schistidium papillosum	SLOVENIA	(8 recent records) Andrej Martinčič *pers. comm.* May 2020
Schistidium platyphyllum	SICILY	● (at risk)
Schistidium pruinosum	SLOVENIA	(1 recent record) Andrej Martinčič *pers. comm.* May 2020
Schistidium pulchrum	FRANCE	V. Hugonnot *pers. comm.* Jan. 2019
Schistidium pulchrum	SPAIN	Exclude (H. Blom *pers. comm.* Dec. 2018)
Schistidium rivulare	GREECE	Papp *et al.* (2011)
Schistidium rivulare	SICILY	● (at risk, if correctly recorded)
Schistidium sordidum	SLOVENIA	(1 recent record) Andrej Martinčič *pers. comm.* May 2020
Schistidium strictum	SLOVENIA	(12 records, before 1950) Andrej Martinčič *pers. comm.* May 2020
Schistidium strictum	UKRAINE	Excluded by Boiko (2014).
Schistidium subflaccidum	ITALY	H. Blom *pers. comm.* Dec. 2018
Schistidium subflaccidum	KOSOVO	H. Blom *pers. comm.* Dec. 2018
Schistidium subflaccidum	NORWAY	H. Blom *pers. comm.* Dec. 2018
Schistidium subflaccidum	SPAIN	H. Blom *pers. comm.* Dec. 2018
Schistidium tenerum	SLOVAKIA	Almost certainly an error resulting from nomencaltural confusion (H. Blom, *pers. comm.* 2017).
Schistidium trichodon	MONTENEGRO	Dubious (Dragićević *pers. comm.* May 2020)
Schistidium trichodon var. *trichodon*	CROATIA	Alegro *et al*. (2019)
Schistidium trichodon var. *trichodon*	SLOVENIA	(7 recent records) Andrej Martinčič *pers. comm.* May 2020
Sciuro-hypnum curtum	BULGARIA	Deleted by Natcheva March 2014
Sciuro-hypnum curtum	FRANCE	● (at risk)
Sciuro-hypnum curtum	GREECE	Only reported by Bory (1832) from the Peloponnese. The record is improbable on phtyogeographic grounds and is surely an error.
Sciuro-hypnum curtum	MONTENEGRO	Reported by Martinčič (2006) (as *S. oedipodium*); presumably refers to *S. curtum* but needs confirmation.
Sciuro-hypnum dovrense	FRANCE	V. Hugonnot *pers. comm.* Jan. 2019

Taxon	Country	Note
Sciuro-hypnum dovrense	SWITZERLAND	? (not yet recorded in Ch)
Sciuro-hypnum flotowianum	SICILY	● (at risk)
Sciuro-hypnum ornellanum	FRANCE	● (at risk)
Sciuro-hypnum ornellanum	GREECE	Only published in the checklist of Sabovljević *et al*. (2008) with no suppoorting information.
Sciuro-hypnum ornellanum	CRETE	Only published in the checklist of Sabovljević *et al*. (2008) with no suppoorting information.
Sciuro-hypnum reflexum	GREECE	Reported by Orgaz *et al.* (2011) on basis of a specimen originally identified as *S. tromsoeense.*
Sciuro-hypnum reflexum	SICILY	● (at risk)
Sciuro-hypnum starkei	LATVIA	● (v. rare)
Sciuro-hypnum starkei	SICILY	● (at risk)
Sciuro-hypnum tromsoeense	GREECE	See *S. reflexum*
Sciuro-hypnum tromsoeense	NW RUSSIA	● Kola Peninsula; probably also in N. Urals but not yet found (M. Ignatov *pers. comm.* 2017)
Scleropodium cespitans	CYPRUS	Kaufmann & Berg (2014)
Scleropodium cespitans	CRETE	Lüth & Frahm (2008)
Scleropodium cespitans	GREECE	Blockeel & Nieuwkoop (2016)
Scleropodium cespitans	SICILY	● (at risk)
Scleropodium touretii	AUSTRIA	0 (very doubtful old report)
Scorpiurium deflexifolium	SICILY	● (at risk)
Scorpiurium sendtneri	SICILY	● (at risk)
Seligeria calcarea	FINLAND	Refound recently (Juutinen *et al.,* 2018)
Seligeria donniana	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Seligeria pusilla	FINLAND	Refound recently (Juutinen *et al.,* 2018)
Seligeria pusilla	GREECE	Papp & Tsakiri (2017)
Seligeria pusilla	LATVIA	● (v. rare)
Seligeria trifaria	ALBANIA	var. *longifolia* (Marka *et al.,* 2018)
Seligeria trifaria	MONTENEGRO	Papp *et al.* (2019)
Sematophyllum substrumulosum	IRELAND	VU (NT?) - new records in Ireland since 2010, status might be NT.
Sematophyllum substrumulosum	SICILY	● (at risk)
Serpoleskea confervoides	GREECE	Only recorded from Rhodes by Düll (1995b) but the specimens are *Scorpiurium sendtneri,* rev. T.L. Blockeel.
Sphagnum affine	AUSTRIA	1 (as part of *S. imbricatum*)
Sphagnum affine	FRANCE	● (at risk)
Sphagnum affine	LITHUANIA	? (old record of *S. imbricatum*)
Sphagnum affine	SLOVAKIA	? EN
Sphagnum auriculatum	SICILY	● (at risk)
Sphagnum austinii	AUSTRIA	1 (as part of *S. imbricatum*)
Sphagnum austinii	BELGIUM	Vanderpoorten *et al.* (2016)
Sphagnum balticum	AUSTRIA	0 (old reports wrong but recently found; Schröck, *pers. comm*. June 2020)
Sphagnum capillifolium	GREECE	The only report is by Juratzka (1861) based on collections by Mazziari from Corfu and Kythera, which are doubtful and in any case may not belong to *S. capillifolium* as currently understood.
Sphagnum contortum	SICILY	● (at risk)
Sphagnum divinum	FINLAND	Juutinen *et al.* (2018)
Sphagnum divinum	FRANCE	V. Hugonnot *pers. comm.* Jan. 2019
Sphagnum divinum	MONTENEGRO	Papp *et al.* (2019)
Sphagnum flexuosum	MONTENEGRO	*S. flexuosum* has not been reliably recorded from Montenegro, and the records, which were of *S. recurvum* (B. Papp, *pers. comm.* 9.4.14), probably refer to *S. fallax*.

Taxon	Country	Note
Sphagnum inundatum	AUSTRIA	3 (included in *S. subsecundum*)
Sphagnum inundatum	SICILY	● (at risk)
Sphagnum lindbergii	FRANCE	● (at risk)
Sphagnum magellanicum	SICILY	RE (based on herbarium specimen revision, the only report of *Sphagnum magellanicum* for Sicily is by Bottini (1919) from Madonie Mountains, without a precise locality. It has never been found again, even by Raimondo & Dia (1978), which led field research.
Sphagnum majus	FRANCE	Only subsp. *norvegicum* present (V. Hugonnot *pers. comm.* Jan. 2019)
Sphagnum medium	FINLAND	Juutinen *et al.* (2018)
Sphagnum medium	FRANCE	V. Hugonnot *pers. comm.* Jan. 2019
Sphagnum molle	FRANCE	● (at risk)
Sphagnum platyphyllum	FRANCE	● (at risk)
Sphagnum pulchrum	AUSTRIA	Old material is wrong, but recently discovered (Schröck, *pers. comm*. June 2020).
Sphagnum quinquefarium	MONTENEGRO	Alegro *et al.* (2019)
Sphagnum recurvum	MONTENEGRO	See *S. flexuosum*
Sphagnum riparium	FRANCE	● (at risk)
Sphagnum rubiginosum	FINLAND	Not present (R. Juutinen via T. Hallingback, *pers. comm.* Feb. 2018)
Sphagnum subnitens subsp. *subnitens*	GREECE	subsp. *subnitens* occurs in Greece (Herb. Blockeel)
Splachnum ampullaceum	FRANCE	● (at risk)
Splachnum ampullaceum	ITALY	● (declined - Belén Albertos, 11 February 2014)
Splachnum sphaericum	FRANCE	● (at risk)
Splachnum sphaericum	ITALY	● (declined - Belén Albertos, 11 February 2014)
Splachnum sphaericum	LATVIA	● (v. rare)
Stereodon pratensis	FRANCE	● (at risk)
Straminergon stramineum	GREECE	Papp *et al*. (2011), and also collected by T.L. Blockeel.
Syntrichia calcicola	LATVIA	A. Mežaka *pers. comm.* (via. S. Caspari), Dec. 2018
Syntrichia fragilis	AUSTRIA	0 (recently refound)
Syntrichia fragilis	FRANCE	● (at risk)
Syntrichia handelii	SICILY	● (at risk)
Syntrichia latifolia	MONTENEGRO	Published in Dragićević & Veljić (2006) but there is sugnificant doubt (Dragićević *pers. comm*. May 2020).
Syntrichia latifolia	SICILY	● (at risk)
Syntrichia montana var. *calva*	CZECH REPUBLIC	J. Kučera *pers. comm.* Dec. 2018
Syntrichia montana var. *montana*	CRETE	var. *montana* is documented for Crete (*e.g.* Kramer, 1980)
Syntrichia norvegica	SICILY	● (at risk)
Syntrichia papillosa	LATVIA	Strazdiņa *et al.* (2017)
Syntrichia papillosa	SICILY	● (at risk)
Syntrichia princeps	IRELAND	RE (CR) - refound in N. Ireland in 2012, status would now be CR in Ireland as a whole.
Syntrichia princeps	N. IRELAND	RE (CR) - refound in 2012, status would now be CR in Ireland as a whole.
Syntrichia ruralis var. *epilosa*	GREAT BRITAIN	O'Leary & Fisk (2019)
Syntrichia subpapillosissima	GREECE	Papp & Tsakiri (2017)
Syntrichia subpapillosissima	MONTENEGRO	Papp *et al.* (2019)
Taxiphyllum wissgrillii	GREECE	Papp & Tsakiri (2017)
Tayloria hornschuchii	SLOVAKIA	Last recorded here in 1994 (Christian Schröck, *pers. comm*. 2017), so probably not extinct

Taxon	Country	Note
Tetraplodon mnioides	FRANCE	● (at risk)
Thamnobryum neckeroides	FRANCE	S. Caspari, *pers. comm.* Dec. 2019
Thamnobryum subserratum	LATVIA	● Abolina *et al.* (2011). Also Fig. 2 l & m in Mastracci (2003)
Timmia megapolitana	FINLAND	Recently refound (Juutinen *et al.*, 2016)
Timmia megapolitana	GREECE	The records are from the 19th century and clearly refer to *T. bavarica,* not regarded as a separate species at that time.
Timmia norvegica	ESTONIA	Deleted (Nele Ingerpuu, *pers. comm.* May 2020)
Timmiella anomala	GREECE	The record by Rajczy (1979) is incorrect (Blockeel, 2016) and other records require confirmation.
Timmiella barbuloides	FRANCE	● (at risk)
Timmiella barbuloides	SWITZERLAND	?DD (erroneously recorded)
Timmiella flexiseta	ITALY	Only one old record on Italian mainland (P. Campesi *pers. comm.*)
Timmiella flexiseta	SICILY	● (at risk)
Tortella alpicola	FRANCE	● (at risk)
Tortella fasciculata/pseudofragilis	several countries	Marked with a '?' where the original records of *T. bambergeri* have not yet been distinguished as *T. fasciculata* or *T. pseudofragilis.*
Tortella fasciculata	MONTENEGRO	Papp & Erzberger (2010), Papp *et al.* (2014), *etc*.
Tortella fragilis	GREECE	Papp & Tsakiri (2017)
Tortella pseudofragilis	GREAT BRITAIN	Ottley & Blockeel (2019)
Tortella pseudofragilis	MONTENEGRO	Papp *et al.* (2019)
Tortula acaulon var. *acaulon*	CRETE	var. *acaulon* is documented for Crete (Düll, 2014)
Tortula bolanderi	ITALY	Recorded only from the Vatican City State, but this is subsumed into peninsular Italy for the purposes of the checklist.
Tortula bolanderi	SICILY	● (at risk)
Tortula brevissima	SICILY	● (at risk)
Tortula cernua	LATVIA	● (v. rare)
Tortula caucasica	MONTENEGRO	Reported at 9th ECCB Conference, Montenegro, 2016 (Dragićević *pers. comm.* May 2020)
Tortula cuneifolia	MALTA	Schäfer-Verwimp & Verwimp (2019)
Tortula hoppeana	SICILY	● (at risk)
Tortula mucronifolia	MONTENEGRO	Very old record only (1888) (Dragićević *pers. comm.* May 2020)
Tortula muralis var. *aestiva*	No country assigned	Included in the checklist after the spreadsheet had been constructed. No distribution information available.
Tortula muralis var. *muralis*	No country assigned	Included in the checklist after the spreadsheet had been constructed. No distribution information available.
Tortula pallida	FRANCE	● (at risk)
Tortula pallida	SICILY	● (at risk)
Tortula protobryoides	FINLAND	Juutinen *et al.* (2016)
Tortula randii	LATVIA	● (probably disappeared)
Tortula revolvens	FRANCE	V. Hugonnot *pers. comm.* Jan. 2019
Tortula revolvens	SICILY	● (at risk)
Tortula schimperi	CORSICA	Hugonnot (2019)
Tortula solmsii	CRETE	Blockeel (2012b)
Tortula solmsii	SICILY	● (at risk)
Tortula subulata	CRETE	Düll (2014)
Tortula subulata	SICILY	● (at risk)
Tortula wilsonii	IRELAND	RE in published Red List, but refound recently at a single locality (Rory Hodd, *pers. comm.* May 2020).

Taxon	Country	Note
Tortula wilsonii	MONTENEGRO	Very old record only (1893) (Dragićević *pers. comm.* May 2020)
Trematodon ambiguus	FRANCE	● (at risk)
Trematodon ambiguus	LATVIA	● (v. rare)
Trematodon longicollis	SICILY	● (at risk)
Trichodon cylindricus	SICILY	● (at risk)
Ulota bruchii	LATVIA	● (v. rare)
Ulota calvescens	SERBIA	Probably an error (Lara & Garilleti *pers. comm.* 2018)
Ulota coarctata	LATVIA	● (v. rare)
Ulota crispa	ALBANIA	● (old, no voucher)
Ulota crispa	SICILY	● (at risk)
Ulota crispa	SWEDEN	Tomas Hallingbäck *pers. comm*. May 2017
Ulota crispula	CZECH REPUBLIC	J. Kučera *pers. comm.* Dec. 2018.
Ulota curvifolia	ALBANIA	Old, no voucher. Regarded as dubious by Lara & Garilleti (*pers. comm.* 2018)
Ulota curvifolia	CAUCASUS	Deleted (V. Fedosov *pers. comm.* Nov. 2018)
Ulota drummondii	KALININGRAD	Lara & Garilleti (*pers. comm.* 2018)
Ulota drummondii	SPAIN	Lara & Garilleti (*pers. comm.* 2018)
Ulota intermedia	CAUCASUS	Lara & Garilleti (*pers. comm.* 2018)
Ulota intermedia	CZECH REPUBLIC	J. Kučera *pers. comm.* Dec. 2018
Ulota intermedia	SE RUSSIA	Lara & Garilleti (*pers. comm.* 2018)
Ulota macroscpora	AUSTRIA	new record (Jan Kučera, *pers. comm.* 2017)
Ulota macroscpora	CZECH REPUBLIC	new record (Jan Kučera, *pers. comm.* 2017)
Ulota rehmannii	FRANCE	● (at risk)
Ulota rehmannii	UKRAINE	Old records only (1936 - Elvira Baisheva *pers. comm.* 2017)
Vesicularia reimersiana	MALTA	Considered very doubtful by Ros *et al.* (2013), and anyway the specimen was destroyed in Berlin during WW2; probably best excluded unless refound.
Voitia nivalis	FRANCE	Deleted (V. Hugonnot *pers. comm.* Jan. 2019)
Warnstorfia fluitans	GREECE	Only reported by Mazziari (1851) from the Ionian islands. The record is not credible on phtyogeographic grounds and is clearly an error.
Warnstorfia pseudostraminea	AUSTRIA	0 (recently refound)
Warnstorfia pseudostraminea	SLOVENIA	RE (if correctly reported)
Weissia angustifolia	MONTENEGRO	Papp & Erzberger (2007)
Weissia brachycarpa	LATVIA	● (v. rare)
Weissia controversa	LATVIA	● (v. rare)
Weissia controversa var. *controversa*	CRETE	var. *controversa* is documented for Crete (Düll, 2014)
Weissia controversa var. *crispata*	CRETE	Papp *et al.* (1998)
Weissia levieri	SICILY	● (at risk)
Weissia squarrosa	LATVIA	Strazdiņa *et al.* (2017)
Zygodon catarinoi	CRETE	Lara & Garilleti (*pers. comm.* 2018)
Zygodon catarinoi	GREECE	Lara & Garilleti (*pers. comm.* 2018)
Zygodon conoideus	VARIOUS	var. *conoideus* confirmed by Lara & Garilleti (*pers. comm.* 2018)
Zygodon dentatus	POLAND	VU (Stebel & Żarnowiec, 2017)
Zygodon gracilis	FRANCE	Doubtful (V. Hugonnot *pers. comm.* Jan. 2019)
Zygodon gracilis	POLAND	CR (Stebel & Żarnowiec, 2017)
Zygodon rupestris	POLAND	NT (Stebel & Żarnowiec, 2017)

Taxon	Country	Note
Zygodon rupestris	NW RUSSIA	Overlooked by Fedosov & Doroshina (2018); a record of *Z. viridissimus sens. lat*. from this region reported by Abramov & Volkova (1998) later proved to be *Z. rupestris*, reported in Ignatov *et al.* (2006).
Zygodon sibiricus	RUSSIA	Previously reported from these regions of Russia (Fedosov & Doroshina, 2018), but then considered dubious by Fedosov (2018), since safe identification is not possible in absence of sporophytes. Confirmaton of this taxon in Russia requires further studies.
Zygodon stirtonii	POLAND	CR (Stebel & Żarnowiec, 2017)
Zygodon viridissimus	CAUCASUS	Deleted (Lara & Garilleti *pers. comm.* 2018)
Zygodon viridissimus	LITHUANIA	Lara & Garilleti (*pers. comm.* 2018)

2.2.2 Taxon details - Mosses

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Abietinella	*abietina*	(Hedw.) M.Fleisch.	
Abietinella	*abietina* var. *abietina*		
Abietinella	*abietina* var. *hystricosa*	(Mitt.) Sakurai	
Acaulon	*casasianum*	Brugués & H.A.Crum	
Acaulon	*dertosense*	Casas, Sérgio, Cros & Brugués	
Acaulon	*fontiquerianum*	Casas & Sérgio	
Acaulon	*mediterraneum*	Limpr.	
Acaulon	*muticum*	(Hedw.) Müll.Hal.	
Acaulon	*piligerum*	(De Not.) Limpr.	
Acaulon	*triquetrum*	(Spruce) Müll.Hal.	
Achrophyllum	*dentatum*	(Hook.f. & Wilson) Vitt & Crosby	
Alleniella	*besseri*	(Lobarz.) S.Olsson, Enroth & D.Quandt	Olsson *et al*. (2011)
Alleniella	*complanata*	(Hedw.) S.Olsson, Enroth & D.Quandt	Olsson *et al*. (2011)
Aloina	*aloides*	(Koch ex Schultz) Kindb.	*A. aloides* and *A. ambigua* are doubtfully separate; the differentiating characters are quantitative and overlapping; molecular work is needed to elucidate (J. Kučera *pers. comm.* Dec. 2018)
Aloina	*ambigua*	(Bruch & Schimp.) Limpr.	*A. aloides* and *A. ambigua* are doubtfully separate; the differentiating characters are quantitative and overlapping; molecular work is needed to elucidate (J. Kučera *pers. comm.* Dec. 2018)
Aloina	*bifrons*	(De Not.) Delgad.	
Aloina	*brevirostris*	(Hook. & Grev.) Kindb.	
Aloina	*humilis*	M.T.Gallego, M.J.Cano & Ros	
Aloina	*obliquifolia*	(Müll.Hal.) Broth.	Doubtfully separate from *A. rigida* (J. Kučera *pers. comm.* Dec. 2018)
Aloina	*rigida*	(Hedw.) Limpr.	Doubtfully separate from *A. obliquifolia* (J. Kučera *pers. comm.* Dec. 2018)
Alophosia	*azorica*	(Renauld & Cardot) Cardot	
Amblyodon	*dealbatus*	(Hedw.) P.Beauv.	
Amblystegium	*serpens*	(Hedw.) Schimp.	
Amphidium	*lapponicum*	(Hedw.) Schimp.	
Amphidium	*mougeotii*	(Schimp.) Schimp.	
Amphidium	*curvipes*	(Müll. Hal.) Broth.	*A. tortuosum* (Hornsch.) Cufod. is a southern hemisphere species (Sim-Sim *et al*., 2017)
Anacamptodon	*splachnoides*	(Froel. ex Brid.) Brid.	
Anacolia	*menziesii*	(Turner) Paris	
Anacolia	*webbii*	(Mont.) Schimp.	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Andoa	*berthelotiana*	(Mont.) Ochyra	
Andreaea	*alpestris*	(Thed.) Schimp.	
Andreaea	*alpina*	Hedw.	(= *A. obovata* Thed.; Price & Ellis, 2018)
Andreaea	*blyttii*	Schimp.	
Andreaea	*crassinervia*	Bruch	
Andreaea	*flexuosa*	R.Br. bis	(subsp. *luisieri* Sérgio & Sim-Sim); Sérgio & Sim-Sim (2012)
Andreaea	*frigida*	Huebener	
Andreaea	*heinemannii*	Hampe & Müll.Hal.	
Andreaea	*heinemannii* subsp. *crassifolia*	(Luisier) Sérgio	
Andreaea	*heinemannii* subsp. *heinemannii*		
Andreaea	*hookeri*	Schimp.	(= *A. alpina* Hedw.; Price & Ellis, 2018)
Andreaea	*megistospora*	B.M.Murray	
Andreaea	*mutabilis*	Hook.f. & Wilson	
Andreaea	*nivalis*	Hook.	
Andreaea	*rothii*	F.Weber & D.Mohr	
Andreaea	*rothii* subsp. *falcata*	(Schimp.) Lindb.	
Andreaea	*rothii* subsp. *rothii*		
Andreaea	*rupestris*	Hedw.	
Andreaea	*rupestris* var. *papillosa*	(Lindb.) Podp.	
Andreaea	*rupestris* var. *rupestris*		
Andreaea	*sinuosa*	B.M.Murray	
Anoectangium	*aestivum*	(Hedw.) Mitt.	
Anoectangium	*angustifolium*	Mitt.	Molecular data show this is clearly distinct from *A. aestivum* (J. Kučera *pers. comm.* Dec. 2018)
Anoectangium	*handelii*	Schiffn.	
Anomobryum	*apiculatum*	(Schwägr.) D.Bell & Holyoak	*Anomobryum apiculatum* Schwägr. Appears not to be this species but probably a new taxon (Holyoak *pers. comm.* Sept. 2018)
Anomobryum	*concinnatum*	(Spruce) Lindb.	
Anomobryum	*julaceum*	(Schrad. ex P.Gaertn., E.Mey & Scherb.) Schimp.	
Anomobryum	*lusitanicum*	(I.Hagen ex Luisier) Thér.	
Anomobryum	*notarisii*	(Mitt.) D.Bell & Holyoak	*Brachymenium notarisii* (Mitt.) A.J.Shaw
Anomodon	*longifolius*	(Schleich. ex Brid.) Hartm.	*Anomodontella longifolia* (Schleich. ex Brid.) Ignatov & Fedosov
Anomodon	*rugelii*	(Müll.Hal.) Keissl.	*Anomodontopsis rugelii* (Müll.Hal.) Ignatov & Fedosov
Anomodon	*tristis*	(Ces.) Sull. & Lesq.	*Haplohymenium triste* (Ces.) Kindb.
Anomodon	*viticulosus*	(Hedw.) Hook. & Taylor	
Antitrichia	*californica*	Sull.	
Antitrichia	*curtipendula*	(Hedw.) Brid.	
Aongstroemia	*longipes*	(Sommerf.) Bruch & Schimp.	
Aplodon	*wormskioldii*	(Hornem.) R.Br.	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Aquilonium	*plicatulum*	(Lindb.) Hedenäs, Schlesak & D.Quandt	*Hypnum plicatulum* (Lindb.) A.Jaeger (Schlesak *et al.*, 2018)
Archidium	*alternifolium*	(Hedw.) Mitt.	
Arctoa	*anderssonii*	Wich.	
Arctoa	*fulvella*	(Dicks.) Bruch & Schimp.	
Arctoa	*hyperborea*	(Gunnerus ex Dicks.) Bruch & Schimp.	
Arvernella	*microclada*	Hugonnot & Hedenäs	Hugonnot & Hedenäs (2015)
Aschisma	*carniolicum*	(F.Weber & D.Mohr) Lindb.	
Aschisma	*cuynetii*	(Bizot & R.B.Pierrot) J.Guerra & M.J.Cano	
Atractylocarpus	*alpinus*	(Schimp. ex Milde) Lindb.	
Atractylocarpus	*subporodictyon*	(Broth.) Bonfim Santos & Stech	Placed in *Campylopus* (*C. subporodictyon* (Broth.) B.H.Allen & Ireland) by Allen & Ireland (2002), having spent time in both *Dicranum* and *Dicranodontium*, but molecular work shows it to be best placed in *Atractylocarpus* (Bonfim Santos & Stech, 2017).
Atrichum	*androgynum*	(Müll.Hal.) A.Jaeger	Sérgio *et al*. (2010); Ros *et al.* (2013)
Atrichum	*angustatum*	(Brid.) Bruch & Schimp.	
Atrichum	*crispum*	(James) Sull.	
Atrichum	*flavisetum*	Mitt.	
Atrichum	*tenellum*	(Röhl.) Bruch & Schimp.	
Atrichum	*undulatum*	(Hedw.) P.Beauv.	
Aulacomnium	*androgynum*	(Hedw.) Schwägr.	
Aulacomnium	*palustre*	(Hedw.) Schwägr.	
Aulacomnium	*turgidum*	(Wahlenb.) Schwägr.	
Barbula	*unguiculata*	Hedw.	
Bartramia	*aprica*	Müll. Hal.	Müller (2014a). *B. rosamrosiae* Damayanti, J.Muñoz, J.-P.Frahm & D.Quandt (Damayanti *et al.*, 2012)
Bartramia	*breviseta*	Lindb.	
Bartramia	*halleriana*	Hedw.	
Bartramia	*ithyphylla*	Brid.	
Bartramia	*laevisphaera*	(Taylor) Müll.Hal.	Damayanti *et al*. (2012)
Bartramia	*pomiformis*	Hedw.	
Bartramia	*subulata*	Bruch & Schimp.	
Blindia	*acuta*	(Hedw.) Bruch & Schimp.	
Blindia	*caespiticia*	(F.Weber & D.Mohr) Müll.Hal.	
Blindiadelphus	*campylopodus*	(Kindb.) Fedosov & Ignatov	(= *Seligeria campylopoda* Kindb.) Fedosov *et al.* (2017)
Blindiadelphus	*diversifolius*	(Lindb.) Fedosov & Ignatov	(= *Seligeria diversifolia* Lindb.) Fedosov *et al.* (2017)
Blindiadelphus	*polaris*	(Berggr.) Fedosov & Ignatov	(= *Seligeria polaris* Berggr.) Fedosov *et al.* (2017)
Blindiadelphus	*recurvatus*	(Hedw.) Fedosov & Ignatov	(= *Seligeria recurvata* (Hedw.) Bruch & Schimp.) Fedosov *et al.* (2017)

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Blindiadelphus	*subimmersus*	(Lindb.) Fedosov & Ignatov	(= *Seligeria subimmersa* Lindb.) Fedosov *et al.* (2017)
Brachydontium	*trichodes*	(F.Weber) Milde	
Brachymenium	*paradoxum*	(Herzog) A.J.Shaw	Probably not a *Brachymenium* but retained here pending further research.
Brachytheciastrum	*collinum*	(Schleich. ex Müll.Hal.) Ignatov & Huttunen	All European records of *B. fendleri* (Sull.) Vanderp. *et al*. are *B. collinum* (Orgaz *et al*., 2013)
Brachytheciastrum	*dieckei*	(Röll) Ignatov & Huttunen	Retained as a species, as significantly different from *B. velutinum* morphologically, molecularly and ecologically (D. Orgaz *pers. comm.* Nov. 2018).
Brachytheciastrum	*olympicum*	(Jur.) Vanderp. *et al*.	Retained as a species, as significantly different from *B. velutinum* morphologically, molecularly and ecologically (D. Orgaz *pers. comm.* Nov. 2018).
Brachytheciastrum	*salicinum*	(Schimp.) J.D.Orgaz, M.J.Cano & J.Guerra	Orgaz *et al.* (2013) (= *B. velutinum* var. *salicinum* (Schimp.) Ochyra & Żarnowiec). Retained as a species, as significantly different from *B. velutinum* morphologically, molecularly and ecologically (D. Orgaz *pers. comm.* Nov. 2018).
Brachytheciastrum	*trachypodium*	(Brid.) Ignatov & Huttunen	
Brachytheciastrum	*velutinum*	(Hedw.) Ignatov & Huttunen	*B. velutinum* var. *vagans* (Milde) Ochyra & Żarnowiec, known only from Poland, is synonymised with *B. velutinum*. Also includes *B. vanekii* (Šmarda) Ochyra & Żarnowiec, as it does not differ either morphologically or molecularly (J. Kučera *pers. comm.* Dec. 2018; D. Orgaz *pers. comm.* Nov. 2018).
Brachythecium	*albicans*	(Hedw.) Schimp.	
Brachythecium	*buchananii*	(Hook.) A.Jaeger	Ignatov & Milyutina (2010)
Brachythecium	*campestre*	(Müll.Hal.) Schimp.	
Brachythecium	*capillaceum*	(F.Weber & D.Mohr) Giacom.	Regarded as a synonym of *B. rotaeanum* De Not. in Ignatov & Milyutina (2010), but it is uncertain that all the plants across Europe belong to the same taxon (M. Ignatov *pers. comm.* 2017).
Brachythecium	*cirrosum*	(Schwägr.) Schimp.	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Brachythecium	*erythrorrhizon*	Schimp.	Incl. subsp. *asiaticum* Ignatov, described in 1998. Ignatov later commented, "Subsequent observation revealed too broad a variation in plant size in Eurasia and North America, making it very difficult to segregate this subspecies." (Ignatov & Milyutina, 2010). "I don't think now it is worthy (of) recognition at any level, the species is too variable" (M. Ignatov *pers. comm.* June 2018).
Brachythecium	*funkii*	Schimp.	
Brachythecium	*geheebii*	Milde	
Brachythecium	*glareosum*	(Bruch ex Spruce) Schimp.	
Brachythecium	*japygum*	(Głow.) Köckinger & Jan Kučera	
Brachythecium	*laetum*	(Brid.) Schimp.	
Brachythecium	*mildeanum*	(Schimp.) Schimp.	
Brachythecium	*novae-angliae*	(Sull. & Lesq.) A.Jaeger	(= *Bryhnia scabrida* (Lindb.) Kaurin; *Bryhnia novae-angliae* (Sull. & Lesq,) Grout). The Eurasian *Brachythecium scabridum* (Lindb.) Min Li & Y.F.Wang was synonymised with the North American *B. novae-angliae* by Huttunen *et al.* (2015), as no significant differences could be found.
Brachythecium	*rivulare*	Schimp.	
Brachythecium	*rutabulum*	(Hedw.) Schimp.	
Brachythecium	*rutabulum* var. *atlanticum*	Hedenäs	
Brachythecium	*rutabulum* var. *rutabulum*		
Brachythecium	*salebrosum*	(Hoffm. ex F.Weber & D.Mohr) Schimp.	
Brachythecium	*tauriscorum*	Molendo	*B. tauriscorum* is an older name for *B. coruscum* I.Hagen (Hedenäs, 2017)
Brachythecium	*tenuicaule*	(Spruce) Kindb.	(= *Rhynchostegiella tenuicaulis* (Spruce) Kartt. - Köckinger & Kučera, 2016)
Brachythecium	*tommasinii*	(Sendtn. ex Boulay) Ignatov & Huttunen	
Brachythecium	*turgidum*	(Hartm.) Kindb.	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Brachythecium	*udum*	I.Hagen	This species was treated as a variety of *B. mildeanum* (Podpera, 1954; Hill *et al*., 2006), but Ignatov & Milyutina (2010) found it to be more closely related to *B. turgidum*. Sporophytes and male gametangia remain unknown, and it needs further study to determine whether it is a good species or an extreme phenotype in the *B. salebrosum-B.turgidum* complex growing in wet northern environments (M. Ignatov *pers. comm.* Dec. 2018).
Braunia	*alopecura*	(Brid.) Limpr.	
Braunia	*imberbis*	(Sm.) N.Dalton & D.G.Long	*Hedwigidium integrifolium* (P.Beauv.) Dixon); Dalton *et al*. (2012); Ros *et al*. (2013); De Luna (2016)
Breutelia	*azorica*	(Mitt.) Cardot	
Breutelia	*chrysocoma*	(Hedw.) Lindb.	
Brotherella	*lorentziana*	(Molendo ex Lorentz) Loeske ex M.Fleisch.	
Bruchia	*flexuosa*	(Schwägr.) Müll.Hal.	
Bruchia	*vogesiaca*	Nestl. ex Schwägr.	
Bryobrittonia	*longipes*	(Mitt.) D.G.Horton	
Bryoerythrophyllum	*alpigenum*	(Venturi) P.C.Chen	
Bryoerythrophyllum	*caledonicum*	D.G.Long	
Bryoerythrophyllum	*campylocarpum*	(Müll.Hal.) H.A.Crum	
Bryoerythrophyllum	*ferruginascens*	(Stirt.) Giacom.	
Bryoerythrophyllum	*inaequalifolium*	(Taylor) R.H.Zander	
Bryoerythrophyllum	*recurvirostrum*	(Hedw.) P.C.Chen	
Bryoerythrophyllum	*rubrum*	(Jur. ex Geh.) P.C.Chen	
Bryoxiphium	*madeirense*	Á.Löve & D.Löve	
Bryoxiphium	*norvegicum*	(Brid.) Mitt.	
Bryum	*argenteum*	Hedw.	
Bryum	*bavaricum*	Warnst.	*Anomobryum bavaricum* (Warnst.) Holyoak & Köckinger; Holyoak & Köckinger (2010); Ros *et al*. (2013)
Bryum	*blindii*	Bruch & Schimp.	
Bryum	*canariense*	Brid.	
Bryum	*caucasicum*	(Schimp. ex Broth.) C.J.Cox & Hedd.	
Bryum	*demaretianum*	Arts	Based on cultivation experiments, plants of this species developed the typical characters of *B. tenuisetum* (S. Caspari *pers. comm.* Dec. 2018).
Bryum	*dichotomum*	Hedw.	*Bryum barnesii* J.B.Wood ex Schimp. continues to be a source of contention (S. Caspari, *pers. comm.* Dec. 2018).
Bryum	*dixonii*	Cardot ex W.E.Nicholson	
Bryum	*dyffrynense*	Holyoak	
Bryum	*gemmiferum*	R.Wilczek & Demaret	
Bryum	*gemmilucens*	R.Wilczek & Demaret	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Bryum	*gemmiparum*	De Not.	
Bryum	*kikuyense*	(Broth. & Thér.) N.Pedersen	*Brachymenium philonotula* Broth.
Bryum	*klinggraeffii*	Schimp.	
Bryum	*marratii*	Hook.f. & Wilson	
Bryum	*oblongum*	Lindb.	
Bryum	*radiculosum*	Brid.	
Bryum	*reyeri*	Breidl.	
Bryum	*riparium*	I.Hagen	
Bryum	*ruderale*	Crundw. & Nyholm	
Bryum	*sauteri*	Bruch & Schimp.	
Bryum	*valparaisense*	Thér.	
Bryum	*versicolor*	A.Braun ex Bruch & Schimp.	(= *Bryum dichotomum*? Not included by Hill *et al*. (2006) but retained for now on the recommendation of representatives of several countries, pending further molecular work at RBGE)
Bryum	*violaceum*	Crundw. & Nyholm	
Buckia	*vaucheri*	(Lesq.) D.Rios, M.T.Gallego & J.Guerra	(= *Hypnum vaucheri* Lesq.; Câmara *et al*., 2018)
Buxbaumia	*aphylla*	Hedw.	
Buxbaumia	*viridis*	(Moug. ex Lam. & DC.) Brid. ex Moug. & Nestl.	
Callicladium	*haldanianum*	(Grev.) H.A.Crum	
Callicladium	*imponens*	(Hedw.) Hedenäs, Schlesak & D.Quandt	*Hypnum imponens* Hedw. (Schlesak *et al*., 2018)
Calliergon	*cordifolium*	(Hedw.) Kindb.	
Calliergon	*giganteum*	(Schimp.) Kindb.	
Calliergon	*megalophyllum*	Mikut.	
Calliergon	*richardsonii*	(Mitt.) Kindb.	
Calliergonella	*cuspidata*	(Hedw.) Loeske	
Calliergonella	*lindbergii*	(Mitt.) Hedenäs	
Calomnion	*complanatum*	(Hook.f. & Wilson) Lindb.	
Calymperes	*erosum*	Müll.Hal.	
Calyptrochaeta	*apiculata*	(Hook.f. & Wilson) Vitt	
Campyliadelphus	*chrysophyllus*	(Brid.) R.S.Chopra	
Campyliadelphus	*elodes*	(Lindb.) Kanda	
Campylium	*bambergeri*	(Schimp.) Hedenäs, Schlesak & D.Quandt	*Hypnum bambergeri* Schimp. (Schlesak *et al*., 2018)
Campylium	*laxifolium*	Engelmark & Hedenäs	
Campylium	*longicuspis*	(Lindb. & Arnell) Hedenäs	
Campylium	*protensum*	(Brid.) Kindb.	*C. protensum* and *C. stellatum* are distinct in some parts of their range and overlap in others; they are retained as separate species for the present.
Campylium	*stellatum*	(Hedw.) Lange & C.E.O.Jensen	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Campylophyllopsis	*calcarea*	(Crundw. & Nyholm) Ochyra	(= *Campylidium calcareum* (Crundw. & Nyholm) Ochyra. Ochyra *et al*., 2003; Ros *et al*., 2013). According to M. Ignatov (*pers. comm.* June 2018), *Campylidium* is an illegitimate name and should be changed to *Campylophyllopsis* (Goffinet *et al*., 2009).
Campylophyllopsis	*sommerfeltii*	(Myrin) Ochyra	(= *Campylidium sommerfeltii* (Myrin) Ochyra. Ochyra *et al*., 2003; Ros *et al*., 2013). According to M. Ignatov (*pers. comm.* June 2018), *Campylidium* is an illegitimate name and should be changed to *Campylophyllopsis* (Goffinet *et al*., 2009).
Campylophyllum	*halleri*	(Hedw.) M.Fleisch.	
Campylophyllum	*montanum*	(Lindb.) B.H.Allen	*Hygrohypnum montanum* (Lindb.) Broth., *Platyhypnum montanum* (Lindb.) Ochyra) (Ochyra, 2013; Allen, 2014).
Campylopus	*atrovirens*	De Not.	
Campylopus	*brevipilus*	Bruch & Schimp.	
Campylopus	*cygneus*	(Hedw.) Brid.	
Campylopus	*flaccidus*	Renauld & Cardot	
Campylopus	*flexuosus*	(Hedw.) Brid.	
Campylopus	*fragilis*	(Brid.) Bruch & Schimp.	
Campylopus	*gracilis*	(Mitt.) A.Jaeger	
Campylopus	*incrassatus*	Müll.Hal.	
Campylopus	*introflexus*	(Hedw.) Brid.	
Campylopus	*oerstedianus*	(Müll.Hal.) Mitt.	
Campylopus	*pilifer*	Brid.	
Campylopus	*pyriformis*	(Schultz) Brid.	
Campylopus	*schimperi*	Milde	
Campylopus	*setifolius*	Wilson	
Campylopus	*shawii*	Wilson	
Campylopus	*subulatus*	Schimp. ex Milde	
Campylostelium	*pitardii*	(Corb.) E.Maier	
Campylostelium	*saxicola*	(F.Weber & D.Mohr) Bruch & Schimp.	
Campylostelium	*strictum*	Solms	
Catoscopium	*nigritum*	(Hedw.) Brid.	
Ceratodon	*amazonum*	Nieto-Lugilde, O.Werner, S.F.McDaniel & Ros	Nieto-Lugilde *et al.* (2018)
Ceratodon	*conicus*	(Hampe) Lindb.	Hybrid origin (Nieto-Lugilde *et al*., 2018), but clearly now forming a self-sustaining population, so retained as a species.
Ceratodon	*purpureus*	(Hedw.) Brid.	
Ceratodon	*purpureus* subsp. *purpureus*		
Ceratodon	*purpureus* subsp. *stenocarpus*	(Bruch. & Schimp. ex Müll.Hal.) Dixon	
Cheilothela	*chloropus*	(Brid.) Broth.	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Chenia	*leptophylla*	(Müll.Hal.) R.H.Zander	*Leptophascum leptophyllum* (Müll.Hal.) J.Guerra & M.J.Cano
Chenia	*ruigtevleia*	Hedd. & R.H.Zander	Ellis *et al.* (2016). A South African species (Hedderson & Zander, 2008) recently identified from Spain. Further work is needed to confirm that the Spanish and South African material are actually conspecific (J. Kučera *pers. comm.* Dec. 2018).
Chionoloma	*bombayense*	(Müll.Hal.) P.Sollman	(*Pseudosymblepharis bombayensis* (Müll.Hal.) P.Sollman). Alonso *et al.* (2016, 2018); Ignatova *et al*. (2012). However, it is questionable whether the plants from Caucasus actually belong to this taxon (Alonso *et al.*, 2018).
Chionoloma	*cylindrotheca*	(Mitt.) M.Alonso, M.J.Cano & J.A.Jiménez	Alonso *et al.* (2016, 2019) = *Chionoloma daldinianum* (De Not.) M.Alonso, M.J.Cano & J.A.Jiménez, *Oxystegus daldinianus* (De Not.) Köckinger, O.Werner & Ros (Köckinger *et al*., 2010). *Oxystegus* is a molecularly well-delimited group, so placing the species in *Chionoloma* is controversial. On the other hand, retaining *Oxystegus* leaves problems, notably in the delimitation of *Pseudosymblepharis* (J. Kučera *pers. comm.* Dec. 2018).
Chionoloma	*hibernicum*	(Mitt.) M.Alonso, M.J.Cano & J.A.Jiménez	Alonso *et al.* (2016) = *Oxystegus hibernicus* (Mitt.) Hilp. (Köckinger *et al*., 2010).
Chionoloma	*minus*	(Köckinger, O.Werner & Ros) M.Alonso, M.J.Cano & J.A.Jiménez	Alonso *et al.* (2016) = *Oxystegus minor* Köckinger, O.Werner & Ros (Köckinger *et al.*, 2010). Appears to intergrade with *O. hibernicus* in Britain and Ireland.
Chionoloma	*recurvifolium*	(Taylor) M.Alonso, M.J.Cano & J.A.Jiménez	Alonso *et al.* (2016) = *Oxystegus recurvifolius* (Taylor) R.H.Zander (Köckinger *et al.*, 2010; Ros *et al*., 2013)
Chionoloma	*tenuirostre*	(Hook. & Taylor) M.Alonso, M.J.Cano & J.A.Jiménez	Alonso *et al.* (2016) = *Oxystegus tenuirostris* (Taylor) R.H.Zander
Chionoloma	*tenuirostre* var. *holtii*	(Braithw.) M.Alonso, M.J.Cano & J.A.Jiménez	Alonso *et al.* (2016) = *Oxystegus tenuirostris* var. *holtii* (Braithw.) A.J.E.Sm. (Köckinger *et al*., 2010; Ros *et al*., 2013)
Chionoloma	*tenuirostre* var. *tenuirostre*		
Cinclidium	*arcticum*	(Bruch & Schimp.) Schimp.	
Cinclidium	*latifolium*	Lindb.	
Cinclidium	*minutifolium*	Broth.	Koponen & Ignatova (2018)
Cinclidium	*stygium*	Sw.	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Cinclidium	*subrotundum*	Lindb.	
Cinclidotus	*aquaticus*	(Hedw.) Bruch & Schimp.	
Cinclidotus	*danubicus*	Schiffn. & Baumgartner	
Cinclidotus	*fontinaloides*	(Hedw.) P.Beauv.	
Cinclidotus	*riparius*	(Host ex Brid.) Arn.	Includes *C. confertus* Lüth (M. Lüth *pers. comm.* 2017) and European records of *C. pachylomoides* Bizot, which is very doubtful in Europe.
Cinclidotus	*vivesii*	Ederra	
Cirriphyllum	*crassinervium*	(Taylor) Loeske & M.Fleisch.	
Cirriphyllum	*piliferum*	(Hedw.) Grout	
Claopodium	*rostratum*	(Hedw.) Ignatov	(= *Anomodon rostratus* (Hedw.) Schimp. - Ignatov *et al.*, 2006)
Claopodium	*whippleanum*	(Sull.) Renauld & Cardot	
Clasmatodon	*parvulus*	(Hampe) Sull.	Müller (2007)
Cleistocarpidium	*palustre*	(Bruch & Schimp.) Ochyra & Bednarek-Ochyra	
Climacium	*dendroides*	(Hedw.) F.Weber & D.Mohr	
Cnestrum	*alpestre*	(Wahlenb. ex Huebener) Nyholm ex Mogensen	
Cnestrum	*glaucescens*	(Lindb. & Arnell) Holmen ex Mogensen & Steere	
Cnestrum	*schisti*	(F.Weber & D.Mohr) I.Hagen	
Codonoblepharon	*forsteri*	(Dicks.) Goffinet	(= *Zygodon forsteri* (Dicks.) Mitt. - Goffinet *et al.*, 2004) Lara & Garilleti (*pers. comm.* 2018) admit this generic placement is controversial, but feel that in the absence of molecular evidence it is best placed in *Codonoblepharon*.
Conardia	*compacta*	(Drumm. ex Müll.Hal.) H.Rob.	
Conostomum	*tetragonum*	(Hedw.) Lindb.	
Coscinodon	*cribrosus*	(Hedw.) Spruce	
Coscinodon	*horridus*	(Muñoz & H.Hespanhol) Hugonnot, R.D.Porley & Ignatov	Hugonnot *et al.* (2018) (*Grimmia horrida* Muñoz & H.Hespanhol)
Coscinodon	*humilis*	Milde	
Coscinodon	*monchiquensis*	R.D.Porley, Ochyra & Ignatova	Muñoz *et al.* (2009); Ignatov *et al.* (2018b)
Cratoneuron	*curvicaule*	(Jur.) G.Roth	
Cratoneuron	*filicinum*	(Hedw.) Spruce	
Crossidium	*aberrans*	Holz. & E.B.Bartram	
Crossidium	*crassinervium*	(De Not.) Jur.	
Crossidium	*davidai*	Catches.	
Crossidium	*geheebii*	(Broth.) Broth.	
Crossidium	*laevipilum*	Thér. & Trab.	Doubtfully separable from *C. crassinervium* (J. Kučera *pers. comm.* Dec. 2018).

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Crossidium	*laxefilamentosum*	W.Frey & Kürschner	Doubtfully separable from *C. crassinervium* (J. Kučera *pers. comm.* Dec. 2018).
Crossidium	*squamiferum*	(Viv.) Jur.	
Crossidium	*squamiferum* var. *pottioideum*	(De Not.) Mönk.	Doubtfully separable from var. *squamiferum* (J. Kučera *pers. comm.* Dec. 2018).
Crossidium	*squamiferum* var. *squamiferum*		
Cryphaea	*heteromalla*	(Hedw.) D.Mohr	
Ctenidium	*molluscum*	(Hedw.) Mitt.	
Cyclodictyon	*laetevirens*	(Hook. & Taylor) Mitt.	
Cynodontium	*asperifolium*	(Lindb. ex Arnell) Paris	
Cynodontium	*bruntonii*	(Sm.) Bruch & Schimp.	
Cynodontium	*fallax*	Limpr.	
Cynodontium	*gracilescens*	(F.Weber & D.Mohr) Schimp.	
Cynodontium	*jenneri*	(Schimp.) Stirt.	
Cynodontium	*polycarpon*	(Hedw.) Schimp.	
Cynodontium	*strumiferum*	(Hedw.) Lindb.	
Cynodontium	*suecicum*	(Arnell & C.E.O.Jensen) I.Hagen	
Cynodontium	*tenellum*	(Schimp.) Limpr.	
Cyrtomnium	*hymenophylloides*	(Huebener) T.J.Kop.	
Cyrtomnium	*hymenophyllum*	(Bruch & Schimp.) Holmen	
Daltonia	*lindigiana*	Hampe	*Daltonia stenophylla* Mitt. (Majestyk, 2011).
Daltonia	*splachnoides*	(Sm.) Hook. & Taylor	
Dendrocryphaea	*lamyana*	(Mont.) P.Rao	
Dialytrichia	*mucronata*	(Brid.) Broth.	
Dialytrichia	*saxicola*	(Lamy) M.J.Cano	Cano (2007); Ros *et al*. (2013)
Dichelyma	*capillaceum*	(L. ex Dicks.) Myrin	
Dichelyma	*falcatum*	(Hedw.) Myrin	
Dichodontium	*flavescens*	(Dicks.) Lindb.	The relationship between this species and *D. pellucidum* still requires clarification.
Dichodontium	*pellucidum*	(Hedw.) Schimp.	This species probably contains more than one taxon, but molecular work is needed.
Dicranella	*campylophylla*	(Taylor) A.Jaeger	
Dicranella	*cerviculata*	(Hedw.) Schimp.	
Dicranella	*crispa*	(Hedw.) Schimp.	
Dicranella	*grevilleana*	(Brid.) Schimp.	
Dicranella	*heteromalla*	(Hedw.) Schimp.	
Dicranella	*howei*	Renauld & Cardot	
Dicranella	*humilis*	R.Ruthe	
Dicranella	*rufescens*	(Dicks.) Schimp.	
Dicranella	*schreberiana*	(Hedw.) Dixon	
Dicranella	*staphylina*	H.Whitehouse	
Dicranella	*subulata*	(Hedw.) Schimp.	
Dicranella	*varia*	(Hedw.) Schimp.	
Dicranodontium	*asperulum*	(Mitt.) Broth.	
Dicranodontium	*denudatum*	(Brid.) E.Britton	
Dicranodontium	*uncinatum*	(Harv.) A.Jaeger	

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Dicranoloma	*menziesii*	(Taylor) Broth. ex Renauld	Holyoak & Lockhart (2009)
Dicranoweisia	*cirrata*	(Hedw.) Lindb.	
Dicranum	*acutifolium*	(Lindb. & Arnell) C.E.O.Jensen	
Dicranum	*angustum*	Lindb.	
Dicranum	*bardunovii*	Tubanova & Ignatova	Described from Siberia (Tubanova & Ignatova, 2011) but later found in Kola Peninsula and Urals (M. Ignatov *pers. comm.* June 2018).
Dicranum	*bonjeanii*	De Not.	
Dicranum	*brevifolium*	(Lindb.) Lindb.	
Dicranum	*crassifolium*	Sérgio, Ochyra & Séneca	
Dicranum	*dispersum*	Engelmark	
Dicranum	*drummondii*	Müll.Hal.	
Dicranum	*elongatum*	Schleich. ex Schwägr.	
Dicranum	*flagellare*	Hedw.	
Dicranum	*flexicaule*	Brid.	
Dicranum	*fragilifolium*	Lindb.	
Dicranum	*fulvum*	Hook.	
Dicranum	*fuscescens*	Sm.	
Dicranum	*groenlandicum*	Brid.	
Dicranum	*laevidens*	R.S.Williams	
Dicranum	*leioneuron*	Kindb.	
Dicranum	*majus*	Sm.	
Dicranum	*montanum*	Hedw.	
Dicranum	*muehlenbeckii*	Bruch & Schimp.	
Dicranum	*polysetum*	Sw. ex anon.	
Dicranum	*schljakovii*	Ignatova & Tubanova	Ignatova *et al*. (2015)
Dicranum	*scoparium*	Hedw.	
Dicranum	*scottianum*	Turner ex R.Scott	(=*D. canariense* Hampe ex Müll.Hal. - A. Vanderpoorten *pers. comm.* April 2017)
Dicranum	*septentrionale*	Tubanova & Ignatova	Tubanova *et al*. (2010)
Dicranum	*spadiceum*	J.E.Zetterst.	
Dicranum	*spurium*	Hedw.	
Dicranum	*tauricum*	Sapjegin	
Dicranum	*transsylvanicum*	Lüth	
Dicranum	*undulatum*	Schrad. ex Brid.	
Dicranum	*viride*	(Sull. & Lesq.) Lindb.	
Didymodon	*acutus*	(Brid.) K.Saito	
Didymodon	*asperifolius*	(Mitt.) H.A.Crum, Steere & L.E.Anderson	
Didymodon	*australasiae*	(Hook. & Grev.) R.H.Zander	
Didymodon	*bistratosus*	Hébr. & R.B.Pierrot	
Didymodon	*brachyphyllus*	(Sull.) R.H.Zander	Jiménez (2006) and Afonina *et al*. (2010) consider *D. lamyanus* (Schimp.) Thér. to be synonymous with *D. brachyphyllus*
Didymodon	*cordatus*	Jur.	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Didymodon	*eckeliae*	R.H.Zander	Puche *et al*. (2006); Ros *et al* (2013). European plants are morphologically similar to American ones, but molecular work shows that they do not belong to the same lineages (J. Kučera *pers. comm.* Dec. 2018). Therefore the identity of the European plants remains problematic.
Didymodon	*fallax*	(Hedw.) R.H.Zander	
Didymodon	*ferrugineus*	(Schimp. ex Besch.) M.O.Hill	
Didymodon	*giganteus*	(Funck) Jur.	
Didymodon	*glaucus*	Ryan	
Didymodon	*glaucus* subsp. *glaucus*		
Didymodon	*glaucus* subsp. *verbanus*	(W.E.Nicholson & Dixon) Jan Kučera	*D. verbanus* (W.E.Nicholson & Dixon) Loeske is a problematic taxon recorded in Europe from Switzerland, Austria, Italy and Germany; it is probably best recognised as a subspecies of *D. glaucus* (J. Kučera *pers. comm.* Dec. 2018).
Didymodon	*icmadophilus*	(Schimp. ex Müll.Hal.) K.Saito	
Didymodon	*insulanus*	(De Not.) M.O.Hill	
Didymodon	*johansenii*	(R.S.Williams) H.A.Crum	
Didymodon	*luridus*	Hornsch.	
Didymodon	*maschalogenus*	(Renauld & Cardot) Broth.	Köckinger & van Melick (2007)
Didymodon	*maximus*	(Syed & Crundw.) M.O.Hill	
Didymodon	*nicholsonii*	Culm.	
Didymodon	*rigidulus*	Hedw.	
Didymodon	*sinuosus*	(Mitt.) Delogne	
Didymodon	*spadiceus*	(Mitt.) Limpr.	
Didymodon	*subandreaeoides*	(Kindb.) R.H.Zander	
Didymodon	*tomaculosus*	(Blockeel) M.F.V.Corley	
Didymodon	*tophaceus*	(Brid.) Lisa	
Didymodon	*tophaceus* subsp. *erosus*	(J.A.Jiménez & J.Guerra) Jan Kučera	(= *D. erosus* J.A.Jiménez & J.Guerra). Kučera *et al.* (2018)
Didymodon	*tophaceus* subsp. *sicculus*	(M.J.Cano, Ros, García-Zamora & J.Guerra) Jan Kučera	(= *D. sicculus* M.J.Cano, Ros, García-Zamora & J.Guerra). Kučera *et al.* (2018)
Didymodon	*tophaceus* subsp. *tophaceus*		
Didymodon	*tophaceus* subsp. *tophaceus* var. *anatinus*	Hamm.	
Didymodon	*tophaceus* subsp. *tophaceus* var. *tophaceus*		
Didymodon	*tophaceus* var. *anatinus*	Hamm.	Kučera *et al.* (2018)

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Didymodon	*umbrosus*	(Müll.Hal.) R.H.Zander	
Didymodon	*validus*	Limpr.	Jiménez (2006); Ros *et al*. (2013)
Didymodon	*vinealis*	(Brid.) R.H.Zander	
Diobelonella	*palustris*	(Dicks.) Ochyra	(*Dichodontium palustre* (Dicks.) M.Stech) - Ochyra *et al.* (2003)
Diphyscium	*foliosum*	(Hedw.) D.Mohr	
Discelium	*nudum*	(Dicks.) Brid.	
Distichium	*capillaceum*	(Hedw.) Bruch & Schimp.	
Distichium	*hagenii*	Ryan ex H.Philib.	
Distichium	*inclinatum*	(Hedw.) Bruch & Schimp.	
Distichophyllum	*carinatum*	Dixon & W.E.Nicholson	
Ditrichum	*cornubicum*	Paton	
Ditrichum	*heteromallum*	(Hedw.) E.Britton	
Ditrichum	*lineare*	(Sw.) Lindb.	
Ditrichum	*pallidum*	(Hedw.) Hampe	
Ditrichum	*plumbicola*	Crundw.	
Ditrichum	*punctulatum*	Mitt.	
Ditrichum	*pusillum*	(Hedw.) Hampe	
Ditrichum	*subulatum*	Hampe	
Ditrichum	*zonatum*	(Brid.) Kindb.	
Drepanium	*fastigiatum*	(Hampe) C.E.O.Jensen	*Hypnum recurvatum* (Lindb. & Arnell) Kindb., *Drepanium recurvatum* (Lindb. & Arnell) G.Roth (Schlesak *et al.*, 2018)
Drepanocladus	*aduncus*	(Hedw.) Warnst.	
Drepanocladus	*angustifolius*	(Hedenäs) Hedenäs & C.Rosborg	Hedenäs & Rosborg (2008)
Drepanocladus	*arcticus*	(R.S.Williams) Hedenäs	
Drepanocladus	*brevifolius*	(Lindb.) Warnst.	Hedenäs & Rosborg (2008)
Drepanocladus	*capillifolius*	(Warnst.) Warnst.	Northern Hemisphere and Australian material can be distinguished from *D. longifolius* (Mitt.) Paris, as *D. capillifolius* (Saługa *et al.*, 2018).
Drepanocladus	*lycopodioides*	(Brid.) Warnst.	Hedenäs & Rosborg (2008); Ros *et al*. (2013)
Drepanocladus	*polygamus*	(Schimp.) Hedenäs	
Drepanocladus	*sendtneri*	(Schimp. ex H.Müll.) Warnst.	
Drepanocladus	*sordidus*	(Müll.Hal.) Hedenäs	
Drepanocladus	*trifarius*	(F.Weber & D.Mohr) Broth. ex Paris	Hedenäs & Rosborg (2008); Ros *et al*. (2013)
Drepanocladus	*turgescens*	(T.Jensen) Broth.	Hedenäs & Rosborg (2008); Ros *et al*. (2013)
Echinodium	*renauldii*	(Cardot) Broth.	
Echinodium	*setigerum*	(Mitt.) Jur.	
Echinodium	*spinosum*	(Mitt.) Jur.	
Encalypta	*affinis*	R.Hedw.	
Encalypta	*affinis* subsp. *affinis*		
Encalypta	*affinis* subsp. *macounii*	(Austin) D.G.Horton	
Encalypta	*alpina*	Sm.	
Encalypta	*brevicolla*	(Bruch & Schimp.) Ångstr.	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Encalypta	*brevipes*	Schljakov	
Encalypta	*ciliata*	Hedw.	
Encalypta	*longicolla*	Bruch	
Encalypta	*microstoma*	Bals.-Criv. & De Not.	
Encalypta	*mutica*	I.Hagen	
Encalypta	*pilifera*	Funck	Fedosov (2012) (= *E. obovatifolia* Nyholm; *E. intermedia* Jur.)
Encalypta	*procera*	Bruch	
Encalypta	*rhaptocarpa*	Schwägr.	
Encalypta	*spathulata*	Müll.Hal.	
Encalypta	*streptocarpa*	Hedw.	
Encalypta	*trachymitria*	Ripart	Fedosov (2012) (= *E. rhaptocarpa* var. *leptodon)*
Encalypta	*vulgaris*	Hedw.	
Entodon	*challengeri*	(Paris) Cardot	
Entodon	*cladorrhizans*	(Hedw.) Müll.Hal.	
Entodon	*concinnus*	(De Not.) Paris	
Entodon	*schleicheri*	(Schimp.) Demet.	
Entosthodon	*abramovae*	Fedosov & Ignatova	Fedosov *et al*. (2010)
Entosthodon	*attenuatus*	(Dicks.) Bryhn	
Entosthodon	*commutatus*	Durieu & Mont.	Brugués & Sérgio (2010); Ros *et al*. (2013)
Entosthodon	*convexus*	(Spruce) Brugués	
Entosthodon	*dagestanicus*	Fedosov & Ignatova	Fedosov *et al*. (2010)
Entosthodon	*duriaei*	Mont.	Ros *et al*. (2013)
Entosthodon	*fascicularis*	(Hedw.) Müll.Hal.	
Entosthodon	*handelii*	(Schiffn.) Laz.	Ros *et al*. (2013)
Entosthodon	*hungaricus*	(Boros) Loeske	
Entosthodon	*kroonkurk*	Dirkse & Brugués	Ros *et al*. (2013)
Entosthodon	*mouretii*	(Corb.) Jelenc	
Entosthodon	*muhlenbergii*	(Turner) Fife	
Entosthodon	*obtusus*	(Hedw.) Lindb.	
Entosthodon	*pulchellus*	(H.Philib.) Brugués	
Entosthodon	*schimperi*	Brugués	
Entosthodon	*stenophyllus*	Fedosov & Ignatova	Fedosov *et al*. (2010)
Ephemerum	*cohaerens*	(Hedw.) Hampe	
Ephemerum	*crassinervium*	(Schwägr.) Hampe	Holyoak (2010); Ros *et al*. (2013)
Ephemerum	*crassinervium* subsp. *rutheanum*	(Schimp. in Ruthe) Holyoak	(= *E. hibernicum)* Holyoak (2010); Ros *et al*. (2013)
Ephemerum	*crassinervium* subsp. *sessile*	(Bruch) Holyoak	Holyoak (2010); Ros *et al*. (2013)
Ephemerum	*recurvifolium*	(Dicks.) Boulay	
Ephemerum	*serratum*	(Hedw.) Hampe	*E. minutissimum* Lindb., *E. serratum* var. *minutissimum* (Lindb.) Grout; Ellis & Price (2015)
Ephemerum	*spinulosum*	Bruch & Schimp. ex Schimp.	
Ephemerum	*stoloniferum*	(Hedw.) L.T.Ellis & M.J.Price	*E. serratum* auct., *E. stellatum* H.Philib.; Ellis & Price (2015)
Epipterygium	*tozeri*	(Grev.) Lindb.	
Eucladium	*verticillatum*	(With.) Bruch & Schimp.	Incl. var. *angustifolium* Lindb., which has no taxonomic value (J. Kučera *pers. comm.* Dec. 2018).

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Eurhynchiastrum	*diversifolium*	(Schimp.) J.Guerra	*Eurhynchiastrum pulchellum* var. *diversifolium* (Schimp.) Ochyra & Żarnowiec; Guerra (2016)
Eurhynchiastrum	*pulchellum*	(Hedw.) Ignatov & Huttunen	Including var. *praecox* (Hedw.) Ochyra & Żarnowiec. See Crum & Anderson (1981), Hedenäs & Geissler (1999) and Guerra (2016)
Eurhynchium	*angustirete*	(Broth.) T.J.Kop.	
Eurhynchium	*striatum*	(Hedw.) Schimp.	
Exsertotheca	*baetica*	González-Mancebo, O.Werner, J.Patiño & Ros	Guerra *et al*. (2010); Olsson *et al*. (2011)
Exsertotheca	*crispa*	(Hedw.) S.Olsson, Enroth & D.Quandt	Olsson *et al*. (2011)
Exsertotheca	*intermedia*	(Brid.) S.Olsson, Enroth & D.Quandt	Olsson *et al*. (2011)
Fabronia	*altaica*	Ignatova & Ignatov	Ignatova *et al.* (2017)
Fabronia	*ciliaris*	(Brid.) Brid.	
Fabronia	*major*	De Not.	Ignatova *et al.* (2017)
Fabronia	*pusilla*	Raddi	
Fissidens	*adianthoides*	Hedw.	
Fissidens	*arcticus*	Bryhn	
Fissidens	*arnoldii*	R.Ruthe	
Fissidens	*asplenioides*	Hedw.	
Fissidens	*azoricus*	(P.de la Varde) Bizot	
Fissidens	*bryoides*	Hedw.	
Fissidens	*bryoides* var. *bryoides*		
Fissidens	*bryoides* var. *caespitans*	Schimp.	
Fissidens	*celticus*	Paton	
Fissidens	*coacervatus*	Brugg.-Nann.	
Fissidens	*crassipes*	Wilson ex Bruch & Schimp.	
Fissidens	*crassipes* subsp. *crassipes*		
Fissidens	*crassipes* subsp. *warnstorfii*	(M.Fleisch.) Brugg.-Nann.	
Fissidens	*crispus*	Mont.	
Fissidens	*curvatus*	Hornsch.	
Fissidens	*dubius*	P.Beauv.	
Fissidens	*dubius* var. *dubius*		
Fissidens	*dubius* var. *mucronatus*	(Limpr.) Kartt., Hedenäs & L.Söderstr.	
Fissidens	*exilis*	Hedw.	
Fissidens	*fontanus*	(Bach.Pyl.) Steud.	
Fissidens	*gracilifolius*	Brugg.-Nann. & Nyholm	Intergrades with *F. pusillus* in western Europe, but very different in Russia.
Fissidens	*grandifrons*	Brid.	
Fissidens	*gymnandrus*	Buse	
Fissidens	*incurvus*	Starke ex Röhl.	*F. viridulus* var. *incurvus* (Starke ex Röhl.) Waldh.
Fissidens	*jansenii*	Sérgio & Pursell	
Fissidens	*microstictus*	Dixon & Luisier	
Fissidens	*monguillonii*	Thér.	
Fissidens	*nobreganus*	Dixon & Luisier	
Fissidens	*osmundoides*	Hedw.	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Fissidens	*ovatifolius*	R.Ruthe	
Fissidens	*polyphyllus*	Wilson ex Bruch & Schimp.	
Fissidens	*pusillus*	(Wilson) Milde	Intergrades with *F. gracilifolius* in UK, but very different in Russia.
Fissidens	*rivularis*	(Spruce) Schimp.	
Fissidens	*rufulus*	Bruch & Schimp.	
Fissidens	*serratus*	Müll.Hal.	
Fissidens	*serrulatus*	Brid.	*F. luisieri* P.de la Varde appears to be distinct but further work is necessary. For now we continue to list it as a synonym of *F. serrulatus*, as suggested by Werner *et al.* (2009)
Fissidens	*sublimbatus*	Grout	
Fissidens	*sublineaefolius*	(P.de la Varde) Brugg.-Nann.	
Fissidens	*taxifolius*	Hedw.	Incl. subsp. *pallidicaulis* (Mitt.) Mönk., which is of dubious value, and seems to intergrade completely with subsp. *taxifolius*.
Fissidens	*viridulus*	(Sw. ex anon.) Wahlenb.	
Flexitrichum	*flexicaule*	(Schwägr.) Ignatov & Fedosov	(= *Ditrichum flexicaule* (Schwägr.) Hampe); Fedosov *et al.* (2016)
Flexitrichum	*gracile*	(Mitt.) Ignatov & Fedosov	(= *Ditrichum gracile* (Mitt.) Kuntze); Fedosov *et al.* (2016)
Fontinalis	*antipyretica*	Hedw.	
Fontinalis	*antipyretica* subsp. *antipyretica*		
Fontinalis	*antipyretica* subsp. *bryhnii*	(Limpr.) Podp.	
Fontinalis	*antipyretica* subsp. *gracilis*	(Lindb.) Kindb.	
Fontinalis	*antipyretica* subsp. *kindbergii*	(Renauld & Cardot) Cardot	
Fontinalis	*dalecarlica*	Schimp.	
Fontinalis	*dichelymoides*	Lindb.	
Fontinalis	*hypnoides*	C.Hartm.	
Fontinalis	*hypnoides* var. *duriaei*	(Schimp.) Kindb.	
Fontinalis	*hypnoides* var. *hypnoides*		
Fontinalis	*squamosa*	Hedw.	Incl. var. *curnowii* Cardot (*pers. comm*. V. Hugonnot Nov. 2018) and var. *dixonii* (Cardot) A.J.E.Sm. (Hill *et al*., 2008, Guerra, 2014)
Funaria	*aequidens*	Lindb. ex Broth.	
Funaria	*arctica*	(Berggr.) Kindb.	
Funaria	*hygrometrica*	Hedw.	
Funaria	*microstoma*	Bruch ex Schimp.	
Funariella	*curviseta*	(Schwägr.) Sérgio	
Gigaspermum	*mouretii*	Corb.	
Glyphomitrium	*daviesii*	(Dicks.) Brid.	
Goniomitrium	*seroi*	Casas	
Grimmia	*alpestris*	(F.Weber & D.Mohr) Schleich.	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Grimmia	*anodon*	Bruch & Schimp.	
Grimmia	*anomala*	Hampe ex Schimp.	
Grimmia	*arenaria*	Hampe	
Grimmia	*atrata*	Miel. ex Hornsch.	
Grimmia	*caespiticia*	(Brid.) Jur.	
Grimmia	*capillata*	De Not.	
Grimmia	*crinita*	Brid.	
Grimmia	*crinitoleucophaea*	Cardot	(= *G. poecilostoma* Cardot & Sebille) Muñoz *et al.* (2015)
Grimmia	*curviseta*	Bouman	
Grimmia	*decipiens*	(Schultz) Lindb.	
Grimmia	*dissimulata*	E.Maier	
Grimmia	*donniana*	Sm.	
Grimmia	*elatior*	Bruch ex Bals.-Criv. & De Not.	
Grimmia	*elongata*	Kaulf.	
Grimmia	*funalis*	(Schwägr.) Bruch & Schimp.	
Grimmia	*fuscolutea*	Hook.	
Grimmia	*hartmanii*	Schimp.	
Grimmia	*incurva*	Schwägr.	
Grimmia	*laevigata*	(Brid.) Brid.	
Grimmia	*lisae*	De Not.	
Grimmia	*longirostris*	Hook.	
Grimmia	*meridionalis*	(Müll.Hall.) E.Maier	Maier (2010); Ros *et al*. (2013)
Grimmia	*mollis*	Bruch & Schimp.	
Grimmia	*montana*	Bruch & Schimp.	
Grimmia	*muehlenbeckii*	Schimp.	
Grimmia	*nutans*	Bruch	
Grimmia	*orbicularis*	Bruch ex Wilson	
Grimmia	*ovalis*	(Hedw.) Lindb.	
Grimmia	*plagiopodia*	Hedw.	
Grimmia	*pulvinata*	(Hedw.) Sm.	
Grimmia	*ramondii*	(Lam. & DC.) Margad.	
Grimmia	*reflexidens*	Müll.Hal.	Whether the correct name for this taxon is *G. reflexidens* or *G. sessitana* is still very uncertain, as specialists disagree. See notes on the subject in Porley (2016).
Grimmia	*teretinervis*	Limpr.	
Grimmia	*tergestina*	Tomm. ex Bruch & Schimp.	
Grimmia	*torquata*	Drumm.	
Grimmia	*trichophylla*	Grev.	
Grimmia	*triformis*	Carestia & De Not.	
Grimmia	*ungeri*	Jur.	
Grimmia	*unicolor*	Hook.	
Gymnobarbula	*bicolor*	(Bruch & Schimp.) Jan Kučera	(= *Barbula bicolor* (Bruch & Schimp.) Lindb.)
Gymnostomum	*aeruginosum*	Sm.	
Gymnostomum	*aeruginosum* var. *aeruginosum*		
Gymnostomum	*aeruginosum* var. *obscurum*	J.Guerra	
Gymnostomum	*calcareum*	Nees & Hornsch.	(= *G. lanceolatum* M.J.Cano, Ros & J.Guerra – Sérgio, 2006)

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Gymnostomum	*calcareum* var. *atlanticum*	Sérgio	Sérgio (2006)
Gymnostomum	*calcareum* var. *calcareum*		
Gymnostomum	*viridulum*	Brid.	
Gyroweisia	*reflexa*	(Brid.) Schimp.	
Gyroweisia	*tenuis*	(Hedw.) Schimp.	
Habrodon	*perpusillus*	(De Not.) Lindb.	
Hageniella	*micans*	(Mitt.) B.C.Tan & Y.Jia	
Hamatocaulis	*lapponicus*	(Norrl.) Hedenäs	
Hamatocaulis	*vernicosus*	(Mitt.) Hedenäs	
Haplocladium	*angustifolium*	(Hampe & Müll.Hal.) Broth.	
Haplocladium	*microphyllum*	(Hedw.) Broth.	
Haplocladium	*virginianum*	(Brid.) Broth.	
Hedenasiastrum	*percurrens*	(Hedenäs) Ignatov & Vanderp.	Aigoin *et al*. (2009); Ros *et al*. (2013)
Hedwigia	*ciliata*	(Hedw.) P.Beauv.	
Hedwigia	*emodica*	Hampe ex Müll.Hal.	(= *H. ciliata* var. *leucophaea* Bruch & Schimp.) Ignatova *et al*. (2016)
Hedwigia	*mollis*	Ignatova, Ignatov & Fedosov	Ignatova *et al.* (2016)
Hedwigia	*nemoralis*	Ignatova, Ignatov & Fedosov	Ignatova *et al.* (2016)
Hedwigia	*stellata*	Hedenäs	
Hedwigia	*striata*	(Wilson ex Hook.) John Whitehead & J.Fergusson ex Hobk. & Porritt	Buchbender *et al*. (2014). Authority corrected according to Blockeel & Bosanquet (2016).
Helicodontium	*capillare*	(Hedw.) A.Jaeger	
Helodium	*blandowii*	(F.Weber & D.Mohr) Warnst.	*Elodium blandowii* (F.Weber & D.Mohr) Eckel (Eckel, 2012): preliminary research shows that N. American and European material is not necessarily congeneric (M. Ignatov *pers. comm.* Jan. 2019).
Hennediella	*heimii*	(Hedw.) R.H.Zander	*Tortula rhodonia* R.H.Zander has now been synonymised with this species (Cano, 2008).
Hennediella	*heimii* var. *arctica*	(Lindb.) R.H.Zander	This variety probably has little or no value but is retained for the present (J. Kučera *pers. comm.* Dec. 2018).
Hennediella	*heimii* var. *heimii*		
Hennediella	*macrophylla*	(R.Br.bis) Paris	
Hennediella	*stanfordensis*	(Steere) Blockeel	
Herzogiella	*seligeri*	(Brid.) Z.Iwats.	
Herzogiella	*striatella*	(Brid.) Z.Iwats.	
Herzogiella	*turfacea*	(Lindb.) Z.Iwats.	
Heterocladiella	*dimorpha*	(Brid.) Ignatov & Fedosov	*Heterocladium dimorphum* (Brid.) Schimp. (Ignatov *et al*., 2019)
Heterocladium	*flaccidum*	(Schimp.) A.J.E.Sm.	
Heterocladium	*heteropterum*	(Brid.) Schimp.	
Heterocladium	*wulfsbergii*	I.Hagen	
Heterophyllium	*nemorosum*	(W.D.J.Koch ex Brid.) Kindb.	*Heterophyllium affine* (Hook.) M.Fleisch.

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Hilpertia	*velenovskyi*	(Schiffn.) R.H.Zander	
Homalia	*lusitanica*	Schimp.	
Homalia	*trichomanoides*	(Hedw.) Brid.	
Homalothecium	*aureum*	(Spruce) H.Rob.	
Homalothecium	*lutescens*	(Hedw.) H.Rob.	
Homalothecium	*lutescens* var. *fallax*	(H.Philib. ex Schimp.) Düll	
Homalothecium	*lutescens* var. *lutescens*		
Homalothecium	*mandonii*	(Mitt.)Geh.	Hedenäs *et al.* (2014)
Homalothecium	*meridionale*	(M. Fleisch. & Warnst) Hedenäs	Hedenäs *et al.* (2014)
Homalothecium	*philippeanum*	(Spruce) Schimp.	
Homalothecium	*sericeum*	(Hedw.) Schimp.	
Homomallium	*incurvatum*	(Schrad. ex Brid.) Loeske	
Hookeria	*lucens*	(Hedw.) Sm.	
Hydrogonium	*amplexifolium*	(Mitt.) P.C.Chen	Köckinger & Kučera (2007); Ros *et al*. (2013); (= *Barbula amplexifolia* (Mitt.) A.Jaeger - Kučera *et al.*, 2013)
Hydrogonium	*bolleanum*	(Müll. Hal.) A.Jaeger	(= *Barbula bolleana* (Müll.Hal.) Broth.- Kučera *et al.*, 2013)
Hydrogonium	*consanguineum*	(Thwaites & Mitt.) Hilp.	Köckinger *et al*. (2012); Ros *et al*. (2013); (= *Barbula consanguinea* (Thwaites & Mitt.) A.Jaeger; the European plant is var. *kurilense* (Ignatova & Ignatov) Jan Kučera - Kučera *et al.*, 2013)
Hydrogonium	*croceum*	(Brid.) Jan Kučera	(= *Barbula crocea* (Brid.) F.Weber & D.Mohr - Kučera *et al.*, 2013)
Hygroamblystegium	*fluviatile*	(Hedw.) Loeske	Although synonymised with *H. varium* (Vanderpoorten & Hedenäs, 2009), this taxon is retained pending further work to confirm this conclusion.
Hygroamblystegium	*humile*	(P.Beauv.) Vanderp., Goffinet & Hedenäs	Although synonymised with *H. varium* (Vanderpoorten & Hedenäs, 2009), this taxon is retained pending further work to confirm this conclusion.
Hygroamblystegium	*tenax*	(Hedw.) Jenn.	Although synonymised with *H. varium* (Vanderpoorten & Hedenäs, 2009), this taxon is retained pending further work to confirm this conclusion.
Hygroamblystegium	*varium*	(Hedw.) Mönk.	
Hygrohypnella	*ochracea*	(Turner ex Wilson) Ignatov & Ignatova	*Hygrohypnum ochraceum* (Turner ex Wilson) Loeske (Ignatov & Ignatova, 2004)
Hygrohypnella	*polaris*	(Lindb.) Ignatov & Ignatova	*Hygrohypnum polare* (Lindb.) Loeske (Ignatov & Ignatova, 2004)
Hygrohypnum	*luridum*	(Hedw.) Jenn.	
Hygrohypnum	*styriacum*	(Limpr.) Broth.	
Hylocomiadelphus	*triquetrus*	(Hedw.) Ochyra & Stebel	*Rhytidiadelphus triquetrus* (Hedw.) Warnst.
Hylocomiastrum	*pyrenaicum*	(Spruce) M.Fleisch.	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Hylocomiastrum	*umbratum*	(Hedw.) M.Fleisch.	
Hylocomium	*splendens*	(Hedw.) Schimp.	
Hymenoloma	*compactum*	(Schleich. ex Schwägr.) Ochyra	Werner *et al*. (2013)
Hymenoloma	*crispulum*	(Hedw.) Ochyra	Werner *et al*. (2013)
Hymenoloma	*mulahaceni*	(Höhn.) Ochyra	Werner *et al*. (2013)
Hymenostylium	*gracillimum*	(Nees & Hornsch.) Köckinger & Kučera	Köckinger & Kučera (2011) (= *Gymnostomum boreale* Nyholm & Hedenäs)
Hymenostylium	*recurvirostrum*	(Hedw.) Dixon	Transfer to *Ardeuma recurvirostrum* (Hedw.) R.H.Zander & Hedd. (Zander & Hedderson, 2016) not accepted (Kučera, in prep.)
Hymenostylium	*recurvirostrum* var. *insigne*	(Dixon) E.B.Bartram	Transfer to *Ardeuma annotinum* (Mitt. ex Dixon) R.H. Zander & Brinda (Zander & Brinda, 2016) not accepted (Kučera, in prep.)
Hymenostylium	*recurvirostrum* var. *recurvirostrum*		Transfer to *Ardeuma recurvirostrum* (Hedw.) R.H.Zander & Hedd. (Zander & Hedderson, 2016) not accepted (Kučera, in prep.)
Hymenostylium	*xerophilum*	Köckinger & Kučera	Köckinger & Kučera (2011)
Hyocomium	*armoricum*	(Brid.) Wijk & Margad.	
Hyophila	*involuta*	(Hook.) A.Jaeger	
Hypnum	*andoi*	A.J.E.Sm.	
Hypnum	*cupressiforme*	Hedw.	
Hypnum	*cupressiforme* var. *cupressiforme*		
Hypnum	*cupressiforme* var. *filiforme*	Brid.	
Hypnum	*cupressiforme* var. *heseleri*	(Ando & Higuchi) M.O.Hill	
Hypnum	*cupressiforme* var. *lacunosum*	Brid.	
Hypnum	*cupressiforme* var. *subjulaceum*	Molendo	*H. subjulaceum* Hedenäs, Schlesak & D.Quandt (Schlesak *et al.*, 2018); published by Schlesak *et al.* (2018) as *H. subcomplantatum*, but *H. subjulaceum* Besch. was not validly published, so the use of the name at species level is not blocked; this is corrected in Schlesak *et al*. (2019).
Hypnum	*jutlandicum*	Holmen & E.Warncke	
Hypnum	*resupinatum*	Taylor	(= *H. cupressiforme* var. *resupinatum* (Taylor) Schimp.) This taxon is treated at species level, as it is both distinct morphologically and has a distinct geographical distribution.
Hypnum	*uncinulatum*	Jur.	
Hypopterygium	*tamarisci*	(Sw.) Brid. ex Müll.Hal.	
Imbribryum	*alpinum*	(Huds. ex With.) N.Pedersen	Holyoak & Pedersen (2007)

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Imbribryum	*mildeanum*	(Jur.) J.R.Spence	Holyoak & Pedersen (2007)
Imbribryum	*miniatum*	(Lesq.) J.R.Spence	*Bryum miniatum* Lesq.
Imbribryum	*muehlenbeckii*	(Bruch & Schimp.) N.Pedersen	(= *Bryum muehlenbeckii* Bruch & Schimp.) - Holyoak *pers. comm.* Sept. 2018. This species looks different and has a different general distribution than *I. alpinum* in Scandinavia (L. Hedenäs *pers. comm.* Dec. 2018).
Imbribryum	*subapiculatum*	(Hampe) D.Bell. & Holyoak	*Bryum subapiculatum* Hampe
Imbribryum	*tenuisetum*	(Limpr.) D.Bell & Holyoak	*Bryum tenuisetum* Limpr.
Indusiella	*thianschanica*	Broth. & Müll.Hal.	
Isopterygiopsis	*alpicola*	(Lindb. & Arnell) Hedenäs	
Isopterygiopsis	*muelleriana*	(Schimp.) Z.Iwats.	
Isopterygiopsis	*pulchella*	(Hedw.) Z.Iwats.	
Isopterygium	*tenerum*	(Sw.) Mitt.	
Isothecium	*algarvicum*	W.E.Nicholson & Dixon	
Isothecium	*alopecuroides*	(Lam. ex Dubois) Isov.	
Isothecium	*holtii*	Kindb.	
Isothecium	*interludens*	Stirt.	(= *I. myosuroides* var. *brachythecioides* (Dixon) Braithw. - Hodgetts & Vanderpoorten, 2018)
Isothecium	*montanum*	Draper, Hedenäs, M.Stech, T.Lopes & Sim-Sim	Draper *et al*. (2015)
Isothecium	*myosuroides*	Brid.	Incl. var. *brevinerve* Brid.
Isothecium	*prolixum*	(Mitt.) M.Stech, Sim-Sim, Tangney & D.Quandt	Stech *et al*. (2008); Ros *et al*. (2013)
Iwatsukiella	*leucotricha*	(Mitt.) W.R.Buck & H.A.Crum	
Jaffueliobryum	*latifolium*	Thér.	
Jochenia	*pallescens*	(Hedw.) Hedenäs, Schlesak & D.Quandt	*Hypnum pallescens* (Hedw.) P.Beauv. (Schlesak *et al.*, 2018).
Jochenia	*protuberans*	(Brid.) Jan Kučera & Ignatov	
Kiaeria	*blyttii*	(Bruch & Schimp.) Broth.	
Kiaeria	*falcata*	(Hedw.) I.Hagen	
Kiaeria	*glacialis*	(Berggr.) I.Hagen	
Kiaeria	*riparia*	(H.Lindb.) M.F.V.Corley	
Kiaeria	*starkei*	(F.Weber & D.Mohr) I.Hagen	
Kindbergia	*praelonga*	(Hedw.) Ochyra	
Leptobarbula	*berica*	(De Not.) Schimp.	
Leptobryum	*pyriforme*	(Hedw.) Wilson	
Leptodictyum	*riparium*	(Hedw.) Warnst.	
Leptodon	*corsicus*	Enroth. Sotiaux, D.Quandt & Vanderp.	Sotiaux *et al*. (2009); Ros *et al*. (2013)
Leptodon	*longisetus*	Mont.	*Cryptoleptodon longisetus* (Mont.) Enroth (Olsson *et al*., 2011; Ros *et al*., 2013)
Leptodon	*smithii*	(Hedw.) F.Weber & D.Mohr	
Leptodontium	*flexifolium*	(Dicks.) Hampe	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Leptodontium	*gemmascens*	(Mitt.) Braithw.	
Leptodontium	*proliferum*	Herzog	Porley & Edwards (2010). *Leptodontium proliferum* was reported from a single site in England by Porley & Edwards (2010). No further localities have been discovered, but plants with intermediate characters have been found at another site in England (T. Blockeel *pers. comm.* 2017). The identity of the English material of *L. proliferum* requires further study (T. Blockeel *pers. comm.* Nov. 2018)
Leptodontium	*styriacum*	(Jur.) Limpr.	
Leptotheca	*gaudichaudii*	Schwägr.	
Lescuraea	*incurvata*	(Hedw.) E.Lawton	Ros *et al*. (2013)
Lescuraea	*mutabilis*	(Brid.) Lindb. ex I.Hagen	
Lescuraea	*patens*	Lindb.	Ros *et al*. (2013)
Lescuraea	*plicata*	(Schleich. ex F.Weber & D.Mohr) Broth.	Ros *et al*. (2013)
Lescuraea	*radicosa*	(Mitt.) Mönk.	Ros *et al*. (2013)
Lescuraea	*saviana*	(De Not.) E.Lawton	Ros *et al*. (2013)
Lescuraea	*saxicola*	(Schimp.) Molendo	
Lescuraea	*secunda*	Arnell	
Leskea	*polycarpa*	Hedw.	
Leucobryum	*albidum*	(P.Beauv.) Lindb.	
Leucobryum	*glaucum*	(Hedw.) Ångstr.	
Leucobryum	*juniperoideum*	(Brid.) Müll.Hal.	
Leucodon	*canariensis*	(Brid.) Schwägr.	
Leucodon	*flagellaris*	Lindb. ex Broth.	
Leucodon	*immersus*	Lindb.	
Leucodon	*pendulus*	Lindb.	
Leucodon	*sciuroides*	(Hedw.) Schwägr.	Incl. var. *morensis* (Schwägr.) De Not.
Leucodon	*treleasei*	(Cardot) Paris	
Lewinskya	*acuminata*	(H.Philib.) F.Lara, Garilleti & Goffinet	Lara *et al.* (2016) (= *Orthotrichum acuminatum* H.Philib.)
Lewinskya	*affinis*	(Schrad. ex Brid.) F.Lara, Garilleti & Goffinet	Lara *et al.* (2016) (= *Orthotrichum affine* Schrad. ex Brid.). Incl. *O. affine* var. *bohemicum* Plášek & Sawicki. *L. affinis* var. *bohemica* not combined and not recognised by Lara *et al.* (2016); a new study, in prep., shows that it is not a separate taxon (F. Lara & R. Garilleti *pers. comm.* 2018).
Lewinskya	*breviseta*	(F.Lara, Garilleti & Mazimpaka) F.Lara, Garilleti & Goffinet	Lara *et al.* (2016) (= *Orthotrichum speciosum* var. *brevisetum* F.Lara, Garilleti & Mazimpaka)
Lewinskya	*elegans*	(Schwägr. ex Hook. & Grev.) F.Lara, Garilleti & Goffinet	Fedosov & Doroshina (2018)
Lewinskya	*fastigiata*	(Bruch ex Brid.) Vigalondo, F.Lara & Garilleti	

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Lewinskya	*iberica*	(F.Lara & Mazimpaka) F.Lara, Garilleti & Goffinet	Lara *et al.* (2016) (= *Orthotrichum ibericum* F.Lara & Mazimpaka)
Lewinskya	*iwatsukii*	(Ignatov) F.Lara, Garilleti & Goffinet	Fedosov & Doroshina (2018)
Lewinskya	*laevigata*	(J.E.Zetterst.) F.Lara, Garilleti & Goffinet	Lara *et al.* (2016) (= *Orthotrichum laevigatum* J.E.Zetterst.)
Lewinskya	*lamyana*	F.Lara, Garilleti, Draper & Mazimpaka	Lara *et al.* (2018)
Lewinskya	*pylaisii*	(Brid.) F.Lara, Garilleti & Goffinet	Lara *et al.* (2016) (= *Orthotrichum pylaisii* Brid.)
Lewinskya	*rupestris*	(Schleich. ex Schwägr.) F.Lara, Garilleti & Goffinet	Lara *et al.* (2016) (= *Orthotrichum rupestre* Schleich. ex Schwägr.)
Lewinskya	*shawii*	(Wilson) F.Lara, Garilleti & Goffinet	Lara *et al.* (2016) (= *Orthotrichum shawii* Wilson)
Lewinskya	*sordida*	(Sull. & Lesq. in Austin) F.Lara, Garilleti & Goffinet	Lara *et al.* (2016) (= *Orthotrichum sordidum* Sull. & Lesq. in Austin)
Lewinskya	*speciosa*	(Nees) F.Lara, Garilleti & Goffinet	Lara *et al.* (2016) (= *Orthotrichum speciosum* Nees)
Lewinskya	*striata*	(Hedw.) F.Lara, Garilleti & Goffinet	Lara *et al.* (2016) (= *Orthotrichum striatum* Hedw.)
Lewinskya	*tortidontia*	(F.Lara, Garilleti & Mazimpaka) F.Lara, Garilleti & Goffinet	Lara *et al.* (2016) (= *Orthotrichum tortidontium* F.Lara, Garilleti & Mazimpaka)
Lewinskya	*transcaucasica*	Eckstein, Garilleti & F.Lara	Fedosov *et al.* (2017)
Lewinskya	*vladikavkana*	(Venturi in Husnot) F.Lara, Garilleti & Goffinet	Lara *et al.* (2016) (= *Orthotrichum vladikavkanum* Venturi in Husnot)
Lindbergia	*dagestanica*	Ignatova & Ignatov	Ignatova *et al*. (2010a)
Lindbergia	*grandiretis*	(Lindb. ex Broth.) Ignatov & Ignatova	Ignatova *et al*. (2010a)
Loeskeobryum	*brevirostre*	(Brid.) M.Fleisch.	
Loeskypnum	*badium*	(Hartm.) H.K.G.Paul	
Meesia	*hexasticha*	(Funck) Bruch	
Meesia	*longiseta*	Hedw.	
Meesia	*minor*	Brid.	Hedenäs (2020)
Meesia	*moinutissima*	Hedenäs	Hedenäs (2020)
Meesia	*triquetra*	(L. ex Jolycl.) Ångstr.	
Meesia	*uliginosa*	Hedw.	
Microbryum	*curvicollum*	(Hedw.) R.H.Zander	
Microbryum	*davallianum*	(Sm.) R.H.Zander	
Microbryum	*davallianum* var. *commuataum*	(Limpr.) R.H.Zander	
Microbryum	*davallianum* var. *conicum*	(Schleich. ex Schwägr.) R.H.Zander	
Microbryum	*davallianum* var. *davallianum*		
Microbryum	*floerkeanum*	(F.Weber & D.Mohr) Schimp.	
Microbryum	*fosbergii*	(E.B.Bartram) Ros, O.Werner & Rams	
Microbryum	*longipes*	(J.Guerra, J.J.Martínez & Ros) R.H.Zander	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Microbryum	*rectum*	(With.) R.H.Zander	
Microbryum	*starckeanum*	(Hedw.) R.H.Zander	
Microbryum	*vlassovii*	(Laz.) R.H.Zander	(= *Tortula vlassovii* (Laz.) Ros & Herrnst.); Ros & Herrnstadt (2010); Ros *et al*. (2013)
Microcampylopus	*laevigatus*	(Thér.) Giese & J.-P.Frahm	
Microeurhynchium	*pumilum*	(Wilson) Ignatov & Vanderp.	Aigoin *et al*. (2009); Ros *et al*. (2013)
Microhypnum	*sauteri*	(Schimp.) Jan Kučera & Ignatov	*Anacamptodon sauteri* (Schimp.) Hedenäs, Schlesak & D.Quandt, *Hypnum sauteri* Schimp. (Schlesak *et al*., 2018)
Micromitrium	*tenerum*	(Bruch & Schimp.) Crosby	
Mielichhoferia	*elongata*	(Hoppe & Hornsch. ex Hook.) Hornsch.	
Mielichhoferia	*mielichhoferiana*	(Funck) Loeske	
Mnium	*blyttii*	Bruch & Schimp.	
Mnium	*heterophyllum*	(Hook.) Schwägr.	
Mnium	*hornum*	Hedw.	
Mnium	*lycopodioides*	Schwägr.	
Mnium	*marginatum*	(Dicks.) P.Beauv.	
Mnium	*marginatum* var. *dioicum*	(H.Müll.) Crundw.	
Mnium	*marginatum* var. *marginatum*		
Mnium	*spinosum*	(Voit) Schwägr.	
Mnium	*spinulosum*	Bruch & Schimp.	
Mnium	*stellare*	Hedw.	
Mnium	*thomsonii*	Schimp.	
Molendoa	*hornschuchiana*	(Hook.) Lindb. ex Limpr.	On the recommendation of J. Kučera (*pers. comm.* 2017), we follow Geissler (1985) in thinking *M. sendtneriana* (Bruch & Schimp.) Limpr. and *M. tenuinervis* Limpr. synonyms of *M. hornschuchiana.*
Molendoa	*schliephackei*	(Schlieph.) R.H.Zander	
Molendoa	*taeniatifolia*	Herzog	
Molendoa	*warburgii*	(Crundw. & M.O.Hill) R.H.Zander	
Myrinia	*pulvinata*	(Wahlenb.) Schimp.	
Myurella	*julacea*	(Schwägr.) Schimp.	
Myurella	*sibirica*	(Müll.Hal.) Reimers	
Myurella	*tenerrima*	(Brid.) Lindb.	
Myurium	*hochstetteri*	(Schimp.) Kindb.	
Myuroclada	*longiramea*	(Müll. Hal.) M. Li, Y.-F. Wang, Ignatov & Huttunen	Ignatov *et al.* (2015)
Myuroclada	*maximowiczii*	(G.G.Borshch.) Steere & W.B.Schofield	
Neckera	*cephalonica*	Jur. & Unger	
Neckera	*menziesii*	Drumm.	
Neckera	*oligocarpa*	Bruch	
Neckera	*pennata*	Hedw.	
Neckera	*pumila*	Hedw.	

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Nobregaea	*latinervis*	Hedenäs	
Nogopterium	*gracile*	(Hedw.) Crosby & W.R.Buck	Crosby & Buck (2011)
Nyholmiella	*gymnostoma*	(Bruch ex Brid.) Holmen & Warncke	Goffinet *et al*. (2004)
Nyholmiella	*obtusifolia*	(Brid.) Holmen & Warncke	Goffinet *et al*. (2004)
Oedipodiella	*australis*	(Wager & Dixon) Dixon	
Oedipodium	*griffithianum*	(Dicks.) Schwägr.	
Oligotrichum	*hercynicum*	(Hedw.) Lam. & DC.	
Oncophorus	*demetrii*	(Renauld & Cardot) Hedenäs	Hedenäs (2018)
Oncophorus	*dendrophilus*	Hedd. & Blockeel	Hedderson & Blockeel (2006); Ros *et al*. (2013)
Oncophorus	*elongatus*	(I.Hagen) Hedenäs	
Oncophorus	*integerrimus*	Hedenäs	
Oncophorus	*virens*	(Hedw.) Brid.	
Oncophorus	*wahlenbergii*	Brid.	Incl. var. *compactus* (Bruch & Schimp.) Braithw. (Hedenäs, 2018)
Oreas	*martiana*	(Hoppe & Hornsch.) Brid.	
Oreoweisia	*torquescens*	(Hornsch. ex Brid.) Wijk & Margad.	
Orthodontium	*gracile*	(Wilson) Schwägr. ex Bruch & Schimp.	
Orthodontium	*lineare*	Schwägr.	
Orthodontium	*pellucens*	(Hook.) Bruch & Schimp.	
Ortholimnobium	*handelii*	C.Schröck & J.T.Wynns	*Plagiothecium handelii* Broth. (Wynns & Schröck, 2018)
Orthothecium	*chryseon*	(Schwägr.) Schimp.	
Orthothecium	*intricatum*	(Hartm.) Schimp.	
Orthothecium	*lapponicum*	(Schimp.) C.Hartm.	
Orthothecium	*rufescens*	(Dicks. ex Brid.) Schimp.	
Orthothecium	*strictum*	Lorentz	
Orthotrichum	*alpestre*	Bruch & Schimp.	
Orthotrichum	*anomalum*	Hedw.	
Orthotrichum	*bistratosum*	(Schiffn.) Guerra	(= *O. cupulatum* var. *bistratosum* Schiffn.) Guerra (1985)
Orthotrichum	*callistomum*	Fisch.-Oost. ex Bruch & Schimp.	
Orthotrichum	*cambrense*	Bosanquet & F.Lara	Bosanquet & Lara (2012)
Orthotrichum	*casasianum*	F.Lara, Garilleti & Mazimpaka	
Orthotrichum	*columbicum*	Mitt.	Separated from *O. consimile* Mitt. (Medina *et al*., 2012)
Orthotrichum	*comosum*	F. Lara, R. Medina & Garilleti	Medina *et al*. (2013)
Orthotrichum	*consobrinum*	Cardot	Lara *et al*. (2009); Ros *et al*. (2013)
Orthotrichum	*crenulatum*	Mitt.	
Orthotrichum	*cupulatum*	Hoffm. ex Brid.	
Orthotrichum	*cupulatum* var. *cupulatum*		
Orthotrichum	*cupulatum* var. *fuscum*	(Venturi) Boulay	

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Orthotrichum	*cupulatum* var. *riparium*	Huebener	
Orthotrichum	*dagestanicum*	Fedosov & Ignatova	Fedosov & Ignatova (2010)
Orthotrichum	*dentatum*	T.Kiebacher & Lüth	
Orthotrichum	*diaphanum*	Schrad. ex Brid.	
Orthotrichum	*handiense*	F.Lara, Garilleti & Mazimpaka	
Orthotrichum	*hispanicum*	F.Lara, Garilleti & Mazimpaka	
Orthotrichum	*macrocephalum*	F.Lara, Garilleti & Mazimpaka	
Orthotrichum	*microcarpum*	De Not.	
Orthotrichum	*moravicum*	Plášek & Sawicki	Plášek *et al*. (2009)
Orthotrichum	*pallens*	Bruch ex Brid.	
Orthotrichum	*patens*	Bruch ex Brid.	
Orthotrichum	*pellucidum*	Lindb.	
Orthotrichum	*philibertii*	Venturi	
Orthotrichum	*pulchellum*	Brunt.	
Orthotrichum	*pumilum*	Sw. ex anon.	
Orthotrichum	*rivulare*	Turner	
Orthotrichum	*rogeri*	Brid.	
Orthotrichum	*scanicum*	Gronvall	
Orthotrichum	*shevockii*	Lewinsky-Haapasaari & D.H.Norris	Vigalondo *et al.* (2019)
Orthotrichum	*schimperi*	Hammar	
Orthotrichum	*sibiricum*	(Grönvall) Warnst.	(= *O. holmenii* Lewinsky-Haapasaari - Fedosov *et al.*, 2017)
Orthotrichum	*sprucei*	Mont.	
Orthotrichum	*stellatum*	Brid.	
Orthotrichum	*stramineum*	Hornsch. ex Brid.	
Orthotrichum	*tenellum*	Bruch ex Brid.	
Orthotrichum	*urnigerum*	Myrin	
Orthotrichum	*vittii*	F.Lara, Garilleti & Mazimpaka	
Oxyrrhynchium	*hians*	(Hedw.) Loeske	
Oxyrrhynchium	*schleicheri*	(R.Hedw.) Röll	
Oxyrrhynchium	*speciosum*	(Brid.) Warnst.	
Palamocladium	*euchloron*	(Müll.Hal.) Wijk & Margad.	
Paludella	*squarrosa*	(Hedw.) Brid.	
Palustriella	*commutata*	(Hedw.) Ochyra	
Palustriella	*decipiens*	(De Not.) Ochyra	
Palustriella	*falcata*	(Brid.) Hedenäs	*P. pluristratosa* now synonymised with this species (Hedenäs, 2010).
Paraleucobryum	*enerve*	(Thed.) Loeske	
Paraleucobryum	*longifolium*	(Hedw.) Loeske	
Paraleucobryum	*sauteri*	(Bruch & Schimp.) Loeske	
Pelekium	*atlanticum*	(Hedenäs) Hedenäs	
Pelekium	*minutulum*	(Hedw.) Touw	
Philonotis	*caespitosa*	Jur.	
Philonotis	*calcarea*	(Bruch & Schimp.) Schimp.	
Philonotis	*capillaris*	Lindb.	Koponen & Isoviita (2010); Ros *et al*. (2013)

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Philonotis	*cernua*	(Wilson) D.G.Griffin & W.R.Buck	
Philonotis	*falcata*	(Hook.) Mitt.	Ignatov *et al*. (2010)
Philonotis	*fontana*	(Hedw.) Brid.	
Philonotis	*hastata*	(Duby) Wijk & Margad.	
Philonotis	*marchica*	(Hedw.) Brid.	
Philonotis	*rigida*	Brid.	
Philonotis	*seriata*	Mitt.	
Philonotis	*tomentella*	Molendo	
Philonotis	*uncinata*	(Schwägr.) Brid.	
Philonotis	*yezoana*	Besch. & Cardot	
Physcomitrium	*arenicola*	Laz.	
Physcomitrium	*eurystomum*	Sendtn.	
Physcomitrium	*eurystomum* subsp. *acuminatum*	(Bruch & Schimp.) Giacom.	As in Hill *et al.* (2006), *Physcomitrium eurystomum* subsp. *acuminatum* is treated as a species in the Polish checklist (Ochyra *et al*., 2003) but as a synonym of subsp. *eurystomum* in the alpine countries from which it was described. It is in any case regared as a dubious taxon by many.
Physcomitrium	*eurystomum* subsp. *eurystomum*		
Physcomitrium	*patens*	(Hedw.) Mitt.	(= *Aphanorrhegma patens* (Hedw.) Lindb., *Physcomitrella patens* (Hedw.) Bruch & Schimp.)
Physcomitrium	*pyriforme*	(Hedw.) Bruch & Schimp.	
Physcomitrium	*readeri*	Müll.Hal.	*Physcomitridium readeri* (Müll.Hal.) G.Roth; Hooper *et al*. (2010); Ellis *et al*. (2013)
Physcomitrium	*sphaericum*	(C.F.Ludw. ex Schkuhr) Brid.	
Physcomitrium	x *stevensonii*	D.A.Callaghan	(*Physcomitrium patens* x *P. eurystomum*) Callaghan *et al*. (2020)
Plagiomnium	*affine*	(Blandow ex Funck) T.J.Kop.	This and the other species of *Plagiomnium* were transferred to *Orthomnion* by Koponen & Sun (2017), but there is currently a proposal to conserve the name *Plagiomnium* (Ochyra *et al*., 2017). Consequently, *Plagiomnium* is retained.
Plagiomnium	*confertidens*	(Lindb. & Arnell) T.J.Kop.	
Plagiomnium	*curvatulum*	(Lindb.) Schljakov	
Plagiomnium	*cuspidatum*	(Hedw.) T.J.Kop.	
Plagiomnium	*drummondii*	(Bruch & Schimp.) T.J.Kop.	
Plagiomnium	*elatum*	(Bruch & Schimp.) T.J.Kop.	
Plagiomnium	*ellipticum*	(Brid.) T.J.Kop.	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Plagiomnium	*medium*	(Bruch & Schimp.) T.J.Kop.	
Plagiomnium	*rostratum*	(Schrad.) T.J.Kop.	
Plagiomnium	*undulatum*	(Hedw.) T.J.Kop.	
Plagiomnium	*undulatum* var. *madeirense*	T.J.Kop. & Sérgio	
Plagiomnium	*undulatum* var. *undulatum*		
Plagiopus	*oederianus*	(Sw.) H.A.Crum & L.E.Anderson	
Plagiopus	*oederianus* var. *alpinus*	(Schwägr.) Ochyra	
Plagiopus	*oederianus* var. *oederianus*		
Plagiothecium	*berggrenianum*	Frisvoll	
Plagiothecium	*cavifolium*	(Brid.) Z.Iwats.	
Plagiothecium	*curvifolium*	Schlieph. ex Limpr.	
Plagiothecium	*denticulatum*	(Hedw.) Schimp.	
Plagiothecium	*denticulatum* var. *denticulatum*		
Plagiothecium	*denticulatum* var. *obtusifolium*	(Turner) Moore	
Plagiothecium	*denticulatum* var. *undulatum*	R.Ruthe ex Geh.	(= *P. ruthei* Limpr.)
Plagiothecium	*laetum*	Schimp.	
Plagiothecium	*latebricola*	Schimp.	
Plagiothecium	*neckeroideum*	Schimp.	
Plagiothecium	*nemorale*	(Mitt.) A.Jaeger	
Plagiothecium	*piliferum*	(Sw.) Schimp.	
Plagiothecium	*platyphyllum*	Mönk.	
Plagiothecium	*rossicum*	Ignatov & Ignatova	Ignatova *et al*. (2019)
Plagiothecium	*succulentum*	(Wilson) Lindb.	
Plagiothecium	*svalbardense*	Frisvoll	
Plagiothecium	*undulatum*	(Hedw.) Schimp.	
Plasteurhynchium	*meridionale*	(Schimp.) M.Fleisch.	
Plasteurhynchium	*striatulum*	(Spruce) M.Fleisch.	
Platydictya	*jungermannioides*	(Brid.) H.A.Crum	
Platygyrium	*repens*	(Brid.) Schimp.	
Platyhypnum	*alpestre*	(Hedw.) Ochyra	*Hygrohypnum alpestre* (Hedw.) Loeske (Ochyra, 2013)
Platyhypnum	*alpinum*	(Lindb.) Loeske	*Hygrohypnum alpinum* (Lindb.) Loeske
Platyhypnum	*cochlearifolium*	(Venturi) Ochyra	*Hygrohypnum cochlearifolium* (Venturi) Broth. (Ochyra, 2013)
Platyhypnum	*duriusculum*	(De Not.) Ochyra	*Hygrohypnum duriusculum* (De Not.) D.W.Jamieson (Ochyra, 2013)
Platyhypnum	*molle*	(Dicks. ex Hedw.) Loeske	*Hygrohypnum molle* (Dicks. ex Hedw.) Loeske
Platyhypnum	*norvegicum*	(Schimp.) Ochyra	*Hygrohypnum norvegicum* (Schimp.) J.J.Amann (Ochyra, 2013)
Platyhypnum	*smithii*	(Sw.) Ochyra	*Hygrohypnum smithii* (Sw.) Broth. (Ochyra, 2013)

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Platyhypnum	*tatrense*	(Váňa) Hedenäs & Ignatov	*Ochyraea tatrensis* Váňa. Moved to *Platyhypnum* as a n. comb. but may prove to be conspecific with *P. smithii.*
Plenogemma	*phyllantha*	(Brid.) Sawicki, Plášek & Ochyra	(= *Ulota phyllantha* Brid. - Plášek *et al.* (2015). According to Lara & Garilleti (*pers. comm.* 2018) there is strong molecular evidence for this generic placement.
Pleuridium	*acuminatum*	Lindb.	
Pleuridium	*subulatum*	(Hedw.) Rabenh.	
Pleurozium	*schreberi*	(Willd. ex Brid.) Mitt.	
Pogonatum	*aloides*	(Hedw.) P.Beauv.	
Pogonatum	*dentatum*	(Menzies ex Brid.) Brid.	
Pogonatum	*nanum*	(Hedw.) P.Beauv.	
Pogonatum	*neesii*	(Müll.Hal.) Dozy	
Pogonatum	*urnigerum*	(Hedw.) P.Beauv.	
Pohlia	*andalusica*	(Höhn.) Broth.	
Pohlia	*andrewsii*	A.J.Shaw	
Pohlia	*annotina*	(Hedw.) Lindb.	
Pohlia	*atropurpurea*	(Wahlenb.) H.Lindb.	
Pohlia	*beringiensis*	A.J.Shaw	Ignatov *et al*. (2006)
Pohlia	*bolanderi*	(Lesq.) Broth.	
Pohlia	*bulbifera*	(Warnst.) Warnst.	
Pohlia	*camptotrachela*	(Renauld & Cardot) Broth.	
Pohlia	*cruda*	(Hedw.) Lindb.	
Pohlia	*crudoides*	(Sull. & Lesq.) Broth.	
Pohlia	*drummondii*	(Müll.Hal.) A.L.Andrews	
Pohlia	*elongata*	Hedw.	
Pohlia	*elongata* var. *acuminata*	(Hornsch.) Huebener	
Pohlia	*elongata* var. *elongata*		
Pohlia	*elongata* var. *greenii*	(Brid.) A.J.Shaw	
Pohlia	*erecta*	Lindb.	
Pohlia	*filum*	(Schimp.) Martensson	
Pohlia	*flexuosa*	Harv.	
Pohlia	*flexuosa* var. *flexuosa*		
Pohlia	*flexuosa* var. *pseudomuyldermansii*	(Arts, Nordhorn-Richter & A.J.E.Sm.) A.J.E.Sm.	
Pohlia	*lescuriana*	(Sull.) Ochi	
Pohlia	*longicolla*	(Hedw.) Lindb.	
Pohlia	*ludwigii*	(Spreng. ex Schwägr.) Broth.	
Pohlia	*lutescens*	(Limpr.) H.Lindb.	
Pohlia	*melanodon*	(Brid.) A.J.Shaw	
Pohlia	*nutans*	(Hedw.) Lindb.	
Pohlia	*nutans* subsp. *nutans*		
Pohlia	*nutans* subsp. *schimperi*	(Müll.Hal.) Nyholm	
Pohlia	*obtusifolia*	(Vill. ex Brid.) L.F.Koch	
Pohlia	*proligera*	(Kindb.) Lindb. ex Broth.	
Pohlia	*scotica*	Crundw.	
Pohlia	*sphagnicola*	(Bruch & Schimp.) Broth.	
Pohlia	*tundrae*	A.J.Shaw	
Pohlia	*vexans*	(Limpr.) H.Lindb.	

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Pohlia	*wahlenbergii*	(F.Weber & D.Mohr) A.L.Andrews	
Pohlia	*wahlenbergii* var. *calcarea*	(Warnst.) E.F.Warb.	Many bryologists doubt the value of this variety.
Pohlia	*wahlenbergii* var. *glacialis*	(Brid.) E.F.Warb.	
Pohlia	*wahlenbergii* var. *wahlenbergii*		
Polytrichastrum	*alpinum*	(Hedw.) G.L.Sm.	
Polytrichastrum	*altaicum*	Ignatov & G.L.Smith Merrill	Ivanova *et al.* (2014)
Polytrichastrum	*fragile*	(Bryhn) Schljakov	Ivanova *et al.* (2014)
Polytrichastrum	*septentrionale*	(Brid.) E.I.Ivanova, N.E.Bell & Ignatov	Ivanova *et al.* (2014)
Polytrichastrum	*sexangulare*	(Brid.) G.L.Sm.	
Polytrichastrum	*sphaerothecium*	(Besch.) J.-P.Frahm	
Polytrichum	*commune*	Hedw.	Included as *P. uliginosum* (Wallr.) Schriebl by Hill *et al.* (2006). N. Bell *pers. comm.* Nov. 2018
Polytrichum	*densifolium*	Wilson ex Mitt.	Ivanova *et al.* (2015)
Polytrichum	*formosum*	Hedw.	Bell & Hyvönen (2010)
Polytrichum	*hyperboreum*	R.Br.	
Polytrichum	*jensenii*	I.Hagen	
Polytrichum	*juniperinum*	Hedw.	
Polytrichum	*longisetum*	Sw. ex Brid.	Bell & Hyvönen (2010)
Polytrichum	*pallidisetum*	Funck	Bell & Hyvönen (2010)
Polytrichum	*perigoniale*	Michx.	N. Bell *pers. comm.* Nov. 2018
Polytrichum	*piliferum*	Hedw.	
Polytrichum	*strictum*	Menzies ex Brid.	
Polytrichum	*swartzii*	Hartm.	
Pottiopsis	*caespitosa*	(Brid.) Blockeel & A.J.E.Sm.	This taxon includes *Trichostomum triumphans* & *Weissia tyrrhena,* according to Ros & Werner (2007)
Pseudanomodon	*attenuatus*	(Hedw.) Ignatov & Fedosov	*Anomodon attenuatus* (Hedw.) Huebener
Pseudephemerum	*nitidum*	(Hedw.) Loeske	
Pseudoamblystegium	*subtile*	(Hedw.) Vanderp. & Hedenäs	Vanderpoorten & Hedenäs (2009)
Pseudobryum	*cinclidioides*	(Huebener) T.J.Kop.	
Pseudocampylium	*radicale*	(P.Beauv.) Vanderp. & Hedenäs	
Pseudocrossidium	*hornschuchianum*	(Schultz) R.H.Zander	
Pseudocrossidium	*obtusulum*	(Lindb.) H.A.Crum & L.E.Anderson	Preliminary molecular studies suggest that this species may be conspecific with *P. hornschuchianum* (J. Kučera *pers. comm.* Dec. 2018).
Pseudocrossidium	*replicatum*	(Taylor) R.H.Zander	Preliminary molecular studies suggest that this species may be conspecific with *P. hornschuchianum* (J. Kučera *pers. comm.* Dec. 2018).
Pseudocrossidium	*revolutum*	(Brid.) R.H.Zander	
Pseudohygrohypnum	*eugyrium*	(Schimp.) Kanda	*Hygrohypnum eugyrium* (Schimp.) Broth.; (Kanda, 1976)

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Pseudohygrohypnum	*fertile*	(Sendtn.) Jan Kučera & Ignatov	No useful DNA could be extracted for this species during the recent revision by Schlesak *et al*. (2018). Now in *Pseudohygrohypnum* on molecular evidence (Kučera *et al*., 2019).
Pseudohygrohypnum	*subeugyrium*	(Renauld & Cardot) Ignatov & Ignatova	*Hygrohypnum subeugyrium* (Renauld & Cardot) Broth. (Ignatov & Ignatova, 2004).
Pseudoleskeella	*catenulata*	(Brid. ex Schrad.) Kindb.	
Pseudoleskeella	*nervosa*	(Brid.) Nyholm	
Pseudoleskeella	*papillosa*	(Lindb.) Kindb.	
Pseudoleskeella	*rupestris*	(Berggr.) Hedenäs & L.Söderstr.	
Pseudoleskeella	*tectorum*	(Funck ex Brid.) Kindb. ex Broth.	
Pseudoleskeopsis	*artariae*	(Thér.) Thér.	*Pseudoleskea artariae* Thér. The type of *Pseudoleskea* is *P. atrovirens* (= *P. incurvata*), now in *Lescuraea,* so it is impossible to have *P. artariae* as the sole representative of the genus. Therefore we return this taxon to the genus *Pseudoleskeopsis* pending further studies.
Pseudomalia	*webbiana*	(Mont.) Enroth	*Homalia webbiana* (Mont.) Schimp. Taxonomic position previously considered uncertain (Olsson *et al*., 2009), but transferred to *Pseudomalia* (Echinodiaceae) by Enroth *et al.* (2019).
Pseudorhynchostegiella	*duriaei*	(Mont.) Ignatov & Vanderp.	Aigoin *et al*. (2009)
Pseudoscleropodium	*purum*	(Hedw.) M.Fleisch.	
Pseudostereodon	*procerrimus*	(Molendo) M.Fleisch.	(= *Hypnum procerrimum* Molendo, *Ctenidium procerrimum* (Molendo) Lindb.; Câmara *et al.*, 2018)
Pseudotaxiphyllum	*elegans*	(Brid.) Z.Iwats.	
Pseudotaxiphyllum	*laetevirens*	(Dixon & Luisier ex F.Koppe & Düll) Hedenäs	
Psilopilum	*cavifolium*	(Wilson) I.Hagen	
Psilopilum	*laevigatum*	(Wahlenb.) Lindb.	
Pterigynandrum	*filiforme*	Hedw.	Incl. var. *majus* (De Not.) De Not.
Pterygoneurum	*kozlovii*	Laz.	
Pterygoneurum	*lamellatum*	(Lindb.) Jur.	
Pterygoneurum	*ovatum*	(Hedw.) Dixon	(= *P. compactum* M.J.Cano, J.Guerra & Ros, *P. crossidioides* W.Frey, Herrnst. & Kürschner & *P. squamosum* Segarra & Kürschner - Guerra *et al.,* 2006). However, no molecular data have been provided to support this view (J. Kučera *pers. comm.* Dec. 2018).
Pterygoneurum	*papillosum*	Oesau	

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Pterygoneurum	*sampaianum*	(Guim.) Guim.	
Pterygoneurum	*subsessile*	(Brid.) Jur.	
Ptilium	*crista-castrensis*	(Hedw.) De Not.	
Ptychomitrium	*incurvum*	(Schwägr.) Spruce	
Ptychomitrium	*nigrescens*	(Kunze) Wijk & Margad.	
Ptychomitrium	*polyphyllum*	(Dicks. ex Sw.) Bruch & Schimp.	
Ptychostomum	*arcticum*	(R.Br.) J.R.Spence ex Holyoak & N.Pedersen	Holyoak & Pedersen (2007)
Ptychostomum	*austriacum*	(Köckinger, Holyoak & Suanjak) D.Bell & Holyoak	*Bryum austriacum* Köckinger, Holyoak & Suanjak; Köckinger *et al*. (2013)
Ptychostomum	*bornholmense*	(Wink. & R.Ruthe) Holyoak & N.Pedersen	Holyoak & Pedersen (2007)
Ptychostomum	*calophyllum*	(R.Br.) J.R.Spence	*Bryum calophyllum* R.Br.
Ptychostomum	*capillare*	(Hedw.) Holyoak & N.Pedersen	Holyoak & Pedersen (2007)
Ptychostomum	*cellulare*	(Hook.) D.Bell & Holyoak	*Bryum cellulare* Hook.
Ptychostomum	*cernuum*	(Hedw.) Hornsch.	(= *Bryum uliginosum*); Holyoak & Pedersen (2007)
Ptychostomum	*compactum*	Hornsch.	(= *Bryum algovicum*); Holyoak & Pedersen (2007)
Ptychostomum	*compactum* var. *compactum*		
Ptychostomum	*compactum* var. *rutheanum*	(Warnst.) Holyoak & N.Pedersen	Holyoak & Pedersen (2007)
Ptychostomum	*creberrimum*	(Taylor) J.R.Spence & H.P.Ramsay	Holyoak & Pedersen (2007)
Ptychostomum	*cryophilum*	(Mårtensson) J.R.Spence	*Bryum cryophilum* Mårtensson
Ptychostomum	*cyclophyllum*	(Schwägr.) J.R.Spence	Holyoak & Pedersen (2007)
Ptychostomum	*demissum*	(Hook.) Holyoak & N.Pedersen	Holyoak & Pedersen (2007)
Ptychostomum	*donianum*	(Grev.) Holyoak & N.Pedersen	Holyoak & Pedersen (2007)
Ptychostomum	*elegans*	(Nees in Brid.) Holyoak	*Bryum elegans* Nees

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Ptychostomum	*funkii*	(Schwägr.) J.R.Spence	*Bryum funkii* Schwägr. The spelling *funkii* was used in *Index Muscorum*, but it has been corrected to *funckii* in some recent European lists because it commemorates Heinrich Christian Funck (1771–1839) (the spelling used in *e.g.* Frahm & Eggers, 2001: 121, *Lexikon Deutschsprachiger Bryologen*). Although at first sight this appears to be correction of an orthographical error (under ICBN Art. 60.1) and congruent with the orthography of *Marsupella funckii* and *Funckia* named in honour of the same botanist, Funk or Funck himself apparently used both spellings of his name (H. Köckinger, *in litt.*) so there is no need to change established usage (D. Holyoak, *pers. comm.* May 2018).
Ptychostomum	*imbricatulum*	(Müll.Hal.) Holyoak & N.Pedersen	(= *Bryum caespiticium*); Holyoak & Pedersen (2007)
Ptychostomum	*inclinatum*	(Sw. ex Brid.) J.R.Spence	(= *P. archangelicum* (Bruch & Schimp.) J.R.Spence) - Holyoak *pers. comm.* Sept. 2018.
Ptychostomum	*intermedium*	(Brid.) J.R.Spence	*Bryum intermedium* (Brid.) Blandow
Ptychostomum	*knowltonii*	(Barnes) J.R.Spence	*Bryum knowltonii* Barnes
Ptychostomum	*kunzei*	(Hornsch.) J.R.Spence	*Bryum kunzei* Hornsch.
Ptychostomum	*longisetum*	(Blandow ex Schwägr.) J.R.Spence	Holyoak & Pedersen (2007)
Ptychostomum	*minii*	(Podp. ex Guim.) D.Bell & Holyoak	*Bryum minii* Podp. ex Guim.
Ptychostomum	*moravicum*	(Podp.) Ros & Mazimpaka	Holyoak & Pedersen (2007)
Ptychostomum	*pallens*	(Sw.) J.R.Spence	Holyoak & Pedersen (2007). *Bryum sibiricum* Lindb. & Arnell; the only collection of *B. sibiricum* was in East Caucasus in Dagestan (Ignatov *et al.*, 2010). This record was omitted in the moss flora of Russia (Ignatov *et al.*, 2018a).
Ptychostomum	*pallescens*	(Schleich. ex Schwägr.) J.R.Spence	(= *P. boreale* (F.Weber & D.Mohr) Ochyra & Bednarek-Ochyra) - Holyoak *pers. comm.* Sept. 2018 & Ochyra & Bednarek-Ochyra (2015).
Ptychostomum	*pseudotriquetrum*	(Hedw.) J.R.Spence & H.P.Ramsay	Holyoak & Pedersen (2007)
Ptychostomum	*pseudotriquetrum* var. *bimum*	(Schreb.) Holyoak & N.Pedersen	Holyoak & Pedersen (2007)
Ptychostomum	*pseudotriquetrum* var. *pseudotriquetrum*		Holyoak & Pedersen (2007)

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Ptychostomum	*rubens*	(Mitt.) Holyoak & N.Pedersen	Holyoak & Pedersen (2007)
Ptychostomum	*salinum*	(I.Hagen ex Limpr.) J.R.Spence	*Bryum salinum* I.Hagen ex Limpr.
Ptychostomum	*schleicheri*	(DC.) J.R.Spence ex D.Bell & Holyoak	*Bryum schleicheri* DC.
Ptychostomum	*schleicheri* var. *latifolium*	(Schwägr.) D.Bell & Holyoak	*Bryum schleicheri* var. *latifolium* (Schwägr.) Kindb.
Ptychostomum	*schleicheri* var. *schleicheri*		
Ptychostomum	*torquescens*	(Bruch & Schimp.) Ros & Mazimpaka	Holyoak & Pedersen (2007)
Ptychostomum	*turbinatum*	(Hedw.) J.R.Spence	*Bryum turbinatum* (Hedw.) Turner
Ptychostomum	*warneum*	(Röhl.) J.R.Spence	*Bryum warneum* (Röhl.) Brid.
Ptychostomum	*weigelii*	(Biehler) J.R.Spence	*Bryum weigelii* Spreng.
Ptychostomum	*wrightii*	(Sull. & Lesq.) J.R.Spence	*Bryum wrightii* Sull. & Lesq.
Ptychostomum	*zieri*	(Hedw.) Holyoak & N.Pedersen	Holyoak & Pedersen (2007)
Pulvigera	*lyellii*	(Hook. & Taylor) Plášek, Sawicki & Ochyra	(= *Orthotrichum lyellii* Hook. & Taylor; Plášek *et al.*, 2015). According to Lara & Garilleti (*pers. comm.* 2018) there is strong molecular evidence for this generic placement.
Pylaisia	*polyantha*	(Hedw.) Schimp.	
Pylaisia	*selwynii*	Kindb.	
Pyramidula	*tetragona*	(Brid.) Brid.	
Racomitrium	*aciculare*	(Hedw.) Brid.	
Racomitrium	*affine*	(F.Weber & D.Mohr) Lindb.	
Racomitrium	*aquaticum*	(Brid. ex Schrad.) Brid.	
Racomitrium	*canescens*	(Hedw.) Brid.	
Racomitrium	*canescens* subsp. *canescens*		
Racomitrium	*canescens* subsp. *latifolium*	(C.E.O.Jensen) Frisvoll	
Racomitrium	*ellipticum*	(Turner) Bruch & Schimp.	
Racomitrium	*elongatum*	Ehrh. ex Frisvoll	
Racomitrium	*ericoides*	(Brid.) Brid.	
Racomitrium	*fasciculare*	(Hedw.) Brid.	
Racomitrium	*hespericum*	Sérgio, J.Muñoz & Ochyra	
Racomitrium	*heterostichum*	(Hedw.) Brid.	
Racomitrium	*himalayanum*	(Mitt.) A.Jaeger	
Racomitrium	*lamprocarpum*	(Müll.Hal.) A.Jaeger	
Racomitrium	*lanuginosum*	(Hedw.) Brid.	
Racomitrium	*lusitanicum*	Ochyra & Sérgio	
Racomitrium	*macounii*	Kindb.	
Racomitrium	*macounii* subsp. *alpinum*	(E.Lawton) Frisvoll	
Racomitrium	*macounii* subsp. *macounii*		
Racomitrium	*microcarpon*	(Hedw.) Brid.	
Racomitrium	*nivale*	(Köckinger, Bednarek-Ochyra & Ochyra) Köckinger	(= *Bucklandiella nivalis*); Köckinger *et al*. (2007, 2008)

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Racomitrium	*obtusum*	(Brid.) Brid.	
Racomitrium	*panschii*	(Müll.Hal.) Kindb.	
Racomitrium	*sudeticum*	(Funck) Bruch & Schimp.	
Rhabdoweisia	*crenulata*	(Mitt.) H.Jameson	
Rhabdoweisia	*crispata*	(Dicks.) Lindb.	
Rhabdoweisia	*fugax*	(Hedw.) Bruch & Schimp.	
Rhamphidium	*purpuratum*	Mitt.	
Rhizomnium	*andrewsianum*	(Steere) T.J.Kop.	
Rhizomnium	*gracile*	T.J.Kop.	
Rhizomnium	*magnifolium*	(Horik.) T.J.Kop.	
Rhizomnium	*pseudopunctatum*	(Bruch & Schimp.) T.J.Kop.	
Rhizomnium	*punctatum*	(Hedw.) T.J.Kop.	
Rhizomnium	*punctatum* var. *hermanperssonii*	T.J.Kop.	Koponen (2017)
Rhizomnium	*punctatum* var. *punctatum*		
Rhodobryum	*ontariense*	(Kindb.) Kindb.	
Rhodobryum	*roseum*	(Hedw.) Limpr.	
Rhynchostegiella	*azorica*	Hedenäs & Vanderp.	Vanderpoorten *et al.* (2015)
Rhynchostegiella	*bourgaeana*	(Mitt.) Broth.	
Rhynchostegiella	*curviseta*	(Brid.) Limpr.	
Rhynchostegiella	*litorea*	(De Not.) Limpr.	incl. *R. tenella* var. *meridionalis* (Boulay) Zodda - Guerra *et al.* (2014); Patiño *et al.* (2017)
Rhynchostegiella	*pseudolitorea*	Hedenäs & J.Patiño	Patiño *et al.* (2017)
Rhynchostegiella	*tenella*	(Dicks.) Limpr.	
Rhynchostegiella	*teneriffae*	(Mont.) Dirkse & Bouman	*R. macilenta* (Renauld & Cardot) Cardot synonymised with *R. teneriffae* by Patiño *et al.* (2017). *R. jacquinii* (Garov.) Limpr. and *R. teesdalei* (Schimp.) Limpr. treated as synonyms pending further work (Patiño *et al.*, 2017).
Rhynchostegiella	*trichophylla*	Dirkse & Bouman	
Rhynchostegiella	*tubulosa*	Hedenäs & J.Patiño	Patiño *et al.* (2017)
Rhynchostegium	*alopecuroides*	(Brid.) A.J.E.Sm.	Huttunen & Ignatov (2010); Ros *et al*. (2013). Also *P. mutatum* Ochyra & Vanderp. (Hutsemékers *et al.*, 2012)
Rhynchostegium	*confertum*	(Dicks.) Schimp.	
Rhynchostegium	*confusum*	K.Cezón, J.Muñoz, Hedenäs & Huttunen	Cezón *et al*. (2010); Ros *et al*. (2013)
Rhynchostegium	*megapolitanum*	(Blandow ex F.Weber & D.Mohr) Schimp.	
Rhynchostegium	*murale*	(Hedw.) Schimp.	Incl. *R. arcticum* (I.Hagen) Ignatov & Huttunen, according to recent molecular work (M. Ignatov *pers. comm.* Dec. 2018).

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Rhynchostegium	*riparioides*	(Hedw.) Cardot	Werner *et al*. (2007); Huttunen & Ignatov (2010); Ros *et al*. (2013). Incl. *Platyhypnidium grolleanum* Ochyra & Bednarek-Ochyra, following Kučera *et al.* (2012). Also *P. torrenticola* (Ochyra, C.Schmidt & Bültmann) Ochyra & Bednarek-Ochyra (Hutsemékers *et al.*, 2012).
Rhynchostegium	*rotundifolium*	(Scop. ex Brid.) Schimp.	
Rhynchostegium	*strongylense*	(Bott.) W.R.Buck & Privitera	
Rhytidiadelphus	*loreus*	(Hedw.) Warnst.	
Rhytidiadelphus	*squarrosus*	(Hedw.) Warnst.	
Rhytidiadelphus	*subpinnatus*	(Lindb.) T.J.Kop.	
Rhytidium	*rugosum*	(Hedw.) Kindb.	
Roaldia	*dolomitica*	(Milde) Hedenäs, Schlesak & D.Quandt	*Hypnum revolutum* (Mitt.) Lindb. var. *dolomiticum* (Milde) Mönk. While this taxon is regarded as 'mere morphological variation' by Câmara *et al.* (2018), it is treated as a full species by Schlesak *et al.* (2018).
Roaldia	*revoluta*	(Mitt.) P.E.A.S.Câmara & M.Carvalho-Silva	Câmara *et al.* (2018)
Saelania	*glaucescens*	(Hedw.) Broth.	
Sanionia	*nivalis*	Hedenäs	(= *S. georgicouncinata* sens. Eur. non (Müll.Hal.) Ochyra & Hedenäs) (Hedenäs, 2012)
Sanionia	*orthothecioides*	(Lindb.) Loeske	
Sanionia	*uncinata*	(Hedw.) Loeske	
Sarmentypnum	*exannulatum*	(Schimp.) Hedenäs	Hedenäs (2006)
Sarmentypnum	*procerum*	(Renauld & Arnell) Hedenäs	(= *Warnstorfia procera* (Renauld & Arnell) Tuom - Hedenäs *et al.*, 2014)
Sarmentypnum	*sarmentosum*	(Wahlenb.) Tuom. & T.J.Kop.	Hedenäs (2006)
Sarmentypnum	*trichophyllum*	(Warnst.) Hedenäs	(= *Warnstorfia trichophylla* (Warnst.) Tuom. & T.J.Kop. - Hedenäs *et al.*, 2014)
Sarmentypnum	*tundrae*	(Arnell) Hedenäs	(= *Warnstorfia tundrae* (Arnell) Loeske - Hedenäs *et al.*, 2014)
Schistidium	*abrupticostatum*	(Bryhn) Ignatova & H.H.Blom	Ignatova *et al*. (2010b)
Schistidium	*agassizii*	Sull. & Lesq.	
Schistidium	*andreaeopsis*	(Müll.Hal.) Laz.	Blom *et al.* (2006)
Schistidium	*apocarpum*	(Hedw.) Bruch & Schimp.	
Schistidium	*atrichum*	(Müll.Hal. & Kindb.) W.A.Weber	Chavoutier & Hugonnot (2013)
Schistidium	*atrofuscum*	(Schimp.) Limpr.	
Schistidium	*boreale*	Poelt	
Schistidium	*brunnescens*	Limpr.	
Schistidium	*brunnescens* subsp. *brunnescens*		

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Schistidium	*brunnescens* subsp. *griseum*	(Nees & Hornsch.) H.H.Blom	
Schistidium	*bryhnii*	I.Hagen	
Schistidium	*canadense*	(Dupr.) Ignatova & H.H.Blom	Ignatova *et al*. (2010b)
Schistidium	*confertum*	(Funck) Bruch & Schimp.	
Schistidium	*confusum*	H.H.Blom	
Schistidium	*convergens*	J.Guerra & M.J.Cano	Guerra *et al.* (2019)
Schistidium	*crassipilum*	H.H.Blom	
Schistidium	*crenatum*	H.H.Blom	
Schistidium	*dupretii*	(Thér.) W.A.Weber	
Schistidium	*echinatum*	Ignatova & H.H.Blom	Ignatova *et al*. (2010b)
Schistidium	*elegantulum*	H.H.Blom	
Schistidium	*elegantulum* subsp. *elegantulum*		
Schistidium	*elegantulum* subsp. *wilsonii*	H.H.Blom	
Schistidium	*flaccidum*	(De Not.) Ochyra	
Schistidium	*flexipile*	(Lindb. ex Broth.) G.Roth	
Schistidium	*frigidum*	H.H.Blom	
Schistidium	*frigidum* var. *frigidum*		
Schistidium	*frigidum* var. *havaasii*	H.H.Blom	
Schistidium	*frisvollianum*	H.H.Blom	
Schistidium	*grande*	Poelt	
Schistidium	*grandirete*	H.H.Blom	
Schistidium	*helveticum*	(Schkuhr) Deguchi	
Schistidium	*holmenianum*	Steere & Brassard	
Schistidium	*lancifolium*	(Kindb.) H.H.Blom	
Schistidium	*marginale*	H.H.Blom, Bednarek-Ochyra & Ochyra	Blom *et al.* (2016)
Schistidium	*maritimum*	(Sm. ex R.Scott) Bruch & Schimp.	
Schistidium	*maritimum* subsp. *maritimum*		
Schistidium	*maritimum* subsp. *piliferum*	(I.Hagen) B.Bremer	
Schistidium	*memnonium*	J.Guerra	Guerra *et al*. (2020)
Schistidium	*obscurum*	H.H.Blom, Köckinger & Ignatova	Ignatova *et al*. (2010b)
Schistidium	*occidentale*	(E.Lawton) S.P.Churchill	
Schistidium	*papillosum*	Culm.	
Schistidium	*platyphyllum*	(Mitt.) H.Perss.	
Schistidium	*poeltii*	H.H.Blom	
Schistidium	*pruinosum*	(Wilson ex Schimp.) G.Roth	
Schistidium	*pulchrum*	H.H.Blom	
Schistidium	*recurvum*	H.H.Blom	
Schistidium	*rivulare*	(Brid.) Podp.	
Schistidium	*robustum*	(Nees & Hornsch.) H.H.Blom	
Schistidium	*scandicum*	H.H.Blom	
Schistidium	*sibiricum*	Ignatova & H.H.Blom	Ignatova *et al*. (2010b)
Schistidium	*sinensiapocarpum*	(Müll.Hal.) Ochyra	
Schistidium	*sordidum*	I.Hagen	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Schistidium	*spinosum*	H.H.Blom & Lüth	
Schistidium	*strictum*	(Turner) Loeske ex Martensson	
Schistidium	*subconfertum*	(Broth.) Deguchi	H. Blom *pers. comm*. Dec. 2018.
Schistidium	*subflaccidum*	(Kindb.) H.H.Blom	Blom *et al*. (2006)
Schistidium	*subjulaceum*	H.H.Blom	
Schistidium	*submuticum*	H.H.Blom	
Schistidium	*submuticum* subsp. *arcticum*	H.H.Blom	
Schistidium	*submuticum* subsp. *submuticum*		
Schistidium	*succulentum*	Ignatova & H.H.Blom	Ignatova *et al*. (2010b)
Schistidium	*tenerum*	(J.E.Zetterst.) Nyholm	
Schistidium	*tenuinerve*	Ignatova & H.H.Blom	Ignatova *et al*. (2010b)
Schistidium	*trichodon*	(Brid.) Poelt	
Schistidium	*trichodon* var. *nutans*	H.H.Blom	
Schistidium	*trichodon* var. *trichodon*		
Schistidium	*umbrosum*	(J.E.Zetterst.) H.H.Blom	
Schistidium	*venetum*	H.H.Blom	
Schistostega	*pennata*	(Hedw.) F.Weber & D.Mohr	
Schizymenium	*pontevedrense*	(Luisier) Sérgio, Casas, Cros & Brugués	
Sciuro-hypnum	*curtum*	(Lindb.) Ignatov	Ignatov & Milyutina (2007a); Ros *et al*. (2013)
Sciuro-hypnum	*dovrense*	(Limpr.) Draper & Hedenäs	Draper & Hedenäs (2009)
Sciuro-hypnum	*flotowianum*	(Sendtn.) Ignatov & Huttunen	
Sciuro-hypnum	*glaciale*	(Schimp.) Ignatov & Huttunen	
Sciuro-hypnum	*latifolium*	(Kindb.) Ignatov & Huttunen	
Sciuro-hypnum	*oedipodium*	(Mitt.) Ignatov & Huttunen	
Sciuro-hypnum	*ornellanum*	(Molendo) Ignatov & Huttunen	
Sciuro-hypnum	*plumosum*	(Hedw.) Ignatov & Huttunen	
Sciuro-hypnum	*populeum*	(Hedw.) Ignatov & Huttunen	
Sciuro-hypnum	*reflexum*	(Starke) Ignatov & Huttunen	
Sciuro-hypnum	*starkei*	(Brid.) Ignatov & Huttunen	
Sciuro-hypnum	*tromsoeense*	(Kaurin & Arnell) Draper & Hedenäs	Draper & Hedenäs (2008); Ros *et al*. (2013)
Scleropodium	*cespitans*	(Wilson ex Müll.Hal.) L.F.Koch	
Scleropodium	*touretii*	(Brid.) L.F.Koch	
Scopelophila	*cataractae*	(Mitt.) Broth.	
Scopelophila	*ligulata*	(Spruce) Spruce	
Scorpidium	*cossonii*	(Schimp.) Hedenäs	
Scorpidium	*revolvens*	(Sw. ex anon.) Rubers	
Scorpidium	*scorpioides*	(Hedw.) Limpr.	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Scorpiurium	*circinatum*	(Bruch) M.Fleisch. & Loeske	
Scorpiurium	*deflexifolium*	(Solms) M.Fleisch. & Loeske	
Scorpiurium	*sendtneri*	(Schimp.) M.Fleisch.	
Seligeria	*acutifolia*	Lindb.	
Seligeria	*austriaca*	T.Schauer	
Seligeria	*brevifolia*	(Lindb.) Lindb.	
Seligeria	*calcarea*	(Hedw.) Bruch & Schimp.	
Seligeria	*calycina*	Mitt. ex Lindb.	
Seligeria	*carniolica*	(Breidl. & Beck) Nyholm	
Seligeria	*donniana*	(Sm.) Müll.Hal.	Incl. *S. galinae* Mogensen & I.Goldberg (Fedosov *et al.*, 2017)
Seligeria	*irrigata*	(H.K.G.Paul) Ochyra & Gos	
Seligeria	*oelandica*	C.E.O.Jensen & Medelius	
Seligeria	*patula*	(Lindb.) I.Hagen	
Seligeria	*pusilla*	(Hedw.) Bruch & Schimp.	
Seligeria	*trifaria*	(Brid.) Lindb.	*S. trifaria* var. *longifolia* (Lindb. ex Broth) Ochyra & Gos
Seligeria	*trifaria* var. *longifolia*	(Lindb. ex Broth.) Ochyra & Gos	
Seligeria	*trifaria* var. *trifaria*		
Seligeria	*tristichoides*	Kindb.	
Sematophyllum	*adnatum*	(Michx.) E.Britton	
Sematophyllum	*demissum*	(Wilson) Mitt.	
Sematophyllum	*substrumulosum*	(Hampe) E.Britton	
Serpoleskea	*confervoides*	(Brid.) Schimp.	Vanderpoorten & Hedenäs (2009); Ros *et al*. (2013)
Sphagnum	*affine*	Renauld & Cardot	Incl. var. *flagellare* (Schlieph. ex Röll) L.Söderstr. & Hedenäs (Séneca & Söderström, 2009) - K-I Flatberg *pers. comm.* Nov. 2018
Sphagnum	*angermanicum*	Melin	
Sphagnum	*angustifolium*	(C.E.O.Jensen ex Russow) C.E.O.Jensen	
Sphagnum	*annulatum*	H.Lindb. ex Warnst.	
Sphagnum	*aongstroemii*	C.Hartm.	
Sphagnum	*arcticum*	Flatberg & Frisvoll	
Sphagnum	*auriculatum*	Schimp.	
Sphagnum	*austinii*	Sull.	
Sphagnum	*balticum*	(Russow) C.E.O.Jensen	
Sphagnum	*beothuk*	R.E.Andrus	Andrus (2006)
Sphagnum	*capillifolium*	(Ehrh.) Hedw.	
Sphagnum	*centrale*	C.E.O.Jensen	
Sphagnum	*compactum*	Lam. & DC.	
Sphagnum	*concinnum*	(Berggr.) Flatberg	*S. fimbriatum* subsp. *concinnum* (Berggr.) Flatberg & Frisvoll (Shaw *et al.*, 2012)
Sphagnum	*contortum*	Schultz	
Sphagnum	*cuspidatum*	Ehrh. ex Hoffm.	
Sphagnum	*cuspidatum* var. *cuspidatum*		

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Sphagnum	*cuspidatum* var. *viride*	(Flatberg) Lönnell & Hassel	*Sphagnum viride* Flatberg
Sphagnum	*divinum*	Flatberg & Hassel	Hassel *et al.* (2018)
Sphagnum	*fallax*	(H.Klinggr.) H.Klinggr.	
Sphagnum	*fallax* var. *brevifolium*	(Lindb. ex Braithw.) Lönnell & Hassel	*S. brevifolium* (Lindb. ex Braithw.) Röll
Sphagnum	*fallax* var. *fallax*		
Sphagnum	*fallax* var. *isoviitae*	(Flatberg) Lönnell & Hassel	*S. isoviitae* Flatberg
Sphagnum	*fimbriatum*	Wilson	
Sphagnum	*flexuosum*	Dozy & Molk.	
Sphagnum	*fuscum*	(Schimp.) H.Klinggr.	
Sphagnum	*girgensohnii*	Russow	
Sphagnum	*inundatum*	Russow	
Sphagnum	*jensenii*	H.Lindb.	
Sphagnum	*lenense*	H.Lindb. ex L.I.Savicz	
Sphagnum	*lindbergii*	Schimp.	
Sphagnum	*magellanicum s.l.*	Brid.	*S. magellanicum s.s.* is now confined to S. America; the European taxa are *S. divinum* and *S. medium* (Hassel *et al.*, 2018).
Sphagnum	*majus*	(Russow) C.E.O.Jensen	
Sphagnum	*majus* subsp. *majus*		
Sphagnum	*majus* subsp. *norvegicum*	Flatberg	
Sphagnum	*medium*	Limpr.	Hassel *et al.* (2018)
Sphagnum	*mirum*	Flatberg & Thingsgaard	Laine *et al.* (2018)
Sphagnum	*molle*	Sull.	
Sphagnum	*nitidulum*	Warnst.	Séneca & Söderström (2009)
Sphagnum	*obtusum*	Warnst.	
Sphagnum	*olafii*	Flatberg	
Sphagnum	*palustre*	L.	
Sphagnum	*papillosum*	Lindb.	
Sphagnum	*platyphyllum*	(Lindb. ex Braithw.) Warnst.	
Sphagnum	*pulchrum*	(Lindb. ex Braithw.) Warnst.	
Sphagnum	*pylaesii*	Brid.	
Sphagnum	*quinquefarium*	(Braithw.) Warnst.	
Sphagnum	*recurvum*	P.Beauv.	Séneca & Söderström (2009); Ros *et al*. (2013)
Sphagnum	*riparium*	Ångstr.	
Sphagnum	*rubellum*	Wilson	
Sphagnum	*rubiginosum*	Flatberg	
Sphagnum	*russowii*	Warnst.	
Sphagnum	*skyense*	Flatberg	
Sphagnum	*squarrosum*	Crome	
Sphagnum	*strictum*	Sull.	
Sphagnum	*subfulvum*	Sjors	
Sphagnum	*subfulvum* subsp. *purpureum*	Flatberg	
Sphagnum	*subfulvum* subsp. *subfulvum*		
Sphagnum	*subnitens*	Russow & Warnst.	
Sphagnum	*subnitens* subsp. *ferrugineum*	Flatberg	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Sphagnum	*subnitens* subsp. *subnitens*		
Sphagnum	*subsecundum*	Nees	
Sphagnum	*tenellum*	(Brid.) Pers. ex Brid.	
Sphagnum	*teres*	(Schimp.) Ångstr.	
Sphagnum	*tescorum*	Flatberg	
Sphagnum	*troendelagicum*	Flatberg	
Sphagnum	*tundrae*	Flatberg	
Sphagnum	*venustum*	Flatberg	Flatberg (2008)
Sphagnum	*warnstorfii*	Russow	
Sphagnum	*wulfianum*	Girg.	
Splachnobryum	*obtusum*	(Brid.) Müll.Hal.	
Splachnum	*ampullaceum*	Hedw.	
Splachnum	*luteum*	Hedw.	
Splachnum	*melanocaulon*	(Wahlenb.) Schwägr.	
Splachnum	*pensylvanicum*	(Brid.) Grout ex H.A.Crum	
Splachnum	*rubrum*	Hedw.	
Splachnum	*sphaericum*	Hedw.	
Splachnum	*vasculosum*	Hedw.	
Stegonia	*latifolia*	(Schwägr.) Venturi ex Broth.	
Stegonia	*latifolia* var. *latifolia*		
Stegonia	*latifolia* var. *pilifera*	(Brid.) Broth.	Reinstated on the advice of Köckinger and Kučera (*pers. comm.* March 2019).
Stereodon	*aemulans*	(Breidl.) Broth.	Species described from Austria omitted by Hill *et al.* (2006) but inserted into list on the advice of Harald Zechmeister, Heribert Köckinger and Christian Schröck (*pers. comm.* January 2013). Morphological evidence suggests this species should be in *Stereodon*.
Stereodon	*callichrous*	(Brid.) Lindb.	*Hypnum callichroum* Brid. (Schlesak *et al.*, 2018)
Stereodon	*hamulosus*	(Schimp.) Lindb.	*Hypnum hamulosum* Schimp. (Schlesak *et al.*, 2018)
Stereodon	*holmenii*	(Ando) Ignatov & Igantova	*Hypnum holmenii* Ando (Schlesak *et al.*, 2018)
Stereodon	*pratensis*	(W.D.J.Koch ex Spruce) Warnst.	*Breidleria pratensis* (W.D.J.Koch ex Spruce) Loeske (Schlesak *et al.*, 2018)
Stereodon	*subimponens*	(Lesq.) Broth.	*Hypnum subimponens* Lesq. (Schlesak *et al.*, 2018)
Straminergon	*stramineum*	(Dicks. ex Brid.) Hedenäs	
Streblotrichum	*convolutum*	(Hedw.) P.Beauv.	(= *Barbula convoluta* Hedw. - Kučera *et al.*, 2013)
Streblotrichum	*convolutum* var. *commutatum*	(Jur.) J.J.Amann	(= *Barbula convoluta* var. *sardoa* Schimp. - Kučera *et al.*, 2013, *S. commutatum* (Jur.) Hilp.)
Streblotrichum	*convolutum* var. *convolutum*		
Streblotrichum	*enderesii*	(Garov.) Loeske	(= *Barbula enderesii* Garov. - Kučera *et al.*, 2013)

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Syntrichia	*bogotensis*	(Hampe) R.H.Zander	
Syntrichia	*calcicola*	J.J.Amann	Incl. *S. glabra* J.-P.Frahm & M.T.Gallego
Syntrichia	*caninervis*	Mitt.	
Syntrichia	*caninervis* var. *abranchesii*	(Luisier) R.H.Zander	
Syntrichia	*caninervis* var. *astrakhanica*	Ignatov, Ignatova & Suragina	
Syntrichia	*caninervis* var. *caninervis*		
Syntrichia	*caninervis* var. *gypsophila*	(J.J.Amann ex G.Roth) Ochyra	
Syntrichia	*echinata*	(Schiffn.) Herrnst. & Ben-Sasson	
Syntrichia	*fragilis*	(Taylor) Ochyra	
Syntrichia	*handelii*	(Schiffn.) S.Agnew & Vondr.	
Syntrichia	*laevipila*	Brid.	*S. pagorum* Milde may be a good species, but more work is needed (Afonina *et al.*, 2014)
Syntrichia	*latifolia*	(Bruch ex Hartm.) Huebener	
Syntrichia	*minor*	(Bizot) M.T.Gallego, J.Guerra, M.J.Cano, Ros & Sánchez-Moya	
Syntrichia	*montana*	Nees	
Syntrichia	*montana* var. *calva*	(Durieu & Sagot ex Bruch & Schimp.) J.J.Amann	
Syntrichia	*montana* var. *montana*		
Syntrichia	*norvegica*	F.Weber	
Syntrichia	*papillosa*	(Wilson) Jur.	
Syntrichia	*papillosissima*	(Copp.) Loeske	
Syntrichia	*princeps*	(De Not.) Mitt.	
Syntrichia	*rigescens*	(Broth. & Geh.) Ochyra	
Syntrichia	*ruraliformis*	(Besch.) Mans	*S. ruralis* var. *ruraliformis* (Besch) Delogne
Syntrichia	*ruralis*	(Hedw.) F.Weber & D.Mohr	
Syntrichia	*ruralis* var. *epilosa*	(Venturi) J.J.Amann	Gallego *et al.* (2018)
Syntrichia	*ruralis* var. *ruralis*		
Syntrichia	*sinensis*	(Müll.Hal.) Ochyra	
Syntrichia	*submontana*	(Broth.) Ochyra	Afonina *et al.* (2014)
Syntrichia	*subpapillosissima*	(Bizot & R.B.Pierrot ex W.A.Kramer) M.T.Gallego & J.Guerra	
Syntrichia	*virescens*	(De Not.) Ochyra	
Taxiphyllum	*densifolium*	(Lindb. ex Broth.) Reimers	
Taxiphyllum	*wissgrillii*	(Garov.) Wijk & Margad.	
Tayloria	*acuminata*	Hornsch.	
Tayloria	*froelichiana*	(Hedw.) Mitt. ex Broth.	
Tayloria	*hornschuchii*	(Grev. & Arn.) Broth.	
Tayloria	*lingulata*	(Dicks.) Lindb.	
Tayloria	*rudolphiana*	(Garov.) Bruch & Schimp.	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Tayloria	*serrata*	(Hedw.) Bruch & Schimp.	
Tayloria	*splachnoides*	(Schleich. ex Schwägr.) Hook.	
Tayloria	*tenuis*	(Dicks.) Schimp.	
Tetraphis	*pellucida*	Hedw.	
Tetraplodon	*angustatus*	(Hedw.) Bruch & Schimp.	
Tetraplodon	*blyttii*	Frisvoll	
Tetraplodon	*mnioides*	(Hedw.) Bruch & Schimp.	
Tetraplodon	*pallidus*	I.Hagen	
Tetraplodon	*paradoxus*	(R.Br.) I.Hagen	
Tetraplodon	*urceolatus*	(Hedw.) Bruch & Schimp.	
Tetrastichium	*fontanum*	(Mitt.) Cardot	
Tetrastichium	*virens*	(Cardot) S.P.Churchill	
Tetrodontium	*brownianum*	(Dicks.) Schwägr.	
Tetrodontium	*ovatum*	(Funck) Schwägr.	
Tetrodontium	*repandum*	(Funck) Schwägr.	
Thamnobryum	*alopecurum*	(Hedw.) Gangulee	
Thamnobryum	*angustifolium*	(Holt) Nieuwl.	Furness and Gilbert (1980) showed that *Thamnobryum angustifolium* maintains its characters distinct from *Thamnobryum alopecurum* in culture. There are at least three distinct morphological features that distinguish this species from *Thamnobryum alopecurum*. Hodgetts and Blockeel (1992) considered it to be more closely related to *Thamnobryum cataractarum* and the Madeiran *Thamnobryum fernandesii* than to *Thamnobryum alopecurum*. However, more recent molecular work by Olsson *et al*. (2009) suggests that, while *Thamnobryum angustifolium* is undoubtedly a distinct entity morphologically, colonies of this plant (and of the other narrowly endemic *Thamnobryum* species) may originate from the surrounding subpopulations of *Thamnobryum alopecurum*. In this case, the two subpopulations of *Thamnobryum angustifolium* are independently derived from local *Thamnobryum alopecurum*, and have evolved convergently in response to the rheophilous habitat (Blockeel *et al*., 2014).

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Thamnobryum	*cataractarum*	N.G.Hodgetts & Blockeel	Olsson *et al*. (2009) used molecular techniques to suggest that, like *Thamnobryum angustifolium*, *Thamnobryum cataractarum* may be a local derivative of *Thamnobryum alopecurum*, evolving convergently in response to its habitat (Blockeel *et al*., 2014).
Thamnobryum	*fernandesii*	Sérgio	Recent molecular work by Olsson *et al*. (2009) suggests that while *Thamnobryum fernandesii* is a distinct entity, colonies may, like *Thamnobryum angustifolium* and *Thamnobryum cataractarum*, originate from surrounding colonies of *Thamnobryum alopecurum*.
Thamnobryum	*maderense*	(Kindb.) Hedenäs	
Thamnobryum	*neckeroides*	(Hook.) E.Lawton	
Thamnobryum	*rudolphianum*	Mastracci	
Thamnobryum	*subserratum*	(Hook. ex Harv.) Nog. & Z.Iwats.	Ignatova & Ignatov (2011); Abolina (2011); Köckinger *et al*. (2008)
Thuidiopsis	*sparsa*	(Hook.f. & Wilson) Broth.	
Thuidium	*assimile*	(Mitt.) A.Jaeger	
Thuidium	*delicatulum*	(Hedw.) Schimp.	
Thuidium	*recognitum*	(Hedw.) Lindb.	
Thuidium	*tamariscinum*	(Hedw.) Schimp.	
Timmia	*austriaca*	Hedw.	
Timmia	*bavarica*	Hessl.	
Timmia	*comata*	Lindb. & Arnell	
Timmia	*megapolitana*	Hedw.	
Timmia	*norvegica*	J.E.Zetterst.	
Timmia	*sibirica*	Lindb. & Arnell	
Timmiella	*anomala*	(Bruch & Schimp.) Limpr.	
Timmiella	*barbuloides*	(Brid.) Mönk.	
Timmiella	*flexiseta*	(Bruch) Limpr.	
Tomentypnum	*nitens*	(Hedw.) Loeske	
Tortella	*alpicola*	Dixon	
Tortella	x *cuspidatissima*	(Cardot & Thér.) O.Werner, Köckinger & Ros	Ellis *et al.* (2011) (as *T. arctica* (Arnold) Crundw. & Nyholm) (Werner *et al*., 2014)
Tortella	*densa*	(Lorentz & Molendo) Crundw. & Nyholm	(= *T. inclinata* var. *densa* (Lorenz & Molendo) Limpr.). There is now molecular evidence that this should be re-elevated to species level (Hedenäs, 2015)
Tortella	*fasciculata*	(Culm.) Culm.	(*T. bambergeri* (Schimp.) Broth. p.p. - Köckinger & Hedenäs, 2017)
Tortella	*flavovirens*	(Bruch) Broth.	Inc. *T. limosella* (Stirt.) P.W.Richards & E.C.Wallace, which was probably just a form of this species.

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Tortella	*flavovirens* var. *flavovirens*		
Tortella	*flavovirens* var. *glareicola*	(T.A.Chr.) Crundw. & Nyholm	
Tortella	*flavovirens* var. *papillosissima*	Sérgio & Casas	
Tortella	*fragilis*	(Hook. & Wilson) Limpr.	
Tortella	*humilis*	(Hedw.) Jenn.	
Tortella	*inclinata*	(R.Hedw.) Limpr.	
Tortella	*inflexa*	(Bruch) Broth.	
Tortella	*limbata*	(Schiffn.) Geh. & Herzog	
Tortella	*mediterranea*	Köckinger, Lüth, O.Werner & Ros	Köckinger *et al.* (2018)
Tortella	*nitida*	(Lindb.) Broth.	
Tortella	*pseudofragilis*	(Thér.) Köckinger & Hedenäs	(*T. bambergeri* p.p. - Köckinger & Hedenäs 2017)
Tortella	*rigens*	Alberts.	
Tortella	*spitsbergensis*	(Bizot & Thér.) O.Werner, Köckinger & Ros	(= *Trichostomum arcticum* Kaal.) Werner *et al*. (2014)
Tortella	*squarrosa*	(Brid.) Limpr.	Werner *et al*. (2005); Grundmann *et al*. (2006); Ros *et al*. (2013)
Tortella	*tortuosa*	(Hedw.) Limpr.	
Tortula	*acaulon*	(With.) R.H.Zander	Zander (1993); Werner *et al*. (2002, 2004); Ros *et al*. (2013)
Tortula	*acaulon* var. *acaulon*		Zander (1993); Werner *et al*. (2002, 2004); Ros *et al*. (2013)
Tortula	*acaulon* var. *papillosa*	(Lindb.) R.H.Zander	Zander (1993); Werner *et al*. (2002, 2004); Ros *et al*. (2013)
Tortula	*acaulon* var. *pilifera*	(Hedw.) R.H.Zander	Zander (1993); Werner *et al*. (2002, 2004); Ros *et al*. (2013)
Tortula	*acaulon* var. *retortifolia*	(J.Guerra & Ros) R.H.Zander	Zander (1993); Werner *et al*. (2002, 2004); Ros *et al*. (2013)
Tortula	*acaulon* var. *schreberiana*	(Dicks.) R.H.Zander	Zander (1993); Werner *et al*. (2002, 2004); Ros *et al*. (2013)
Tortula	*amplexa*	(Lesq.) Steere	
Tortula	*ampliretis*	Crundw. & D.G.Long	
Tortula	*atrovirens*	(Sm.) Lindb.	
Tortula	*bogosica*	(Müll.Hal.) R.H.Zander	
Tortula	*bolanderi*	(Lesq. & James) M.Howe	
Tortula	*brevissima*	Schiffn.	
Tortula	*canescens*	Mont.	
Tortula	*caucasica*	Broth.	(= *T. modica*) Ros *et al*. (2008); Ros & Herrnstadt (2010); Ros *et al*. (2013)
Tortula	*cernua*	(Huebener) Lindb.	
Tortula	*cuneifolia*	(Dicks.) Turner	
Tortula	*freibergii*	Dixon & Loeske	
Tortula	*guepinii*	(Bruch & Schimp.) Broth.	
Tortula	*hoppeana*	(Schultz) Ochyra	
Tortula	*inermis*	(Brid.) Mont.	
Tortula	*israelis*	Bizot & F.Bilewsky	
Tortula	*laureri*	(Schultz) Lindb.	
Tortula	*leucostoma*	(R.Br.) Hook. & Grev.	
Tortula	*lindbergii*	Broth.	(= *T. lanceola*) Ros *et al*. (2008); Ros *et al*. (2013)

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Tortula	*lingulata*	Lindb.	
Tortula	*marginata*	(Bruch & Schimp.) Spruce	
Tortula	*mucronifolia*	Schwägr.	
Tortula	*muralis*	Hedw.	
Tortula	*muralis* subsp. *muralis*		Incl. var. *aestiva* Hedw.
Tortula	*muralis* subsp. *obtusifolia*	(Schwägr.) Culm.	Košnar & Kolář (2009); Ros *et al*. (2013)
Tortula	*pallida*	(Lindb.) R.H.Zander	
Tortula	*protobryoides*	R.H.Zander	Zander (1993); Werner *et al*. (2002, 2004); Ros *et al*. (2013)
Tortula	*randii*	(Kenn.) R.H.Zander	
Tortula	*revolvens*	(Schimp.) G.Roth	
Tortula	*schimperi*	M.J.Cano, O.Werner & J.Guerra	
Tortula	*solmsii*	(Schimp.) Limpr.	
Tortula	*subulata*	Hedw.	
Tortula	*systylia*	(Schimp.) Lindb.	
Tortula	*truncata*	(Hedw.) Mitt.	
Tortula	*ucrainica*	(Laz.) R.H.Zander	
Tortula	*vahliana*	(Schultz) Mont.	
Tortula	*viridifolia*	(Mitt.) Blockeel & A.J.E.Sm.	
Tortula	*wilsonii*	(Hook.) R.H.Zander	
Trachycystis	*ussuriensis*	(Maack & Regel) T.J.Kop.	
Trematodon	*ambiguus*	(Hedw.) Hornsch.	
Trematodon	*brevicollis*	Hornsch.	
Trematodon	*laetevirens*	Hakelier & J.-P.Frahm	
Trematodon	*longicollis*	Michx.	
Trematodon	*perssoniorum*	P.Allorge & Thér. ex V.Allorge	
Trichodon	*cylindricus*	(Hedw.) Schimp.	
Trichostomum	*brachydontium*	Bruch	Very variable and may contain a number of different infraspecific taxa.
Trichostomum	*crispulum*	Bruch	
Triquetrella	*arapilensis*	Luisier	
Ulota	*bruchii*	Hornsch. ex Brid.	
Ulota	*calvescens*	Wilson	
Ulota	*coarctata*	(P.Beauv.) Hammar	
Ulota	*crispa*	(Hedw.) Brid.	
Ulota	*crispula*	Bruch	
Ulota	*curvifolia*	(Wahlenb.) Lilj.	
Ulota	*drummondii*	(Hook. & Grev.) Brid.	
Ulota	*hutchinsiae*	(Sm.) Hammar	
Ulota	*intermedia*	Schimp.	
Ulota	*macrospora*	E.Bauer & Warnst.	
Ulota	*rehmannii*	Jur.	
Vesicularia	*reimersiana*	Bizot & P.de la Varde	
Voitia	*hyperborea*	Grev. & Arn.	
Voitia	*nivalis*	Hornsch.	
Warnstorfia	*fluitans*	(Hedw.) Loeske	
Warnstorfia	*pseudostraminea*	(Müll.Hal.) Tuom. & T.J.Kop.	

Genus	Specific/ Sub-specific epithets	Authority	Notes & references
Weissia	*angustifolia*	(Baumgartner) D.A.Callaghan	Callaghan *et al*. (2019)
Weissia	*brachycarpa*	(Nees & Hornsch.) Jur.	
Weissia	*condensa*	(Voit) Lindb.	
Weissia	*condensa* var. *armata*	(Thér. & Trab.) M.J.Cano, Ros & J.Guerra	
Weissia	*condensa* var. *condensa*		
Weissia	*controversa*	Hedw.	
Weissia	*controversa* var. *controversa*		
Weissia	*controversa* var. *crispata*	(Nees & Hornsch.) Nyholm	
Weissia	*controversa* var. *densifolia*	(Bruch & Schimp.) Wilson	Retained as a variety for now, but very doubtfully distinct from var. *controversa,* and significantly less so than var. *crispata* (J. Kučera *pers. comm.* Dec. 2018).
Weissia	*levieri*	(Limpr.) Kindb.	
Weissia	*longifolia*	Mitt.	
Weissia	x *mittenii*	(Bruch & Schimp.) Mitt. emend. A.J.E.Sm.	Callaghan (2019)
Weissia	*perssonii*	Kindb.	
Weissia	*rostellata*	(Brid.) Lindb.	
Weissia	*rutilans*	(Hedw.) Lindb.	
Weissia	*squarrosa*	(Nees & Hornsch.) Müll.Hal.	
Weissia	*sterilis*	W.E.Nicholson	
Weissia	*wilsonii*	D.A.Callaghan	*W. multicapsularis* auct. non (Sm.) Mitt. Callaghan *et al.* (2019)
Weissia	*wimmeriana*	(Sendtn.) Bruch & Schimp.	
Zygodon	*catarinoi*	C. Garcia, F. Lara, Sérgio & Sim-Sim	Garcia *et al*. (2006)
Zygodon	*conoideus*	(Dicks.) Hook. & Taylor	
Zygodon	*conoideus* var. *conoideus*		
Zygodon	*conoideus* var. *lingulatus*	S.R.Edwards	
Zygodon	*dentatus*	(Limpr.) Kartt.	
Zygodon	*gracilis*	Wilson	
Zygodon	*rupestris*	Schimp. ex Lorentz	
Zygodon	*sibiricus*	Ignatov, Ignatova, Z.Iwats. & B.C.Tan	
Zygodon	*stirtonii*	Schimp. ex Stirt.	
Zygodon	*viridissimus*	(Dicks.) Brid.	

3 Bibliography & Relevant Literature

Abolina, A.A. (2011) New moss records from Republic of Adygeya. 3. *Arctoa* **20**, 256.

Abolina, A.A., Reriha, I.S., Opmanis, A.G., Suško, U.A. & Ignatova, E.A. (2011) New and rare moss records from Latvia 1. *Arctoa* **20,** 265–266.

Ābolina, A., Piterāns, A. & Bambe, B. (2015) *Latvijas kerpji un sunas. Taksonu saraksts (Lichens and bryophytes in Latvia. Checklist)*. Latvijas Valsts mežzinātnes instituts 'Silava', Salaspils.

Abramov, I.I. & Volkova, L.A. (1998). Handbook of mosses of Karelia. *Arctoa* **7**, suppl. **1**, 390 pp.

Ade, A. & Koppe, F. (1955) Moose aus dem Balkan, aus Suditalien und von den Aegaischen Inseln. *Acta Musci Macedonici Scientarum Naturalium* **2,** 181–197.

Afonina, O.M., Czernyadjeva, I.V., Ignatova, E.A. & Kučera, J. (2010) Five species of *Didymodon* (Pottiaceae, Bryophyta) new for Russia. *Arctoa* **19**, 51–62.

Afonina, O.M., Ignatova, E.A., Fedosov, V.E. & Kuznetsova, O.I. (2014) Toward a new understanding of *Syntrichia submontana* (Pottiaceae, Bryophyta). *Arctoa* **23**, 11–24.

Aicardi, O. & Granger, C. (2004) *Liste des mousses observées en France.* Lyon.

Aigoin, D.A., Huttunen, S., Ignatov, M.S. Dirkse, G.M. & Vanderpoorten, A. (2009) *Rhynchostegiella* (Brachytheciaceae): molecular re-circumscription of a convenient taxonomic repository. *Journal of Bryology* **31**, 213–221.

Aleffi, M. (2005) New check-list of the Hepaticae and Anthocerotae of Italy. *Flora Mediterranea* **15**, 485–566.

Aleffi, M. (2015) The bryophyte flora of the Vatican City State. *Cryptogamie, Bryologie* **36**, 155–169.

Aleffi, M., Ricci, S. & Tacchi, R. (2010) *Hypopterygium tamarisci* (Sw.) Brid. *ex* Müll. Hal. (Hypopterygiaceae, Bryopsida), new to Italy. *Cryptogamie, Bryologie* **31**, 293–295.

Aleffi M. & Schumacker, R. (1995) Check-list and Red-List of the liverworts (Marchantiophyta) and hornworts (Anthocerotophyta) of Italy. *Flora Mediterranea* **5**, 73–161.

Alegro, A.L., Dragićević, S., Šegota, V. & Ćetković, I. (2019) Stepping beyond the 700 milestone: four new moss species in the bryophyte flora of Montenegro. *Cryptogamie, Bryologie* **40** (9), 97–103.

Alegro, A.L., Papp, B., Szurdoki, E., Šegota, V., Šapić, I. & Vukelić, J. (2014) Contributions to the bryophyte flora of Croatia III. Plitvička jezera National Park and adjacent areas. *Studia Bot. Hung.* **45**, 49–65.

Alegro, A.L., Šegota, V., Papp, B., Deme, J., Kovács, D., Purger, D. & Csiky, J. (2018) The invasive moss *Campylopus introflexus* (Hedw.) Brid. (Bryophyta) spreads further into south-eastern Europe. *Cryptogamie, Bryologie* **39** (3), 331–341.

Alegro, A.L., Šegota, V., Rimac, A. Kiebacher, T, Prlić, D., Sedlar, Z., Vuković, N. & Papp, B. (2019) New and noteworthy bryophyte records from Croatia (2019). *Cryptogamie, Bryologie* **40** (2), 5–13.

Allen, B.H. (2014) Maine mosses: Drummondiaceae-Polytrichaceae. *Memoirs of the New York Botanical Garden* **111**, 1–607.

Allen, B.H. & Ireland, R.R. (2002) The taxonomic status of *Dicranodontium subporodictyon* in western North America. *Lindbergia* **27**, 73–78.

Alonso, M., Jiménez, J.A. & Cano, M.J. (2018) New synonyms and typifications in *Chionoloma* tenuirostre (Pottiaceae, Bryophyta). *Phytotaxa* **373**, 147–154.

Alonso, M., Jiménez, J.A. & Cano, M.J. (2019) Taxonomic revision of *Chionoloma* (Pottiaceae, Bryophyta). *Annals of the Missouri Botanical Garden* **104**, 563–632.

Alonso, M., Jiménez, J.A., Nylander, S., Hedenäs, L., & Cano, M.J. (2016) Disentangling generic limits in *Chionoloma, Oxystegus, Pachyneuropsis* and *Pseudosymblepharis* (Bryophyta: Pottiaceae): an inquiry into their phylogenetic relationships. *Taxon* **65**, 3–18.

Andić, B., Dragićević, S., & Stešević, D. (2013) Bryophyte flora of 'Forest park Gorica' (Podgorica, Montenegro). *Agriculture and Forestry* **59** (4): 144.

Andrus, R.E. (2006) Six new species of *Sphagnum* (Bryophyta; Sphagnaceae). *Sida* **22**, 959–972.

Antičević, V. (1962) *Mahovinska flora i vegetacija južnih obronaka Zagrebačke gore.* Diplomski rad, Zagreb, 1–57.

Appelgren, L., Carlsson, P. and Homble, K. (2016) *Scopelophila ligulata* recorded for the first time in northern Europe. *Lindbergia* **39**, 12–19.

Armata, L. (2006) New records of rare and endangered mosses from the Bieszczady Zachodnie Range and the Carpathian Foothills. *Annales Universitatis Mariae Curie-Skłodowska Lublin – Polonia, Sectio C.* **61** (7), 131–139.

Athanasiadis, N. (1975) Zur postgiazialen Vegetationsentwickiung von Litochoro Katerinis und Pertouli Trikalon (Griechenland). *Flora, Jena*, **164**, 99–132.

Bailly, G., Caillet, M., Ferrez, Y. & Vadam, J.-C. (2009) Liste rouge des bryophytes de Franche-Comté, version 2. *Les Nouvelles Archives de la Flore jurassienne* **7**, 61–82.

Bakalin, V.A. (2016) Notes on Lophozia VIII. The lectotypification of *Lophozia longiflora* (Nees) Schiffn. (Lophoziaceae, Hepaticae). *Herzogia* **29**, 635–642.

Bakalin, V.A., Fedosov, V.E., Fedorova, A.V. & Nguyen, V.S. (2019) Integrative taxonomic revision of *Marsupella* (Gymnomitriaceae, Hepaticae) reveals

neglected diversity in Pacific Asia. *Cryptogamie, Bryologie* **40**, 59–85.

Bakalin, V.A. & Klimova, K.G. (2016) A note on *Nardia japonica* Steph. (Gymnomitriaceae). *Botanica Pacifica* **5**, 43–50.

Bálint, L. & Orbán, S. (2003) Bryofloristical researches of Harghita Mountains. *Contribuţii Botanice* **38** (1), 13–18.

Bardat, J. & Boudier, P. (2006) Some remarkable bryophytes of the Causse Méjean (Lozère, France). *Cryptogamie, Bryologie* **27**, 165–180.

Bardat, J., Boudier, P. & Gauthier, R. (2013) *Tetrodontium ovatum* (Funck) Schwägr. (Tetraphidaceae, Bryophyta) nouveau pour la France. *Cryptogamie, Bryologie* **34**, 31–36.

Belkina, O.A. & Likhachev, A.Yu. (2013) Mosses of the Prince Oscar Land (Nordaustlandet, Svalbard). *Arctoa* **22**, 27–34.

Bell, D., Long, D.G., & Hollingsworth, P.M. (2013) *The use of DNA barcoding to address major taxonomic problems for rare British bryophytes.* Royal Botanic Garden, Edinburgh.

Bell, N.E. & Hyvönen, J. (2010) A phylogenetic circumscription of *Polytrichastrum* (Polytrichaceae): reassement of sporophyte morphology suppors molecular phylogeny. *American Journal of Botany* **97** (4), 566–578.

Bergaminni, A., Bisang, I., Hodgetts, N., Lockhart, N., Van Rooy, J. & Hallingbäck, T. (2019) Recommendations for the use of critical terms when applying IUCN red-listing criteria to bryophytes. *Lindbergia* **42**, 1–6.

Bergmeier, E. (2011) New floristic records, confirmations and other phytogeographical notes from Crete (Greece). *Willdenowia* **41**, 167–177.

Bezgodov, A.G. & Ignatova, E.A. (2013) *Pohlia lutescens* (Mielichhoferiaceae, Bryophyta) in Russia. *Arctoa* **22**, 107–110.

Biedermann, S., Müller, F. & Seifert, E. (2014) New records and rediscoveries for the bryophyte flora of Saxony. *Herzogia* **27**, 215 –219.

Biel, B. & Tan, K. (2014) *Flora of Samothraki.* Goulandris Natural History Museum, Athens.

Blanár, D. & Petrášová A. (2007) *Desmatodon cernuus* (Huebeners) Bruch et Schimp. - new species in the bryoflore of Slovakia. *Reussia* **4**, 79–106.

Blockeel, T.L. (2003) New records of bryophytes from Cyprus. *Bocconea* **16**, 105–113.

Blockeel, T.L. (2007) Notes on some rare and newly recorded bryophytes from Crete, Greece. *Journal of Bryology* **29**, 197–198.

Blockeel, T.L. (2008) *Orthotrichum consimile* in Derbyshire. *Field Bryology* **94**, 23–26.

Blockeel, T.L. (2010) The bryophytes of Greece: new records and observations. *Nova Hedwigia, Beiheft* **138**, 129–146.

Blockeel, T.L. (2012a) *Orthotrichum scanicum* Grönvall in Derbyshire: an epiphytic moss new to Britain. *Journal of Bryology* **34**, 55–59.

Blockeel, T.L. (2012b) Notes on the bryophytes of the schistose valleys of western Crete, including *Asterella africana* new to Greece, and an assessment of the conservation status of *Rhamphidium purpuratum* and *Jungermannia handelii*. *Journal of Bryology* **34**, 292–296.

Blockeel, T.L. (2013) Mountains and islands: in search of bryophytes in Greece. *Field Bryology* **109**, 16–25.

Blockeel, T.L. (2015) Book review: A survey of the bryophytes known from the Aegean Islands by R. Düll. *Journal of Bryology* **37**, 342–344.

Blockeel, T.L. (2016) The mosses *Aschisma carniolicum*, *Campylostelium strictum* and *Timmiella flexiseta* on the Eastern Aegean Islands, new to Greece, and a second locality for *Syntrichia latifolia*. *Herzogia* **29**, 52–58.

Blockeel, T.L. (2017) Bryophytes of the Cyclades, Greece: the flora of the island of Andros. *Field Bryology* **117**, 36–45.

Blockeel, T.L. (2018a) Mt. Tzena, an important site for bryophytes in Greece, with a remarkably disjunct population of the rich-fen moss *Cinclidium stygium*. *Herzogia* **31** (1), 37–47.

Blockeel, T.L. (2018b) Bryophytes of Frakto Forest (Rhodope Mountains, Greece), including *Syzygiella autumnalis* and the genus *Ulota* new to Greece. *Cryptogamie, Bryologie* **39**, 129–146.

Blockeel, T.L. *et al.* (2006) New national and regional bryophyte records, 13. *Journal of Bryology* **28**, 151–155.

Blockeel, T.L. *et al.* (2006) New national and regional bryophyte records, 14. *Journal of Bryology* **28**, 271–275.

Blockeel, T.L. *et al.* (2007) New national and regional bryophyte records, 15. *Journal of Bryology* **29**, 139–142.

Blockeel, T.L. *et al.* (2007) New national and regional bryophyte records, 16. *Journal of Bryology* **29**, 198–204.

Blockeel, T.L. *et al.* (2007) New national and regional bryophyte records, 17. *Journal of Bryology* **29**, 277–283.

Blockeel, T.L. *et al.* (2008) New national and regional bryophyte records, 19. *Journal of Bryology* **30**, 231–237.

Blockeel, T.L. *et al.* (2009) New national and regional bryophyte records, 20. *Journal of Bryology* **31**, 54–62.

Blockeel, T.L. *et al.* (2009) New national and regional bryophyte records, 21. *Journal of Bryology* **31**, 132–139.

Blockeel, T.L. *et al.* (2009) New national and regional bryophyte records, 22. *Journal of Bryology* **31**, 201–210.

Blockeel, T.L. *et al.* (2010) New national and regional bryophyte records, 23. *Journal of Bryology* **32**, 140–149.

Blockeel, T.L. & Bosanquet, S. [D.S.] (2016) *Hedwigia striata* in Britain and Ireland. *Field Bryology* **115**, 10–19.

Blockeel, T.L., Bosanquet, S.D.S., Hill, M.O. & Preston, C.D. (2014) *Atlas of British and Irish Bryophytes. The distribution and habitat of mosses and liverworts in Britain and Ireland. Vols. 1–2.* Pisces Publications, Newbury.

Blockeel, T.L., Kiebacher, T. & Long, D.G. (2019) *Hygrohypnum subeugyrium* (Renauld & Cardot) Broth. (Hypnales), a neglected British moss, with a note on its occurrence in the Himalayas. *Journal of Bryology* **41** (1), 12–20.

Blockeel, T.L. & Kučera, J. (2019) Notes from the BBS Workshop on *Didymodon*, 2018. *Field Bryology* **121**, 23–30.

Blockeel, T.L., Kučera, J. & Fedosov, V.E. (2017) *Bryoerythrophyllum duellii* Blockeel (Bryophyta: Pottiaceae), a new moss species from Greece and Cyprus, and its molecular affinities. *Journal of Bryology* **39**, 247–254.

Blockeel, T.L. & Lara, F. (2015) A herbarium record of *Orthotrichum alpestre* Hornsch. ex Bruch & Schimp. in Scotland: new to Britain. *Journal of Bryology* **37**, 244–247.

Blockeel, T.L. & Nieuwkoop, J.A.W. (2016) The bryophyte flora of Lesbos, Greece. *Herzogia* **29**, 1–34.

Blockeel, T.L. & Ottley, T.W. (2015) *Pterygoneurum papillosum* Oesau, a distinct moss species, its occurrence in southern England, new to Britain, and the presence of rhizoidal tubers. *Journal of Bryology* **37**, 267–275.

Blockeel, T.L., Rothero, G.P. & Long, D.G. (2009) *Tortula inermis* and *Schistidium helveticum*, two mosses from Scotland, new to the British Isles. *Journal of Bryology* **31**, 174–179.

Blom, H.H. (1996) A revision of the *Schistidium apocarpum* complex in Norway and Sweden. *Bryophytorum Bibliotheca* **49**, 1–334.

Blom, H.H., Bednarek-Ochyra, H. & Ochyra, R. (2016) Studies on *Schistidium* (Grimmiaceae, Bryophyta) in Europe, with particular reference to the Alps: I. A description of *S. marginale* sp. nov. *Phytotaxa* **247**, 210–218.

Blom, H.H., Ignatova, E.A. & Afonina, O.M. (2006) New records of *Schistidium* (Grimmiaceae, Musci) in Russia. *Arctoa* **15**, 187–194.

Blom H.H. & De Zuttere Ph. (2002) Quelques *Schistidium* intéressants récoltés dans les Alpes française (Savoie et Hautes-Alpes) ainsi que suisses (Valais). *Nowellia bryologica* **23**, 36–38.

Bonfim Santos, M. & Stech, M. (2017) Testing hypotheses on suprageneric relationships and morphological evolution in the Leucobryaceae (Bryophyta). *Plant Systematics and Evolution* **303**, 1383–1397.

Bonnet V. & Legland T. (2012) *Inventaire floristique de la zone humide du Chenalet au sein du site N2000. « massif de la Lauzière » (S17).* Conservatoire Botanique National Alpin, 31p.

Bonte, F. & Boudier, P. (2014) *Sarmentypnum tundrae* (Calliergonaceae, Bryophyta), espèce nouvelle pour la France et la chaîne des Alpes. *Cryptogamie, Bryologie* **35**, 409–416.

Bonte, F. & Boudier, P. (2016) *Radula holtii* Spure au Pays basque français, espèce nouvelle pour la France. *Bull. Soc. Bot. Centre-Ouest (nouv. sér.)* **47**, 97–102.

Boros, A. (1967–1968) Uber zwei fuïr Kroatien neue Laubmoosarten. *Acta Botanica Croatica* **26–27** (1), 241–245.

Borovichev, E.A. (2010) New liverwort records from Svalbard. 1. *Arctoa* **19**, 280–281.

Borovichev, E.A. & Nyporko, S.A. (2014) Three taxa from Aytoniaceae family (Marchantiophyta), new for the Ukrainian liverwort flora. *Ukrayins'k. Bot. Zhurn.* **71** (1), 66–70.

Bory de Saint-Vincent, J.B.G.M. (1832) Musci. *In*: Fauché, J.-B., Brongniart, A.T., Chaubard, L.A. & Bory de Saint-Vincent, J.B.G.M. *Expédition scientifique de Morée, Section des Sciences Physiques 3 (2) Botanique*, pp. 291–296.

Bosanquet, S.D.S. (2012) *Entosthodon mouretii* (Corb.) Jelenc in the British Isles: a significant northerly range extension. *Journal of Bryology* **34**, 134–137.

Bosanquet, S.D.S. (2014) *Crossidium squamiferum* var. *squamiferum* (Viv.) Jur. in southern England, new to Britain. *Journal of Bryology* **36**, 118–121.

Bosanquet, S.D.S. (2015) *Orthotrichum rogeri* Brid. in England, new to Britain. *Journal of Bryology* **37**, 329–331.

Bosanquet, S.D.S. & Lara, F. (2012) *Orthotrichum cambrense* sp. nov. (Orthotrichaceae), a distinctive moss from Wales, United Kingdom. *Cryptogamie, Bryologie* **33**, 329–339.

Bottini, A. (1919) *Sfagnologia italiana. Memoriedella reale academia dei Lincei. Classe di scienze fisiche, matematiche e naturali*, s. 5, **13** (1), 87.

Boudier P. (1992) *Tortula rigescens* Broth. & Geh. (Pottiaceae - musci), nouveau pour la bryoflore européenne. *Cryptogamie, Bryologie, Lichenologie* **13** (1), 1–6

Boudier P. & Bick F. (2011) Au sujet de quelques espèces du genre *Dicranum* Hedw. de l'étage alpin savoyard. *Bulletin de la Société Botanique du Centre-Ouest (nouv. sér.)* **42**, 579–588.

Boudier, P., Bonte, F. & Delahaye, T. (2018) *Oreoweisia torquescens* (Hornsch. ex Brid.) Wijk & Margad. et autres découvertes bryologiques dans le Massif de la Vanoise (Savoie, France). *Cryptogamie, Bryologie* **39** (2), 213–222.

Brenan, J.P.M. (1973) Notes on the mosses of Rhodes and Kos. *Journal of Bryology* **7**, 413–416.

Briscoe, L., Engel, J.J., Söderström, L., Hagborg, A. & von Konrat, M. (2015) Notes on Early Land Plants Today. 66. Nomenclatural notes on Acrobolbaceae. *Phytotaxa* **202**, 58–62.

Briscoe, L., Zerega, N.J.C., Thorsten Lumbsch, H., Stech, M., Kraichak, E., von Konrat, M., Engel, J.J. & Wickett, N.J. (2017) Molecular, morphological and biogeographic perspectives on the classification of

Acrobolboideae (Acrobolbaceae, Marchantiophyta). *Phytotaxa* **319**, 56–70.

Bruggeman-Nannenga, M.A. (1982) The section *Pachylomidium* (genus *Fissidens*) III. The *F. crassipes*-subcomplex (*F. bryoides* complex), *F. sublineaefolius* (Pot. Varde) Brugg.-Nann. and *F. fluitans* (Pot. Varde) Brugg.-Nann. *Proc. Kon. Ned. Akad. Wetensch., C* **85**, 59–104.

Brugués, M. & Guerra, J. (2015) Flora Briofítica Ibérica, Volumen 2. Archidiales, Dicranales, Fissidentales, Seligeriales, Grimmiales. Murcia, Universidad de Murcia, Sociedad Española de Briología.

Brugués, M., Infante, M. & Cros, R.M. (2011) Anotaciones sobre hepáticas de España. *Boletín de la sociedad Española de briología* **36**, 3–8.

Brugués, M., Puche, F. & Cezón, K. (2009) *Tortella bambergeri* (Pottiaceae) in the Iberian Peninsula, with an updated key to Iberian *Tortella*. *Bryologist* **112**, 164–168.

Brugués, M., Ros, R.M., Saez, L. & Cano, M.J. (2010) *Entosthodon commutatus* Durieu *et* Mont. (Funariaceae, Bryopsida), new to Europe and Morocco. *Cryptogamie, Bryologie* **31**, 271–276.

Brugués, M. & Ruiz, E. (2011a) Sobre la presencia de *Callicladium haldanianum* (Grev.) H.A.Crum en España. *Boletín de la sociedad Española de briología* **36**, 1–2.

Brugués, M. & Ruiz, E. (2011b) *Dicranodontium*. *In*: Borradores de Flora Briofítica Ibérica http://www.florabriofíticaiberica.com Accessed October 2011.

Brugués, M. & Ruiz, E. (2012) The genus *Kiaeria* in Spain, including *K. blyttii* (Bruch & Schimp.) Broth. new to Spain. *Cryptogamie, Bryologie* **33**, 263–266.

Brugués, M., Ruiz, E., Puche, F. & Muñoz, J. (2012) Especies a excluir del Catálogo de Musgos de España. *Boletín de la sociedad Española de briología* **38–39**, 1–4.

Brugués, M, & Sérgio, C. (2010) On the identity of some *Entosthodon* species endemic to Macaronesia or the North of Africa. *Cryptogamie, Bryologie* **31**, 277–280.

Buchbender, V., Hespanhol, H., Krug, M., Sérgio, C., Séneca, A., Maul, K., Hedenäs, L. & Quandt, D. (2014) Phylogenetic reconstructions of the Hedwigiaceae reveal cryptic speciation and hybridisation in *Hedwigia*. *Bryophyte Diversity & Evolution* **36** (1), 1–21.

Buczkowska, K., Bakalin, V.A., Bączkiewicz, A., Aguero, B., Gonera, P., Ślipiko, M., Szczecińska, M. & Sawicki, J. (2018) Does *Calypogeia azurea* (Calypogeiaceae, Marchantiophyta) occur outside Europe? Molecular and morphological evidence. *PLoS One* **13**, 1–27.

Burghardt, M. & Gradstein, S.R. (2008) A revision of *Tylimanthus* (Acrobolbaceae, Marchantiophyta) in Tropical America, Africa and Macaronesia. *Fieldiana: Botany (n.ser.)* **47**, 199–210.

Calabrese, G.M. & Muñoz, J. (2006) *Zygodon bistratus* sp. nov. (Orthotrichaceae) from the Iberian Peninsula. *Bryologist* **109**, 38–42.

Calabrese, G.M. & Muñoz, J. (2008) *Zygodon* (Orthotrichaceae) in the Iberian Peninsula**.** *Bryologist* **111**, 231–247.

Callaghan, D.A. (2019) Typification ond diagnosis of *Weissia* x *mittenii* (Bruch & Schimp.) Mitt. emend. A.J.E.Sm. (*Weissia multicapsularis* x *W rostellata*) (Pottiaceae, Bryophyta). *Journal of Bryology* **41**, 243–248.

Callaghan, D.A., Bell, N.E. & Forrest, L.L. (2019) Taxonomic notes on *Weissia* subgenus *Astomum*, including *Weissia wilsonii* D.A.Callaghan, a new species from Europe. *Journal of Bryology* **41**, 135–148.

Callaghan, D.A., Masson, J. & During, H. (2020) *Physcomitrium* x *stevensoni* D.A.Callaghan (*Physcomitrium patens* x *P. eurystomum*) (Funariaceae, Bryophyta), a new name for a rarely recorded hybrid moss. *Journal of Bryology* **41**, https://doi/10.1080/03736687.2020.1725325

Câmara. P.E.A.S., Carvalho-Silva, M., Henriques, D.K., Guerra, J., Gallego, M.T., Poveda, D.R. & Stech, M. (2018) Pylaisiaceae Schimp. (Bryophyta) revisited. *Journal of Bryology* **40**, 251–264.

Campisi, P., Gallego, M.T. & Lo Re, M.G. (2006) *Syntrichia echinata* (Schiffn.) Herrnst. & Ben-Sasson (Pottiaceae, Bryopsida) new to Italy. *Cryptogamie, Bryologie* **27**, 383–386.

Cano, M.J. (2007) Typification of the names of some infraspecific taxa in the *Tortula subulata* complex (Pottiaceae, Bryophyta) and their taxonomic disposition. *Taxon* **56**, 949–952.

Cano, M. J. (2008) Taxonomic revision of *Hennediella* Paris (Pottiaceae, Bryophyta). *Bryophytorum Bibliotheca* **64**, 1–142.

Caparrós, R., Garilleti, R. & Lara, F. (2014) *Ulota* D.Mohr. In: Guerra, J., Cano, M.J. & Brugués, M. (eds.), *Flora Briofítica Ibérica, Vol. V.* Murcia, Universidad de Murcia, Sociedad Española de Briología, pp. 34–50.

Casas C., Brugues M. & Cros R.-M. (2001) *Les Bryophytes de la Réserve Naturelle de la Massane. Réserve Naturelle de la Massane.* Association des Amis de la Massane, Travaux **59**, 1–33.

Caspari, S., Dürhammer, O., Sauer, M. & Schmidt, C. (in prep.): Rote Liste und Gesamtartenliste der Moose (*Marchantiophyta, Anthocerophyta, Bryophyta*) Deutschlands. In: Metzing, D., Hofbauer, N., Ludwig, G. & Matzke-Hajek, G. (Red.): *Rote Liste gefährdeter Tiere, Pflanzen und Pilze Deutschlands. Band 7: Pflanzen*. Münster (Landwirtschaftsverlag). Naturschutz und Biologische Vielfalt **70** (7).

Castelli L. (1953) Contribution à la flore bryologique de la Haute-Maurienne. *Revue bryologique et lichénologique* **22** (3–4), 185–199.

Cezón, K., Muñoz, J., Hedenäs, L. & Huttunen, S. (2010) *Rhynchostegium confusum*, a new species from the Iberian Peninsula and its relation *to R. confertum* based on morphological and molecular data. *Journal of Bryology* **32**, 1–8.

Cezón, K., Muñoz, J. & Hespanhol, H. (2010) The discovery of *Bryum minii* Podp. ex Machado-Guim. in Spain, with new synonyms and correct authorship. *Bryologist* **113**, 371–375.

Cezón, K. & Muñoz, J. (2006) The rediscovery of *Tortella limbata* (Pottiaceae). *Bryologist* **109**, 401–403.

Cezón, K. & Muñoz, J. (2013) Catálogo de los musgos de Castilla-La Mancha (España). *Boletín de la Sociedad Española de Briología* **40–41**, 15–41.

Chavoutier, L. & Hugonnot, V. (2013) *Mousses, hépatiques & anthocérotes du department de la Savoie (France).* FMBDS, Sevrier.

Chiş, V.T. (2010) Geographical introductary characterization of the Rodna Mountains – Rodna Mountains National Park (Eastern Carpathians, Romania). *Transyl. Rev. Syst. Ecol. Res.* **9**, 1–165.

Clesse, B. & Sotiaux, A. (2015) *Mannia fragrans* (Hepaticae), espèce nouvelle pour la bryoflore belge à Viroinval (province de Namur). Une remarquable extension de son aire de répartition. *Dumortiera* **107**, 31–34.

Colacino, C. & Marka, J. (2009) Bryophytes of the Karavasta Lagoon area, with new reports for Albania. *Phytologia Balcanica* **15**, 39–42.

Cortini-Pedrotti, C. & Aleffi, M. (1995) Stato delle conoscenze briologiche delle isole circum-sarde e considerazioni briogeografiche. *Biogeographia* **38**, 133–146.

Crandall-Stotler, B. & Stotler, R.E. (2007) On the identity of *Moerckia hibernica* (Hook.) Gottsche (Moerckiaceae fam. nov, Marchantiophyta). *Nova Hedwigia, Beihefte* **131**, 41–59.

Crosby, M.R. & Buck, W.R. (2011) *Nogopterium*, a new name for the genus *Pterogonium* (Musci, Leucodontaceae). *Novon* **21**, 424–425.

Crum, H.A. & Anderson, L.E. (1981) *Mosses of eastern North America.* Columbia University Press, New York.

Czernyadjeva, I.V., Kuznetsova, O.I. & Ignatov, M.S. (2017) On *Pohlia saprophila* (Mielichhoferiaceae, Bryophyta). *Arctoa* **26**, 181–186.

Dalton, N.J., Kungu, E.M. & Long, D.G. (2012) The misapplication of *Hedwigia integrifolia* P. Beauv and identity of *Gymnostomum imberbe* Sm. (Hedwigiaceae, Bryopsida). *Journal of Bryology* **34**, 59–61.

Damayanti, L., Muñoz, J., Wicke, S., Symmank, L., Shaw, B., Frahm, J.-P. & Quandt, D. (2012) Common but new: *Bartramia rosamrosiae*, a 'new' widespread species of apple mosses (Bartramiales, Bryophytina) from the Mediterranean and western North America. *Phytotaxa* **73**, 37–59.

Damsholt, K. (2017) The complex liverwort flora of the Faeroe Isles. *Lindbergia* **40**, 14–38.

De Beer, D. (2009) *Grimmia anodon* (Musci, Grimmiaceae) nieuw voor België en vier nieuwe *Grimmia*-soorten voor Vlaanderen. *Dumortiera* **96**, 20–22.

De Beer, D. (2017) *Riccia crozalsii* (Hepaticae, Ricciaceae), een nieuw landvorkje voor België. *Dumortiera* **110**, 22–25.

De Luna, E. (2016) Typification, taxonomy and worldwide distribution of *Braunia secunda* (Hook.) Bruch & Schimp. (Hedwigiaceae). *Journal of Bryology* **38**, 286–294.

De Sloover, J.L (1959) Considérations sur la valeur spécifique de *Moerckia flotoviana* (Nees) Schiffn., Dilaenacée nouvelle pour la flore Belge. *Bulletin du Jardin Botanique de l'État, Bruxelles* **29**, 157–181.

De Stefani, C., Forsyth Major, C.J. & Barbey, W. (1895) *Karpathos. Etude geologique, paleontologique et botanique* 1–8. G. Bridel, Lausanne.

Dia, M.G. & Campisi, P. (2009) New or interesting records to the moss flora of Italy. *Cryptogamie, Bryologie* **30**, 199–201.

Dias, E., Mendes, C. & Shaw, J. (2009) *Sphagnum recurvum* P.Beauv. on Terceira, Azores, new to Macaronesia-Europe. *Journal of Bryology* **31**, 199–201.

Dihoru, G. (2004) Review of the bryophyte research in Romania. *Phytologia Balcanica* **10** (2–3), 167–170.

Dirkse, G.M. & Brugués, M. (2010) *Entosthodon kroonkurk* (Bryophyta: Funariaceae), a new species from the Iberian Peninsula and Macaronesia. *Journal of Bryology* **32**, 133–139.

Dirkse, G.M. & Losada-Lima, A. (2010) *Andreaea* Hedw. in the Canary Islands. *Journal of Bryology* **32**, 51–55.

Dirkse, G.M. & Losada-Lima, A. (2011) Additions and amendments to the moss flora of the Canary Islands. *Cryptogamie, Bryologie* **32**, 37–42.

Dirkse, G.M., Losada-Lima, A. & Stech, M. (2016) *Riccia boumanii* Dirkse, Losada & M.Stech sp. nov. (Ricciaceae, Marchantiophyta) in the Canary Islands, the first species of *Riccia* subgenus *Riccia* section *Pilifer* Volk outside South Africa. *Journal of Bryology* **38**, 94–102.

Dirkse, G.M., Nieuwkoop, J.A.W., Vanderpoorten, A., Losada-Lima, A., Gonzáles-Mancebo, J.M., Patiño, J., Sotiaux, A., Hernández-Hernández, R. & Rodríguez-Romero, A. (2018) New bryophyte records from Macaronesia. *Cryptogamie, Bryologie* **39** (1), 61–76.

Douin Ch.-I. (1907) L'*Ephemerum stellatum* Phil. dans la flore parisienne. *Revue Bryologique* **1**, 24–24.

Douin R. (1925) Les muscinées de la région du Lautaret. *Revue Générale de Botanique* **37**, 241–261.

Dragićević, S. & Veljić, M. (2006) *Pregled mahovina Crne Gore* [Survey of Bryophyta of Montenegro]. Prirodnjački Muzej Crne Gore [Natural History Museum of Montenegro], Podgorica, 99 pp.

Dragićević, S., Veljić, M. & Marin, P.D. (2008) New records to the moss flora of Montenegro. *Cryptogamie, Bryologie* **29**, 397–400.

Dragićević, S., Vulević, A. & Caković, D. (2017) A rare liverwort in the Mediterranean area, *Crossocalyx hellerianus* (Nees ex Lindenb.) Meyl., newly recorded for Montenegro. *Cryptogamie, Bryologie* **38**, 275–280.

Draper, I., González-Mancebo, J.M., Werner, O., Patiño, J. & Ros, R.M. (2011) Phylogeographic relationships between the mosses *Exsertotheca intermedia* from Macaronesian islands and *Neckera baetica* from southern glacial refugia of the Iberian Peninsula. *Annales Botanici Fennici* **48**, 133–141.

Draper, I. & Hedenäs, L. (2008) *Sciuro-hypnum tromsoeense* (Kaurin & Arnell) Draper & Hedenäs, a distinct species from the European mountains. *Journal of Bryology* **30**, 271–278.

Draper, I. & Hedenäs, L. (2009) *Sciuro-hypnum dovrense* (Limpr.) Draper *et* Hedenäs comb. nov., a distinct Eurasian alpine species. *Cryptogamie, Bryologie* **30**, 289–299.

Draper, I., Hedenäs, L., Stech, M., Patiño, J., Werner, O., González-Mancebo, J.M., Sim-Sim, M., Lopes, T. & Ros, R.M. (2015) How many species of *Isothecium* (Lembophyllaceae, Bryophyta) are there in Macaronesia? A survey using integrative taxonomy. *Botanical Journal of the Linnean Society* **177**, 418–438.

Duda, J. & Vezda, A. (1981) *Lejeunea patens* Lindb. – species hepaticarum pro Caucaso novo. *Novosti Sistematiki Nizshikh Rastenii* **18**, 207–208.

Düll, R. (1979) Neue Übersicht zur Moosflora der Insel Kreta (Aegaeis). *Journal of Bryology* **10**, 491–509.

Düll, R. (1983) Distribution of the European and Mediterranean liverworts (Hepatiocophytina). *Bryologische Beiträge* **2**, 1–114.

Düll, R. (1991) Die Moose Tirols. IDH-Verlag, Bad-Münstereifel.

Düll, R. (1995) Übersicht der Moose Griechenlands. *Bryologische Beiträge* **10**, 1–125.

Düll, R. (2014) *A survey of the bryophytes known from the Aegean Islands.* Weissdorn-Verlag, Jena.

Düll, R. & Düll-Hermanns, I. (1973) Ergänzungen und Nachträgezer Bryoflora und Bryogeographie der ostmediterranean Insel Kreta in der Aegaeis. *Journal of Bryology* **7**, 421–437.

Dull, R., Martinčič, A. & Pavletić, Z. (1999) A contribution to the Yugoslavian bryoflora - Checklist of the Yugoslavian bryophytes. *Bryologische Beiträge* **11** (1), 1–94.

Eckel, P. (2012) The genus *Elodium* (Bryophyta, Helodontiaceae): a history and new combinations. *Phytoneuron* **70**, 1–7.

Ellis, L.T. & Price, M.J. (2015) Review of the type specimens of species described by J. Hedwig in *Phascum* Hedw. (Pottiaceae). *Journal of Bryology* **37**, 23–41.

Ellis, L.T. *et al.* (2010) New national and regional bryophyte records, 24. *Journal of Bryology* **32**, 232–241.

Ellis, L.T. *et al.* (2010) New national and regional bryophyte records, 25. *Journal of Bryology* **32**, 311–322.

Ellis, L.T. *et al.* (2011) New national and regional bryophyte records, 26. *Journal of Bryology* **33**, 66–73.

Ellis, L.T. *et al.* (2011) New national and regional bryophyte records, 27. *Journal of Bryology* **33**, 158–162.

Ellis, L.T. *et al.* (2011) New national and regional bryophyte records, 28. *Journal of Bryology* **33**, 237–247.

Ellis, L.T. *et al.* (2011) New national and regional bryophyte records, 29. *Journal of Bryology* **33**, 316–323.

Ellis, L.T. *et al.* (2012) New national and regional bryophyte records, 30. *Journal of Bryology* **34**, 45–51.

Ellis, L.T. *et al.* (2012) New national and regional bryophyte records, 31. *Journal of Bryology* **34**, 123–134.

Ellis, L.T. *et al.* (2012) New national and regional bryophyte records, 32. *Journal of Bryology* **34**, 231–246.

Ellis, L.T. *et al.* (2012) New national and regional bryophyte records, 34. *Journal of Bryology* **34**, 281–296.

Ellis, L.T. *et al.* (2013) New national and regional bryophyte records, 35. *Journal of Bryology* **35**, 129–139.

Ellis, L.T. *et al.* (2013) New national and regional bryophyte records, 36. *Journal of Bryology* **35**, 228–238.

Ellis, L.T. *et al.* (2013) New national and regional bryophyte records, 37. *Journal of Bryology* **35**, 290–305.

Ellis, L.T. *et al.* (2014) New national and regional bryophyte records, 38. *Journal of Bryology* **36**, 61–72.

Ellis, L.T. *et al.* (2014) New national and regional bryophyte records, 39. *Journal of Bryology* **36**, 134–151.

Ellis, L.T. *et al.* (2014) New national and regional bryophyte records, 40. *Journal of Bryology* **36**, 223–244.

Ellis, L.T. *et al.* (2014) New national and regional bryophyte records, 41. *Journal of Bryology* **36**, 306–324.

Ellis, L.T. *et al.* (2015) New national and regional bryophyte records, 42. *Journal of Bryology* **37**, 68–85.

Ellis, L.T. *et al.* (2015) New national and regional bryophyte records, 43. *Journal of Bryology* **37**, 128–146.

Ellis, L.T. *et al.* (2015) New national and regional bryophyte records, 44. *Journal of Bryology* **37**, 228–241.

Ellis, L.T. *et al.* (2015) New national and regional bryophyte records, 45. *Journal of Bryology* **37**, 308–329.

Ellis, L.T. *et al.* (2016) New national and regional bryophyte records, 46. *Journal of Bryology* **38**, 47–63.

Ellis, L.T. *et al.* (2016) New national and regional bryophyte records, 47. *Journal of Bryology* **38**, 151–167.

Ellis, L.T. *et al.* (2016) New national and regional bryophyte records, 48. *Journal of Bryology* **38**, 235–259.

Ellis, L.T. *et al.* (2016) New national and regional bryophyte records, 49. *Journal of Bryology* **38**, 327–347.

Ellis, L.T. *et al.* (2017) New national and regional bryophyte records, 50. *Journal of Bryology* **39**, 99–114.

Ellis, L.T. *et al.* (2017) New national and regional bryophyte records, 51. *Journal of Bryology* **39**, 177–190.

Ellis, L.T. *et al.* (2017) New national and regional bryophyte records, 52. *Journal of Bryology* **39**, 285–304.

Ellis, L.T. *et al.* (2017) New national and regional bryophyte records, 53. *Journal of Bryology* **39**, 368–387.

Ellis, L.T. *et al.* (2018) New national and regional bryophyte records, 54. *Journal of Bryology* **40**, 74–97.

Ellis, L.T. *et al.* (2018) New national and regional bryophyte records, 55. *Journal of Bryology* **40**, 173–187.

Ellis, L.T. *et al.* (2018) New national and regional bryophyte records, 56. *Journal of Bryology* **40**, 271–296.

Ellis, L.T. *et al.* (2018) New national and regional bryophyte records, 57. *Journal of Bryology* **40**, 399–419.

Ellis, L.T. *et al.* (2019) New national and regional bryophyte records, 58. *Journal of Bryology* **41**, 63–84.

Ellis, L.T. *et al.* (2019) New national and regional bryophyte records, 59. *Journal of Bryology* **41**, 177–194.

Ellis, L.T. *et al.* (2019) New national and regional bryophyte records, 60. *Journal of Bryology* **41**, 285–299.

Ellis, L.T. *et al.* (2019) New national and regional bryophyte records, 61. *Journal of Bryology* **41**, 364–384.

Enroth, J., Olsson, S., Huttunen, S., Buchbender, V., Tangney, R., Stech, M., Hedenäs, L. & Quandt, D. (2019) Orthostichellaceae fam. nov. and other novelties in pleurocarpous mosses revealed by phylogenetic analyses. *Bryologist* **122**, 219–245.

Erzberger, P., Papp, B. & Dragićević, S. (2008) Notes on some newly recorded bryophytes from Montenegro. *Journal of Bryology* **30**, 167–170.

Erzberger, P. & Schröder, W. (2008) The genus *Schistidium* (Grimmiaceae, Musci) in Hungary. *Studia bot. hung.* **39**, 27–88.

European Committee for the Conservation of Bryophytes (1995) Red Data Book of European bryophytes. European Committee for the Conservation of Bryophytes, Trondheim.

Fedosov, V.E. (2008) On *Tortula cuneifolia* (Dicks.) Turner (Pottiaceae, Musci) in Russia. *Arctoa* **17**, 85–80.

Fedosov, V.E. (2010) *Aloina bifrons* (De Not.) Delgad. (Pottiaceae, Musci) in Russia. *Arctoa* **19**, 235–240.

Fedosov, V.E. (2011) On *Entosthodon fascicularis* and *Weissia armata* comb. nov. (= *W. papillosissima* Laz.) in Russia. *Arctoa* **20**, 191–196.

Fedosov, V.E. (2012) *Encalypta* Sect. *Rhabdotheca* in Russia. *Arctoa* **21**, 101–112.

Fedosov, V.E. (2018) The family Orthotrichaceae (Bryophyta) in flora of Russia: results of revision and biogeographical review. *Nov. Sist. Nizshikh Rastenii* **52**, 519–534.

Fedosov, V.E., Churakova, E., Kholod, S.S., Beldiman, L.N., Bakalin, V., Zakhaarchenko, D.A. & Afonina, O.M. (2018) Bryophytes of Zhelania Cape, Severny Island, Novaya Zemlya Archipelago in the Russian Arctic. *Nordic Journal of Botany* 2019: e02186. doi: 10.1111/njb.0218 6

Fedosov, V.E., Doroshina, G.Y., Tubanova, D.Y., Afonina, O.M. & Ignatova, E.A. (2017) Four Orthotrichaceae species new for Russian flora. *Arctoa* **26**, 154–165.

Fedosov, V.E. & Doroshina, G.Y. (2018) Orthotrichales. In: Ignatov, M.S. (ed.) *Moss Flora of Russia. Volume 4. Bartramiales-Aulacomniales.* Moscow: KMK Scientific Press Ltd. (Arctoa 27, supplement 1). pp. 67–195.

Fedosov, V.E., Fedorova, A.V., Fedosov, A.E. & Ignatov, M.S. (2016) Phylogenetic inference and peristome evolution in haplolepidous mosses, focusing on Pseudoditrichaceae and Ditrichaceae *s.l.* *Botanical Journal of the Linnean Society* **181**, 139–155.

Fedosov, V.E., Fedorova, A.V., Ignatova, E.A. & Ignatov, M.S. (2017) A revision of the genus *Seligeria* (Seligeriaceae, Bryophyta) in Russia inferred from molecular data. *Phytotaxa* **323** (1), 27–50.

Fedosov, V.E. & Ignatova, E.A. (2010) *Orthotrichum dagestanicum* sp. nov. (Orthotrichaceae, Musci) – a new species from Dagestan (Eastern Caucasus). *Arctoa* **19**, 69–74.

Fedosov, V.E. & Ignatova, E.A. (2018) On the genus *Ulota* (Orthotrichaceae, Bryophyta) in Russia. *Novosti Sistematiki Nizshikh Rastenii* **52** (1), 141–171.

Fedosov, V.E., Ignatova, E.A. & Ivanov, O.V. (2009) *Orthotrichum holmenii* Lewinsky-Haapasaari (Orthotrichaceae, Musci), a new species for Russian moss flora. *Arctoa* **18**, 195–200.

Fedosov, V.E., Ignatova, E.A., Ivanov, O.V. & Doroshina, D.Y. (2010) On the genus *Entosthodon* (Funariaceae, Musci) in the Caucasus. *Arctoa* **19**, 75–86.

Feldberg, K., Groth, H., Wilson, R., Schäfer-Verwimp, A. & Heinrichs, J. (2004) Cryptic speciation in *Herbertus* (Herbertaceae, Jungermanniopsida): range and morphology of *Herbertus sendtneri* inferred from nr ITS sequences. *Plant Systematics and Evolution* **249**, 247–261.

Feldberg, K., Váňa, J., Krusche, J., Kretschmann, J., Patzak, S.D.F., Pérez-Excobar, O.A., Rudolf, N.R., Seefelder, N., Schäfer-Verwimp, A., Long, D.G., Schneider, H. & Heinrichs, J. (2016) A phylogeny of Cephaloziaceae (Jungermanniopsiada) based on nuclear and chloroplast DNA markers. *Organisms, Diversity & Evolution* **16**, 727–742.

Flatberg, K.I. (2008) *Sphagnum venustum* (Bryophyta), a noticeable new species in sect. *Acutifolia* from Labrador, Canada. *Lindbergia* **33**, 2–12.

Fojcik, B. & Stebel, A. (2006) Chosen aspects of threatened moss species occurrence in urban areas – a case study of Katowice. *Biodiv. Res. Conserv.* **1–2**, 187–189.

Frahm, J.-P. (2010) *Plagiochila britannica* Paton in den Vogesen, neu für Frankreich. *Archive for Bryology* **73**, 1–4.

Frahm, J.-P. (2013) La bryoflore des Vosges et des zones limitrophes. *Archive for Bryology* **156**, 1–138.

Frahm, J.-P. & Bick, F. (2013) La bryoflore des Vosges et des zones limitrophes 3ème édition. *Archive for Bryology* **169**, 1–135.

Frahm, J.-P. & Eggers, J. (2001) *Lexikon deutschsprachiger Bryologen.* Books on Demand.

Frahm, J.-P., Lüth, M. & van Melick, H. (2008) Kommentierte Artenliste der Moose von Sardinien. *Archive for Bryology* **31**, 1–13.

Frahm, J.-P., Lüth, M. & van Melick, H. (2009) Die Moose Zyperns. *Archive for Bryology* **46**, 1–9.

Fransén, S. (2004) A taxonomic revision of *Bartramia* Hedw. Section *Bartramia*. *Lindbergia* **29**, 113–122.

Fröhlich, J. (1961) Bryophyten. *In*: Rechinger, K.H., Die Flora von Euboea. *Bot. Jb.* **80**, 455–459.

Furness, S.B. & Gilbert, O.L. (1980) The status of *Thamnobryum angustifolium* (Holt) Crundw.) *Journal of Bryology* **11**, 139–144.

Gallego, M.T., Cano, M.J. & Guerra, J. (2014) New chorological data on *Hedwigia striata* (Bruch & Schimp.) Bosw., (Hedwigiaceae, Musci) in Spain, and remarks on its morphological characters. *Anales de Biologia* **36**, 5–9.

Gallego, M.T., Hugonnot, V. & Cano, M.J. (2018) Taxonomic resurrection of an awnless variety of *Syntrichia ruralis* and comparison with other European muticous taxa in this genus. *Journal of Bryology* **40**, 244–250.

Gams, H. (1960) Nachträgezur Flora und Vegetation des Olymps. *Österreichische botanische Zeitschrift* **107**, 177–193.

Ganiatsas, K.A. (1937) Contribution to the knowledge of the bryophytes of Macedonia. *Scientific annals of the faculty of physics and mathematics, Aristotelian university of Thessaloniki* **3**, 73–93. [in Greek]

Garcia, C., Lara, F., Sérgio, C., Sim-Sim, M., Garilleti, R. & Mazimpaka, V. (2006) *Zygodon catarinoi* (Orthotrichaceae, Bryopsida), a new epiphytic species from the Western Mediterranean Basin. *Nova Hedwigia* **82**, 247–256.

Gardiner, A., Ignatov, M.S., Huttunen, S. & Troitsky, A. (2005) On resurrection of the families Pseudoleskeaceae Schimp. and Pylaisiaceae Schimp. (Musci, Hypnales). *Taxon* **54**, 651–663.

Garilleti, R. & Albertos, B. (2012) *Atlas y Libro Rojo de los Briófitos Amenazados de España*. Ministerio de Agricultura, Alimentacion y Medio Ambiente, Madrid. 287 pp.

Geissler, P. (1985) Notulae Bryofloristicae Helveticae II. *Candollea* **40**, 193 – 200.

Goffinet, B. & Buck, W.R. (2011) *Physcomitridium readeri* is the correct name for *Ephemerella readeri*. *Bryologist* **114**, 545–546.

Goffinet, B., Buck, W.R. & Shaw AJ. (2009) Morphology, anatomy and classification of the Bryophyta. *In*: Goffinet B, Shaw AJ, editors. *Bryophyte Biology, 2nd edition.* Cambridge University Press, Cambridge. p. 55–138.

Goffinet, B., Shaw, A.J., Cox, C.J., Wickett, N.J. & Boles, S. (2004) Phylogenetic inferences in the Orthotrichoideae (Orthotrichaceae: Bryophyta) based on variation in four loci from all genomes. *Monographs in Systematic Botany from the Missouri Botanical Garden* **98**, 270–289.

Gonzáles-Mancebo, J.M. , Draper, I., Lara, F., Marrero, D., Muñoz, J., Patiño, J., Romaguera, F. & Vanderpoorten, A. (2009) Amendments to the bryophyte flora of the Cape Verde and Canary Islands. *Cryptogamie, Bryologie* **30**, 433–441.

Górski, P. (2013) Rediscovery of the liverwort *Frullania fragilifolia* in Poland. *Polish Botanical Journal* **58** (2), 605–611.

Górski, P., Kapustyńsky, T., Kozub, L., Dembicz, I., Rosadziński, S., Staniaszek-Kik, M., Rusińska, A. & Smoczyk, M. (2015) New distributional data on bryophytes of Poland, 4. *Steciana* **19** (4), 221–230.

Górski, P., Pawlikowski, P., Staniaszek-Kik, M., Stebel, A., Rusińska, A., Zubel, R., Wilhelm, M., Fudali, E., Cykowska-Marzencka, B. & Przewoźnik, L. (2014) New distributional data on bryophytes of Poland, 1. *Steciana* **18** (2), 77–87.

Górski, P., Rosadziński, S., Rusińska, A., Pawlikowski, P., Wilhelm, M., Zubel, R., Piwowarski, B., Staniaszek-Kik, M., Fojcik, B., Wołkowycki, D., Lisowski, S., Pisarek, W., Anioł, A. & Tracz, J. (2015) New distributional data on bryophytes of Poland and Slovakia, 3. *Steciana* **19** (3), 163–176.

Górski, P., Rusińska, A., Smoczyk, M., Dembicz, I., Wierzcholska, S., Kozub, L., Romański, M., Fudali, E., Podlaska, M. & Wiaderny, A. (2016) New distributional data on bryophytes of Poland and Slovakia, 5. *Steciana* **20** (1), 33–44.

Górski, P., Smoczyk, M., Pawlikowski, P., Vončina, G., Stebel, A., Paciorek, T., Staniaszek-Kik, M., Romański, M., Wiaderny, A., Gąbka, M. & Wierzcholska, S. (2015) New distributional data on bryophytes of Poland, 2. *Steciana* **19** (2), 55–65.

Górski, P. & Váňa, J. (2013) *Jungermannia exsertifolia* subsp. *cordifolia* – a liverwort new to Poland found in the Tatra Mountains (Western Carpathians). *Cryptogamie, Bryologie* **34**, 353–358.

Górski, P. & Váňa, J. (2014) A synopsis of liverworts occurring in the Tatra Mountains (Western Carpathians, Poland and Slovakia): checklist, distribution and new data. *Preslia* **86**, 381–485.

Gottsche, C.M. (1861) Hepaticas. In: L. Heufler, Specimen florae cryptogamae septern insularum editum juxta plantas Mazziarianas herbarii Heufleriani et speciatim quoad filices herbarii Tommasiniani. *Verhandlungen der Kaiserlich-Königlichen Zoologisch-Botanischen Gesellschaft in Wein*, **11**: 416.

Gottsche, C.M., Lindenberg, J.B.G. & Nees von Esenbeck, C.G. (1844–1847) *Synopsis Hepaticarum*. Hamburg.

Gradstein, S.R. (1970) New or otherwise interesting bryophytes from Crete. *Revue Bryologique et lichénologique* **37**, 663–679.

Gradstein, S.R. & Ilkiu-Borges, A.L. (2015) A taxonomic revision of the genus *Odontoschisma* (Marchantiophyta: Cephaloziaceae). *Nova Hedwigia* **100**, 15–100.

Grisebach, H.R.A. (1841) *Reise durch Runelien und nach Brussa im Jahre 1839*. Göttingen.

Grolle, R. & Long, D.G. (2000) An annotated check-list of the Hepaticae and Anthocerotae of Europe and Macaronesia. *Journal of Bryology* **22**, 103–140.

Grundmann, M., Schneider, H., Russell S.J. & Vogel, J.C., (2006) Phylogenetic relationships of the moss genus *Pleurochaete* Lindb. (Bryales: Pottiaceae) based on chloroplast and nuclear genomic markers. *Organisms diversity and evolution* **6**, 33–45.

Guerra, J. (1985) *Orthotrichum bistratosum* (Schiffn.) Guerra, comb. & stat. nov. *Anales Jardin Botánico de Madrid* **42**, 284.

Guerra, J. (2004–2006) *In*: Guerra J., Brugués M., Cano M.J. & Cros R.M. (eds) *Flora Briofítica Ibérica, Vol. III. Pottiaceae, Encalyptaceae, Bartramiaceae.* Universidad de Murcia, Sociedad Española de Briología.

Guerra, J. (2010) *Pohlia*. *In*: Guerra J., Brugués M., Cano M.J. & Cros R.M. (eds) *Flora Briofítica Ibérica, Vol. IV. Funariales, Splachnales, Schistostegales, Bryales, Timmiales.* Murcia, Universidad de Murcia, Sociedad Española de Briología, pp. 183–206.

Guerra, J. (2014) Fontinalaceae. *In*: Guerra, J., Cano, M.J., Brugués, M. (eds) *Flora Briofítica Ibérica. Vol. V.* Universidad de Murcia, Murcia, Sociedad Española de Briología; p. 155–163.

Guerra, J. (2018) Hypnales. *In*: Guerra, J., Cano, M.J., Brugués, M., (eds) *Flora Briofítica Ibérica. Vol. VI.* Murcia: Universidad de Murcia, Sociedad Española de Briología; p. 365.

Guerra, J. (2016) Notes on the genus *Eurhynchiastrum* (Bryophyta, Brachytheciaceae) in the Iberian Peninsula. *Nova Hedwigia* **102**, 359–365.

Guerra, J., Heras, P. & Infante, M. (2012) *Fissidens bryoides* var. *gymnandrus* and *F. celticus* (Bryophyta, Fissidentaceae) in the Iberian Peninsula. *Cryptogamie, Bryologie* **33**, 149–154.

Guerra, J., Jiménez-Martínez, J.F., Cano, M.J., Alonso, M., & Gallego M.T. (2019) *Schistidium convergens* (Grimmiaceae, Bryophyta), a new species from southern Spain and Morocco. *Nova Hedwigia* **109**, 65–80.

Guerra, J., Jiménez-Martínez, J.F., Cano, M.J. & Brugués, M. (2008) Molecular and morphological evidence on the status of *Bryum mildeanum* Jur. and records revision in the Iberian Peninsula. *Journal of Bryology* **30**, 297–302.

Guerra, J., Jiménez-Martínez, J.F. & Jiménez, J.A. (2010) *Neckera baetica* sp. nov. (Neckeraceae, Bryophyta) from southern Spain, based on morphological and molecular data. *Nova Hedwigia* **91**, 255–263

Guerra, J. Martínez, M., Jiménez, J.A., Cano, M.J. & Gallego, M.T. (2020) A new species of moss emerges from molecular and morphological data: *Schistidium memnonium* sp. nov. (Grimmiaceae, Bryophyta), *Plant Biosystems - An International Journal Dealing with all Aspects of Plant Biology*, doi: 10.1080/11263504.2020.1762789.

Guerra, J., Ríos, D. & Gallego, M.T. (2014) A revision of the genus *Rhynchostegiella* (Brachytheciaceae) in the Iberian Peninsula and Balearic Islands. *Phytotaxa* **183**, 193–200.

Guillaumot, M. (1949) Quelques muscinées rares de Savoie (Rosuel, Peisey) récoltées en 1949. *Revue bryologique* **18** (**1–2**), 181–181.

Hájková, P., Plášek, V. & Hájek, M. (2007) A contribution to the Bulgarian bryoflora. *Phytologia Balanica* **13** (3), 307–310.

Hassel, K., Kyrkjeeide, M.O., Yousefi, N., Prestø, T., Stenøien, H.K., Shaw, J.A. & Flatberg, K.I. (2018) *Sphagnum divinum* (sp. nov.) and *S. medium* Limpr. and their relationship to *S. magellanicum* Brid. *Journal of Bryology* **40**, 197–222.

Hassel, K., Appelgren, L., Blom, H.H., Flynn, K.M., Gaarder, G., Heegaard, E., Høitomt, T., Jordal, B.J., Lima, M., Söderström, L. & Wangen, K. (2014) *Colura calyptrifolia*, a new oceanic liverwort to Norway and Scandinavia. *Lindbergia* **37**, 1–5.

Haussknecht, H.K. (1899) Symbolae ad floram graecam. Aufzählung der im Sommer 1885 in Griechenland gesammelten Pflanzen. *Mitt. thüring. bot. Ver. Neue Folge* **13**, 18–77.

Hedderson, T.A. & Blockeel, T.L. (2006) *Oncophorus dendrophilus*, a new moss species from Cyprus and Crete. *Journal of Bryology* **28**, 357–359.

Hedderson, T.A. & Zander, R.H. (2008) *Chenia ruigtevleia* (Pottiaceae), a new moss species from the Western Cape Province of South Africa. *Bryologist* **111**, 496–500.

Hedenäs, L. (1992) Flora of Madeiran pleurocarpous mosses (Isobryales, Hypnobryales, Hookeriales). *Bryophytorum Bibliotheca* **44**, 1–165.

Hedenäs, L. (2006) Additional insights into the phylogeny of *Calliergon, Loeskypnum, Straminergon* and *Warnstorfia* (Bryophyta: Calliergonaceae). *J. Hatt. Bot. Lab.* **100**, 125–134.

Hedenäs, L. (2010) ITS distinguishes *Palustriella falcata* from *P. commutata* and *P. decipiens*, but not from *P. pluristratosa* (Bryophyta: Amblystegiceae). *Nova Hedwigia* **138**, 51–60.

Hedenäs, L. (2012) Global phylogeography in *Sanionia uncinata* (Amblystegiaceae: Bryophyta). *Botanical Journal of the Linnean Society* **168**, 19–42.

Hedenäs, L. (2015) *Tortella rigens* (Bryophyta, Pottiaceae): relationships, regional variation, and

conservation aspects. *Plant Systematics & Evolution* **301** (5), 1361–1375.

Hedenäs, L. (2017) *Brachythecium tauriscorum* Molendo, a widely distributed Arctic-alpine species. *Journal of Bryology* **39**, 201–203.

Hedenäs, L. (2017) Scandinavian *Oncophorus* (Bryopsida, Oncophoraceae): species, cryptic species, and intraspecific variation. *European Journal of Taxonomy* **315**, 1–34.

Hedenäs, L. (2018) *Oncophorus demetrii*, a fifth Scandinavian species of *Oncophorus* (Musci) possible to recognize by morphology. *Lindbergia* **41**, 1–9.

Hedenäs, L. (2020) Disentangling Scandinavian species hidden within *Meesia uliginosa* Hedw. *s.l.* (Bryophyta, Meesiaceae). *Lindbergia* **42**, 1–14.

Hedenäs, L., Bisang, I. & Schnyder, N. (2003) The distribution of bryophytes in Switzerland and Liechtenstein, IV. *Hamatocaulis* and *Pseudocalliergon*. *Botanica Helvetica* **113** (2), 111–123.

Hedenäs, L., Désamoré, A., Laenen, B., Papp, B., Quandt, D., González-Mancebo, J.M., Patiño, J., Vanderpoorten, A. & Stech, M. (2014) Three species for the price of one within the moss *Homalothecium sericeum s.l. Taxon* **63** (2), 249–257.

Hedenäs, L. & Geissler, P. (1999) Leptotypification of Hedwig names: Holarctic pleurocarpous mosses. *Candollea* **54**, 417–432.

Hedenäs, L., Reisborg, C. & Hallingbäck, T. (2014) *Nationalnyckeln till Sveriges flora och fauna. Bladmossor: Skirmossor-baronmossor. Bryophyta:* Hookeria-Anomodon. ArtDatabanken, SLU, Uppsala.

Hedenäs, L. & Rosborg, C. (2008) *Pseudocalliergon* is nested within *Drepanocladus* (Bryophyta: Amblystegiaceae). *Lindbergia* **33**, 67–74.

Heinrichs, J., Dong, S., Schäfer-Verwimp, A., Pócs, T., Feldberg, K., Czumaj, A., Schmidt, A.R., Reitner, J., Renner, M.A.M., Hentschel, J., Stech, M. & Schneider, H. (2013) Molecular phylogeny of the leafy liverwort *Lejeunea* (Porellales): evidence for a Neotropical origin, uneven distribution of sexual systems and insufficient taxonomy. *PLOS one* 8 (12;E82547),1–14.

Heinrichs, J., Hentschel, J., Bombosch, A., Fiebig, A., Reise, J., Edelmann, M., Kreier, H.-P., Schäfer-Verwimp, A., Caspari, S., Schmidt, A., Zhu, R.-L., von Konrat, M., Shaw, B. & Shaw, A.J. (2010) One species or at least eight? Delimitation and distribution of *Frullania tamarisci* (L.) Dumort. *s.l.* (Jungermanniopsida, Porellales) inferred from nuclear and chloroplast DNA markers. *Molecular Phylogenetics and Evolution* **56**, 1105–1114.

Hentschel, J., von Konrat, M., Söderström, L., Hagborg, A., Larraín, J., Sukkharak, P., Uribe, J. & Zhang, L. (2015) Notes on Early Land Plants Today. 72. Infrageneric classification and new combinations, new names, new synonyms in *Frullania* (Marchantiophyta). *Phytotaxa* **220**, 127–142.

Hespanhol, H., Vieira, C., Garcia, C. & Sérgio, C. (2013) New distribution data on *Hedwigia striata* (Wilson) Bosw., a forgotten and misplaced taxon, in Portugal. *Boletín de la Sociedad Española Briologia* **40**–**41**, 49–53.

Hill, M.O., Bell, N., Bruggeman-Nannenga, M.A., Brugués, M., Cano, M.J., Enroth, J., Flatberg, K.I., Frahm, J.-P., Gallego, M.T., Garilleti, R., Guerra, J., Hedenäs, L., Holyoak, D.T., Hyvönen, J., Ignatov, M.S., Lara, F., Mazimpaka, V., Muñoz, J. & Söderström, L. (2006) An annotated checklist of the mosses of Europe and Macaronesia. *Journal of Bryology* **28**, 198–267.

Hill, M.O., Blackstock, T.H., Long, D.G. & Rothero, G.P. (2008) *A checklist and census catalogue of British and Irish bryophytes updated 2008*. British Bryological Society, Middlewich.

Hodgetts, N.G. (2010) *Schistidium maritimum* (Sm. ex R.Scott) Bruch & Schimp. subsp. *piliferum* (I.Hagen) B.Bremer in Shetland, new to the British Isles. *Journal of Bryology* **32**, 296–298.

Hodgetts, N.G. (2015) Checklist and country status of European bryophytes – towards a new Red List for Europe. *Irish Wildlife Manuals, No. 84.* National Parks & Wildlife Service, Department of Arts, Heritage & the Gaeltacht, Dublin.

Hodgetts, N.G. & Blockeel, T.L. (1992) *Thamnobryum cataractarum*, a new species from Yorkshire, with observations on *T. angustifolium* and *T. fernandesii*. *Journal of Bryology* **17**, 251–262.

Hodgetts, N., Cálix, M., Englefield, E., Fettes, N., García Criado, M., Patin, L., Nieto, A., Bergamini, A., Bisang, I., Baisheva, E., Campisi, P., Cogoni, A., Hallingbäck, T.,Konstantinova, N., Lockhart, N., Sabovljević, M., Schnyder, N., Schröck, C., Sérgio, C., Sim Sim, M., Vrba, J., Ferreira, C.C., Afonina, O., Blockeel, T., Blom, H., Caspari, S., Gabriel, R., Garcia, C., Garilleti, R., González Mancebo, J., Goldberg, I., Hedenäs, L., Holyoak, D., Hugonnot, V., Huttunen, S., Ignatov, M., Ignatova, E., Infante, M., Juutinen, R., Kiebacher, T., Köckinger, H., Kučera, J., Lönnell, N., Lüth, M., Martins, A., Maslovsky, O., Papp, B., Porley, R., Rothero, G., Söderström, L., Ştefănuţ, S., Syrjänen, K., Untereiner, A., Váňa, J., Vanderpoorten, A., Vellak, K., Aleffi, M., Bates, J., Bell, N., Brugués, M., Cronberg, N., Denyer, J., Duckett, J., During, H.J., Enroth, J., Fedosov, V., Flatberg, K.-I., Ganeva, A., Gorski, P., Gunnarsson, U., Hassel, K., Hespanhol, H., Hill, M., Hodd, R., Hylander, K., Ingerpuu, N., Laaka-Lindberg, S., Lara, F., Mazimpaka, V., Mežaka, A., Müller, F., Orgaz, J.D., Patiño, J., Pilkington, S., Puche, F., Ros, R.M., Rumsey, F., Segarra-Moragues, J.G., Seneca, A., Stebel, A., Virtanen, R., Weibull, H., Wilbraham, J. and Żarnowiec, J. (2019) *A miniature world in decline: European Red List of Mosses, Liverworts and Hornworts*. Brussels, Belgium.

Hodgetts, N.G., Söderström, L., Blockeel, T.L., Caspari, S., Ignatov, M.S., Konstantinova, N.A., Lockhart, N., Papp, B., Schröck, C., Sim-Sim, M., Bell, D., Bell, N.E.,

Blom, H.H., Bruggeman-Nannenga, M.A., Brugués, M., Enroth, J., Flatberg, K.I., Garilleti, R., Hedenäs, L., Holyoak, D.T., Hugonnot, V., Kariyawasam, I., Köckinger, H., Kučera, J., Lara, F. & Porley, R.D. (2020) An annotated checklist of bryophytes of Europe, Macaronesia and Cyprus. *Journal of Bryology* **42**, 1–116, DOI: 10.1080/03736687.2019.1694329.

Hodgetts, N.G. & Vanderpoorten, A. (2018) *Isothecium myosuroides* var. *brachythecioides* (Dixon) Braithw. reinstated as a species, *I. interludens* Stirt. *Journal of Bryology* **40**, 316–323.

Høitomt, T., Appelgren, L., Lönnell, N., Lye, K.A. & Hassel, K. (2012) *Pyramidula tetragona* (Brid.) Brid. rediscovered in Fennoscandia and new to Norway. *Lindbergia* **35**, 33–39.

Holyoak, D.T. (2004) Taxonomic notes on some European species of *Bryum* (Bryopsida, Bryaceae). *Journal of Bryology* **26**, 247–264.

Holyoak, D.T. (2009) *Bryum apiculatum* (Bryaceae) in East Cornwall: a moss new to Europe. *Journal of Bryology* **31**, 117–120.

Holyoak, D.T. (2010) Notes on taxonomy of some European species of *Ephemerum* (Bryopsida: Pottiaceae). *Journal of Bryology* **32**, 122–132.

Holyoak, D.T. & Köckinger, H. (2010) A taxonomic revision of some European and Asian bulbiferous species of *Anomobryum* (Bryophyta: Bryaceae). *Journal of Bryology* **32**, 153–169.

Holyoak, D.T. & Lockhart, N. (2009) Australasian bryophytes introduced to South Kerry with tree ferns. *Field Bryology* **98**, 3–7.

Holyoak, D.T. & Pedersen, N. (2007) Conflicting molecular and morphological evidence of evolution within the Bryaceae (Bryopsida) and its implications for generic taxonomy. *Journal of Bryology* **29**, 111–124.

Hooper, E.J., Duckett, J.G., Cuming, A.C., Kunin, W.E. & Pressel, S. (2010) *Ephemerella readeri* Müll.Hal. (*Physcomitrella readeri* (Müll.Hal.) I.G.Stone & G.A.M.Scott, Funariidae, Bryophyta): a genus and species new to Europe. *Journal of Bryology* 32, 256–264.

Hradílek, Z. (2002) Bryophytes (Bryophyta) of the Kaltwasser brook valley near Horný Turček (the Kremnické vrchy hills, Slovakia). *Bull. Slov. Bot. Spoločn., Bratislava* **24**, 43–46.

Hradílek, Z. (2008) *Funaria pulchella*, a new moss species to the Czech Republic. *Bryonora* **42**, 6–10.

Hugonnot, V. (2008) *Antitrichia californica* Sull. (Leucodontaceae) in France. Identification, distribution, habitat and communities, *Cryptogamie, Bryologie* **29**, 359–385.

Hugonnot, V. (2009) *Tayloria splachnoides* (Schleich. *ex* Schwägr.) Hook., new to the Pyrenees (France). *Cryptogamie, Bryologie* **30**, 337–342.

Hugonnot, V. (2010) Towards an improved understanding of *Riccia ciliata* Hoffm. (Marchantiopsida: Ricciaceae). *Journal of Bryology* **32**, 300–303.

Hugonnot, V. (2013a) *Hygrohypnum styriacum* (Limpr.) Broth. in the Pyrenees, a new record to the moss flora of France. *Cryptogamie, Bryologie* **34**, 55–59.

Hugonnot, V. (2013b) *Bryum valparaisense* Thér. (Bryaceae, Bryophyta), new to the bryophyte flora of France. *Cryptogamie, Bryologie* **34**, 73–76.

Hugonnot, V. (2014) Remarkable bark-dwelling species in a Hautes-Alpes *Juniperus thurifera* L. forest with the new finding for France of *Didymodon johansenii* (R.S.Williams) H.A.Crum. *Cryptogamie, Bryologie* **35**, 217–222.

Hugonnot, V. (2015) *Riccia melitensis* Mass. (Marchantiophyta: Ricciaceae), an endemic species of the Maltese archipelago? *Phytotaxa* **222**, 238–240.

Hugonnot, V. (2019) New records for the bryophyte flora of Corsica. *Cryptogamie, Bryologie* **40** (14), 153–158.

Hugonnot, V. & Chavoutier, L. (2014) A significant northward extension of the area of *Aloina bifrons* in Europe (Bryophyta, Pottiaceae). *Cryptogamie, Bryologie* **36**, 117–122.

Hugonnot, V. & Chavoutier, L. (2015) *Bryoerythrophyllum inaequalifolium* (Taylor) R.H. Zander in France. *Boletín de la Sociedad Española de Briología* **44–45**, 31–36.

Hugonnot, V. & Hedenäs, L. (2015) *Arvernella microclada* Hugonnot & Hedenäs (Amblystegiaceae), a new minute species from France, requiring a separate species. *Journal of Bryology* **37**, 184–191.

Hugonnot, V., Porley, R.D. & Ignatov, M.S. (2018) A taxonomic conundrum resolved: the transfer of *Grimmia horrida* to *Coscinodon* based on sporophyte discovery in France, with support from molecular data. *Bryologist* **121**, 520–528.

Hugonnot, V. & Schill, D.B. (2006) *Mannia californica* (Gottsche ex Underw.) L.C.Wheeler (Aytoniaceae, Marchantiales) in Ardèche (France), new to Europe. *Cryptogamie, Bryologie* **27**, 181–189.

Hugonnot, V. & Simont, V. (2018) *Riccia sommieri* Levier in Corsica, newly recorded in France. *Cryptogamie, Bryologie* **39** (2), 223–231.

Hutsemékers, V., Vieira, C.C., Ros, R.M., Huttunen, S. & Vanderpoorten, A. (2012) Morphology informed by phylogeny reveals unexpected patterns of species differentiation in the aquatic moss *Rhynchostegium riparioides s.l. Molecular Phylogenetics and Evolution* **62**, 748–755

Huttunen, S. & Ignatov, M.S. (2010) Evolution and taxonomy of aquatic species in the genus *Rhynchostegium* (Brachytheciaceae, Bryophyta). *Taxon* **59**, 791–808.

Huttunen, S., Kuznetsova, O., Li, M., Wang, Y.-F. & Ignatov, M.S. (2015) East Asian origin and Northern Hemisphere diversification in the *Brachythecium novae-angliae* complex (Bryophyta). *Taxon* **64** (5), 911–930.

Ignatov, M.S., Afonina, O.M., Ignatova, E.A. *et al.* (2006) Check-list of mosses of East Europe and North Asia. *Arctoa* **15**, 1–130.

Ignatov, M.S., Fedorova, A.V. & Fedosov, V.E. (2019) On the taxonomy of Anomodontaceae and *Heterocladium* (Bryophyta). *Arctoa* **28**, 75–102.

Ignatov, M.S., Fedosov, V.E., Ignatova, E.A., Doroshina, D.Y. & Zolotov, V.I. (2010) Moss flora of Gunib area in Dagestan, the Eastern Caucasus. *Arctoa* **19**, 87–96.

Ignatov, M.S., Gardiner, A.A., Bobrova, V.K., Milyutina, I.A., Huttunen, S. & Troitsky, A.V. (2007) On the relationships of mosses of the order Hypnales, with special reference to taxa traditionally classified in Leskeaceae. *In*: Newton A.E. & Tangney R. (eds), *Pleurocarpous mosses: systematics and evolution*. Boca Raton, CRC Press, pp. 177–213.

Ignatov, M.S., Huttunen, S., Li, M. & Wang, Y.-F. (2015) How to know *Myuroclada longiramea* (Brachytheciaceae, Bryophyta). *Arctoa* **24**, 497–502.

Ignatov, M.S. & Ignatova, E.A. (2004) Moss Flora of the Middle European Russia. Volume 2: Fontinalaceae-Amblystegiaceae. *Arctoa* **11** (Supplement 2): 609–960.

Ignatov, M.S., Ignatova, E.A., Fedosov, V.E., Zolotov, V.I., Koponen, T., Czernyadjeva, I.V., Doroshina, G.Ya., Tubanova, D. Ya. & Bell, N.E. (2018a) Moss Flora of Russia. Volume 4. Bartramiales-Aulacomniales. *Arctoa* **27**, suppl. 1, 1–543. KmK Scientific Press Ltd, Moscow.

Ignatov, M.S., Ignatova, E.A., Kurayeva, E.N., Minayeva, T.Yu. & Potemkin, A.D. (1998) Bryophyte flora of Zentral'no-Lesnoj Biosphere Nature reserve (European Russia, Tver Province). *Arctoa* **7**, 45–58.

Ignatov, M.S. & Milyutina, I.A. (2007a) On *Sciuro-hypnum oedipodium* and *S. curtum* (Brachytheciaceae, Bryophyta). *Arctoa* **16**, 47–61.

Ignatov, M.S. & Milyutina, I.A. (2007b) A revision of the genus *Sciuro-hypnum* (Brachytheciaceae, Bryophyta) in Russia. *Arctoa* **16**, 63–86.

Ignatov, M.S. & Milyutina, I.A. (2010) The genus *Brachythecium* (Brachytheciaceae, Musci) in Russia: comments on species and key for identification. *Arctoa* **19**, 1–30.

Ignatov, M.S., Porley, R.D., Ochyra, R., Kuznetsova, O.I. & Ignatova, E.A. (2018b) *Coscinodon monchiquensis* R,D,Porley, Ochyra & Ignatova (Grimmiaceae), a new species from the Algarve, southern Portugal. *Journal of Bryology* **40**, 125–136.

Ignatova, E.A., Blom, H.H., Goryunov, D.V. & Milyutina, I.A. (2010b) On the genus *Schistidium* (Grimmiaceae, Musci) in Russia. *Arctoa* **19**, 195–233.

Ignatova, E.A. & Doroshina, H.Y. (2008) Notes on *Tortella* (Pottiaceae, Bryophyta) in the Caucasus. *Arctoa* **17**, 39–47.

Ignatova, E.A., Fedorova, A.V., Kuznetsova, O.I. & Ignatov, M.S. (2019) Taxonomy of the *Plagiothecium laetum* complex (Plagiotheciaceae, Bryophyta) in Russia. *Arctoa* **28**, 28–45.

Ignatova, E.A. & Ignatov, M.S. (2011) The genus *Thamnobryum* (Neckeraceae, Bryophyta) in Russia. *Arctoa* **20**, 137–151.

Ignatova, E.A., Ignatov, M.S. & Milyutina, I.A. (2010a) A revision of the genus *Lindbergia* (Leskeaceae, Bryophyta) in Russia. *Arctoa* **19**, 97–116.

Ignatova, E.A., Kuznetsova, O.I., Fedosov, V.E. & Ignatov, M.S. (2016) On the genus *Hedwigia* (Hedwigiaceae, Bryophyta) in Russia. *Arctoa* **25**, 241–277.

Ignatova, E.A., Kuznetsova, O.I., Ignatov, M.S. & Köckinger, H. (2012) The genera *Oxystegus* and *Pseudosymblepharis* (Pottiaceae, Bryophyta) in the Caucasus. *Arctoa* **21**, 173–180.

Ignatova, E.A., Kuznetsova, O.I., Milyutina, I.A., Fedosov, V.E. & Ignatov, M.S. (2017) The genus *Fabronia* (Fabroniaceae, Bryophyta) in Russia. *Arctoa* **21**, 173–180.

Ignatova, E.A., Tubanova, D.Y., Tumurova, O.D., Goryunov, D.V. & Kuznetsova, O.I. (2015) When the plant size matters: a new semi-cryptic species of *Dicranum* from Russia. *Arctoa* **24**, 471–488.

Ingerpuu, N., Vellak, K. & Ehrlich, L. (2018) Revised Red Data List of Estonian bryophytes. *Folia Cryptogamica Estonica* **55**, 97–104.

IUCN (2012a) *IUCN Red List categories and criteria: Version 3.1*. Second edition. Gland, Switzerland and Cambridge, UK: IUCN.

IUCN (2012b) *Guidelines for application of IUCN Red List criteria at regional and national levels*. Version 4.0. IUCN Species Survival Commission. Gland: IUCN.

IUCN (2014) *Guidelines for using the IUCN Red List categories and criteria*. Version 11. Prepared by the Standards and Petitions Subcommittee. Gland, Switzerland and Cambridge, UK: IUCN.

Ivanova, E.I., Bell, N.E. & Kuznetsova, O.I. (2014) The genus *Polytrichastrum* (Polytrichaceae) in Russia. *Arctoa* **23**, 164–184.

Ivanova, E.I., Bell, N.E. & Kuznetsova, O.I. (2015) The genus *Polytrichum* Sect. *Aporotheca* (Polytrichaceae) in Russia. *Arctoa* **24**, 67–78.

Jakab, G. (1999) Contributions to the knowledge of the bryophyte flora of the SE Carpathians (Romania). *Studia botanica Hungarica* **29**, 49–57.

Jiménez, J.A. (2006) Taxonomic revision of the genus *Didymodon* Hedw. (Pottiaceae, Bryophyta) in Europe, North Africa and Southeast and Central Asia. *Journal of the Hattori Botanical Laboratory* **100**, 211–292.

Jóhannsson, B. (1984) Notes on some Icelandic bryophyte species. *Acta Botanica Islandica.* **7**, 37–50.

Juratzka, J. (1861) II. Muscos frondosos. In: Reichardt, H.W., Juratzka, J., Gottsche, C.M. & Grunow, A., Specimen florae cryptogamae septem insularum editum juxta plantas Mazziarianas herbaria Heufleurianai et speciatim quoad filices herbaria Tommasiniani. *Verhandlungen der Kaiserlich-*

Königlichen Zoologisch-Botanischen Gesellschaft in Wein, 413–416.

Juratzka, J. (1865) Hepaticae et Musci Frondosi. *In*: Unger, F. & Kotschy, T. *Die insel Cypern, ihrer physischen und organischen Natur nach mit Rücksicht auf ihre frühere Geschichte.* Wien, pp. 166–173.

Juslén, A. (2006) Revision of Asian *Herbertus* (Herbertaceae, Marchantiophyta). *Annales Botanici Fennici* **43**, 409–436.

Juutinen, R., Syrjänen, K., Korvenpää, Te., Laitinen, P., Ahonen, I., Huttunen, S., Korvenpää, Tu., Kypärä, T., Parnela, A., Ryömä, R. & Ulvinen, T. (2019) Bryophytes. *In*: Hyvärinen, E., Juslén, A., Kemppainen, E., Uddström, A. & Liukko, U.-M. (Eds.), *The 2019 Red List of Finnish Species.* Suomen lajien uhanalaisuus. Punainen kirja. Finnish Environment Institute, Helsinki.

Juutinen, R., Ulvinen, T., Kypärä, T., Huttunen, S., Vuorinen, K., Kuitunen, T., Parnela, A., Korvenpää, T., Syrjänen, K., Pihlaja, K., Köckinger, H., Konstantinova, N., Kestilä, A., Ervasti, E., He, X., Häyhä, T., Karttunen, K., Laaka-Lindberg, S., Torniainen, J., Vainio, O., Vasander, H. & Vuorinen, E. (2018) New national and regional biological records for Finland 9. Contributions to Bryophyta and Marchantiophyta 8. *Memoranda Societatis pro Fauna et Flora Fennica* **94**, 84–99.

Juutinen, R., Ulvinen, T., Syrjänen, K., Kypärä, T., Kuitunen, T., Parnela, A., Heikkilä, R., Suoknuuti, M., Marsh, T., Arkkio, H., He, X., Huttunen, S., Tahvanainen, T., Häyhä, T., Jääskeläinen, K. & Vainio, O. (2016) New national and regional biological records for Finland 7. Contributions to Bryophyta and Marchantiophyta. *Memoranda Societatis pro Fauna et Flora Fennica* **92**, 35–47.

Kalniková, V., Palpuina, S., Peterka, T., Kubešová, S., Plesková, Z. & Sabovljević, M. (2017) Bryophytes on river gravel bars in the Balkan Mountains: new records and insights into ecology. *Herzogia* **30** (2), 370–386.

Kanda, H. (1976) A revision of the family Amblystegiaceae of Japan II. *Journal of Science of the Hiroshima University, Series B, Division 2, Botany* **16**, 47–119.

Kaufmann, S. & Berg, C. (2014) Bryophyte ecology and conservation in the Troodos Mountains, Cyprus. *Herzogia* **27** (1), 165–187.

Kiebacher, T. & Lüth, M. (2017) *Orthotrichum dentatum* T.Kiebacher & Lüth sp. nov. (Orthotrichaceae). *Journal of Bryology* **39**, 46–56.

Klinggraeff, H. von (1893) *Die Leber und Laubmoose West und Ostpreussens*. Danzig, Commissions-verlag von W. Engelmann in Leipzig.

Köckinger, H. (2016) Rediscovery and redescription of the enigmatic *Radula visianica* (Porellales, Marchantiophyta). *Herzogia* **29**, 625–634.

Köckinger, H. (2017) Die Horn- und Lebermoose Osterreichs (Anthocerotophyta und Marchantiophyta). Catalogus Florae Austriae, II. Teil. *Biosystematics and Ecology-Series* **32**, 1–382.

Köckinger, H. & Kučera, J. (2007) *Barbula amplexifolia* (Mitt.) A.Jaeger in Europe. *Journal of Bryology* 29, 33–40.

Köckinger, H. & Kučera, J. (2011) *Hymenostylium xerophilum sp. nov.*, and *H. gracillimum, comb. nov.*, two neglected European mosses and their molecular affinities. *Journal of Bryology* **33**, 195–209.

Köckinger, H. & Kučera, J. (2016) *Brachythecium funkii* Schimp. and *B. japygum* (Głow.) Köckinger & Jan Kučera *comb. nov.*, two alpine species hitherto included in *B. cirrosum* (Schwägr.) Schimp. *Journal of Bryology* **38**, 267–285.

Köckinger, H. & van Melick, H. (2007) *Didymodon maschalogenus* (Pottiaceae), a novelty in the European moss flora, reported from the Austrian Alps and southern Norway. *Lindbergia* **32**, 62–68.

Köckinger, H., Bednarek-Ochyra, H. & Ochyra, R. (2007) *Bucklandiella nivalis* (Grimmiaceae), a new moss from the Alps of Austria**.** *Bryologist* **110**, 92–99.

Köckinger, H. & Hedenäs, L. (2017) A farewell to *Tortella bambergeri* (Pottiaceae) as understood over the last decades. *Journal of Bryology* **39**, 213–225.

Köckinger, H., Holyoak, D.T. & Suanjak, M. (2013) *Bryum austriacum* Köckinger, Holyoak & Suanjak, a new bulbiferous species from the Alps. *Journal of Bryology* **35**, 57–61.

Köckinger, H., Kučera, J., Hofmann, H., Müller, N. & Amann, G. (2012) *Barbula consanguinea* discovered in Switzerland and Austria, with a revision of former European records of *B. indica*. *Herzogia* **25**, 61–70.

Köckinger, H., Lüth, M., Werner, O. & Ros, R.M. (2018) *Tortella mediterranea* (Pottiaceae), a new species from southern Europe, its molecular affinities, and taxonomic notes on *T. nitida*. *Bryologist* **121**, 560–570.

Köckinger, H., Suanjak, M., Schribl, A. & Schröck, C. (2008) *Die Moose Kärntens.* Klagenfurt, 319 pp.

Köckinger, H., Werner, O. & Ros, R.M. (2010) A new taxonomic approach to the genus *Oxystegus* (Pottiaceae, Bryophyta) in Europe based on molecular data. *Nova Hedwigia, Beiheft* **138**, 31–49.

Konstantinova, N.A. & Bakalin, V.A. (2009) Checklist of liverworts (Marchantiophyta) of Russia. *Arctoa* **18**, 1–64.

Konstantinova, N.A. & Potemkin, A.D. (1996) Liverworts of the Russian arctic: an annotated check-list and bibliography. *Arctoa* **6**, 125–150.

Konstantinova, N.A., Mamontov, Y.S. & Vilnet, A.A. (2020) *Frullania stylifera* (R.M.Schust.) R.M.Schust. (Hepaticae), new to Eurasia. *Journal of Bryology* **42**, doi: 10.1080/03736687.2020.1722511

Konstantinova, N.A. & Savchenko, A.N. (2008) Contributions to the hepatic flora of Svalbard. *Lindbergia* **33**, 13–22.

Konstantinova, N.A. & Savchenko, A.N. (2012) Contribution to the hepatic flora of Nordaustandet

(Svalbard). 1. Hepatics of the north coast of Murchison Fjorden. *Polish Botanical Journal* **57** (1), 181–195.

Konstantinova, N.A. & Savchenko, A.N. (2018) Contribution to the bryophyte flora of Svalbard: hepatics of Barents Island. *Folia Cryptogamica Estonica* **55**, 105–115.

Konstantinova, N.A. & Vilnet, A.A. (2016) A new species of the genus *Jungermannia* (Jungermanniales, Marchantiophyta) from the Caucasus with notes on taxa delimitation and taxonomy of *Jungermannia* s. str. *Phytotaxa* **255**, 227–239.

Konstantinova, N.A., Vilnet, A.A. & Lapshina, E.D. (2019) New records of *Scapania spaerifera* H.Buch & Tuom. in Europe with description of global distribution and ecology of the species. *Arctoa* **28**, 203–209.

Konstantinova, N.A., Vilnet, A.A. & Ştefănuţ, S. (2014) On the distribution and variability of *Bucegia romanica* Radian. *Arctoa* **23**, 137–144.

Kooijman, A., Hedenäs, L., Mettrop, I. & Cusell, C. (2015) *Calliergon megalophyllum* rediscovered in the Netherlands after 50 years: comparison to Swedish habitats. *Lindbergia* **38**, 20–29.

Koponen, T. (2017) Lähdelehväsammal (*Rhizomnium dentatum*), jolla ole hampainen lehtilaita, ja sen mahdollinen jälkeläinen, *R. punctatum* var. *hermanperssonii*, var. nov. *Bryobrotherella* **20**, 62–66.

Koponen, T. & Ignatova, E.A. (2018) Mniaceae. *In*: Ignatov MS, editor. *Moss Flora of Russia. Volume 4. Bartramiales-Aulacomniales.* KMK Scientific Press Ltd., Moscow (Arctoa. 27, supplement 1). p. 439–517.

Koponen, T. & Isoviita, P. (2010) *Philonotis capillaris* Lindb. and *P. arnellii* Husn.; one moss, two names. *Cryptogamie, Bryologie* **31**, 75–94.

Koponen, T. & Sun, Y. (2017) Preliminary study on phylogenetic position and delimitation of the ciliate arthrodontous genera of the moss family Mniaceae. *Journal of Bryology* **39**, 23–38.

Koppe, E. (1976) Beobachtungen über die Moosvegetation und Moosflora von Kypern. *Herzogia* **4**, 95–136.

Koroleva, N.E. (2014) Phytosociological evaluation of terrestrial habitat types in Pyramiden area (Svalbard, Norway). *Czech Polar Reports* **4** (2), 193–211.

Koroleva, N.E. & Borovichev, E.A. (2014) Rare plant communities with abundance of *Sauteria alpina* (Nees) Nees in the arctic tundra of Svalbard. *Arctoa* **23**, 5–10.

Košnar, J. & Kolář, F. (2009) A taxonomic study of selected European taxa of the *Tortula muralis* (Pottiaceae, Musci) complex: variation in morphology and ploidy level. *Preslia* **81**, 399–421.

Košnar, J. & Kučera, J. (2010) The taxonomic identity and typification of *Barbula montenegina* Breidl. & Szyszyl. (Bryopsida, Pottiaceae). *Journal of Bryology* **32**, 275–278.

Kramer, W. (1980) *Tortula* Hedw. sect. *Rurales* De Not. (Pottiaceae, Musci) in der ostlichen Holarktis. *Bryophytorum Bibliotheca* **21**, 223 pp.

Krause, W. Ludwig, W. & Seidel, F. (1963) Zur Kenntnis der Flora und Vegetation auf Serpentinstandorten des Balkans. 6. Vegetationsstudien in der Umgebung von Mantoudi (Euboea). *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* **82**, 337–403.

Krajewski, L. (2017) *Drepanocladus turgescens* (Bryophyta, Amblystegiaceae) rediscovered in Poland. *Cryptogamie, Bryologie* **38**, 265–273.

Kubinská, A., Janovicová, K. & Soltes, R. (2001) Red list of bryophytes of Slovakia (December 2001). *In*: Baláz, D., *et al.* (eds), Cerveny zoznam rastlín a zivocichov Slovenska. *Ochr. Prír*. **20** (Suppl.), 48–81.

Kučera, J. (2000) Illustrierter Bestimmungsschlüssel zu den mitteleuropäischen Arten der Gattung *Didymodon*. *Meylania* **19**, 2–49.

Kučera, J. & Köckinger, H. (2000) The identity of *Grimmia andreaeoides* Limpr. and *Didymodon subandreaeoides* (Kindb.) R.H.Zander. *Journal of Bryology* **22**, 49–54.

Kučera, J. & Váňa, J. (2003) Check- and Red List of bryophytes of the Czech Republic (2003). *Preslia* **75**, 193–222.

Kučera, J., Blockeel, T.L., Erzberger, P., Papp, B., Soldán, Z., Vellak, K., Werner, O. & Ros, R.M. (2018) The *Didymodon tophaceus* complex (Pottiaceae, Bryophyta) revisited: new data support the subspecific rank of currently recognized species. *Cryptogamie, Bryologie* **39**, 241–257.

Kučera, J., Dřevojan, P., Bradáčová, J., Fialová, L., Godovičová, K., Janošík, L., Kubešová, S., Manukjanová, A., Mikulášková, E., Skoupá, Z. & Tkáčiková, J. (2017) Bryophytes recorded during the 2017 Spring Bryological and Lichenological Meeting in the Pavlov Hills (Pálava). *Bryonora* **60**, 1–12.

Kučera, J., Košnar, J. & Werner, O. (2013) Partial generic revision of *Barbula* (Musci: Pottiaceae): Re-establishment of *Hydrogonium* and *Streblotrichum*, and the new genus *Gymnobarbula*. *Taxon* **62** (1), 21–39.

Kučera J., Kuznetsova O.I., Manukjanová A., & Ignatov M.S. (2019) A phylogenetic revision of the genus *Hypnum*. Towards completion. *Taxon* **68**, 1-33.

Kučera J., Váňa J. & Hradílek Z. (2012) Bryophyte flora of the Czech Republic: updated checklist and Red List and a brief analysis. *Preslia* **84**, 813–850.

Kyrkjeeide, M.O., Hassel, K., Stenøien, H.K., Prestø, T., Boström, E., Shaw, A.J. & Flatberg, K.I. (2015) The dark morph of *Sphagnum fuscum* (Schimp.) H.Klinggr. in Europe is conspecific with the North American *S. beothuk*. *Journal of Bryology* **37**, 251–266.

Laflin, T. (1973) Bryophytes new to Crete. *Journal of Bryology* **7**, 417–420.

Laine, J., Flatberg, K.I., Harju, P., Timonen, T., Minkkinen, K., Laine, A., Tuittila, E.S. & Vasander, H.

(2018) Sphagnum *mosses – the stars of European mires*. University of Helsinki, Helsinki.

Lakušić, R. (1966) Vegetacija livada I pašnjaka na planini Bjelasici. *God. Biol. Inst*. **19**, 25–186.

Lang, A.S., Tubanova, D. & Stech, M. (2014) Species delimitations in the *Dicranum acutifolium* complex (Dicranaceae, Bryophyta), using molecular markers. *Journal of Bryology* **36**, 279–290.

Lara, F., Blockeel, T.L., Garilleti, R. & Mazikpaka, V. (2003) Some interesting *Orthotrichum* species from mainland Greece and Evvia. *Journal of Bryology* **25**, 129–134.

Lara, F., Garilleti, R., Draper, I. & Mazimpaka, V. (2018) *Lewinskya lamyana* sp. nov. (Orthotrichaceae, Bryopsida), a distinct moss from an exceptional habitat in the southern Iberian Peninsula. *Cryptogamie, Bryologie* **39** (2), 259–270.

Lara, F., Garilleti, R., Goffinet, B., Draper, I., Medina, R., Vigalondo, B. & Mazimpaka, V. (2016) *Lewinskya*, a new genus to accommodate the phaneroporous and monoicous taxa of *Orthotrichum* (Bryophyta, Orthotrichaceae). *Cryptogamie, Bryologie* **37**, 361–382.

Lara, F., Mazimpaka, V., Estébanez, B. & Garilleti, R. (2009) *Orthotrichum consobrinum* Cardot in Western Europe and South-Western Asia. *Journal of Bryology* **31**, 80–85.

Larraín, J., Quandt, D., Stech, M. & Muñoz, J. (2013) Lumping or splitting? The case of *Racomitrium* (Bryophytina: Grimmiaceae). *Taxon* **62** (6), 1117–1132.

Leis, M. & Kannukene, L. (2007) New Estonian records. *Folia Cryptog. Estonica* **43**, 69–76.

Li, M., Zuo, Q., Ignatov, M.S., Huttunen, S., He, S. & Wang, Y.-F. (2014) Phylogenetic position of the genus *Bryhnia* Kaurin (Brachytheciaceae, Bryophyta) inferred from chloroplast (rpl16, trnG, trnL–F) and nuclear (ITS) sequence data. *Journal of Bryology* **36**, 15–21.

Linares, L., Grech, M., Perez, C., Gonzalez, A., Guillem, R. & Bensusan, K. (2018) *Flora of Gibraltar.* Available from www.floraofgibraltar.myspecies.info Accessed October 2018.

Lindenberg, J.B.G. (1829) Synopsis Hepaticarum Europaearum. *Nova Acta Acad. Caesar. Leop. Carol.* **14**, Suppl., 1–133.

Lo Giudice, R. (1996) On the *Bryum bicolor* complex in Italy including *Bryum gemmilucens* Wilcz. & Dem., new species to the Italian bryological flora. *Flora Mediterranea* **6**, 61–67.

Long, D.G., Forrest, L.L., Villarreal, J.C. & Crandall-Stotler, B.J. (2016) Taxonomic changes in Marchantiaceae, Corsiniaceae and Cleveaceae. *Phytotaxa* **252** (1), 77–80.

Lönnell, N. (2017) *Sphagnum beothuk* new to Sweden. *Lindbergia* **40**, 11–13.

Loskotova, E. (2006) Interesting records of *Aneura maxima* (Schiffn.) Steph. (Metzgeriales) in the Czech Republic and Slovakia. *Silva Gabreta* **12/1**, 15–18.

Lüth, M. (2003) Moose in der Umgebung des Dorfes Vikos, im Vikos-Aoos Nationalpark (NW Griechenland). *Archive for Bryology* **2**, 1–25.

Lüth, M. (2007) Additions to the bryophyte flora of Bulgaria. *Cryptogamie, Bryologie* **28**, 237–241.

Lüth, M. & Frahm, J.-P. (2008) New and interesting records of bryophytes from Crete. *Herzogia* **21**, 247–250.

Mahévas T., Werner J., Schneider C. & Schneider T. (2010) *Liste rouge des bryophytes de Lorraine (Anthocérotes, Hépatiques, Mousses).* 62 p.

Maier, E. (2002) *Grimmia dissimulata* E. Maier *sp. nova*, and the taxonomic position of *Grimmia trichophylla* var. *meridionalis* Müll. Hal. (Musci, Grimmiaceae). *Candollea* **56**, 281–300.

Maier, E. (2010) The genus *Grimmia* Hedw. (Grimmiaceae, Bryophyta) — A morphological anatomical study. *Boissiera* **63**, 5–377.

Majestyk, P. (2011) A taxonomic treatment of *Daltonia* (Musci: Daltoniaceae) in the Americas. *Journal of the Botanical Research Institute of Texas* **5**, 553–575.

Maksimov, A.I., Fedorova, A.V. & Ignatov, M.S. (2018) *Fontinalis dichelymoides* (Fontinalaceae, Bryophyta), a new species for the moss flora of Russia. *Arctoa* **27**, 203–207.

Mamontov, Y.S., Konstantinova, N.A., Vilnet, A.A. & Bakalin, V.A. (2015) On the phylogeny and taxonomy of Pallaviciniales (Marchantiophyta), with overview of Russian species. *Arctoa* **24**, 98–123.

Mamontov, Y.S., Potemkin, A.D., Tubanova. D.Y. & Sofronova, E.V. (2018) Liverworts of the Dzherginsky Reserve (Republic of Buryatia). *Novosti sistematiki nizshikh rastenii* **52**, 483–504.

Marka, J., Blockeel, T.L., Long, D.G. & Papp, B. (2018) Bryophytes new to Albania from the British Bryological Society field meeting in 2014. *Journal of Bryology* **40**, 163–172.

Marka, J. & Sabovljević, M. (2011) New bryophyte records from Albania. *Journal of Bryology* **33**, 74–76.

Mårtensson, O. (1956) Bryophytes of the Torneträsk Area, Northern Swedish Lappland. II. Musci. *Kungl. Svenska Vetenskapakademiens Avhandlingar i Naturskyddsärenden* **14**, 1–116.

Martin, P. (2011) *Syntrichia montana* var. *calva* (Durieu & Sagot ex Bruch & Schimp.) J.J.Amann in Gloucestershire, new to Britain. *Journal of Bryology* **33**, 77–79.

Martinčič, A. (2006) Moss flora of the Prokletije Mountains (Serbia, Montenegro). *Hacquetia* **5** (1), 113–130.

Martinčič, A. (2016) Updated Red List of bryophytes of Slovenia. *Hacquetia* **15** (1), 107–126.

Martinez, L., Grillas, P, Offerhaus, B, Puche, F. & Segarra-Moragues, J.G. (2014) *Riella cossoniana* Trab. (Riellaceae, Marchantiophyta) new to France. *Cryptogamie, Bryologie* **35**, 197–210.

Mastracci, M. (2003) *Thamnobryum neckeroides* (Bryopsida: Neckeraceae): Lectotypification, synonymies, diagnostic characters, habitat and distribution. *Journal of Bryology* **25**, 115–120.

Mazziari, A.D. (1851) *Flora Septinsularis.* Published only as extracts in Stephanides (1948), Appendix 1, pp. 187–201.

Medelius, S. (1927) Contribution a la flore bryologique de la Crete. *Svensk botanisk Tidskrift* **21**, 45–48.

Medina, R., Garilleti, R., Mazimpaka, V. & Lara, F. (2009) A new look at *Orthotrichum scanicum* Grönvall (Orthotrichaceae, Bryophyta). *Journal of Bryology* **31**, 86–92.

Medina, R., Lara, F., Goffinet, B., Garilleti, R. & Mazimpaka V. (2012) Integrative taxonomy successfully resolves the pseudo-cryptic complex of the disjunct epiphytic moss *Orthotrichum consimile s.l.* (Orthotrichaceae). *Taxon* **61**, 1180–1198.

Medina, R., Lara, F., Goffinet, B., Garilleti, R. & Mazimpaka V. (2013) Unnoticed diversity within the disjunct moss *Orthotrichum tenellum s.l.* validated by morphological and molecular approaches. *Taxon* **62** (6), 1133–1152.

Mifsud, S.D. (2012) An update on the moss flora of the Maltese Islands. *Cryptogamie, Bryologie* **33**, 405–418.

Mišíková, K., Godovičová, K., Širka, P. & Šoltés, R. (2019) Checklist and Red List of mosses (Bryophyta) of Slovakia. *Biologia* **75**, 21–37.

Müller, F. (2007) Zum Vorkommen von *Clasmatodon parvulus* (Fabroniaceae, Bryopsida) in Deutschland. *Herzogia* **20**, 293–298.

Müller, F. (2010) Additions to the moss flora of Sicily. *Herzogia* **23**, 171–172.

Müller, F. (2014a) *Bartramia aprica* – the correct name for the Mediterranean and western North American species historically recognized as *"Bartramia stricta"*. *Herzogia* **27**, 211–214.

Müller, F. (2014b) *Tortula randii* (Pottiaceae) new for Slovakia and comments on its distinction from *Tortula cernua*. *Herzogia* **27**, 413– 417.

Müller, F. (2017) *Didymodon sicculus* und *Tortula pallida* neu für die Flora von Deutschland von Binnensalzstellen in Ostdeutschland. *Herzogia* **30**, 397–411.

Muñoz, J., Cezón, K., Hespanhol, H. & Quandt, D. (2015) Grimma. Flora Briofítica Ibérica. Vol. II. Universidad de Murcia, Murcia, Sociedad Española de Briología.

Muñoz, J., Hespanhol, H., Cezón, K. & Séneca, A. (2009) *Grimmia horrida* (Grimmiaceae), a new species from the Iberian Peninsula. *Bryologist* **112**, 325–328.

Natcheva, R. (2007) New bryophyte records in the Balkans: 2. *Phytologia Balcanica* **13** (2), 247–259.

Natcheva, R. (2007) New bryophyte records in the Balkans: 3. *Phytologia Balcanica* **13** (3), 429–432.

Natcheva, R., Coşkun, M. & Çayir, A. (2008) Contribution to the bryophyte flora of European Turkey. *Phytologia Balcanica* **14**, 335–341.

Natcheva, R. & Ganeva, A. (2006) Bryophytes on loess cliffs in Bulgaria: a preliminary study. *Phytologia Balcanica* **12**, 47–50.

Natcheva, R. & Ganeva, A. (2018) On the identity and distribution of some elusive bryophyte specices in the Bulgarian flora. *Phytologia Balcanica* **24** (2), 201–204.

Natcheva, R., Ganeva, A. & Spiridonov, G. (2018) Red List of the bryophytes in Bulgaria. *Phytologia Balcanica* **12** (1), 55–62.

Nieto-Lugilde, M., Werner, O., McDaniel, S.F. & Ros, R.M. (2018) Environmental variation obscures species diversity in southern European populations of the moss genus *Ceratodon*. *Taxon* **67**, 673–692.

Nyholm, E. (1998) *Illustrated Flora of Nordic mosses. Fasc. 4.* Nordic Bryological Society, Copenhagen & Lund.

Ochyra, R. (2013) The new generic name *Torrentaria*, a nomenclatural consequence of the legitimacy of *Platyhypnum* and the illegitimacy of *Platyhypnidium* (Bryophyta). *Nova Hedwigia* **96**, 205–212.

Ochyra, R. & Bednarek-Ochyra, H. (2015) Proposal to conserve the name *Bryum pallescens* against *Hypnum boreale* (*Bryum boreale*) (Bryaceae, Bryophyta). *Taxon* **64** (5), 1053–1054.

Ochyra, R., Bednarek-Ochyra, H. & Plášek, V. (2017) Proposal to conserve the name *Plagiomnium* against *Orthomnion* and *Orthomniopsis* (Bryophyta: Mniaceae). *Taxon* **66**, 1218–1220.

Ochyra, R., Zarnowiec, J. & Bednarek-Ochyra, H. (2003) *Census Catalogue of Polish mosses.* Polish Academy of Sciences, W. Szafer Institute of Botany, Kraków.

O'Leary, S. & Fisk, R. (2019) *Syntrichia ruralis* var. *epilosa* new to the British Isles. *Field Bryology* **121**, 35–37.

Olsson, S., Buchbender, V., Enroth, J., Huttunen, S., Hedenäs, L. & Quandt D. (2009) Evolution of the Neckeraceae (Bryophyta): resolving the backbone phylogeny. *Systematics and Biodiversity* **7**, 419–432.

Olsson, S., Enroth, J., Buchbender, V., Hedenäs, L., Huttunen, S. & Quandt, D. (2011) *Neckera* and *Thamnobryum* (Neckeraceae, Bryopsida) – paraphyletic assemblages. *Taxon* **60**, 36–50.

Orgaz, J.D., Cano, M.J. & Guerra, J. (2010) *Brachytheciastrum dieckei* (Roll) Ignatov Huttunen (Brachytheciaceae) in the eastern Mediterranean area and the Middle East. *Nova Hedwigia* **90**, 257–261.

Orgaz, J.D., Cano, M.J. & Guerra, J. (2011) *Sciuro-hypnum* (Brachytheciaceae) in the Mediterranean region. *Bryologist* **114**, 595–610.

Orgaz, J.D., Cano, M.J. & Guerra, J. (2012a) *Brachythecium laetum* (Brid.) Schimp. (Brachytheciaceae, Bryophyta) new to the flora of the Iberian Peninsula and Bulgaria with notes on related taxa. *Journal of Bryology* **34**, 137–140.

Orgaz, J.D., Cano, M.J. & Guerra, J. (2012b) Typification, taxonomy and distribution of *Brachythecium erythrorrhizon* Schimp. (Brachytheciaceae, Bryophyta) in the Mediterranean Region. *Nova Hedwigia* **95**, 227–231.

Orgaz, J.D., Cano, M.J. & Guerra J. (2013) Taxonomic revision of *Brachytheciastrum* (Brachytheciaceae, Bryophyta) from the Mediterranean Region. *Systematic Botany* **38**, 283–294.

Orgaz Alvarez, J.D. & Blockeel, T.L. (2010) A note on some new and interesting records of *Brachythecium* Schimp. *sensu lato* from Greece. *Journal of Bryology* **32**, 298–300.

Ottley, T. & Blockeel, T. (2019) *Tortella fasciculata* and *T. pseudofragilis* in Britain and Ireland. *Field Bryology* **121**, 19–22.

Pantović, J.P., Grdović, S.N., Sabovljević, A.D. & Sabovljević, M.S. (2014) New and interesting bryophyte records for the flora of Serbia. *Arch. Biol. Sci.,* Belgrade **66** (2), 701–704.

Pantović, J.P., Milanović, D. & Sabovljević, M.S. (2016) Three novelties for the bryophyte flora of Bosnia and Herzegovina. *Herzogia* **29** (2), 801–804.

Pantović, J.P. & Sabovljević, M.S. (2017) Bryophytes of Kosovo. *Phytotaxa* **306** (2), 101–123.

Pantović, J., Veljić, M., Grdović, S. & Sabovljević, M. (2020) An annotated list of hornwort and liverwort species of Serbia. *Cryptogamie, Bryologie* **41,** 35–48.

Papp, B. (2008) Selection of Important Bryophyte Areas in Hungary. *Folia Cryptogamica Estonica* **44**, 101–111.

Papp, B., Alegro, A., Šegota, V., Šapić, I. & Vukelić, J. (2013) Contributions to the bryophyte flora of Croatia I. Gorski Kotar Region (W Croatia). *Studia botanica Hungarica* **44**, 193–211.

Papp, B. Dragićević, S. & Erzberger, P. (2014) Contribution to the bryophyte flora of the Komovi Mts (Montenegro). *Studia Botanica Hungarica* **45**, 17–31.

Papp, B. & Erzberger, P. (2007) Contributions to the bryophyte flora of Montenegro. *Studia Botanica Hungarica* **38**, 79–94.

Papp, B. & Erzberger, P. (2010) Contribution to the bryophyte flora of Durmitor National Park, Montenegro. *Nova Hedwigia* **138**, 145–161.

Papp, B. & Erzberger, P. (2012) Contribution to the bryophyte flora of the former Yugoslav Republic of Macedonia. *Polish Botanical Journal* **57** (1), 205–221.

Papp, B. Erzberger, P. & Dragićević, S. (2008) Contribution to the bryophyte flora of the Orjen Mts., Montenegro. *Studia Botanica Hungarica* **39**, 101–112.

Papp, B. Erzberger, P. & Dragićević, S. (2013) Contribution to the bryophyte flora of Eastern Albania (Korça and Kolonja) Districts. *Studia Botanica Hungarica* **41**, 61–88.

Papp, B., Erzberger, P. & Marka, J. (2010) Contribution to the bryophyte flora of Bjelasica Mts. (Montenegro). *Polish Botanical Journal* **58**, 293–318.

Papp, B. Erzberger, P., Szurdoki, E., Dragićević, S. (2019) Contributions to the bryophyte flora of the Prokletije Mts, Montenegro. *Studia botanica Hungarica* **50**, 29–52.

Papp, B., Erzberger, P. & Tsakiri, E. (2011) Contributions to the bryophyte flora of the Voras (Nidž Mts (Greece) and the former Yugoslav Republic of Macedonia. *Studia botanica Hungarica* **42**, 51–76.

Papp, B., Natcheva, R., Erzberger, P. & Sabovljević, M. (2012) *Didymodon sicculus*, new to Bulgaria and Serbia and notes on its ecology. *Nova Hedwigia* **95**, 221–226.

Papp, B., Natcheva, R. & Ganeva, A. (2011) The bryophyte flora of Northern Mt. Strandzha. *Phytologia Balcanica* **17** (1), 21–32.

Papp, B., Pantovic, J., Sabovljević, M.S. & Szurdoki, E. (2014) *Myurella sibirica*, a moss species new to Montenegro and Serbia: its range extension towards south-eastern Europe. *Cryptogamie, Bryologie* **35**, 321–326.

Papp, B., Pantovic, J., Szurdoki, E. & Sabovljević, M.S. (2014) Interesting and new species for the bryophyte flora of Serbia. *Herzogia* **27**, 221–225.

Papp, B., Pantovic, J., Szurdoki, E. & Sabovljević, M.S. (2016) New bryophyte records for the Republic of Macedonia. *Journal of Bryology* **38**, 168–171.

Papp, B., Szurdoki, E., Pantovic, J., & Sabovljević, M.S. (2016) New records of Mediterranean-Atlantic mosses in the flora of Serbia. *Herzogia* **29**, 185–189.

Papp, B. & Sabovljević, M. (2002) The bryophyte flora of Tara National Park (W. Serbia, Yugoslavia). *Studia Bot. Hung.* **33**, 25–39.

Papp, B. & Sabovljević, M. (2003) Contribution to the bryophyte flora of Turkish Thrace. *Studia Bot. Hung.* **34**, 43–54.

Papp, B. & Sabovljević, M. (2009) Notes on some new and interesting bryophyte records from Croatia. *Journal of Bryology* **31**, 272–275.

Papp, B., Szurdoki, E. & Sabovljević, M.S. (2012) Bryophyte flora of Lake Vlasina and its surroundings (SE Serbia). *Studia Bot. Hung.* **43**, 27–45.

Papp, B. & Tsakiri, E. (2017) Contributions to the bryophyte flora of the Paiko, Tzena and Pinovo Mts in Greece. *Studia botanica Hungarica* **42**, 51–76.

Papp, B., Tsakiri, E. & Babalonas, D. (1998) Bryophytes and their environmental conditions at Enipeas (Mt. Olympos) and Lykorrema (Mt. Ossa) streams (Greece). *In*: Tsekos, I. & Moustakas, M. (eds.), *Progress in botanical research. Proceedings of the 1st Balkan Botanical Congress.* Kluwer Academic Publishers, Dordrecht, Boston, London, pp. 129–132.

Patiño, J., Hedenäs, L., Dirkse, G.M., Ignatov, M.S., Papp, B., Müller, F. González-Mancebo, J.M. & Vanderpoorten, A. (2017) Species delimitation in the recalcitrant moss genus *Rhynchostegiella* (Brachytheciaceae). *Taxon* **66**, 239–308.

Pericàs, J. & Rosselló, J.A. (2009) New and interesting records to the bryophyte flora of the Balearic Islands. *Cryptogamie, Bryologie* **30**, 501–505.

Persson, H. (1939) Bryophytes from Madeira. *Bot. Not.* 1939, 566–589.

Peterka, T., Kalniková, V. & Plesková, Z. (2017) *Pseudocalliergon lycopodioides*, a new bryophyte species for Montenegro. *Herzogia* **30** (2), 496–500.

Peterka, T., Plesková, Z., Palpurina, S., Kalníková, V., Lazarević, P.M. & Hájek, M. (2016) *Meesia triquetra*, a new relict moss for the Republic of Macedonia. *Herzogia* **29**, 66–71.

Philippe, M. & Ochyra, R. (2017) Biogeographical complements for *Seligeria carniolica* and *S. irrigata* (Bryophyta, Seligeriaceae). *Cryptogamie, Bryologie* **38**, 303–312.

Philippi, G. (2009) Vorkommen und Vergesellschaftung von *Heterocladium flaccidum* in Südwestdeutschland und Nachbargebieten. *Herzogia* **22**, 313–321.

Pilous Z. & Šoltés R., 2000: *Oreas martiana*, new species to the Carpathians' bryoflora (The High Tatra Mountains, Slovakia). *Biologia* **55** (4), 375–379.

Plášek, V., Sawicki, J., Trávníčková, V. & Pasečná, M. (2009) *Orthotrichum moravicum* (Orthotrichaceae), a new moss species from the Czech Republic. *Bryologist* **112**, 329–336.

Plášek, V., Sawicki, J., Marková, I. & Wierzcholska, S. (2011) *Orthotrichum affine* var. *bohemicum* (Orthotrichaceae), a new variety of epiphytic moss from the Czech Republic. *Acta Societatis Botanicorum Poloniae* **80**, 335–340.

Plášek, V., Sawicki, J., Ochyra, R., Szczecińska, M. & Kulik, T. (2015) New taxonomical arrangement of the traditionally conceived genera *Orthotrichum* and *Ulota*. *Acta Musei Silesiae Scientiae Naturales* **64**, 169–174.

Pócs, T., Ochyra, R. & Bednarek-Ochyra, H. (2016) *Lepidozia cupressina* (Marchantiopsida, Lepidoziaceae) in Sub-Saharan Africa, with a note on the taxonomic status of *L. chordulifera*. *Cryptogamie, Bryologie* **37** (2), 125–147.

Pócs, T., Sabovljević, M.S., Puche, F., Segarra-Moragues, J.G., Gimeno, C. & Kürschner, H. (2004) *Crossidium laxefilamentosum* Frey & Kürschner (Bryopsida: Pottiaceae), new to Europe and to North Africa. *Journal of Bryology* **26**, 113–124.

Podpěra, J. (1954) *Conspectus Muscorum Europaeorum.* Ceskoslovenské Akademie Ved, Prague

Poponessi, S., Aleffi, A. & Venanzoni, R. (2014) *Conocephalum salebrosum* Szweykowski, Buckowska et Odrzykoski (Conocephalaceae, Marchantiophyta), new to Italy. *Cryptogamie, Bryologie* **35**, 223–226.

Porley, R.D. (2016) A new key to *Grimmia* in Britain and Ireland. *Field Bryology* **116**, 28–43.

Porley, R.D. & Edwards, S. (2010) *Leptodontium proliferum* Herzog (Bryopsida: Pottiaceae), new to Europe. *Journal of Bryology* **32**, 46–50.

Potemkin, A.D. (1999) An analysis of the practical taxonomy of some critical northern species of *Scapania* (Scapaniaceae, Hepaticae). *Bryologist* **102**, 32–38.

Potemkin, A.D. (2018) *Calypogeia fissa* (Calypogeiaceae, Marchantiophyta) in the Northwestern European Russia. *Novosti Sistematiki Nizshikh Rastenii* **52** (1), 173–181.

Potemkin, A.D. & Ahti, T. (2012) On *Riccia marginata* and related species (Ricciaceae, Marchantiophyta). *Novosti Sistematiki Nizshikh Rastenii* **46**, 298–305.

Potemkin, A.D. & Rozantseva, E.I. (2015) New and little-known for the Leningrad Region liverworts (Marchantiophyta) from Hogland Island (Gulf of Finland, Baltic Sea). *Novosti sistematiki nizshikh rastenii* **49**, 369–381.

Preston, C.D. & Blockeel, T.L. (2006) Field meeting, February-March 2006, Salerno, Italy. *Field Bryology* **90**, 38–45.

Prey, T., Boudier, P. & Werner, J. (2014) *Cephaloziella uncinata* (Cephaloziellaceae, Marchantiophyta) en Haute-Normandie, une hépatique arctique nouvelle pour la France. *Cryptogamie, Bryologie* **35**, 313–320.

Price, M.J. & Ellis, L.E. (2018) The disentanglement of *Andreaea alpina* Hedw. (Andreaeaceae): Typifications and nomenclatural changes. *Taxon* **67**, 989–995.

Privitera, M. & Puglisi, M. (1997) *Riella notarisii* (Mont.) Mont. (Hepaticae, Riellaceae), rediscovered in Italy. *Flora Mediterranea* **7**, 149–152.

Puche, F., Casas, C. & Brugués, M. (2006) *Didymodon eckeliae* (Pottiaceae), new to Europe. *Bryologist* **109**, 239–241.

Puche, F. & Segarra-Moragues, J.G. (2013) *Riella bialata* Trab. (Riellaceae, Marchantiophyta): a new addition to the European liverwort flora. *Cryptogamie, Bryologie* **34**, 341–352.

Puglisi, M. (2009) New interesting records to the moss flora of Sicily (Italy). *Cryptogamie, Bryologie* **30**, 395–398.

Puglisi, M., Campisi, P., Dia, M.G. & Privitera, M. (2015) New or interesting regional bryophyte records for Italian bryoflora. *Fl. Medit.* **25** (Special Issue), 193–198.

Puglisi, M., Campisi, P., Lakusic, D., Surina, B., Di Pietro, R. & Privitera, M. (2013) Notes on the bryophyte flora and vegetation of the central and south-western Balkans. *Lazaroa* **34** (1), 107–116.

Puglisi, M. & Privitera, M. (2018) New moss records for the Mediterranean islands. *Cryptogamie, Bryologie* **39** (2), 177–183.

Puglisi, M., Tamburino, A. & Privitera, M. (2012) Additions to the moss flora of Greece. *Cryptogamie, Bryologie* **33**, 383–389.

Puntillo, D. & Puntillo, M. (2018) On the presence of *Riella notarisii* (Riellaceae) in the peninsular Italy. *Flora Mediterranea* **24**, 93–98.

Raimondo, F.M. & Dia, M.G. (1978) Note briogeografiche. I. Il genere *Sphagnum* L. in Sicilia. *Il Naturalista Siciliano*, S. **4**, **2** (**3**–**4**), 109–126.

Rajczy, M. (1979) Contributions to the bryoflora of Greece, I. The bryophytes of the cave Perama near Joannina. *Studia botanica Hungarica* **13**, 3–5.

Rams, S., Ros, R.M. & Werner, O. (2006) *Tortella alpicola* (Pottiaceae) from Spain, new to western Europe. *Bryologist* **109**, 404–407.

Reimers, H. (1957) Einige bemerkenswerte Moose des östlichen Mediterrangebeits. *Willdenowia* **1**, 689–703.

Rimac, A., Šegota, V., Alegro, A.L., Koletić, N. & Vuković, N. (2019) Novelties in the hornwort flora of Croatia and Southeast Europe. *Cryptogamie, Bryologie* **40** (**22**), 289–295.

Ros, R.M. & Cano, M.J. (2008) Identity of North African endemic bryophytes, 2. *Cryptogamie, Bryologie* **29**, 135–141.

Ros, R.M. & Herrnstadt, I. (2010) New taxonomical data in the genus *Tortula* (Pottiaceae, Bryophyta). *Tropical bryology* **31**, 150–153.

Ros, R.M., Mazimpaka, V., Abou-Salama, U., Aleffi, M., Blockeel, T.L., Brugués, M., Cano, M.J., Cros, R.M., Dia, M.G., Dirkse, G.M., El Saadawi, W., Erdağ, A., Ganeva, A., González-Mancebo, J.M., Herrnstadt, I., Khalil, K., Kürschner, H., Lanfranco, E., Losada-Lima, A., Refai. M.S., Rodríguez-Nuñez, S., Sabovljević, M., Sérgio, C., Shabbara, H., Sim-Sim, M. & Söderström, L. (2007) Hepatics and Anthocerotes of the Mediterranean, an annotated checklist, *Cryptogamie, Bryologie* **28**, 351–437.

Ros, R.M., Mazimpaka, V., Abou-Salama, U., Aleffi, M., Blockeel, T.L., Brugués, M., Cros, R.M., Dia, M.G., Dirkse, G.M., Draper, I., El-Saadawi, W., Erdağ, A., Ganeva, A., Gabriel, R., González-Mancebo, J.M., Granger, C., Herrnstadt, I., Hugonnot, V., Khalil, K., Kürschner, H., Losada-Lima, A., Luís, L., Mifsud, S., Privitera, M., Puglisi, M., Sabovljević, M., Sérgio, C., Shabbara, H.M., Sim-Sim, M., Sotiaux, A., Tacchi, R., Vanderpoorten, A. & Werner, O. (2013) Mosses of the Mediterranean, an annotated checklist. *Cryptogamie, Bryologie* **34**, 99–283.

Ros, R.M., Muñoz, J., Werner, O. & Rams, S. (2008) New typifications and synonyms in *Tortula* sect. *Pottia* (Ehrh. ex Rchb.) Kindb. (Pottiaceae, Musci). *Taxon* **57**, 279–288.

Ros, R.M. Rams, S. Holyoak, D.T. Brugués, M. & Cros, R.M. (2007) Revision of the records of *Brachymenium commutatum* (Bryophyta, Bryaceae) in Europe. *Nova Hedwigia* **84**, 241–247.

Ros, R.M. & Werner, O. (2007) The circumscription of the genus *Pottiopsis* (Pottiaceae, Bryophyta) based on morphology and molecular sequence data. *Nova Hedwigia, Beiheft* **131**, 65–79.

Rothero, G.P. (2009) *Arctoa anderssonii* Wich. (Dicranaceae), new to the British Isles. *Journal of Bryology* **31**, 76–79.

Rothero, G.P. (2014) *Dicranum spadiceum* J.E.Zetterst. in Scotland, new to the British Isles. *Journal of Bryology* **36**, 75–77.

Rozhina, V.I., Ignatov, M.S., Ignatova, E.A. & Napreenko, M.G. (2010) *Dicranella staphylina* (Dicranaceae, Bryophyta) in Russia. *Arctoa* **19**, 135–138.

Rungby, S. (1966) Moose. *In*: A. Hansen & S. Snogerup, Beiträge zur Kenntnis der Flora der Insel Rhodos. *Sber. öst. Akad. Wiss. Math.-naturw. Kl. Abt.* **1**. **175**, 379–380.

Sabovljević, M. & Cvetić, T. (2003) Bryophyte flora of Avala Mt. (C. Serbia, Yugoslavia). *Lindbergia* **28**, 90–96.

Sabovljević, M. & Nacheva, R. (2006) Check-list of the liverworts and hornworts of Southeast Europe. *Phytologia Balcanica* **12**, 169–180.

Sabovljević, M., Kuzmanović, N., Vreš, B., Ruščić, M. & Surina, B. (2018) Contribution to the bryophyte flora of the island of Rava (Adriatic Sea, Mediterranean) and *Zygodon conoideus* new to Croatia. *Herzogia* **31** (2), 988–994.

Sabovljević, M., Natcheva, R., Dihoru, G., Tsakiri, E., Dragićević, S., Erdağ, A. & Papp, B. (2008) Check-list of the mosses of SE Europe. *Phytologia Balcanica* **14,** 207–244.

Sabovljević, M., Papp, B. & Szurdoki, E. (2010) New bryophyte records to some countries of the South-Eastern Europe. *Cryptogamie, Bryologie* **31**, 289–292.

Saługa, M., Ochyra, R., Żarnowiec, J. & Ronikier, M. (2018) Do Antarctic populations represent local or widespread phylogenetic and ecological lineages? Complicated fate of bipolar moss concepts with *Drepanocladus longifolius* as a case study. *Organisms Diversity & Evolution* **18** (3), 263–278.

Schäfer-Verwimp., A. & Verwimp, I. (2019) On a bryophyte collection from the Maltese Islands. *Cryptogamie, Bryologie* **40** (4), 19–29.

Schiffner, V. (1915) Die von J. Dörfler im Jahre 1904 auf Kreta gesammelten Moose. *Österreichische Botanische Zeitschrift* **66**, 376–386.

Schill, D.B., Long, D.G. & Forrrest, L.L. (2010) A molecular phylogenetic study of *Mannia* (Marchantiophyta, Aytoniaceae) using chloroplast and nuclear markers. *Bryologist* **113** (1), 164–179.

Schlesak, S., Hedenäs, L., Nebel, M. & Quandt, D. (2018) Cleaning a taxonomic dustbin: placing the European *Hypnum* species in a phylogenetic context! *Bryophyte Diversity and Evolution* **40**, 37–54.

Schlesak, S., Hedenäs, L., Nebel, M. & Quandt, D. (2019) Addendum to *Hypnum subcomplanatum* Hedenäs, Schlesak, D. Quandt. *Bryophyte Diversity and Evolution* **41**, 1.

Schlüsslmayr, G. & Schröck, C. (2013) Bewerken Neu- und Wiederfunde zur Moosflora von Oberösterreich. *Stapfia* **99**, 75–86.

Schröck, C., Köckinger, H. & Schlüsslmayr, G. (2014) *Katalog und Rote Liste der Moose Oberösterreichs*. Stapfia **100**, 1–247.

Schumacker, R. & Soldán, Z. (1997) New survey of the bryophyte flora of the Gran Paradiso National Park and its immediate surroundings. Preliminary results. *Ibex J.M.E.* **4**, 33–48.

Schütz, N., Quandt, D. & Nebel, M. (2016) The position of the genus *Apopellia* stat. nov. within the Pelliales (Marchantiophytina: Jungermanniopsida. *Taxon* **65** (2), 221–234.

Segarra-Moragues, J.G., Puche, F., Sabovljević, M., Infante, M. & Heras, P. (2014) Taxonomic revision of *Riella* subgenus *Trabutiella* (Riellaceae, Sphaerocarpales). *Phytotaxa* **159** (3), 131–174

Segarra-Moragues, J.G. & Puche, F. (2016) The bryophyte flora of Sierra Calderona (Valencia and Castellón Provinces, Eastern Spain). *Boletín de la Sociedad Española Briologia* **46–47**, 11–35.

Seifert, E. & Müller, F. (2017) *Orthotrichum shawii* im Erzgebirge – Erstfund für Sachsen und Deutschland. *Herzogia* **30**, 343–352.

Séneca, A. & Söderström, L. (2009) Sphagnophyta of Europe and Macaronesia: a checklist with distribution data. *Journal of Bryology* **31**, 243–254.

Sérgio, C. (2006) A review of the *Gymnostomum calcareum* Nees & Hornsch. complex (Bryopsida: Pottiaceae) in southern Europe and the Macaronesian Islands, including *G. calcareum* var. *atlanticum* var. nov. *Journal of Bryology* **28**, 38–45.

Sérgio, C., Casas, C., Brugués, M., Cros, R.M. & Louro, T. (2009) New localities for *Bryum cyclophyllum* (Bryaceae) in the Iberian Peninsula**.** *Bryologist* **112**, 169–172.

Sérgio, C., Garcia, C.A., Sim-Sim, M., Vieira, C., Hespanhol, H. & Stow, S. (2013) *Atlas e Livro Vermelho dos Briófitos ameaçados de Portugal (Atlas and Red Data Book of Threatened Bryophytes of Portugal).* MUHNAC. Documenta. Lisboa. 464 pp.

Sérgio, C., Garcia, C.A., Sim-Sim, M., Vieira, C., Hespanhol, H., Stow, S. & Guerra, J. (2017) *Homalothecium meridionale* (M.Fleisch. & Warnst.) Hedenäs: a distinct species from *H. sericeum* (Hedw.) Schimp. (Brachytheciaceae, Bryopsida) in the Iberian Peninsula. *Journal of Bryology* **39**, 1–7.

Sérgio, C. & Sim-Sim, M. (2012) *Andreaea flexuosa* R.Brown bis subsp. *luisieri* Sérgio & Sim-Sim (Andreaeaceae), a new taxon from Madeira Island. *Cryptogamie, Bryologie* **33**, 271–277.

Sérgio, C., Sim-Sim, M. & Luis, L. (2010) *Atrichum androgynum* (Müll. Hal.) A. Jaeger in Portugal, Azores and Madeira, new to the European bryoflora. *Cryptogamie, Bryologie* **31**, 281–288.

Sérgio, C., Stow, S., Brugués, M. & Cros, R.M. (2010) *Entosthodon mouretii* (Corb.) Jelenc in Portugal: new areas of occurrence worldwide. *Journal of Bryology* **32**, 239–241.

Sérgio, C., Stow, S. & Garcia, C. (2011) New distribution data on *Plagiomnium undulatum* var. *madeirense* T.J.Kop. & Sérgio. *Journal of Bryology* **33**, 324–325.

Shaw, B., Crandall-Stotler, B., Váňa, J., Stotler, R.E., von Konrat, M., Engel, J.J., Davis, C.E., Long, D.G., Sova, P. & Shaw, A.J. (2015) Phylogenetic relationships and morphological evolution in a major clade of leafy liverworts (phylum Marchantiophyta, order Jungermanniales): suborder Jungermanniineae. *Systematic Botany* **40**, 27–45.

Shaw, A.J., Flatberg, K.I., Szövényi, P., Ricca, M., Johnson, M.G., Stenøien, H.K. & Shaw, B. (2012) Systematics of the *Sphagnum fimbriatum* complex: phylogenetic relationships, morphological variation, and allopolyploidy. *Systematic Botany* **37**, 15–30.

Shimwell, D.W. (1980) Studies in the plant sociology of fern-dominated wall communities on the island of Corfu. *Fern Gazette* **12**, 75–82.

Sibthorp, J. & Smith, J.E. (1816) *Florae Graecae Prodromus.* 2. London.

Siebel, H.N., Bijlsma, R.J. & Sparrius, L.B. (2013) Basisrapport voor de Rode Lijst Mossen 2012. *BLWG-rapport* 14.

Sim-Sim, M. (1999) The genus *Frullania* Raddi (Hepaticae) in Portugal and Madeira. *Cryptogamie, Bryologie* **20**, 83–144.

Sim-Sim, M., Afonina, O.M., Almeida, T., Désamoré, A., Laenen, B., Garcia, C.A., González-Mancebo, J.M. & Stech, M. (2017) Integrative taxonomy reveals too extensive lumping and a new species in the moss genus *Amphidium* (Bryophyta). *Systematics and Biodiversity* **15**, 451–463.

Sim-Sim, M., Luis, L., Garcia, C., Fontinha, S., Lobo, C., Martins, S. & Stech, M. (2008) New data on the status of threatened bryophytes of Madeira Island. *Journal of Bryology* **30**, 226–228.

Sim-Sim, M., Ruas, S., Fontinha, S., Hedenäs, L., Sérgio, C. & Lobo, C. (2014) Bryophyte conservation on a North Atlantic hotspot: threatened bryophytes in Madeira and Selvagens Archipelagos (Portugal). *Systematics and Biodiversity* **12** (3), 35–330.

Skrzypczak R. (2007) *Barbula amplexifolia* (Mitt.) A. Jaeger présent en France (Savoie). *Bulletin de la Société Botanique du Centre-Ouest (nouv. sér.)* **38**, 321–326.

Skrzypczak R. (2009a) *Didymodon bistratosus* J.P.Hébrard & R.B.Pierrot en France. *Bulletin de la Société Botanique du Centre-Ouest (nouv. sér.)* **40**, 549–561.

Skrzypczak R. (2009b) *Schistidium sordidum* Hag. en France (Savoie). *Bulletin de la Société Botanique du Centre-Ouest (nouv. sér.)* **40**, 575–581.

Skrzypczak R. (2009c) *Didymodon erosus* J.A.Jiménez & J.Guerra en France. *Bulletin de la Société Botanique du Centre-Ouest (nouv. sér.)* 40, 581–585.

Smieja, A. (2014) Flora of springs in the Polish Tatra Mountains – habitat and phytosociological

characteristics of crenophiles. *Biodiv. Res. Conserv.* **36**, 25–36.

Söderström, L., Hagborg, A., von Konrat, M., Bartholomew-Began, S., Bell, D., Briscoe, L., Brown, E., Cargill, D.C., Costa, D.P., Crandall-Stotler, B.J., Cooper, E., Dauphin, G., Engel, J.J., Feldberg, K., Glenny, D., Gradstein, S.R., He, X., Hentschel, J., Ilkiu-Borges, A.L., Katagiri, T., Konstantinova, N.A., Larraín, J., Long, D.G., Nebel, M., Pócs, T., Puche, F., Reiner-Drehwald, M.E., Renner, M.A.M., Sass-Gyarmati, A., Schäfer-Verwimp, A., Segarra-Moragues, J., Stotler, R.E., Sukkharak, P., Thiers, B., Uribe, J., Váňa, J., Wigginton, M., Zhang, L. & Zhu, R.L. (2016) World checklist of hornworts and liverworts. *PhytoKeys* **59**, 1–828. DOI: 10.3897/phytokeys.59.6261

Söderström, L., Hagborg, A., von Konrat, M. & Renner, M. (2008) Early Land Plants Today: liverwort checklist of checklists. *Fieldiana* **47**, 105–130.

Söderström, L., Urmi, E. & Váňa, J. (2002) Distribution of Hepaticae and Anthocerotae in Europe and Macaronesia. *Lindbergia* **27**, 3–47.

Söderström, L., Urmi, E. & Váňa, J. (2007) The distribution of Hepaticae and Anthocerotae in Europe and Macaronesia – Update 1–427. *Cryptogamie, Bryologie* **28**, 299–350.

Söderström, L., Váňa, J., Hagborg, A. & von Konrat, M. (2013) Early Land Plants Today. 35. Notes on Lophoziaceae (Marchantiophyta). *Phytotaxa* **97** (2), 27–35.

Söderström, L., Váňa, J., Crandall-Stotler, B., Renner, M.A.M., Hagborg, A. & von Konrat, M. (2015) Notes on Early Land Plants Today. 68. Miscellaneous notes on Marchantiophyta. *Phytotaxa* **202**, 69–72.

Sofronova, E.V. (ed.) (2012) New bryophyte records. 1. *Arctoa* **21**, 275–300.

Sofronova, E.V. (ed.) (2018) New bryophyte records. 11. *Arctoa* **27**, 208–225.

Sokolova, I.V., Kapustin, D.A., Davydov, D.A., Borovichev, E.A. & Potemkin, A.D. (2017) Cryptogamic nomenclatural notes. 1. *Novosti Sistematiki Nizshikh Rastenii* **51**, 281–285.

Šoltés R., (2008) *Racomitrium elongatum* Frisvoll, a neglected Slovakian bryophyte. *Thaiszia - J. Bot*., **18**, 59–64.

Šoltés R., Janovicová-Mišíková, K., Kučera, J., Kochjarová, J., Blanár, D. & Hrivnák, R. (2004) Bryophytes of the Muránska Planina Mts, and the adjacent area (the preliminary check-list of taxa). *Reussia* **1**, Suppl. **1**, 69–89.

Sotiaux, A., Enroth, J., Olsson, S., Quandt, D. & Vanderpoorten, A. (2009) When morphology and molecules tell us different stories: a case-in-point with *Leptodon corsicus*, a new and unique endemic moss species from Corsica. *Journal of Bryology* **31**, 186–196.

Sotiaux, A., Sotiaux, O. & Vanderpoorten, A. (2008) Additions to the bryophyte flora of Corsica. *Cryptogamie, Bryologie* **29**, 267–274.

Sotiaux, A. & Vanderpoorten, A. (2001) Check-list of the bryophytes of Belgium. *Belgian Journal of Botany* **134**, 97–120.

Sotiaux, A. & Vanderpoorten, A. (2017) A checklist of the bryophytes of Andorra. *Journal of Bryology* **39**,353–367.

Spitale, D., Jiménez, J.A. & Köckinger, H. (2012) The rare moss *Didymodon johansenii* (R.S.Williams) H.A.Crum in the Italian and Austrian Alps. *Cryptogamie, Bryologie* **33**, 141–147.

Stebel, A. (2010) Rediscovery of *Orthotrichum rogeri* Brid. (Bryophyta) in Poland. *Opole Scientific Society Nature Journal* **43**, 23–27.

Stebel, A. (2011) Interesting records of bryophytes from Silesia Province (Poland). *Čas. Slez. Muz. Opava (A)* **60**, 135–138.

Stebel, A. & Koczur, A. (2012) Contribution to the moss flora of mires in the Bieszczady Zachodnie (Polish Eastern Carpathians). *Roczniki Bieszczadzkie* **20**, 98–115.

Stebel, A. & Żarnowiec, J. (2017) The moss genus *Zygodon* (Orthotrichaceae) in Poland – distribution, ecological preferences and threats. *Cryptogamie, Bryologie* **38** (3), 231–251.

Stech, M. & Sim-Sim, M. (2006) Molecular variation in *Plagiomnium undulatum* (Hedw.) T.J.Kop. and the status *of P. undulatum* var. *madeirense* T.J.Kop. & Sérgio. *Journal of Bryology* **28**, 63–64.

Stech, M., Sim-Sim, M., Esquível, M.G., Fontinha, S., Tangney, R., Lobo, C., Gabriel, R. & Quandt, D. (2008) Explaining the "anomalous" distribution of *Echinodium* (Bryopsida: Echinodiaceae): Independent evolution in Macaronesia and Australasia. *Organisms, Diversity & Evolution* **8**, 282–292.

Ştefănuţ, S. (2014) New data on the presence of some hornworts and liverworts in Romania. *Cryptogamie, Bryologie* **35**, 211–216.

Ştefănuţ, S. & Goia, I. (2012) Checklist and Red List of Bryophytes of Romania. *Nova Hedwigia* **95**, 59–104.

Ştefănuţ, S. & Manole, A. (2015) *Myurella tenerrima*, a moss species new to Romania. *Herzogia* **28** (1), 282–284.

Stešević, D., Anđić, B. & Stanišić-Vujačić, M. (2020) *Physcomitrium eurystomum* Sendtn., a new moss species in the bryophyte flora of Montenegro. *Acta Botanica Croatica* **79**, 95–97.

Strazdiņa, L., Kluša, J., Leimanis, I. & Opmanis, A. (2017) Latvijā jaunatklāto un reto sūnu un sēņu taksonu atradumi 2016. Gadā (New bryophyte and fungi records and rarities of Latvia in 2016). *Latvijas Vegetacija* **16**, 125–150.

Tacchi, R., Petraglia, A. & Aleffi, M. (2014) *Cephaloziella integerrima* (Cephaloziellaceae, Marchantiophyta), new for Italy. *Cryptogamie, Bryologie* **35**, 405–408.

Taylor, J. (1952) A contribution to the bryophyte flora of the nearer East. *Kew bulletin for 1952*, 45–60.

Thouvenot L. (2000) Une seconde station françaises de *Oedipodiella australis* (Wag. et Dix.) Dix. var. catalaunica P. de la V. dans les Pyrénées-Orientales. *Bulletin de la Société Botanique du Centre-Ouest* **31**, 495–500.

Thouvenot, L. (2008) *Entosthodon mouretii* (Funariaceae, Musci), nouveau pour la bryoflore de la France. *Cryptogamie, Bryologie* **29**, 195–197.

Tsakiri, E. & Babalonas, D. (2002) Bryophytic flora of the drainage system of Grevana Prefecture (West Macedonia, Greece). *Proceedings of the 9th Congress of the Hellenic botanical society*, 319–324.

Tubanova, D., Goryunov, D.V., Ignatova, E.A. & Ignatov, M.S. (2010) On the taxonomy of *Dicranum acutifolium* and *D. fuscescens* complexes (Dicranaceae, Bryophyta) in Russia. *Arctoa* **19**, 151–164.

Tubanova, D.Y. & Ignatova, E.A. (2011) A new species of *Dicranum* (Dicranceae, Bryophyta) from Asiatic Russia. *Arctoa* **20**, 183–190

Ulvinen, T. & Kypärä, T. (2016) Nipponinlähdesammal (*Philonotis yezoana*) Suomen Lapissa. *Bryobrotherella* **19**, 71–76.

Urmi, E. (2017a) Betreffend *Diplophyllum obtusatum* (R.M.Schust.) R.M.Schust. in der Schweiz. *Meylania* **60**, 5–7.

Urmi, E. (2017b) Bryoflorula Gaudensis – Ein Beitrag zur Kryptogamenflora der Ägäis. *Herzogia* **30** (2), 327–342.

Van Dort K. & Smulders, M. (2007) De mossen van het BLWG-zomerkamp 2006 in Bretagne. *Buxbaumiella* **78**, 19–51.

Váňa, J., Söderström, L., Hagborg, A. & von Konrat, M. (2013a) Notes on Early Land Plants Today. 41. New combinations and synonyms in Cephaloziaceae (Marchantiophyta). *Phytotaxa* **112**, 7–15.

Váňa, J., Söderström, L., Hagborg, A. & von Konrat, M. (2013b) Notes on Early Land Plants Today. 45. A correction. *Phytotaxa* **152**, 48–49.

Van der Pluijm, A., Blok, D. & Robertus, I. (2015) *Lejeunea lamacerina* (gevleugeld tuitmos), een zuidelijk oceanisch levermos nieuw voor Nederland. *Buxbaumiella* **103**, 13–23.

Van der Pluijm, A. & Siebel, H.N. (2017) *Orthotrichum comosum* new to the Netherlands and Northwest Europe. *Herzogia* **30**, 10–15.

Vanderpoorten, A. & Hedenäs, L. (2009) New combinations in the Amblystegiaceae. *Journal of Bryology* **31**, 129–132.

Vanderpoorten, A., Patiño, J., Dirkse, G., Blockeel, T. & Hedenäs, L. (2015) Early divergence of an Azorean endemic species in the moss genus *Rhynchostegiella* (Brachytheciaceae). *Phytotaxa* **210**, 60–69.

Vanderpoorten, A., Sotiaux, A. & Streel, M. (2016) L'extinction de *Sphagnum austinii* en Belgique. *Natura Mosana* **69**, 91–95.

Van Landuyt, W. & De Beer, D. (2008) *Amblyodon dealbatus* in het Antwerpse havengebied, nieuw voor de Belgische mosflora. *Dumortiera* **95**, 15–17.

Vellak, K., Callejo, R.C., Ingerpuu, N., Leis, M., Ehrlich, L. & Kupper, T. (2019) Additions and amendments to the list of Estonian bryophytes. *Folia Cryptogamica Estonica* **56**, 1–5.

Vellak, K., Ingerpuu, N., Leis, M. & Ehrlich, L. (2015) Annotated checklist of Estonian bryophytes. *Folia Cryptogamica Estonica* **52**, 109–127.

Vellak, K., Kannukene, L., Leis, M. & Ingerpuu, N. (2013) New Estonian records: mosses. *Folia Cryptogamica Estonica* **50**, 121–122.

Vigalondo, B., Patiño, J., Draper, I., Mazimpaka, V., Shevock, J.R., Losada-Lima, A., González-Mancebo, J.M., Garilleti, R. & Lara, F. (2019) The long journey of *Orthotrichum shevockii* (Orthotrichaceae, Bryopsida): from California to Macaronesia. *PLoS One* **14** (2), e0211017.

Villareal, J.C., Forrest, L.L., Cooper, E.D. & Long, D.G. (2014) Phylogenetic affinities and conservation status of *Telaranea murphyae* Paton in Britain. *Journal of Bryology* **36**, 191–199.

Vilnet, A.A. Borovichev, E.A. & Bakalin, V.A. (2014) *Frullania subarctica* – a new species of the *Frullania tamarisci* complex (Frullaniaceae, Marchantiophyta). *Phytotaxa* **173** (1), 63–72.

Vulević, A., Dragićević, S & Petrović, D. (2017) Two moss species from Mt. Durnitor new to the bryophyte flora of Montenegro. *Acta Botanica Croatica* **76,** 196–199.

Werner, J. (1996) A fifth locality of the controversial *Hypnum heseleri* Ando & Higuchi, new to France. *Journal of Bryology* **19**, 347–348.

Werner, O., Köckinger, H., Magdy, M. & Ros, R.M. (2014) On the systematic position of *Tortella arctica* and *Trichostomum arcticum* (Bryophyta, Pottiaceae). *Nova Hedwigia* **98**, 273–293.

Werner, O., Patiño, J., González–Mancebo, J.M., Gabriel, R. & Ros, R.M. (2009) The taxonomic status and the geographical relationships of the Macaronesian endemic moss *Fissidens luisieri* (Fissidentaceae) based on DNA sequence data**.** *Bryologist* **112**, 315–324.

Werner, O., Patiño, J., Gonzáles-Mancebo, J.M. & Ros, R.M. (2007) The taxonomic status of *Platyhypnidium torrenticola* based on ITS sequence data. *Cryptogamie, Bryologie* **28**, 187–195.

Werner, O., Rams, S., Kučera, J., Larraín, J., Afonina, O.M., Pisa, S. & Ros, R.M. (2013) New data on the moss genus *Hymenoloma,* with special reference to *H. mulahaceni. Cryptogamie, Bryologie* **34** (1), 13–30.

Werner, O., Ros, R.M., Cano, M.J. & Guerra, J. (2002) *Tortula* and some related genera (Pottiaceae, Musci): phylogenetic relationships based on chloroplast *rps4* sequences. *Plant systematics and evolution* **235**, 197–207.

Werner, O., Ros, R.M., Cano, M.J. & Guerra, J. (2004) Molecular phylogeny of Pottiaceae (Musci) based on chloroplast *rps4* sequence data. *Plant systematics and evolution* **243**, 147–164.

Werner, O., Ros, R.M. & Grundmann, M. (2005) Molecular phylogeny of Trichostomoideae (Pottiaceae, Bryophyta) based on nrITS sequence data. *Taxon* **54**, 361–368.

Wynns, J.T. & Schröck, C. (2018) Range extensions for the rare moss *Plagiothecium handelii* Broth. *Lindbergia* **41**, 1–7.

Yu, Y., Pócs, T. & Zhu, R.-L. (2014) Notes on Early Land Plants Today. 62. A synopsis of Myriocoleopsis (Lejeuneaceae, Marchantiophyta) with special reference to transfer of *Cololejeunea minutissima* to *Myriocoleopsis*. *Phytotaxa* **183**, 293–297.

Zander, R.H., (1993) Genera of the Pottiaceae: mosses of harsh environments. *Bulletin of the Buffalo society of natural sciences* **32**, 1–378.

Zander, R.H. & Brinda, J.C. (2016) A new combination in *Ardeuma* (Pottiaceae, Bryophyta). *Lindbergia* **39**, 39–40.

Zander, R.H. & Hedderson, T.A. (2016) Re-evaluation of *Hymenostylium xanthocarpum* (Hook.) Brid., and *Ardeuma* R.H.Zander & Hedd., a new name for all other species of *Hymenostylium* (Pottiaceae, Bryophyta). *Journal of Bryology* **38**, 295–301.

Zechmeister, H.G., Kropik, M. & Hagel, H. (2017) Neufunde und andere bemerkenswerte Funde von Moosen (Bryophyta) in Niederösterreich. *Stapfia* **107**, 131–145.

Zheleznova, G.V., Shubina, T.P. & Degteva, S.V. (2015) On the moss flora of the Yugyd Va National Park (Ma-Lyi Patok river basin, subpolar Urals). *Proceedings of the Komi Scientific Centre of UB RAS* 4 (24). http://cyberleninka.ru/article/n/on-the-moss-flora-of-the-yugyd-va-national-park-ma-lyi-patok-river-basin-subpolar-urals Accessed January 2017.

Zinovjeva, L.A. (1973) K flore pechenochnich mchov poljarnogo i severnogo Urala [On the flora of hepatics of Polar and North Urals]. *Ucenye Zapiski. Permskij Gosudarstvennyj Universitet imeni A. M. Gor'kogo* **263**, 14–37.

Appendix 1 European bryophyte checklists and Red Lists

These references cover Europe as a whole, European regions and individual European countries or territories. Only the more recent and relevant references are included; there are many older works that have been superseded. Most local and national Floras have not been included, but some publications (*e.g.* atlases) have been included, as they approach checklists in essence. Minor papers (*e.g.* adding a small number of species to a country list) have not been included: please refer to the published Checklist (Hodgetts *et al*., 2020) for a more comprehensive bibliography. For a more complete list of references for liverworts, see Söderström *et al*. (2008) and Söderström *et al*. (2016). For mosses, see also (*e.g.*) Hill *et al*. (2006).

Europe

Düll, R. (1983) Distribution of the European and Mediterranean liverworts (Hepatiocophytina). *Bryologische Beiträge* **2**, 1–114.

European Committee for Conservation of Bryophytes (1995) *Red Data Book of European Bryophytes*. European Committee for Conservation of Bryophytes, Trondheim.

Grolle, R. & Long, D.G. (2000) An annotated check-list of the Hepaticae and Anthocerotae of Europe and Macaronesia. *Journal of Bryology* **22**, 103–140.

Hill, M.O., Bell, N., Bruggeman-Nannenga, M.A., Brugués, M., Cano, M.J., Enroth, J., Flatberg, K.I., Frahm, J.-P., Gallego, M.T., Garilleti, R., Guerra, J., Hedenäs, L., Holyoak, D.T., Hyvönen, J., Ignatov, M.S., Lara, F., Mazimpaka, V., Muñoz, J. & Söderström, L. (2006) An annotated checklist of the mosses of Europe and Macaronesia. *Journal of Bryology* **28**, 198–267.

Hodgetts, N.G. (2015) Checklist and country status of European bryophytes – towards a new Red List for Europe. *Irish Wildlife Manuals, No. 84.* National Parks & Wildlife Service, Department of Arts, Heritage & the Gaeltacht, Dublin.

Hodgetts, N., Cálix, M., Englefield, E., Fettes, N., García Criado, M., Patin, L., Nieto, A., Bergamini, A., Bisang, I., Baisheva, E., Campisi, P., Cogoni, A., Hallingbäck, T.,Konstantinova, N., Lockhart, N., Sabovljević, M., Schnyder, N., Schröck, C., Sérgio, C., Sim Sim, M., Vrba, J., Ferreira, C.C., Afonina, O., Blockeel, T., Blom, H., Caspari, S., Gabriel, R., Garcia, C., Garilleti, R., González Mancebo, J., Goldberg, I., Hedenäs, L., Holyoak, D., Hugonnot, V., Huttunen, S., Ignatov, M., Ignatova, E., Infante, M., Juutinen, R., Kiebacher, T., Köckinger, H., Kučera, J., Lönnell, N., Lüth, M., Martins, A., Maslovsky, O., Papp, B., Porley, R., Rothero, G., Söderström, L., Ştefănuţ, S., Syrjänen, K., Untereiner, A., Váňa, J., Vanderpoorten, A., Vellak, K., Aleffi, M., Bates, J., Bell, N., Brugués, M., Cronberg, N., Denyer, J., Duckett, J., During, H.J., Enroth, J., Fedosov, V., Flatberg, K.-I., Ganeva, A., Gorski, P., Gunnarsson, U., Hassel, K., Hespanhol, H., Hill, M., Hodd, R., Hylander, K., Ingerpuu, N., Laaka-Lindberg, S., Lara, F., Mazimpaka, V., Mežaka, A., Müller, F., Orgaz, J.D., Patiño, J., Pilkington, S., Puche, F., Ros, R.M., Rumsey, F., Segarra-Moragues, J.G., Seneca, A., Stebel, A., Virtanen, R., Weibull, H., Wilbraham, J. and Żarnowiec, J. (2019). *A miniature world in decline: European Red List of Mosses, Liverworts and Hornworts*. Brussels, Belgium.

Hodgetts, N.G., Söderström, L., Blockeel, T.L., Caspari, S., Ignatov, M.S., Konstantinova, N.A., Lockhart, N., Papp, B., Schröck, C., Sim-Sim, M., Bell, D., Bell, N.E., Blom, H.H., Bruggeman-Nannenga, M.A., Brugués, M., Enroth, J., Flatberg, K.I., Garilleti, R., Hedenäs, L., Holyoak, D.T., Hugonnot, V., Kariyawasam, I., Köckinger, H., Kučera, J., Lara, F. & Porley, R.D. (2020) An annotated checklist of bryophytes of Europe, Macaronesia and Cyprus. *Journal of Bryology* **42** (1), 1–116, DOI: 10.1080/03736687.2019.1694329

Ignatov, M.S., Afonina, O.M., Ignatova, E.A. *et al.* (2006) Check-list of mosses of East Europe and North Asia. *Arctoa* **15**, 1–130.

Ros, R.M., Mazimpaka, V., Abou-Salama, U., Aleffi, M., Blockeel, T.L., Brugués, M., Cano, M.J., Cros, R.M., Dia, M.G., Dirkse, G.M., El Saadawi, W., Erdağ, A., Ganeva, A., González-Mancebo, J.M., Herrnstadt, I., Khalil, K., Kürschner, H., Lanfranco, E., Losada-Lima, A., Refai. M.S., Rodríguez-Nuñez, S., Sabovljević, M., Sérgio, C., Shabbara, H., Sim-Sim, M. & Söderström, L. (2007) Hepatics and Anthocerotes of the Mediterranean, an annotated checklist, *Cryptogamie, Bryologie* **28**, 351–437.

Ros, R.M., Mazimpaka, V., Abou-Salama, U., Aleffi, M., Blockeel, T.L., Brugués, M., Cros, R.M., Dia, M.G., Dirkse, G.M., Draper, I., El-Saadawi, W., Erdağ, A., Ganeva, A., Gabriel, R., González-Mancebo, J.M., Granger, C., Herrnstadt, I., Hugonnot, V., Khalil, K., Kürschner, H., Losada-Lima, A., Luís, L., Mifsud, S., Privitera, M.,

Puglisi, M., Sabovljević, M., Sérgio, C., Shabbara, H.M., Sim-Sim, M., Sotiaux, A., Tacchi, R., Vanderpoorten, A. & Werner, O. (2013) Mosses of the Mediterranean, an annotated checklist. *Cryptogamie, Bryologie* **34**, 99–283.

Sabovljević, M. & Natcheva, R. (2006) Check list of the liverworts and hornworts of South-Eastern Europe. *Phytologia Balcanica* **12**, 169–180

Sabovljević, M., Natcheva, R., Dihoru, G., Tsakiri, E., Dragićević, S., Erdağ, A. & Papp, B. (2008) Check-list of the mosses of SE Europe. *Phytologia Balcanica* **14**, 207–244.

Séneca, A. & Söderström, L. (2009) Sphagnophyta of Europe and Macaronesia: a checklist with distribution data. *Journal of Bryology* **31**, 243–254.

Söderström, L., Hagborg, A., von Konrat, M. & Renner, M. (2008) Early Land Plants Today: liverwort checklist of checklists. *Fieldiana* **47**, 105–130.

Söderström, L., Urmi, E. & Váňa, J. (2002) Distribution of Hepaticae and Anthocerotae in Europe and Macaronesia. *Lindbergia* **27**, 3–47.

Söderström, L., Urmi, E. & Váňa, J. (2007) The distribution of Hepaticae and Anthocerotae in Europe and Macaronesia – Update 1–427. *Cryptogamie, Bryologie* **28**, 299–350.

Söderström, L., Hagborg, A., von Konrat, M., Bartholomew-Began, S., Bell, D., Briscoe, L., Brown, E., Cargill, D.C., Costa, D.P., Crandall-Stotler, B.J., Cooper, E., Dauphin, G., Engel, J.J., Feldberg, K., Glenny, D., Gradstein, S.R., He, X., Hentschel, J., Ilkiu-Borges, A.L., Katagiri, T., Konstantinova, N.A., Larraín, J., Long, D.G., Nebel, M., Pócs, T., Puche, F., Reiner-Drehwald, M.E., Renner, M.A.M., Sass-Gyarmati, A., Schäfer-Verwimp, A., Segarra-Moragues, J., Stotler, R.E., Sukkharak, P., Thiers, B., Uribe, J., Váňa, J., Wigginton, M., Zhang, L. & Zhu, R.L. (2016) World checklist of hornworts and liverworts. *PhytoKeys* **59**, 1–828.

Albania

Colacino, C. & Sabovljević, M. (2006) Bryophyte flora of Albania: a preliminary check-list. *Cryptogamie, Bryologie* **27**, 471–498.

Marka, J., Papp, B., Erzberger, P., Colacino, C. & Sabovljević, M. (2012) Towards a Red List of the Albanian bryophytes. *Studia Botanica Hungarica* **43**, 13–25.

Ros, R.M., Mazimpaka, V., Abou-Salama, U., Aleffi, M., Blockeel, T.L., Brugués, M., Cano, M.J., Cros, R.M., Dia, M.G., Dirkse, G.M., El Saadawi, W., Erdağ, A., Ganeva, A., González-Mancebo, J.M., Herrnstadt, I., Khalil, K., Kürschner, H., Lanfranco, E., Losada-Lima, A., Refai. M.S., Rodríguez-Nuñez, S., Sabovljević, M., Sérgio, C., Shabbara, H., Sim-Sim, M. & Söderström, L. (2007) Hepatics and Anthocerotes of the Mediterranean, an annotated checklist, *Cryptogamie, Bryologie* **28**, 351–437.

Sabovljević, M. & Natcheva, R. (2006) Check list of the liverworts and hornworts of South-Eastern Europe. *Phytologia Balcanica* **12**, 169–180

Sabovljević, M., Natcheva, R., Dihoru, G., Tsakiri, E., Dragićević, S., Erdağ, A. & Papp, B. (2008) Check-list of the mosses of SE Europe. *Phytologia Balcanica* **14**, 207–244.

Andorra

Sérgio, C., Brugués, M., Cros, R.M. Casas, C. & Garcia, C. (2006) The 2006 Red List and an updated checklist of bryophytes of the Iberian Peninsula (Portugal, Spain and Andorra). *Lindbergia* **31**, 109–125.

Sotiaux, A. & Vanderpoorten, A. (2017) A checklist of the bryophytes of Andorra. *Journal of Bryology* **39**, 353–367.

Austria

Grims, F. & Köckinger, H. (1999) Rote Liste gefährdeter Laubmoose (Musci) Österreichs. 2. Fassung. In: Niklfeld, H. *et al.*, *Rote Listen gefährdeter Pflanzen Österreichs.* Wien, Grüne Reihe des Bundesministeriums für Umwelt, Jugend und Familie, pp. 157–171.

Köckinger, H., Schröck, C., Krisai, R. & Zechmeister, H.G. (2020) *Checklist of Austrian bryophytes.* Webpage. http://131.130.59.133/projekte/moose/ (a continuously updated checklist, accessed 1.4.2020)

Saukel, J. & Köckinger, H. (1999) Rote Liste gefährdeter Lebermoose (Hepaticae) und Hornmoose (Anthocerotae) Österreichs. 2. Fassung. In: Niklfeld, H. *et al.*, *Rote Listen gefährdeter Pflanzen Österreichs.* Wien, Grüne Reihe des Bundesministeriums für Umwelt, Jugend und Familie, pp. 172–179.

Schröck, C., Köckinger, H., Amann, G. & Zechmeister, H. (2013) *Rote Listen gefährdeter Moose Voralbergs.* Herausgegeben von der inatura – Erlebnis Naturschau GmbH im Auftrag der Voralberger Landesregierung, Dornbirn.

Schröck, C., Köckinger, H. & Schlüsslmayr, G. (2014) *Katalog und Rote Liste der Moose Oberösterreichs*. Stapfia **100**, 1–247.

Belarus

Ignatov, M.S., Afonina, O.M., Ignatova, E.A. *et al.* (2006) Check-list of mosses of East Europe and North Asia. *Arctoa* **15**, 1–130.

Maslovsky, O. (2017) *Atlas of rare and threatened bryophytes of Eastern Europe as candidates to new European Red List.* National Academy of Sciences of Belarus, Minsk.

Rykovsky, G. & Maslovsky, O. (2005) Bryophytes - In: *Belarus Red Book (3 ed.).* Minsk, 295–325 pp.

Rykovsky, G. & Maslovsky, O. (2009) *Flora of Belarus. Bryophyta.* (in 2 volumes). Minsk. Vol. 1 - 2004, 435 pp., Vol. 2, 213 pp.

Belgium

De Zuttere, P. & Schumacker, R. (1984) *Bryophytes nouvelles, méconnues, rares, menacées ou disparues de Belgique.* Minist. Region Wallone, Serv. Conserv. Nature, Trav., 160 pp.

Sotiaux, A., Stieperaere, H. & Vanderpoorten, A. (2007) Bryophyte checklist and European Red List of the Brussels-Capital Region, Flanders and Wallonia (Belgium). *Belgian Journal of Botany* **140**, 174–196.

Sotiaux, A. & Vanderpoorten, A. (2001) Check-list of the bryophytes of Belgium. *Belgian Journal of Botany* **134**, 97–120.

Sotiaux, A. & Vanderpoorten, A. (2015) *Atlas des Bryophytes (mousses, hépatiques, anthocérotes) de Wallonie.* Département de l'Etude du Milieu Naturel et Agricole, Gembloux.

A list of species occurring in Belgium, including bryophytes, is also available at www.species.be/en/index.php (accessed 1.4.2020).

Bosnia-Herzegovina

Ros, R.M., Mazimpaka, V., Abou-Salama, U., Aleffi, M., Blockeel, T.L., Brugués, M., Cano, M.J., Cros, R.M., Dia, M.G., Dirkse, G.M., El Saadawi, W., Erdağ, A., Ganeva, A., González-Mancebo, J.M., Herrnstadt, I., Khalil, K., Kürschner, H., Lanfranco, E., Losada-Lima, A., Refai. M.S., Rodríguez-Nuñez, S., Sabovljević, M., Sérgio, C., Shabbara, H., Sim-Sim, M. & Söderström, L. (2007) Hepatics and Anthocerotes of the Mediterranean, an annotated checklist, *Cryptogamie, Bryologie* **28**, 351–437.

Sabovljević, M. & Natcheva, R. (2006) Check list of the liverworts and hornworts of South-Eastern Europe. *Phytologia Balcanica* **12**, 169–180

Sabovljević, M., Natcheva, R., Dihoru, G., Tsakiri, E., Dragićević, S., Erdağ, A. & Papp, B. (2008) Check-list of the mosses of SE Europe. *Phytologia Balcanica* **14**, 207–244.

Bulgaria

Ganeva, A. & Natcheva, R. (2003) Check-list of the bryophytes of Bulgaria with data on their distribution. I. Hepaticae and Anthocerotae. *Cryptogamie, Bryologie* **24**, 229–239.

Natcheva, R. & Ganeva, A. (2005) Check-list of the bryophytes of Bulgaria. II. Musci. *Cryptogamie, Bryologie* **26**, 209–232.

Natcheva, R., Ganeva, A. & Spiridonov, G. (2006) Red List of the bryophytes in Bulgaria. *Phytologia Balcanica* **12**, 55–62.

Peev, D. (ed.) (2011) *Red Data Book of the Republic of Bulgaria. Vol. 1. Plants and Fungi.* Sofia, Bulgaria Academy of Sciences & Ministry of Environment and Water [see also http://www.e-ecodb.bas.bg/rdb/en/vol1/; accessed 1.4.2020]

Sabovljević, M. & Natcheva, R. (2006) Check list of the liverworts and hornworts of South-Eastern Europe. *Phytologia Balcanica* **12**, 169–180

Sabovljević, M., Natcheva, R., Dihoru, G., Tsakiri, E., Dragićević, S., Erdağ, A. & Papp, B. (2008) Check-list of the mosses of SE Europe. *Phytologia Balcanica* **14**, 207–244.

Croatia

Sabovljević, M. (2003) The hepatic check list of Croatia. *Archives of Biological Sciences, Belgrade* **55**, 59–66.

Sabovljević, M. (2006) Checklist of mosses of Croatia. *Archives of Biological Sciences, Belgrade* **58**, 45–53.

Sabovljević, M. & Natcheva, R. (2006) Check list of the liverworts and hornworts of South-Eastern Europe. *Phytologia Balcanica* **12**, 169–180

Sabovljević, M., Natcheva, R., Dihoru, G., Tsakiri, E., Dragićević, S., Erdağ, A. & Papp, B. (2008) Check-list of the mosses of SE Europe. *Phytologia Balcanica* **14**, 207–244.

Cyprus

Frahm J.-P., Lüth M. & van Melick H. (2009) Die Moose Zyperns. *Archive For Bryology* **46**, 1–8.

Ros, R.M., Mazimpaka, V., Abou-Salama, U., Aleffi, M., Blockeel, T.L., Brugués, M., Cano, M.J., Cros, R.M., Dia, M.G., Dirkse, G.M., El Saadawi, W., Erdağ, A., Ganeva, A., González-Mancebo, J.M., Herrnstadt, I., Khalil, K., Kürschner, H., Lanfranco, E., Losada-Lima, A., Refai. M.S., Rodríguez-Nuñez, S., Sabovljević, M., Sérgio, C., Shabbara, H., Sim-Sim, M. & Söderström, L. (2007) Hepatics and Anthocerotes of the Mediterranean, an annotated checklist, *Cryptogamie, Bryologie* **28**, 351–437.

Czech Republic (Czechia)

Kučera, J. & Váňa, J. (2003) Check- and Red List of bryophytes of the Czech Republic (2003). *Preslia* **75**, 193–222.

Kučera, J. & Váňa, J. (2005) Seznam a červený seznam mechorostů České republiky (2005) *Příroda, Praha,* **23**, 1–104.

Kučera, J., Váňa, J. & Hradílek, Z. (2012) Bryophyte flora of the Czech Republic: updated checklist and Red List and a brief analysis. *Preslia* **84**, 813–850.

Váňa, J. (1997) Bryophytes of the Czech Republic – an annotated check-list of species (1). *Novit. Bot. Univ. Carol., Praha* **11**, 39–89.

Váňa, J. (1998) Bryophytes of the Czech Republic – an annotated check-list of species (2). *Novit. Bot. Univ. Carol., Praha* **12**, 7–33.

Denmark

Damsholt, K. (2002) *Illustrated flora of Nordic liverworts and hornworts.* Lund, Nordic Bryological Society.

Damsholt, K., Goldberg, I. & Øllgaard, H. (2008) *Danish and Latin names for Liverworts and Hornworts that occur in Denmark (2008)* Webpage: http://www.bryologkredsen.dk/pdf/danlevermos2008.pdf (accessed 1.4.2020).

Damsholt, K., Holmen, K. & Warncke, E. (1969) A list of the bryophytes of Denmark. *Botanisk Tidsskift* **65**, 163–183.

Mogensen, G.S. & Goldberg, I. (2005) *Danske og latinske navne for Tørvenmosser, Sortmosser of Bladmosser, der forekommer i Danmark.* Version 4. [Danish and Latin names for Sphagna, Andreaeas and Mosses that occur in Denmark. Version 4] Botanisk Have & Museum. Københavns Universitet, Danmark. 30 sider. Webpage. http://www.bryologkredsen.dk/pdf/danmos4.pdf (accessed 1.4.2020).

Estonia

Ingerpuu, N. (1998) Sammaltaimed, Bryophyta. In: *Lillelecht V (ed.), Eesti punane raamat.* Eesti Teaduste Akad. Lood., Tartu, pp. 37–49. (see also http://www.botany.ut.ee/bryology/ (accessed 1.4.2020)

Ingerpuu, N., Vellak, K. & Ehrlich, L. (2018) Revised Red Data List of Estonian bryophytes. *Folia Cryptogamica Estonica* **55**, 97–104.

Ignatov, M.S., Afonina, O.M., Ignatova, E.A. *et al.* (2006) Check-list of mosses of East Europe and North Asia. *Arctoa* **15**, 1–130.

Maslovsky, O. (2017) *Atlas of rare and threatened bryophytes of Eastern Europe as candidates to new European Red List.* National Academy of Sciences of Belarus, Minsk.

Vellak, K., Ingerpuu, N., Leis, M. & Ehrlich, L. (2015) Annotated checklist of Estonian bryophytes. *Folia Cryptogamica Estonica* **52**, 109–127.

More detailed information about Red List species in Estonia can be found at: http://elurikkus.ut.ee/prmt.php?lang=eng;(accessed 1.4.2020).

Faeroe Islands

Boesen, D.F., Lewinsky, J. & Rasmussen, L. (1975) A check-list of the bryophytes of the Faroes. *Lindbergia* **3**, 69–78.

Damsholt, K. (2017) The complex liverwort flora of the Faeroe Isles. *Lindbergia* **40**, 14–38.

Finland

Juutinen, R., Syrjänen, K., Korvenpää, Te., Laitinen, P., Ahonen, I., Huttunen, S., Korvenpää, Tu., Kypärä, T., Parnela, A., Ryömä, R. & Ulvinen, T. (2019) Bryophytes. *In*: Hyvärinen, E., Juslén, A., Kemppainen, E., Uddström, A. & Liukko, U.-M. (Eds.), *The 2019 Red List of Finnish Species.* Suomen lajien uhanalaisuus. Punainen kirja. Finnish Environment Institute, Helsinki.

Koponen, T., Isoviita, P. & Lammes, T. (1977) *The bryophytes of Finland: an annotated checklist.* Helsinki, Societas pro fauna et flora Fennica.

Kotiranta, H., Uotila, P., Sulkava, S. & Peltonen, S.-L. (eds.) (1998) *Red Data Book of East Fennoscandia.* Helsinki, Ministr. Envir., 351 pp.

Laaka-Lindberg, S., Anttila, S. & Syrjänen, K. (2009) *Suomen uhanalaiset sammalet (Endangered mosses in Finland).* Suomen ympäristöopas, Helsinki.

France

(including Corsica)

There is no national overview for France. Information on bryophytes in France is fragmented and dispersed, with some parts of the country being well covered, while others have almost no coverage.

Augier, J. (1966) *Flore des bryophytes.* Editions Paul Lechavalier, Paris.

Ros, R.M., Mazimpaka, V., Abou-Salama, U., Aleffi, M., Blockeel, T.L., Brugués, M., Cano, M.J., Cros, R.M., Dia, M.G., Dirkse, G.M., El Saadawi, W., Erdağ, A., Ganeva, A., González-Mancebo, J.M., Herrnstadt, I., Khalil, K., Kürschner, H., Lanfranco, E., Losada-Lima, A., Refai. M.S., Rodríguez-Nuñez, S., Sabovljević, M., Sérgio, C., Shabbara, H., Sim-Sim, M. & Söderström, L. (2007) Hepatics and Anthocerotes of the Mediterranean, an annotated checklist, *Cryptogamie, Bryologie* **28**, 351–437.

Alsace

Bick, F. & Stoehr, B. (2014) *La Liste rouge des Bryophytes menacées en Alsace.* SBA, ODONAT, 55 p. Document numérique.

Auvergne

De Zuttere, P. (1993) Bryophytes rare ou nouvelles pour le département du Puy-de-Dôme et du Cantal (Auvergne, France). Une mousse nouvelle pour la France: *Tortula lingulata* Lindb. var. *montenegrina* (Brid. & Szygz.) Broth. *Nowellia Bryologica* **3–4**, 27–41.

De Zuttere, P. (1993) Bryophytes rare ou nouvelles pour le département du Puy-de-Dôme et du Cantal (Auvergne, France). Une mousse nouvelle pour la France: *Tortula lingulata* Lindb. var. *montenegrina* (Brid. & Szygz.) Broth. *Nowellia Bryologica* **3–4**, 27–41.

Franche-Comté

Bailly, G., Caillet, M., Ferrez, Y. & Vadam, J.C. (2009) Liste rouge des Bryophytes de Franche-Comté, version 2. *Les Nouvelles Archives de la Flore jurassienne*, **7**, 61–81.

Languedoc-Roussillon

Hugonnot, V, Chavoutier, L., Pépin, F. & Vergne, T. (2018) *Les bryophytes des Pyrénées-orientales.* Naturalia Publications, Turriers.

Thouvenot, L. (2002) *Flore bibliographique des bryophytes du Département des Pyrénées-orientale*. Société d'Hostoire naturelle de Perpignan et des Pyrénées-orientale.

Lorraine

Mahévas, T., Werner, J., Schneider, C. & Schneider, T. (2010) *Liste rouge des bryophytes de Lorraine (Anthocérotes, Hépatiques, Mousses)*. Conservatoire et Jardin Botanique, 61p. & annexe.

Werner, J., Schneider, T., Schneider, C. & Mahévas, T. (2005) Les bryophytes de la Lorraine extra-vosgienne. Liste critique annotée. *Cryptogamie, Bryologie* **26**, 347–402.

Midi-Pyrénées

Infante Sanchez, M. (2015) *Catalogue des Bryophytes de la Region Midi-Pyrénées 2015.* Conservatoire botanique National des Pyrénées.

Nord-Pas-de-Calais

Lecron, J.-M., Toussaint, B. & Hauguel, J.-C. (2015) Inventaire des Bryophytes du Nord-Pas de Calais: satats, rareté et menace. Version No. 2. Centre régional de phytosociologie agréé Conservatoire botanique national de Bailleul.

Picardie

Hauguel, J.C. & Wattez, J.R., (2008) *Inventaire des bryophytes de Picardie: présence, rareté et menace*. Conservatoire Botanique National de Bailleul. Rapport d'étude. 38 p.

Rhône-Alpes

Chavoutier, L. & Hugonnot, V. (2013) *Mousses, hépatiques et anthocérotes du departement de la Savoie (France).* FMBDS, Sevrier.

Upper Normandy

Werner, J., Bardat, J., Vanot, M. & Prey, T. (2009) Check-list des bryophytes (Anthocerotae, Hepaticae, Musci) de Haute-Normandie (France). *Cryptogamie, Bryologie* **30**, 457–475.

Corsica

Sotiaux, A., Pioli, A., Royaud, A., Schumacker, R. & Vanderpoorten, A. (2007) A checklist of the bryophytes of Corsica (France): new records and a review of the literature. *Journal of Bryology* **29**, 41–53.

In addition there are a number of useful national and regional websites that have bryophyte data:

- http://portail.gbif.fr
- https://inpn.mnhn.fr/accueil/index
- http://siflore.fcbn.fr/?cd_ref=&r=metro
- www.cbn-alpin.fr/atlas-communal-de-la-flore-des-alpes.html (French Alps)
- http://cbnbp.mnhn.fr/cbnbp/biodiversite/especes.jsp (Bassin Parisien)
- www.cbnbrest.fr/copielibry/ (north-west France)
- https://obv-na.fr/fiche-espece (Aquitaine)

A previously useful website for bryophyte distribution in the Auvergne (https://www.cbnmc.fr/fr/flore) seems to be no longer functioning in the same way.

Germany

Caspari, S. Dürhammer, O., Sauer, M. & Schmidt, C. (2018) Rote Liste und Gesamtartenliste der Moose (Anthocerotophyta, Amarchantiophyta und Bryophyta) Deutschlands. *In*: Metzing, D., Hofbauer, N., Ludwig, G. & Matzke-Hajek, G. (Eds), Rote Liste gefährdeter Tiere, Pflanzen und Pilze Deutschlands. Band 7: Pflanzen. *Naturschutz und Biologische Viefalt* **70**, 361–489.

What is effectively a German bryophyte checklist, including conservation status of species, is available at www.moose-deutschland.de (accessed 2.4.2020).

Greece (including Crete)

Düll, R. (1995) Moose Griechenlands. *Bryologische Beiträge* **10**, 1–229. *(not accessed)*

Phitos, D., Constantinidis, T. & Kamari, G. (eds.) (2009) *The Red Data Book of rare and threatened plants of Greece.* Patras, Hellenic Botanical Society. [Contains a single species of bryophyte – *Buxbaumia viridis*]

Preston, C.D. (1981) A check-list of Greek liverworts. *Journal of Bryology* **11**, 537–553.

Preston, C.D. (1984) A check-list of Greek mosses. *Journal of Bryology* **13**, 43–95.

Ros, R.M., Mazimpaka, V., Abou-Salama, U., Aleffi, M., Blockeel, T.L., Brugués, M., Cano, M.J., Cros, R.M., Dia, M.G., Dirkse, G.M., El Saadawi, W., Erdağ, A., Ganeva, A., González-Mancebo, J.M., Herrnstadt, I., Khalil, K., Kürschner, H., Lanfranco, E., Losada-Lima, A., Refai. M.S., Rodríguez-Nuñez, S., Sabovljević, M., Sérgio, C., Shabbara, H., Sim-Sim, M. & Söderström, L. (2007) Hepatics and Anthocerotes of the Mediterranean, an annotated checklist, *Cryptogamie, Bryologie* **28**, 351–437.

Sabovljević, M. & Natcheva, R. (2006) Check list of the liverworts and hornworts of South-Eastern Europe. *Phytologia Balcanica* **12**, 169–180.

Sabovljević, M., Natcheva, R., Dihoru, G., Tsakiri, E., Dragićević, S., Erdağ, A. & Papp, B. (2008) Check-list of the mosses of SE Europe. *Phytologia Balcanica* **14,** 207–244.

The Aegean Bryophyte Atlas is a useful source of data on bryophytes in the Greek Islands – https://rbg-web2.rbge.org.uk/bbs/Activities/aba/index.html (accessed 2.4.2020)

Hungary

Erzberger, P. & Papp, B. (2004) Annotated checklist of Hungarian bryophytes. *Studia Botanica Hungarica* **35**, 91–149.

Papp, B., Erzberger, P., Ódor, P., Hock, Zs., Szövényi, P., Szurdoki, E. & Tóth, Z. (2010) Updated checklist and Red List of Hungarian bryophytes. *Studia Botanica Hungarica* **41**, 31–59.

Rajczy, M. (1990) Mohák-Bryophyta. In: Rakonczai, Z. (ed.), *Vöros könyv.* Akademiai Kiadó, Budapest, pp. 322–325.

Iceland

Ingadóttir, Á. (1996) *Válisti 1. Plöntur.* Reykjavik, Náttúrufrædistofnun Íslands, 82 pp. (mosses only)

Jóhannsson, B. (1996) Mosar, p. 49–69. In: Válisti 1, Plöntur, Náttírufraedistofnun Íslands. 1–82. Red Data List (1) Plants; Icelandic Natural History Institute, Reykjavík.

Jóhannsson, B. (2003) *Checklist of bryophytes in Iceland.* Fjölrit Náttúrufræðistofnunar 44. Webpage. http://www.floraislands.is/Annad/moslist.html (accessed 2.4.2020).

Distribution maps of bryophytes in Iceland are available at http://vefsja.ni.is/website/plontuvefsja/ (accessed 2.4.2020)

Ireland

(including Northern Ireland)

Blockeel, T.L., Bosanquet, S.D.S., Hill, M.O. & Preston, C.D. (2014) *Atlas of British and Irish Bryophytes. The distribution and habitat of mosses and liverworts in Britain and Ireland. Vols. 1–2.* Pisces Publications, Newbury.

Hill, M.O., Blackstock, T.H., Long, D.G. & Rothero, G.P. (2008) *A checklist and census catalogue of British and Irish bryophytes updated 2008*. British Bryological Society, Middlewich.

Lockhart, N., Hodgetts, N.G. & Holyoak, D.T. (2012a) *Rare and threatened bryophytes of Ireland.* Ulster Museum, Belfast (includes Red List).

Lockhart, N., Hodgetts, N. & Holyoak, D. (2012b) *Ireland Red List No. 8. Bryophytes. Mosses, liverworts & hornworts.* National Parks & Wildlife Service, Dublin.

See also https://nbnatlas.org for distribution information *etc*. (accessed 3.4.2020).

Italy

(including Sicily and Sardinia)

Aleffi, M. (2005) New check-list of the Hepaticae and Anthocerotae of Italy. *Flora Mediterranea* **15**, 485–566.

Aleffi, M. & Schumacker, R. (1995) Check-list and red-list of the liverworts (Marchantiophyta) and hornworts (Anthocerotophyta) of Italy. *Flora Mediterranea* **5**, 73–161.

Cortini-Pedrotti, C. (1992) Check-list of the mosses of Italy. *Flora Mediterranea* **2**, 119–221. See also http://dbiodbs.univ.trieste.it/global/mosses1#init (accessed 2.4.2020)

Cortini Pedrotti, C. & Aleffi, M. (1992) Lista rossa della briofite d'Italia. In: Conti, F., Manzi, A. & Pedrotti, F. (eds.), *Libro rosso delle piante d'Italia.* Roma, WWW & *Società Botanica Italiana*, pp. 559–687.

Cortini Pedrotti, C. & Aleffi, M. (2011) Lista rossa delle Briofite del Trentino. *Studi Trentini di Scienze Naturali* **88**, 5–27.

Ros, R.M., Mazimpaka, V., Abou-Salama, U., Aleffi, M., Blockeel, T.L., Brugués, M., Cano, M.J., Cros, R.M., Dia, M.G., Dirkse, G.M., El Saadawi, W., Erdağ, A., Ganeva, A., González-Mancebo, J.M., Herrnstadt, I., Khalil, K., Kürschner, H., Lanfranco, E., Losada-Lima, A., Refai. M.S., Rodríguez-Nuñez, S., Sabovljević, M., Sérgio, C., Shabbara, H., Sim-Sim, M. & Söderström, L. (2007) Hepatics and Anthocerotes of the Mediterranean, an annotated checklist, *Cryptogamie, Bryologie* **28**, 351–437.

Sguazzin, F. (2011) Check-list delle briofite del Friuli Venezia Giulia (NE Italia). *Gortania Botanica, Zoologia* **32**, 17–114.

Distribution maps of bryophytes in Italy by region can be found at http://dryades.units.it/briofite/ (accessed 2.4.2020).

Kazakhstan

(mostly in Asia – small part in Europe)

Ignatov, M.S., Afonina, O.M., Ignatova, E.A. *et al.* (2006) Check-list of mosses of East Europe and North Asia. *Arctoa* **15**, 1–130.

Kosovo

(included in Serbia Sabovljević *et al*., 2008)

Pantović, J.P. & Sabovljević, M.S. (2017) Bryophytes of Kosovo. *Phytotaxa* **306**, 101–123.

Latvia

Ābolina, A.A. (1994) *Latvijas retas un aizsargajamas sunas.* Riga, LU Ekologiska Centra Apgads "VIDE", 24 pp.

Ābolina, A.A. (2001) Latvijas sūnu saraksts [List of bryophytes of Latvia]. *Latvijas veģetācija* **3**, 47–87. [Previously at http://latvijas.daba.lv/scripts/db/saraksti/saraksti.cgi?d=suunas (accessed 13.10.11), but no longer available]

Ābolina, A., Piterāns, A. & Bambe, B. (2015) *Latvijas kerpji un sunas. Taksonu saraksts (Lichens and bryophytes in Latvia. Checklist)*. Latvijas Valsts mežzinātnes instituts 'Silava', Salaspils. (Abstract available at http://agris.fao.org/agris-search/search.do?recordID=LV2016000196).

Ignatov, M.S., Afonina, O.M., Ignatova, E.A. *et al.* (2006) Check-list of mosses of East Europe and North Asia. *Arctoa* **15**, 1–130.

Maslovsky, O. (2017) *Atlas of rare and threatened bryophytes of Eastern Europe as candidates to new European Red List.* National Academy of Sciences of Belarus, Minsk.

Also Latvian Red List available at http://latvijas.daba.lv/aizsardziba/saraksti/aizsargajamas_sunas.shtml (accessed 2.4.2020).

Liechtenstein

Senn, H.-P. (2000) Die Moose des Fürstentums Liechtenstein. *Berichte der Botanisch-Zoologischen Gesellschaft Liechtenstein-Sargans-Werdenberg* **27**, 7–248.

Lithuania

Ignatov, M.S., Afonina, O.M., Ignatova, E.A. *et al.* (2006) Check-list of mosses of East Europe and North Asia. *Arctoa* **15**, 1–130.

Jukoniene, I. (1996) Rare and threatened bryophyte species in Lithuania. *Bot. Lithuanica* **2**, 327– 342.

Jukoniene I., (2002) Checklist of Lithuanian mosses [Lietuvos lapsamanių sąvadas]. – *Botanica Lithuanica* **8**, 303–322.

Maslovsky, O. (2017) *Atlas of rare and threatened bryophytes of Eastern Europe as candidates to new European Red List.* National Academy of Sciences of Belarus, Minsk.

Naujalis, J., Kalinauskaite, N. & Grineviciene, M. (1995) *Vadovas Lietuvos kerpsamanėms pazinti.* Vilnius.

Rašomavičius V.(ed.), (2007) *Lietuvos raudonoji knyga.* 262–354. Vilnius.

Luxembourg

Werner, J. (2003) Liste rouge des bryophytes du Luxembourg. Mesures de conservation et perspectives. *Ferrantia* **35**, 1–71.

Werner, J. (2011) Les bryophytes du Luxembourg – Liste annotée et atlas. [The bryophytes of Luxembourg – annotated list and atlas]. *Ferrantia* **65**, 1–138.

Werner, J. (2014) *Check-list et liste rouge des bryophytes du Luxembourg. [Checklist and Red List of the bryophytes of Luxembourg].* Formerly at http://sci.mnhn.lu/colsci/weje/pdf/checkliste2014.pdf (accessed 6.6.14), but no longer available. An updated version was produced by the late Jean Werner in 2016 (J. Werner *pers. comm.* 1.4.2016).

Malta

Frahm, J.-P. & Lüth, M. (2008) The bryophyte flora of the Maltese Islands. *Archive for Bryology* **29**, 1–10.

Moldova

Ignatov, M.S., Afonina, O.M., Ignatova, E.A. *et al.* (2006) Check-list of mosses of East Europe and North Asia. *Arctoa* **15**, 1–130.

Monaco

No list known, although there are some liverworts mentioned by Söderström *et al*. (2002, 2007).

Montenegro

Dragićević, S. & Veljić, M. (2006) *Pregled mahovina Crne Gore* [Survey of Bryophyta of Montenegro]. Prirodnjački Muzej Crne Gore [Natural History Museum of Montenegro], Podgorica, 99 pp.

Ros, R.M., Mazimpaka, V., Abou-Salama, U., Aleffi, M., Blockeel, T.L., Brugués, M., Cano, M.J., Cros, R.M., Dia, M.G., Dirkse, G.M., El Saadawi, W., Erdağ, A., Ganeva, A., González-Mancebo, J.M., Herrnstadt, I., Khalil, K., Kürschner, H., Lanfranco, E., Losada-Lima, A., Refai. M.S., Rodríguez-Nuñez, S., Sabovljević, M., Sérgio, C., Shabbara, H., Sim-Sim, M. & Söderström, L. (2007) Hepatics and Anthocerotes of the Mediterranean, an annotated checklist, *Cryptogamie, Bryologie* **28**, 351–437.

Sabovljević, M. (2000) Checklist of hepatics of the Federal Republic of Yugoslavia. *Lindbergia* **25**, 37–42. (Data separated for Serbia and Montenegro)

Sabovljević, M., Cvetić, T. & Stevanović, V. (2004) Bryophyte Red List of Serbia and Montenegro. *Biodiversity and Conservation* **13**, 1781–1790.

Sabovljević, M. & Natcheva, R. (2006) Check list of the liverworts and hornworts of South-Eastern Europe. *Phytologia Balcanica* **12**, 169–180

Sabovljević, M., Natcheva, R., Dihoru, G., Tsakiri, E., Dragićević, S., Erdağ, A. & Papp, B. (2008) Check-list of the mosses of SE Europe. *Phytologia Balcanica* **14**, 207–244.

Sabovljević, M. & Stevanovic, V. (1999) Moss conspectus of the Federal Republic of Yugoslavia. *Flora Mediterranea* **9**, 65–95. (Data separated for Serbia and Montenegro)

Netherlands

Siebel, H.N., During, H.J. & van Melick, H.M.H. (2005) Veranderingen in de Standaardlijst van de Netherlandse blad-, lever- en hauwmossen [Checklist of Dutch bryophytes and liverworts]/ *Buxbaumiella* **73**, 26–54.

Siebel, H.N., Bijlsma, R.J. & Bal, D. (2006) *Toelichting op de Rode Lijst Mossen.* Ministry of Agriculture, Nature and food quality, report DK2006/034.

Siebel, H.N., Bijlsma, R.J. & Sparrius, L.B. (2013) *Basisrapport voor de Rode Lijst Mossen 2012.* BLWG-rapport 14. (see also www.verspreidingsatlas.nl/soortenlijst.aspx?groep=B; accessed 2.4.2020).

Distribution maps and more information on Dutch bryophytes are available at https://www.verspreidingsatlas.nl/mossen (accessed 2.4.2020).

North Macedonia

(formerly Macedonia)

Cekova, M. (2005) *Pregled na brioflorata na republika Makedonija* [Survey of bryophyte flora of R. Macedonia]. PMF, Institut za biol., 40 pp.

Martinčič, A. (2009) Contributions to the bryophyte flora of Republic of Macedonia. *Hacquetia* **8,** 97–114.

Ros, R.M., Mazimpaka, V., Abou-Salama, U., Aleffi, M., Blockeel, T.L., Brugués, M., Cano, M.J., Cros, R.M., Dia, M.G., Dirkse, G.M., El Saadawi, W., Erdağ, A., Ganeva, A., González-Mancebo, J.M., Herrnstadt, I., Khalil, K., Kürschner, H., Lanfranco, E., Losada-Lima, A., Refai. M.S., Rodríguez-Nuñez, S., Sabovljević, M., Sérgio, C., Shabbara, H., Sim-Sim, M. & Söderström, L. (2007) Hepatics and Anthocerotes of the Mediterranean, an annotated checklist, *Cryptogamie, Bryologie* **28**, 351–437.

Sabovljević, M. & Natcheva, R. (2006) Check list of the liverworts and hornworts of South-Eastern Europe. *Phytologia Balcanica* **12**, 169–180

Sabovljević, M., Natcheva, R., Dihoru, G., Tsakiri, E., Dragićević, S., Erdağ, A. & Papp, B. (2008) Check-list of the mosses of SE Europe. *Phytologia Balcanica* **14**, 207–244.

Norway

Mainland

Direktoratet for naturforvalning (DN). (1999) *Nasjonal rødliste for truete arter 1998* [Norwegian Red List 1998]. DN-rapport **1999–3**, 1–161. See also www.nhm.uio.no/botanisk/mose/red.htm (accessed 3.4.2020).

Hassel, K., Blom, H.H., Flatberg, K.I., Halvorsen, R. & Johnsen, J.I. (2010) Moser. Anthocerophyta, Marchantiophyta, Bryophyta. *In*: Kålås, J.A., Viken, Å., Henriksen, S. and Skjelseth, S. (eds.) (2010) *The 2010 Norwegian Red List for Species.* Norwegian Biodiversity Information Centre. (See also www.artsdatabanken.no and http://www.researchgate.net/publication/301685377_The_2010_Norwegian_Red_List_for_Species (both accessed 3.4.2020).

Up-to-date checklist available at the home pages of The Norwegian Biodiversity Information Center http://www2.artsdatabanken.no/artsnavn/Contentpages/Sok.aspx (accessed 3.4.2020).

Svalbard

Frisvoll, A.A. & Blom, H.H. (1997) *Trua moser i Noreg med Svalbard. Førebelse ark.* NTNU, Vit.- mus., Bot. Notat **1997–3**, 1–170.

Frisvoll, A.A. & Elvebakk, A. (1996) Part 2. Bryophytes. In: Elvebakk, A & Prestrud, P. (eds.) A catalogue of Svalbard plants, fungi, algae and cyanobacteria, pp. 57–172. Norwegian Polar Institute, Oslo.

Poland

Klama, H. (2006) Red list of the liverworts and hornworts in Poland, Czerwona lista watrobowców i glewików w Polsce. *In*: Mirek, Z., Zarzycki, K. Wojewoda, & W. Szelag, Z. *Red list of plants and fungi in Poland, Czerwona lista roslin i grzybów Polski.* Polish Academy of Sciences, W. Szafer Institute of Botany, Kraków.

Klama, H. & Górski, P. (2018) Red List of liverworts and hornworts of Poland (4th edition, 2018). *Cryptogamie, Bryologie* **39**, 415–441.

Ochyra, R. (1992) *Czerwona lista mchów zagroonych Polsce* (Red list of threatened mosses in Poland). Polish Academy of Sciences, Kraków, pp. 79–85.

Ochyra, R., Zarnowiec, J. & Bednarek-Ochyra, H. (2003) *Census Catalogue of Polish mosses.* Polish Academy of Sciences, W. Szafer Institute of Botany, Kraków.

Szweykowski, J. (1992) *Czerwona lista watrobowców zagroonych w Polske* [List of threatened liverworts in Poland]. *In*: Zarzycki K., Wojewoda W. & Heinrich Z. (eds.), *List of threatened plants in Poland (2nd ed.).* W. Szafer Institute of Botany, Polish Academy of Sciences, Kraków, pp.75–78.

Szweykowski, J. (2006) *An annotated checklist of Polish liverworts and hornworts.* Polish Academy of Sciences, W. Szafer Institute of Botany Kraków.

Zarnowiec, J., Stebel, A. & Ochyra, R. (2004) Threatened moss species in the Polish Carpathians in the light of a new Red List of mosses in Poland. *In*: Stebel, A. & Ochyra, R. (eds.), *Bryological studies in the Western Carpathians.* Sorus, Poznań.

Portugal

Mainland

Sérgio, C., Casas, C., Brugués, M. & Cros, R.M. (1994) *Lista Vermelha dos Briófitos da Península Ibérica* [Red List of Bryophytes of the Iberian Peninsula]. Lisboa, ICN, 45 pp.

Sérgio, C. & Carvalho, S. (2003) Annotated catalogue of Portuguese bryophytes. *Portugaliae Acta Biologica* **21**, 5–230. (Sérgio, *pers. comm.* 13.6.11)

Sérgio, C., Brugués, M., Cros, R.M. Casas, C. & Garcia, C. (2006) The 2006 Red List and an updated checklist of bryophytes of the Iberian Peninsula (Portugal, Spain and Andorra). *Lindbergia* **31**, 109–125.

Sérgio, C., Garcia, C.A., Sim-Sim, M., Vieira, C., Hespanhol, H. & Stow, S. (2013) *Atlas e Livro Vermelho dos Briófitos Ameaçados de Portugal.* Universidade de Lisboa – Museu Nacional de História Natural e da Ciência, Lisboa. See also online version at https://www.gbif.org/dataset/c91efd92-49fc-49fa-83c9-da0611f73022, which includes a checklist of bryophytes in Portugal (accessed 3.4.2020).

Azores

Gabriel, R., Sjögren, E., Schumacker, R., Sérgio, C., Frahm, J.-P. & Sousal, E. (2005) 4.1. Lista dos Briófitos (Bryophyta) [List of Bryophytes (Bryophyta)]. *In*: *Lista de espécies terrestres dos Açores* [List of terrestrial species from the Azores].

Gabriel, R., Sjögren, E., Schumacker, R., Sérgio, C., Aranda, S.C., Claro, D., Homem, N. & Martins, B. (2010) List of bryophytes (Anthocerotophyta, Marchantiophyta, Bryophyta). *In*: PAV. Borges, A. Costa, R. Cunha, R.Gabriel, V. Gonçalves, A.F. Martins, I. Melo, M. Parente, P. Raposeiro, P. Rodrigues, R.S. Santos, L. Silva, P. Vieira & V. Vieira (eds.) *A list of the terrestrial and marine fungi, flora and fauna from the Azores*. pp. 99–115, Princípia, Cascais.

Gabriel, R., Homem, N., Couto, A., Aranda, S.C. & Borges, P.A.V. (2011) Azorean Bryophytes: a preliminary review of rarity patterns. *Açoreana* **2011–7**, 149–206.

Further useful information on the Azores is available at http://azoresbioportal.uac.pt. (accessed 3.4.2020).

Madeira

Sérgio, C., Schumacker, R., Fontinha, S. & Sim-Sim, M, (1992) Evaluation of the status of the bryophyte flora of Madeira with reference to endemic and threatened European species. *Biological Conservation* **59**, 223–231.

Sérgio, C., Sim-Sim, M. & Carvalho, M. (2006) Annotated catalogue of Madeiran bryophytes. *Bol. Mus. Munic. Funchal* **10**, 5–164.

Sérgio, C., Sim-Sim, M., Fontinha, S. & Figueira, R. (2008) 5.1 Lista dos briófitos (Bryophyta) (List of bryophytes (Bryophyta)). *In*: Borges, P.A.V. *et al.* Listagem dos fungos, flora e fauna terrestres dos arquipélagos da Madeira e Selvagens (A list of the terrestrial fungi, flora and fauna of Madeira and Selvagens archipelagos). Direcção Regional do Ambiente do Governo Regional da Madeira, Funchal.

Sim-Sim, M., Luis, L., Garcia, C., Fontinha, S., Lobo, C., Martins, S. & Stech, M. (2008) New data on the status of threatened bryophytes of Madeira Island. *Journal of Bryology* **30**, 226–228.

Distribution maps are available at http://oslo.geodata.es/briofits/ (accessed 4.4.2020)

Romania

Sabovljević, M. & Natcheva, R. (2006) Check list of the liverworts and hornworts of South-Eastern Europe. *Phytologia Balcanica* **12**, 169–180

Sabovljević, M., Natcheva, R., Dihoru, G., Tsakiri, E., Dragićević, S., Erdağ, A. & Papp, B. (2008) Check-list of the mosses of SE Europe. *Phytologia Balcanica* **14**, 207–244.

Ştefănuţ, S. (2008) *The hornwort and liverwort atlas of Romania.* Bucharest, Edit. Ars Docendi, 510 pp. (see also www.ibiol.ro/bucegia/hepatice/redlist.htm; accessed 3.4.2020).

Ştefănuţ S. & Goia, I. (2012) Checklist and Red List of Bryophytes of Romania. *Nova Hedwigia* **95**, 59–104.

Russia

(in Europe)

Afonina, O.M. & Czernyadjeva, I.V. (1995) Mosses of the Russian Arctic: check-list and bibliography. *Arctoa* **5**, 99–142.

Ignatov, M.S., Afonina, O.M., Ignatova, E.A. *et al.* (2006) Check-list of mosses of East Europe and North Asia. *Arctoa* **15**, 1–130.

Konstantinova, N.A. & Bakalin, V.A. (2009) Checklist of liverworts (Marchantiophyta) of Russia. *Arctoa* **18**, 1–64.

Konstantinova, N.A. & Potemkin, A.D. (1996) Liverworts of the Russian arctic: an annotated check-list and bibliography. *Arctoa* **6**, 125–150.

Maslovsky, O. (2017) *Atlas of rare and threatened bryophytes of Eastern Europe as candidates to new European Red List.* National Academy of Sciences of Belarus, Minsk.

Bardonov, L.V. & Ignatov, M.C. (2005) Bryophytes. In: *Red Data Book of the Russian Federation*. (see also http://en.wikipedia.org/wiki/Red_Data_Book_of_the_Russian_Federation; accessed 3.4.2020)

Distribution information is available on the Russian Moss Database (http://arctoa.ru/Flora/basa.php; accessed 3.4.2020).

Bashkortostan

Baisheva, E.Z. (2002) Bryophyta. In: *Red Data Book of the Bashkortostan Republic. Vol. 2. Bryophytes, algae, lichens and fungi.* Tabigat, Ufa, 17–44.

Dagestan

Konstantinova, N.A. (2011) Contribution to the hepatic flora of the Republic of Dagestan (Eastern Caucasus, Russia). *Arctoa* **20**, 175–182.

Radzhi, A.D. (1998) Bryophytes. In: *Red book of Dagestan. Rare and endangered species of animal and plants.* Dagestanskoe Knizhnoe Izd., Makhachkala, 191–194.

Kabardino-Balkar

Shkhagapsoev, S.H. (2000) Bryophytes. In: *Red book of Kabardino-Balkar Republic.* Ael'-Fa, Nalchik: 298.

Karelia

Maksimov, A.I., Potemkin, A.D. & Maksimova, T.A. (2007) Bryophytes. *In*: Ivanter, E.V. & Kuznetsov, O.L. (eds.). *Red Data Book of the Republic of Karelia.* Ministerstvo sel'skogo, rybnogo khozyaijstva i ekologii Respublici Karelia, Karel'skiij nauchnyij tsentr Rossiijskoij akademii hauk, Petrozavodskiij gosudarstvennyij universitet. Petrozavodsk, "Karelia": 79–98. This is also a checklist.

Komi

Taskaeva, A.I. (1998) *Krasnaja kniga Respubliki Komi.*Syktyvkar: Izdatelstvo DIK, Moscow.

Krasnodar

Konstantinova, N.A., Akatova, T.V., Ignatova, E.A. & Ignatov, M.S. (2008) Bryophyta. *In*: *Red Data Book of the Krasnodar Province. (Plants and fungi). 2d ed.* Krasnodar, Dizain byuro No. 1, 450–477.

Kursk

Popova, N.N. (2001) Bryophyta . *In*: *Red Data Book of Kursk Province. Vol. 2. Rare and endangeded plants and fungi.* Centralno-Czernozemnyj Gos. Prir. Biospher. Zapovednik & al., Tula: 21–45.

Lipetsk

Popova, N.N & Abramova, L.I. (2005) Bryophytes. *In*: Novikov, V.S. (ed.). *Red Data Book of Lipetsk Province. Vol. 1. Plants, Fungi, Lichens*. KMK, Moscow: 15–70.

Moscow (City)

Ignatov, M.S. (2001) Bryophyta. *In*: *Red Data Book of Moscow City.* Moscow Government: 543–567.

Moscow (Region)

Ignatov, M.S. (1998) Bryophytes. *In*: Zubakin, V.A. & Tikhomirov, V.N. (eds.). *Red Data Book of Moscow Province.* Argus & Russki Univ., Moscow.

Ignatov, M.S. (2008) Bryophytes. *In*: Varlygina, T.I., Zubakin, V.A. & Sobolev, N.A. (eds.). *Red Data Book of Moscow Province. 2d edition.* Moscow.

Murmansk

Konstantinova, N.A., Belkina, O.A. & Likhachev, A.Y. (2003) Bryophytes. *In*: Konstantinova, N.A., Koryakin, A.S. & Makarova, O.A. (eds.). *Red Data book of the Murmansk Province.* Murmanskoe Knizhnoe Izdatelstvo, Murmansk.

Nenetsky

Afonina, O.M. & Konstantinova, N.A. (no date) Bryophytes. In: Matveeva, N.V. (ed.) *Red Data Book of Nenetsky Autonomous District. Official edition.* Naryan-Mar: 108–125

Ryazan

Volosnova, L.P. *et al.* (2003) Bryophyta. In: *Red book of Ryazan Province.* Uzoroch'e, Ryazan: 27–36.

St. Petersburg

Andreeva, E.N., Afonina, O.M., Kuzmina, E.O. & Kurbaova, L.E. (2004) Bryophyta. In: *Red Data Book of St.-Petersburg.* St.-Petersburg: 325–342.

Tzvelev, N.N. (2000) *Red Data Book of nature of the Leningrad region. Vol. 2 - Plants and Fungi.* St. Petersburg, 671 pp.

St. Petersburg, Karelia & Murmansk

Kotiranta, H., Uotila, P., Sulkava, S. & Peltonen, S.-L. (eds.) (1998) *Red Data Book of East Fennoscandia.* Ministr. Envir., Helsinki, 351 pp.

Tver'

Zykov, I.V., Notov, A.A. & Spirina, U.N. (2002) Bryophyta. – Divisio Bryophytes. In: *Red Data Book of the Tver' Province.* Veche Tveri & ANTEK, Tver': 10–35.

Vologda

Dulin, M.V., Philippov, D.A. & Karmazina, E.V. (2009) Current state of knowledge of the liverwort and hornwort flora of the Vologda Region, Russia. *Folia Cryptogamica Estonica* **45**, 13–22.

Several other provinces also have checklists (Lars Söderström, *pers. comm.*, May 2012).

San Marino

Zodda, G. (1930) In: Pampanini, R. (ed.). *Flora della Repubblica di San Marino.* San Marino pp. 1–68.

Serbia

Pantović, J., Veljić, M., Grdović, S. & Sabovljević, M. (2020) An annotated list of hornwort and liverwort species of Serbia. *Cryptogamie, Bryologie* **41**, 35–48.

Ros, R.M., Mazimpaka, V., Abou-Salama, U., Aleffi, M., Blockeel, T.L., Brugués, M., Cano, M.J., Cros, R.M., Dia, M.G., Dirkse, G.M., El Saadawi, W., Erdağ, A., Ganeva, A., González-Mancebo, J.M., Herrnstadt, I., Khalil, K.,

Kürschner, H., Lanfranco, E., Losada-Lima, A., Refai. M.S., Rodríguez-Nuñez, S., Sabovljević, M., Sérgio, C., Shabbara, H., Sim-Sim, M. & Söderström, L. (2007) Hepatics and Anthocerotes of the Mediterranean, an annotated checklist, *Cryptogamie, Bryologie* **28**, 351–437.

Sabovljević, M. (2000) Checklist of hepatics of the Federal Republic of Yugoslavia. *Lindbergia* **25**, 37–42. (Data separated for Serbia and Montenegro)

Sabovljević, M. & Stevanovic, V. (1999) Moss conspectus of the Federal Republic of Yugoslavia. *Flora Mediterranea* **9**, 65–95. (Data separated for Serbia and Montenegro)

Sabovljević, M., Cvetić, T. & Stevanović, V. (2004) Bryophyte Red List of Serbia and Montenegro. *Biodiversity and Conservation* **13**, 1781–1790.

Sabovljević, M. & Natcheva, R. (2006) Check list of the liverworts and hornworts of South-Eastern Europe. *Phytologia Balcanica* **12**, 169–180.

Sabovljević, M., Natcheva, R., Dihoru, G., Tsakiri, E., Dragićević, S., Erdağ, A. & Papp, B. (2008) Check-list of the mosses of SE Europe. *Phytologia Balcanica* **14**, 207–244.

Slovakia

Kubinská, A., Janovicová, K. & Peciar, V. (1993) The checklist of bryophytes in Slovakia. *Biológia, Bratislava* **48**, 99–143.

Kubinská, A., Janovicová, K. & Peciar, V. (1996) The list of extinct, missing and threatened bryophytes (Bryophyta) of Slovakia (1st version). *Biológia, Bratislava* **51**, 373–380.

Kubinská, A. & Janovicová, K. (1998) Bryophytes, pp. 297–332. *In*: Marhold, K. & Hindák, F. (eds). *Checklist of non-vascular and vascular plants of Slovakia.* Veda, Bratislava (see also http://ibot.sav.sk/checklist/index.php?lang=en; attempted to access 3.4.2020 but password protected).

Kubinská, A., Janovicová, K. & Soltes, R. (2001) Red list of bryophytes of Slovakia (December 2001). *In*: Baláz, D., *et al*. (eds)., Cerveny zoznam rastlín a zivocichov Slovenska. *Ochr. Prír.* **20** (Suppl.), 48–81.

Kubinská, A., Janovicová, K. & Soltes, R. (2001) Updated checklist of liverworts, hornworts and mosses of Slovakia. *Bryonora, Praha* **28**, 4–10.

Mišíková, K., Godovičová, K., Širka, P. & Šoltés, R. (2019) Checklist and Red List of mosses (Bryophyta) of Slovakia. *Biologia* **75**, 21–37.

Slovenia

Martinčič, A. (1992) Rdeci seznam ogroženih listnatih mahov (Musci) v Sloveniji. *Varstvo Narave* **18**, 1–190. (Red List; mosses only)

Martinčič, A. (2003) Seznam listnatih mahov (Bryopsida) Slovenije [Survey of mosses of Slovenia]. *Hacquetia* **2**, 91–166.

Martinčič, A. (2016) Updated Red List of bryophytes of Slovenia. *Hacquetia* **15**, 107–126.

Spain

Mainland

Garilleti, R. & Albertos, B. (2012) *Atlas y Libro Rojo de los Briófitos Amenazados de España*. Ministerio de Agricultura, Alimentacion y Medio Ambiente, Madrid. 287 pp.

Sérgio, C., Casas, C., Brugués, M. & Cros, R.M. (1994) *Lista Vermelha dos Briófitos da Península Ibérica* [Red List of Bryophytes of the Iberian Peninsula]. ICN, Lisboa, 45 pp.

Sérgio, C., Brugués, M., Cros, R.M. Casas, C. & Garcia, C. (2006) The 2006 Red List and an updated checklist of bryophytes of the Iberian Peninsula (Portugal, Spain and Andorra). *Lindbergia* **31**, 109–125. (see also http://pagines.uab.cat/briologia/en/content/bryophyte-lists; accessed 3.4.2020)

Baleares

Cros, R.M., Saez, L. & Brugués, M. (2008) The bryophytes of the Balearic Islands: an annotated checklist. *Journal of Bryology* **30**, 74–95. (see also http://pagines.uab.cat/briologia/en/content/bryophyte-lists; accessed 3.4.2020)

Canary Isles

Dirkse, G.M., Bouman, A.C. & Losada-Lima, A. (1993) Bryophytes of the Canary Islands, an annotated checklist. *Cryptogamie Bryologie Lichenologie* **14**, 1–47.

Dirkse, G.M. & Losada-Lima, A. (2011) Additions and amendments to the moss flora of the Canary Islands. *Cryptogamie, Bryologie* **32**, 37–41.

González-Mancebo, J.M., Romaguera, F., Ros, R.M., Patiño, J. & Werner, O. (2008) Bryophyte flora of the Canary Islands: an updated compilation of the species list with an analysis of island distribution patterns in the context of the Macaronesian Region. *Cryptogamie, Bryologie* **29**, 315–357.

Distribution maps are available at http://oslo.geodata.es/briofits/ (accessed 4.4.2020)

Sweden

Gärdenfors, U. (ed.) (2010) *Rödlistade arter i Sverige 2005* [The 2010 Red List of Swedish species]. ArtDatabanken, Uppsala, 590 pp. (See also http://www.artfakta.se, accessed 3.4.2020)

Hallingbäck, T., Hedenäs, L. & Weibull, H. (2006) Ny checklista för Sveriges mossor [Checklist of bryophytes recorded from Sweden]. *Svensk Botanisk Tidskrift* **100**, 96–148.

For further up-to-date information on Swedish bryophytes, see https://www.analysisportal.se/Filter/TaxonFromSearch (accessed 3.4.2020).

Switzerland

Schnyder, N., Bergamini, A., Hofman, H., Müller, N., Schubiger-Bossard, C. & Urmi, E. (2004) *Rote Liste der gefährdeten Moose der Schweiz.* Bern, Hrsg. BUWAL, FUB & NISM. BUWAL-reihe: Vollzug umwelt, 99 pp.

For further up-to-date information on Swiss bryophytes, including a checklist and news about a forthcoming Red List, see https://www.swissbryophytes.ch/index.php/datenzentrum (accessed 3.4.2020).

Turkey

(mostly in Asia – small part in Europe)

Kürschner, H. & Erdağ, A. (2005) Bryophytes of Turkey: an annotated reference list of the species with synonyms from the recent literature and an annotated list of Turkish bryological literature. *Turkish Journal of Botany* **29**, 95–154.

Natcheva, R., Coşkun, M. & Çayir, A. (2008) Contribution to the bryophyte flora of European Turkey. *Phytologia Balcanica* **14**, 335–341.

Sabovljević, M. & Natcheva, R. (2006) Check list of the liverworts and hornworts of South-Eastern Europe. *Phytologia Balcanica* **12**, 169–180.

Sabovljević, M., Natcheva, R., Dihoru, G., Tsakiri, E., Dragićević, S., Erdağ, A. & Papp, B. (2008) Check-list of the mosses of SE Europe. *Phytologia Balcanica* **14**, 207–244.

Uyar, G. & Çetin, B. (2004) A new check-list of the mosses of Turkey. *Journal of Bryology* **26**, 203–220.

Ukraine

Boiko, M.F. (2014) The second checklist of Bryobionta of Ukraine. *Chornomors'k. bot. z.* **10**, 426–487.

Ignatov, M.S., Afonina, O.M., Ignatova, E.A. *et al.* (2006) Check-list of mosses of East Europe and North Asia. *Arctoa* **15**, 1–130.

Maslovsky, O. (2017) *Atlas of rare and threatened bryophytes of Eastern Europe as candidates to new European Red List.* National Academy of Sciences of Belarus, Minsk.

Sheljag-Sosonka, J.R. (ed.) (1996) *Kniga Ukraïni. Roslinnij svit.* Vidavnictvo "Ukrains'ka Enciklopedija" imeni M.P. Bazana, Kiev.

Váňa, J. & Virchenko, V.M. (1993) A list of Anthocerotes and Hepatics of Ukraine. *Ukrajins'kyj Botaničnyj Žurnal* **50**, 89–93.

United Kingdom

(including England, Scotland and Wales, plus the Isle of Man)

Blockeel, T.L., Bosanquet, S.D.S., Hill, M.O. & Preston, C.D. (2014) *Atlas of British and Irish Bryophytes. The distribution and habitat of mosses and liverworts in Britain and Ireland. Vols. 1–2.* Pisces Publications, Newbury.

Hill, M.O., Blackstock, T.H., Long, D.G. & Rothero, G.P. (2008) *A checklist and census catalogue of British and Irish bryophytes updated 2008*. British Bryological Society, Middlewich.

Church, J.M., Hodgetts, N.G., Preston, C.D. & Stewart, N.F. (2001) *British Red Data Books. Mosses and liverworts.* JNCC, Peterborough, 168 pp.

Hodgetts, N.G. (2011) A revised Red List of bryophytes in Britain. *Field Bryology* **103**, 40–49.

See also https://nbnatlas.org for distribution information *etc*. (accessed 3.4.2020).

Northern Ireland

See Ireland.

Channel Islands

Hill, M.O., Blackstock, T.H., Long, D.G. & Rothero, G.P. (2008) *A checklist and census catalogue of British and Irish bryophytes updated 2008*. British Bryological Society, Middlewich.

Bryophytes of the Channel Islands are not included in the British Red List.

Gibraltar

Linares, L., Grech, M., Perez, C. Gonzalez, A., Guillem, R. & Bensusan, K. (2020) *Flora of Gibraltar*. www.floraofgibraltar.myspecies.info (accessed 3.4.2020).

Vatican

Aleffi, M. (2015) The bryophyte flora of the Vatican City State. *Cryptogamie, Bryologie* **36**, 155–169.

Aleffi, M. (2017) Contribution to the knowledge of the bryophyte flora of the Vatican City State: the pontifical villas of Castel Gandolfo (Rome, Italy). *Flora Mediterranea* **27**, 137–150.

Appendix 2 European bryological societies and journals

Societies

British Bryological Society
Area covered: principally Britain and Ireland
Website: http://rbg-web2.rbge.org.uk/bbs/bbs.htm
Journals/Newsletters: *Journal of Bryology*; *Field Bryology*

Bryological Association of South-Eastern Europe
Area covered: SE Europe, principally the Balkans
Website: - (only old address found)
Contact: Prof. Dr. Marko Sabovljević, Department of Ecology & Geography of Plants, University of Belgrade, Takovska 43, 11000 Belgrade, Serbia
Journals/Newsletters: -

Bryologisch-lichenologische Arbeitsgemeinschaft für Mitteleuropa (BLAM) (The Bryological and Lichenological Working Group of Central Europe)
Area covered: Central Europe
Website: https://blam-bl.de/blam/blam-verein-en.html
Journals/Newsletters: *Herzogia; Herzogiella*

Czech Botanical Society – Bryological/Lichenological Section
Area covered: Czech Republic
Website: https://botanospol.cz/en/node/12
Journals/Newsletters: *Bryonora*

Dutch Bryological and Lichenological Society (BLWG)
Area covered: Netherlands
Website: http://www.blwg.nl/
Journals/Newsletters: *Lindbergia* (with Nordic Bryological Society); *Buxbaumiella*

Mossornas Vänner
Area covered: Sweden, Finland, Denmark, Norway & Iceland
Website: www.mossornasvanner.se
Journals/Newsletters: *Myrinia*

Nordic Bryological Society
Area covered: principally Denmark, Finland, Iceland, Norway, & Sweden
Website: https://www.nordicbryologicalsociety.com
Journals/Newsletters: *Lindbergia* (with Dutch Bryological and Lichenological Society)

Spanish Bryological Society (Sociedad Española de Briología)
Area covered: Spain
Website: http://www.uam.es/informacion/asociaciones/SEB/
Journals/Newsletters: *Boletín de la Sociedad Española de Briología*

Swiss Association of Bryology and Lichenology
Area covered: Switzerland
Website: https://naturalsciences.ch/organisations/bryolich
Journals/Newsletters: *Meylania*

Other Journals or newsletters

Arctoa
Area covered: principally Russia
Website: http://www.arctoa.ru/en/

Bryobrothera (1992-2013)
Area covered: international
Website: www.suomensammalseura.fi/219917436

Bryobrotherella
Area covered: Finland
Website: www.suomensammalseura.fi/219917437

Cryptogamie, Bryologie
Area covered: international, but based in France
Website: https://sciencepress.mnhn.fr/en/periodiques/bryologie

Dumortiera
Area covered: Belgium Netherlands and surrounding area
Website: https://www.plantentuinmeise.be/en/pQGY8SK/dumortiera-intro

Limprichtia
Area covered: western and central Europe.
Website: http://www.jan-peter-frahm.de/Limprichtia/Limprichtia_vols.htm

Muscillanea
Area covered: Belgium
Website: -
Contact: Herman Stieperaere, Nationale Plantentuin van Belgie, Domein de Bouchout, B-1860 Meise, Belgium.

Nov. System Plant non Vasc
Website: -

Nowellia Bryologica
Area covered: Belgium
Website: http://users.skynet.be/fb062663/nowellia.htm

Phytologia Balconica
Area covered: the Balkans; mainly vascular plants but occasional bryological papers.
Website: http://www.bio.bas.bg/~phytolbalcan/

Appendix 3 Floras

There are many bryophyte Floras covering various geographical areas in Europe. The more relevant and modern ones, or the latest known for a territory, are presented here. Only major Floras are listed, not Floras of small subdivisions of countries, and not publications dealing only with a small taxonomic group of plants.

Atherton, I., Bosanquet, S. & Lawley, M. (eds.) (2010) *Mosses and liverworts of Britain and Ireland. A field guide.* British Bryological Society, Plymouth.

Casas, C., Brugués, M., Cros, R.M. & Sérgio, C. (2006) *Handbook of the mosses of the Iberian Peninsula and the Balearic Islands.* Institut d'Estudis Catalans, Barcelona.

Casas, C., Brugués, M., Cros, R.M., Sérgio, C. & Infante, M. (2009) *Handbook of liverworts and hornworts of the Iberian Peninsula and the Balearic Islands.* Institut d'Estudis Catalans, Barcelona.

Cortini Pedrotti, C. (2001) *Flora dei Muscha d'Italia, Parte 1: Sphagnopsida, Andreaeopsida, Bryopsida.* Antonio Delfino Editore, Roma.

Cortini Pedrotti, C. (2005) *Flora dei Muscha d'Italia, Parte 2: Bryopsida.* Antonio Delfino Editore, Roma.

Damsholt, K. (2009) *Illustrated Flora of Nordic liverworts and hornworts (2nd edition).* Nordic Bryological Society, Lund.

Frey, W., Frahm, J.-P., Fischer, E. & Lobin, W. (2006) *The liverworts, mosses and ferns of Europe.* English edition revised and edited by T.L. Blockeel. Harley Books, Colchester.

Grims, F. (1999) *Die Laubmoose Österreichs. Catalogus Florae Austriae, II. Teil, Bryophyten (Moose), Heft 1, Musci (Laubmoose).* Verlag der Österreichische Akademie der Wissenschaften, Vienna.

Guerra, J. (ed.) (2007–2018) *Flora Briofítica Ibérica.* Vols. 1–6. Sociedad Española de Briología, Murcia.

Hallingbäck, T., Lonnell, N. & Weibull, H., Hedenäs, L. & von Knorring, P. (2006) *Nationalnyckeln till Sveriges flora och fauna. Bladmossor: Sköldmossor-blåmossor. Bryophyta:* Buxbaumia-Leucobryum. ArtDatabanken, SLU, Uppsala.

Hallingbäck, T., Lonnell, N. & Weibull, H., von Knorring, P. Korotynska, M., Reisborg, C. & Birgersson, M. (2008) *Nationalnyckeln till Sveriges flora och fauna. Bladmossor: Kompactmossor-kapmossor. Bryophyta:* Anoectangium-Orthodontium. ArtDatabanken, SLU, Uppsala.

Hedenäs, L., Reisborg, C. & Hallingbäck, T. (2014) *Nationalnyckeln till Sveriges flora och fauna. Bladmossor: Skirmossor-baronmossor. Bryophyta:* Hookeria-Anomodon. ArtDatabanken, SLU, Uppsala.

Hedenäs, L. (1992) *Flora of Madeiran pleurocarpous mosses (Isobryales, Hypnobryales, Hookeriales).* J.Cramer, Berlin & Stuttgart.

Ignatov, M.S. (ed.) (2017) *Moss Flora of Russia. Volume 2: Oedipodiales-Grimmiales.* KMK Scientific Press, Moscow.

Ignatov, M.S. (ed.) (2018) *Moss Flora of Russia. Volume 4: Bartramiales-Aulacomniales.* KMK Scientific Press, Moscow.

Ignatov, M.S. & Ignatova, E.A. (2003) *Moss Flora of the middle part of European Russia, Vol. 2: Fontinalaceae–Amblystegiaceae.* KMK Scientific Press, Moscow.

Jóhannsson, B. (2003) Íslenskir mosar: skrár og vid-baetur [Icelandic bryophytes: lists and additions]. *Fjölrit Náttúrufræðistofnunar* **44**, 1–135.

Jukoniene, I. (2003) *Mosses of Lithuania.* Institute of Botany, Vilnius.

Laine, J., Flatberg, K.I., Harju, P., Timonen, T., Minkkinen, K., Laine, A., Tuittila, E.S. & Vasander, H. (2018) Sphagnum *mosses – the stars of European mires.* University of Helsinki, Helsinki.

Lüth, M. (2019) *Mosses of Europe. A photographic Flora, Vols. 1–3.* Michael Lüth, Freiburg.

Nyholm, E. (1993) *Illustrated Flora of Nordic mosses. Fasc. 3.* Oikos editorial office, Lund.

Paton, J.A. (1999) *The liverwort flora of the British Isles.* Harley Books, Colchester.

Rykovsky, G. & Maslovsky, O. (2004) *Flora of Belarus. Bryophyta. Volume 1. Andreaeopsida-Bryopsida.* Technalohija, Minsk.

Rykovsky, G. & Maslovsky, O. (2009) *Flora of Belarus. Bryophyta. Volume 2. Hepaticopsida-Sphagnopsida.* Belaruskaya navuka, Minsk.

Smith, A.J.E. (2004) *The moss flora of Britain and Ireland. Second edition (2006 reprint).* Cambridge University Press, Cambridge.

Appendix 4 ECCB Country Contacts

This table is updated from the version in Hodgetts (2015).

Country	Name	Institute	e-mail
Albania	Marka, Jani	Department of Biology Faculty of Natural Sciences Tirana University	markajani@yahoo.com jani.marka@fshn.edu.al
Andorra	Brugués, Montserrat	Botànica, Facultat de Biociències, Universitat Autònoma de Barcelona	montserrat.brugues@uab.cat
Austria	Schröck, Christian	Biology Centre of Upper Austrian National Museums, Linz	christian.schroeck@gmx.at
Azores (Portugal)	Gabriel, Rosalina	Universidade dos Açores, cE3c/GBA, Angra do Heroísmo	rosalina.ma.gabriel@uac.pt
Balearic Islands (Spain)	Brugués, Montserrat	Botànica, Facultat de Biociències, Universitat Autònoma de Barcelona	montserrat.brugues@uab.cat
Belgium	De Beer, Dirk Vanderpoorten, Alain	- Institute of Botany, University of Liège, Liège, Belgium	dirk.debeer@telenet.be a.vanderpoorten@ulg.ac.be
Belarus	Maslovsky, Oleg	Institute of Experimental Botany Academy of Science, Minsk	oleg.maslovsky@tut.by
Bosnia-Herzegovina	Sabovljević, Marko	Institute of Botany and Botanical Garden, Faculty of Biology, University of Belgrade, Takovska 43, 11000 Belgrade	sabmar@hotmail.com
Bulgaria	Ganeva, Anna Natcheva, Rayna	Institute of Biodiversity & Ecosystems Research, Bulgarian Academy of Sciences (IBER-BAS), Sofia ditto	annaganeva8@gmail.com raynanatcheva@yahoo.com
Canary Islands (Spain)	Dirkse, Gerard M. González-Mancebo, Juana María Losada-Lima, Ana	Natuurmuseum De Bastei, Waalkade, Nijmegen Dept. de Botánica, Ecología y Fisiología Vegetal, Tenerife ditto	gerard.dirkse@debastei.nl jglezm@ull.es alosada@ull.es
Croatia	Alegro, Antun	Dept. of Botany & Botanical Garden, University of Zagreb	antun.alegro@biol.pmf.hr
Czech Republic	Kučera, Jan	Faculty of Science, University of South Bohemia, České Budějovice	kucera@prf.jcu.cz
Cyprus	-	-	-
Denmark	Goldberg, Irina	Danish Bryological Society (Bryologkredsen)	irina.goldberg@gmail.com
Estonia	Ingerpuu, Nele Vellak, Kai	University of Tartu Institute of Ecology and Earth Sciences Department of Botany Institute of Ecology and Earth Sciences, Natural History Museum, University of Tartuu	nele.ingerpuu@ut.ee kai.vellak@ut.ee
Faroe Islands (Denmark)	Goldberg, Irina	Danish Bryological Society (Bryologkredsen)	irina.goldberg@gmail.com
Finland	Syrjänen, Kimmo	Finnish Environment Institute Biodiversity Centre, Helsinki	Kimmo.syrjanen@ymparisto.fi

Country	Name	Institute	e-mail
France (including Corsica)	Hugonnot, Vincent Leblond, Sébastien	Le Bourg 43 380 Blassac Muséum National d'Histoire Naturelle, Paris	vincent.hugonnot@wanadoo.fr sleblond@mnhn.fr
Germany	Caspari, Steffen	Red List Center, German Aerospace Center, Bonn	steffen.caspari@dir.de
Greece (including Crete)	Tsakiri, Evdoxia	Aristotle University of Thessaloniki Department of Botany, Thessaloniki	tsakiri@bio.auth.gr
Hungary	Papp, Beáta	Hungarian Natural History Museum Botanical Department, Budapest	papp.beata@nhmus.hu
Iceland	-	-	-
Ireland (including Northern Ireland)	Hodd, Rory Lockhart, Neil	- National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, 90 North King Street, Dublin 7, D07 N7CV	rlhodd@gmail.com Neil.Lockhart@chg.gov.ie
Italy (including Sardinia, Sicily)	Campisi, Patrizia Cogoni, Annalena	Department of Environmental Biology and Biodiversity, University of Palermo Dept. of Life & Environmental Sciences, Botany Section, University of Cagliari	patrizia.campisi@unipa.it cogoni@unica.it
Kazakhstan (in Europe)	-	-	-
Kosovo	Sabovljević, Marko	Institute of Botany and Botanical Garden, Faculty of Biology, University of Belgrade, Takovska 43, 11000 Belgrade	sabmar@hotmail.com
Latvia	Mežaka, Anna	Institute of Life Sciences & Technology, Daugavpils University	bryo82@gmail.com
Liechtenstein	-	-	-
Lithuania	Jukonienė, Ilona	Nature Research Center, Institute of Botany, Laboratory of Flora and Geobotany, Vilnius	ilona.jukoniene@gamtc.lt
Luxembourg	-	-	-
Madeira (Portugal)	Fontinha, Susana Sim-Sim, Manuela	Regional Secretary of the Environment, Natural Resources and Climatic Changes Universidade de Lisboa, Faculdade de Ciências de Lisboa,	suzu.65@gmail.com mmsim-sim@fc.ul.pt
Malta	Mifsud, Stephan	-	valerandi@gmail.com
Moldova	-	-	-
Monaco	Hugonnot, Vincent	Conservatoire Botanique National du Massif Central, Chavaniac-Lafayette	vincent.hugonnot@wanadoo.fr
Montenegro	Dragićević, Snežana Sabovljević, Marko	Montenegran Academy of Science and Arts, Podgorica Institute of Botany and Botanical Garden, Faculty of Biology, University of Belgrade, Takovska 43, 11000 Belgrade	sneza.dragicevic@t-com.me sabmar@hotmail.com
Netherlands	Siebel, Henk	Dutch Bryological and Lichenological Society	h.siebel@hetnet.nl

Country	Name	Institute	e-mail
North Macedonia	Sabovljević, Marko	Institute of Botany and Botanical Garden, Faculty of Biology, University of Belgrade, Takovska 43, 11000 Belgrade	sabmar@hotmail.com
	Papp, Beáta	Hungarian Natural History Museum, Botanical Dept, Budapest	papp.beata@nhmus.hu
Norway (including Svalbard)	Hassel, Kristian	NTNU University Museum, Department of Natural History, Trondheim	kristian.hassel@ntnu.no
Poland	Klama, Henryk	Technichal University of Łódź, Branch in Bielsko-Biała, Faculty of Textile Engineering and Environmental Protection, Bielska-Biała	hklama@ath.bielsko.pl
	Stebel, Adam	Department of Pharmaceutical Botany Medical University of Silesia in Katowice, Sosnowiec	astebel@sum.edu.pl
	Żarnowiec, Jan	Technichal University of Łódź, Branch in Bielsko-Biała, Faculty of Textile Engineering and Environmental Protection, Bielska-Biała	jzarnowiec@ath.bielsko.pl
Portugal	Sérgio, Cecília	Museu Nacional de Historia Natural e da Ciência, Universidade de Lisboa, Faculdade de Ciências, Lisboa	clgomes@fc.ul.pt
Romania	Goia, Irina	Grădina Botanică "Al. Borza", Universitatea "Babeş-Bolyai", Cluj-Napoca	igoia@yahoo.com
	Ştefănuţ, Sorin	Institute of Biology, Bucharest, Romanian Academy	sorin.stefanut@ibiol.ro
Russia (including Caucasus, Kaliningrad)	Konstantinova, Nadya	The Polar-Alpine Botanical Garden-Institute, Kola Science Center of the Russian Acad. Sci., Apatity	nadya50@list.ru
	Ignatov, Mikhail	Tsitsin Main Botanical Garden, Russian Acad. Sci., & Faculty of Biology, Moscow University	misha_ignatov@list.ru
San Marino	Aleffi, Michele	School of Biosciences and Veterinary Medicinem Bryology Laboratory & Herbarium, Camerino University	michele.aleffi@unicam.it
Serbia	Sabovljević, Marko	Institute of Botany and Botanical Garden, Faculty of Biology, University of Belgrade, Takovska 43, 11000 Belgrade	sabmar@hotmail.com
Slovakia	Šoltés, Rudolf	19 Podtatranská Str., 05801 Poprad	rudolf.soltes@gmail.com
Slovenia	Martinčič, Andrej	Založka 78a. 1000 Ljubljana	andrej.martincic@siol.net
	Sabovljević, Marko	Institute of Botany and Botanical Garden, Faculty of Biology, University of Belgrade, Takovska 43, 11000 Belgrade	sabmar@hotmail.com
Spain	Brugués, Montserrat	Botànica, Facultat de Biociències, Universitat Autònoma de Barcelona	montserrat.brugues@uab.cat

Country	Name	Institute	e-mail
	Garilleti, Ricardo	Departamento de Botánica y Geología, Facultad de Farmacia, Universidad de Valencia	ricardo.garilleti@uv.es
	Lara, Francisco	Departamento de Biologia, Universidad Autónoma de Madrid, C/Darwin 2, 28049 Madrid	francisco.lara@uam.es
Sweden	Lönnell, Niklas	SLU Swedish Species Information Centre, Swedish University of Agricultural Sciences, Uppsala	niklas.lonnell@slu.se
Switzerland	Kiebacher, Thomas	Institut für Systematische und Evolutionäre Botanik, Universität Zürich	thomas.kiebacher@systbot.uzh.ch
	Meier, Markus	ditto	markus.meier@uzh.ch
	Schnyder, Norbert	ditto	n.schnyder@access.uzh.ch
Turkey	Kirmaci, Mesut	Adnan Menderes University, Arts and Science Faculty, Biology Department, Aydin	mkirmaci@gmail.com
	Uyar, Güray	Ankara Hacı Bayram Veli University, Polatlı Science & Arts Faculty, Department of Biology, Ankara	gurayuyar@hbv.edu.tr
Ukraine	Boiko, Mykhailo Fedoseevich	Kherson State University, Kherson	Bomifed@ksu.ks.ua
United Kingdom (including Channel Is., Isle of Man, Gibraltar; excluding N. Ireland)	Hodgetts, Nick	-	nick1901@hotmail.co.uk
Vatican	Aleffi, Michele	School of Biosciences and Veterinary Medicinem Bryology Laboratory & Herbarium, Camerino University	michele.aleffi@unicam.it