DISTRIBUTION OF BRYOPHYTES IN THE BRITISH ISLES

A Census Catalogue of their Occurrence in Vice-Counties

M. F. V. CORLEY
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PStarty 1981

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Prepared by

M. F. V. CORLEY (Recorder of Hepatics) and M. O. HILL (Recorder of Mosses)



BRITISH BRYOLOGICAL SOCIETY CARDIFF

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FOR THE PURPOSES of botanical recording, Great Britain is divided into 112 vice-counties; Ireland is divided into 40 vice-counties. The Channel Islands, though geographically part of Normandy, are conventionally considered also as a British vice-county.

The main purpose of the present volume is to present the distribution of bryophytes in the 153 vice-counties. It is therefore the successor to the British Bryological Society's Census Catalogues of

mosses and hepatics (Warburg, 1963; Paton, 1965).

The latest *Census Catalogues* were published nearly twenty years ago, during a period of unprecedented activity among British bryologists. In 1964, for example, there were roughly 250 new records of hepatics, 420 new records of mosses, and an additional 250 records due to the inclusion of published distributions for the *Bryum erythrocarpum* complex. At present the rate of additions is substantially lower. Ignoring the numerous amendments that have been necessitated by preparations for the present volume, it is running at about 100 new records a year for hepatics and 200 new records a year for mosses. Considering that the total number of records in the latest *Census Catalogues* is about 60,000 and that about 10,000 new records have accumulated in the past twenty years, the need for an updated volume is evident.

In addition to bringing the *Census Catalogues* up to date, the present volume serves as an updated check-list of bryophytes in the British Isles. Taxa that have been added since publication of the standard floras (Macvicar, 1926; Smith, 1978a) are indicated in the notes. There is an index of synonymy, cross-referencing to the nomenclature of the *Census Catalogues* and of the standard floras.

There is also an index of maps, listing the maps of bryophyte distributions that have hitherto been published by the British Bryological Society.

Vice-county recording and its advantages

The system of vice-county recording is as follows. Additions to the recorded distributions are accepted only if supported by a voucher. In most cases the voucher is checked by the Recorder for Hepatics or the Recorder for Mosses as appropriate. A small minority of specimens are checked by other competent bryologists, whose authority

is then cited along with the record. Voucher specimens sent to the Recorders are retained and deposited in the herbarium of the British Bryological Society (BBSUK). They are therefore available for checking again in future if necessary. New records are published in the *Bulletin of the British Bryological Society* once a year. The records are also entered in notebooks kept by the Recorders, and are used for the preparation of volumes such as the present one.

Vice-county recording is often criticized as archaic; and vice-counties are admittedly not ideal as the basis of a modern recording system. Their major drawback is that they are not indicated on Ordnance Survey maps, and therefore have to be specially described and illustrated by those who wish to use them. On the other hand, the system has many advantages. It ensures that at a broad scale of resolution, distributional data are checked by a competent expert. It ensures that herbarium material from a wide range of localities is available if a species needs to be revised. It allows bryologists to publish occasional finds that they may make, and at the same time provides them with an automatic service for checking their specimens.

Perhaps the greatest advantage of the system is in encouraging amateurs and beginners. A bryologist anywhere in the British Isles can get some idea of the taxa that he is likely to find in his area. For a beginner, it is a great encouragement to make a new find for his area and to have it published. Indeed, the encouragement provided by the system has been a major factor in raising the standard of field bryology in Britain, so that it is now one of the highest in the world.

Finally, the vice-county records will be useful when it comes to preparing the Society's projected atlas of bryophytes in the British Isles. The existence of vice-county data of high quality will allow the distribution maps to be checked both for errors and for omissions.

History of distributional recording

The Moss Exchange Club was founded in 1896. At about the same time, new floras were published by Dixon & Jameson (1896) and Lett (1902). Interest in the distribution of British bryophytes soon increased to the point where it was possible to publish a census of their occurrence in the vice-counties of Britain and Ireland (Macvicar, 1905; Ingham, 1907). From these early *Census Catalogues*, the present system of vice-county recording has developed.

The following chronology lists the main events in the progress of distributional recording in the British Isles.

1881 London Catalogue of British Mosses ed. 2 (Lees, 1881), with distributions in 18 'provinces' of Britain. This came at about

the time of a marked increase in publication of county lists of bryophytes, records appearing in the *Report of the Botanical Record Club* and other journals.

1896 Formation of the Moss Exchange Club; this lasted until 1922 (Foster, 1979), and on 1 January 1923 was formally reconsti-

tuted as the British Bryological Society.

1897 E. C. Horrell published a note in the circulating notebook of the Moss Exchange Club, indicating that by that time fairly good lists of mosses had been published for about 50 vice-counties of Great Britain. He intended to publish a census; but he was not a good organizer, and the scheme lapsed.

1902 Publication of a hepatic flora by Lett (1902), including (very

incomplete) vice-county distributions for each species.

1905 Census Catalogue of British Hepatics ed. 1 (Macvicar, 1905).

1907 Census Catalogue of British Mosses ed. 1 (Ingham, 1907).

1909 Vice-county records were indicated by an asterisk in the Report of the Moss Exchange Club. This practice continued until 1946, when publication of the Report of the British Bryological Society (as it then was) ceased and a new format was introduced for the Society's Transactions. However, until 1937, new vice-county records were not published unless material was submitted for distribution in the annual exchange.

1913 Census Catalogue of British Hepatics ed. 2 (Ingham, 1913).

J. B. Duncan became Recorder of Mosses for the newly founded British Bryological Society and opened an official B.B.S. book of moss records. All vice-county records and amendments made between 1907 and 1961 were entered in this book, with the exception of the period 1926–34, for which they were entered in an interleaved copy of the 2nd edition of the moss catalogue. From 1962 to 1980, new records have been entered in an interleaved copy of Warburg (1963). An official B.B.S. record book for hepatics was opened in 1923 likewise by A. Wilson. This was superseded by a new hepatic record book dating from 1963.

1926 Census Catalogue of British Mosses ed. 2 (Duncan, 1926). Sphagna were entered according to two systems, Dixon's and Warnstorf's. However, Dixon's system was not used after this date, and the Warnstorfian system of recording

sphagna was maintained by W. R. Sherrin.

1929 Issue of a first supplement to the moss catalogue, bringing distributions up to date. Records were indicated as amendments only, without recorder, locality or date.

- 1930 Census Catalogue of British Hepatics ed. 3 (Wilson, 1930).
- Supplements to both *Census Catalogues* were issued by the B.B.S. in the same style as the 1929 supplement, and including all the records given there.
- 1937 Full details of new vice-county records subsequent to the 1935 supplements were published in the *Report for 1936*. From this time onwards, all new records have been published with details of locality, recorder and date. This year also saw publication of a first *Census Catalogue of British Sphagna* (Sherrin, 1937); a second edition of the sphagnum catalogue was published in 1946 (Sherrin, 1946).
- 1946 The B.B.S. was re-formed and revitalized after the 1939–45 war. From this time onwards, new records have been published only if supported by a voucher. Prior to this, records were sometimes accepted on the basis of manuscript lists.
- 1952 Following publication of a new check-list of mosses by Richards & Wallace (1950), the Warnstorfian system of recording sphagna was dropped. The group ceased to have a separate Recorder.
- 1960 A scheme for mapping bryophytes in 10-km squares of the National Grid was launched. Maps began to be published in the *Transactions of the B.B.S.* in 1963.
- 1963 Census Catalogue of British Mosses ed. 3 (Warburg, 1963).
- 1965 Census Catalogue of British Hepatics ed. 4 (Paton, 1965). The nomenclature in this catalogue was largely based on a checklist by Jones (1958).
- 1975 New vice-county records were first published in the *Bulletin* of the *B.B.S.* rather than in the *Journal of Bryology* (and its predecessor, the *Transactions of the B.B.S.*).
- 1978 Provisional Atlas of the Bryophytes of the British Isles, with dot-maps of 104 species on a 10-km grid (Smith, 1978b). Publication of *The Moss Flora of Britain and Ireland* (Smith, 1978a) stimulated work leading to production of the present volume.

1905	S. M. Macvicar		
1906-23	W. Ingham		
1923-46	A. Wilson		
1947	Miss G. Wigglesworth		
1948-59	C. P. Castell		
1960–76	Mrs J. A. Paton		
	M. F. V. Corley		

RECORDERS OF MOSSES

1906-7 T. Barker 1907-23 W. Ingham 1923-46 J. B. Duncan 1946-65 E. F. Warburg 1966 A. R. Perry 1967-75 A. C. Crundwell 1976- M. O. Hill

Accuracy of vice-county records

It can be seen from the foregoing history that the system of recording has only gradually evolved to its present state. In the early years, a much less critical attitude was adopted. The first editions of the *Census Catalogues* were based mainly on literature records and manuscript lists.

Certain areas and groups of taxa were revised at an early stage, and contain relatively few errors. For example, Macvicar (1910) published a complete list of the known records of hepatics in Scotland. The Scottish data for this group are therefore generally reliable. Likewise, for some counties such as Dorset (v.-c. 9) the original list of mosses was based on specimens that had been verified by a competent bryologist (in this case H. Boswell). But the data for several other counties contained many inaccuracies.

As time has passed the more glaring errors have been eliminated. Warburg (1963) and Paton (1965) revised several distributions for their editions of the *Census Catalogues*, and we have done likewise for the present volume. The mapping scheme has also made a contribution; vice-county records untraced for maps published in the *Journal*

of Bryology have been deleted as the maps appeared.

In addition to revisions of particular species, there has been a steady flow of county floras and county lists (for a list of these see Pearman, 1979). Several of the county floras have involved critical revisions of the list of species for particular vice-counties. As such floras were published, the necessary amendments were included along with the year's new records in the Society's *Bulletin*. For several vice-counties, members of the B.B.S. have kindly supplied amendments in advance of the county floras going to press.

Tracing distributional records

The chief sources of records listed here are the first editions of the *Census Catalogues* and the lists of additions and amendments published over the years by the B.B.S.

If a species is listed as occurring in a vice-county, then a reliable localized record ought to be traceable. Records accruing since 1935 have almost all been published and most are represented by specimens in the B.B.S.'s herbarium (BBSUK). Details of the remainder can generally be had from the notebooks kept by the Recorders. For species revised for this edition, the Recorders are retaining a list of localities and dates of records, together with locations of specimens.

Earlier records that have been added since the first Census Catalogues can be more difficult to trace. Many were published in the Reports

of the Moss Exchange Club and the British Bryological Society. For those that were not published in the *Reports*, the Recorders' books can be helpful but are often cryptic. For example, when Ingham was Recorder of Mosses, he annotated a copy of the first edition of the *Census Catalogue of British Mosses*. A typical annotation is '258 (*Weissia sterilis*), v.-c. 37, Duncan (*leg.* Knight)'. The specimen is probably in J. B. Duncan's herbarium, now at the Royal Botanic Garden, Edinburgh (E), or in H. H. Knight's herbarium, now at the National Museum of Wales (NMW); but it could be in the B.B.S.'s herbarium (BBSUK) or absent. There is no way of knowing, and unless the record was published it may now be untraceable. Fortunately this is unlikely, as records of rarities such as *W. sterilis* were normally published in local naturalists' journals or the London *Journal of Botany*.

The greatest difficulties arise in tracing records in the first editions of the *Census Catalogues*. Most of the records were based on published sources, which were cited in the *Census Catalogues* themselves. But many of the records were based on manuscript lists, and

these have now been lost.

VICE-COUNTIES OF GREAT BRITAIN AND IRELAND

THE VICE-COUNTIES of Great Britain were originally defined by Watson (1852). The vice-counties of Ireland were defined by Praeger (1901). Since those times, county boundaries have frequently been changed. Vice-counties often differ widely from counties that bear the same name. In the past this has caused confusion, but should not do so in the future. We are fortunate now to have definitive modern accounts of the vice-counties, by Dandy (1969) for Great Britain and by Webb (1980) for Ireland. Both Dandy and Webb assert the principle that the vice-county boundaries were fixed for all time at the moment of creation.

Maps showing the general disposition of the vice-counties are given here, but they are not adequate to locate borderline cases. Where greater detail is needed for British records, bryologists should consult the authoritative booklet of descriptions of British vice-counties by Dandy (1969). Dandy's descriptions are accompanied by two maps at a scale of 1:625,000, the three items together being issued as boxed set. A copy of the set is available for consultation by B.B.S. members from the Society's Librarian. Other copies are widely available in botanical libraries in Britain, but bryologists working in Britain are strongly advised to obtain a copy of their own. It is still in print, and is very useful.

The boundaries of the Irish counties have changed less than those of the British ones, with the result that modern maps are still fairly useful for identifying the vice-county boundaries. The map published by Scannell & Synnott (1972) is also a useful guide, but bryologists working regularly or extensively in Ireland are strongly advised to consult Webb's (1980) authoritative account. A copy is available for consultation by B.B.S. members from the Society's Librarian.

Names of vice-counties

The names given here are the full, unabbreviated names of the vice-counties, though it should be understood that with Durham and most of the undivided Irish counties, the form County Durham, County Dublin, etc. is used, to avoid confusion with the town of the

VICE-COUNTIES OF GREAT BRITAIN AND IRELAND

same name. For British (but not for Irish) counties, several of the names used here differ from those recommended by the Botanical Society of the British Isles (Halliday & Perring, 1976) and by Dandy (1969). These authorities were inconsistent with their use of the suffix -shire, and gave many names in abbreviated form. Dandy maintained that Watson's abbreviations *were* the names of the vice-counties, but we demur.

Alternative names, some of them still in common use, are indicated in brackets.

Great Britain

Great Britain				
1	West Cornwall with Scilly	32	Northamptonshire	
2	East Cornwall		East Gloucestershire	
3	South Devon	34	West Gloucestershire	
4	North Devon	35	Monmouthshire	
5	South Somerset	36	Herefordshire	
6	North Somerset	37	Worcestershire	
7	North Wiltshire	38	Warwickshire	
8	South Wiltshire	39	Staffordshire	
9	Dorset	40	Shropshire (Salop)	
10	Isle of Wight	41	Glamorgan	
11	South Hampshire	42	Breconshire (Brecknockshire)	
12	North Hampshire	43	Radnorshire	
13	West Sussex	44	Carmarthenshire	
14	East Sussex	45	Pembrokeshire	
15	East Kent	46	Cardiganshire	
16	West Kent	47	Montgomeryshire	
17	Surrey		Merioneth	
	South Essex	49	Caernarvonshire	
19	North Essex	50	Denbighshire	
20	Hertfordshire		Flintshire	
21	Middlesex	52	Anglesey	
22	Berkshire	53	South Lincolnshire	
23	Oxfordshire	54	North Lincolnshire	
24	Buckinghamshire	55	Leicestershire with Rutland	
25	East Suffolk	56	Nottinghamshire	
26	West Suffolk	57	Derbyshire	
27	East Norfolk	58	Cheshire	
28	West Norfolk	59	South Lancashire	
29	Cambridgeshire	60	West Lancashire	
	Bedfordshire		South-east Yorkshire	
31	Huntingdonshire		North-east Yorkshire	

VICE-COUNTIES OF GREAT BRITAIN AND IRELAND

10	0	1	* *			1 .
63	Out	h-west	V	Or	10	hira
00	Jour	II-WCSL	1	OI.	CA	IIIIC

- 64 Mid-west Yorkshire
- 65 North-west Yorkshire
- 66 Durham
- 67 South Northumberland
 - 68 North Northumberland (Cheviot)
 - 69 Westmorland with Furness
 - 70 Cumberland
 - 71 Isle of Man
 - 72 Dumfriesshire
 - 73 Kirkudbrightshire
 - 74 Wigtownshire
 - 75 Ayrshire
 - 76 Renfrewshire
 - 77 Lanarkshire
 - 78 Peeblesshire
 - 79 Selkirkshire
 - 80 Roxburghshire
 - 81 Berwickshire
 - 82 East Lothian (Haddington)
 - 83 Midlothian (Edinburgh)
 - 84 West Lothian (Linlithgow)
 - 85 Fife (including Kinross-shire)
 - 86 Stirlingshire
 - 87 West Perthshire (including Clackmannanshire)

- 88 Mid Perthshire
- 89 East Perthshire
- 90 Angus (Forfarshire)
- 91 Kincardineshire
- 92 South Aberdeenshire
- 93 North Aberdeenshire
- 94 Banffshire
- 95 Moray (Elginshire)
- 96 Easterness (including Nairnshire)
- 97 Westerness
- 98 Main Argyll
- 99 Dunbartonshire
- 100 Clyde Isles (Buteshire)
- 101 Kintyre (Cantyre)
- 102 South Ebudes
- 103 Mid Ebudes
- 104 North Ebudes
- 105 West Ross
- 106 East Ross
- 107 East Sutherland
- 108 West Sutherland
- 109 Caithness
- 110 Outer Hebrides
- 111 Orkney
- 112 Shetland (Zetland)

Ireland

- H1 South Kerry
 - 2 North Kerry
 - 3 West Cork
 - 4 Mid-Cork
 - 5 East Cork
 - 6 Waterford
 - 7 South Tipperary
 - 8 Limerick
 - 9 Clare (including Aran Islands)
- 10 North Tipperary
- 11 Kilkenny
- 12 Wexford
- 13 Carlow

- 14 Laois (Leix, Queen's County)
- 15 South-east Galway
- 16 West Galway
- 17 North-east Galway
- 18 Offaly (King's County)
- 19 Kildare
- 20 Wicklow
- 21 Dublin
- 22 Meath
- 23 Westmeath
- 24 Longford
- 25 Roscommon
- 26 East Mayo

VICE-COUNTIES OF GREAT BRITAIN AND IRELAND

27 West Mayo	34 East Donegal
28 Sligo	35 West Donegal
29 Leitrim	36 Tyrone
30 Cavan	37 Armagh
31 Louth	38 Down
32 Monaghan	39 Antrim
33 Fermanagh	40 Londonderry

C Channel Islands

Maps of vice-counties

The detailed maps are at a scale of approximately 1:3,700,000. The scale can be inferred from the grid squares, which are of side 100 km. Note that the Irish grid is that of the Ordnance Survey of Ireland, and not the extended British grid that has sometimes been used for botanical recording in Ireland.

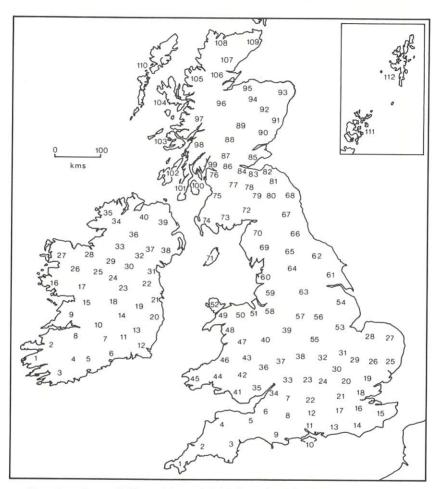


Fig. 1. General disposition of British and Irish vice-counties; vice-county boundaries have been omitted, but are indicated in the more detailed maps that follow.

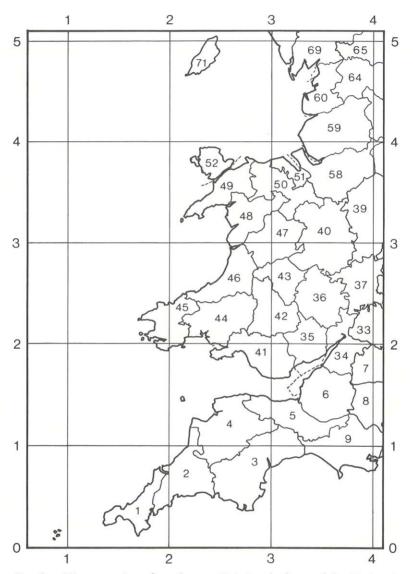


Fig. 2. Vice-counties of south-west Britain; the lines of the National Grid are spaced at intervals of 100 km.

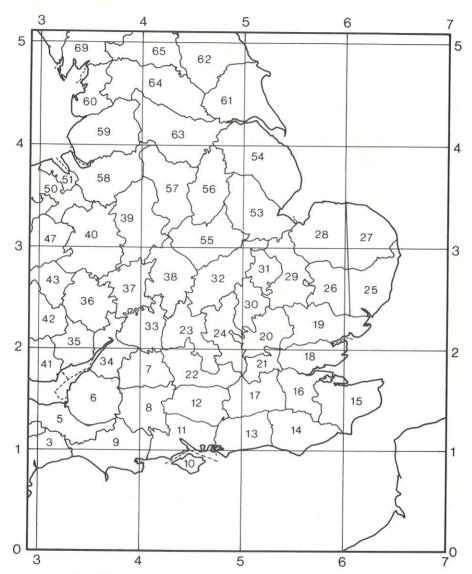


Fig. 3. Vice-counties of south-east Britain; the lines of the National Grid are spaced at intervals of 100 km.

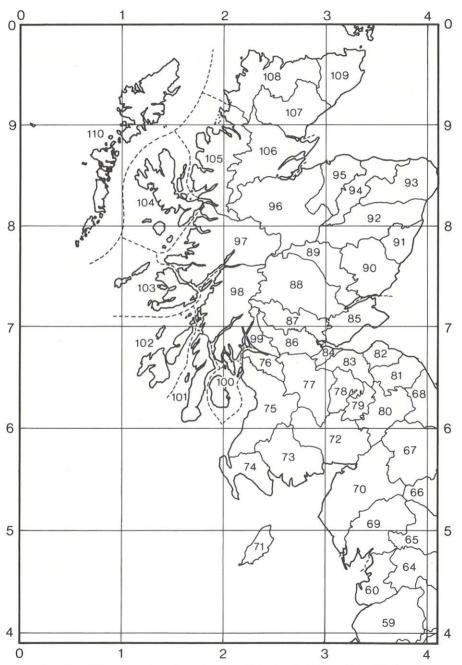


Fig. 4. Vice-counties of north-west Britain; the lines of the National Grid are spaced at intervals of 100 km.

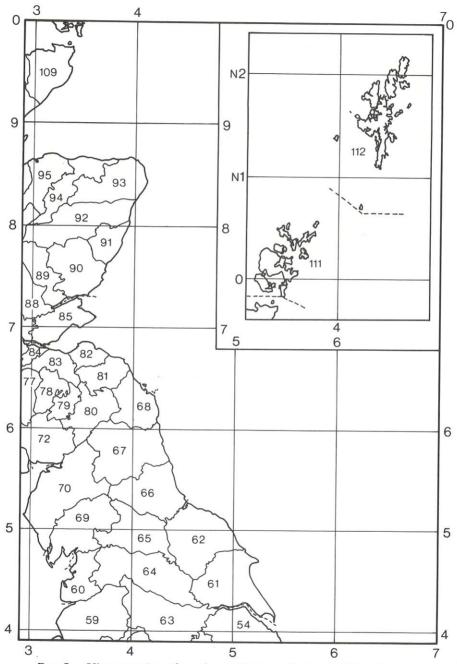


Fig. 5. Vice-counties of north-east Britain; the lines of the National Grid are spaced at intervals of 100 km.

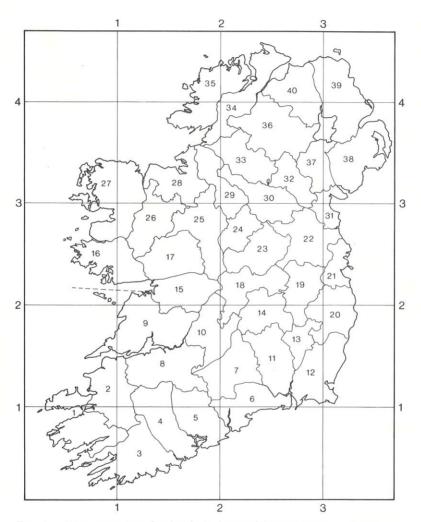


Fig. 6. Vice-counties of Ireland; the lines of the Irish National Grid are spaced at intervals of $100 \ \mathrm{km}$.

DISTRIBUTION OF BRYOPHYTES IN VICE-COUNTIES

THE TAXA WHOSE distributions are listed below are those whose occurrence in Britain or Ireland is well authenticated. The following mosses have been recorded from Britain, but according to Smith (1978a), the records are doubtful: Andreaea blyttii Br. Eur., A. hartmanii Thed., Barbula asperifolia Mitt., Bryum purpurascens (R. Br.) Br. Eur., Cinclidotus riparius (Web. & Mohr) Arnott, Cynodontium gracilescens (Web. & Mohr) Schimp., Sphagnum subfulvum Sjörs.

Arrangement and nomenclature

For Hepaticae and Anthocerotae the arrangement and nomenclature follow Grolle (1976), with minor amendments to bring his system into line with British taxonomic thinking. In accordance with long-standing tradition, the Hepaticae and Anthocerotae are numbered in one series, ignoring the fact that the Hepaticae are perhaps less closely related to the Anthocerotae than they are to the Musci.

The names and numbering of Musci follow Smith (1978a).

If the numbering of the present volume is to be used to cite a taxon, then it should be employed thus: 3/1, 14/5b, etc. But it is not our intention to provide a definitive numbering of British bryophytes; the same number can refer either to a moss or to a hepatic. Mosses added to the British list since publication of Smith's flora have been interpolated with numbers such as 18/2A. Upper case letters are used to distinguish interpolated species from varieties.

Symbols and conventions

Records in brackets signify vice-counties from which a species has not been seen for fifty years. For example, *Bryum mamillatum* has the distribution (28), 54, (59), indicating that there is a recent record for v.-c. 54 and old records for v.-c.'s 28 and 59.

Absence of brackets does not always indicate that there is a recent record. For example, *Pterigynandrum filiforme* has not been seen in Shetland (v.-c. 112) since 1878. The record is not placed in brackets because the locality has not been revisited, and there is no reason to suppose that *P. filiforme* has disappeared from it. With well worked counties such as Surrey (v.-c. 17), on the other hand, the fifty-year

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rule has been applied fairly firmly. There have been major changes in land use near London in recent years; apparent losses of species are all too likely to be real.

Irish vice-counties are signified by the prefix 'H', from *Hibernia*, the Latin name for Ireland. Thus the distribution of *Lejeunea hibernica* is H1–3, 16, indicating that it has been found only in Ireland, in vice-counties 1, 2, 3 and 16.

Doubtful records were listed in the *Census Catalogues* as well as old ones. A record was considered doubtful if the determination was in doubt, if the provenance was in doubt, or if it was not localized. Such records are of little value and have been omitted here.

Species for which there are no recent records are indicated by a dagger (†).

Numbers in brackets following the name of a species refer to the notes (p. 133).

DISTRIBUTION OF ANTHOCEROTAE AND HEPATICAE

1. Anthoceros L.

- 1 **agrestis** Paton (*A. punctatus* auct.) (5) 1, 2, 4, 5, 9–12, 14, 16–19, 22–24, 27, (29), 30, 32–41, 46, (48), 50, 51, 54–56, 59, 63, 65, 68, 69, 72, 74, 75, 83, 86, 89, 90, 98. H35, 36.
- 2 **punctatus** L. (*A. husnotii* Steph.) (1, 5) 1–6, 8, 9, 11, 13, 14, 16, 17, 22, 23, 34, 38, 44, 47–49, 52, 58, 61, 67, 70–74, 85–87, 90, 95, 97–103, 105–107, 109. H1–3, 5, 6, 8, 9, 12, 16, 27, 34, 35, 38. C.

2. Phaeoceros Prosk.

- laevis (L.) Prosk. (Anthoceros laevis L.) (1)
 a ssp. laevis
 1-6, 8-11, 13-15, (16), 17, 18, 22, 24,
 33-36, (38), 40-49, 51, 52, 58-60, 62,
 (63), 64, 69-76, 80, 81, 83, 84, 86-88,
 90, 97-100, 102-104, 107, 109. H1, 3-9,
 12, 14, 16, 20-22, 26, 27, 29, 31, 32,
 34-40. C.
 - b ssp. **carolinianus** (Michx.) Prosk. (6) 2, 13, 17, (18), 35.

3. Sphaerocarpos Boehmer

- 1 **michelii** Bellardi (1) 1, 5, 16, 19, (20), 22–28, (29), 32, 34, 36, 37, (55), 61, 62. C.
- 2 **texanus** Aust. (1) 1, 9, (16), 17, 24, 25, 27, 34, 36, 37. C.

Targionia L.

1 **hypophylla** L. (1) 2–6, 12, 13, 17, (26), 36, 37, 39, 40, 42–45, 47–49, 52, 57, 70, 80, 85, 87, 88, (90), 98, 99, 101, (104). H1, 2, 4, 39. C.

Reboulia Raddi

1 **hemisphaerica** (L.) Raddi (1) 1–17, 20, 22, 26, 27, 30, 33–37, (38), 39–52, 55, 57–60, (61), 62, 64–69, 72–77, 80–90, 96–106, 108–110. H1, 2, 4, 5, 7–9, 11, 16, 17, 21, 23, 25, 27–29, 33, 35, 38–40. C.

- 6. Conocephalum Wiggers
 - 1 **conicum** (L.) Lindb. 1–112. H1–40. C.
- 7. Lunularia Adans.
 - 1 **cruciata** (L.) Dum. ex Lindb. (1) 1–112. H1–14, 16–22, 24–40. C.
- 8. Preissia Corda
 - 1 **quadrata** (Scop.) Nees 3, 4, 6, 11, 22, 26–28, 32, 35, 36, 39, 41–50, 52, 54, 55, 57–62, 64–80, 82–112. H1–3, 6, 8, 9, 14–19, 21–23, 25–29, 31, 33–36, 38–40.
- Marchantia L.
 - 1 **polymorpha** L. 1–70, 72–101, 103, 104, 106–112. H1, 3, 5–11, 13, 16–25, 27–31, 33–40. (C).
 - 2 alpestris (Nees) Burgeff (M. polymorpha var. alpestris Nees) 1, 2, 20, 37, 42, 52, 64, 65, 68–70, 77, 78, 80–83, 88–90, 92, 94–98, 105, 106, 108, 112.
- 10. **Dumortiera** Nees
 - 1 **hirsuta** (Sw.) Nees (1) 1–4, 14, 71, 98, 102. H1–4, 6–11, 20, 29, 39.
- 11. Ricciocarpos Corda
 - 1 **natans** (L.) Corda (1) 6, 12–16, 18, 20–22, 24, 26–29, 31, 32, 35, 36, 38, 40, 50, 53–56, 58, 61–66. H8, 9, 15, 19, 21–23, 25, 31.
- 12. Riccia L.
 - 1 **cavernosa** Hoffm. (7) 1, 4–6, 8, 9, 11, 14, 17, 20, 22–24, 26, 28–30, 32, 33, 36, (38), 41, 44, 48, 49, 52, 53, 55, 56, 58, 59, 61, 64, 67, 83, 85, 93, 95, 101, 110. H1, 15, 25, 38.

- 2 **crystallina** L. (7) 1, 76.
- 3 **huebenerana** Lindenb. (7) 2, 9, 13, 14, 17, 42, 44, 52, 58, 64, 67, 100. H20.
- 4 **fluitans** L. (1, 8, 9) 3–7, 9, 11–31, 33–38, 40, 41, 44, 47, 50, 53–64, 69. H8, 13, 19–21, 23, 29, 32, 36–39.
- 5 **rhenana** Lorbeer (9) 7, 17, 20, 24, 28, 29.
- 6 **canaliculata** Hoffm. (1, 8) 13, 40, (48), 52, 58, 83, 86–88.
- 7 **glauca** L. (1) 1–20, 22–24, 26–39, 41–43, 45, 46, 48–65, 67, 69, 71, 73, 75, 82–88, 90, 97–101, 106. H1–7, 9–11, 14–16, 20, 25, 28, 33, 34, 37–40. C.
- 8 **warnstorfii** Limpr. 1, 2, 4–8, 10, 11, 13, 14, 17, 24, 28, 29, 34–37, 40, 42, 43, 45–47, 49, 52, 56, 63, 64, 72, 74, 97–103, 106. H1–6, 9, 16, 28, 33, 35–40. C.
- 9 **crozalsii** Lev. (10) 1–3, 42, (48), 49, 52. C.
- 10 **bifurca** Hoffm. (10) 1.
- 11 **beyrichiana** Hampe ex Lehm. 1, 2, 26, 41–43, 45, 46, 48, 49, 52, 59, 60, 64, 65, 69, 73–76, 82–86, 88, 90, 98–104, 110. H1, 3, 9, 16, 20, 23, 26, 35, 37, 39. C.
- 12 **sorocarpa** Bisch. (1) 1–20, 22–52, 54–92, 94–107. H1–6, 8–10, 12, 13, 15, 16, 20–22, 25–28, 31, 33–40. C.
- 13 **nigrella** DC. (1) 1, 37, 43, 48. C.

13. Metzgeria Raddi

- 1 **fruticulosa** (Dicks.) Evans (11) 1–9, 11, 13–16, 20, 22–25, 27–29, 32–34, 36, 40–42, 44, 45, 47–49, 52, 60, 61, 65–68, 70, 71, 73–75, 77–91, 93–99, 101–104, 106–109, 111. H1–6, 8–11, 13, 15–19, 23–26, 28–33, 35–40. C.
- 2 **temperata** Kuwah. (11) 1–14, 16, 17, 22, 23, 32–37, 41, 42, 44–50, 52, 60, 64, 65, 69–74, 83, 86, 88, 98–101. H3–7, 9, 12, 15, 16, 22, 24, 25, 31, 33, 36. C.
- 3 **furcata** (L.)Dum. 1–112. H1–40. C.
- 4 **conjugata** Lindb. 1-6, 13, 14, 33–37, 39–50, 52, 57, 60, 62–65, 67–83, 85–92, 95–106, 108–111. H1–3, 6–13, 16–18, 20–22, 27–30, 33–40.
- 5 **leptoneura** Spruce (*M. hamata* Lindb.) (1) 46, 48, 49, (64), 69, 70, 72, 73, 75, 76, 86–88, 97–106, 108, 110, 111. H1–3, 7, 16, 27–29, 35, 39.

14. Apometzgeria Kuwah.

- 1 **pubescens** (Schrank) Kuwah. (*Metzgeria pubescens* (Schrank) Raddi) (1) 34–36, 39, 40, 48, 50, 51, (56), 57, 60, 62–70, 72, 73, 78–83, 85–99, 104–106, 108, 109. H39.
- 15. **Aneura** Dum. (12)
 - 1 **pinguis** (L.) Dum. (*Riccardia pinguis* (L.) S. Gray) 1–52, 54–112. H1–40. C.
- 16. Cryptothallus Malmb. (1, 13)
 - 1 **mirabilis** Malmb. 2, 3, 6, 9, 12–17, 22, 24, 28, 30, 40, 43, 47–49, 69, 75, 86, 89, 92, 94–101, 105, 106. H2, 16, 20.

17. Riccardia S. Gray (12)

- 1 **multifida** (L.) S. Gray 1–6, 8–18, (19), 20, (21), 22–29, 34–52, 54–83, 85–112. H1–13, 16–21, 23–40. C.
- 2 **chamedryfolia** (With.) Grolle (*R. sinuata* (Hook.) Trev.) 1–74, 76–86, 88–101, 103–112. H1–16, 19–30, 33–40. C.
- 3 **incurvata** Lindb. 1, 2, 11, 13, (14), 17, 44, 48, 49, 52, 58–60, 63, 65, 66, 69–71, 73–75, 78–80, (81), 82–84, 88–90, 95–98, 101, 102, 104, 106–108, 112. H9, 16, 20, 27, 35.
- 4 **palmata** (Hedw.) Carruth. 3, 9, 11, 17, 24, 42, 44, 45, 48–51, 58, 62, (63), 67–70, (72), 73, 75, 77–80, 83–92, 94–112. H1–3, 7, 9, 11, 15, 16, 18, 20, 23, 25–30, 33–36, 39, 40.
- 5 **latifrons** (Lindb.) Lindb. (1) 1–6, 8–11, 17, 22, 26–28, 35, 40, 42–52, 67, 70, 73, 74, 77–81, 83, 88, 90–92, 94–98, 101–106, 108–110, 112. H1–3, 6–16, 18–25, 27–29, 33–37, 39, 40. C.

Pellia Raddi

- **epiphylla** (L.) Corda (*P. borealis* Lorbeer) (14) 1–30, 32–112. H1–40. C.
- 2 **neesiana** (Gott.) Limpr. 1–7, 9, 11, 12, 14, 17, 22, 33, 34, 36–38, 41–53, 57–60, 62–75, 77–83, 88–92, 94–99, 101, 104–110, 112. H1–3, 6–10, 12, 13, 16, 20, 21, 23–25, 27–30, 33–39. C.
- 3 **endiviifolia** (Dicks.) Dum. 1–24, 26–112. H1–23, 25–40. C.

19. Pallavicinia S. Gray

1 **lyellii** (Hook.) Carruth. 6, 10, 11, (13), 14, 17, (18), 22, 25, 46, 48, (59, 62), 64, (65, 69). H1, 2, (3), 8, 11, 19–21, 27.

20. Moerckia Gott.

- 1 **hibernica** (Hook.) Gott. (*M. flotoviana* (Nees) Schiffn.) (15) (1), 4, 17, 26–28, 41, 44, 46, 48, 49, (50), 52, 57–59, (62), 63–70, 80, (82), 85, 88–92, 94, 95, 97, 105, 106, 108, 110, 112. H9, 14, 16–18, 20, 21, 23, 27, 33–35, 38–40.
- 2 **blyttii** (Moerch) Brockm. (1) 88–90, 92, 94, 96–98, 105–108.

21. Blasia L.

1 **pusilla** L. 1–10, 12–15, (16), 17–20, (21), 22, 25, 27, 28, 32–52, (54), 55–60, (61), 62, (63), 64, 65, 67–112. H1–3, 5–7, 12, 16, 18–22, 26–40.

22. Fossombronia Raddi

- 1 **foveolata** Lindb. (1) 1–3, 9, 11–14, 17, 22, 27, 48, 54, 58, 59, (61), 62, 69, 70, 74, 86–88, 95–99, 101, 103–106, 108–110, 112. H1–3, 9, 16, 20, 27, 35, 37, 39.
- 2 **angulosa** (Dicks.) Raddi (1) 1, 2, 45, 48, 49, 110. H1, 3, 16, 27, 34, 35. C.
- 3 **caespitiformis** De Not. ex Rabenh. (4) 1, 2, 4, 6–8, 13, 14, (16), 17, 23, 34, 37, 39, 40, 58–60, 69.
- 4 **husnotii** Corb. 1–3, 41, 44, 45. H1, 3, 9, 16, 27. C.
- 5 **pusilla** (L.) Nees (1) a var. **pusilla** 1–25, 27–77, 80–84, 88–91, 93, 94, 97–104, 106, 109. H1–6, 8, 10–12, 16, 19–21, 23, 25, 27–29, 31, 33–40. C.

b var. **maritima** Paton (16) 1, 11. H3. C.

- 6 **wondraczekii** (Corda) Dum. ex Lindb. (1)
 1–20, 22–24, 28, 30, 32–52, 55–57, 59, 61–65, 67–74, 78–90, 92, 96–99, 101–107, 109, 112. H1, 3–6, 9, 10, 12, 13, 15, 16, 20, 21, 24, 25, 27, 29, 31, 33–35, 37, 38. C.
- 7 **crozalsii** Corb. 7, 22.
- 8 **incurva** Lindb. (17) 1, 2, 14, 44, 49, 62, 74, 77, 78, 80, 83, 88–90, 94–98, 101, 104–107, 112. H3, 6, 16, 27, 28, 30. C.
- 9 **fimbriata** Paton (18) 78, 79, 88, 97, 98, 101. H28.
- 23. **Petalophyllum** Nees & Gott. ex Lehm.
 - 1 **ralfsii** (Wils.) Nees & Gott. (1) 1, 4, (6), 28, 41, 44–46, 48, 51, 52, 59, (62), 68, 105. H1, 2, 21, 27, 28, 35, 39, 40.
- 24. Haplomitrium Nees
 - 1 **hookeri** (Sm.) Nees (1) 1, (3, 11, 13), 42, 49, 59, (61), 66, 70, 71, 74, 77–79, 83, 87–90, 92, 93, 95–98, 101, 104–110, 112. H(1), 3, 16, 20, 21, 27, 28, 30, 34, 35.
- 25. Chandonanthus Mitt.
 - 1 **setiformis** (Ehrh.) Lindb. (1) 68, 88–97, 105, 106, 108, 109.
- 26. Barbilophozia Loeske
 - 1 **quadriloba** (Lindb.) Loeske (1) 88, 89, 92, 98.
 - 2 **kunzeana** (Hueb.) Gams 64, 67, 68, 71, 88, 90, 92, 95–97, 108, 110. H28.
 - 3 **floerkei** (Web. & Mohr) Loeske 2–6, 14, 35–37, 39–52, 55, 57–60, 62–112. H1–3, 6, 8, 13, 16, 20, 21, 27, 28, 30, 33–36, 38–40.

- 4 **atlantica** (Kaal.) Loeske (19) 47–49, 52, 59, 60, 63–73, 80, 90–92, 96, 98, 100, 101, 105, 108, 109, 111. H34.
- 5 **attenuata** (Mart.) Loeske 1–6, 9, 11, 13, 14, 16–18, (20), 22, (23), 24, 27, 28, 34–37, 39–52, 54, 55, 57–76, 78–92, 94–106, 108, 109. H1, 3, 6, 7, 12, 13, 16, 20, 21, 25, 27–29, 31, 33–40. C.
- 6 **hatcheri** (Evans) Loeske 26, 28, 40, (48, 49), 50, 59, 60, 65–70, 72, 77–98, 105–109.
- 7 **lycopodioides** (Wallr.) Loeske 64, 65, 68–70, 88–90, 92, 94, 96–98, 104–108.
- 8 **barbata** (Schmid. ex Schreb.) Loeske 2, (14), 26, 28, 36, 37, 40–44, 46–50, (54), 55, 57, 59, 60, 62, (63), 64–70, 72–74, 76–99, 101, 103–109, 112. H1, 6, 12, 20, 21, 27, 30, 35, 37, 40.

27. Anastrepta (Lindb.) Schiffn.

- 1 **orcadensis** (Hook.) Schiffn. (1) 4, 47–50, 60, 64, 65, 68–70, 72, 73, 75, 77, 78, 83, 85–90, 92, 94, 96–112. H1–3, 6, 16, 20, 27, 29, 33, 35.
- 28. Lophozia (Dum.) Dum.
 - 1 ventricosa (Dicks.) Dum. (20)
 - a var. **ventricosa**1, 2, 4–9, 11, 13–18, 20–22, 26, 30, 32, 37, 39, 42, 45, 49, 55–57, 64, 66, 70, 72, 76, 80, 88, 97–99, 104. H10, 13, 29.
 - b var. **silvicola** (Buch) E. W. Jones ex Schust. 1–5, 11, 16, 17, 22, 35, 41, 42, 45, 47–49, 55, 56, 63–67, 69, 70, 72, 73, 80, 88, 95, 97, 99, 104. H1, 13, 33, 36.
 - c var. **longiflora** (Nees) Macoun 39, 88, 90.
 - d var. **confertifolia** (Schiffn.) Husn. 14, 16, 20, 25, 40, 70. H35.

- 2 **guttulata** (Lindb.) Evans (*L. porphyroleuca* (Nees) Schiffn.) (20)
 1, 2, 16, 27, 35, 36, 38, 39, 57, 58, 60–62, 64, 66, 69, 70, 72–78, 85–92, 96–98, 100–102, 105, 107–112. H12, 20, 27, 31–33, 35–39.
- 3 **wenzelii** (Nees) Steph. 88–90, 92, 94, 96, 97, 108.
- 4 **sudetica** (Nees ex Hueb.) Grolle (*L. alpestris* auct.)
 2, 35, 40, 42–44, 46–50, 57, 60, 63–66, 68–73, 75, 77–83, 86–92, 94–98, 101, 103–110, 112. H1–3, 9, 12, 13, 16, 20, 21, 27, 28, 30, 36–40,
- 5 **perssonii** Buch & S. Arn. (21) 18, 29, 63, 64.
- 6 excisa (Dicks.) Dum.
 - var. **excisa**1–8, 10, 11, 13–20, 22, 23, 25–30, 32–50, 52, 54–62, (63), 64–74, 76–85, 87–92, 94–98, 100–103, 105–107, 109, 110. H1–4, 6, 7, 16, 20, 22, 27–29, 33, 35–40. C.
 - b var. **cylindracea** (Dum.) K. Muell. 5, 48, 89, 92, 96, 108.
- 7 **capitata** (Hook.) Macoun (22) (11), 12, 14, 17, 19, 22, 58.
- 8 **incisa** (Schrad.) Dum. (1) 1–6, 9, 11, 13–17, 25–28, 35–37, 39, 41–50, 55, 57–83, 85–112. H1–3, 6–11, 13, 14, 16–30, 32–40.
- 9 **opacifolia** Culm. ex Meyl. (23) 69, 88–90, 92, 96–98, 105, 106, 108. H35.
- 10 **bicrenata** (Schmid. ex Hoffm.) Dum. 1–25, 27, 28, 30, 32–45, 47–75, 77–86, 88–92, 95–99, 101, 105, 106, 108, 109, 112. H1, 2, 4, 6–8, 10, 12, 13, 16, 20–22, 28, 35–39. C.
- 11 **longidens** (Lindb.) Macoun 48, 65, 66, 70, 88, 90–92, 94–99, 105, 106, 108.

- 12 **obtusa** (Lindb.) Evans (1) (48), 49, 65, 67, 71, 88, 95–99, 104–106, 108.
- 29. Leiocolea (K. Muell.) Buch
 - 1 **turbinata** (Raddi) Buch 1–25, 27, 29, 30, 32–42, 44, 45, 47–52, 54, 56–78, 80–85, 87, 89–91, 93–104, 106–109, 111. H1, 2, 4–15, 17–22, 25, 26, 28, 29, 31–40.
 - 2 **badensis** (Gott.) Jørg. 1, 2, 4–6, 9, 12–14, 16–18, 20, 23–25, 29, 33–36, 39, 41, 42, 44, 48–52, 57–60, 62–70, 72, 75–92, 94, 97, 98, 101, 104–106, 108–111. H9, 16–18, 20, 22, 23, 25, 27, 28, 33–36, 39, 40.
 - 3 **heterocolpos** (Thed. ex Hartm.) Buch (1) 42, 44, 46, 48, 49, 65, 66, 69, 72, 83, 86–89, 92, 94–96, 98, 101, 103–106. H39.
 - 4 **alpestris** (Schleich. ex Web.) Isov. (*L. muelleri* (Nees) Jørg.) 34–36, 39–42, 44, 47–50, 57, 60, 62–67, 69–73, 75, 76, 78–80, 82, 83, 85–92, 94–109, 111, 112. H1, 2, 16, 27–29, 33, 35, 36, 39.
 - 5 **bantriensis** (Hook.) Jørg. 35, 36, 38, 40–42, 44, 47–50, 57, 59, 60, 62, 64–70, 72, 73, 75, 78–83, 85–92, 94–102, 104–111. H1–3, 7, 14, 16, 20, 27–29, 31, 33, 35, 36, 38–40.
 - 6 **gillmanii** (Aust.) Evans (1) 64, 88, 89, 92, 97, 98, 105, 109, 112.
 - 7 **rutheana** (Limpr.) K. Muell. 27, 28.
- 30. Gymnocolea (Dum.) Dum.
 - 1 inflata (Huds.) Dum.
 - a var. **inflata** 1–22, 24–28, 30, 32–112. H1–3, 5–7, 9, 10, 12–16, 18, 20, 21, 24–30, 33–40. C.
 - b var. heterostipa (Carringt. & Spruce)
 K. Muell.
 49, 57, 60, 73, 88–90, 92, 97–99. H35.

- 2 **acutiloba** (Schiffn.) K. Muell. 48.
- 31. Sphenolobopsis Schust. & Kitag.
 - 1 **pearsonii** (Spruce) Schust. (Cephaloziella pearsonii (Spruce) Douin) (1) 46–49, 64, 69, 70, 73, 75, 87, 97, 98, 101–104, 108, 110. H1–3, 6, 7, 16, 27, 31, 35, 40.
- 32. Sphenolobus (Lindb.) Berggr.
 - 1 **minutus** (Schreb.) Berggr. 4, 11, (14), 36, 44, 46, 48, 49, 52, 57, 58, 60, (62, 63), 64–70, 72–75, 77, 78, 80, 81, 83, 85–92, 94–112. H1–3, 6, 7, 13, 16, 20, 21, 25, 27–29, 33–36, 38.
 - 2 helleranus (Nees ex Lindenb.) Steph. (1) 44, 47, 48, 69, 70, 88, 92, 96–98, 105. H33, 40.
- 33. Eremonotus Lindb. & Kaal. ex Pears.
 - myriocarpus (Carringt.) Lindb. & Kaal. ex Pears. (1)
 42, 48, 49, 69, 70, 87–91, 96–98, 101, 103–106, 108, 111. H1, 2, 16, 27, 34.
- 34. Anastrophyllum (Spruce) Steph.
 - 1 **saxicola** (Schrad.) Schust. (Sphenolobus saxicola (Schrad.) Steph.) 88, 92, 96, 108.
 - 2 **donianum** (Hook.) Steph. (1) 88, 92, 94, 96–98, 105–108.
 - 3 **joergensenii** Schiffn. (1) 96, 105–108.
- 35. Tritomaria Schiffn. ex Loeske
 - 1 **exsectiformis** (Breidl.) Loeske 1–5, 7, 9–17, 22–27, 30, 34, 36, 37, 39, 40, 42, 44–46, 48–52, 54, 57, 58, (59), 60, (61), 62–70, 72–74, 76–78, 80, 81, 85–101, 103–110, 112. H1–4, 6–10, 13, 17, 20, 22–30, 33–40.

- 2 **exsecta** (Schrad.) Loeske (1) 35, 40, 48, (49), 70, 72, 80, 86–88, 97–101, 103–105, 108. H1–3, 16, 27, 35.
- 3 **quinquedentata** (Huds.) Buch 4–6, 35–37, 40, 42–50, (51), 52, 57, 59, 60, 62, (63), 64–70, 72–92, 94–112. H1–3, 6–9, 16, 20, 27–31, 33–40.
- 4 **polita** (Nees) Jørg. (1) 88–90, 92, 97–99, 104, 105.

36. Jamesoniella (Spruce) Carringt.

- 1 **autumnalis** (DC.) Steph. (1) 2, 3, (14, 34, 37), 40, 42, 46, 48, 49, 60, 64, 69, 70, 73, 86–88, (90, 91), 96–99, 101, 105.
- 2 **undulifolia** (Nees) K. Muell. (1), 2, (34), 69, 98.

37. **Mylia** S. Gray

- taylorii (Hook.) S. Gray
 2, 36, 39, 40, 42–44, 46–50, 57–74,
 76–80, 82, 83, (84), 85–112. H1–4,
 6–10, 14, 16–21, 25–31, 33–40.
- 2 **anomala** (Hook.) S. Gray 1–6, 8–17, 22, 24–28, 35, 39, 40, 42–51, (55), 57–112. H1–3, 7–11, 13, 14, 17–20, 22–25, 27–40.

38. Jungermannia L.

- 1 **leiantha** Grolle (*J. lanceolata* auct.) (14, 62), 64, (69), 105.
- 2 **atrovirens** Dum. (*Solenostoma triste* (Nees) K. Muell., *S. sphaerocarpoideum* (De Not.) Paton & Warb.) (24) (1), 2–9, 12–14, 23, 32–37, 39–52, 55, (56), 57–92, 94–112. H1–10, 16, 20, 22, 23, 25, 27–31, 33–40.
- 3 **pumila** With. (*S. pumilum* (With.) K. Muell.)
 1–6, 13–16, 34–37, 39–52, 57–60, 62–92, 94–106, 108–112. H1–8, 10, 11, 13, 16, 20, 21, 27–31, 33–40.

- **polaris** Lindb. (S. schiffneri (Loitl.) K. Muell.) 88, 89, 92.
- 5 borealis Damsholt & Váňa (S. oblongifolium (K. Muell.) K. Muell.) (1, 25) 49, 88–90, 96–98, 104–106.
- **exsertifolia** Steph. ssp. **cordifolia** (Dum.) Váňa (*S. cordifolium* (Hook.) Steph.) 42, 44, 45, 47–51, 57, 59, 60, 62–73, 76–80, 82, 83, 85–92, 94–99, 101, 102, 104–106, 108–110, 112. H1–3, 6, 16, 35, 38–40.
- **confertissima** Nees (*S. levieri* (Steph.) (26) 44, 65, 66, 79, 88, 89, 92, 96–98, 105.
- **sphaerocarpa** Hook. (*S. sphaerocarpum* (Hook.) Steph.)
 3, 4, 36, 39, 42, 46–50, 55, 57–60, 62–73, 75, 80, 83, 86, 88–92, 96–99, 101, 104, 107–110, 112. H1–3, 6, 16, 20, 21, 27, 29, 31, 33, 36–40. C.
- **gracillima** Sm. (*S. crenulatum* (Sm.) Mitt.) 1–27, (28), 32–52, 54, 55, 57–112. H1–3, 5–10, 12–16, 20, 21, 25, 27–40. C.
- **caespiticia** Lindenb. (*S. caespiticium* (Lindenb.) Steph.) (1) 2, (10, 17, 33), 43, 63.
- **hyalina** Lyell (*Plectocolea hyalina* (Lyell) Mitt.)
 1–17, 20–23, 27, 33, 34, 36–38, 40, 42–44, 46–51, 55, 57, 59, 60, 62–69, 71–73, 75, 76, 80, 83, 85, 86, 88–92, 96–101, 103, 104, 107, 108. H1, 3, 5, 8–10, 16, 20, 27, 28, 30, 31, 33–37, 39, 40.
- **paroica** (Schiffn.) Grolle (*P. paroica* (Schiffn.) Evans)
 5, 35, 39, 41–44, 46–50, 60, 62–65, 67–73, 75, 78–83, 86–91, 95–102, 104–109, 112. H1, 6, 8, 16, 35, 36, 38–40.

- 13 **obovata** Nees (*P. obovata* (Nees) Mitt.) 42–50, 57–60, 62–80, 82, 83, 86–92, 94–110, 112. H1–4, 6, 7, 9, 20, 21, 27, 29, 30, 34–36, 38–40.
- 14 **subelliptica** (Lindb. ex Kaal.) Lev. (*P. subelliptica* (Lindb. ex Kaal.) Evans) 2, 5, 42, 48, 49, 67, 71, 72, 78–80, 82, 83, 87–92, 95–98, 102–106, 108, 111, 112. H16, 27, 28, 34, 35, 39.

39. Nardia S. Gray

- 1 **compressa** (Hook.) S. Gray (1) 2–4, 14, 41–44, 46–50, 57–60, 62–67, 69–71, 73, 75, 83, 86–92, 94, 96–105, 108, 110–112. H1–3, 6–8, 10, 12, 13, 16, 20, 21, 26–30, 33–36, 38, 39.
- 2 **scalaris** S. Gray 1–18, 20–25, 27, 28, 30, 32–52, (53, 54), 55–112. H1–10, 12–14, 16–22, 25–31, 33–40. C.
- 3 **geoscyphus** (De Not.) Lindb. (1) 3–5, 11–14, 16–18, 22, 28, 34, 35, 38, 40, 41, 48, 49, 57–60, (61), 62–67, 69, 72, 77, 79, 87–90, 92, 93, 95–98, 104–109, 112. H13, 16, 27, 34, 35.
- 4 **breidleri** (Limpr.) Lindb. 88–90, 92, 94, 96–98, 106.

40. Marsupella Dum.

- emarginata (Ehrh.) Dum.
 - a var. **emarginata**1-6, 13-16, 34-37, 39-50, 52, (55), 57-60, (61), 62-112. H1-3, 5-10, 12-14, 16, 18, 20-22, 26-31, 33-40. C.
 - b var. **aquatica** (Lindenb.) Dum. (*M. aquatica* (Lindenb.) Schiffn.) 3, 36, 41–45, 48, 49, 59, 60, 62, 65, 66, 68–71, 73, 74, 76, 78, 80, 83, 86–92, 94, 96–112. H1–4, 6, 13, 16, 20, 21, 26–28, 30, 34–36, 38, 39.
 - c var. **pearsonii** (Schiffn.) Corley (*M. aquatica* var. *pearsonii* (Schiffn.) E. W. Jones) 3, 42, 47–49, 65, 68–70, 73, 88, 90, 92, 96–99, 103, 108, 110, 112. H1, 2, 16, 20,

27, 31, 38, 39.

- 2 sphacelata (Gieseke ex Lindenb.) Dum. 42, 49, 62, 65, 70, 73, 86, 88–90, 92, 94, 96–98, 101, 104–106, 108, 110, 112. H6, 10, 20, 27, 33, 35.
- 3 **funckii** (Web. & Mohr) Dum. (1) 1–3, (7), 9, 14, 37, 40, 42–44, 46–49, 58, 65, 68–70, 72, 73, 75, 79, 83, 86–92, 96–105, 108. H2, 3, 7, 12, 16, 20, 27, 31, 35, 37–39. C.
- 4 **sprucei** (Limpr.) H. Bern. (*M. ustulata* (Hueb.) Spruce) (27)
 1–3, 13, 42, 44, 48, 49, (62), 65–70, 72, 73, 76, 78, 79, 87–90, 92, 94, 96–99, 103–106, 108. H1, 2, 16, 20, 36, 39, 40.
- 5 **sparsifolia** (Lindb.) Dum. 92.
- 6 **boeckii** (Aust.) Lindb. ex Kaal. 97, 98.
- 7 **stableri** Spruce (1, 28) 48, 49, 69, 70, 88, 90, 92, 94, 96–98, 104–106.
- 8 **condensata** (Ångstr. ex Hartm. f.) Lindb. ex Kaal. 88, 92, 94, 96, 97.
- 9 **adusta** (Nees) Spruce 48, 49, 69, 70, 72, 77, 88–90, 92, 94, 96–99, 104–106, 108, 110. H1.
- 10 **brevissima** (Dum.) Grolle (*M. varians* (Lindb.) K. Muell.) (1) 88–90, 92, 94, 96–98, 105–107.
- 11 **alpina** (Mass. & Carest.) H. Bern. (1) 48, 49, 69, 70, 73, 88–92, 94, 96–98, 103–106, 108.

41. Gymnomitrion Corda

- 1 **concinnatum** (Lightf.) Corda 2, 47–49, (64, 65), 68–70, 72, 73, 75, 77, 78, 86–101, 103–110, 112. H16, 34, 35, 39.
- 2 **obtusum** (Lindb.) Pears. 2, 4, 47–50, 65–70, 72, 73, 75, 78, 80, 85–92, 94–99, 103–110. H1, 6, 13, 16, 20, 27, 35, 38, 40.

- 3 **corallioides** Nees (49), 88, 89, 92, 97, 104–106, 108, 109. H(1), 34.
- 4 **crenulatum** Gott. ex Carringt. (1) 3, 4, 45, 46, 48, 49, 68–70, 72, 73, 75, 78, 88, 90, 92, 96–101, 103–112. H1–3, 6, 7, 12, 13, 16, 20, 21, 27–31, 33–36, 38–40.
- 5 **apiculatum** (Schiffn.) K. Muell. 92, 94, 96, 97.

42. Acrobolbus Nees

- 1 **wilsonii** Nees (1) 97, 101, 104. H1–3, 27.
- 43. **Southbya** Spruce
 - 1 **tophacea** (Spruce) Spruce (1, 29) 1, 41, 51, 52. H28.
 - 2 **nigrella** (De Not.) Henr. (1, 29) 9, 10.
- 44. Gongylanthus Nees
 - 1 **ericetorum** (Raddi) Nees (1) 1. C.
- 45. Pedinophyllum (Lindb.) Lindb.
 - 1 **interruptum** (Nees) Kaal. (1) 57, 64, 65, 69, 98. H1, 9, 28, 29, 33, 35.
- 46. Plagiochila (Dum.) Dum.
 - 1 **carringtonii** (Balf.) Grolle (1) 88, 90, 92, 94, 96–100, 102–108, 110–112. H27.
 - porelloides (Torrey ex Nees) Lindenb. (*P. asplenioides* auct.) (30)
 1–17, 19, 20, 22–24, 30–112. H1–40. C.
 - 3 **asplenioides** (L.) Dum. (*P. asplenioides* var. *major* Nees) (30) 1–20, 22–24, 26–55, 57–111. H1–6, 8, 10–16, 20, 23–26, 28–31, 33–40. C.

- 4 **britannica** Paton (30) 34, 35, 42, 44, 52, 63–67,75, 78, 89–91, 95, 96, H8, 9, 37.
- 5 **atlantica** F. Rose (*P. ambagiosa* auct.) (31) 48, 97, 98, 101, 104. H1, 3.
- 6 **spinulosa** (Dicks.) Dum. (2, 31, 32) 2, 3, 5, 6, (11), 34, 35, 37, 40–50, 52, (59), 60, (63), 64, 65, 67, 69–73, 75, 76, 79, 80, 82, 83, 86–88, 96–108, 110–112. H1–6, 8, 10, 11, 13, 16, 20, 25, 27–29, 33–36, 38–40.
- 7 **killarniensis** Pears. (32) 1–4, 6, (11, 14), 45, 48, 49, 52, 64, 69–71, 73–75, 97, 98, 101–105. H1–3, 9, 10, 16, 20, 23, 27, 29, 31, 35, 39.C.
- 8 **punctata** Tayl. (32) 1–5, 41–49, 64, 65, 69–73, 75, 86–88, 96–105, 108, 110, 112. H1–3, 5–10, 13, 16, 20, 26–30, 33–35, 39, 40.
- Gerniculata (Dum.) Dum. (*P. tridenticulata* (Hook.) Dum.) (1) 44, 47–49, (64), 65, 69, 70, 73, (75), 87, 88, 97–105, 108. H1–3, 6, 16, 27, 28, 35, 39, 40.
- 47. Leptoscyphus Mitt.
 - 1 **cuneifolius** (Hook.) Mitt. (*Mylia cuneifolia* (Hook.) S. Gray) (1, 33) 48, 87, 88, 97–105, 108, 110. H1–4, 16, 27, 29, 35.
- 48. Lophocolea (Dum.) Dum.
 - 1 **bidentata** (L.) Dum. (4, 34) 1–112. H1–30, 32–40. C.
 - 2 **cuspidata** (Nees) Limpr. (34) 1–112. H1–17, 19–31, 33–40. C.
 - 3 bispinosa (Hook. f. & Tayl.) Gott., Lindenb. & Nees (35) 1, 102.
 - 4 **heterophylla** (Schrad.) Dum. (1) 1–91, 93, 95–106. H1–3, 5–7, 11–13, 16, 19–22, 24, 27, 29–31, 34–39. C.

- 5 **semiteres** (Lehm.) Mitt. (36) 1, 98.
- 6 **fragrans** (Moris & De Not.) Gott., Lindenb. & Nees (1)
 1-6, 9, 14, 35, 40, 41, 43-45, 47-50, 52, 57, 60, 70, 72-76, 81, 97-105, 108, 110. H1-3, 5, 6, 8, 10-13, 15, 16, 20, 24, 27-29, 33-35, 39, 40. C.

49. Chiloscyphus Corda

- 1 **polyanthos** (L.) Dum. (37) 1–26, 30–52, 54, 55, (56), 57–112. H1–14, 16, 18–21, 23, 25, 27–40. C.
- 2 **pallescens** (Ehrh. ex Hoffm.) Dum. 1–20, 22–24, 26–54, 57–65, 67–74, 76, 78, 80, 82–92, 96–109, 111, 112. H1, 2, 4–6, 8, 9, 12, 13, 16, 20, 21, 23, 24, 27–30, 33–38, 40.

50. Geocalyx Nees

1 **graveolens** (Schrad.) Nees (1) 97, 104, (105). H1.

51. Harpanthus Nees

- 1 **flotovianus** (Nees) Nees (1) (73), 88–90, 92, 96–98, 105–109, 112.
- 2 **scutatus** (Web. & Mohr) Spruce (1) 2, 3, 14, 16, 36, 46–49, 60, 62, 64, 67, 69, 70, 72, 80, 86, 87, 89, 97, 98, 100–105, 108, 112. H1–3, 6, 16, 20, 27–29, 33, 35, 36, 39, 40.

52. Saccogyna Dum.

1 **viticulosa** (L.) Dum. (1) 1–6, 11, 14, 34–37, 39–50, 52, 59, 60, 62–67, 69–78, 85–89, (90), 91, 96–108, 110–112. H1–14, 16, 18, 20, 21, 25–36, 38–40. C.

53. Douinia (C. Jens.) Buch

1 **ovata** (Dicks.) Buch (1) 1–4, 42, 44, 48–50, 57, (65), 68–70, (71), 73, 78, 86–92, 94, 96–110, 112. H1, 2, 6, 12, 16, 20, 21, 27, 31, 34, 35, 38, 40.

- 54. Diplophyllum (Dum.) Dum.
 - 1 **albicans** (L.) Dum. 1–25, 27, 28, 30, 32–52, (53), 54–112. H1–16, 18–40. C.
 - 2 **taxifolium** (Wahlenb.) Dum. (1) 49, 69, 87–90, 92, 94, 96–98, 105–108.
 - 3 **obtusifolium** (Hook.) Dum. (1) 1–6, 13, 14, 16, 17, 22, 27, 34, 35, 41, 43, 44, 46–50, 58, (61), 69, 73, 74, 77, 78, 82, 85, 87–93, 95–98, 106, 108, 112. H1, 3, 4, 6, 20, 21, 32, 34, 37.
- 55. Scapania (Dum.) Dum. (38)
 - 1 **gymnostomophila** Kaal. 89, 92, 97, 104. H34.
 - 2 calcicola (H. Arn. & J. Perss.) Ingham (39) 87–89, 97, 98, 104.
 - 3 **cuspiduligera** (Nees) K. Muell. (39) 35, 40–42, 44, 47, 49, 57, 64–67, 69, 83, 88–92, 97, 105, 108, 109. H28.
 - 4 **scandica** (H. Arn. & Buch) Macv. (40) 2, 5, 42, 43, 46–50, 57, 59, 62, 64–70, 72, 73, 75, 77–83, 85, 87–92, 94–98, 103, 105, 106, 108, 112. H1, 6, 7, 28, 34.
 - 5 **curta** (Mart.) Dum. (40) 13, 14, 16.
 - 6 **lingulata** Buch (41) 89, 90, 95, 96, 98. H10.
 - 7 **praetervisa** Meyl. (*S. mucronata* auct. angl.) (40) 64, 88, 91, 95.
 - 8 **parvifolia** Warnst. (42) (97), 98.
 - 9 **umbrosa** (Schrad.) Dum. 1–5, 13, 14, 16, 34, 37, 39, 42, 44–49, 57–60, 62–70, 72–93, 95–112. H1–3, 6–8, 10, 12, 13, 16, 20, 21, 25–30, 33–40.
 - 10 **nemorosa** (L.) Dum. 1–27, 30, 32–52, 54–60, 62–81, 83–112. H1–10, 12, 13, 16, 20, 21, 27–31, 33–40. C.

- 11 **degenii** Schiffn. ex K. Muell. (1, 43) 65, 66, 70, 87–89, 92, 95, 97, 98, 104, 107, 112.
- 12 **irrigua** (Nees) Nees 1–28, 30, 33–52, 54–75, 77–112. H1–12, 16, 20–23, 25–31, 33–40.
- 13 paludicola Loeske & K. Muell. (44) 2, 64.
- 14 **compacta** (A. Roth) Dum. 1–6, 8–11, 13–17, 20, 22, 24–26, (27), 28, 32, 34–37, 39–50, 52, 54, 55, 57, 59, 60, (62, 64), 65–112. H1–4, 6, 8, 12, 13, 16, 20, 21, 27, 28, 31, 32, 35, 37–40. C.
- 15 **subalpina** (Nees ex Lindenb.) Dum. 2–5, 42–44, 46–51, 60, 64–70, 72–81, 83, 85–99, 101–112. H1, 2, 6, 7, 16, 20, 27, 34–36, 38–40.
- 16 **undulata** (L.) Dum. 1–17, (18–21), 22–25, 27, 32, 34–52, 54, 55, 57–60, 62–112. H1–31, 33–40. C.
- 17 **uliginosa** (Sw. ex Lindenb.) Dum. 36, 46, 48, 49, 60, (62, 64), 69, 70, 86–90, 92, 94, 96–99, 103–106, 108, 112. H1, 2, 12, 20, 27, 31, 35.
- 18 **paludosa** (K. Muell.) K. Muell. 48, 70, 88, 90, 92, 96, 106.
- 19 **aequiloba** (Schwaegr.) Dum. (45) 44, 49, 64–66, 69, 70, 72, 79, 80, 83, (85), 86–92, 94, 96–99, 101, 104, 105, 107, 108, 110. H7, 28, 34, 35, 39.
- 20 **aspera** H. Bern. (45) 3, 6, 8–14, 17, 20, 23, 24, 32–36, (39), 41–45, 47–53, (55), 57, 59, 60, 62–70, (71), 72, (76), 78–80, 82, 83, 86–90, 92, 94, (95), 96–111. H1, (2), 6, 8–10, 13–16, 22–29, 33–36, 39, 40.
- 21 **gracilis** Lindb. 1–5, 9, 11, 14, 16, 34–36, 39–52, 57–112. H1–4, 6–13, 16, 20, 21, 25–31, 33–40. C.

- 22 **ornithopodioides** (With.) Waddell (1) 49, 69, 70, 88, 92, 94, 96–99, 102–108, 110, 112. H1, 16, 27, 35.
- 23 **nimbosa** Tayl. (1) (49), 88, 92, 94, 96–98, 102, 104–108, 110. H1, 27, 35.

56. Adelanthus Mitt.

- 1 **decipiens** (Hook.) Mitt. (1) 48, 49, 70, 73, 86, 97–105. H1–3, 6, 7, 16, 27–29, 33–35, 39, 40.
- 2 lindenbergianus (Lehm.) Mitt. (A. unciformis (Tayl.) Mitt.) H16, 27, 35.

57. Odontoschisma (Dum.) Dum.

- sphagni (Dicks.) Dum. 1–5, 8, 9, 11–17, (21), 22, (23), 24, 25, 27, 28, (29), 34, 35, 37, 39–52, 54, (55), 57–112. H1–5, 7–40.
- 2 **denudatum** (Mart.) Dum. 2–5, 8, 9, 11–14, 16, 17, 22, 26, 39, 40, 42–52, 57, 58, (59), 60–62, 64, 66–75, 78, 80, 81, 83–85, 87, 88, 91, 94–112. H1–3, 7, 9–11, 13, 14, 16–19, 21–31, 33–38, 40.
- 3 **elongatum** (Lindb.) Evans 88, 92, 96, 98, 99, 105, 106, 108, 111, 112. H3, 16.
- 4 **macounii** (Aust.) Underw. 88, 105.

58. **Cephaloziella** (Spruce) Schiffn.

- elachista (Jack ex Gott. & Rabenh.)
 Schiffn.
 12, 14, 22, 27. H20, 21.
- 2 **subdentata** Warnst. 1–5, 8, 12–14, 17, 22, 24, 34, 46, 48, 52, 67, 77, 81–83, 88, 89, 92, 97, 98, 108, 112. H1, 9, 27, 29, 34, 35.

- 3 **rubella** (Nees) Warnst. 1, 2, 4, 6, 7, 9, 12–14, 17, 20, 22–25, 28–30, 33, 34, 36–41, 46, 48, 50, 51, 56, 58, 59, 61–64, 67–69, 71, 72, 74, 76, 78, 80–83, 85, 86, 88–92, 94–99, 105, 107, 111. H34, 37, 39. C.
- 4 **hampeana** (Nees) Schiffn. 1–7, 9–19, 22–24, 26–29, 34, 35, 39–43, 45–52, 56–80, 82, 83, 85–92, 94–99, 101–109, 112. H1–13, 16, 18, 20, 22–25, 27–30, 33–40.
- 5 **baumgartneri** Schiffn. 9, 10, 13–15, 17, 34.
- 6 **divaricata** (Sm.) Schiffn. (*C. starkei* (Funck) Schiffn.)
 1–6, 8, 9, 11–18, 20–30, 32–55, 57–75, 77–92, 95–101, 103–108, 110–112. H1–4, 6–10, 12, 13, 16, 20–23, 27–30, 33–40. C.
- 7 **stellulifera** (Tayl.) Schiffn. 1–6, 10, 13, 14, 16, 33, 34, 36, 37, 41, 44, 45, 47–49, (50), 52, 56, 57, 61, 64, 66, 71, 77, 87. H2, 3, 6, 20, 27, 34. C.
- 8 **massalongi** (Spruce) K. Muell. 1–4, 48, (49), 52. H3, 6.
- 9 **turneri** (Hook.) K. Muell. (1) 1–3, 10, 11, 13, 14, 16, 33–36, (38), 44, 45, (48), 101. H2, 3, 20. C.
- 10 **dentata** (Raddi) Mig. 1.
- 11 **integerrima** (Lindb.) Warnst. (1) 7, 11, 13, 14, 22. H6.
- 12 **calyculata** (Dur. & Mont.) K. Muell. 1, 41.
- 59. Cephalozia (Dum.) Dum.
 - 1 **bicuspidata** (L.) Dum. (46) a ssp. **bicuspidata** 1–30, 32–112. H1–40. C.

- b ssp. **lammersiana** (Hueb.) Schust. 1, 2, 4–6, 8, 9, 11–19, 22, 26–28, 30, 35, 36, 38, 39, 41–49, (53), 54, 56–65, 67–79, 81, 83–86, 88–92, 95–99, 103–112. H1–3, 6–12, 14, 16–21, 26, 27, 30, 33, 35, 37–40.
- c ssp. ambigua (Mass.) Schust. (C. ambigua Mass.) 88, 92, 94, 96.
- 2 **connivens** (Dicks.) Lindb. 1-6, 8-20, 22 (23), 24-30, 32, 34, 35, 38-52, 54, 57-112. H1-3, 6-25, 27-29, 31, 33-40. C.
- 3 **hibernica** Spruce ex Pears. H1, 2, 16.
- 4 **loitlesbergeri** Schiffn. (1) (48), 60, 64, 66, 69, 73, 74, 77, 79, 83, 88–90, 92, 94–98, 104, 105, 108, 109, 112. H9, 16, 22, 25, 35, 37.
- 5 **pleniceps** (Aust.) Lindb. (1) 2, 4, 6, 14, 27, 46, 48, 49, 70, 79, 83, 88–90, 92, 94–98, 105, 106, 108, 112. H1, 20, 23, 35, 39.
- 6 **lunulifolia** (Dum.) Dum. (*C. media* Lindb.) 1–9, 11–17, 20, 22, 23, 31, 34–37, 39, 40, 43–51, 55–75, 77–112. H1–3, 5–11, 13, 15, 16, 18, 20, 21, 26–29, 33–40.
- 7 **macrostachya** Kaal. (1) a var. **macrostachya** 2, 3, 8–15, 17, 22, 24, 27, 28, 39, 40, 45, 46, 50, 58, 60, 62, 64, 67, 68, (69), 70, 72, 74, 75, 77, 80, 81, 83, 84, 89, 96,
 - b var. **spiniflora** (Schiffn.) K. Muell. 13.

104. H20, 34, 35.

- 8 **catenulata** (Hueb.) Lindb. 1–4, 11, 13, 14, 41, 42, 44, 48, 49, 58, 59, 62, (63), 64, 67–75, 80, 83, 88, 92, 96–98, 102–105, 110, 112. H1–3, 7, 9, 13, 16–18, 20, 21, 27–31, 33–36, 38, 39.
- 9 **leucantha** Spruce (1) 1, 2, (17), 48–50, 68, 70, 72–75, 77, 78, 81, (82, 83), 86–101, 103–112. H1, 3, 9, 12, 16, 20, 25, 27–30, 33–36, 40.

60. Nowellia Mitt.

1 **curvifolia** (Dicks.) Mitt. (1) 1–9, 13, 14, 17, 22–24, 29, 33, 34, 36, 38–51, 57–60, 62–92, 94–112. H1–3, 5, 7, 9, 11, 15–17, 20, 21, 26–31, 33–36, 38–40.

61. Cladopodiella Buch

1 **francisci** (Hook.) Buch ex Jørg. 1–3, 8, 9, 11–14, 16, 17, 22, 24–26, (27), 28, 34, 35, 41, 45, (48), 52, 58, (61), 62, (64), 71, 88, 90–92, 95–98, 100, 101, 103, 105, 110. H1, 3, 21, 27, 29, 38, 39.

2 **fluitans** (Nees) Buch (1) 1–3, 8–11, 13–15, (16), 17, 27, 28, 39, 40, 42–50, 57–60, 62–71, 73, 76, 80, 83, 88, 92, 95, 97, 98, 101, 103–110, 112. H1, 2, 16, 20, 21, 23, 24, 26, 27, 35, 37–39.

62. Pleurocladula Grolle

1 **albescens** (Hook.) Grolle (*Pleuroclada albescens* (Hook.) Spruce) (1) 88–90, 92, 94, 96–98, 100, 105, 106.

63. Hygrobiella Spruce

1 **laxifolia** (Hook.) Spruce (14), 42, 46, 48, 49, (57), 62, 64–70, 72, 73, 75, 77, 79, 83, 86–92, 94–106, 108–110, 112. H1–4, 6, 7, 16, 20, 21, 27, 28, 33–36, 39, 40.

64. Anthelia (Dum.) Dum.

1 **julacea** (L.) Dum. 42, 46, 48, 49, 64, (65), 68–73, 75, 85–90, 92, 94–101, 103–112. H1–3, 6, 7, 13, 16, 20, 27, 28, 34, 35, 38, 40.

2 **juratzkana** (Limpr.) Trev. 48, 49, 88–90, 92, 96–98, 101, 104–110, 112. H16, 34, 35.

65. Telaranea Spruce ex Schiffn.

 nematodes (Gott. ex Aust.) Howe (T. sejuncta (Ångstr.) S. Arn.) (1, 47)
 1. H1–3, 16, 27.

2 **murphyae** Paton (1, 48) 1, 17.

66. Kurzia Martens

- 1 **pauciflora** (Dicks.) Grolle (*Lepidozia setacea* (G. Web.) Mitt.) (1)
 1–6, 8–17, 22, (23), 24–28, 34, 35, 37, 39–48, 50, 52, 54, (55), 57–60, (61), 62–83, 85–92, 95–112. H1–3, 5–7, 9–25, 27–31, 33–36, 38, 39. C.
- 2 **trichoclados** (K. Muell.) Grolle (*L. trichoclados* K. Muell.) (2)
 2, 5, 14, 39, 48–50, 60, 62, 64, 65, 67–70, 74, 78, 83, 88–92, 96–98, 100–106, 108, 109, 112. H1–4, 6, 7, 10, 12, 13, 16, 20, 25–27, 29, 30, 33–36, 39, 40.
- 3 **sylvatica** (Evans) Grolle (*L. sylvatica* Evans)
 1, 2, 4, 5, 9, 11, 13, 14, 16, 17, 39, 42, 44–46, 48–52, 60, 62–64, 70, 73, 75, 80, 82, 83, 90, 95–98, 104, 105, 112. H1, 2, 4, 8, 16, 20, 27, 28, 33, 34. C.

67. Lepidozia (Dum.) Dum.

- 1 **reptans** (L.) Dum. 1–30, 32–112. H1–3, 5–10, 12–31, 33–40. C.
- 2 **pearsonii** Spruce 44, 46–50, (57, 59), 60, (63), 64, 65, 67–76, 78, 83, 86–88, 90, 92, 96–106, 108–112. H1–3, 20, 27–30, 33–35, 39.
- 3 **cupressina** (Sw.) Lindenb. (*L. pinnata* (Hook.) Dum.) (1) 1–5, 34, 42–50, 52, (58), 60, 63, 64, 67, 68, 70, 71, 75, 86, 96–105, 108, 110–112. H1–4, 6, 8, 12, 16, 20, 21, 26–30, 33–36, 39, 40.

68. Bazzania S. Gray

1 **trilobata** (L.) S. Gray (1) 1–5, 11, 13, 14, 34–37, 39–50, 52, 57–60, 62–75, 79, 80, (81), 85–92, 95–105, 108, 111, 112. H1–3, 5, 12, 13, 16, 20, 21, 27–30, 33–35, 37–40. C.

- 2 **tricrenata** (Wahlenb.) Lindb. 42, 44, 48, 49, 60, (64), 65, 69, 70, 72, 73, 75, 76, 78, 79, 86–90, 92, 94, 96–112. H1–4, 6, 7, 16, 20, 27–30, 33–36, 39, 40.
- 3 **pearsonii** Steph. (1) 92, 97, 98, 104–108, 110. H1, 2, 16, 27, 35.

69. Calypogeia Raddi (49)

- 1 **neesiana** (Mass. & Carest.) K. Muell. 3, 11, 17, 46–48, 50, 59, 60, 62, 67–70, 72, 75, 77–80, 83, 85, 88–92, 95–98, 101, 102, 104–110, 112. H2, 7, 10, 13, 16, 20, 22, 23, 28–30, 33–35, 40.
- 2 **integristipula** Steph. (*C. neesiana* var. *meylanii* (Buch) Schust.) (1) 14–17, 39, 58, 60, 62–64, 66–68, 70, 72, 74, 78, 83, 86, 92, 97, 101, 105, 106. H2, 33, 39.
- 3 **muellerana** (Schiffn.) K. Muell. 1–6, 8–30, 34–52, 54, 55, 57–60, (61), 62–112. H1–14, 16–40. C.
- 4 **trichomanis** (L.) Corda 42, 48–50, 52, 57–60, 63–70, 72, 73, 78, 80, 83, 87–90, 92, 93, 96–99, 101–103, 105, 106, 108, 110–112. H2, 3, 6, 7, 16, 20, 27, 33–36, 40.
- 5 **fissa** (L.) Raddi 1–24, 26–112. H1–40. C.
- 6 **sphagnicola** (H. Arn. & J. Perss.) K. Muell. (1) 2, 3, 8, 9, 11–15, 17, 22, 26, 28, 39, 40, 42, 45–48, 50, 58, (60), 64–67, 70, 73, 74, 79, 81, 83, 87–90, 92, 95–98, 101, 104–106, 109–112. H3, 6, 7, 9, 11, 14, 16, 17, 19, 22–24, 27–29, 32–37.
- 7 **suecica** (H. Arn. & J. Perss.) K. Muell. (1) 97, 98, 101, 105, 106, 108. H1, 33, 36.
- 8 **arguta** Mont. & Nees (1) 1–20, 22–24, 26–28, 32–86, 88, 90, 91, 93, 94, 96–106, 108–112. H1–16,18–21, 23–40. C.

- 70. Blepharostoma (Dum.) Dum.
 - 1 **trichophyllum** (L.) Dum. (1) 1, 3, 4, 14, 16, 23, 33–37, 39–44, 46–50, (54), 57, 59, 60, 62–83, 85–92, 94–112. H1–3, 6, 16, 20, 27–29, 31, 33–35, 38–40.
- 71. Trichocolea Dum.
 - 1 **tomentella** (Ehrh.) Dum. (1) 1–6, 8, 9, 11, (12), 13–18, (20), 24, 26, 34–40, 42–50, 52, 57–60, 62–80, (81), 82, 83, 85–92, 94–106, 108, 109, 111. H1–6, 8–10, 13, 14, 16, 18, 20, 27–30, 33–36, 38–40.
- 72. **Ptilidium** Nees
 - 1 **ciliare** (L.) Hampe 2–5, 12, 13, 15, 17, (19, 21), 22, 24–28, 30, 34–112. H1, 2, 8, 20–22, 27, 35, 36, 39.
 - 2 **pulcherrimum** (G. Web.) Vainio (1) 5–9, 11–18, 20, 22–24, 27–32, 34–42, 44, 47, 48, 50, 51, 54, 55, (56), 57, 59–62, 64, 65, 67–70, 75, 77, 78, 80–86, 88–92, 95, 96, 99–101, 106, 108. H31.
- 73. Mastigophora Nees
 - 1 **woodsii** (Hook.) Nees (1) 88, 97–99, 103–108, 110, 112. H1, 2, 16, 27.
- 74. Herbertus S. Gray
 - 1 **stramineus** (Dum.) Trev. (*Herberta adunca* auct.) (1) 48, 49, 70, 86–88, 90, 96–99, 103–108, 110–112.
 - aduncus (Dicks.) S. Gray ssp. hutchinsiae (Gott.) Schust. (Herberta hutchinsiae (Gott.) Evans) (1)
 48, 49, 69, 70, 73, 75, 86–88, 97–108, 110, 111. H1–3, 6, 7, 16, 27–29, 33–35, 39.
 - 3 **borealis** Crundw. (50) 105.

75. Radula Dum.

- 1 **complanata** (L.) Dum. 1–17, 19, 20, (21), 22–62, (63), 64–83, (84), 85–112. H1–40. C.
- 2 **lindenbergiana** Gott. ex Hartm. f. (*R. lindbergiana* Gott.) 1–3, 40, 48, 49, 52, 65, 68–70, 72, 73, 75–78, 85–90, 92, 96–101, 103–106, 108–111. H1–3, 6, 8, 27–29. C.
- 3 **holtii** Spruce (1) H1–3, 27.
- 4 **aquilegia** (Hook. f. & Tayl.) Gott. & Lindenb. (1) 46, 48, 49, 69, 70, 73, 86, 87, (88), 97–105, 107, 108, 110, 112. H1–3, 6, 7, 16, 27–29, 34, 35, 38.
- 5 **carringtonii** Jack (1) 97, 101, 103, 104. H1–3, 27, 33.
- 6 **voluta** Tayl. ex Gott. & Lindenb. (1) 48, 49, 70, 73, (75), 97, 98, 101, 102, 104, 105. H1–3, 6, 7, 16, 27, 28, 30, 35.

76. Pleurozia Dum.

1 **purpurea** Lindb. (1) 73–75, 86–89, 92, 96–112. H1–3, 9, 16–18, 20, 21, 23–25, 27–30, 33–36, 38–40.

77. Porella L.

- arboris-vitae (With.) Grolle (P. laevigata (Schrad.) Lindb.) (1)
 - a var. **arboris-vitae**1, 3–6, 9–14, 16, 17, 24, 33–37, 39, 40, 42–50, 52, 57, 60, 62, 64–67, 69, 70, 72–75, 77, 79, 80, 82, 83, 85–90, 96–105, 108, 112. H1–3, 5–7, 9, 16, 20, 23, 26–30, 33–35, 39, 40. C.
 - b var. **killarniensis** (Pears.) Corley 3. H2.
 - c var. **obscura** (Nees) Corley 1, 40, 48, 49, 82, 83, 85, 99. C.

- 2 **obtusata** (Tayl.) Trev. (*P. thuja* (Dicks.) C. Jens.)
 1–5, 9, 15, 34, 45, 46, 48–50, 52, 72–75, 81, 82, 85–91, 96–104, 110–112. H1–3, 5, 6, 8, 16, 18, 20, 27, 38, 39. C.
- 3 **platyphylla** (L.) Pfeiff. (1) 1–60, 62–73, 75–81, 83, 85–92, 94, 95, 97–99, 101, 103, 104, 106, 108, 112. H1, 2, 4–9, 11–14, 16, 17, 19–22, 24, 26, 28–33, 36–40. C.
- 4 cordaeana (Hueb.) Moore
 - a var. **cordaeana**2–5, 13, 17, 40, 42–45, 47–51, 57, 64–73, 75–99, 104, 106–109, 112. H5, 6, 9, 13, 15, 20, 22, 23, 28, 29, 31–33, 36–40.
 - b var. **simplicior** (Zett.) S. Arn. 36, 73, 77, 83, 87, 88. H32, 38, 39.
 - c var. **faeroensis** (C. Jens.) E. W. Jones 112.
- 5 **pinnata** L. 2–5, 36, 45, 46, 48–50, 69. H1, 2, 4–6, 9, 10, 12, 15, 20, 28, 30, 37.

78. Frullania Raddi

- 1 **teneriffae** (Web.) Nees (*F. germana* (Tayl.) Gott., Lindenb. & Nees) (1)
 1–3, 45, 48, 49, (52), 64, 69–75, 85, 88, 97–105, 108, 110–112. H1–4, 6, 8, 9, 16–20, 22, 26–31, 33–36, 39, 40. C.
- 2 **tamarisci** (L.) Dum. 1–17, 20, 22–24, 26, 28, 32–52, (54–56), 57–60, 62–112. H1–22, 24–40. C.
- 3 **microphylla** (Gott.) Pears. (1) 1–5, 42, 45, 48, 49, 64, 69–71, 73–75, 86, 87, 97, 98, 100–105, 110, 111. H1–3, 7, 16, 27–29, 33–35.
- 4 **fragilifolia** (Tayl.) Gott., Lindenb. & Nees (1)
 1–4, 11, 14, 34, 40, 43, 45–50, 52, 60, 64–67, 69–75, 78, 79, 81–83, 85–92, 94–110, 112. H1–3, 6, 7, 16, 20, 27, 29, 33–36, 38–40. C.

- 5 **dilatata** (L.) Dum. 1–17, (18), 19, 20, (21), 22–62, (63), 64–83, (84), 85–112. H1–40. C.
- 79. Jubula Dum.
 - 1 **hutchinsiae** (Hook.) Dum. (1) (1), 2–5, 34, 35, 42, 44–50, 63, 64, 69–76, 86, 97, 98, 100–105, 110. H1–4, 6, 8, 16, 20, 27–29, 34–36, 38, 39.
- 80. Marchesinia S. Gray
 - 1 **mackaii** (Hook.) S. Gray (1) 1–6, 9, 10, 34–36, 39–41, 43–46, 48–50, 52, 57, 60, 63, 64, 69–75, 86, 97–104, 110. H1–10, 14–17, 20–23, 26–29, 31, 33–35, 38–40.
- 81. Harpalejeunea (Spruce) Schiffn.
 - 1 **ovata** (Hook.) Schiffn. (1) 1–3, 46, 48–50, 64, 65, 69, 70, 72, 73, 75, 86, 87, 97–105, 108, 110. H1–3, 6, 7, 9, 15, 16, 27–29, 33–35, 38, 39.
- 82. Drepanolejeunea (Spruce) Schiffn.
 - 1 **hamatifolia** (Hook.) Schiffn. (1) 2, 48, 49, 64, (65), 69, 70, 73, 86, 87, 97–105, 108, 110. H1–4, 6, 8, 9, 14–17, 20, 21, 25–29, 31, 33–35, 38, 39.
- 83. **Lejeunea** Lib. (51)
 - 1 **cavifolia** (Ehrh.) Lindb. 1–19, 22–24, 26, 29, 30, 32–36, 38, 40–50, 52, 57–60, 62–70, 72–75, 77–101, 104–109, 112. H1–8, 10, 13, 14, 16, 17, 20, 21, 25–29, 33–40.
 - 2 **lamacerina** (Steph.) Schiffn. 1-6, 9-11, 17, 34, 35, 39, 41-52, 60, 63-65, 67, 69-75, 79-82, 85, 86, 88, 90, 97-105, 108, 110, 112. H1-13, 15, 16, 20, 21, 25, 27-29, 33-40. C.
 - 3 **patens** Lindb.
 1, 2, 4, 35, 41, 42, 44–50, 60, 62–65, 67–75, 78–80, 83, 85–88, 92, 94, 97–112. H1–13, 15–17, 20, 21, 25–31, 33–40. C.

- 4 **hibernica** Bischl., H. Miller & Bonner (*L. diversiloba* Spruce) (1) H1–3, 16.
- 5 **flava** (Sw.) Nees (1) H1–3, 6, 16.
- 6 **mandonii** (Steph.) K. Muell. (1) 1, 97, 104. H1, 2, 29.
- 7 **holtii** Spruce (1) 102. H1–4, 6, 10, 16.
- 8 **ulicina** (Tayl.) Gott., Lindenb. & Nees (1) 1–17, 20, 22–24, 33–36, 40–42, 44–50, 52, 60, (62), 64, 65, 69–76, 86–88, 97–105, 110. H1–7, 9–12, 14–16, 18, 20, 21, 23–40. C.

84. Colura (Dum.) Dum.

- 1 **calyptrifolia** (Hook.) Dum. (1) 1, 14, 48, 49, 64, 70, 73, 86, 87, 97–105, 108, 110. H1–4, 6–10, 15, 16, 21, 24, 26–29, 33, 35, 38, 39.
- 85. Cololejeunea (Spruce) Schiffn.
 - 1 **calcarea** (Lib.) Schiffn. (1) 34–36, 41, 42, 47–50, 57, 59, 60, 63–67, 69, 70, 72, 73, 75, 76, 80, 82, 83, 86–92, 94, 96–101, 103–109. H1, 2, 7, 9, 10, 15, 16, 21, 28, 29, 31, 33–35, 38–40.
 - 2 **rosettiana** (Mass.) Schiffn. (1) 3, 5, 6, 9, 10, 34–36, 40, 50, 52, 57, 59, 60, 63–67, 69, 70, 72, 75, 80, 81, 91, 98, 99. H2, 6, 8, 9, 14, 16, 21, 22, 28, 29, 33, 36.
 - 3 **minutissima** (Sm.) Schiffn. 1–4, 6, 8–11, 13–17, 45, 48–50, 52, (70), 97, 98, 100, 101, 103, 104. H1–6, 8–11, 15–18, 21, 23–30, 33, 35. C.

86. Aphanolejeunea Evans

1 **microscopica** (Tayl.) Evans (1) 46, 48–50, 64, 65, 69, 70, 72–75, 86, 87, (88), 97–105, 108, 110. H1–3, 6–8, 10, 16, 26–29, 33, 35, 36, 39, 40.

Sphagnum L.

- 1 **imbricatum** Hornsch. ex Russ. (1) 3, 46, 48, 49, 62, (65–67), 69, 70, 72–75, 77–81, 83, 86–90, 92, 95–99, 102, 104–112. H1, 2, 9, 10, 14–18, 20, 22–24, 27, 29, 30, 33, 35–37, 39, 40.
- 2 **papillosum** Lindb. 1-6, 8-17, 22, 24, 26-28, 34-52, (53), 54, 57-112. H1-40.
- 3 **palustre** L. 1–22, (23), 24–32, 34–112. H1–4, 6–40.
- 4 **magellanicum** Brid. 2, 3, 9, 11–17, 22, 24, 27, 28, 39, 40, 45–51, 58, 60, 62, 64–70, 72–84, 86–92, 95–112. H1–3, 7–11, 14–20, 22–31, 33–40.
- 5 **squarrosum** Crome 1–3, 5, 6, 8–31, 34–110, 112. H1–9, 12–14, 16, 17, 19–24, 27–40.
- 6 **teres** (Schimp.) Ångstr. 3–5, 9, 11, 13, 14, 17, 25, 27, 35, 38, 40, 42–50, 57–60, 62–80, 82, 83, 86–92, 94–109, 112. H1, 20, 22, 27, 34, 37, 39, 40.
- 7 **fimbriatum** Wils. 1–6, 8–22, (23), 24–31, 34–104, 106, 108–112. H1, 4, 6, 7, 9, 10, 13, 18–22, 24, 25, 28–30, 32–40.
- 8 **girgensohnii** Russ. 5, 24, 30, (38), 39, 46–50, 53, 56, 57, 60, 62–70, 72–78, 80–112. H3, 20, 29, 34, 36–39.
- 9 **russowii** Warnst. 5, 13, (17), 26, 39, 40, 42, 43, 45–50, 57, 58, 60, 62–75, 77, 78, 80–93, 95, 96, 98, 99, 101, 104–112. H3, 7, 10, 13, 20, 21, 28–30, 33, 34, 36–40.
- 10 **quinquefarium** (Braithw.) Warnst. 2–5, 35, 37, 39, 42–44, 46–50, 57, 59, 60, 62–70, 72–74, 77, 79, 80, 86–88, 90–111. H1–3, 6, 7, 14, 16, 20, 21, 27–30, 33–37, 39.

- 11 **warnstorfii** Russ. (1) 47–50, (60, 62, 65, 67), 69, 70, 72–74, 77–80, 83, 87–90, 92, 95–102, 104, 105, 107, 108. H14, 27, 40.
- 12 **capillifolium** (Ehrh.) Hedw. (52) 1–6, 8–17, 19, 20, (21), 22, 24–28, 30, 32, 34–42, 44–52, (53), 54–112. H1–40.
- 13 **fuscum** (Schimp.) Klinggr. (1) 13, 46, 48, (60), 65–70, 72–74, 78, 79, 83, 86–92, 94–97, (98), 102, 104–109. H9, 10, 15–19, 22–25, 27, 32–34, 36, 39, 40.
- 14 **subnitens** Russ. & Warnst. 1-6, 8-31, 34-112. H1-3, 5-40. C.
- 15 **molle** Sull. 1, 3–5, 8, 9, 11, 12, 14, 17, 26, 28, 32, 34, 44, 45, 48, 49, 57, 59, 62–64, 66–70, 72, 73, 75, 77, 80, 83–88, 91, 92, 96–108, 110. H1–3, 15, 16, 20, 27–30, 33–40.
- 16 **strictum** Sull. (1) 48, (69), 73, 75, 86, 88, 89, 92, 96–98, 100, 101, 103–108, 110. H1–3, 16, 27, 34, 35, 39, 40.
- 17 **compactum** DC. 1–6, 8–17, (19, 21), 22, 24, 26–28, 34, 35, 37, 39–50, 52, 54, 56, 58, (59), 60–62, (63), 64–112. H1–9, 12, 14–21, 24, 26–40.
- 18 **platyphyllum** (Braithw.) Warnst. (1) 42, 49, 50, 60, 65, 69, 73, 74, 87, 88, 96–98, 110. H33.
- 19 auriculatum Schimp.
 - a var. **auriculatum** 1–20, (21), 22, (23), 24, 25, 27, 28, (29), 32–76, 78–93, 95–112. H1–31, 33–40. C.
 - b var. **inundatum** (Russ.) M. O. Hill 1–6, 8, 9, 11–14, 16–18, (19), 20, (21), 22, 24, 26–28, (29), 31, 33–38, 41–52, 54, 55, 57–78, 80, 82, 83, 85–112. H1–4, 6, 7, 9, 12, 15–17, 19–22, 24, 25, 27–31, 33–40.

- 20 **subsecundum** Nees (1, 53) 3, 5, 11, 12, (17), 27, 28, 45, 47–50, 69, 70, 73–75, 86–90, 96–98, 106.
- 21 **contortum** Schultz 3, 9, 11, 13, 14, 16, 27, 28, 43, 45–52, 58–62, 64, 65, 67, 69–74, 76, 79, 80, 83, 86–90, 92, 93, 95–104, 106–110, 112. H1–3, 6, 8, 9, 12, 15, 16, 20–23, 27, 29–31, 34–40.
- 22 **cuspidatum** Hoffm. 1–6, 8–19, (20, 21), 22, 24, 25, 27, 28, (29), 30, 34–52, 54–112. H1–40.
- 23 **majus** (Russ.) C. Jens. 67, 90.
- 24 **tenellum** (Brid.) Brid. 1–5, 8, 9, 11–17, (18, 19), 22, 24, 27, 28, (29), 34, 35, 37, 39–50, 52, 54, 56–58, (59), 60–81, 83–112. H1–4, 6–40.
- 25 **balticum** (Russ.) C. Jens. 46, (58), 63, 67, 72, 92.
- 26 **pulchrum** (Braithw.) Warnst. (1) 9, 40, 46, 47, 58, 60, 64, 67, 70, 71, 73, 74, 97, 104. H1, 2, 16, 35, 38, 39.
- 27 **recurvum** P. Beauv.
 - a var. **amblyphyllum** (Russ.) Warnst. 2, 3, 6, 9, 17, 22, 27, 30, 41, 46, 48–50, 60–65, 69, 79, 95, 97, 103–105. H3, 16.
 - b var. **tenue** Klinggr. 4, 5, 47–49, 60, 65, 67, 69, 72, 79, 88, 90, 95, 96, 98, 101, 105, 107–109. H3.
 - var. **mucronatum** (Russ.) Warnst. (54) 1–6, 8–20, (21), 22, 24–32, 34–112. H1–4, 6–14, 16–18, 20, 22–31, 33–40.
- †28 **obtusum** Warnst. (59, 60).
 - 29 **riparium** Ångstr. (1) 22, (58, 60), 61, 67, (69), 77, 88, 90, 92, 94–96, 106, 112.
 - 30 **lindbergii** Schimp. ex Lindb. (1) 90, 92, 94, 96, 97, 105, 106, (112).

Andreaea Hedw.

1 **alpina** Hedw.

(41), 42, 44–46, 48, 49, 64–70, 72, 73, 75, 78, 79, 86–92, 94, 96–101, 103–108, 110, 112. H1, 2, 7, 16, 20, 21, 27, 28, 31, 35, 37–40.

2 obovata Thed.

- a var. **papillosa** (Lindb.) Nyholm (3, 55) (92, 94), 96.
- †b var. **sparsifolia** (Zett.) Nyholm (88).

3 rupestris Hedw.

- var. **rupestris**(1), 3, 4, (14), 40–50, 57, (59), 60, 62, (63), 64–112. H1–3, 6–8, 11–13, 16, 20, 21, 27, 29–31, 35–40.
- b var. **alpestris** (Thed.) Sharp 49, 70, 86–88, 90, 92, 94, 96–98, 104, 110.

4 rothii Web. & Mohr

- a ssp. **rothii**1–5, 34, 35, (37), 40–50, 52, 57, 58, 60, (63), 64–80, 82, 83, 85–112. H1–8, 10–13, 16, 20, 21, 25–31, 33–40.
- b ssp. **frigida** (Hueb.) Schultze-Motel 70, 92, 96, 97.

5 crassinervia Bruch (3, 56)

- ssp. **crassinervia** 3, 48, 49, 58, 60, 63–65, 69, 70, 73, 86, 88, 90, 98, 99, 103, 105, 108. H16.
- b ssp. **huntii** (Limpr.) Amann (48), 69, (70, 71, 92, 98). H(2).
- 6 **nivalis** Hook. (90), 92, 94, 96–98, 105, 106.

3. Tetraphis Hedw.

1 **pellucida** Hedw. 1–92, 94–109. H1–8, 10–13, 16, 18, 20, 21, 23, 26–30, 32–40.

- 4. **Tetrodontium** Schwaegr.
 - 1 **brownianum** (Dicks.) Schwaegr. 3, 4, 13, 14, 16, 36, 39, 41, 42, 46–49, 57–60, 62–70, 72, 73, 75–77, 80, 83–88, 90, 91, 96–101, 103–108. H1, 8, 20, 21, 33, 36, 39, 40.
 - 2 repandum (Funck) Schwaegr. 62.
- 5. **Polytrichum** Hedw.
 - l **alpinum** Hedw.
 - a var. **alpinum**2–4, 34, 36, 37, 40–50, 57, 59, 60, 62, (63), 64–112. H1, 2, 6–8, 13, 16, 20, 21, 27–31, 33–40.
 - b var. **septentrionale** (Sw.) Lindb. 97. H1, 26, 35.
 - 2 **longisetum** Sw. ex Brid. (1), 3, 5–44, 46, 50, 53–70, 72–92, 94–97, 100, 103, 105, 110–112. H1–3, 7, 8, 12–15, 17–30, 32, 33, 36–40.
 - 3 **formosum** Hedw. 1–112. H1–14, 16–40. C.
 - 4 commune Hedw.
 - var. **commune** 1–112. H1–40. C.
 - b var. **perigoniale** (Michx.) Hampe 3, 12, (17), 18, 22, 32, 35–39, 51, 54, 59, 62, (63), 85, 88–90, 95, 104–106, 111.
 - c var. **humile** Sw. 1, 3, 9, 12–14, (17), 38, 42, 43, 45, 58, 59, 61, 62, 71, 73, 76, 83, 85, 88, 90, 95, 96. H38.
 - 5 **sexangulare** (Floerke ex Hoppe) Brid. (1) 88–90, 92, 94, 96, 97, 105, 106.
 - 6 **piliferum** Hedw. 1–112. H1–22, 24–40. C.
 - 7 **juniperinum** Hedw. 1–112. H1–6, 8–40. C.
 - 8 **alpestre** Hoppe 2–6, 11, 12, 14, (17), 22, 25, 28, 39–51, 57–62, (63), 64–92, 94–106, 108–112. H1, 3, 6–8, 10, 14, 16–18, 20–24, 27–30, 33–40.

- 6. Pogonatum P. Beauv.
 - 1 **nanum** (Hedw.) P. Beauv. (1) 1–20, (21), 22–27, (29), 30, 32–49, (50, 51), 52, 55–58, (59), 60–64, 66–73, 75–79, 81, 83, (84), 85–92, 94–98, 100–104, 106, 108–112. H1–5, 10, 12, 13, 20, 21, 25, 27, 28, 32–40. C.
 - 2 aloides (Hedw.) P. Beauv.
 - a var. **aloides** 1–20, (21), 22–28, (29), 30, 32–112. H1–14, 16, 18–22, 24–40. C.
 - b var. **minimum** (Crome) Mol. (1), 3, 5, 7, (22, 23), 25, 38, 47, 58–60, 62, 66–69, 72, 73, 83–85, 88, 90, 96, 103, 105, 106, 111. H5, 38, 39.
 - 3 **urnigerum** (Hedw.) P. Beauv. 1–17, 20, (21), 22, 24, 26, 27, (30), 32–112. H1–10, 12–18, 20–22, 25–40. C.
- Oligotrichum Lam. & DC.
 - 1 **hercynicum** (Hedw.) Lam. & DC. 1–4, 39, 41–44, 46–50, 57–60, 62–83, 85–112. H1, 2, 4–7, 13, 16, 20, 27, 29, 31, 33–36, 38–40.
- 8. Atrichum P. Beauv.
 - 1 **crispum** (James) Sull. & Lesq. (1) 1, 3–5, 39, 41–44, 46–50, 57–61, 63–65, 69–71. H20, 29.
 - 2 **tenellum** (Roehl.) Br. Eur. (1) 1, 7, 15–17, 58, 73, 75, 78, 81, 83, 85, 89, 95, 97, 106. H3.
 - 3 undulatum (Hedw.) P. Beauv.
 - a var. **undulatum** 1–112. H1–40. C.
 - b var. **minus** (Hedw.) Paris 1, 2, 5, 6, 8–11, 15–17, (20), 22, 28, 32, 36, 38, 39, 42, 54–57, 59, 60, 62, 64–69, 74, 81, 85, 86, 88, 90–92, 95, 96, 101, 102, 106–108, 110.
 - †c var. **gracilisetum** Besch. (17, 37, 38, 40, 56, 59, 70).

4 **angustatum** (Brid.) Br. Eur. (1) 13–16, (17, 19, 33, 37), 44, 87. H36, 38.

9. **Diphyscium** Mohr

1 **foliosum** (Hedw.) Mohr 1–5, 14, 23, 35, 36, 39–50, 57, 58, (59), 60, 62, (63), 64–73, 75–80, 83, 85–93, 95–110, 112. H1–3, 7, 8, 13, 16, 20, 21, 27–29, 31, 33–40.

Buxbaumia Hedw.

- 1 **aphylla** Hedw. (1) 17, 22, 23, (27, 37, 39), 40, 47, (48), 57, (58), 59, 63, (64), 66, (68), 72, (73), 77, (78, 79), 80, (81), 82–86, (87), 88–92, 95, 96, (98, 99). H(1).
- 2 viridis (Moug. ex DC.) Brid. ex Moug. & Nestl. (90, 92), 96, (106).

11. Archidium Brid.

1 **alternifolium** (Hedw.) Mitt. (1) 1–17, (18), 20, (21), 22–24, (29, 30), 33–49, 51, 52, (54), 55, 57–62, (63), 64–79, 81–83, 85–92, 95–112. H1–3, 5, 8, 9, 12, 13, 16, 21, 27–30, 34, 35, 38–40. C.

Pleuridium Brid.

- 1 **acuminatum** Lindb. 1–52, 54–73, 75–107, 109, 111, 112. H1, 3–5, 8, 9, 14, 16, 18, 20–22, 25, 28–32, 34–40. C.
- 2 **subulatum** (Hedw.) Lindb. 1–7, 9–20, (21), 22–24, 26–41, 43–50, 52–55, 57–74, 76, 77, 80–86, 88–92, 94–96, 98–101, 103–105. H1–3, 6, 9, 12, 21, 31, 38, 39. C.

13. Pseudephemerum (Lindb.) Hagen

1 **nitidum** (Hedw.) Reim. (1) 1–30, 32–52, 54–87, 89–99, 101–109, 111, 112. H1–6, 8–10, 12, 15, 16, 20, 21, 26, 27, 29–31, 33–40. C.

14. Ditrichum Hampe

- 1 **cylindricum** (Hedw.) Grout 1–20, 22–26, 28–52, 55–59, 62–92, 94–101, 103–112. H1–4, 6–8, 10–13, 15, 16, 20, 27, 33–40. C.
- 2 **flexicaule** (Schimp.) Hampe (1) 1-3, 5-17, (19), 20, 22-30, 32-62, (63), 64-70, 72, 73, 75, 77-83, 85-92, 94-112. H1-3, 6-36, 38-40. C.
- 3 **subulatum** Hampe 1–3, 15.
- 4 **heteromallum** (Hedw.) Britt. 1–6, 9–17, (19), 24, 27, 32, 34–51, 55, 57–112. H1–8, 10, 12, 13, 16, 20, 21, 25, 27–40.
- 5 zonatum (Brid.) Limpr.
 - var. **zonatum** (1) 48, 49, 68–70, 73, 75, 78, 88, 89, (90), 92, 96–98, 100, 103, 104, 108, 110. H39.
 - b var. **scabrifolium** Dix. (1) 46, 48, 49, 69, 73, 88, 94, 96–98, 103–105, 110. H16, 35.
- 6 **pusillum** (Hedw.) Hampe (57) 13, (14, 16), 17, 22, (46), 48, 49, 58, (60, 62, 64), 76, 95, 98, 99, 101, 104, 108, 109. H(5, 12, 32, 35, 38, 39).
- 7 **lineare** (Sw.) Lindb. (1) 43, 46–49, 69, 73, 90, 92, 94, 96–98, 103, 104. H28, 39.
- 8 **plumbicola** Crundw. (1) 6, 49, 67, 71, 88.
- 9 **cornubicum** Paton (1) 1, 2.

15. **Distichium** Br. Eur.

1 **capillaceum** (Hedw.) Br. Eur. (1) 6, (17), 35, 42, 44, 48–50, 57, 59, 60, 62–70, 72, 73, 77, 79, 80, 82, 83, 85–92, 94–112. H1, 3, 9, 12, 16, 20, 21, 27–29, 33–35, 39, 40.

- 2 **inclinatum** (Hedw.) Br. Eur. 41, 44, 50, 52, 56, 57, 59, 60, 62, 64–66, 68–70, 72, 75, 82, 85, 87–90, 93, 94, 97, 98, 103, 107–112. H16, 26–29, 34, 35, 39, 40.
- 16. Trematodon Michx.
 - †1 **ambiguus** (Hedw.) Hornsch. (88).
- 17. Brachydontium Fuernr.
 - 1 **trichodes** (Web.) Milde 1–3, 13, 16, 17, 35, 36, 39, 42, 43, (48), 49, 57–60, 62–70, 72, 73, 75–78, 80, (81, 83), 86–92, 95–97, 99, 102, 103, 105. H20, 21, 28, 38, 40.
- 18. Seligeria Br. Eur.
 - donniana (Sm.) C. Muell. (1) 7, 16, 22, 23, 33, 35, 36, 40, 47, 48, 57, 60, 62–70, 72, 75–77, 80, 83, 86–92, 94, 97–99, 101, 103–108. H9, 29, 33, 39.
 - 2 **pusilla** (Hedw.) Br. Eur. (1) 3, 6–9, 15, 23, 33–39, 41–43, 48, 50, 52, (54), 57–60, 62, 64–67, 69, 70, 72, 74, 80, 83, 86–90, 92, 94, 97, 98, 101, 104, 108. H28, 29, 33, 39.
 - 2A **brevifolia** (Lindb.) Lindb. (58) 49.
 - 3 **acutifolia** Lindb. (1) 6, 7, 33–36, 39, 42, 57, 60, 64–66, 69, 70, 89, 97, 104. H39.
 - 4 **trifaria** (Brid.) Lindb. (1) 42, 57, 64–66, 69, 89, 108. H28, 29, 33.
 - 5 **paucifolia** (Dicks.) Carruthers (1) 3, 6–17, 19, 20, 22–24, 26, 28–30, 54, 61. H40.
 - 6 **calcarea** (Hedw.) Br. Eur. (1) 6–26, 28–30, 33, 34, 37, 54, 55, 57, 61. H39, 40.
 - 7 diversifolia Lindb.62.

- 8 **recurvata** (Hedw.) Br. Eur. 3, 10, 12–14, 24, 34–37, 40, 42–44, 47–51, 57–60, 62–70, 72–78, 80, 81, 83–92, 97–109, 111. H1, 3, 16, 27–31, 33–36.
- 9 **oelandica** C. Jens. & Medel. H28, 29.
- 10 carniolica (Breidl. & Beck) Nyholm 67, 80.

19. Blindia Br. Eur.

- 1 **acuta** (Hedw.) Br. Eur. 1–3, 35, 36, 40–42, 44–50, 52, 57–60, 62–83, 85–92, 94–112. H1–4, 6–8, 13, 16, 20, 21, 26–28, 31, 33–40.
- 2 **caespiticia** (Web. & Mohr) C. Muell. 88, 97.

20. Saelania Lindb.

1 **glaucescens** (Hedw.) Broth. (1) 90, 96.

21. Ceratodon Brid.

- 1 purpureus (Hedw.) Brid.
 - ssp. **purpureus** 1–112. H1–40. C.
 - b ssp. **conicus** (Hampe) Dix. (4) 17, 22, 23, 25, 27, 32, 33, 36–39, 58, 59, 62, (63), 64–66, 69, 87, 95, 96, 102. H21, 27. C.

22. Cheilothela (Lindb.) Broth.

1 **chloropus** (Brid.) Broth. 3, 6.

23. Rhabdoweisia Br. Eur.

1 **fugax** (Hedw.) Br. Eur. 2–5, 35, 39–46, 48–50, 58, (63), 64–66, 68–73, 76, 77, (82), 85–93, 96–99, 101, 103–106, 112. H1, 6, 7, 16, 20, 21, 31, 35, 38–40.

- 2 **crispata** (With.) Lindb. 2–4, 40–42, 44–50, 57, (59), 60, 64–66, 68–78, 83–92, 96–101, 103–105, 107–110, 112. H1–3, 6–8, 10, 12, 13, 16, 20, 27, 31, 33–36, 38–40.
- 3 **crenulata** (Mitt.) Jameson 41–44, 46, 48–50, 58, 64, 66, 68–70, 72–76, 79, 80, 86–88, 97–101, 103–105, 108, 110. H1, 3, 4, 6, 16, 20, 26–28, 33, 35, 36, 40.

24. Cynodontium Schimp.

- 1 **strumiferum** (Hedw.) De Not. 89, 90, 92, 93, 96, 104.
- 2 **polycarpon** (Hedw.) Schimp. 48, 68, 70, 90, 96.
- 3 **jenneri** (Poech) Limpr. 48, 49, (65), 66, 68–70, 72, 73, 75, 78, 80, (81), 85–92, 95–98, 101, 105, 107–109, 111.
- 4 **tenellum** (Br. Eur.) Limpr. 81, 87–92, 95, 96.
- †6 **fallax** Limpr. (90).
 - 7 **bruntonii** (Sm.) Br. Eur. (1) 1–6, (16), 34–37, 40–50, 52, 57, 58, (59), 62, (63), 64–78, 80–93, 95–100, 105, 106, 108, 109. H1, 4–7, 12, 13, 20, 30, 36, 39. C.

25. Oncophorus (Brid.) Brid.

- 1 **virens** (Hedw.) Brid. 69, 70, 87–90, 92, 96–98, 104, 107, 108.
- wahlenbergii Brid. 87, 88, 90, 92, 97–99, 105, 106.

26. **Dichodontium** Schimp.

1 **pellucidum** (Hedw.) Schimp. 1–6, 8–17, 27, 30, 33–52, (55), 56–60, 62–112. H1–10, 12–14, 16, 18, 20, 21, 25–40.

- 2 **flavescens** (With.) Lindb. (3, 59) 37, 40, 41, 44, 47, 49, 50, 52, 57–60, 62–65, 68, 70, 72, 73, 75, 77, 86, 88, 90, 96, 98. H20, 21, 29, 40.
- 27. Aongstroemia Br. Eur.
 - 1 **longipes** (Somm.) Br. Eur. 88, 89, 95, 96, 98, 99.
- 28. **Dicranella** (C. Muell.) Schimp.
 - 1 **palustris** (Dicks.) Crundw. ex Warb. 1–6, (14), 34–37, 39–52, 57–60, 62–112. H1–10, 12–14, 16, 18, 20, 21, 25, 27–40.
 - 2 **schreberana** (Hedw.) Dix. 1–25, 27–72, 74–91, 93–95, 97–99, 101, 102, 104–106, 108–112. H1–16, 20–26, 28–30, 32–40. C.
 - 3 **grevilleana** (Brid.) Schimp. 88, 89, 98, 106. H20, 28, 29.
 - 4 **crispa** (Hedw.) Schimp. 1–3, 13–15, (16, 17), 21, 25, (38), 39, (48), 57, 58, (59), 61, 62, (63), 64–72, 76, 77, 80, 81, 85, 86, 88–92, 94–98, 106, 107, 109, 111. H1, 2, 5, 16, 28, 29, 34, 38–40.
 - 5 **subulata** (Hedw.) Schimp. (1), 2–4, 10, 17, 35, 39, 41–44, 47–50, 58, (59), 60, 62, (63, 64), 65–73, 75, 76, 78, 80, 81, 83, 85–99, 101, 104–112. H1, 3, 5, 6, 12, 13, 16, 17, 21, 35, 36, 38, 39.
 - 6 **rufescens** (With.) Schimp. (1) 1–9, 11–20, 22, 23, 25, 27, 32–51, 54, 55, 57–112. H1–10, 12, 14, 16, 20, 21, 27–32, 34–36, 38–40. C.
 - 7 **varia** (Hedw.) Schimp. 1–92, 94–102, 104–112. H1–40. C.
 - 8 **staphylina** Whitehouse 1–39, 42–53, 55–64, 66, 67, 70–86, 88–92, 94, 95, 98, 99, 101, 106–109, 112. H3, 5, 6, 8, 9, 12, 16, 20, 22, 25, 29, 37. C.

- 9 **cerviculata** (Hedw.) Schimp. (1) (1, 2), 3–6, 8–22, (23), 24–28, 30–35, 37–40, 42–46, 48–50, (52), 54, 55, 57–70, 72–78, 81–92, 95–99, 102, 104, 105, 108, 109, 111, 112. H1–6, 12–14, 16–18, 20–26, 28–40.
- 10 **heteromalla** (Hedw.) Schimp. 1–112. H1–16, 18–40. C.

29. Dicranoweisia Lindb. ex Milde

- 1 **cirrata** (Hedw.) Lindb. ex Milde (1) 1–107, 109, 112. H1, 3–6, 8, 12, 13, 19–22, 25, 31, 34–40. C.
- 2 **crispula** (Hedw.) Milde 49, (62, 65), 69, 72, 73, 75, (86), 87–92, 94–99, 103–108.

30. Arctoa Br. Eur.

1 **fulvella** (Dicks.) Br. Eur. (1) (48), 49, (65), 69, 70, 72, 73, 86–90, 92, 94, 96–98, 100, 103–106, 108, 110. H1, 35.

31. Kiaeria Hagen

- falcata (Hedw.) Hagen 49, (65, 66, 69), 70, 72, 78, 86–90, 92, 94, 96–98, 100, 102, (104), 105–108, 110.
- 2 **blyttii** (Schimp.) Broth. (48), 49, (65), 66, 68–70, 72, 73, 78, 86–94, 96–99, 104–108, 110. H35, 40.
- 3 **starkei** (Web. & Mohr) Hagen (65), 69, 86–90, 92, 94, 96–98, 103–109.

32. **Dicranum** Hedw.

- 1 **glaciale** Berggr. 88–90, 92, 94, 96–98, 106.
- 2 **polysetum** Sw. (1) 17, 22, 26–28, 30, 31, 34, (38), 40, 54, 55, 58, 59, 61, 62, 64, 69, 70, 73, 80, 85, 87–90, 92, 95, 96.

- 3 **bonjeanii** De Not. 1–18, (19), 20–28, 30, 32–52, 54–112. H1–4, 6–13, 15–31, 33–40. C.
- 4 **leioneuron** Kindb. 46, 67, 70, 88, 92, 98.
- 5 **scoparium** Hedw. 1–112. H1–40. C.
- 6 **majus** Sm. 1–24, 27, 28, (29), 30, 32–52, (53), 54, 55, 57–112. H1–14, 16, 20–22, 25–31, 33–36, 38–40. C.
- 7 **spurium** Hedw. (1) (3), 5, 8, 9, 11–14, 17, 22, 27, 28, (38), 54, 61, 62, (63, 64, 68, 69, 72, 85), 87, 88, 90, (91), 92, 95, 96.
- 8 **undulatum** Schrad. ex Brid. (1) 40, 46, 58, (59, 68), 70, (80), 81, 88, 89, 92, 95, 96, 109. H18.
- 9 fuscescens Sm.
 - var. **fuscescens**1–3, 5, 11, 13, 14, 17, 34, 36, 37, (38), 39–51, 57–70, 72–83, 85–112. H1–4, 6, 7, 12, 13, 16, 20, 21, 26, 27, 29, 30, 33–36, 38–40.
 - b var. **congestum** (Brid.) Husn. (65), 66, 68, 88, 92, 94, 97, 98, 105, 108–110.
- 10 **elongatum** Schleich. ex Schwaegr. (68, 90), 92, (96, 97, 105, 109, 112).
- 11 **scottianum** Turn. (1) 1–5, 14, 16, 34–36, (39), 41, 44–50, 52, 58, 60, (62), 67, 68, 70, 73, 75, 80, 86–90, 92, 97–105, 108, 110, 111. H1–8, 16, 20, 25–30, 33–36, 38. C.
- 12 **montanum** Hedw. (1) 6–8, 11–25, 29, 30, 32, 34, 36–41, 47, 50, (54), 55, 57, 58, 64, 66–70, 80, 81, 83, 88–90, 95, 96, 99, 112.
- 13 **flagellare** Hedw. (1) 3, 12, 13, 15–17, 19–23, 30, 38, (39), 64, 73, (88).

14 **tauricum** Sapehin (1) 6, 7, 9, 13–24, 29, 32–34, 36–41, 47, 50, 53, 55, 57, 58, 60–68, 76, 78, 83–86, 95, 96, 106.

33. Dicranodontium Br. Eur.

- 1 **uncinatum** (Harv.) Jaeg. 69, 70, 73, 86–89, (90), 92, 94, 96–99, 102, 104–108, 110. H2, 16, 27.
- 2 **asperulum** (Mitt.) Broth. 80, 86–88, 90, 92, 94, 96–99, 102, 105–108. H29, 30, 33.
- 3 **subporodictyon** Broth. 97.
- 4 denudatum (Brid.) Broth.
 - a var. **denudatum**3, 11, 13, 14, 39–50, 57, 58, (59), 60, 62–67, 69, 70, 72, 73, 78, 80, 83, 86–92, 96–110, 112. H1–3, 6, 12, 14, 16, 20, 21, 27, 28, 30, 33–36, 38–40.
 - b var. **alpinum** (Schimp.) Hagen 48, 49, 59, 60, 64, 65, 69, 70, 72, 75, 78, 86–88, 90, 92, 97, 98, 105, 106, 108. H1, 2, 16, 20, 21, 27, 39, 40.

34. Campylopus Brid.

- subulatus Schimp.
 2, 4, 11, 14, 17, 36, 41–49, 64, 66, 69, 70, 72, 73, 88–91, 95–101, 103–105, 110, 111. H2, 3, 28, 29, 34–36, 39. C.
- 2 **schimperi** Milde 86–90, 96–100, 104–106, 108, 110–112. H1, 2, 20, 35.
- 3 **schwarzii** Schimp. 46, 48, 49, 69, 70, 73, 86–88, 90, 96–101, 103–110. H1–4, 7, 8, 16, 20, 27, 28, 30, 34–36.
- 4 **fragilis** (Brid.) Br. Eur. 1–6, 9–11, 13–16, 23, 25, 27, 29, 31, 33–37, 40–52, 54, 57–60, 62–75, 78, 79, 81–88, 90, 95–112. H1–8, 10, 16, 18, 20, 21, 24, 27–30, 33–35, 37–40. C.

- 5 pyriformis (Schultz) Brid.
 - a var. **pyriformis** 1–112. H1–23, 25–40. C.

b var. **azoricus** (Mitt.) Corley 2, 3, 6, 8, 10–12, 16, 17, 22, 28, 30, 38, 40, 46, 49, 54, 58, 61–63, 65, 67, 68, 83, 86, 98, 101, 102, 104, 105, 108, 109.

H20, 27, 35.

- c var. **fallaciosus** (Thér.) Corley 12, 17, 22.
- 6 **paradoxus** Wils. 1–112. H1–14, 16–40. C.
- 7 **setifolius** Wils. (1) 48, 49, 69, 70, 73, 97, 98, 100, 103–105, 108, 110. H1–3, 15, 16, (20), 27, 28, 34, 35, (38).
- 8 **shawii** Wils. ex Hunt (1) 97, 104, 105, 108, 110. H1–3, 27.
- 9 atrovirens De Not.
 - a var. **atrovirens** 1–4, 41–50, 52, 57, 58, 60, 62, 64–67, 69–79, 85–93, 95–112. H1–4, 6–9, 12, 14–17, 20, 21, 24, 26–40.
 - b var. **falcatus** Braithw. 69, 72, 75, 102–105, 108, 110, 112. H1, 3, 16, 27, 35.
 - c var. **gracilis** Dix. 48, 49, 64, 65, 69, 70, 88, 90, 97, (104). H3.
- 10 **polytrichoides** De Not. (1) 1–3, 45, 48, 49, 104. H1–3, 16, 27. C.
- 11 **introflexus** (Hedw.) Brid. (1) 1–32, 34–52, 54, 56, 58–60, 62–67, 69–75, 77–92, 95–108, 110–112. H1–31, 33–40. C.
- 12 **brevipilus** Br. Eur.
 1–15, (16), 17, 22, 24, 25, 27–29, 34, 41, 43, 45, 46, (48), 49, 52, 58, 60, 61, (62, 67), 69–73, 81, 87–93, 96–98, 100, 102–112. H1–3, 5–10, 12, 15–17, 20, 21, 26–29, 31, 33–35, 38, 39, C.

- 35. Paraleucobryum (Limpr.) Loeske
 - †1 **longifolium** (Hedw.) Loeske (72, 88, 90).
- 36. Leucobryum Brid.
 - 1 **glaucum** (Hedw.) Ångstr. (60) 1–30, 32, 34–112. H1–31, 33–40. C.
 - 2 **juniperoideum** (Brid.) C. Muell. (60) 2, 3, 5, 9, 11, 13, 14, 16–18, 20, 22, 34, 35, 40, 41, 43, 45, 47–49, 59, 70, 86, 97, 99, 101. H2.
- 37. Fissidens Hedw.
 - 1 **exiguus** Sull. (1) 6, 14–16, 38, 42, 70. H10.
 - 2 **viridulus** (Sw.) Wahlenb. (2, 61) 1–11, 13–20, 23, 24, 29–38, 41, 43, 45–51, 53, 54, 57–60, 63–66, 68–70, 80–82, 85, 86, 90, 94, 100, 101, 105. H1, 7, 11, 12, 15, 19, 22, 27, 28, 32, 33, 36, 37, 39.
 - 2A **pusillus** (Wils.) Milde (F. minutulus auct.) (61)
 - a var. **pusillus** (2) 1, 2, 4–12, 14–17, 19, 20, 23, 29, 32–36, 38–46, 49, 51, 57, 59–65, 67–70, 72–80, 82–84, 87, 90, 91, 97–104, 106–109. H1–9, 15, 16, 20, 27–30, 33, 38, 39.
 - b var. **tenuifolius** (Boul.) Podp. (*F. viridulus* var. *tenuifolius* (Boul.) A. J. E. Smith)
 3, 6–18, 20, 22–24, 28–30, 32–38, 40, 41, 43, 51, 55, 57, 62–65, 68–70, 83, 88, 89, 101. H2, 7–9, 23, 24, 28, 29, 33.
 - 2B **limbatus** Sull. (*F. herzogii* Ruthe ex Herz.) (2, 61)
 1–4, 6, 8, 9, 11, 13, 14, 22, 35, 36, 40–42, 44, 45, 47–49, 57, 59, 60, 69, 71, 73, 83, 84, 98, 101, 103, 104. H1, 3, 21. C.

- 3 **incurvus** Starke ex Roehl. (1) 1–27, 29–41, 43–45, 47, 49–58, (59), 60–66, 68–71, 75, 77, (80), 81–85, 90, 91, 100. H5, 9, 11, 21, 24, 29, 31, 33, 37–39. C.
- 4 **bryoides** Hedw. 1–112. H1–14, 16, 19–25, 27–40. C.
- 5 **curnovii** Mitt. 1–6, 35, 42–50, 59, 60, (64), 68–71, 86, 88, 97–105, 110, 112. H1–3, 5–7, (12), 16, 20, 27, 34, 38. C.
- 6 **rivularis** (Spruce) Br. Eur. (1) 1–5, 9, 14, 34, 35, 42, 43. C.
- 7 **monguillonii** Thér. (1) 3–5, 45, 49. H33.
- 8 **crassipes** Wils. ex Br. Eur. (1) 1–17, 19–30, 32–38, 40, 41, 43, 47–51, 53–55, 57–60, 62–69, 71, 72, 77, 78, 81–84, 86, 88, 91, 98, 104. H5, 8–11, 13, 14, 16, 17, 19, 22, 28, 29, 31, 33, 36–38, 40.
- 9 **rufulus** Br. Eur. (1) 35, 37, 41–44, 48, 49, 60, 62, 64, 65, 69, 70, 72, 79, 80, 89, 90. H6, 19, 20, 33, 34, 38.
- 10 **algarvicus** Solms (1) 1–3, 33, 43, 45, 48, 49. H1.
- 11 **exilis** Hedw. (1) 1–25, 29–45, 47–51, 53–72, 77–79, 81–84, 86, 88–90, 95, 99, 103, 109. H1, 8, 19–22, 32, 38–40. C.
- 12 **celticus** Paton 1-6, 10, 13-17, 34, 42, 44-50, 52, 69, 71, 73, 74, 97-99, 101-104. H1, 3, 5, 7, 8, 10, 16, 27.
- 13 **osmundoides** Hedw. 1–3, 5, 11, 35, 40–52, 57–60, 62–78, 80–83, 85–92, 94–112. H1–4, 6, 7, 9, 10, 12, 14, 16, 18–21, 24, 25, 27–40.

- 14 taxifolius Hedw.
 - ssp. **taxifolius** 1–112. H1–40. C.
 - b ssp. **pallidicaulis** (Mitt.) Moenk. 9, 44, 49, 97, 98, 101–103, 112. H1, 7, 16.
- 15 **cristatus** Wils. ex Mitt. 1–11, 13–20, 22–24, 26–30, 32–55, 57–83, 86–112. H1–23, 25–40. C.
- 16 **adianthoides** Hedw. 1–20, (21), 22–30, 32–112. H1–40. C.
- 17 **serrulatus** Brid. (1) 1, 3, 48. H27.
- 18 **polyphyllus** Wils. ex Br. Eur. (1) 1–3, 47–49, 98, 101, 102. H1–4, 6, 20, 28.
- 38. Octodiceras Brid.
 - 1 **fontanum** (La Pyl.) Lindb. (1) 19, 20, (21), 22–24, 32, (33, 34), 35, (37), 38, 39, (40), 55, (58, 59), 63, 64.
- 39. **Encalypta** Hedw.
 - 1 **alpina** Sm. (1) 49, 64, 88–90, 96–98, 108. H28.
 - 2 **vulgaris** Hedw. (1) 1–10, 12–17, 19, (20, 21), 22–42, 44–47, 49–57, 59–70, 76, 77, 79–92, 94–96, 100, 106, 108, 110. H1, 2, 4–7, 9, 11, 13–16, 18–24, 27, 32, 33, 35, 37, 39, 40.
 - 3 **ciliata** Hedw. 36, 42–44, 48, 49, 64–66, 68–70, 72, 75, 78, 80, 82, 83, 85–92, 94–101, 104–109. H8, 27, 39, 40.
 - 4 **rhaptocarpa** Schwaegr. (1) (49), 64–66, 69, 82, 85, 87–90, 92, 94, 96–98, 104, 105, 107–110, 112. H9, 27–29.
 - †4A **brevicollis** (Br. Eur.) Ångstr. (62) (90).
 - 5 **streptocarpa** Hedw. (1) 1–17, 20, 22–24, 28–92, 94–111. H1–40.

40. Tortula Hedw.

- 1 ruralis (Hedw.) Gaertn.
 - a ssp. **ruralis** 1–73, 75–83, 85–96, 98, 100, 101, 103, 104, 106, 108, 109, 111. H1, 4–11, 13–22, 24, 25, 27–31, 33–35, 37–40. C.
 - b ssp. **ruraliformis** (Besch.) Dix. (1) 1–6, 8–11, 13–17, 19, 20, 22, 23, 25–29, 34, 37, 40, 41, 44–56, 58–62, 66–71, 73–75, 81–86, 90–112. H1, 2, 5, 6, 9, 12, 16, 19–22, 27, 28, 31, 33–35, 37–40. C.
- 2 **norvegica** (Web.) Wahlenb. ex Lindb. 88, 92, 97.
- 3 **intermedia** (Brid.) De Not. 1–73, 75, 77–79, 81–91, 93–95, 98, 100–104, 107–109, 112. H3–9, 12–19, 21–26, 28, 29, 31–35, 38, 39. C.
- 4 **princeps** De Not. 40, 49, 57, (65), 72, 75–77, 81, 83, 85–92, 96, 98, 99, 101, 106, 108. H28, 39, 40.
- 5 **virescens** (De Not.) De Not. 19, 20, 23, 28, 29, 32, 36, 65, 81, 88–91, 94, 103, 106.
- 6 laevipila (Brid.) Schwaegr. (1)
 - a var. **laevipila**1–62, (63), 64–83, 85–91, 94, 95, 97–104, 106, 107, 109, 110. H1–12, 14, 15, 18–23, 25, 28–40. C.
 - b var. **laevipiliformis** (De Not.) Limpr. 1–12, 14–17, 22–25, 27, 28, 30, 33, 34, 36–38, 41, 43, 45, 47, 48, 50, 51, 54, 71, 75, 80, 86, 98. H12, 14, 18, 22, 25, 30, 33, 35.
- 7 **canescens** Mont. 1–4, (14), 43, 45, 47, 48, 101. C.
- 8 muralis Hedw.
 - a var. **muralis** 1–112. H1–40. C.
 - b var. **aestiva** Hedw. 3, 5, 6, 9, 12–14, 16, 17, 19, 21–25, 27, 30, 32–34, 36–39, 50, 53, 55–58, 63–65, 68, 74, 81. H38.

- 9 **marginata** (Br. Eur.) Spruce (1) 2, 3, 5–27, 29, 32–40, 50, 55–58, (59), 61–66, 98, 99. H15, 17, 23, 29, 36, 38, 39. C.
- 10 subulata Hedw.
 - a var. **subulata** (1), 3–20, (21), 22–30, 32–112. H1, 3–5, 8, 9, 11–14, 16, 20–22, 25, 27–40.
 - b var. **angustata** (Schimp.) Limpr. 3, 7, 11, 12, 19, (20), 22, 24, 32, 34–37, 54, 55, 57–59, 61, 62, 64–68, 81–83, 111, 112. H38.
 - c var. **subinermis** (Brid.) Wils. 6–9, 13, 22, 34–36, 42, 43, 47, 50, 57–68, 75, 85, 86, 88. H29.
 - d var. **graeffii** Warnst. 6, 35, 40–42, 44, 57, 64, 65, 69, 70, 72, 78, 80, 86, 89–92, 94, 96–99, 105, 106, 108, 112. H23, 30.
- 11 **papillosa** Wils. (1) 1–9, 11–17, (19–21), 22–29, (30), 32–34, 36–40, 43, 46–51, 53–56, 60–62, 64–66, 68–75, 77–83, 85–92, 94–101, 103, 105, 106. H1, 8–12, 15, 20–22, 29, 31, 34, 36, 38–40. C.
- 12 **latifolia** Bruch ex Hartm. (1) 2–44, 46–51, 53–55, 57–70, 75–77, 79–91, 94. H4, 6–8, 12, 14, 20–22, 36, 38–40.
- 13 **vahliana** (Schultz) Mont. (1) 3–5, 7–9, 13, 16, (17), 19, 20, 29, 33, 34, 36, 41, 54. H21, 39.
- 14 **cuneifolia** (With.) Turn. 1–6, 13, 14, (15, 17, 19, 22), 25, 36, 37, 39, 45, 48, (52). H1, 3–5, 8, 12, 14, 21, 38. C.
- 15 **freibergii** Dix. & Loeske 14.
- 16 **amplexa** (Lesq.) Steere 55.
- 17 **rhizophylla** (Sak.) Iwats. & Saito 10.

- 41. Aloina (C. Muell.) Kindb.
 - 1 **brevirostris** (Hook. & Grev.) Kindb. 9, 11, 17, 19, 20, 22, 29, (57), 58, 61, 63, 64.
 - 2 **rigida** (Hedw.) Limpr. (3) 8, 11, (13), 14, (16), 17, 20, 22–24, (26), 29, (32), 33, (34, 35, 37, 48, 50), 54, 55, (57–59), 61, (62), 63, 64, (69, 77, 82, 83, 85), 89, 96, 99, 106. H19, (21, 38, 39).
 - 3 aloides (Schultz) Kindb.
 - a var. **aloides** 1–11, 13–30, 32–45, 47–72, 75–77, 80–87, 90, 94, 95, 98, 100, 101, 106. H1, 2, 5–9, 11–24, 27–33, 36–40. C.
 - b var. **ambigua** (Br. Eur.) Craig (3) 1–3, 5, 6, (7), 9, 11, 12, (13), 14, 15, 17–23, 25, 26, (27), 28, 29, (32–36, 40, 41), 48–50, (52), 54, (57–60, 62), 63, 64, 66, (68, 69). H(2), 5, 6, 9, (21, 31, 39). C.

Desmatodon Brid.

- 1 **cernuus** (Hueb.) Br. Eur. 56, 58, 63, 64.
- 2 **convolutus** (Brid.) Grout 1–5, 9, 10, 13–15, 36, (38), 41, 44–46, 48, 49, 52, 57, 68, 71, 73, 81, 82, 85, 90, 91, 94, 99, 106. H1, 3–5, 12, 16, 20, 21, 38, 39. C.
- 3 **leucostoma** (R. Br.) Berggr. 89, (90), 92.

Pterygoneurum Jur.

- 1 **ovatum** (Hedw.) Dix. (1) 3, 5, 6, 9, 10, 12–20, 22–34, 36–38, 40, 45, (50, 52), 53–58, (59, 61–64), 66–68, 70, 72, 77, 79, 81–83, 85, 90, 92, 94–96, 106. H4, 21.
- 2 **lamellatum** (Lindb.) Jur. (3, 6, 13, 16, 23, 24), 28, 29, (32, 33, 37, 55, 57, 62–64, 86). H(21, 38).

44. Stegonia Vent.

1 **latifolia** (Schwaegr.) Vent. 88, 89, (90), 92, 94.

45. **Pottia** Fuernr.

- 1 **caespitosa** (Bruch ex Brid.) C. Muell. 1, 6, 8, 9, 11, 13–16, (17), 22–24, 29, 36.
- 2 starkeana (Hedw.) C. Muell.
 - a ssp. **starkeana** var. **starkeana** (4) 1–4, 6, 9, 10, 12–17, 23, 27, 32–34, 37, 40, 41, 45, 47, 49, 51, 52, 56, 59, 68, 69, (90), 101. H4, 5, 21, 33, 38, 39. C.
 - b ssp. **starkeana** var. **brachyodus** C. Muell. 1, 2, (3), 4, 6, 9, 10, (14, 16), 17, (19), 41, 45, (52), 67, (90). H(5, 21). C.
 - c ssp. **conica** (Schleich. ex Schwaegr.) Chamberlain (3) 1–4, 6, 7, 9–11, 13–17, 20, 22–24, 27, 29, 30, 33, 35–38, 40, 41, 44–47, 49–52, 54–60, 62–64, 66, 67, 75, 77, 81, 83–86, 90, 101. H1, 2, 5, 11, 19, 21, 28, 31, 33, 39, 40. C.
 - d ssp. **minutula** (Schleich. ex Schwaegr.) Chamberlain 6–11, 13, 17, 19, 20, (21), 22, 23, (28), 29, 33, 38, 53, 57, (58), 60–65, 67, 111. H(15, 21), 22, (40).
- 3 **commutata** Limpr. 1, 3, 4, 9, 10, 14, (17), 49.
- 4 **wilsonii** (Hook.) Br. Eur. 1–4, (5), 6, 9, 11, 13, 14, (19), 27, 40, 44, 45, 48, (49, 50, 52), 58, (59). H3, 5, 20, 21. C.
- 5 **crinita** Wils. ex Br. Eur. 1–6, 9–11, 13, 14, 25, 26, 41, 44–49, 52, 58, 68, 71, 73–75, 77, 81, 82, 85, 90–94, 101, 106, 108, 109, 112. H1–5, 12, 21, 35, 38–40. C.
- 6 **lanceolata** (Hedw.) C. Muell. (1) 1, (2), 3–17, 19–30, 32–41, 44, 47, 49–58, 60–69, 75, 80–85, 89, 90, 92, 94, 95, 99, 100, 106, 109. H4–6, 19, 21, 22.

- 7 **intermedia** (Turn.) Fuernr. (1), 2–17, (18), 19–30, 32–42, 44–46, 49–52, 54–64, 66–71, 73, 75, 76, 78, 79, 81–83, 85, 88–92, 95, 99, 101, 104–106. H1, 4, 13, 15, 16, 18, 20, 21, 26, 27, 31, 33, 37–39. C.
- 8 **truncata** (Hedw.) Fuernr. 1–92, 94–99, 101–109, 111, 112. H1, 3–10, 12–16, 19–40. C.
- 9 **heimii** (Hedw.) Fuernr. (1) 1–6, 9–11, 13–17, (18), 19–21, 25–29, (32), 34, 35, 37, 38, 41, 44–46, 48, 49, (50), 52–54, 56, 58–62, (63), 64–76, 81–86, 90–112. H2–6, 9, 12, 16, 20, 21, 27–29, 31, 34, 35, 38–40. C.
- 10 **bryoides** (Dicks.) Mitt. (1) 3–11, 13, 14, 16, 17, 19, 20, 22, 23, 25–29, 31–34, 36, 39–41, 45, 47, 49, (50), 52–57, 60–64, 66–70, 82, 85, 90, 109. H21, 39.
- 11 **recta** (With.) Mitt. (1) 1–17, 19, 20, 22–24, 26–30, 32–34, 36, 37, 40, 41, 45–47, 49–57, (59), 60, 61, 63–66, 69, 71, 75, 81, (83), 101, 111. H1, 4, 5, 7, 8, 11, 16, 20–23, 28, 31, 34. C.

46. **Phascum** Hedw.

- 1 cuspidatum Hedw.
 - var. **cuspidatum**1–73, 75, 77, 78, 80–86, 88–93, 95, 96, 99–101, 106, 109–111. H1, 3–9, 11, 12, 14–18, 20–24, 26, 28, 29, 31–35, 37–40.
 - b var. **piliferum** (Hedw.) Hook. & Tayl. 1–3, 5, 9, 10, 13–16, 18, 19, 25, 29, 41, 67, 68, 81, 82, (83), 84, 85, 89–91. C.
 - c var. **schreberanum** (Dicks.) Brid. 6, (17), 20, (29), 40, 61, 62, 66.
- 2 **curvicolle** Hedw. 1, 3–6, 8–17, 19, 20, 22–24, 26–30, 32–34, 36–38, 40, 49, (50), 52–54, 56, 57, 61, 63–66, 68, 69, 81, 90, 94, 106. H16, 21.

- 3 **floerkeanum** Web. & Mohr 5, 7–17, 19, 20, 22–24, 27, 29, 30, 33, 34, (49), 58, 61, 62, (63), 66.
- 47. Acaulon C. Muell.
 - 1 **muticum** (Brid.) C. Muell. (*A. minus* (Hook. & Tayl.) Jaeg.) (1, 63) 1–17, (18), 19–27, 29–41, 43, 45, 46, (48, 50), 52, 54–62, (63), 64–69, 71–73, 77, (80), 81, (83), 85, 87–92, 95, 100, 106. H1, 4, 21, 34, 35, 39, 40. C.
 - 3 **triquetrum** (Spruce) C. Muell. (3), 9, 10, 14.
- 48. **Hyophila** Brid.
 - 1 **stanfordensis** (Steere) Smith & Whitehouse (1) 1, 17, 19, 21, 29, 33–37, 39, 40, 42, 43, 47, 50, 63, 64, 78, 82, 83. H21.
- 49. Barbula Hedw.
 - 1 convoluta Hedw.
 - a var. **convoluta** 1–112. H1–40. C.
 - b var. **commutata** (Jur.) Husn. 1–20, 22–25, 27–29, 31–37, (38), 39, 41–50, 55, 57–65, 67–72, 74, 76, 81, 83–91, 98, 99, 101–104, 106, 110. H1–13, 16, 17, 20, 21, 24, 25, 27–40. C.
 - 2 **unguiculata** Hedw. 1–112. H1–40. C.
 - 3 **hornschuchiana** Schultz (1) 1–41, 43–70, 72–91, 93–112. H1–3, 5, 7–9, 12, 15, 16, 19–23, 26–28, 30, 33, 35–40. C.
 - 4 **revoluta** Brid. 1–91, 94–111. H1–14, 16–40. C.
 - 5 **acuta** (Brid.) Brid. 1, 4, 6–9, 13, 14, 16, 17, 20, 22, 23, 25, 29, 33, 34, 36, 37, 40, 41, 43, 45, 47, 49, 50, 52–54, 56–58, 63, 64, 69, 90, 93. H6, 8, 9, 18, 26–28, 31, 38. C.

- 6 **icmadophila** Schimp. ex C. Muell. 70, 88, 89, 94, 104.
- 7 **fallax** Hedw. 1–73, 75–112. H1–40. C.
- 8 **reflexa** (Brid.) Brid. (1) 1, 3, 6, 12–15, 17, 20, 22–24, 27, 28, 30, 32–36, 38–43, 45, 46, 48, 50–53, 56, 57, (59), 60, 62, (63), 64–70, 72, 75, 82, 86–89, 91, 92, 94, 95, 97, 98, 101, 103, 105–111. H1–3, 9, 11, 12, 15, 16, 19, 21–23, 25–29, 32–35, 38–40.
- 9 **maxima** Syed & Crundw. H28, 29.
- 10 **spadicea** (Mitt.) Braithw. 3, 6, 12, 14, 16, 33–37, (38), 39–45, 47, 50, (52, 55), 57, 59, 60, 62–73, 75–95, 97–106, 108–112. H1, 4–7, 9–11, 14, 19, 20, 23, 25, 27–33, 35, 36, 38–40.
- 11 **glauca** (Ryan) Moell. 7, (13, 65).
- 13 **mamillosa** Crundw. 87.
- 14 **rigidula** (Hedw.) Mitt. 1–112. H1–6, 8–30, 32–40. C.
- 15 **nicholsonii** Culm. 2, 3, 5, 11, 13, 17, 20–25, 29, 32, 34–38, 42, 62, 64, 67, 68, 80, 81, 100. H2, 5, 12.
- 16 **trifaria** (Hedw.) Mitt. 1–26, 28–30, 32–42, 44, 45, 47–50, 52–57, (59), 60–72, 74, 78, 80–85, 94. H1, 2, 4–6, 8, 12, 13, 17, 18, 21–23, 26, 29, 31, 33–35, 38, 39. C.
- 17 **cordata** (Jur.) Braithw.
- 18 **tophacea** (Brid.) Mitt. 1–11, 13–42, 44–91, 93–112. H1–6, 8–10, 12, 14–23, 25–29, 31–40. C.
- 19 **vinealis** Brid. (1) 1–40, 45–55, 57–69, 72, 73, 78, 80–86, 88, 92, 96, 97, 99–101, 106, 108, 110. H4–6, 11, 12, 14, 18–21, 24, 27, 28, 33, 34, 36–39. C.

- 20 **cylindrica** (Tayl.) Schimp. 1–25, 29–112. H1–14, 16–40. C.
- 21 **recurvirostra** (Hedw.) Dix. 1–112. H1–14, 16–40. C.
- 22 **ferruginascens** Stirt. 5, 36, 39, 41–44, 47–50, 59, 64–67, 69, 70, 72, 75, 78, 86–92, 96–101, 104–106, 108, 110, 111. H1, 7, 9, 10, 14, 16, 27–29, 34, 35, 39, 40.

50. **Gymnostomum** Nees & Hornsch.

- 1 **calcareum** Nees & Hornsch. (1, 64) 1–6, 8–10, 15, 33–37, 40–42, 44, 45, 49, 50, 57, 62–66, 69, 73, 95, 97, 98, 101, 102, 104, 105, 108, 112. H4–6, 8, 9, 11, 14, 16, 28, 29, 33–36, 38.
- 2 **aeruginosum** Sm. 2, 3, 5, 6, 35, 36, 39–45, 47–50, 57–60, 62–92, 94–112. H1–3, 6–9, 16, 20–23, 25–29, 31, 33–36, 38–40.
- 3 **recurvirostrum** Hedw. 1, 40–42, 44–46, 49–51, 57, 59, 60, 62, 64–72, 76, 77, 81, 82, (83), 84–91, 94–112. H1, 2, 4, 9, 10, 16, 18, 20–23, 26–31, 33–36, 38–40.
- 4 **insigne** (Dix.) A. J. E. Smith 88, 97, 98, 104, 105, 108. H28, 29.

51. Gyroweisia Schimp.

- 1 **tenuis** (Hedw.) Schimp. (1) 1–17, 19–24, 28, 29, 32–42, 45, (49), 50–52, 54, (55), 56–77, 80–86, 88–91, 95–102, 104, 106, 108. H1, 3, 5, 6, 8, 11, 15, 16, 20, 21, 28, 29, 31, 33–36, 38–40.
- †2 **reflexa** (Brid.) Schimp. (38).

52. Anoectangium Schwaegr.

1 **aestivum** (Hedw.) Mitt. 39, 41–44, 46–50, 59, 62, 64–67, 69, 70, 72, 73, 75–81, 83, 85–92, 95–108, 110. H1–3, 6–9, 16, 20, 27, 28, 31, 33–35, 38, 39.

- 2 warburgii Crundw. & Hill 48, 49, 86–90, 92, 96–101, 103–108, 110, 112.
- Eucladium Br. Eur.
 - 1 **verticillatum** (Brid.) Br. Eur. (1) 1–7, 9–17, (19), 20, 22–24, 27–30, 32–52, (53), 54–91, 93–95, 97–112. H1, 2, 4–24, 26–29, 31–40. C.

54. Weissia Hedw.

- 1 controversa Hedw.
 - a var. **controversa** 1–112. H1–9, 11–40. C.
 - b var. **crispata** (Nees & Hornsch.) Nyholm (3, 65) (3), 8–10, 17, (33), 40, 49, 50, 52, (60), 64, (69), 80, 81.
 - c var. **densifolia** (Br. Eur.) Wils. 1–6, 36, 46–51, 60, 64–67, 70, 71, 81, 84, 87. H1, 10.
- wimmerana (Sendtn.) Br. Eur. 96.
- 3 **perssonii** Kindb. 1, 2, 4, 36, 41, 44–46, 48, 49, 71, 73–75, 98, 101, 103–105, 112. H3, 6, 27, 34, 35, 39. C.
- 4 **rutilans** (Hedw.) Lindb. (1) 1–7, 9, 10, (11), 13–19, (20), 22, 23, 34–43, 45–50, 52, 57, 58, (59), 60–64, 67–69, 71–73, 77, 79, 82, 83, (84), 85, 86, 88, 91, 92, 97, 98, 101, 102, 105, 107–109, 111. H35, 38–40. C.
- 5 **tortilis** (Schwaegr.) C. Muell. (3) 3, 6, 9–11, 13, (14, 15), 16, 17, (33).
- 6 microstoma (Hedw.) C. Muell.
 - a var. **microstoma**1–17, 19, 20, (21), 22–30, 32–34, 36–41,
 43–46, 48, 49, 51, 52, 54–77, 80–83, 85,
 86, 88–92, 96–100, 102–105, 108, 109,
 111, 112. H1, 4, 5, 15, 20–24, 26, 28, 31,
 34, 35, 37–40. C.

- b var. brachycarpa (Nees & Hornsch.)
 C. Muell.
 1-3, 6, 9-11, 14, 15, 22, 23, 32, 38, 44, 45, 50, 57, 61-64, 82, 83, 98, 109.
- 7 **squarrosa** (Nees & Hornsch.) C. Muell. (4) 3, 10, 13–17, 22, 24, 31, 32, 35, 37, 38, 45, 55–58, (59), 60, (62), 64, 69, 85.
- 8 **rostellata** (Brid.) Lindb. 9, 13–15, 17, 22, 23, 29, 36, (38), 52, 55, 57, 58, 63, 64, 67, 83. H39.
- †9 **mittenii** (Br. Eur.) Mitt. (13, 14, 17).
- 10 **multicapsularis** (Sm.) Mitt. 1–3, 13, 14, 16, 23, 58.
- 11 **sterilis** Nicholson 3, 8–11, 13–17, 20, 22, 24, 29, 30, 33, 37.
- 12 longifolia Mitt. (1)
 - a var. **longifolia**1–3, 6, 13–20, 22, 23, 29, 31–34, 37, 38, 41, 47, 49, 50, 55, 56, 65, 82, 99.
 - b var. **angustifolia** (Baumg.) Crundw. & Nyholm 1, 3, 5–17, 19–26, 28–34, 36–41, 43, 49, 53–58, 60–67. H11, 19, 21, 23, 35, 38, 39.
- 13 **levieri** (Limpr.) Kindb. 6, 41.

55. Oxystegus (Lindb.) Hilp.

- 1 **sinuosus** (Mitt.) Hilp. (1) 1–30, 32–38, 40, 41, 44–46, 48–53, 55–57, 59–68, 70, 71, 75, 79, 81, 97, 98, 103, 112. H1–3, 6–9, 11, 15–17, 19, 21–23, 25, 28, 30, 32, 33, 35–39. C.
- 2 **tenuirostris** (Hook. & Tayl.) A. J. E. Smith a var. **tenuirostris**1–5, 14, 34–36, 39–51, 57, (59), 60, 62–77, 79, 81, 85–91, 94–106, 108, 110. H1–3, 6, 7, 16, 20–22, 26–28, 31, 33–36, 38–40.
 - b var. **holtii** (Braithw.) A. J. E. Smith 48–50, 59, 66, 69–71, 87, 90, 97, 98, 100, 101, 104. H1, 2.

- 3 **hibernicus** (Mitt.) Hilp. (1) 72, 86, 88, 97–100, 103–106, 110. H1, 2, (5), 16, 27, 35.
- 56. Trichostomum Hedw.
 - 1 **crispulum** Bruch 1–17, 20, 22–24, 29, 30, 32–53, 55–57, 59–77, 79–83, 85–91, 93–112. H1–12, 14, 16–40. C.
 - 2 **brachydontium** Bruch 1–6, 9–17, 20, 24, 29, 33–37, 39–55, 57–60, 62–76, 78–82, 84–112. H1–3, 5, 6, 8–10, 12, 14–17, 21, 23, 25–31, 33–35, 38–40. C.
- 57. Tortella Limpr.
 - 1 **fragilis** (Hook.f. & Wils.) Limpr. 85, 88, 107, 109, 110.
 - 2 **tortuosa** (Hedw.) Limpr. 2–7, 9, 11, 13, 14, (16), 17, 20, 22–24, 29, 30, 33–37, (38), 39–60, 62–83, 85–112. H1–40. C.
 - 3 flavovirens (Bruch) Broth.
 - a var. **flavovirens**1–6, 9–11, 13–15, 25, 27, 28, 34, 41, 45, 46, 48–50, 52, 54, 59–61, 67, 68, 70, 71, 73–76, 81, 82, 84, 85, 90, 91, 93–95, 97, 98, 100–103, 105, 106, 109–112. H1–3, 5, 6, 8, 9, 12, 16, 17, 21, 27, 28, 34, 35, 37–39. C.
 - b var. glareicola (Christens.) Crundw.
 & Nyholm
 1, 2, 6, 9, 13, 14, 27, 41, 44, 68, 91, 101–103. H9, 20, 31, 35. C.
 - 4 **inclinata** (Hedw.f.) Limpr. 17, (23), 28, 29, 33, 41, 44, 45, 48, 52, 53, 65, 66, 69, 70, 82, 85, 91, 95, 100, 106, 107, 109. H27, 38.
 - †5 **limosella** (Stirt.) Rich. & Wall. (97).
 - 6 **densa** (Mol.) Crundw. & Nyholm 33, 64–66, 69, 71, 98, 105, 108. H9, 26–28.

- 7 **inflexa** (Bruch) Broth. (1) 6–17, 20, 23, 24, 29, 30, 33, 34.
- 8 **nitida** (Lindb.) Broth. (1) 1–6, 9, 20, 34–36, 39, 41–45, 48–52, 57, 60, 64, 69, 71, 73, 75, 87, 98, 100–102. H1–3, 5, 7, 9, 10, 15–17, 22–24, 26, 28.
- 58. Pleurochaete Lindb.
 - 1 **squarrosa** (Brid.) Lindb. (1) 1-6, 8-11, 13-17, 22, (23), 26, 28, 33, 34, 36, 40, 41, 45, 47, 50-52, 57, 60, 64, 69. H9, 20-22. C.
- 59. Trichostomopsis Card.
 - 1 **umbrosa** (C. Muell.) Robins. 10, 11, 14, 15, 17, 20, 21, 24, 29.
- 60. **Leptodontium** (C. Muell.) Hampe ex Lindb.
 - 1 **flexifolium** (With.) Hampe (1) 1–6, 11–14, 16, 17, 20, (21), 22, 24, 28, 30, 32, 34–41, 43, 45–52, 55, 57–60, 62–84, 86–92, 96–102, 104–106, 108–111. H1, 3, 6, 10, 12, 13, 20, 21, 27–30, 33, 35, 37, 39.
 - 2 **gemmascens** (Mitt. ex Hunt) Braithw. (3, 5), 10, (11, 13, 14, 16), 17, 20, 21, 23, 24, (33), 36, (90).
 - 3 **recurvifolium** (Tayl.) Lindb. (1) 48, (49), 69, 70, 86–88, 96–98, (99), 104–108, 110. H1–3, 16, 27, 35.
- 61. Cinclidotus P. Beauv.
 - 1 **fontinaloides** (Hedw.) P. Beauv. (1) 1–17, 20–24, 29–52, (54), 55, 57–92, 94–105, 107–112, H1–17, 20–40.
 - 3 **mucronatus** (Brid.) Mach. (1) 2–20, 22–24, 29, 32–45, (49, 52, 54), 59, 64, 66, (80).
- 62. Coscinodon Spreng.
 - 1 **cribrosus** (Hedw.) Spruce (1) 2, 4, 44–50, 62, 69, 70, 72, 73, 83, 88, 94.

63. Schistidium Brid.

- 1 **maritimum** (Turn.) Br. Eur. (1) 1–5, 44–46, 48, 49, 52, 58, (59), 60, (62), 66, 68–71, 73–76, 81–85, 90–112. H1, 3–6, 8, 9, 12, 13, 16, 17, 20, 21, 27–29, 31, 34, 35, 38–40. C.
- 2 alpicola (Hedw.) Limpr.
 - a var. alpicola 36, 42, 43, 48, 57, 60, 63–70, 72, 80, 81, 84, 88–92, 95, 96, 98, 104, 112. H19.
 - b var. **rivulare** (Brid.) Limpr. 2–5, 34–40, 42–52, 55, 57–62, 64–109, 111, 112. H1–7, 16, 20, 21, 28–30, 33, 34, 38–40.
- 3 **agassizii** Sull. & Lesq. 65, 66, 69, 88.
- 4 **apocarpum** (Hedw.) Br. Eur.
 - var. **apocarpum** 1–112. H1–40. C.
 - b var. **confertum** (Funck) Moell. 3, 43, 47–49, 65, 69, 70, 76, 77, 79, (80, 83), 85, 87–90, 96–99. H26, 31, 32, 38–40.
 - c var. homodictyon (Dix.) Crundw. & Nyholm (1) 69, 88–90, 92, 94, 97, 98, 101, 104, 105, 108.
- 5 **atrofuscum** (Schimp.) Limpr. 92, 96.
- 6 **strictum** (Turn.) Loeske 3, 36, 37, 44, 46, 48, 49, 57, 59, 60, 64–66, 68–70, 72, 73, 75, 85–90, 92, 94, 96–101, 103–111. H1–4, 6, 8, 13, 18, 25, 27–30, 35, 39.
- 7 **boreale** Poelt 88, 90, 98.
- 8 **trichodon** (Brid.) Poelt (1) (49), 64, 66, 69, 70, 87–90, 92, 96–98, 108.

64. **Grimmia** Hedw.

1 **anodon** Br. Eur. 69, 83, 98.

- †2 **crinita** Brid. (38).
 - 3 **laevigata** (Brid.) Brid. (1) 1, (2), 3, 4, (7, 14), 15, (16, 22), 34, 36, (43), 45, (48), 49, 50, (52, 55), 57, 71, (82), 83, (85, 87–90), 98, (99), 103. H(3), 5, (39). C.
 - 4 **montana** Br. Eur. (1) 3, 35, 40, 43, (48, 49, 65), 70, 72, (73), 82, 86, 90, 92, 98. C.
 - 5 alpestris (Web. & Mohr) Schleich. ex Hornsch. (90), 92, 93.
 - 6 donniana Sm.
 - a var. **donniana** (1) 3–6, 35–37, 40–52, 57–60, 63–74, 76–83, 85–101, 103, 104, 108, 110, 112. H1, 2, 6, 7, 19–21, 27, 31, 34, 37–39.
 - b var. **curvula** Spruce (1) 48, 49, (50), 70.
 - 7 **elongata** Kaulf. (1) 49, 68–70, (90, 92).
- 8 **affinis** Hornsch. (*G. ovalis* auct.) (1) (3, 4, 39, 48), 49, (55), 66, 68, (69), 83, (85), 87, 88, (89, 91–93), 97, 98, 101, 102, 104, 105, (108). H1, (4, 38, 39).
- 9 **ovalis** (Hedw.) Lindb. (*G. commutata* Hueb.) (1) 14, (16, 19), 34–36, 42, 43, 50, 66, 69, 70, 73, 81, (82), 85, 88–90, 98, 107.
- 10 **unicolor** Hook. 90.
- 11 **atrata** Mielichh. (1) 46, 48, 49, 69, 70, 72, 88–90, 92, 96, 101.
- 12 **incurva** Schwaegr. (1) 40, 49, 68–70, 73, 89–92, 94, 98.
- 13 **pulvinata** (Hedw.) Sm. a var. **pulvinata**
 - 1–112. H1–40. C. b var. **africana** (Hedw.) Hook.f. 5, 13, (16), 34, 37, 39, 40, 48, 49, 57.

- 14 **orbicularis** Bruch ex Wils. (1) (3), 4, 6, (9, 13, 14), 16, 22, 23, 33, 34, 36, (37, 40), 41, (43, 48), 49–52, 57, (60), 64, (65), 67, 69, (82, 83, 85, 88, 89), 101, 102, 104, 108. H4, 5, (21, 38).
- 15 **torquata** Hornsch. (1) 42, 44, 48–50, 64–66, 68–70, 72, 73, 75, 78, 86–90, 92, 95–101, 103–108. H1, 2, 6, 7, 20, 27.
- 16 **funalis** (Schwaegr.) Br. Eur. (1) 47–49, 64, (65), 66, 69, 70, 72, 73, 75, 77, 78, 85–90, 92, 94, 96–101, 103–110. H1, 4, 7, 16, 20, 27, 34, 35, 38–40.
- 17 trichophylla Grev.
 - a var. **trichophylla** 1–9, 11–14, 16, 17, 22, 29, 34–52, 54, 55, 57, 58, (59), 60–112. H1–4, 6, 8, 9, 13, 14, 16, 18–22, 26–32, 34–40. C.
 - b var. **subsquarrosa** (Wils.) A. J. E. Smith 1–4, 7, 36, 43, 46, 48, 49, 52, (55), 58, 64, 70, 75, 77, 82–86, 88, 89, 98, 99, 101. H1, 8, 11. C.
 - c var. **stirtonii** (Schimp.) Moell. 1, 4, 5, 7, 13, 34, 36, 37, 43–45, 47–50, 52, 57, 58, 60, 64, 68–70, 73, 75, 77, 78, 80–83, 85, 87, 88, 90, 96, 98, 100, 101, 111, 112. H12, 19, 21, 38, 39.
 - d var. **tenuis** (Wahlenb.) Wijk & Marg. 77, 92, 96–98, 101, 103, 107.
 - e var. **robusta** (Ferg.) A. J. E. Smith 1, 3, (48), 49, 69, 70, 73, 86, 88–90, 92, 96–99, 101–105, 108. H1–3, 16, 21, 35, 38–40.
- 18 **hartmanii** Schimp. (1) 3, 34, 36, 42, 43, 45, 47–50, 52, 64, 66–70, 72–75, 81, 86–93, 95–99, 101–108, 110. H2, 3, 7, 16, 20, 26, 29, 31, 34, 35, 38–40.
- 19 **retracta** Stirt. (1) 36, 42, 43, 47–50, 64, 69, 70, 73, 81, 86, 88, 99, 101, 102, 105, 110. H1–3, 16, 33, 35.

- 20 **decipiens** (Schultz) Lindb. 1, (2), 3, 4, 7, 13, 14, 22, 35, 36, 43–45, (47), 48, 49, 52, (55, 62), 66, 68–70, 73, 79, (80), 82, 85–90, 92, 94, 96–98,
 - 79, (80), 82, 85–90, 92, 94, 96–98, 101–105, 108–110. H6, 16, 20, 21, 31, 38, 39. C.
- †21 **elatior** Bruch ex Bals. & De Not. (90, 92).
- 65. Dryptodon Brid.
 - 1 **patens** (Hedw.) Brid. (1) 2, 3, 44, 48, 49, (57, 65), 68–73, 75, 78, 80, (82), 86–88, 90–92, 94–99, 101–110, 112. H1, 3, 6, 7, 16, 20, 21, 27, 31, 33–35, 38–40.
- 66. Racomitrium Brid.
 - 1 **ellipticum** (Turn.) Br. Eur. (1) 48, 49, (65), 69, 70, 72, 73, 75, 86, 88, 90, 92, 94, 96–99, 101, 103–108, 110, 112. H1, 3, 4, 16, 20, 27, 31, 34, 35, 38–40.
 - 2 **aciculare** (Hedw.) Brid. 1–6, 13, 14, (16), 17, 34–52, 55, 57–60, 62–112. H1–4, 6–16, 18, 20–22, 25–40.
 - 3 **aquaticum** (Schrad.) Brid. 1–6, 35, (37), 40–50, 52, (55, 59), 60, 64–79, 82, 85–92, 95–112. H1–8, 11–13, 16, 18, 20, 21, 24–40.
 - 4 **fasciculare** (Hedw.) Brid. 1-6, 12, 14, 16, 17, 20, 22, 24, 30, 32–52, 55, 57–60, 62–112. H1–4, 6–8, 10–16, 19–22, 24–40.
 - 5 **heterostichum** (Hedw.) Brid. 1–6, 9, 11–17, 22, 24, 29, 30, 32, 34–52, 55–60, 62–112. H1–9, 11–17, 19–22, 24–40. C.
 - 6 **affine** (Web. & Mohr) Lindb. (3, 66) 4, 40–42, 44, 46–50, 60, 64, 65, 68–73, 85–90, 92, 94, 96–101, 105–111. H3, 6, 27, 35, 38, 39.
 - 7 **microcarpon** (Hedw.) Brid. (1) 88, 96, 97, (98, 104), 105, 109, 110. H1.

- 8 **lanuginosum** (Hedw.) Brid. 1–6, 9, 11–14, 16, 17, 20, 22–24, 27, 29, 30, 32–52, 55, 57–112. H1–17, 19–40.
- 9 canescens (Hedw.) Brid.
 - a var. **canescens** 6, 9, (14), 17, 23, 26, 28, 30, 36, (37), 41, 47, 52, (54), 66, 69, 82, (85), 90. H21, 22, 38, C.
 - b var. **ericoides** (Hedw.) Hampe 1–3, 5, 6, (9), 11–14, 16, 17, (20), 25–29, 33–35, 37, 38, 40–45, 47–49, 52, (54, 55), 56–112. H1–8, 11–16, 18–21, 26–40.
- 67. Ptychomitrium Fuernr.
 - 1 **polyphyllum** (Sw.) Br. Eur. 1–6, 13, (32), 33–50, 52, 55, 57–60, 62–112. H1–22, 25–40. C.
- 68. **Glyphomitrium** Brid.
 - 1 **daviesii** (With.) Brid. (1) (2, 3, 48, 49, 52, 69), 70, 86, 97, (98), 99, 100, 103–105, 108, 110. H1–3, 16, 35, 38–40.
- 69. Campylostelium Br. Eur.
 - 1 **saxicola** (Web. & Mohr) Br. Eur. 3, 12–16, 36, 42, 46, 48, 49, 57, 58, (59), 60, 62, 64, 65, 67–70, 77, 80, 86, 99, 103, 104. H1, 2, 20, 21, 28, 29, 40.
- 70. **Discelium** Brid.
 - 1 **nudum** (Dicks.) Brid. (1) 2, 3, 14, 15, 32, 37, 39, 40, 47, 49, 57–60, 62–67, 69, 70, 75, (77, 82), 88, 106. H30.
- 71. Funaria Hedw.
 - 1 **hygrometrica** Hedw. 1–112. H1–40. C.
 - 2 **muhlenbergii** Turn. (67) 3, 6, 9, 34, 36, 41, 42, 47, 50, 57, 60, 62, 64, 69, 88. H4, 5.

- 3 **pulchella** Philib. 2, 3, 6, 9, 13, 34, 41, 47, 49, 51, 52, 60, 94.
- 4 **attenuata** (Dicks.) Lindb. 1–5, 42–50, 52, 58, (59), 60, (62, 63), 64–76, 79, (83), 86–88, (91), 96–112. H1–9, 12, 16, 20, 21, 25, 27–29, 31, 33–36, 38–40. C.
- 5 **fascicularis** (Hedw.) Lindb. (4) 1–20, 22–28, 31–52, 55–60, (61, 62, 64), 66, 67, 69–77, 81, (83), 85–92. H1–5, 8, 16, 19–21, 27, 31, 36, 38–40. C.
- 6 **obtusa** (Hedw.) Lindb. 1–5, 7, 9–17, (20), 24, 27, 34, 36, 37, 40–52, 58, (59), 60, (61), 62–75, 77–81, 83, 85–93, 95–112. H1–7, 9, 10, 12–16, 20, 21, 25–31, 33–40. C.

72. **Physcomitrium** (Brid.) Brid.

- 1 **pyriforme** (Hedw.) Brid. 1–41, 43–77, 79–83, (84), 85–92, 94, 95, 97–99, 101–103, 108–110, 112. H1–5, 8, 9, 11, 13, 18–24, 28, 30, 33, 34, 36–40.
- 2 **eurystomum** Sendtn. (1) 20, 28.
- 3 **sphaericum** (Hedw.) Brid. (1) 14, (17), 39, 57, 58, 63, 64, 76, 83, 85, 86, 99.

73. **Physcomitrella** Br. Eur.

1 **patens** (Hedw.) Br. Eur. (1) 1–9, 11–20, (21), 22–29, (30), 31–34, 36–41, 50–52, 54–68, 76, 79, 82, 83, (84), 99. H4, 8, 9, 14, 15, 17, 21, 22, 24, (39).

74. Micromitrium Aust.

1 **tenerum** (Bruch) Crosby 13, 14, 16, 17, 52.

75. Ephemerum Hampe

- 1 **recurvifolium** (Dicks.) Boul. 3, 5–7, 9–11, 13–17, 19, 20, 22–25, 28–30, 32–34, 37, 38, 49, 54, 55, 58, 66.
- 2 **sessile** (Br. Eur.) C. Muell. 1–3, 5–7, 10, 12–14, 16, 23, 42, 58, 64, 67. H16, 35.
- 3 cohaerens (Hedw.) Hampe 13, 20, 55. H15.
- 4 **stellatum** Philib. 14, 16. H1.
- 5 serratum (Hedw.) Hampe
 - a var. **serratum**1, 2, 4–6, 11, 12, 14, 17, 20, 22–24, 36, 40, 42, 43, 46, 49, 52, 57, 58, 62–64, 67–69, 73, 75, 76, 78, 80–83, 86, 90, 91, 95–101, 104, 105, 109, 112. H1, 3, 12, 13, 20, 34, 35.
 - †b var. **praecox** Walth. & Mol. (13).
 - c var. **minutissimum** (Lindb.) Grout 1–17, 19, 20, 22–29, 31–37, 39–45, 47–52, 55–61, 63–65, 67, 70, 73–76, 78, 80, 81, 83, 87, 89–91, 98, 99, 101, 106, 107, 109, 112. H4–7, 10, 11, 14, 22, 31, 33, 34, 36–40.

76. Oedipodium Schwaegr.

- 1 **griffithianum** (Dicks.) Schwaegr. (1) 42, 44, 47–50, (64), 65, 68–70, 72, 73, 78, (80), 86–92, 96–100, 103–105. H1, 35.
- 77. Tayloria Hook.
 - 1 **lingulata** (Dicks.) Lindb. (1) (86), 88, (90), 92, (98).
 - 2 **longicollis** (Dicks.) Dix. (1) (87, 88, 90–92, 96, 105), 109. H(40).
- 78. Tetraplodon Br. Eur.
 - 1 **angustatus** (Hedw.) Br. Eur. (49), 88–90, 92, 94, 96, 97, 104–106, 108.

- 2 **mnioides** (Hedw.) Br. Eur. 3, 4, 17, 40–43, 46, 48, 49, 52, (54, 57), 58, (59), 60–70, 72, 73, 75–83, 85–111. H1–3, 7, 14, 16, 19, 20, 24, 25, 27–30, 33, 35, 36, 38–40.
- 79. Aplodon R. Br.
 - 1 **wormskjoldii** (Horn.) R. Br. 66, 69, 70, (88), 96.
- 80. Splachnum Hedw.
 - 1 **sphaericum** Hedw. 3, 4, 35, 36, 42–44, 47–50, 57–60, 62–73, 75–81, 83–92, 94–112. H1, 3, 7, 9, 11, 16, 20, 21, 26–30, 33–36, 38–40.
 - 2 **ampullaceum** Hedw. 2–4, (5), 9, 11, 12, 14, (15–17, 22, 23), 25–28, (29–32), 35, 38–46, 48–50, (52, 55), 56, 58–60, 62–70, 72–75, 77, 78, 80–83, 85–92, 95–106, 108–110. H1–3, 7, 9, 12, 14–17, 19–25, 27–29, 33–40.
 - 3 **vasculosum** Hedw. (1) (65), 68, 69, 72, 78, 87–90, 92, 93, 95, 96, 106, 107.
- 81. Schistostega Mohr
 - 1 **pennata** (Hedw.) Web. & Mohr 1–5, 9, 13, 17, 28, 32, 34, 36–40, 42–50, 55–59, 62–65, 68–70, 76, 85, 86, 88, 97. C.
- 82. Mielichhoferia Hornsch.
 - 1 **elongata** (Hoppe & Hornsch. ex Hook.) Hornsch. (1) 62, 92.
 - 2 **mielichhoferi** (Hook.) Wijk & Marg. (1) 92.
- 83. Orthodontium Schwaegr.
 - l **lineare** Schwaegr. (1) 1–3, 5–91, 95, 97–99. H5, 21, 36, 37, 39. C.

- 2 **gracile** Schwaegr. ex Br. Eur. (1) 3, 14, (39, 50, 51), 55, 57, (58), 64, (68), 70, (75, 77), 83, (86).
- 84. Leptobryum (Br. Eur.) Wils.
 - 1 **pyriforme** (Hedw.) Wils. (1) 1–11, 13–42, 45, 46, 48–80, 82–86, 88–93, 95, 97–99, 101–110. H3, 4, 7–9, 14, 21–23, 26, 27, 29, 31, 33, 34, 38–40.

85. **Pohlia** Hedw.

- 1 elongata Hedw.
 - a ssp. **elongata** var. **elongata** 2, 4, 5, (11), 35, 40–44, 46–50, (59), 60, 64–70, 72, 73, 75, 78, 86–90, 92, 96–101, 103–108, 110. H1–3, 6–8, 16, 20, 35, 38, 40.
 - b ssp. elongata var. acuminata (Hoppe & Hornsch.) Hueb.
 46, 49, 69, 70, 86, 88–90, 92, 98, 101, 105, 106, 108. H1, 2, 7.
 - ssp. **polymorpha** (Hoppe & Hornsch.) Nyholm 49, 69, 70, 73, 86–90, 92, 96–100, 104–108. H1, 7, 16.
- 2 crudoides (Sull. & Lesq.) Broth. 96.
- 3 **cruda** (Hedw.) Lindb. 3, 4, 35, 36, 40, 42–44, 46–50, 57, 59, 60, 62–70, 72, 73, 75–101, 103–110, 112. H1, 7, 8, 10, 16, 20, 21, 29, 34, 38–40.
- 4 **nutans** (Hedw.) Lindb. 1–112. H1–25, 27–40.
- 5 **obtusifolia** (Brid.) L. Koch 88, 96, 100, 105.
- 6 **drummondii** (C. Muell.) Andrews (3) 1, 2, (7), 11, 13, 22, 42, 48, 49, (57), 59, 62–64, 67–69, 73, 75, 78, 79, 82, 83, (84), 86–90, 92, 95–99, 105, 106, 108, 112. H2, 16, 27, 28, 34, 35.

- 7 **filum** (Schimp.) Mårt. 17, 44, (60), 73, 74, 83, 85–90, 92–99, 105, 106, 108, 112. H6, 36.
- 8 **rothii** (Correns ex Limpr.) Broth. (3) 1, 2. H3, 6.
- 9 **bulbifera** (Warnst.) Warnst. 2, 38, 42, 44, 47–50, 57–59, 63, 64, 67–69, 73–75, 77–79, 81–84, 87–90, 92, 94–99, 101, 104–108, 111. H1, 3, 4, 16, 27, 28, 33–36, 39.
- 10 **proligera** (Kindb. ex Breidl.) Lindb. ex Arnell (68)
 1-11, 13-25, 27, 30, 32, 34-52, 54-112.
 H1-10, 12-14, 16, 19-21, 25, 27-29, 31, 33-40. C.
- 11 **camptotrachela** (Ren. & Card.) Broth. 1, 2, 4–6, 10, 11, 41, 42, 44–50, 58–60, 63, 65, 68, 69, 71, 73–76, 81–84, 86–90, 94–100, 102, 103, 105, 107, 109, 112. H3, 9, 10, 12, 20, 35, 39.
- 12 **muyldermansii** Wilcz. & Demar. 42, 48, 49, 59, 60, 63, 69, 72–74, 78, 80, 83, 86–88, 95–98, 100, 101, 103–105, 108. H1, 3, 6, 7, 9, 16.
- 13 **ludwigii** (Schwaegr.) Broth. (48), 49, (65), 68–70, 86, 88–90, 92, 94, 96–99, 104–108.
- 14 **lutescens** (Limpr.) Lindb.f. 1–9, 11–20, 22, 23, 27, 29, 30, 32, 34–40, 42–51, 57–60, 62–64, 70–74, 78, 79, 82, 83, 86, 95, 96, 98–101, 104, 107, 109. H2, 8, 10, 12. C.
- 15 **lescuriana** (Sull.) Andrews 3, 6, 8, 10, 12, 15–17, 20, 21, 24, 35, 39, 40, 47–50, 58, 63, 71, 77, 86, 88, 90, 98, 99, 108, 109. H3, 8. C.
- 16 **carnea** (Schimp.) Lindb. 1–85, 88–95, 97–112. H1, 4–9, 11–22, 26–35, 38–40. C.

- 17 wahlenbergii (Web. & Mohr) Andrews
 - a var. **wahlenbergii** 1–24, 28–30, 32–112. H1–40.
 - b var. glacialis (Schleich. ex Brid.)
 Warb.
 49, 57, 68–70, 78, 88–90, 92, 94, 96–98,
 100, 104–107, 110. H28.
 - c var. **calcarea** (Warnst.) Warb. (4) 1, 2, 9, 10, 14, 17, 34, 64. H16, 35, 39.

86. Epipterygium Lindb.

- 1 **tozeri** (Grev.) Lindb. 1–6, 8–11, 13–17, 19, 34–36, 40–50, 52, 71, 98, 101. H2–4, 9, 12, 20, 34, 38, 39.
- 87. Plagiobryum Lindb.
 - **zieri** (Hedw.) Lindb. 35, 36, 39–44, 47–50, 57, (59), 60, 62–70, 72, 73, 75–78, 80, 82, 83, 85–90, 92, 94, 96–101, 103–111. H1, 16, 27–29, 34, 35, 39, 40.
 - 2 **demissum** (Hook.) Lindb. 88, 90, 98.
- 88. **Anomobryum** Schimp.
 - 1 filiforme (Dicks.) Solms
 - a var. **filiforme**1, (3), 35, 36, 39–50, 52, 57, (59), 60, 64–83, 85–112. H1–3, 6, 7, 15, 16, 20, 21, 27–31, 33–40.
 - b var. **concinnatum** (Spruce) Loeske 42, 43, 47, 59, 64–66, 69, 70, 78–80, 83, 88, 92, 96–98, 101–104, 108, 110. H8, 9, 16, 28, 29, 35, 40.
- 89. Bryum Hedw.
 - 1 **marratii** Wils. (1) 46, 48, 49, 54, 59, (60, 62, 70, 75), 81, (85), 90, 101, 109. H(21), 27, 35, 40.
 - 2 **mamillatum** Lindb. (1) (28), 54, (59).

- 3 **warneum** (Roehl.) Bland. ex Brid. (1) 4, (6), 16, 41, 44, 46, 48, (49), 52, 54, (58), 59, (60, 62, 66), 69, (75), 82, 85, 90, 95, 105. H(21).
- 4 **calophyllum** R. Br. (1) (4), 46, 48, (52, 58), 59, (62, 66, 68), 69, (70), 82, (85), 90, 95, 105, (109). H27.
- 6 **arcticum** (R. Br.) Br. Eur. 88–90, 92.
- †7 **lawersianum** Philib. (88).
 - 8 **uliginosum** (Brid.) Br. Eur. (1) (22, 23, 37, 39, 48, 57–64), 65, (68, 70), 72, (77, 85, 86, 90, 92, 108, 109). H(7, 18, 19, 21), 25, (33, 35, 39, 40).
 - 9 **pallens** Sw. a var. **pallens** 1–26, 28–30, 32–73, 75–112. H1, 4–13, 15–21, 23–40.
 - var. **fallax** Jur. (14), 59, 64, 88, 92. H20.
- 10 **turbinatum** (Hedw.) Turn. (1) (13, 23, 35, 39, 48, 59, 67, 96), 104. H27.
- 11 **schleicheri** DC. var. **latifolium** (Schwaegr.) Schimp. 86, (88).
- 12 **weigelii** Spreng. (1) 40, 49, 64, 65, 68–70, 72, 77, 78, 87–98, 103–109, 111.
- 13 **cyclophyllum** (Schwaegr.) Br. Eur. 69, 70, 86, 98, 101, 105.
- 14 **algovicum** Sendtn. ex C. Muell. var. **rutheanum** (Warnst.) Crundw.
 1–7, 9–16, (17), 18–20, 22, 23, 25, 26, 28, (30), 31, 33, 34, 36, 37, 39–50, (51), 52, 54, 56–75, 77, 78, 80, 82–91, 93–97, 100–112. H1, 2, 4–7, 9, 11–14, 16, 18–23, 25, 27–31, 33–35, 38–40. C.
- 15 salinum Hagen ex Limpr.(5), 75, 91, 102, 106, 108. H17.

- 16 **inclinatum** (Brid.) Bland. 1–6, 8–16, (17), 18, 19, (21), 22–25, 28, 29, (30), 32–50, 52, 54–75, 77, 78, 82, 83, 85–99, 101, 103–112. H2–6, 8, 9, 11, 15, 16, 19–21, 23–30, 33, 35, 37, 38, 40. C.
- 17 **knowltonii** Barnes (1) (4, 9), 19, 20, (25, 26), 48, 49, (52), 54, (58–60, 62, 65, 66, 68), 69, 82, 90, 105, 106.
- 18 **intermedium** (Brid.) Bland. (4) (1), 2–6, 8, 10–14, 16, (17), 18, 19, 21–23, 25, 26, 28, 29, 32–34, 36–40, 44–46, (48, 49), 51, (52), 53–70, 73, 74, 77, 81–83, 85, 86, 89–92, 95, 97, 104, 105, 107–109. H4, 12, 21, 31, 34, 37–40.
- 19 **donianum** Grev. (1) 1–10, 12–19, 25, 34, 36, 37, 40, 41, 44, 45, 48–50, 52, 53, 59, 71, 74. H1, 3–5, 7, 19–22, 28.
- 20 capillare Hedw.
 - a var. **capillare** 1–112. H1–40. C.
 - b var. **rufifolium** (Dix.) Podp. (69) 6, 9, 34, 43, 49, 50, 63, 67, 82, 83, 98, 99, 105, 108. H9.
- 21 **elegans** Nees ex Brid. (69) 1, 14, 36, 50, 57, 59, 60, 64–66, 69, 70, 81, 88, 89, 92, 94, 97, 98, 108. H28.
- 22 **stirtonii** Schimp. (69) 68, 87–90.
- 23 **flaccidum** Brid. (69) 2–9, 12–20, 22, 23, 26, 28, 29, 31–35, 37, 40–43, 47, 48, 50, 55–57, 59–69, 74, 78–85, 88, 89, 95, 96. H1.
- 24 **torquescens** Bruch ex De Not. (69) 1, 3, 5, 6, 9–11, 13, 14, 16, (23), 26, 27, 29, 32–34, 36, 41, 45, 48, 50, 52, 54, 63, 64, 66, 75, 86, 87, 106. H2, 34.
- 25 **canariense** Brid. (1) 3, 6, 9, 10, (13, 14), 15, (16), 34, (36), 40, 41, 45, 47, 49, 50, 52, 60. C.

- 26 **creberrimum** Tayl. (1, 70) 9, 11, (13, 14, 16), 17, 23, 29, (34, 42, 43), 49, 50, (57–61), 63, (66), 69, (70), 77, (88), 89, 96, 106.
- 27 **pallescens** Schleich. ex Schwaegr. (1, 70) 1, 2, 6, (14, 16), 18, 19, 22, (32, 34), 38, 39, 47–51, (57, 59, 61, 62), 63, (64), 65, (66), 67, (69–72), 80, 81, (82, 85, 87), 88, 90, 92, 96, 97, (98, 105). H1, (7), 9, 22, 33, (38). C.
- 28 **pseudotriquetrum** (Hedw.) Schwaegr. a var. **pseudotriquetrum** 1–11, 13–17, 19, 20, 22, 23, 25–28, (30), 31–112. H1–12, 14–40. C.
 - var. **bimum** (Brid.) Lilj. (1), 2–6, 9–17, (18), 19–23, 26, 27, 29–34, 36–41, 43–46, 50, 52–66, 68–70, 72, 73, 75, 77, 81–88, 90–92, 94–96, 98, 99, 101, 104–106, 108–110. H1, 2, 4, 5, 8, 9, 11–13, 18, 20, 21, 23, 25, 27, 28, 30–34, 37–40. C.
- 29 **neodamense** Itzigs. 49, 59, (65, 90), 109. H9, 17, 22, 23, 25, 26, 34, 40.
- 30 caespiticium Hedw.
 - a var. **caespiticium** (1), 2–70, 72–92, 94–100, 102–109, 111. H1, 2, 4–9, 12, 13, 15, 18–21, 23, 25, 27, 28, 30–40. C.
 - b var. **imbricatum** Br. Eur. 6, 14, 36, 40, 43, 47, 49, 52, 57, 63, 66.
- 31 **alpinum** Huds. ex With. 1–5, 9–12, 14, 34–36, 40–52, (55), 57–60, 63–76, 78–93, 95–112. H1–9, 13, 14, 16, 20, 21, 24–28, 30, 31, 33–40. C.
- 32 **gemmiparum** De Not. 3, 4, 35, 42.
- 33 **muehlenbeckii** Br. Eur. 88, 92, 96, 97, 103, 105, 106, 108.
- 34 **riparium** Hagen 41, 43, 46–49, 69, 70, 73, 80, 87–90, 92, 95–99, 101–106, 108–110. H1, 6, 16, 38.

- 35 **mildeanum** Jur. (1) 36, 42, 44, (49), 64, (65), 66, (69), 70, (87, 88), 89, 91, (92), 97, 98, 107, 108.
- 36 **dixonii** Card. ex Nicholson 87, 90, (98), 104.
- 37 **bicolor** Dicks. 1–77, 79–112. H1–16, 19–23, 25, 27–40. C.
- 38 **gemmiferum** Wilcz. & Demar. (1) 1, 3, 6–10, 12, 14–24, 26–36, 38, 45, 47–51, 53, 55–59, 61, 63, 64, 66, 68, 71, 81, 82, 88, 97, 101, 106, 108. H4, 8, 12, 21, 22.
- 39 **gemmilucens** Wilcz. & Demar. (1) 6, 9, 20, 27, 29, 34, 38, 62.
- 40 **dunense** Smith & Whitehouse (1) 1–3, 6, 9, 10, 16, 17, 20, 22, 28–30, 41, 45, 46, 48–52, 59, 60, 63, 71, 73, 75, 82, 88, 98, 101, 112. H28, 34, 35. C.
- 41 argenteum Hedw.
 - var. **argenteum** 1–112. H1–40. C.
 - b var. **lanatum** (P. Beauv.) Hampe 1–6, 8–23, 25, 26, 28–39, 41, 43, 45–50, 52, 53, 55–60, 62–74, 76, 77, 81–83, 85, 89–91, 94, 96, 99–101, 104, 106, 108, 109, 111, 112. H1, 2, 5, 6, 9, 11, 16, 20, 21, 28, 31, 34, 37–40. C.
- 42 **radiculosum** Brid. 1–29, (30), 32–55, 57–65, 67–75, 78, 80–83, 85–88, 90, 96–98, 101, 102, 105, 106, 110. H2, 3, 8–12, 14, 20, 21, 23, 29–33, 35, 36, 38, 39. C.
- 43 **ruderale** Crundw. & Nyholm 1, 2, 4–10, 12–39, 41–45, 47–55, 57–60, 62–65, 67, 69, 72, 75, 76, 78, 79, 82–84, 86, 87, 89, 95, 97, 99–103, 108, 109, 112. H1–3, 6–9, 11, 13, 15, 16, 20, 22–25, 34, 35, 39, 40. C.

44 **violaceum** Crundw. & Nyholm 1–6, 8, 9, 12, 13, 15–23, 26, 29, 30, 33, 36–40, 42, 43, 46–51, 53, 55–58, 60–64, 66, 71, 72, 76, 77, 81, 83, 84, 94–96, 98, 99, 101, 106–109. H1, 8, 9, 34, 35, 40.

45 **klinggraeffii** Schimp. 1, 2, 4–20, 22–24, 26–29, 31, 33–40, 44–55, 57–67, 69, 70, 74, 76, 77, 81–84, 87, 88, 91, 95, 98, 99, 101, 106, 108–112. H1, 3, 5, 7–10, 13, 15, 16, 20, 22–25, 27, 28, 34. C.

46 **sauteri** Br. Eur. 1–5, 9, 14–16, 20, 28, 34–37, 42, 43, 45–52, 60, 62, 63, 71, 74–77, 81, 83, 86, 87, 90, 98, 99, 101, 103, 104, 106, 107, 109, 112. H3, 4, 6, 8, 13, 16, 20, 34, 35. C.

47 **tenuisetum** Limpr. 1, 2, 9, 11, 17, 20, 25, 43, 47–50, 52, 57, 59, 61, 63, 78, 83, 86, 90, 97–99, 101, 104, 108. H3. C.

- 48 **microerythrocarpum** C. Muell. & Kindb. 1–7, 9–17, 20, 22–29, 31, 34, 36–39, 41, 42, 44–50, 52–54, 58, 60–67, 69, 71–79, 81–92, 94, 96, 98, 99, 101–104, 109, 111, 112. H1, 3, 5, 16, 20, 22, 23, 29, 37. C.
- 49 **bornholmense** Winkelm. & Ruthe 1, 2, 4–10, 12, 14, 16–18, 20, 25, 27, 28, 30, 31, 33, 34, 36, 39–41, 43, 44, 47–50, 52, 55, 61, 62, 64, 67, 69, 71, 72, 74, 79, 83, 86, 88, 90, 93, 95, 98, 99, 103, 106, 108, 112. H1, 10, 11, 21–23, 28, 29, 35. C.
- 50 **rubens** Mitt. 1–26, 28–84, 86–92, 94–101, 103, 104, 106, 108–110, 112. H1–9, 11–13, 16, 17, 20–23, 25, 27, 28, 31, 34–36, 40. C.

90. **Rhodobryum** (Schimp.) Limpr.

1 **roseum** (Hedw.) Limpr. (1) 2–6, 8–17, 19, 20, (21), 22–30, 32–41, 43–52, 55–60, 62, (63), 64–92, 95–106, 108, 110, 112. H1, 2, 4–6, 8, 9, 15, 16, 18, 20, 22, 26, 29, 31, 33–36, 38–40.

91. Mnium Hedw.

- 1 **hornum** Hedw. 1–112. H1–40. C.
- 2 **thomsonii** Schimp. (1) 49, (60), 64, 65, 69, 70, 72, 87–90, 96–98, 104–106, 108. H9, 16, 28, 29.
- 3 **ambiguum** H. Muell. 88, 90.
- 4 marginatum (With.) P. Beauv.
 - a var. **marginatum**(2), 3, (13, 14), 22, 26, 34–37, 39, 40, 42, 44, 46, 48–50, (52–54), 57–60, 62–70, 72, 73, 75–92, 94–99, 101, 104–109, 111. H1, 6, 16, 20, 28, 29, 33, 34, 39, 40.
 - b var. **dioicum** (H. Muell.) Crundw. (3, 71) (13), 50, (61), 65.
- 5 **spinosum** (Voit) Schwaegr. (1) 88–90, 96–98.
- 6 **stellare** Hedw. 3–10, 12–17, 19, 22–24, 32–52, 54–73, 75–92, 94–108, 110–112. H2, 6, 9, 11, 20, 21, 23, 28, 29, 33, 35, 36, 39, 40.

92. Cinclidium Sw.

1 **stygium** Sw. (26), 27, 28, 48, 60, 64–66, 69, 70, 80, 87–92, 95, 97, 102, 104, 105, 108. H23, 28, 29.

93. Rhizomnium (Broth.) Kop.

- 1 **punctatum** (Hedw.) Kop. 1–112. H1–18, 20–40. C.
- 2 **magnifolium** (Horik.) Kop. 90, 93, 96, 97.
- 3 **pseudopunctatum** (Br. Eur.) Kop. 3, (6), 10–12, 14, (18), 22, 26–28, 36–40, 42–45, 47–52, 56–60, 62–70, 72–78, 80–92, 95–98, 101–106, 108–112. H2, 6, 12, 13, 21, 22, 27, 28, 30–33, 36–40.

94. Plagiomnium Kop.

- 1 **cuspidatum** (Hedw.) Kop. 1–9, 12–17, 19, 20, 22–30, 32–53, 55–70, 72, 73, 75–77, 79–92, 95–99, 101–103, 105, 108–110, 112. H1, 2, 7, 9, 12, 13, 15–17, 20, 21, 23, 24, 26–30, 32, 35, 36, 38–40.
- 2 **affine** (Funck) Kop. 1–3, 5, 6, 8–11, 13–20, 22, 26, 29–34, 38, 39, 41, 43–45, 47–52, 56, 58–60, 63–65, 68, 70, 74, 81, 83, 85, 86, 90, 93–99, 101–103, 105, 106. H12, 14, 17, 20, 36, 38.
- 3 **elatum** (Br. Eur.) Kop. 5–7, 9–15, (17, 18), 19, 22–24, 26–30, 32, 33, 36–50, 52–84, 86–101, 103–112. H2, 5, 8–10, 13, 14, 16, 17, 19, 21–30, 33, 35, 36.
- 4 **medium** (Br. Eur.) Kop. 88, 97, 98.
- 6 **ellipticum** (Brid.) Kop. 1, 3, 6, 13, 14, (21), 22–24, 26–29, 32, 38–46, 48–50, 52, 55–59, 62, 64–77, 79, 80, 82, 83, 85–91, 94–99, 101–106, 108–112. H6–10, 15–17, 19, 22, 23, 27–30, 33, 35, 37–40.
- 6 **undulatum** (Hedw.) Kop. 1–112. H1–40. C.
- 7 **rostratum** (Schrad.) Kop. 2–92, 94–104, 106, 108–112. H1–8, 10, 11, 13, 14, 16–26, 28–40. C.

95. Pseudobryum (Kindb.) Kop.

- 1 **cinclidioides** (Hueb.) Kop. 46, 48, 49, 68–70, 72, 73, 75, 76, 78–80, 87–99, 106, 109, 112.
- 96. Aulacomnium Schwaegr.
 - 1 palustre (Hedw.) Schwaegr.
 - a var. **palustre** 1–112. H1–40. C.
 - b var. **imbricatum** Br. Eur. 10, 26, 36, (54), 64, 66, 75.

- 2 **turgidum**(Wahlenb.) Schwaegr. (65), 88, 96–98, 104–108.
- 3 **androgynum** (Hedw.) Schwaegr. (1) (2), 3–43, 46–51, 53–70, 72, 73, 75–77, 80, 83–97, 99, 100, 105–109. H18, 20, 30, 31, 33, 37–40.
- 97. Paludella Brid.
 - †1 **squarrosa** (Hedw.) Brid. (58, 61, 62).
- 98. Meesia Hedw.
 - 1 **uliginosa** Hedw. (1) 52, 59, 60, 65–67, 69, 70, 75, 78, (82), 85–92, 94–98, 105, 106, 108–110.
 - 2 triquetra (Hook. & Tayl.) Ångstr. H27.
- 99. Amblyodon Br. Eur.
 - 1 **dealbatus** (Hedw.) Br. Eur. 4, (26, 27), 37, (38), 41, 44, 48, 52, 57–60, (62, 63), 64–70, 74, 75, 80, (81), 82, 83, 85–89, (90), 92, 94–96, 105, 106, 108–112. H1, 9, 16, 17, 21, 26–29, 31–35, 38–40.
- 100. Catoscopium Brid.
 - 1 **nigritum** (Hedw.) Brid. (1) 52, 59, 60, (64), 65, 66, 68, (82), 85, 88–90, (92), 94, 98, 105, 106, 108–110, 112. H27, 34, 35, 39, 40.
- 101. Plagiopus Brid.
 - 1 **oederi** (Brid.) Limpr. (1), 34–36, 39, 41–44, 46–50, 57, 60, (62), 64–66, 69, 70, 72, 75–77, (83), 85–92, 94, 96–99, 103, 104. H1, 29, 39.
- 102. Bartramia Hedw.
 - 1 **stricta** Hedw. (14), 43, 47, 88. C.

- 2 **pomiformis** Hedw.
 - 1–17, (18), 19–28, (29), 30, 32, 34–52, 54–60, 62–110. H1–9, 11–13, 16, 19–22, 26–31, 33, 34, 36–40. C.
- 3 **hallerana** Hedw. 35, 42–44, 46, 48, 49, (57, 62), 64–66, 69, 70, 72, 73, 75–77, 80, 86–92, 95–101, 103–106, 108. H1, 2, 4, 6, 7, 20, 27, 36, 39.
- 4 **ithyphylla** Brid. 2, 3, 5, 13–15, (16, 17), 25, 35–37, 40–44, 46–50, (55), 57, 58, (59), 60, 62–112. H1, 6–8, 16, 20–22, 27, 31, 34–36, 38–40.
- 103. Conostomum Sw.
 - 1 **tetragonum** (Hedw.) Lindb. (1) (49), 69, 86–90, 92, 94, 96–100, 103–108, 112.
- 104. Bartramidula Br. Eur.
 - 1 **wilsonii** Br. Eur. (48, 90), 97, 98, 105, 110. H1, 3.
- 105. **Philonotis** Brid.
 - 1 **rigida** Brid. (1) 1, 2, 4, 10, 43, 48, 49, (50), 71, 75, 87. H1–3, 16, 20, 27, 33, 35. C.
 - 2 **marchica** (Hedw.) Brid. 10, (65).
 - 3 **arnellii** Husn. (3) 1, 2, (3), 9, (14), 15, (16), 17, 22, (23, 36, 37), 40, 42–44, 46–50, 57, 58, 64, 67–69, (70, 73), 82, 83, (86), 87, 90, 95, 97, 98, 104, (109). H16, 36. C.
 - 4 **caespitosa** Wils. (3) 1, 2, 4, 6; 8, 9, 11, 13, 14, 17, 22, 38, 40, 41, 43, 45, 47–49, 57–60, 63–65, 67–70, 81, 83, 90, 95, 99. H1, 4, 16, 20, 33. C.
 - 5 **fontana** (Hedw.) Brid. 1–20, (21), 22–28, (29, 30), 32–112. H1–21, 23–40. C.

- 6 **tomentella** Mol. (3) 49, 65, 68, 69, (70), 88–90, 96, 98, 105, 110, 112.
- 7 **seriata** Mitt. 49, 88–90, 92, 94–98, 103, 105, 106, 108, 111.
- 8 **calcarea** (Br. Eur.) Schimp. (1) 2-5, 7-9, 11, 12, 22, 23, 26-28, 32-52, (53), 57-70, 72, 74, 75, 77-96, 98-112. H1, 2, 6-9, 11, 15-17, 19-25, 27-29, 31-40.

106. Breutelia (Br. Eur.) Schimp.

1 **chrysocoma** (Hedw.) Lindb. 1–6, (11), 35, 36, 39–52, (54, 55), 57, (59), 60, (61), 62, (63), 64–80, (81), 83, 85–92, 94–112. H1–18, 20, 21, 24–40.

107. **Timmia** Hedw.

- 1 **austriaca** Hedw. (1) 88–90. H28.
- 2 **norvegica** Zett. (1) 87, 88, 97, 98. H28.

108. Amphidium Schimp.

- 1 **lapponicum** (Hedw.) Schimp. (42), 43, 44, 49, 64–66, 68–70, 72, 73, 75, (80), 86–92, 94, 96–99, 104–108.
- 2 **mougeotii** (Br. Eur.) Schimp. 1–5, 35–37, 40–50, 52, 56, 57, 59, 60, 62–92, 94–112. H1–11, 13, 14, 16, 20, 21, 26–31, 33–40.

109. **Zygodon** Hook. & Tayl.

- 1 viridissimus (Dicks.) R. Br.
 - a var. **viridissimus** 1–55, 57–106, 108–112. H1–40. C.
 - b var. **stirtonii** (Schimp. ex Stirt.) Hagen 1–4, 6, 9–11, 13–15, 17, 19, 20, 28, 32, 34–37, 40–45, 47–52, 57, 60, 62–65, 68–75, 77, 80–91, 93–95, 97–104, 106–109, 111, 112. H2–6, 8, 10, 11, 13, 20–22, 26–29, 31, 33–35, 38–40. C.

- 2 baumgartneri Malta
 - 2–7, 9, 11, 13, 23, 33, 35, 42–45, 47, 48, 50, 67, 69, 70, 72, 77, 80, 82, 87–90, 92, 97, 98, 101, 104, 105, 108. H1–3, 14, 20.
- 3 **conoideus** (Dicks.) Hook. & Tayl. (1) 1–14, 17, (19), 20, 22, 23, 33–36, 40–45, 47–52, 58, (59), 60, 62, 64, 65, 69–75, 80, 86–88, 90–92, 97–101, 103–106, 108, 110. H1–5, 8, 10, 12, 14–18, 20, 22, 24–29, 33, 35, 38–40. C.
- 4 **gracilis** Wils. ex Berk.
- 5 **forsteri** (With.) Mitt. (5), 11, 18, 24, (37).

110. Orthotrichum Hedw.

- 1 **gymnostomum** Bruch ex Brid. 96.
- 2 **obtusifolium** Brid. (22–24, 32, 33, 36, 38, 65, 66), 90, (91), 95.
- 3 **striatum** Hedw. (1) 1–16, (17–20, 22, 23), 24–27, 32–37, (38), 40–50, 52, (55), 56, 57, 60, (61–64), 65, 67–73, 75, 77–83, 85–109. H1–6, 9, 12–14, 20, 21, 23, 25, 28, 31–33, 36–40. C.
- 4 **speciosum** Nees (13, 14, 62), 86, 88, 89, (90, 91), 92, 94–96.
- 5 **lyellii** Hook. & Tayl. (1) 1–17, (18), 19, (20, 21), 22–29, (30), 31–50, (51), 52–58, 60, (61, 62), 64–83, 85–101, 103–107. H1, 2, 4, 6–8, 10–14, 18–24, 30–33, 36–40. C.
- 6 **affine** Brid. 1–20, (21), 22–110. H1–6, 8–40. C.
- 7 **rupestre** Schleich. ex Schwaegr. 2, 3, 6–8, 22, 34, 37, (38), 40, 47, 48, (49), 50, 52, 59–61, 65–71, 73–83, 85–93, 95–112. H1, 2, 16, 20, 21, 25–29, 34, 35, 37–40.

- 8 **rivulare** Turn. (1)
 2–5, (9), 13, 14, 16, (17), 33–37, (38), 39, 40, 42–50, (55), 57, 58, (59), 60, (62), 64–70, 72, 73, 75–95, 97, 102, 103. H1, 2, 4, 6, 9, 13, 20, 21, 29, 31, 36, 38–40.
- 9 **sprucei** Mont. 2–6, 8, 9, 11, 13, 14, 16, (17, 19), 32–36, 38–40, 42, 43, 46–50, 55, 57–60, 62–65, 67–70, 72, 73, 75–77, 80, 86, 88. H2, 6, 12, 38, 39.
- 10 **anomalum** Hedw. 1–112. H1–40. C.
- 11 **cupulatum** Brid. a var. **cupulatum** (72) 2–9, 11–14, 16, 17, 19, 20, 22, 23, 25, 27–30, 32–52, 54, 55, 57, 59–73, 75–83, 85–98, 100, 101, 103, 105–108, 112. H1, 2, 4–10, 15–17, 19, 21, 23, 25, 26,
 - 28–30, 32, 34, 35, 38–40. b var. **riparium** Hueb. (72) 6, 9, 14, 22–24, 32, 33, 36, 37, 39, 42, 44, 50, 51, 55, 57, 59, 60, 63–72, 74, 77, 78, 80, 81, 83–91, 93, 94, 101, 106, 108, 109. H6, 8, 9, 21, 22, 24, 26, 33, 34, 36, 38–40.
- 12 **urnigerum** Myr. 97.
- 13 **schimperi** Hammar 3, 26, 27, 32, 90, 91.
- 14 **stramineum** Hornsch. ex Brid. 3, 5, 6, 10–14, (16, 17, 19), 22–24, 32–50, 52, 57, (58), 60, (61), 62, (64), 65–75, 77–83, 85–100, 103, 105–108. H1, 2, 10–12, 20, 38, 39.
- 15 **pallens** Bruch ex Brid. 59, (62), 64, (65), 66, 75, 92, 97, 106. H4, 16, 17, 20, 21, 26.
- 16 **tenellum** Bruch ex Brid. 1–11, 13–17, (19), 22–28, (30), 32–36, (38), 43, 45–50, 52, 55, 57, 58, (59), 60, (61, 62), 64, 65, 67, 69–71, 73–77, 80, 81, 83, 85–91, 97–101, 103–105, 110. H1–3, 5–9, 11, 12, 15, 20, 21, 29, 31–34, 36, 38–40. C.

17 **diaphanum** Brid. 1–112. H1–34, 36–40. C.

18 **pulchellum** Brunton
1–9, 11–16, (17), 22–25, 27, 28, (30),
32–36, 38, 40, 42, 44–52, 54, 55, 57, 58,
60–62, (63), 64–75, 77–101, 103–112.
H2–6, 8–10, 12, 14, 16, 19–30, 32–40.
C.

111. Ulota Mohr

- 1 **coarctata** (P. Beauv.) Hammar (1) 5, 11, (13), 27, (48), 79, 86–88, 90, 92, 96–98, 105, 106. H1, 2.
- 2 **drummondii** (Hook. & Grev.) Brid. 46, 48, 49, 60, (63), 65–70, 72, 73, 75, 79, 81–83, 85–98, 100, 101, 103–109, 111. H1, 2, 6, 7, 10, 20, 21, 33, 35, 36, 39.
- 3 crispa (Hedw.) Brid.
 - a var. **crispa**1–17, (18, 19), 20, (21), 22–28, (29), 30, 32–52, (54, 55), 56–58, (59), 60, (61), 62, (63), 64–77, 79–112. H1–40. C.
 - b var. **norvegica** (Groenvall) Smith & Hill (4) 1-17, 19, (20), 22-24, 27, 32-37, 40-52, 57, 58, 60, (61, 62), 64-83, 85-111. H1-18, 20-22, 24, 27-31, 34-36, 38-40. C.
- 4 **calvescens** Wils. (1) 48, 75, 86, 97, 98, 101–106, 108, 110, 112. H1, 2, 9, 16, 18, 26–30, 33, 35, 39, 40.
- 5 **hutchinsiae** (Sm.) Hammar (2), 3, 4, 7, 44, 48, 49, (62, 65), 69, 70, 73, 75, 86–92, 95–99, 101–110, 112. H1–7, 15, 16, 20, 21, 27, 28, 30, 32, 34, 35, 37, 38, 40.
- 6 **phyllantha** Brid. 1–6, 9–15, 17, 20, 22, (23), 26, 27, 32, 33, 36, 37, 40–50, 52, (54), 58, 60, (61), 62, (64), 65–77, 79–112. H1–40. C.

112. Hedwigia P. Beauv.

- 1 **ciliata**(Hedw.) P. Beauv. (1) 1–7, 9, 13, 14, (16), 17, 22, 34–37, (38), 39–50, 52, (55), 57, (58, 62), 64–110, 112. H1–4, 6–8, 10–16, 19–22, 24–31, 33–40. C.
- 2 **integrifolia** P. Beauv. (1) 48, 49, 52, 69–75, 82, 87–89, 96–98, 100, 101, 103–105. H1, 3, 6, 20, 39.

113. Fontinalis Hedw.

- 1 antipyretica Hedw.
 - a var. **antipyretica** 1–112. H1–40. C.
 - b var. **gracilis** (Hedw.) Schimp. 2, 3, 5, 19, 39, 42, 45, 46, 48, 49, 57, 59, 60, 63–65, 67–71, 74, 78, 80, 83, 86, 88–91, 93, 96–98, 100, 103–108, 110, 112. H1, 7, 12, 16, 21, 38, 39.
 - c var. **gigantea** (Sull.) Sull. 1, 2, 11, 17, (22), 23, 34, 38, 46, 49, 57, 62, 64–66, 70–72, 88, 89, 92, 96–98, 112. H9, 12, 15, 22, 25, 26, 28, 29, 36, 38–40.
 - d var. **cymbifolia** Nicholson 5–7, 14, 21, 24, 31, 32, 57, 64. H9.

2 squamosa Hedw.

- var. **squamosa** 1–5, 36, 37, 39, 40, 42–50, 57–60, 62–77, 80, 83, 86–92, 94–102, 104–110. H1–8, 12, 13, 16, 20, 21, 27, 33–38, 40.
- b var. **curnowii** Card. 1–3, 58.
- c var. **dixonii** (Card.) A. J. E. Smith 48, 49, 57, 63, 70, 97, 103, 110. H33.

114. Climacium Web. & Mohr

1 **dendroides** (Hedw.) Web. & Mohr 1–9, 11–15, 17, (18), 19, 20, (21), 22–112. H1–40.

115. Cryphaea Mohr

- 1 **heteromalla** (Hedw.) Mohr (1) 1–17, (18), 19, (20, 21), 22–29, (30), 32–42, 44–50, 52, (54), 55–59, (61–64), 66–75, 77, 79–83, 85, 87, 88, (90), 97–104, 106, 110. H2–33, 35–40. C.
- 2 **lamyana** (Mont.) C. Muell. 2–4, 44, 46.

116. Leucodon Schwaegr.

- sciuroides (Hedw.) Schwaegr. (1)
 a var. sciuroides
 1–17, (18), 19, (20, 21), 22, 23, 25–50,
 52–57, (59), 60–62, (63), 64, 65, 67–73,
 76, 78–83, 85, 87–98, 103, 105–108. H3,
 6, 7, 9, 11, 14, 16, 18–22, 31, (39). C.
 - b var. **morensis** (Limpr.) De Not. (4) 9, 17, 45, 73, 88, 90, 96.

117. Antitrichia Brid.

curtipendula (Hedw.) Brid. (1) 2-4, 6, 12, 13, (14), 15, (18-20, 22, 23), 25, 27, 32, 33, 35-40, 42, 45, 47-50, 52, (55), 57, 60, (62, 63), 64-66, 68-70, 72, 73, 75, 78, 79, (80), 81, 82, (83), 85-99, 101, 103-112. H1, 3, 6, 12, 20, 28, 32-34, 36, 39, 40.

118. **Pterogonium** Sw.

- 1 **gracile** (Hedw.) Sm. (1) 1–7, 9–14, (16), 17, (26), 34–37, 40–50, 52, 60, 64–66, 68–75, 77–83, 85–92, 96–105, 108, 110. H1–8, 13, 16, 20, 21, 28, 31, 33, 35, 38, 39. C.
- 119. Myurium Schimp.
 - 1 **hochstetteri** (Schimp.) Kindb. (1) 97, 103, 104, 108, 110. H16.

120. Leptodon Mohr

1 **smithii** (Hedw.) Web. & Mohr (1) (1), 2–15, 17, (18), 22, (23), 41, 45, (48), 49, 52, (70). H3, 6. C.

121. Neckera Hedw.

- †1 **pennata** Hedw. (90).
 - 2 **crispa** Hedw. 1, (2), 3–17, 22–24, 30, 33–37, 39–54, (55), 56, 57, 59–83, 85–92, 94, 96–111. H1–10, 15–17, 20, 23–31, 33–40. C.
 - 3 **pumila** Hedw. (1) 1–17, (18–20), 22, 23, 27, 28, 32–36, 40–42, 44–50, 52, (55), 56–58, (59), 60, (62), 64, 65, 69, 70, 72, 73, 75, 77, 86–88, 90, 96–99, 101, 103–105. H1–12, 14–26, 28–33, 36–39, C.
 - 4 **complanata** (Hedw.) Hueb. 1–112. H1–40. C.

122. Homalia (Brid.) Br. Eur.

1 **trichomanoides** (Hedw.) Br. Eur. 1–62, (63), 64–94, 96–102, 104, 106, 109, 111, 112. H1–6, 8–16, 18–26, 28–31, 33–40. C.

123. Thamnobryum Nieuwl.

- 1 **alopecurum** (Hedw.) Nieuwl. 1–27, 29–92, 94–112. H1–40, C.
- 2 angustifolium (Holt) Crundw.57.

124. Hookeria Sm.

1 **lucens** (Hedw.) Sm. (1) 1–6, 8–17, (18), 27, 29, 34–52, (55), 57–60, 62–112. H1–16, 20–22, 24–40. C.

125. Eriopus C. Muell.

1 apiculatus (Hook.f. & Wils.) Mitt. 1.

126. Cyclodictyon Mitt.

1 **laetevirens** (Hook. & Tayl.) Mitt. (1) (1), 102. H1–4, (6), 27, 29.

- 127. Daltonia Hook. & Tayl.
 - splachnoides (Sm.) Hook. & Tayl. (1) 97, 98, 105. H1–3, (21), 29, 30.
- 128. Myurella Br. Eur.
 - 1 julacea (Schwaegr.) Br. Eur.
 - a var. **julacea** (1) (49), 64, 65, 87–90, 92, 94, 96–98, 101, 104, 105, 107, 110. H6, 16, 40.
 - b var. **scabrifolia** Lindb. ex Limpr. (1) 88. H29.
 - 2 **tenerrima** (Brid.) Lindb. 88, 90.
- 129. Myrinia Schimp.
 - 1 **pulvinata** (Wahlenb.) Schimp. 9, 14, (17, 30), 36, 40, 42, 43, 47, 50, 58, (59, 61–63), 64, 73, 75, 77, 86–89.
- 130. Habrodon Schimp.
 - 1 **perpusillus** (De Not.) Lindb. (1) 3, (4), 5, 6, 41, 47, (65), 69, 70, (75), 78, 88, 90, 97, (99, 100).
- Pseudoleskeella Kindb.
 - 1 catenulata (Brid.) Kindb.
 - a var. **catenulata** (1) 49, 64–66, 69, 70, 88–90, 92, 94, 96–98, 108.
 - b var. **acuminata** (Culm.) Amann (1) 69, 88, 89, (90), 94, 96, 104, 105, 108.
 - 2 **nervosa** (Brid.) Nyholm (88), 92, 108.
- 132. Leskea Hedw.
 - 1 **polycarpa** Hedw. 1–9, 11–25, 27–91, 95, 98, 99, 108. H1, 2, 4, 6–8, 12, 13, 15, 19–22, 24, 25, 28–40. C.
- 133. Lescuraea Br. Eur.
 - 1 **patens** (Lindb.) Arn. & C. Jens. 88, 90, 92, 96–98, 106.

- 2 **incurvata** (Hedw.) Lawton (1) 85, 87–90, 92, 94, 96, 97.
- 3 **plicata** (Schleich. ex Web. & Mohr) Lawton 88–90, 97.
- †4 saxicola (Br. Eur.) Milde (88).

134. Pterigynandrum Hedw.

- 1 filiforme Hedw.
 - a var. **filiforme** (1) 42, (49, 57), 68–70, 72, 86–90, 92–98, 104–108, 112. H20, 21, 38, 40.
 - b var. **majus** (De Not.) De Not. (1) (49), 88, 90, 92, 96, 106. H38.

135. Heterocladium Br. Eur.

- 1 heteropterum (Bruch ex Schwaegr.) Br. Eur.
 - a var. **heteropterum** 1–6, 13–16, 34–37, 39–52, 55, 57–60, 62–83, 85–92, 95–112. H1–16, 20–22, 26–31, 33–40. C.
 - b var. **flaccidum** Br. Eur. 1–6, 9, 14–17, 34–37, 39–50, 52, 60, 63–75, 77–83, 86, 88, 90, 97–106, 108. H1–3, 5, 6, 10, 11, 16, 20, 28, 29, 33–35, 38–40. C.
- 2 **dimorphum** Br. Eur. 86–88, 90, 96, 99.

136. **Anomodon** Hook. & Tayl.

- 1 **longifolius** (Brid.) Hartm. (6), 34, (35, 36, 64–66), 88, 90.
- †2 **attenuatus** (Hedw.) Hueb. (88, 90).
 - 3 **viticulosus** (Hedw.) Hook. & Tayl. (1) 1–45, 47–73, 75–83, 85–99, 101–106, 108. H1–11, 13–26, 28–40. C.

137. Thuidium Br. Eur.

- 1 **abietinum** (Hedw.) Br. Eur.
 - a ssp. abietinum 1, 8, 12, 13, 15, (19), 20, 23, 25–29, 32, 33, 41, 44, 45, (49), 52, 53, 55, 64, 66, 69, 71, 75, 82, 85, 87–90, 94, 106. H16, 21, 27, 28, 34, 35, 40. C.
 - b ssp. **hystricosum** (Mitt.) Kindb. 7–9, 11–13, 15–17, 20, 22–24, 30, 64, 65, 88. H28, 34, 35, 40.
- 2 **tamariscinum** (Hedw.) Br. Eur. 1–112. H1–40. C.
- 3 **delicatulum** (Hedw.) Mitt. 1–6, 9, 11, 12, (17), 34, 42–50, 52, 57, 60, 64, 65, 67, 69–80, 82–89, 91, 96–110, 112. H1–3, 6–10, 12, 15, 16, 19–21, 23, 25–31, 33–36, 38–40.
- 4 **philibertii** Limpr. 3–17, (19), 20–30, 32–39, 41–43, 46–52, 54, 55, 57, 60–70, 72–75, 80, 82–90, 94, 97, 98, 100–103, 105–110. H1, 7, 9–11, 14, 16, 17, 19, 22, 23, 28, 32, 34, 35, 37, 39, 40.
- 5 **recognitum** (Hedw.) Lindb. 6, 34, 35, 50, 51, 57, 60, 64, 69, 86–88, 90, 92, 96, 98, 105–108, H9, 26, 29, 40.

138. **Helodium** Warnst.

†1 **blandowii** (Web. & Mohr) Warnst. (58, 62, 64, 65).

139. Cratoneuron (Sull.) Spruce

- 1 filicinum (Hedw.) Spruce
 - a var. **filicinum** 1–112. H1–40. C.
 - b var. **curvicaule** (Jur.) Moenk. 88, 104.

- 2 commutatum (Hedw.) Roth
 - a var. **commutatum**1–7, 9, 10, 12–17, (19, 20), 22, 23, 25–27, 29, (30), 32–112. H1–10, 13–21, 23–29, 31–40. C.
 - b var. **falcatum** (Brid.) Moenk. 1–9, 11, 12, 14, (18), 22–28, 32–55, 57–83, 85–112. H1–3, 8, 9, 11–19, 21–40.
 - c var. **virescens** (Schimp.) Rich. & Wall. 32, 37, 39, 50, 53, 57, 59–62, 64, 65, 67, 69, 92, 103, 108. H29.
 - d var. **sulcatum** (Lindb.) Moenk. 88, 97, 98, 103.
- 3 **decipiens** (De Not.) Loeske 61, (62), 88–92, 96–98, 106.

140. Campylium (Sull.) Mitt.

- 1 stellatum (Hedw.) J. Lange & C. Jens.
 - a var. **stellatum** 1–9, 11–15, (16), 17–20, 22–29, (30), 31, 32, 34–112. H1–40. C.
 - b var. **protensum** (Brid.) Bryhn 1–6, 8–20, (21), 22–26, 29–38, 40–42, 44–55, 57, 59–70, 72, 73, 75–78, 80–84, 86–91, 94–106, 108–111. H1, 2, 4, 7–9, 11, 16, 18, 19, 22, 23, 25, 27–37, 39, 40.
- 2 **chrysophyllum** (Brid.) J. Lange 1–24, 26, 28–30, 32–45, 47–71, 75–77, 80–83, 85, 86, 88–90, 92, 94, 96–98, 100–102, 104–112. H1, 2, 4, 5, 8–12, 14–40. C.
- 3 **polygamum** (Br. Eur.) J. Lange & C. Jens. 1, 3–5, 9, 11, 13–15, 17, (18), 22, (23), 25–27, 29, 31, 37–41, 43–46, 48, 49, 52, 54, 55, 58–62, 64, 67–71, 74–77, 80–83, 85, 86, 88–93, 95, 98, 100–102, 104, 105, 108–110, 112. H3, 9, 12, 13, 16, 19–25, 27, 28, 31–35, 37–40.
- 4 **elodes** (Lindb.) Kindb. 1, 4, 7, 9, 11, 12, 15, (17), 18, 19, 22, 24, 26–30, 34, 38, 40, 44, 48–52, 54, (55), 59–62, 64, 65, 67–70, 73, 80–82, 85, 87, 89, 90, 98, 104–110, 112. H2, 7–10, 12, 15–23, 25, 26, 28, 30, 33, 35–37, 39, 40.

- 5 **calcareum** Crundw. & Nyholm 3, 5–8, 10–18, 20, (21), 22–24, 29, 30, 32–38, 40, 42, (49), 50, 51, (53), 54, 55, 57, 58, 61–65, 67, 69, 70, 73, 75, 85, 86, 88, 89, 94–96. H16, 26, 39, 40.
- 6 halleri (Hedw.) Lindb. 88, 90, 97.

141. Amblystegium Br. Eur.

- 1 **serpens** (Hedw.) Br. Eur.
 - a var. **serpens** 1–106, 108–112. H1–40. C.
 - var. **salinum** Carringt. 1, 3, 5, 6, 18, 41, 44, 45, 48, 50, 52, 59, 60, 62, 68, 69, 73, 75, 82, 85, 90, 91, 101, 105, 108–110, 112. H1, 2, 6, 9, 12, 21, 27, 28, 34, 35, 38, 40.
- 2 **fluviatile** (Hedw.) Br. Eur. 1–5, 22, 33–51, (52), 57–60, 62–70, 72–83, 85–91, 93–95, 99, 103, 109. H4–6, 10, 12, 13, 15, 19, 20, 35, 38, 39. C.
- 3 **tenax** (Hedw.) C. Jens. 2–20, (21), 22–25, 32–53, (54), 55–70, 72–75, 77–90, 94, 99, 101, 106, 109, 111. H1, 2, 5–9, 11, 15, 19–21, 25, 27, 28, 33, 37–40. C.
- 4 **varium** (Hedw.) Lindb. 1, 3, 5–17, 19, 20, (21), 22–27, 29, 30, 32–41, 45, 48–52, 54–62, (63), 64–67, 69–71, 73, 74, 80, 81, 83, 88–91, 97–99, 101, 108, 110. H6, 8, 9, 15–17, 22, 24–26, 28, 30, 33–40. C.
- 5 **humile** (P. Beauv.) Crundw. 3, 4, 6–8, 11–14, 16, 17, 19, 20, 22, 24, 27, 29, 31, 32, 36, 38, 48–52, 54, 58, 61–64, 69, 85, 90, 109. H25, 39, 40.
- 6 **saxatile** Schimp. 2.
- 7 **riparium** (Hedw.) Br. Eur. 1–45, 47–77, 80–92, 95, 98–100, 102–108, 110–112. H1, 2, 4–6, 8, 9, 11, 12, 14–16, 19–33, 35–40. C.

8 **compactum** (C. Muell.) Aust. 3, 10, 34, 36, 37, 40, 57, 60, 63, 64, 66–68, 72, 81, 83, 85, 90, 91, 95, 108. H28.

142. Platydictya Berk.

- 1 **confervoides** (Brid.) Crum (2), 3, 6, 7, 16, 22, 23, 33–36, 39, 41, 42, 50, 57, (62), 64, (65), 69, 70, 90, 94. H8, 9, 16, 20, 21, 28.
- 2 **jungermannioides** (Brid.) Crum (1) 6, 34, 35, (36), 40, 42, 47–50, 57, (59), 63–65, (66), 69, 70, 72, 76, 80, 86–90, 92, 94, 96–99, 101, 104, 106, 108. H11, 28, 29, 33.

143. Drepanocladus (C. Muell.) Roth

- 1 **aduncus** (Hedw.) Warnst. 1–42, 44, 45, 48, 49, 51–78, 80–92, 94–96, 98–105, 107, 109–112. H1–5, 8, 9, 12, 14–16, 20, 21, 23–25, 27–29, 31, 33–40. C.
- 2 **sendtneri** (Schimp. ex H. Muell.) Warnst. 1–4, 11, 15, 18, (23, 24), 26, 27, (30), 32, 34, 35, 37, (38), 39, 41, 45, 48, 52–54, 56–62, (63), 64, 65, 68, 70, 82, 85–87, 90, 96, 100, 103–105, 109, 110. H9, 15, 23–26, 28, 31, 34–37, 39, 40.
- 3 **lycopodioides** (Brid.) Warnst. 1, 3, 4, 11, 12, 25, 27, 28, 32, (38), 41, 45, 52, 54, 59–62, (63), 64–66, (67), 68, 69, 85, (90), 92, 95, 96, 106, 107, 109–111. H9, 15, 17, 20, 21, 23, 26, 35, 38–40.
- 4 fluitans (Hedw.) Warnst.
 - a var. **fluitans**1–6, 8, 9, 11–18, 20, 22, 30, 35, 37–50, 52–55, 57–72, 75, 77, 78, 83, 86–90, 92, 94, 96–99, 101, 102, 104–112. H3, 15, 16, 20, 21, 23, 27, 30, 33, 34, 39.
 - b var. **falcatus** (Sanio ex C. Jens.) Roth 1–4, 6, 9, 11, 12, 17, 18, 22, 30, 34, 35, 37–42, 44–46, 48–51, 54, 55, 57–78, 80–83, 85–90, 94–98, 102, 104, 105, 107, 109–112. H1, 7, 12, 13, 19, 32, 35, 40.

- 5 exannulatus (Br. Eur.) Warnst.
 - a var. **exannulatus**1–6, 9, 11, 12, 17–20, 22, 27, 30, 34, 35, 37, 38, 41, 43–50, 52, 55, 57–78, 81, 83, 84, 86–90, 92, 93, 96–99, 101, 103–112. H2–8, 12, 16, 20–22, 24, 25, 27–31, 33–35, 37–39.
 - b var. **rotae** (De Not.) Loeske 1, 2, 4–6, 11, 12, 15, 18, 19, 27, 37, 38, 41, 42, 44–50, 52, 54, 57, 59–66, 69, 70, 73, 75, 77, 78, 80, 83, 86, 88, 89, 92, 93, 95–100, 103–106, 108–110, 112. H3, 5, 12, 16, 20, 37, 39.
- 6 **revolvens** (Sw.) Warnst. 1-6, 8, 9, 11, 12, (13), 17, 22, 23, 25-28, (29, 30), 32-52, (53), 54, 56-83, 85-112. H1-17, 19-40.
- 7 **vernicosus** (Mitt.) Warnst. 3, 11, (13), 27, 28, 37–50, 52, 57–62, (63), 64, 65, 69, 70, 72, 73, 75, 76, 79, 82, 85–88, (90), 91, 92, 104, 106, 109, 110. H1, 2, 6, 9, 12, 17, 19–25, 27–29, 34, 35, 38–40.
- 8 **uncinatus** (Hedw.) Warnst. 1-6, 9, 11, 13, 14, 16, (17), 18, 19, 25-27, 33-37, (38), 39-45, 47-51, 57-60, 62-112. H1, 2, 4, 6-10, 12, 14-17, 20-22, 24, 26, 28, 29, 31-40.

144. **Hygrohypnum** Lindb.

- 1 **ochraceum** (Turn. ex Wils.) Loeske 1–5, 8, 35, 36, 39, 41–51, 57–60, 62–102, 104–109, 111, 112. H1–3, 5–10, 12, 16, 19–21, 31, 33–36, 38–40.
- 2 polare (Lindb.) Loeske 105.
- 3 luridum (Hedw.) Jenn.
 - var. **luridum**3–9, (11), 13–15, 17, 19, 20, (21), 22–26,
 29, 32–52, (53), 55–70, 72–92, 94–112.
 H1–4, 6–11, 13–16, 18–36, 38–40.
 - b var. **subsphaericarpon** (Schleich. ex Brid.) C. Jens. (3) (58, 60), 64, 65, (67, 85).

- 4 **eugyrium** (Br. Eur.) Broth. 4, 36, 40, 42, 44, 45, 48–50, (62), 64–66, 68–70, 72–75, 78, 79, 81, 83, 85–92, 96–106, 108, 110, 112. H1–3, 6–8, 16, 20, 31, 33–36, 38, 39.
- 5 **smithii** (Sw.) Broth. 88–90, 92, 97.
- 6 **molle** (Hedw.) Loeske 92, 96, 97.
- 7 **dilatatum** (Wils. ex Schimp.) Loeske 48, 49, (65), 69, 70, 88, 90–92, 94, 96, 97, (98), 108, 112. H1, 2.

145. **Scorpidium** (Schimp.) Limpr.

- 1 **scorpioides** (Hedw.) Limpr. 1–7, 9, 11, 12, (13), 17, 25–29, (30), 35, 37, 40–50, (51), 52, 54, 57–77, 79–83, 85–92, 94–112. H1–4, 8–11, 13–28, 30–40
- 2 turgescens (T. Jens.) Loeske 88.

146. Calliergon (Sull.) Kindb.

- 1 **stramineum** (Brid.) Kindb. 1–15, (16), 17, (18–21), 22, 24, 25, 27, 28, 30, 34–52, 54, 55, 57–112. H1, 5–7, 9, 10, 12–14, 16, 20–24, 26–31, 33, 34, 36–40.
- 2 **trifarium** (Web. & Mohr) Kindb. (1) 86–89, (90), 92, 94, 96–99, 103–108. H9.
- 3 **cordifolium** (Hedw.) Kindb. 1–28, 30–102, 104–112. H1–6, 8, 12, 13, 15, 16, 20–25, 27–34, 36–40.
- 4 **giganteum** (Schimp.) Kindb. 1, 3, 5, 7, 9, 11–14, 17, (21), 22, (23), 26–29, 31–46, 48–52, 54, 55, 58–83, 85–92, 94–104, 106, 108–112. H1, 7–11, 13, 15–17, 19–29, 31–40.
- 5 **sarmentosum** (Wahlenb.) Kindb. 1, 2, 42–52, 60, 64–66, 69–79, 85–92, 94–112. H1–3, 16, 20, 27, 34, 35, 38, 39.

6 **cuspidatum** (Hedw.) Kindb. 1–112. H1–40. C.

147. Isothecium Brid.

- 1 **myurum** Brid. 1–20, (21), 22–112. H1–40. C.
- 2 myosuroides Brid.
 - var. **myosuroides** 1–25, 27–55, 57–112. H1–40. C.
 - b var. **brachythecioides** (Dix.) Braithw. 49, 72, 85, 86, 88–90, 92, 93, 95–106, 108, 110–112. H1, 2, 7, 8, 16, 27–30, 33–36.
- 3 **holtii** Kindb. 2–5, 42–44, 46–50, 64, 69, 70, 72–74, 86–88, 95–99, 105, 108, 109. H1–3, 6, 20, 35, 38, 40.
- 4 **striatulum** (Spruce) Kindb. 3, 5, 6, 9–14, 17, 34–36, 41, 42, 45, 49, 50, 52, 57, 60, 64, 69, 98. H1, 2, 5, 8, 9, 16, 17, 20, 28, 29.

148. **Scorpiurium** Schimp.

1 **circinatum** (Brid.) Fleisch. & Loeske (1) 1–6, 8–11, 13–15, 17, 34, 35, (36), 41, 44, 45, 52. H(1), 2, 5, 6, 8, 9, 15, 23. C.

149. Homalothecium Br. Eur.

- sericeum (Hedw.) Br. Eur.
 1–112. H1–40. C.
- 2 **lutescens** (Hedw.) Robins. 1–73, 75, 77–95, 97–99, 101–112. H1-35, 37–40. C.
- 3 **nitens** (Hedw.) Robins. (1) 26–28, (37), 40, 49, 50, 52, (58, 62), 64, (65), 66–70, 72, 77, 78, 80, 81, 83, 85, 87–92, 94–96. H19, 23, 27, 33.

150. Brachythecium Br. Eur.

1 **albicans** (Hedw.) Br. Eur. 1–112. H1, 3–6, 9, 12, 16, 19–22, 27, 28, 31, 34, 35, 37–40. C.

- 2 **glareosum** (Spruce) Br. Eur. (1) 1–30, 32–43, 47, (48), 49–55, 57–70, 72, 75, 77, 79–83, 85–91, 94, 95, 97, 98, 100, 101, 104, 108. H1–3, 6, 8, 9, 16, 18–22, 25, 26, 28, 29, 31, 33, 35, 38–40. C.
- 3 erythrorrhizon Br. Eur. 108.
- 4 **salebrosum** (Web. & Mohr) Br. Eur. (3, 73) 3, (9), 12, (14, 15), 20, 22–24, 29, (32), 36, 37, (54, 62), 63, (64, 80, 90).
- 5 **mildeanum** (Schimp.) Milde (3, 73) 1–4, 6, 8–18, 22–24, 29, 32, 33, 36–38, 40, 41, 44–46, 48–50, 52–55, 57–61, 68–70, 75, 81–83, 85, 86, 88, 90, 95–97, 102, 104, 105, 110. H1, 2, 5, 13, 16, 17, 20–23, 28, 35, 39. C.
- 6 **rutabulum** (Hedw.) Br. Eur. 1–112. H1–40. C.
- 7 **rivulare** Br. Eur. 1–27, 29–112. H1–3, 5–13, 15–23, 25–40. C.
- 8 **starkei** (Brid.) Br. Eur. 88, 105.
- 9 **glaciale** Br. Eur. 88, 90, 92, 96–98, 105, 106.
- 10 **reflexum** (Starke) Br. Eur. 88, 89, (90), 92, 96–98, 105, 106.
- 11 **velutinum** (Hedw.) Br. Eur. 1–73, 75–99, 101–104, 106–109, 112. H1, 2, 5–9, 12, 13, 16, 20–24, 26–28, 30, 32–40. C.
- 12 **populeum** (Hedw.) Br. Eur. 1–9, 11–19, (21), 22–24, 27, 29, 31–55, 57–112. H1–16, 19–25, 27–40. C.
- 13 **plumosum** (Hedw.) Br. Eur. 1–6, 9, 11, 13–17, 34–52, (53, 54), 55–112. H1–10, 12–16, 18, 20, 21, 24, 25, 27–40. C.

- 151. Pseudoscleropodium (Limpr.) Fleisch.
 - 1 **purum** (Hedw.) Fleisch. 1–112. H1–40. C.
- 152. Scleropodium Br. Eur.
 - 1 **cespitans** (C. Muell.) L. Koch (1) 1–17, 19–23, 29, 32–40, 42, 43, 45–47, 49, 50, 52, 55, 57, 58, (59), 61, 62, (63), 64, 65, 67, 68, 70, 73, 80, 81. H3, 5–7, 13, 28, 30, 33, 39. C.
 - 2 **tourettii** (Brid.) L. Koch (1) 1–7, 9–17, (18), 19, (20), 22, 23, 26–29, 33–38, 40–43, 45–52, 71, 74, 75, 88. H2–7, 12, 21, 37, 39. C.

153. Cirriphyllum Grout

- 1 **piliferum** (Hedw.) Grout 1–20, (21), 22–91, 93–111. H1–7, 9, 11–16, 18–26, 28–31, 33–40. C.
- 2 cirrosum (Schwaegr.) Grout 88, 98, 105.
- 3 **crassinervium** (Tayl.) Loeske & Fleisch. 1–20, (21), 22–24, 29, 30, 32–55, 57–73, 75–77, 79–91, 95, 98–101, 105, 106, 108, 111, 112. H1, 2, 4–12, 15–30, 32, 33, 36, 38–40. C.
- 154. Rhynchostegium Br. Eur.
 - 1 **riparioides** (Hedw.) C. Jens. 1–27, 29–112. H1–40. C.
 - 2 **lusitanicum** (Schimp.) A. J. E. Smith 1–5, 35, 36, 42, 46–50, 57, 60, 69–71, 91, 92, 94, 105, 108. H1, 2, 6, 19–21, 35.
 - 3 **murale** (Hedw.) Br. Eur. (1) (1), 2–26, 28–30, 32–78, 80–92, 94, 95, 98, 99, 101, 103, 104, 106, 108, 111, 112. H1, 2, 4, 5, 7–9, 12, 14, 15, 17–25, 27–29, 33, 34, 36–40. C.
 - 4 **confertum** (Dicks.) Br. Eur. 1–91, 93, 95–106, 109–112. H1–14, 16–40. C.

- 5 **megapolitanum** (Web. & Mohr) Br. Eur. (1) 1–20, (21), 22–30, 37, 38, 41, 44–46, 48, 49, 51, 52, 54, 56–60, 67, 71, 73, 75, 85, 90. H1, 6, 20, 21, 33. C.
- 6 **rotundifolium** (Brid.) Br. Eur. (6), 14, (33).

155. Eurhynchium Br. Eur.

- 1 **striatum** (Hedw.) Schimp. 1–112. H1–40. C.
- 2 **meridionale** (Br. Eur.) De Not. 9.
- 3 pulchellum (Hedw.) Jenn.
 - †a var. pulchellum (2, 3).
 - †b var. **diversifolium** (Br. Eur.) C. Jens. (90).
 - c var. **praecox** (Hedw.) Dix. 26.
- 4 **pumilum** (Wils.) Schimp. 1–45, 47–52, 54–77, 80–91, 94, 95, 97–106, 108, 109, 111. H1–6, 8, 9, 11–16, 19–22, 27–29, 32–35, 37–40. C.
- 5 **praelongum** (Hedw.) Br. Eur.
 - var. **praelongum** 1–112. H1–40. C.
 - b var. **stokesii** (Turn.) Dix. 1–11, 15, 19, 20, 22, 27, 29, 33–52, 55–58, 60–71, 73, 74, 76, 78–83, 85, 86, 88, 90–92, 94–111. H1–3, 7, 10, 12–18, 20–23, 25–34, 36–40. C.
- 6 swartzii (Turn.) Curn.
 - a var. **swartzii** 1–112. H1–40. C.
 - b var. **rigidum** (Boul.) Thér. 1, 3, 5–7, 9–14, 17, 18, 22, 23, 28, 29, 33–36, 62, 64, 65, 67, 68, 70, 72, 80, 81, 88, 90, 91, 98, 105, 108. H9, 26, 29, 34.
- 7 **schleicheri** (Hedw.f.) Milde (1) 3–17, 19, 20, 22–24, 27, 33–37, 40–43, 50, 60, 62, 64, 67–69, 80, 81. H10.

8 **speciosum** (Brid.) Jur. (1) 1–3, 5–15, 17, 19, 20, (21), 22–25, 28, 29, 32, 33, 36, 37, (38), 40–42, 44–46, (48, 49), 52, 54, 55, 58–62, (63), 64, (68), 69, 71, 73–75, 81, 90, 91, 98, 101, 102, 109. H2, 4–6, 9, 20–22, 25, 28, 35–40. C.

156. Rhynchostegiella (Br. Eur.) Limpr.

- l tenella (Dicks.) Limpr.
 - a var. **tenella** 1–25, 27, 29, 30, 32–79, 81–86, 88–91, 97–104, 106, 108. H1–23, 25–40. C.
 - b var. **litorea** (De Not.) Rich. & Wall. 3, 5, 6, 11, 13–17, 19, (21), 22, 23, 29.
- curviseta (Brid.) Limpr.
 2, 3, 5-17, 22, 23, 30, 32-38, 40, (62).
 H1, 29, 33, 39. C.
- 3 **teesdalei** (Br. Eur.) Limpr. (1) 1–3, 5–12, 14, 22, 23, 33–37, (38), 40–45, 47, 49–53, 57–70, 72, 73, 75–77, 80–83, 85–91, 98–100, 108, 111. H3, 6, 9–11, 15, 16, 20, 21, 28, 29, 33, 34, 38–40. C.

157. Orthothecium Br. Eur.

- 1 **rufescens** Br. Eur. (1) (48), 49, (62), 64, 65, 69, 86–90, 92, 96–99, 103–105, 107, 108, 111. H9, 28, 29.
- 2 **intricatum** (Hartm.) Br. Eur. 4, 6, 34–36, 42, 43, 47–50, 52, 57, 59, 60, 62–67, 69–73, 75–80, 83, 86–92, 94, 96–108, 111, 112. H1, 2, 7, 16, 27–29, 33–35, 39.

158. Entodon C. Muell.

1 **concinnus** (De Not.) Paris (1) 6–17, (19), 20, 22–24, 29, 30, 32–34, 36–39, 41, 49, 50, 52–55, 57, (59), 60–62, 64–67, 69–71, 80, 82, 83, 85–90, 92, 97, 98, 101–106, 108–110. H1, 6, 8, 9, 15, 16, 19–22, 25–30, 33–35, 38–40.

159. Plagiothecium Br. Eur.

- 1 **latebricola** Br. Eur. (1) 2–26, 33–41, 43, 45, 47–51, 54, 55, 57, 58, (59), 62–65, (81), 86. H29.
- 2 **piliferum** (Sw. ex Hartm.) Br. Eur. 88, 90.
- 3 denticulatum (Hedw.) Br. Eur.
 - a var. **denticulatum** 1–20, 22–55, 57–110, 112. H3, 8, 10, 12, 13, 20, 22, 24–26, 33, 36–39. C.
 - b var. **obtusifolium** (Turn.) Moore 2, 42, 48, 49, 64, 65, 69, 70, 72, 78, 86–90, 92, 94–101, 104–108. H1, 3, 7, 35, 40.
- 4 **ruthei** Limpr. 1–3, 5, 6, 9–12, 16–19, 22–24, 28–31, 37–39, 41–43, 46, 47, 49, 50, 54, 55, 60–65, 68, 70, 71, 98, 102, 104, 105.
- 5 **curvifolium** Schlieph. 5–40, 42, 44, 47, 49–51, 53–55, 57, 59–70, 72, 73, 75, 77, 78, 80, 82–86, 88–92, 94–96, 98, 99, 104, 106, 107. C.
- 6 **laetum** Br. Eur. 39, 48, 50, 57, 58, 60, 63–70, 77–79, 83, 86, 88–92, 95, 96, 98, 99, 101, 105, 106, 109. H21, 33.
- 7 **platyphyllum** Moenk. 49, 69, 70, 88–90, 92, 96–98, 104–108. H20, 21.
- 8 **cavifolium** (Brid.) Iwats. 45, 46, 48, 49, 60, 62, 70, 81–83, 87, 88, 90, 92, 93, 95–98, 101, 103, 105–108. H1, 34.
- 9 **succulentum** (Wils.) Lindb. 1–20, 22–25, 28, 30, 32, 34–112. H1–10, 12, 15–18, 20, 22, 24, 26–30, 32–35, 38–40. C.
- 10 **nemorale** (Mitt.) Jaeg. 1–31, 33–55, 57, 61–77, 79, 80, 83, 84, 86–88, 90, 91, 94, 95, 97–105, 108–112. H1–3, 5–7, 9–11, 16, 20, 21, 25, 27–30, 34–40. C.

- 11 **undulatum** (Hedw.) Br. Eur. 1–30, 32, 34–112. H1–14, 16, 17, 20, 21, 23–40. C.
- 160. Herzogiella Broth.
 - 1 **striatella** (Brid.) Iwats. 71, 86–90, 92, 94, 96–99, 105–109.
 - 2 **seligeri** (Brid.) Iwats. (1) 6, 11–17, 19, 22–27, 29, (61), 62.
- 161. Isopterygium Mitt.
 - 1 **pulchellum** (Hedw.) Jaeg. 3, 5, 35, 36, 42–44, 46–50, 57, 59, 60, 62–70, 72, 73, 75–83, 85–92, 94–101, 103–108, 110, 111. H1–3, 6–8, 10, 16, 20, 21, 27–29, 33–35, 38–40.
 - 2 **elegans** (Brid.) Lindb. 1–25, 27–30, 32–112. H1–14, 16, 19–23, 25–40. C.
- 162. Isopterygiopsis Iwats.
 - 1 **muellerana** (Schimp.) Iwats. 49, 87–90, 97, 98, 103–108. H1.
- 163. Taxiphyllum Fleisch.
 - 1 **wissgrilli** (Garov.) Wijk & Marg. 3–17, 19–24, 33–38, 40–44, 47–52, 56–70, 72, 73, 75, 77, 81–90, 97, 98, 101, 108. H2, 9, 11, 16, 21, 23, 28, 29, 33, 34, 38–40.
- 164. Sematophyllum Mitt.
 - 1 **demissum** (Wils.) Mitt. (1) 48, (49). H1–3.
 - 2 **micans** (Mitt.) Braithw. (1) (48), 70, 86, 97–99, 101, 103–105. H1–3, 16.
- 165. Pylaisia Br. Eur.
 - **polyantha** (Hedw.) Br. Eur. 6–8, 13–15, (19) ,22, 23, 33, 34, 36, 37, (38), 40, 48, (52, 54), 55, 57, 61, 62, (63), 64–70, 73–75, 78, 80–82, (83), 85, 88–91. H1, 2, 5. C.

- 166. Platygyrium Br. Eur.
 - 1 **repens** (Brid.) Br. Eur. 6, 17, 22, 23, 29, 31, 35, 50, 82.
- 167. Homomallium (Schimp.) Loeske
 - 1 **incurvatum** (Brid.) Loeske 57, 64–66, 69, 70, 75, 84, 87–89.
- 168. **Hypnum** Hedw.
 - 1 **revolutum** (Mitt.) Lindb. 88.
 - 2 vaucheri Lesq. 88.
 - 3 **cupressiforme** Hedw.
 - a var. **cupressiforme** 1–112. H1–40. C.
 - b var. **resupinatum** (Tayl.) Schimp. 1–112. H1–40. C.
 - c var. **lacunosum** Brid. 1–20, 22–30, 32–55, 57–112. H1–3, 5–9, 11–17, 19–31, 33–40. C.
 - 4 **mammillatum** (Brid.) Loeske 1–9, 11–14, 16, 17, 20, 22, 24, 33–37, 40–52, 60, (63), 64–67, 69, 70, 72–78, 80–83, 86–88, 90–93, 96–108. H1–4, 6–8, 12, 16, 20, 23, 25–30, 33, 38. C.
 - †4A **uncinulatum** Jur. (74) H(2).
 - 5 **jutlandicum** Holmen & Warncke 1–112. H1–40. C.
 - 6 **imponens** Hedw. 3, 8, 11–15, 17, 22, 28, 49, 59–62, 64, 67–70, 72, 77–83, 88, 95, 98, 105.
 - 7 **bambergeri** Schimp. (1) 88–90, 96–98.
 - 8 **lindbergii** Mitt. 1–9, 11–20, 22–24, 30, 31, 33–53, 55, 57–60, 62–91, 93–95, 97–106. H1–16, 19, 20, 22, 23, 26–29, 31–40.

- 9 **callichroum** Brid.
 - 48, 49, (50, 51), 64, 67–70, 72, 73, 78, 85–90, 92, 96–108, 110, 111. H1, 2, 16, 27–29, 34, 35.
- 10 **hamulosum** Br. Eur. (1) 48, 49, 64, 69, 70, 87–92, 94, 96–98, 103–108.
- 169. Ptilium De Not.
 - 1 **crista-castrensis** (Hedw.) De Not. (1) 26, 28, 48, 49, 60, (62, 64), 65, 69, 70, 72, 73, 78–80, (81, 83), 85–99, 101–108.
- 170. Ctenidium (Schimp.) Mitt.
 - 1 molluscum (Hedw.) Mitt.
 - a var. **molluscum** 1–112. H1–40. C.
 - b var. **fastigiatum** (Bosw. ex Hobk.) Braithw. 4, 39, 41, 57, 62, 64, 65, 70, 88, 96–98, 103, 105, 108. H1, 2, 9, 28, 29, 33.
 - c var. **condensatum** (Schimp.) Britt. 5, 36, 37, 39, 40, 42, 46, 47, 49, 57, 59, 64–70, 72, 74, 78, 80, 81, 83, 85–88, 90–92, 94, 96–108, 110–112. H1–3, 6, 7, 16, 20, 31, 33, 35, 36, 39.
 - d var. **robustum** Boul. 48, 64, 69, 70, 72, 73, 86, 88, 90, 92, 98, 99, 103, 104, 110. H1, 2, 6, 38, 39.
 - 2 procerrimum (Mol.) Lindb. 88, 96.
- 171. **Hyocomium** Br. Eur.
 - 1 **armoricum** (Brid.) Wijk & Marg. 1–6, 11, 13–16, 34, 35, 39–50, (55), 57–60, 62–76, 78–80, 86–88, 90–92, 96–112. H1–14, 16, 18, 20, 21, 26–31, 33–40.
- 172. Rhytidium (Sull.) Kindb.

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1 **rugosum** (Hedw.) Kindb. (1) 6, (23), 26, 28, (29), 36, 39, 49, 57, (59), 60, 64–66, 69, 70, 82, 85–90, 92, 96–98, 103–106, 108. H40.

173. Rhytidiadelphus (Warnst.) Warnst.

- 1 **triquetrus** (Hedw.) Warnst. 1–17, (18), 19, 20, (21), 22–62, (63), 64–112. H1–40. C.
- 2 **squarrosus** (Hedw.) Warnst. 1–112. H1–40. C.
- 3 **subpinnatus** (Lindb.) Kop. (3) (36), 44, (48, 57, 58, 64, 65, 69). H6.
- 4 **loreus** (Hedw.) Warnst. 1–17, (18, 20, 21), 22, 23, 25–27, 29, 32–52, (54, 55), 56–60, 62, (63), 64–112. H1–22, 24–40. C.

174. Pleurozium Mitt.

1 **schreberi** (Brid.) Mitt. 1–112. H1–40. C.

175. **Hylocomium** Br. Eur.

- 1 **brevirostre** (Brid.) Br. Eur. (1) 1–6, 8, 9, 11–17, (20), 22–24, 29, 32–37, (38), 39, 40, 42–50, 55, 57–60, (62, 63), 64, 65, 67, 69, 70, 72–77, 79, 80, 86–89, (90), 92, 96–105, 107, 108, 110. H1–10, 12–18, 20–36, 38–40. C.
- 2 **pyrenaicum** (Spruce) Lindb. (1) 88–90, 96–98, 104–107.
- 3 **umbratum** (Hedw.) Br. Eur. (1) 46–49, 69, 70, 72, 73, 75, 76, 78, 80, 86–90, 92, 94, 96–108, 110. H1, 2, 16, 27–29, 35, 39.
- 4 **splendens** (Hedw.) Br. Eur. 1–17, (18, 19), 20, (21), 22–112. H1–40. C.

NOTES

- 1. A map of the distribution of this taxon has been published by the B.B.S.; for the bibliographic reference, refer to the Index of Maps, p. 142.
- 2. The vice-county distribution of this taxon has been revised by M.F.V.C.; a manuscript list of localities has been retained by the appropriate Recorder.
- 3. The vice-county distribution of this taxon has been revised by M.O.H.; a manuscript list of localities has been retained by the Recorder of Mosses.
- 4. The vice-county distribution of this taxon is in need of revision; the data given here cannot be regarded as entirely reliable.
- 5. Anthoceros agrestis, A. punctatus, for the distinction between these species, see Paton (1979), J. Bryol. 10, 257–61.
- 6. Phaeoceros laevis ssp. carolinianus, for a description, see Paton (1973), J. Bryol. 7, 541–43.
- 7. Riccia cavernosa, R. crystallina, R. huebenerana, for the distinction between these species, see Paton (1967), Trans. Br. bryol. Soc. 5, 222–25.
- 8. *Riccia fluitans*, *R. canaliculata*, for the distinction between these species, see Paton (1973), *J. Bryol.* **7**, 253–59.
- 9. *Riccia fluitans*, *R. rhenana*, for the distinction between these species, see Jones (1952).
- 10. Riccia crozalsii, R. bifurca, for revised descriptions and a revision of their distribution, see Paton (1980), J. Bryol. 11, 1–6.
- 11. Metzgeria fruticulosa, M. temperata, for the distinction between these species, see Paton (1977), J. Bryol. 9, 441–49.
- 12. Aneura, Riccardia, the oil bodies can be useful in distinguishing the species; see Little (1968), Trans. Br. bryol. Soc. 5, 536–40.
- 13. Cryptothallus mirabilis, for a description, see Williams (1950), Trans. Br. bryol. Soc. 1, 357–66.
- 14. Pellia borealis is treated here as a synonym of P. epiphylla; see Paton & Newton (1967), Trans. Br. bryol. Soc. 5, 226–31.
- 15. *Moerckia flotoviana* is treated here as a synonym of *M. hibernica*; see de Sloover (1959), *Bull. Jard. bot. Brux.* **29**, 157–81.
- 16. Fossombronia pusilla var. maritima, new variety, described by Paton (1973), J. Bryol. 7, 243–52.

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- 17. Fossombronia incurva, for a description, see Crundwell (1965), Trans. Br. bryol. Soc. 4, 767–74.
- 18. Fossombronia fimbriata, new species, described by Paton (1974), J. Bryol. 8, 1–4.
- 19. Barbilophozia atlantica, for a revised description, see Fitzgerald & Fitzgerald (1962), Trans. Br. bryol. Soc. 4, 214–20.
- 20. Lophozia ventricosa, L. guttulata, this complex is in need of taxonomic revision. For a description of var. silvicola, see Jones (1952). The records of var. ventricosa are very incomplete. The aggregate is recorded from all vice-counties except 19, 31, 33, 53, H5, H9, H11, H19, H24; there are no recent records from vice-counties 23, 29.
- 21. Lophozia perssonii, for a description, see Paton & Birks (1968), Trans. Br. bryol. Soc. 5, 439–42.
- 22. Lophozia capitata, for a description, see Jones (1950), Trans. Br. bryol. Soc. 1, 353–56.
- 23. Lophozia opacifolia, for a description, see Jones (1957), Trans. Br. bryol. Soc. 3, 180.
- 24. Solenostoma triste and S. sphaerocarpoideum are treated here as a single species, Jungermannia atrovirens; see Váňa (1973), Folia geobot. phytotax. bohemoslovaca 8, 255–309.
- 25. Jungermannia borealis, for a description, see Paton (1968), Trans. Br. bryol. Soc. 5, 435–38.
- Jungermannia confertissima, for a description, see Paton (1970), Trans. Br. bryol. Soc. 6, 50–55.
- 27. *Marsupella ustulata* is treated here as a synonym of *M. sprucei*; see Grolle (1975), *Lindbergia* **3**, 47–56.
- 28. *Marsupella stableri* is of uncertain status, and should perhaps be regarded as a variety of *M. boeckii*.
- 29. Southbya nigrella, S. tophacea, for the distinction between these species, see Paton (1971), Trans. Br. bryol. Soc. 6, 328–30.
- 30. Plagiochila porelloides, P. asplenioides, P. britannica, for the distinction between these species, see Paton (1979), J. Bryol. 10, 245–56.
- 31. Plagiochila atlantica, P. spinulosa, for the distinction between these species, see Jones & Rose (1975), J. Bryol. 8, 417–22.
- 32. Plagiochila spinulosa, P. killarniensis, P. punctata, for the distinction between these species, see Paton (1977), J. Bryol. 9, 451–59.
- 33. Leptoscyphus cuneifolius, for a revised description, see Paton (1967), Trans. Br. bryol. Soc. 5, 232–36.
- 34. Lophocolea bidentata, L. cuspidata, for the distinction between these species, see Steel (1978), J. Bryol. 10, 49–59.

- 35. Lophocolea bispinosa, for a description, see Paton (1974), J. Bryol. 8, 191–96.
- 36. Lophocolea semiteres, for a description, see Paton (1965), Trans. Br. bryol. Soc. 4, 775–79.
- 37. Chiloscyphus polyanthus var. fragilis, illustrated as Fig. 5 on p. 247 of Macvicar (1926), is now referred to C. pallescens.
- 38. Scapania crassiretis, British records are erroneous; see Paton (1975), J. Bryol. 8, 493.
- 39. Scapania calcicola, S. cuspiduligera, for the distinction between these species, see Paton & Duckett (1970), Bot. J. Linn. Soc. 63, 177–87.
- 40. Scapania scandica, S. curta, S. praetervisa, for the differences between these species, see Perry (1965), Trans. Br. bryol. Soc. 4, 785–89.
- 41. Scapania lingulata, for a description, see Paton (1981), J. Bryol. 11, 399–403.
- 42. Scapania parvifolia, for a description, see Jones (1963), Trans. Br. bryol. Soc. 4, 463.
- 43. Scapania degenii, for a revised description, see Paton (1966), Trans. Br. bryol. Soc. 5, 83–85.
- 44. Scapania paludicola, for a description, see Paton (1981), J. Bryol. 11, 405–07.
- 45. Scapania aequiloba, S. aspera, for the distinction between these species and a revision of the distribution of S. aequiloba, see Long (1978), Bull. Br. bryol. Soc. 31, 26–29.
- 46. *Cephalozia bicuspidata*, the subspecies are in need of revision; the distinguishing characters are not clearly understood, nor is it known whether the cytological races correlate fully with morphological differences.
- 47. Telaranea nematodes, for a description, see Jones (1952).
- 48. Telaranea murphyae, new species, described by Paton (1965), Trans. Br. bryol. Soc. 4, 775–79.
- 49. Calypogeia, for a monograph of the genus in Britain, see Paton (1962), Trans. Br. bryol. Soc. 4, 221–29.
- 50. Herbertus borealis, new species, described by Crundwell (1970), *Trans. Br. bryol. Soc.* **6**, 41–49.
- 51. Lejeunea, the form and number of oil bodies in each cell is very useful in this genus. L. cavifolia and L. holtii have numerous (ca 25–50) small, simple, long-persisting oil bodies. L. mandonii has 4–14 intermediate-sized, compound, non-persistent oil bodies. The remaining species have rather few (usually less than 9) larger, compound, non-persistent oil bodies.

- 52. Sphagnum capillifolium, distribution is based on combined records of S. capillaceum and S. rubellum in Warburg (1963).
- 53. Sphagnum subsecundum, distribution has been revised; see Hill (1975), Bull. Br. bryol. Soc. 26, 24–25.
- 54. Sphagnum recurvum var. mucronatum is much the commonest segregate of the recurvum complex in Britain and Ireland. Its distribution here is based on the aggregate distribution in Warburg (1963).
- 55. Andreaea obovata var. papillosa, distribution has presented great difficulties; the taxonomy is still unclear. Only robust plants from high altitudes in the Cairngorm Mountains are recognized as belonging to this taxon here. Other British plants labelled A. rupestris var. acuminata are smaller, and have been referred to A. rupestris var. rupestris.
- 56. Andreaea crassinervia is a poorly marked taxon in Britain, intergrading completely with A. rothii. The remarks in Dixon & Jameson (1924) are apposite.
- 57. Ditrichum pusillum, distribution has been revised for this edition by Dr H. L. K. Whitehouse.
- 58. Seligeria brevifolia, for a description, see Hill (1980), J. Bryol. 11, 7–10.
- 59. *Dichodontium flavescens*, only plants with capsules have been accepted for the revised vice-county distribution.
- 60. Leucobryum glaucum, L. juniperoideum, sterile plants may be distinguished by the following recipe, due to A. C. Crundwell. Take six well grown leaves and place them on a microscope slide with the concave (ventral) face upwards. Under the high power of the microscope, count the upper epidermal cells, to the nearest tenth of a cell under 100 divisions of the eye-piece scale across the face of each leaf at its widest part. From the six numbers obtained, calculate an average value. The mean width of the cells is about 34 μm in L. glaucum, 27 μm in L. juniperoideum.
- 61. Fissidens viridulus, F. limbatus, F. pusillus, for the distinction between these species as understood here, see Corley (1980), J. Bryol. 11, 191–208.
- 62. Encalypta brevicollis, for the occurrence of this species in Britain, see Horton (1980), J. Bryol. 11, 209–12.
- 63. Acaulon minus cannot be maintained as a taxon distinct from A. muticum (Hill, in preparation).
- 64. Gymnostomum calcareum, Scottish distribution has been revised, because there was formerly confusion with Anoectangium warburgii; see Hill (1978), Bull. Br. bryol. Soc. 32, 19.

- 65. Weissia controversa var. crispata is a poorly marked taxon in Britain; only plants with the nerve at least 80 µm wide on some leaves have been accepted here. Such plants were almost entirely confined to chalk and limestone.
- 66. Racomitrium affine, distribution is based mainly on plants with capsules. Non-fruiting plants have been accepted as R. affine only if they were clearly too small to be R. heterostichum.
- 67. Funaria muhlenbergii, distribution has been revised, as there was formerly confusion with F. pulchella; see Crundwell & Nyholm (1974), Lindbergia 2, 222–29.
- 68. *Pohlia proligera*, distribution is based on that of *P. annotina* in Warburg (1963). *P. proligera* is much the commonest bulbiliferous species of *Pohlia* in the British Isles, so the distribution is not likely to be in error.
- 69. B. capillare var. rufifolium, B. elegans, B. stirtonii, B. flaccidum, B. torquescens, distributions are based on revision by Syed (1973), J. Bryol. 7, 265–326.
- 70. Bryum creberrimum, B. pallescens, distributions have been revised by Dr A. J. E. Smith; manuscript lists of records are in the care of the Recorder of Mosses.
- 71. Mnium marginatum var. dioicum, all confirmed records are of male plants.
- 72. Orthotrichum cupulatum, distribution of the varieties is not reliable, as the criteria used to distinguish them have not been applied consistently.
- 73. Brachythecium salebrosum and B. mildeanum have often been confused in Britain but may be distinguished as follows. B. salebrosum, leaves markedly plicate; margin narrowly recurved above, denticulate towards apex, evidently so in the acumen; differentiated cells at basal angles normally few, occasionally more numerous. B. mildeanum, leaves not plicate; margin plane above, entire or nearly so; quadrate cells at basal angles numerous, forming a well defined patch. B. rutabulum differs from both species in having leaves that are strongly denticulate from base to apex.
- 74. Hypnum uncinulatum has been reinstated as an Irish species; see Ando & Townsend (1980), J. Bryol. 11, 185–89.

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WE SHOULD LIKE particularly to thank our predecessors as Recorders, Mr A. C. Crundwell (mosses) and Mrs J. A. Paton (hepatics). Most of the additions and amendments accruing since the latest *Census Catalogues* have been checked by them and entered in the Recorders' Books, so that in total they have perhaps done more in preparing for the present volume than we have. In addition, they have been unsparing with kindly help and advice since we have become Recorders. We and British bryology are greatly indebted to them.

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UNDER THE AUSPICES of its mapping scheme, the British Bryological Society has been publishing maps of bryophyte distributions in the British Isles. Distributions are indicated by dot-maps, showing occurrence in 10 km squares of the British and Irish National Grids. Those maps that have hitherto been published are listed below.

In order to save space, species names have been abbreviated. The following abbreviations have been used for the citations. $JB = Journal \ of \ Bryology, \ PA = Provisional \ Atlas \ of \ the \ Bryophytes \ of \ the British \ Isles \ (Smith, 1978b), \ TBBS = Transactions \ of \ the British \ Bryological Society.$

Acau	muti,	PA 2		cana,	TBBS 5, 369, 1967
Acro	wils,	TBBS 4, 737, 1964		creb,	JB 8, 126, 1974
Adel	deci,	TBBS 4, 506, 1963		doni,	JB 7, 457, 1973
Anas	orca,	PA 70		dune,	JB 10, 45, 1978
Anas	doni,	TBBS 4, 874, 1965		gemmif,	<i>JB</i> 10 , 38, 1978
	joer,	TBBS 4, 875, 1965			JB 10, 40, 1978
Anom	viti,	PA 3		know,	<i>JB</i> 7 , 452, 1973
Anth	punc,	PA 71		mami,	TBBS 6, 153, 1970
Anti	curt,	<i>JB</i> 8, 128, 1974		marr,	JB 7, 450, 1973
Apha	micr,	TBBS 5, 836, 1969		mild,	TBBS 4, 740, 1964
Apom	pube,	TBBS 5, 589, 1968		palles,	JB 8, 127, 1974
Arch	alte,	PA 4		turb,	JB 7, 455, 1973
Arct	fulv,	TBBS 6, 148, 1970		ulig,	JB 7, 454, 1973
Atri	angu,	JB 8 , 495, 1975		warn,	<i>JB</i> 7 , 451, 1973
	cris,	TBBS 5, 362, 1967		weig,	JB 7, 456, 1973
	tene,	JB 8, 496, 1975	Buxb	aphy,	<i>JB</i> 8, 497, 1975
Aula	andr,	PA 5	Call	trif,	TBBS 4, 515, 1963
Aula	turg,	TBBS 5, 599, 1968	Caly	argu,	PA 75
Barb	quad,	<i>JB</i> 10 , 78, 1978	,	inte,	JB 10, 74, 1978
Barb	horn,	PA 6		spha,	JB 8, 384, 1975
	refl,	PA 7		suec,	<i>JB</i> 10 , 75, 1978
	vine,	PA 8	Camp	intr,	JB 8, 294, 1975
Bazz	pear,	TBBS 4, 507, 1963	1	poly,	JB 8, 296, 1975
	tril,	PA 73		seti,	TBBS 6, 149, 1970
Blep	tric,	PA 74		shaw,	TBBS 5, 161, 1966
Brac	glar,	PA 9	Cato	nigr,	TBBS 5, 163, 1966
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•	calo,	JB 7, 453, 1973	1	loit,	TBBS 5, 358, 1967

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1	turn,	TBBS 5, 159, 1966		spec,	PA 25
Chan	seti,	TBBS 5, 154, 1966	Fiss	alga,	JB 7, 89, 1972
Cinc	font,	PA 10		cras,	<i>JB</i> 7 , 90, 1972
	mucr,	PA 11		exig,	JB 7, 93, 1972
Clad	flui,	PA 76		exil,	PA 26
Colo	calc,	TBBS 5, 592, 1968		incu,	PA 27
	rose,	PA 77		mong,	JB 7, 93, 1972
Colu	caly,	TBBS 4, 738, 1964		poly,	TBBS 4, 887, 1965
Cono	tetr,	TBBS 6, 155, 1970		rivu,	JB 7, 92, 1972
Cosc	crib.	TBBS 5, 162, 1966		rufu,	IB 7, 91, 1972
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Cryp	mira,	TBBS 5, 588, 1968	Foss	angu,	TBBS 4, 876, 1965
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	rufe,	PA 15		micr,	PA 83
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Dicr	flag,	TBBS 4, 517, 1963	Geoc	grav,	TBBS 4, 737, 1964
	mont,	TBBS 4, 516, 1963	Glyp	davi,	JB 9, 122, 1976
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Disc	nudu,	JB 7, 449, 1973		hart,	TBBS 6, 346, 1971
Dist	capi,	PA 18		incu,	TBBS 6, 343, 1971
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	flex,	PA 19		mont,	TBBS 6, 340, 1971
	line,	<i>JB</i> 9 , 397, 1977		orbi,	TBBS 6, 151, 1970
	plum,	<i>JB</i> 9 , 398, 1977		oval,	TBBS 6, 336, 1971
	zona,	<i>JB</i> 9 , 399, 1977		retr,	TBBS 6, 347, 1971
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Enca	alpi,	TBBS 5, 837, 1969	Hapl	hook,	TBBS 6 , 142, 1970
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Lept	smit,	PA 35	Phys	eury,	TBBS 6, 349, 1971
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Lept	cune,	TBBS 4, 512, 1963	D1	corn,	JB 8, 388, 1975
Lesc	pate,	JB 9, 406, 1977	Plag	late,	JB 9, 123, 1976
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Mars	alpi,	TBBS 6, 146, 1970	_	plat,	PA 97
	brev,	TBBS 6, 144, 1970	Pott	bryo,	PA 45
	func,	PA 92		heim,	PA 46
	stab,	TBBS 6 , 145, 1970		lanc,	PA 47
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	micr,	<i>JB</i> 7 , 448, 1973	Spha	fusc,	JB 9 , 118, 1976
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	tour,	<i>JB</i> 7 , 95, 1972	Tric	tome,	PA 105
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NAMES USED IN the standard floras (Macvicar, 1926; Smith, 1978a; Watson, 1968) and in the most recent Census Catalogues (Paton, 1965; Warburg, 1963) are cross-referenced to the nomenclature used here. The entry

Acrocladium = Calliergon signifies that the name *Acrocladium* has been superseded by *Calliergon*.

Names that have been superseded are given in brackets. Thus the entry

Taxiphyllum wissgrillii (Isopterygium depressum) signifies that the moss now called *Taxiphyllum wissgrillii* was called *Isopterygium depressum* in the most recent *Census Catalogue* (Warburg, 1963). Only moss names have been entered in this way, because Paton's (1965) names of hepatics are indicated in the main text.

Acrocladium = Calliergon Adelanthus dugortiensis = lindenbergianus unciformis = lindenbergianus Alicularia = Nardia Aloina ambigua = A. aloides var. ambigua Amblystegiella = Platydictya sprucei = P. jungermannioides Amblystegium fluviatile (Hygroamblystegium fluviatile) humile (kochii) juratzkanum = serpens kochii = humile riparium (Leptodictyum riparium) tenax (Hygroamblystegium tenax) Andreaea crassinervia (rothii, p.p.) obovata (rupestris, p.p.) rothii var. crassinervia = A. crassinervia var. falcata = ssp. rothii var. huntii = A. crassinervia ssp. huntii

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rupestris
    var. acuminata = A. obovata var. papillosa
    var. gracilis = var. rupestris
    var. sparsifolia = A. obovata var. sparsifolia
Aneura = Riccardia, except A. pinguis
Anomobryum
  concinnatum = filiforme var. concinnatum
  juliforme = filiforme var. filiforme
Anthoceros
  crispulus = agrestis
  dichotomus = Phaeoceros laevis
  husnotii = punctatus
  laevis = Phaeoceros laevis
  punctatus sensu Paton, 1965 = agrestis
Aplozia = Jungermannia
  cordifolia = I. exsertifolia ssp. cordifolia
  crenulata = I. gracillima
  lanceolata = I. leiantha
  riparia = J. atrovirens
  schiffneri = J. polaris
Atrichum undulatum var. haussknechtii = var. gracilisetum
Barbula
  reflexa var. robusta = B. maxima
  rufa = asperifolia, of doubtful occurrence in Britain
Bartramia pomiformis var. elongata = var. pomiformis
Bazzania triangularis = B. tricrenata
Blindia acuta var. arenacea = var. acuta
Bryum
  algovicum var. rutheanum (pendulum)
  alpinum, all varieties = var. alpinum
  canariense var. provinciale = var. canariense
  capillare
    var. elegans = B. elegans
    var. rufifolium (B. rufifolium)
    var. torquescens = B. torquescens
  cyclophyllum (tortifolium)
  elegans (B. capillare var. elegans)
  obconicum = pallescens
  pendulum = algovicum var. rutheanum
  rufifolium = capillare var. rufifolium
  torquescens (capillare var. torquescens)
  tortifolium = cyclophyllum
Calliergon (Acrocladium)
Calypogeia
  neesiana var. meylanii = C. integristipula
```

submersa, dubious taxon, excluded

Camptothecium = Homalothecium Campylium protensum = C. stellatum var. protensum Campylopus flexuosus, all varieties = paradoxus schwarzii var. huntii = var. schwarzii setifolius var. intermedius = var. setifolius Cephalozia affinis, excluded ambigua = bicuspidata ssp. ambigua fluitans = Cladopodiella fluitans francisci = Cladopodiella francisci media = lunulifolia Cephaloziella myriantha = rubella nicholsoni = massalongi pearsonii = Sphenolobopsis pearsonii starkei = divaricata striatula = subdentata Ceratodon chloropus = Cheilothela chloropus Chiloscyphus polyanthos var. rivularis = var. polyanthos Cololejeunea microscopica = Aphanolejeunea microscopica Cratoneuron filicinum var. fallax = var. filicinum Dichodontium pellucidum var. fagimontanum = var. pellucidum pellucidum var. flavescens = D. flavescens heteromalla var. sericea = var. heteromalla subulata var. curvata = var. subulata varia var. callistoma = var. varia Dicranum blyttii = Kiaeria blyttii falcatum = Kiaeria falcata starkei = Kiaeria starkei strictum = tauricum tauricum (strictum) Diphyscium foliosum var. acutifolium = var. foliosum Diplophyllum gymnostomophilum = Scapania gymnostomophila Drepanocladus revolvens var. intermedius = var. revolvens sendtneri var. wilsonii = var. sendtneri Dryptodon (Grimmia, p.p.) Ephemerum intermedium = E. serratum var. praecox Eucalyx = Jungermannia Eurhynchium alopecuroides = Rhynchostegium lusitanicum

confertum = Rhynchostegium confertum megapolitanum = Rhynchostegium megapolitanum murale = Rhynchostegium.murale pumilum (Rhynchostegiella pumila) riparioides = Rhynchostegium riparioides rotundifolium = Rhynchostegium rotundifolium

Fontinalis

dalecarlica, excluded dixonii = squamosa var. dixonii dolosa = antipyretica var. antipyretica hypnoides, excluded Fossombronia

dumortieri = foveolata

husnotii var. anglica = var. husnotii loitlesbergeri, excluded

mittenii = wondraczekii

pusilla var. decipiens = var. pusilla

Frullania

germana = teneriffae tamarisci, all varieties = var. tamarisci

Grimmia

affinis (ovalis sensu Warburg, 1963) agassizii = Schistidium agassizii alpicola = Schistidium alpicola apocarpa = Schistidium apocarpum atrofusca = Schistidium atrofuscum borealis = Schistidium boreale commutata = ovalis conferta = Schistidium apocarpum var. confertum decipiens var. robusta = trichophylla var. robusta donniana var. arenaria = var. curvula maritima = Schistidium maritimum muehlenbeckii = trichophylla var. tenuis ovalis (commutata) ovalis sensu Warburg, 1963 = affinis patens = Dryptodon patens stirtonii = trichophylla var. stirtonii stricta = Schistidium strictum subsquarrosa = trichophylla var. subsquarrosa trichodon = Schistidium trichodon trichophylla

var. robusta (G. decipiens var. robusta) var. stirtonii (G. stirtonii) var. subsquarrosa (G. subsquarrosa)

var. tenuis (G. muehlenbeckii)

```
Gymnomitrion
   adustum = Marsupella adusta
   alpinum = Marsupella alpina
   varians = Marsupella brevissima
Gymnostomum recurvirostrum
     var. cataractarum = var. recurvirostrum
     var. insigne = G. insigne
Haplodon = Aplodon
Herbertus (Herberta)
   aduncus sensu Macvicar, 1926 = stramineus
   hutchinsiae = aduncus ssp. hutchinsiae
Herzogiella
   seligeri (Isopterygium seligeri)
   striatella (Plagiothecium striatellum)
Homalia (Omalia)
Homalothecium (Camptothecium)
Hygroamblystegium = Amblystegium
Hyocomium flagellare = H. armoricum
Hyophila stanfordensis (Tortula stanfordensis)
Hypnum
  cupressiforme
     var. ericetorum = H. jutlandicum
     var. filiforme = H. mammillatum
     var. mamillatum = H. mammillatum
     var. tectorum = var. lacunosum
  jutlandicum (cupressiforme var. ericetorum)
  mammillatum (cupressiforme var. mamillatum)
Isopterygiopsis muellerana (Isopterygium muelleranum)
Isopterygium
  depressum = Taxiphyllum wissgrillii
  muelleranum = Isopterygiopsis muellerana
  pulchellum var. nitidulum = var. pulchellum
  seligeri = Herzogiella seligeri
Jamesoniella
  carringtonii = Plagiochila carringtonii
  schraderi = undulifolia
Jungermannia lanceolata = J. leiantha
Kiaeria (Dicranum, p.p.)
Leiocolea muelleri = L. alpestris
Lejeunea
  diversiloba = hibernica
  lamacerina var. azorica = var. lamacerina
  macvicari = mandonii
  planiuscula = lamacerina
```

Lepidozia pinnata = cupressina setacea = Kurzia pauciflora sylvatica = Kurzia sylvatica trichoclados = Kurzia trichoclados Leptodictyum = Amblystegium Leptoscyphus = Mylia, except L. cuneifolius Lescuraea incurvata (Pseudoleskea incurvata) patens (Pseudoleskea patens) plicata (Ptychodium plicatum) Leskea nervosa = Pseudoleskeella nervosa Lophocolea alata = L. cuspidata Lophozia alpestris = sudetica atlantica = Barbilophozia atlantica attenuata = Barbilophozia attenuata badensis = Leiocolea badensis bantriensis = Leiocolea bantriensis barbata = Barbilophozia barbata confertifolia = ventricosa var. confertifolia floerkei = Barbilophozia floerkei hatcheri = Barbilophozia hatcheri heterocolpa = Leiocolea heterocolpos kaurini = Leiocolea gillmanii kunzeana = Barbilophozia kunzeana longiflora = ventricosa var. longiflora lycopodioides = Barbilophozia lycopodioides muelleri = Leiocolea alpestris porphyroleuca = guttulata quadriloba = Barbilophozia quadriloba quinquedentata = Tritomaria quinquedentata schultzii = Leiocolea rutheana turbinata = Leiocolea turbinata Madotheca = Porella laevigata = P. arboris-vitae porella = P. pinnatathuja = P. obtusata Marchantia polymorpha var. alpestris = M. alpestrisvar. aquatica = var. polymorpha Marsupella

apiculata = Gymnomitrion apiculatum

var. aquatica = M. emarginata var. aquatica var. pearsonii = M. emarginata var. pearsonii

aquatica

```
joergensenii = sphacelata
  nevicensis = boeckii
  pearsonii = emarginata var. pearsonii
  sullivantii = sphacelata
  ustulata = sprucei
  varians = brevissima
Metzgeria
  furcata
    var. fruticulosa = M. fruticulosa, M. temperata
    var. ulvula = var. furcata
  hamata = leptoneura
  pubescens = Apometzgeria pubescens
Microlejeunea ulicina = Lejeunea ulicina
Micromitrium tenerum (Nanomitrium tenerum)
Mnium
  affine = Plagiomnium affine
  ambiguum (lycopodioides)
  cinclidioides = Pseudobryum cinclidioides
  cuspidatum = Plagiomnium cuspidatum
  longirostrum = Plagiomnium rostratum
  lycopodioides = ambiguum
  medium = Plagiomnium medium
  orthorhynchum = thomsonii
  pseudopunctatum = Rhizomnium pseudopunctatum
  punctatum = Rhizomnium punctatum
  rugicum = Plagiomnium ellipticum
  seligeri = Plagiomnium elatum
  thomsonii (orthorhynchum)
  undulatum = Plagiomnium undulatum
Moerckia flotoviana = M. hibernica
Mylia cuneifolia = Leptoscyphus cuneifolius
Myurium hebridarum = M. hochstetteri
```

Nanomitrium = Micromitrium

Omalia = Homalia
Orthothecium intricatum var. abbreviatum = var. intricatum
Orthotrichum
cupulatum var. nudum = var. riparium
rupestre, all varieties = var. rupestre
shawii = striatum
stramineum var. patens, excluded
Oxystegus (Trichostomum, p.p.)

Pellia

borealis = epiphylla fabbroniana = endiviifolia

```
Phascum cuspidatum
    var. curvisetum = var. cuspidatum
    var. maximum = var. schreberanum
Philonotis
  capillaris = arnellii
  fontana
    var. adpressa = var. fontana
    var. tomentella = P. tomentella
Plagiochila
  ambagiosa = atlantica
  asplenioides
    var. asplenioides sensu Paton, 1965 = P. porelloides
    var. major = P. asplenioides sensu stricto
  punctata var. owenii = var. punctata
  spinulosa
    var. inermis = var. spinulosa
    var. killarniensis = P. killarniensis
  stableri, dubious taxon, excluded
  tridenticulata = corniculata
Plagiomnium (Mnium, p.p.)
  elatum (M. seligeri)
  ellipticum (M. rugicum)
  rostratum (M. longirostrum)
Plagiothecium
  cavifolium (roeseanum)
  nemorale (sylvaticum)
  roeseanum = cavifolium
  striatellum = Herzogiella striatella
  sylvaticum = nemorale
Platydictya (Amblystegiella)
  jungermannioides (A. sprucei)
Plectocolea = Jungermannia
Pleuroclada = Pleurocladula
Pogonatum (Polytrichum, p.p.)
Pohlia
  acuminata = elongata var. acuminata
  annotina = proligera
  carnea (delicatula)
  cucullata = obtusifolia
  delicatula = carnea
  elongata
    ssp. elongata var. acuminata (P. acuminata)
    ssp. polymorpha (P. polymorpha)
  filum (gracilis)
  gracilis = filum
  lescuriana (pulchella)
  ludwigii var. latifolia = var. ludwigii
```

```
obtusifolia (cucullata)
   polymorpha = elongata ssp. polymorpha
   proligera (annotina)
   pulchella = lescuriana
Polytrichum
  aloides = Pogonatum aloides
  aurantiacum = longisetum
  longisetum (aurantiacum)
  nanum = Pogonatum nanum
  norvegicum = sexangulare
  sexangulare (norvegicum)
  urnigerum = Pogonatum urnigerum
Porella
  laevigata = arboris-vitae
  thuja = obtusata
Pottia
  asperula = wilsonii
  crinita var. viridifolia = var. crinita
  davalliana = starkeana ssp. conica and ssp. minutula
  intermedia var. littoralis = var. intermedia
Pseudobryum (Mnium, p.p.)
Pseudoleskea
  catenulata = Pseudoleskeella catenulata
  incurvata = Lescuraea incurvata
  patens = Lescuraea patens
Pseudoleskeella
  catenulata (Pseudoleskea catenulata)
  nervosa (Leskea nervosa)
Ptychodium = Lescuraea
Racomitrium (Rhacomitrium)
  affine (heterostichum vars.)
Radula lindbergiana = R. lindenbergiana
Rhabdoweisia denticulata = R. crispata
Rhacomitrium = Racomitrium
Rhizomnium (Mnium, p.p.)
Rhynchostegiella pumila = Eurhynchium pumilum
Rhynchostegium (Eurhynchium, p.p.)
  lusitanicum (E. alopecuroides)
Rhytidiadelphus squarrosus var. calvescens = R. subpinnatus
Riccardia
  pinguis = Aneura pinguis
  sinuata = chamedryfolia
Riccia
  ciliata, excluded
  commutata = warnstorfii
  michelii, excluded
```

```
Scapania
  crassiretis, excluded
  dentata = undulata
  intermedia = undulata
  mucronata sensu Paton, 1965 = praetervisa
  nemorea = nemorosa
  obliqua = uliginosa
Schistidium (Grimmia, p.p.)
  apocarpum var. confertum (G. conferta)
Scleropodium caespitosum = S. cespitans
Seligeria
  acutifolia var. longiseta = var. acutifolia
  carniolica (Trochobryum carniolicum)
Sematophyllum novae-caesareae = S. micans
Solenostoma = Jungermannia
  cordifolium = J. exsertifolia ssp. cordifolia
  crenulatum = J. gracillima
  levieri = I. confertissima
  oblongifolium = I. borealis
  schiffneri = J. polaris
  sphaerocarpoideum = J. atrovirens
  triste = J. atrovirens
Sphagnum
  auriculatum (subsecundum, p.p.)
  capillaceum = capillifolium
  capillifolium (capillaceum, rubellum)
  contortum var. platyphyllum = S. platyphyllum
  dusenii = majus
  majus (dusenii)
  platyphyllum (contortum var. platyphyllum)
  plumulosum = subnitens
  robustum = russowii
  rubellum = capillifolium
  russowii (robustum)
  subfulvum, excluded
  subnitens (plumulosum)
  subsecundum vars. = S. auriculatum
  warnstorfianum = warnstorfii
Sphenolobus
  exsectiformis = Tritomaria exsectiformis
  exsectus = Tritomaria exsecta
  ovatus = Douinia ovata
  pearsoni = Sphenolobopsis pearsonii
  politus = Tritomaria polita
  saxicola = Anastrophyllum saxicola
```

Taxiphyllum wissgrillii (Isopterygium depressum)

Telaranea sejuncta = T. nematodes Tetraphis browniana var. browniana = Tetrodontium brownianum var. repanda = Tetrodontium repandum Tetrodontium (Tetraphis, p.p.) repandum (Tetraphis browniana var. repanda) Thamnium = Thamnobryum Thuidium hystricosum = T. abietinum ssp. hystricosum Tortula rhizophylla (vectensis) ruraliformis = ruralis ssp. ruraliformis stanfordensis = Hyophila stanfordensis vectensis = rhizophylla Trichostomum brachydontium, all varieties = var. brachydontium crispulum, all varieties = var. crispulum hibernicum = Oxystegus hibernicus sinuosum = Oxystegus sinuosus tenuirostre = Oxystegus tenuirostris Trochobryum = Seligeria

Ullota

bruchii = crispa var. norvegica calvescens (vittata) coarctata (ludwigii) crispa var. norvegica (U. bruchii) crispula = crispa var. crispa ludwigii = coarctata nicholsonii = crispa var. crispa vittata = calvescens

Weissia

controversa var. crispata (W. crispata)
crispa = longifolia
crispata = controversa var. crispata
longifolia
var. angustifolia (W. crispa var. crispa)
var. longifolia (W. crispa var. aciculata)

Zygodon viridissimus var. vulgaris = Z. baumgartneri

Acaulon, 79 Acrobolbus, 38 Adelanthus, 43 Aloina, 76 Amblyodon, 104 Amblystegium, 117 Amphidium, 106 Anastrepta, 30 Anastrophyllum, 33 Andreaea, 58 Aneura, 26 Anoectangium, 81 Anomobryum, 96 Anomodon, 114 Anthelia, 46 Anthoceros, 23 Antitrichia, 111 Aongstroemia, 66 Aphanolejeunea, 53 Aplodon, 93 Apometzgeria, 26 Archidium, 61 Arctoa, 67 Atrichum, 60 Aulacomnium, 103

Barbilophozia, 29 Barbula, 79 Bartramia, 104 Bartramidula, 105 Bazzania, 47 Blasia, 28 Blepharostoma, 49 Blindia, 64 Brachydontium, 63 Brachythecium, 121 Breutelia, 106 Bryum, 96 Buxbaumia, 61

Calliergon, 120 Calypogeia, 48 Campylium, 116 Campylopus, 69 Campylostelium, 90 Catoscopium, 104 Cephalozia, 44 Cephaloziella, 43 Ceratodon, 64 Chandonanthus, 29 Cheilothela, 64 Chiloscyphus, 40 Cinclidium, 102 Cinclidotus, 85 Cirriphyllum, 123 Cladopodiella, 46 Climacium, 110 Cololejeunea, 53 Colura, 53 Conocephalum, 24 Conostomum, 105 Coscinodon, 85 Cratoneuron, 115 Cryphaea, 111 Cryptothallus, 26 Ctenidium, 129 Cyclodictyon, 112 Cynodontium, 65

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Dicranella, 66
Dicranodontium, 69
Dicranoweisia, 67
Dicranum, 67
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Discelium, 90
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Marchantia, 24 Marchesinia, 52 Marsupella, 36 Mastigophora, 49 Meesia, 104 Metzgeria, 26 Micromitrium, 91 Mielichhoferia, 93 Mnium, 102 Moerckia, 28 Mylia, 34 Myrinia, 113 Myurella, 113 Myurium, 111

Nardia, 36 Neckera, 112 Nowellia, 46

Octodiceras, 73 Odontoschisma, 43

Oedipodium, 92 Oligotrichum, 60 Oncophorus, 65 Orthodontium, 93 Orthothecium, 125 Orthotrichum, 107 Oxystegus, 83

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