

1907 Barker & Ingham, Mosses

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by William Ingham B.A.

588.2

A Census Catalogue

OF

BRITISH MOSSES,

WITH

List of the Botanical Vice Counties and their boundaries,
and Lists of Sources of Records.

COMPILED, UNDER THE DIRECTION OF

The Moss Exchange Club.

BY

ENGLAND	Professor BARKER & W. INGHAM, B.A.
WALES	D. A. JONES, F.L.S.
SCOTLAND	R. H. MELDRUM.
IRELAND	Rev. C. H. WADDEN, M.A., B.D., and Canon LITT, M.A., M.B.F.A.
CHANNEL ISLANDS	D. D. MARQUAND, A.B.S.

Showing the comparative rarity or frequency of each species and variety by means of a Census, indicating its distribution through the 412 Watsonian Vice County Divisions of Great Britain, and R. Lloyd Praeger's 40 County Divisions of Ireland.

Work:

GOLLAS AND VOLANS, ELECTRIC PRINTING WORKS, LITTLE STONEGATE,
1907.

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YORK:

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EXPLANATIONS OF THE CATALOGUE.

In July, 1906, a circular was distributed far and wide by the British Moss Exchange Club inviting the co-operation of all interested in Mosses in the production of the present Census Catalogue of British Mosses.

A Committee was formed, consisting of H. N. Dixon, M.A., F.L.S., Professor Barker, W. Ingham, B.A., D. A. Jones, F.L.S., R. H. Meldrum, W. E. Nicholson, Rev. C. H. Waddell, M.A., B.D., J. A. Wheldon, F.L.S., and Symers M. Macvicar, and Professor Barker undertook to act as Editor.

The response to the circular exceeded all expectations. Bryologists in all parts of the British Islands were unsparing in their efforts to try and make the Census as complete as possible.

In the Lists of Sources of records following will be found both the names of those who kindly helped, and the character of their work.

Unfortunately, in the Spring of this year, Professor Barker became seriously ill, and was obliged to give up all work on the Catalogue, which, however, was in an advanced condition, owing to the immense amount of labour he had already expended upon it.

The arduous task of picking up the threads and continuing the work then fell upon me, and in this I have been ably assisted by Mr. Dixon. To him, therefore, as well as to Professor Barker, the thanks of all bryologists are due, for without their co-operation I could not have made the Census even so accurate and complete as it is.

Special thanks are also due to those who kindly took charge of the Census work in different parts, and who sent me their Catalogues. They are D. A. Jones, for Wales; R. H. Meldrum, for Scotland; Canon Lett and the Rev. C. H. Waddell, for Ireland; and E. D. Marquand, for the Channel Islands. It should be mentioned that Canon Lett and the Rev. C. H. Waddell sent distinct lists for Ireland, one list supplementing the other, and that the records under '*Sphagna after Warnstorff*' are from the former alone.

The arrangement follows that of the 2nd Edition of the Student's *Handbook of British Mosses* by Dixon and Jameson, because that is pre-eminently a worker's book, and is probably used by every one who will use this Catalogue.

The *Sphagna* at the beginning are arranged according to the Handbook, but, at the end a *Supplement* will be found of the System published by Warnstorff in 1903, with an attempt, by no means easy,

to reconcile it with that of the Handbook. It has been thought advisable in this Edition to omit the varieties depending upon colour alone. The records of colour varieties are therefore entered under their respective species.

The *Harpidia* also follow the System of the Handbook.

The older records of *H. aduncum* var. *Kneiffii* are entered under var. *polycarpon*, to which probably most, if not all, would now be referred.

The following further explanations of the Catalogue have been supplied by Mr. Dixon at my request.

All suggestions for further additions and improvements in a future edition, may be addressed to the Editor

WM. INGHAM,

Hon. Secretary of the

Moss Exchange Club.

52, HAXBY ROAD, YORK,
26th July, 1907.

EXPLANATORY NOTES BY H. N. DIXON,
M.A., F.L.S.

Since the issue of the 2nd Edition of the London Catalogue of British Mosses in 1881, nothing has been published tabulating the distribution of Mosses in Britain. In that work the distribution was given through the Watsonian Provinces, and no attempt was made, or indeed at that time could have been made, to indicate their distribution according to the Vice-Counties. Since that date considerable progress has been made in Bryological study. Local Floras have in many cases included lists of Mosses as well as of the higher plants; and a large number of County Lists have been published in the *Journal of Botany* and other periodicals. For some time past the desire has been felt for a more complete Census of Mosses; and the Moss Exchange Club appeared to be a suitable body to undertake the task; but the difficulties in the way have been very great. For such a work the two essentials are accuracy and completeness. To collect and collate some hundreds of County Lists, to weigh the value of each record, to ensure the inclusion of all trustworthy and the exclusion of all unreliable ones, was no light task. When once undertaken it soon became evident that the choice must be made between publishing a frankly incomplete Catalogue, or delaying its publication for a very long period if anything like an approximate completeness was to be secured. It was finally decided to bring out the Catalogue without unnecessary delay in its present form. It is very far from

being complete. There are many gaps which might be filled, entries which need verifying, herbaria, public and private, which might be searched for new records. But it was clear that only by the aid of such a Catalogue as this could these gaps be filled and these records obtained. Unless workers in the field and owners of Herbaria have some basis to guide them, it is a thankless task to complete lists and extract records nine-tenths of which must be superfluous.

The present Catalogue must, therefore, be looked upon as a preliminary, and in some respects a tentative one, issued as a working list by means of which in the course of a few years it may be possible to compile a very fairly accurate and complete statement of Moss Distribution in Britain. One advantage of this method is that it has been possible to indicate in this Edition a number of points on which at present doubt exists, in order that they may be cleared up for a later and more complete Census.

Thus many of the older records applied to aggregates, which have since been divided into segregate species or varieties; while to others a certain suspicion attaches owing to confused synonymy or other causes. Special marks have been used to distinguish these cases.

In several instances a reliable record for a County does not specify the locality, and the V.C. is therefore uncertain; these are entered thus: 15 or 16.

Round brackets, thus, (15), indicate that a certain amount of doubt attaches to the record, for one reason or another, and that it is desirable to have it confirmed. Square brackets, thus, [15], indicate that the record rests upon most insecure evidence, and unless confirmed must in a future edition be omitted.

It may be well to point out that the bracketing of a record does not necessarily cast any doubt upon the accuracy of the recorder. It may arise from the authority for the record being unknown to the compilers of the Catalogue, or from some uncertainty as to the exact locality, or some similar cause. It is earnestly desired that any errors may be pointed out, and any information or criticism that may tend to the ultimate perfection of the Census may be sent to the Editor, and that Bryologists will endeavour to fill the remaining gaps and verify doubtful records in their own localities.

The arrangement of the Catalogue follows for the most part that of the 2nd Edition of the Student's Handbook of British Mosses, with the addition of some recently added species and a few additional varieties. The species and sub-species are numbered consecutively without distinction, but the sub-species (of the Handbook) are indicated by different type and by being set back in the column.

COUNTY & VICE-COUNTY DIVISIONS of the BRITISH ISLES
(FOR BIOLOGICAL PURPOSES).

Hewett C. Watson's 112 Divisions of Great Britain (1852).

[See Introduction to "Topographical Botany," Edition II.
(Baker & Newbould), 1883].

ENGLAND AND WALES.

C. CHANNEL ISLANDS.

I. Peninsula Province.

- 1 West Cornwall with Scilly.
- 2 East Cornwall.
- 3 South Devon.
- 4 North Devon.
- 5 South Somerset.
- 6 North Somerset.

II. Channel Province.

- 7 North Wilts.
- 8 South Wilts.
- 9 Dorset.
- 10 Isle of Wight.
- 11 South Hants.
- 12 North Hants.
- 13 West Sussex.
- 14 East Sussex.

III. Thames Province.

- 15 East Kent.
- 16 West Kent.
- 17 Surrey.
- 18 South Essex.
- 19 North Essex.
- 20 Herts.
- 21 Middlesex.
- 22 Berks.
- 23 Oxford.
- 24 Bucks.

IV. Ouse Province.

- 25 East Suffolk.
- 26 West Suffolk
- 27 East Norfolk
- 28 West Norfolk
- 29 Cambridge.
- 30 Bedford.
- 31 Hunts.
- 32 Northampton.

V. Severn Province.

- 33 East Gloucester.
- 34 West Gloucester.
- 35 Monmouth.
- 36 Hereford.
- 37 Worcester.
- 38 Warwick.
- 39 Stafford
- 40 Shropshire

VI. South Wales Province.

- 41 Glamorgan
- 42 Brecon.
- 43 Radnor.
- 44 Carmarthen.
- 45 Pembroke.
- 46 Cardigan.

VII. North Wales Province.

- 47 Montgomery.
- 48 Merioneth.
- 49 Carnarvon.
- 50 Denbigh.
- 51 Flint.
- 52 Anglesey.

VIII. Trent Province.

- 53 South Lincoln.
- 54 North Lincoln.
- 55 Leicester with Rutland.
- 56 Nottingham.
- 57 Derby.

IX. Mersey Province.

- 58 Cheshire.
- 59 South Lancashire.
- 60 West (*i.e.* Mid) Lancashire.

X. Humber Province.

- 61 South-east York.
- 62 North-east York.
- 63 South-west York.
- 64 Mid-west York.
- 65 North-west York.

XI. Tyne Province.

- 66 Durham.
- 67 Northumberland, South.
- 68 Cheviotland, or
Northumberland, North

XII. Lakes Province.

- 69 Westmorland with
North Lancashire.
- 70 Cumberland.
- 71 Isle of Man.

SCOTLAND.

XIII. West Lowlands Province.

- 73 Dumfries.
- 73 Kirkcudbright.
- 74 Wigtown.
- 75 Ayr.
- 76 Renfrew.
- 77 Lanark.

XIV. East Lowlands Province.

- 78 Peebles.
- 79 Selkirk.
- 80 Roxburgh.
- 81 Berwick.
- 82 Haddington.
- 83 Edinburgh.
- 84 Linlithgow.

XV. East Highlands Province.

- 85 Fife with Kinross.
- 86 Stirling.
- 87 West Perth with Clackmannan.
- 88 Mid Perth.
- 89 East Perth.
- 90 Forfar.
- 91 Kincardine.
- 92 South Aberdeen.
- 93 North Aberdeen.

- 94 Banff.
- 95 Elgin or Moray.
- 96 Easternness (East Inverness with Nairn).

XVI. West Highlands Province.

- 97 Westernness (West Inverness).
- 98 (Main) Argyll.
- 99 Dumbarton.
- 100 Clyde Isles.
- 101 Cantyre.
- 102 South Ebudes (Islay, &c).
- 103 Mid Ebudes (Mull, &c.)
- 104 North Ebudes (Skye, &c.)

XVII. North Highlands Province.

- 105 West Ross.
- 106 East Ross.
- 107 East Sutherland.
- 108 West Sutherland.
- 109 Caithness.

XVIII. North Isles Province.

- 110 Outer Hebrides.
- 111 Orkneys.
- 112 Shetlands.

R. Lloyd Praeger's 40 County Divisions of Ireland (1901).

(See "Journal of Botany" and "Irish Naturalist" of February, 1896, and "Irish Topographical Botany," 1901).

IRELAND.

- | | | |
|--------------------------|-----------------------|------------------|
| 1 South Kerry. | 14 Queen's County. | 27 West Mayo. |
| 2 North Kerry. | 15 South-east Galway. | 28 Sligo. |
| 3 West Cork. | 16 West Galway. | 29 Leitrim. |
| 4 Mid Cork. | 17 North-east Galway. | 30 Cavan. |
| 5 East Cork. | 18 King's County. | 31 Louth. |
| 6 Waterford. | 19 Kildare. | 32 Monaghan. |
| 7 South Tipperary. | 20 Wicklow. | 33 Fermanagh. |
| 8 Limerick | 21 Dublin. | 34 East Donegal. |
| 9 Clare with Aran Isles. | 22 Meath. | 35 West Donegal. |
| 10 North Tipperary. | 23 Westmeath. | 36 Tyrone. |
| 11 Kilkenny. | 24 Longford. | 37 Armagh. |
| 12 Wexford. | 25 Roscommon | 38 Down |
| 13 Carlow. | 26 East Mayo | 39 Antrim. |
| | | 40 Derry. |

Particulars of Division of the Larger Counties.

The following are particulars of the lines of separation which are taken to divide the Larger Counties into two or more Vice-Counties. These particulars are, in the case of Great Britain, taken from the fourth volume, pp. 139-142, of the late Hewett C. Watson's "Cybele Britannica" (1859). In the case of Ireland, they are taken (1) partly from a paper by the late Charles C. Babington, M.A., F.R.S., read before the Dublin University Zoological and Botanical Association, in February, 1859, entitled "Hints towards a 'Cybele Hibernica'" (see Nat. Hist. Review, vi. part 2, Dublin, 1859), and (2) partly from a paper by R. Lloyd Praeger, B.A., B.E., M.R.I.A., entitled "On the Botanical Sub-division of Ireland," published simultaneously in the "Journal of Botany" (p. 57) and in the "Irish Nationalist" (p. 29) of February, 1896, and again in "Irish Topographical Botany," 1901.

ENGLAND AND WALES.

West Cornwall (1) is separated from *East Cornwall* (2) by a line traced along the high road from Truro, through St. Columb to the inland extremity of Padstow Creek, the salt water at the two ends of this line completing the division; *South Devon* (3) from *North Devon* (4) by a line following the watershed that separates the streams flowing to the English Channel, from those flowing to the Bristol Channel; *South Somerset* (5) from *North Somerset* (6) by a line along the river Parret from Bridgwater to Ilchester, thence curving round to the northern extremity of Dorset; *North Wilts* (7) from *South Wilts* (8) by a line drawn along the Kennet and Avon Canal; *South Hants* (11) from *North Hants* (12) by a line traced along the high roads from Winchester, westward to Stockbridge, eastward to Petersfield, and continued thence to the borders of Wilts and Sussex; *West Sussex* (13) from *East Sussex* (14) by a line traced along the high road from Brighton to Cuckfield, thence by Crawley to the borders of Surrey; *East Kent* (15) from *West Kent* (16) by the river Medway and its tributaries, nearly up to Staplehurst, thence by the high road through Cranbrook to the border of Sussex near Hawkhurst; *South Essex* (18) from *North Essex* (19) by the high road from Walton and Epping to Chelmsford, thence by the Blackwater river to the coast; *East Suffolk* (25) from *West Suffolk* (26), and *East Norfolk* (27) from *West Norfolk* (28) by the meridian of 1° east longitude; *East Gloucester* (33) from *West Gloucester* (34) by the Thames and Severn Canal, and by the river Severn from the point of junction up to Tewkesbury; *South Lincoln* (53) from *North Lincoln* (54) by the Witham river from Boston to Lincoln, thence by the Foss Dyke to the Border of Nottingham; *South Lancashire* (59) from *West (i.e. Mid) Lancashire* (60) by the river Ribble; that more northerly (and detached) portion of the county situate to the north-west of Morecambe Bay, is taken with the Lakes Province and treated as a part of Westmorland.

The great county of York is first divided into the two sub-provinces of East and West Humber, by the rivers Humber, Ouse and Wiske. *South-east York* (61) is separated from *North-east York* (62) by the political line which divides the East Riding from the rest of the county; *South-west York* (63) is separated from *Mid-west York* (64) by the Leeds and Liverpool Canal, and by the river Aire below Leeds. *Mid-west York* (64) is separated from *North-west York* (65) by the political boundary between the North and West Ridings, that boundary being deflected westward so as to pass over Whernside to the south-eastern angle of Westmorland. *Cheviotland* (68) is cut off from the more southern part of Northumberland by the river Coquet, and a line continued to Carter Fell from the Linn Bridge.

Note.—The boundaries of the several counties are those employed previous to the readjustment completed in some in 1889.

SCOTLAND.

East Perth (89) is cut off from *Mid Perth* (88) by the rivers Garry and Tay. *Mid Perth* (88) is separated from *West Perth* (87) by a line traced over the high ground or water-shed so as to divide the tributaries of the Tay from those of the Forth; the little county of Clackmannan and a small detached portion of Stirling being taken as parts of West Perth; [When Perthshire or Stirlingshire material has been gathered in the Loch Lomond drainage area, it would be well to state this]. *South Aberdeen* (92) is separated from *North Aberdeen* (93) by lines traced along the water-sheds eastward and westward of Inverurie. Inverness is divided by the line of water-shed between the eastern and western sides of Scotland continued along Loch Erich to the border of Perthshire. The easterly portion of the county, with the addition of Nairnshire, forms the large vice-county of *Easternness*. (96). The remainder of Inverness, the waters of which drain to the western coast, along with the detached portion of Argyll situated to the north-west of Loch Linnhe, makes up the vice-county of *Westernness* (97); [In "Top. Bot." this definition of *Westernness* is adhered to in the text, but the map unfortunately includes in *Westernness* the portion of Argyll, south of Loch Linnhe, that lies between Loch Etive and Loch Leven, and has led to some erroneous records in past years]. (*Main*) *Argyll* (98) and *Cantyre* (101) are separated by the Crinan Canal. The *Clyde Isles* (100) include Bute, Arran, the Cumbraes and the islets Inchmarnock, Holy Isle and Pladda; (Ailsa Craig goes with Ayrshire). *South Ebudes* (102) include Islay, Jura and Colonsay with adjacent islets. *Mid Ebudes* (103) consist of Mull, Coll and Tiree, with their adjacent islets. *North Ebudes* (104) include Skye, Rum, Eigg and Canna, with their adjacent islets. *East Ross* (106) is separated from *West Ross* (105) by a line traced along the water-shed between the eastern and western coasts. The fragmentary county of Cromarty belongs to East Ross or West Ross according to the geographical position of its detached fragments. *East Sutherland* (107) is separated from *West Sutherland* (108) by the line of water-shed, this being so traced as to divide the south-eastern portion of the county from that draining to the west and north; [As "*West Sutherland*" includes two well-defined areas, one draining to the north, the other to the west, it should be indicated in all new records, to which of these they refer]. The three groups of North Isles, viz., the *Outer Hebrides* (110), *Orkneys* (111) and *Shetlands* (112) are treated as counties and numbered accordingly.

Note.—The boundaries of the several counties are those employed previous to the readjustment completed in some in 1892.

IRELAND.

South Kerry (1) is separated from *North Kerry* (2) by a line following the southern and western boundaries of the baronies of Magunihy and Trughanacmy (R. Ll. Praeger); *West Cork* (3) from *Mid Cork* (4) by a line drawn from Millstreet through Macroom to Bandon, the boundary being completed by the Killarney Railway in the north, and the Bandon River in the south (Rev. Thos. Allin (1883); *Mid Cork* (4) from *East Cork* (5) by the Great Southern and Western Railway from Charleville to Cork, thence by the western shore of Cork harbour to the ocean (R. A. Phillips and R. Ll. Praeger); *South Tipperary* (7) from *North Tipperary* (10) by the Great Southern and Western Railway (C. C. Babington); *West Galway* (Connemara) (16) from *North-east Galway* (17) by Lough Corrib and the River Corrib (C. C. Babington); *South-east Galway* (15) from *North-east Galway* (17) by the Midland Great Western from Oranmore to Ballinasloe (R. Ll. Praeger); *East Mayo* (26) from *West Mayo* (27) by Lough Mask and the course of the River Ayle, thence to Castlebar by the Tuam road, and down the Clydagh River, Lough Conn, and the Moy River to the sea (C. C. Babington); *East Donegal* (34) from *West Donegal* (35) by a line dividing the baronies of Raphoe and Boyleagh from those of Inishowen and Kilmacrennan (R. Ll. Praeger).

SOURCES OF RECORDS—ENGLAND.

The *Phytologist*, 1842-4.

Records from the following by W. Ingham :—

British Moss Flora, 1880-1905, Dr. Braithwaite.

Student's Handbook of Brit. Mosses, 1896 & 1904, H. N. Dixon & H. G. Jameson.

Moss Exchange Club Reports, 1896-1907.

The European Sphagnaceæ, after Warnstorff, 1901, E. C. Horrell.

North of England Harpidia, after Renauld, Nat. 1902, J. A. Wheldon.

MSS. Records from *Brit. Mus. Herb.*, by W. R. Sherrin—*Hunt's Herb.*, Kew, A. Bruce Jackson—*Boswell's Herb.*, Oxford, A. B. Jackson—J. A. Wheldon—W. Whitwell—Miss E. Armitage for V.C. 4, 6, 8, 9, 11, 12, 17, 24, 37, 40, 69.

Special thanks are due to A. Bruce Jackson and W. R. Sherrin for their great assistance in compiling lists from the Herb. above mentioned and to F. Comyns for his great help to A. B. Jackson.

SOURCES OF V.C. RECORDS—ENGLAND.

Y.C. 1 & 2, Cornwall. *Bot. rec. Club Rep.*, 1873-1879—*Trans. Penzance Nat. Hist. Soc.*, 1881-2, Ralfs and Curnow, *addenda* 1891-2—Do. R. V. Tellam, 1887-8—*Moss. Devon and Cornwall*, E. M. Holmes and F. Brent and *additions* by E. M. Holmes, E. D. Marquand, W. Mitten, W. B. Waterfall and H. N. Dixon—*Vict. Co. Hist.*, 1906, E. M. Holmes—*Moss. Falmouth and Neighbourhood*, J. of Bot., Rev. W. H. Painter.

MSS. Ll. J. Cocks—R. V. Tellam—Miss Larter—R. W. Smitham, including lists from Rev. H. Boyden and Mr. Glasson—Miss E. Armitage.

Y.C. 3 & 4, Devon. *Bot. rec. Club Rep.*, 1873-1879—*Flora of Devon*, 1829, Jones and Kingston—*Moss. Dev. and Cornw.*, E. M. Holmes and F. Brent—*Moss Flora of Devon*, E. Parfitt—*Vict. Co. Hist.*, 1906, E. M. Holmes—*Flora Ilfracombe*, E. M. Holmes—*Moss. Lynmouth district*, *Sci. Gossip*, Sept. 1900, C. A. Briggs.

MSS. Rev. W. S. Hore—Rev. C. D. Blakiston and C. H. Blakiston—G. B. Savery and F. Savery—Ll. J. Cocks—Miss Larter.

Y.C. 5 & 6, Somerset. *Bot. rec. Club Report.*, 1873-1879.

MSS. W. B. Waterfall, compiled from lists by Thwaites, Stoddart, Green, Wheeler, Miss Roper, W. B. Waterfall, and Rev. C. H. Binstead in *Vict. Co. Hist.*—Dr. Parsons—Miss Larter—Sir Edward Fry, MS. prepared by Miss Agnes Fry—Miss E. Armitage—A. Bruce Jackson for v.c. 6 from *Bosw. Herb.*, Oxford—W. Watson.

Y.C. 7 & 8, Wiltshire. MSS. A. Bruce Jackson, v.c. 7—J. Saunders, New Forest and S. Wilts.

Y.C. 9, Dorsetshire. *Bot. rec. Club Rep.*, 1873-1879.

MSS. E. M. Holmes—Miss G. Lister.

Y.C. 10, Isle of Wight. Venables' *Isle of Wight*, Stamford, 1860—*Coll.* by Mrs. Venables.

MS. A. Bruce Jackson—*Spec. Rev.* H. M. Levens *det.* Prof. Barker and W. Ingham.

- Y.C. 11 & 12, Hampshire.** *Vict. Co. Hist.*, 1900, H. N. Dixon.
MS. A. Bruce Jackson.
- Y.C. 13 & 14, Sussex.** MS. W. E. Nicholson, including the following:—
The Moss Flora of Sussex, 1870, by C. P. Smith.
List of Mosses of Eastbourne (Cuckmere) Dist., 1889, Rev. H. G. Jameson.
Nat. Hist. of Hastings and St. Leonard's, 1878, supplements 1883, 1888, and 1898, mostly by Rev. E. N. Bloomfield.
Later additions in *Co. Hist.*, *Loc. Hist.*, &c.
- Y.C. 15 & 16, Kent.** *Vict. Co. Hist.*, 1907, E. M. Holmes.
MS. Ll. J. Cocks, from papers by E. M. Holmes, *J. of Bot.*, 1877 and 1901, and from notes by Ll. J. Cocks and Sir J. Stirling.
- Y.C. 17, Surrey.** *Phytologist*, Vol. I., H. M. Holman and C. A. Johns.
Moss. Flora, Roy. Kew Gardens, Salmon, *Bulletin of Miscellaneous Inform.*, 1899, DCXXXVII.
MS. Dr. Parsons, including mosses by A. G. Bradley and Dr. Eyre de Crespigny.
- Y.C. 18 & 19, Essex.** MSS. E. M. Holmes—F. J. Chittenden (published in *Essex Nat.*, 1906).
- Y.C. 20, Herts.** H. Darton from spec. in *Herts. Co. Mus.* at St. Albans, from his own Herb. and from a *Prel. Herts. Moss Flora*, by A. E. Gibbs, 1884.
- Y.C. 21, Middlesex.** *Middlesex Flora*, 1869, Trimen and Dyer—*New London Flora*, Dr. Eyre de Crespigny—*Bot. rec. Club Rep.*, 1873-1879.
MS. W. R. Sherrin.
- Y.C. 22, Berks.** *Vict. Co. Hist.*, 1906, Druce.
- Y.C. 23, Oxford.** *Phytol.*, Vol. III., P. B. Ayres—*Vict. Co. Hist.*, 1907, Druce.
- Y.C. 24, Bucks.** *Vict. Co. Hist.* 1905, E. M. Holmes.
- Y.C. 25 & 26, Suffolk.** *Norfolk and Norwich Nat. Soc.*, Vol. VII., 227, Rev. E. N. Bloomfield, 1901.
- Y.C. 27 & 28, Norfolk.** *Norfolk and Norwich Nat. Soc.*, Vol. VII., 212, H. N. Dixon, 1901—*A Supplementary List*, H. N. Dixon, with later add. by W. H. Burrell and Rev. W. E. Thompson, Vol. VII., 558.
- Y.C. 29, Cambridge.** Relhan, *Flora Cantabrigiensis*, 1829.
MSS. H. N. Dixon—P. G. Rhodes.
- Y.C. 30, Bedford.** *Vict. Co. Hist.*, 1904—*J. of Bot.*, XXII., 47, J. Saunders.
- Y.C. 31, Hunts.** MS. Dr. H. F. Parsons
- Y.C. 32, Northampton.** *Moss Flora of Northampton*. in *Journ. of Northampton. Nat. Hist. Soc.*, H. N. Dixon, 1899.
- Y.C. 33 & 34, Gloucester.** *Thwaite's Moss. coll. nr. Bristol*—*Wheeler's List* in *Clifton Coll. Mus.*
MSS. *Stroud Dist. and Forest of Dean*, Geo. Holmes, E. J. Elliott, and Rev. A. Ley—*lower part of Wye Valley*, W. A. Shoolbred—Rev. H. P. Reader—Rev. C. H. Binstead and Miss E. Armitage—E. J. Elliott—E. M. Holmes—W. Beach in *Proc. of Cheltenham Work. Nat. Assoc.*
- Y.C. 35, Monmouth.** *J. of Bot.*, 1898, H. N. Dixon—MS. Miss E. Armitage.

Y.C. 36, Hereford. *Hereford. Flora*, 1889, *add.* 1894.—*Bot. rec. Club Rep.*, 1873-1879.

MS. Miss E. Armitage.

Y.C. 37, Worcester. *J. of Bot.*, 1903, J. E. Bagnall.

MS. J. B. Duncan, *add.* to 1907.

Y.C. 38, Warwick. *Flora of Warwick*. 1891, and *Midland Nat.*, 1892-3, J. E. Bagnall.

Y.C. 39, Stafford. *J. of Bot.*, 1896, J. E. Bagnall.

Y.C. 40, Shropshire. *Phytol.*, Vol. II., F. Westcott.

MS. W. P. Hamilton of moss. observed by R. de G. Benson, W. P. Hamilton, Rev. A. Ley, A. W. Weyman and Rev. W. H. Painter.

Y.C. 53 & 54, Lincoln. *Bot. rec. Club Rep.* for V.C. 54, 1873-1879.

Nat. 1896-1906, chiefly by J. Larder and Miss S. C. Stow.

Y.C. 55, Leicester and Rutland. *Flora of Leicester.*, by Lit. and Philosoph. Soc. of Leicester, 1886—*J. of Bot.*, 1905, *add.* to *Flora*, A. B. Jackson.

MSS. A. R. Horwood and Rev. H. P. Reader, *add.* to 1907.

Y.C. 56, Nottingham. *Synop. Ed. II.*, 1696, Ray—*Catalogues*, 1738, Deering—*Bot. Calendars*, 1826, Jowett—*Nottingham. Flora*, 1839, Howitt

MS. Prof. Carr, 192 sp. and 24 vars.

Y.C. 57, Derby. *North Derbyshire Mosses*, *J. of Bot.*, 1894, J. Whitehead, 273 sp. and 51 vars.—*Flora of Derbysh.*, Rev. W. R. Linton.

MSS. Prof. Barker and Rev. W. R. Linton.

Y.C. 58, Cheshire. *Bot. rec. Club rep.*, 1873-1879.

Early Bot. work of the late W. Wilson, *Nat.* 1887, Jas. Cash.

Mosses of Cheshire, *J. of Bot.*, 1898, 1904, J. A. Wheldon.

Mosses of Mersey Prov., *Nat.* 1900, J. A. Wheldon—*MS.* Sphagna, D. A. Jones.

Y.C. 59 & 60, Lancashire. *Phytol.*, Vol. III., V.C. 59, J. Sidebottam—*Bot. Guide to Manchester*, 1849, R. Buxton—*Muse. and Hep. of Liverpool*, *Proc. Liverpool Lit. and Phil. Soc.*, 1855, F. P. Marratt—*Moss. of Ashton-under-Lyne*, *Nat.* 1886, J. Whitehead—*Vict. Co. Hist.*, 1906.

By J. A. Wheldon, *Moss. S. Lancashire*, *J. of Bot.*, 1898, 1899—*Moss. of Southport*, *Brit. Ass. Handb.*, 1903.

By J. A. Wheldon and Albert Wilson, *Moss. W. Lancas.*, *J. of Bot.*, 1899, 1901, 1902, 1905, 1906—*Flor. Over Wyresdale*, *Nat.* 1901—*Flora W. Lancashire*, 1907.

Y.C. 61, 62, 63, 64, 65, Yorkshire. *Phytol.*, Vol. I, V.C. 62, 64, R. Spruce; Vol. II., V.C. 62, R. Spruce; V.C. 64, S. Gibson; Vol. III., V.C. 62, H. Ibbotson—*Supp. to Flora Yorks.*, 1854, John Nowell—*Bot. rec. Club Rep.*, V.C. 61, 1873-79—*Flora W. Yorks.*, 1888, F. A. Lees—*Flora E. Riding*, 1892, J. F. Robinson, moss., by J. J. Marshall—*N. Yorks.*, 1863, J. G. Baker, moss. in 1906 ed. by M. B. Slater—*Moss-Flo., Nidderdale & Wensleydale* *Nat.* 1897, R. Barnes—*Some Nidderdale Moss.*, *Nat.* 1897, Ll. J. Cocks—*Moss. of Pool, Wharfedale*, *Nat.* 1902, G. B. Savery—*Flora Halifax*, 1904, Crump and Crossland.

By W. Ingham, *Moss. and Hep., Skipwith Com.*, *Nat.* 1898—*Strensall Com.*, *Nat.* 1899—*Tadcaster Dist.*, *Nat.* 1899—*N. E. Yorks.*, *J. of Bot.*, 1900—*Arken-garthdale*, *Nat.* 1900—*East. Rid.*, *J. of Bot.*, 1903—*Bowes Dist.*, *Nat.* 1903—

Baugh Fell, Nat. 1903—*Buckden Dist.*, Nat. 1904—*Askrigg and Leyburn Dist.*, Nat. 1905—*Harpidia*, *Yorks. and Durham*, Nat. 1901-2—*Sphagna*, *Yorks. and Durham*, after *Warnst.*, Nat. 1901-2—*Moss. and Hep. of York and District* of 20 miles radius, *Brit. Ass. Handbk.*, 1906.

Y.C. 66, Durham. *Flora Northumberland and Durham*, 1831, Winch—*Moss. of Durham*, *J. of Bot.*, 1900, W. Ingham—*Sphag.*, *Upper Teesdale*, *J. of Bot.*, 1903, E. C. Horrell—*Vict. Co. Hist.*, 1906, *Moss. and Hep.*, by W. Ingham.

Y.C. 67 & 68. Northumberland. *Moss. of Northumberland*, *Berwick Nat. Hist. Soc.*, 1907, H. N. Dixon.

Y.C. 69, Westmorland with N. Lancashire. *MS. Alb. Wilson—Hep. and Musc. of Westmorland*, Nat. 1896-8, G. Stabler.

Y.C. 70, Cumberland. *Bot. rec. Club Rep.*, 1873-79.

MSS. W. B. Waterfall, including *Vict. Co. Hist.*, 1901, Rev. C. H. Binstead; *Sci. Gossip*, Silloth in April, H. Friend; *Nat.*, 1896-98, G. Stabler; *Carlisle Mus. List*, 1882-1883; Rev. R. Wood, sen. and jun., 203 spec.; *Wheeler's Hist. Cumberland*, 85 spec.; Winch, 1833, 53 spec.; J. Bowman, 1868-72; W. Hodgson.—Albert Wilson, 1906.

Y.C. 71, Isle of Man. *MS.* H. Beesley, of moss. in *Trans. of Isle of Man Nat. Hist. Soc.*, 1888, by G. A. Holt, 1885, and including list pub. in 1857 in *Phytol.*, by J. H. Davies, his own collection and that of Rev. H. Stowell, 232 sp. and 28 vars.—*add.* to 1907, H. Beesley.

C. Channel Islands. *MS.* E. D. Marquand, of all spec. recorded to 6th October, 1906, the *Jersey spec.* on authority of Auguste Martin, of Cherbourg, those of *Guernsey, Alderney, Sark and the smaller Isles* on authority of E. D. Marquand.

SOURCES OF RECORDS—WALES.

Books. *Wilson's Bry. Brit.*, 1855.

Braithwaite's Brit. Moss Flora, 1880-1905.

Griffith's Flora of Anglesey and Carnarvon, 1895.

Herbaria. W. Wilson's, *Brit. Mus.*, per F. J. Chittenden, W. R. Sherrin, and D. A. Jones.

John Whitehead's, per Prof. Barker.

Lists. V.C. 41, Glamorgan, J. W. G. Gutch, *Phytologist*, Old Series, 4/42.

V.C. 42, Brecon, Rev. W. H. Painter, *J. of Bot.*, 1904.

V.C. 43, Radnor, Rev. W. H. Painter, *Sci. Goss. New Series*

Vol. VIII., No. 85; Rev. A. Ley, *Flo. Aberedw.*

V.C. 45, Pembroke, H. N. Dixon, *J. of Bot.*, 1898.

V.C. 46, Cardigan, Rev. W. H. Painter, *J. of Bot.*, 1906.

V.C. 48, Merioneth, Mrs. Bradford, *J. of Bot.*, 1896, 1897; J. E.

Bagnall, *J. of Bot.*, 1898-9; J. Whitehead, *Bot. rec. Club Rep.*,

1898; *Bot. rec. Club Rep.*, 1873-1879.

V.C. 49, Carnarvon, H. N. Dixon, *J. of Bot.*, 1899.

V.C. 50, Denbigh, H. N. Dixon (coll. by Parsons and Lewis), 5/98;

Miss E. Armitage, *J. of Bot.*, 1900.

SOURCES OF V.C. RECORDS—WALES.

- Professor Barker—41, 43, 44, 45, 48, 49, 50, 52.
 Dr. Salter—46, 48. Dr. Parsons—45, 47, 48, 50.
 Rev. C. H. Binstead—42, 43. E. C. Horrell—48.
 Miss E. Armitage—42, 43, 45. Rev. A. Ley—42, 46.
 Rev. W. R. Linton—42, 45. H. N. Dixon—42, 43, 47.
 A. Brinkman—45, 51. A. A. Dallman and Lewis—50.
 H. H. Knight—41, 42, 44, 45. D. A. Jones—50.
 S. J. Owen and D. A. Jones—48, 49, 52.

SOURCES OF RECORDS—SCOTLAND.

- Floras.** Braithwaite's *Br. Moss Flora*, 1880-1905.
 Dickie's *Bot. Guide, Aberdeen, Banff, Kincardine*, 1860.
 Dixon's *Student's Handbook*, 1896, 1904.
 Edmonston's *Flora of Shetland*, 1845.
 Gardiner's *Flora of Forfarshire*, 1848.
 Greville's *Flora Edinensis*, 1824.
 ——— *Scot. Crypt. Flora*, 1833—38.
 Hardy, *Moss Flo., Eastern Borders*, 1868.
 Hooker's *Flo. Scot.*, 1821; *Brit. Flo.*, Vol. II., 1833.
 Hobkirk's *Syn. Brit. Moss.*, 1873, 1884.
 Lightfoot's *Flo. Scot.*, 1792.
 Schimper's *Syn. Musc. Europ.*, 1876.
 Wilson's *Bry. Brit.*, 1855.
 Howie's *Moss Flo., Fife and Kinross*, 1889.
 Horrell's *Europ. Sphag.*, 1901.
 J. Sim's *Bot. of Scotston Moor*.

Magazines and Transactions.

1. Scottish Naturalist.

- Dr. Stirton—*Myur. Hebrid. and other moss.*, Hebrides, 1885.
 Rev. J. Fergusson—*Bry. Notes*, 1874, 1875, 1877; *Dic. montanum* in
Scot., 1875; *bot. ramble, Glenshee*, 1877; *recent advances in Brit. Bry.*,
 1879.
 Rev. J. Keith—*Moss. in vicinity Forres*, 1871.
 F. Buchanan White—*Crypt. Flo. Mull*, 1882; *Glen Tilt, fauna, flora*,
 1879.
 W. Martin—*Bry. notes Glen Devon and Strathearn*, 1885.
 Mrs. Farquharson—*Notes moss., N. of Scot.*, 1886; *Alford Dist.*, 1890.

2. Annals of Scottish Nat. Hist.

- Dr. Stirton—*New and rare Scot. moss.*, 1897, 1899, 1900-1903, 1905-1907.
 T. D. Sadler—*Contrib. to Moss Flo., Perthshire*, 1894.

3. Journ. of Botany.
 H. N. Dixon—*Plag. Mullerianum* and *A. compactum* in Britain, 1898;
Bry. notes, W. Highlands, 1899; *new and rare moss., Ben Lawers*,
 1900; *new loc. rare moss.*, 1884; *Ross-shire*, 1886; *new var. Brit. moss.*,
 1902.
 W. E. Nicholson—*Sutherland. mosses*, 1900.
 J. A. Wheldon—*Elgin mosses*, 1901 (coll. by S. M. Macvicar).
4. The Naturalist.
 W. West—*A few days field Botany*, 1881-2.
5. Trans. Perth. Soc. Nat. Sci.
 F. B. White—*Nat. Hist., Kinnoul Hill*, 1886.
 R. H. Meldrum—*Prelim. list Perth. moss.*, 1898.
6. Proc. E. Scot. Union Nat. Hist. Societies.
 J. Fulton—*Moss. Sidlaw Hills*, 1892.
7. Annals Andersonian Nat. Soc.
 J. Murray—*Clydesdale moss.*, 1896.
8. Trans. Stir. Nat. Hist. and Arch. Soc.
 Stirling and Kidson—*Stirling. Bog moss.*, 1879; *Stirling. moss.*, 1899.
9. Trans. Nat. Hist. Soc., Glasgow.
 D. A. Boyd—*Bry. notes*, 1905.
 Murray and Wilkie—*Moss., Campsie Glen*, 1898.
 P. Ewing—*Flo. Ben Laoigh*, 1883.
10. Trans. Bot. Soc., Edinburgh.
 Dr. Stirton—*New and rare moss., Ben Lawers*, 1870-1871.
 Rev. J. Fergusson—*Moss., indigenous to Forfar. not in Flora*, 1869.
 Balfour and Babington—*Cat. Long Island plants*, 1841.
 Symington Grieve—*Moss., Colonsay*, 1880; *Do. Isle of Rum*, 1887.
 W. Nichol—*Recent add., Crypt. Flo., Edinburgh*, 1858; *crypt., nr. Moffatt*, 1858.
 J. Sadler—*Musc. Excurs. Ramsheugh and Glen Farg and Habbie's How*,
 1858; *notes new and rare Brit. moss.*, 1862, 1863, 1869; *moss. Blair Athole and Brechin*, coll. Mrs. and Miss McInroy, 1864.
 C. Howie—*New and rare moss., Ross. and Inverness*, 1868, 1869.
 Ll. J. Cocks—*Report on moss. and hep., Scot. Alp. Bot. Club*, 1900, 1904.
 W. Bell and J. Sadler—*Mosses collected round Edinburgh in 1869*.

Herbaria. *Edinburgh Bot. Garden; Perth. Soc. Nat. Sci.; John Sim, Ban-*
chory; R. H. Meldrum.

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SOURCES OF V.C. RECORDS—SCOTLAND.

- P. Ewing—75, 76, 77, 86, 88, 97, 98, 99, 100, 101, 102, 103, 104, 105, 110.
 Rev. Dr. Fergusson—88, 89, 90, 91, 92, 93, 94, 95, 112.
 J. McAndrew—72, 73, 74, 78, 82, 83, 84, 85, 86.
 J. Murray—75, 76, 77, 78, 86, 98, 99, 100, 101.
 D. A. Boyd—75, 100. Dr. J. Grant—111.
 H. N. Dixon—88, 97, 98, 103. J. Hunter—79.
 Wm. Evans—78, 79, 82, 83, 84, 87. R. Kidston—86.
 J. R. Lee—75, 76, 77, 86, 98, 99. W. E. Nicholson—101.
 Rev. D. Lillie—93, 94, 107, 108, W. West—110.
 109, 111.
 S. M. Macvicar—78, 80, 96, 97. D. A. Jones—88.
 C. McIntosh—88, 89, 106. J. B. Duncan—88.
 Professor Barker—various.

SOURCES OF RECORDS—IRELAND.

- D. Turner—*Mus. Hib. Spicilegium*, 1804.
 Taylor—*Flora Hib.*, 1826.
 Hooker—*Eng. Bot.*, Vol. V., Part 1., 1833.
 Power—*Fauna, Flora, Cork*, Part II., 1845.
 Wilson—*Bry. Brit.*, 1855.
 Carroll—*New Ir. moss., Phytol.*, 1856, p. 236.
 Phytologist, 1856, 1857, 1861.
 Carrington—*Gleanings Ir. Crypt.*, 1863.
 Moore—*Syn. moss., Ireland*, 1872.
 Lindberg—*Hep. in Hib.*, 1873.
 H. C. Hart—*Locs. of moss., Ireland*, J. Bot., 1902.
 Stewart—*Flora N.E. Ireland*, 1888; *Supp.*, 1895; *Bot. S. Clare and Proc. R.I.A.*, 1890; *L. Allen*, do. 1885; *Arran, Ir. Nat.*, 1895.
 Orr—*Moss., Ireland*, J. Bot., 1881.
 Braithwaite—*Br. Moss. Fl.*, 1880-1905.
Moss Exchange Club Rep., 1896-1907.
 Miss E. Armitage—*Limerick mosses*, J. Bot., 1902.
 H. N. Dixon—*J. Bot.*, 1891, p. 361.
 Rev. C. H. Waddell.—*Moss. Ulster*, 1884; *moss., Ben Bulbin*, Ir. Nat., 1892, 1893; *Ulster*, Ir. Nat., 1898; *Brit. Ass. Guide*, 1902.
 Canon Lett—*Moss. new to Irel.*, J. Bot., 1901; *Mourne Mts.*, Proc. R.I.A., 1890; *S. Donegal*, J. Bot., 1903.
 D. McArdle—*Mus. and Hep., Cavan*, P.R.I.A., 1898; *Berehaven*, Ir. Nat., 1894; *Louth*, Ir. Nat., 1894; *Galway*, Ir. Nat., 1905; *Clonbrock*, Ir. Nat., 1896; *Sligo conf.*, Ir. Nat., 1904.
 J. Hunter—*Moss., N. Donegal*, J. Bot., 1902.
 J. H. Davies—*N.E. Ireland*, Ir. Nat., 1900, 1902, 1904, and July 1907 (last on *Co. Down mosses*).
 Herb.—*Sci. and Art Mus.*, Dublin, and *Canon Lett's*.
 J. Templeton—*MSS. Roy. Ir. Acad. Lib. and Belfast Mus.*

SOURCES OF V.C. RECORDS—IRELAND.

- Canon Lett—1, 6, 7, 16, 18, 20, 27, 28, 31, 33, 35, 36, 37, 38, 39, 40.
 Rev. C. H. Waddell—2, 6, 8, 9, 28, 31, 32, 35, 37, 38, 39, 40.
 D. Moore, *Syn.*, 1872—7, 16, 20, 21, 27, 28, 39, 40.
 R. A. Phillips—10, 11, 12, 13, 14, 15.
 D. McArdle—21, 27, 28, 29.
 W. F. d'V. Kane—9, 16, 26, 32, 33.
 S. A. Stewart—8, 9, 29, 38, 39, 40.
 Miss H. A. Martin—3.
 Miss O. Peyton—4.
 Mrs. E. H. Bennis—8, 10.
 G. V. Machamara—9.
 G. Fogerty—8, 9.
 Sir T. H. Gratton Esmonde—12.
 R. Clayton-Brown—13, 14.
 Canon C. D. Russell—18.
 D. Orr—20, 21.
 W. N. Tetley—29, 33.
 H. N. Dixon—35.
 J. Templeton—38, 39.
 T. Power—3, 4, 5.
 W. Wilson—1, 2, 3.
 Rev. W. W. Fleming—6.
 Miss E. Armitage—8.
 P. B. O'Kelly—9.
 Miss A. Hemphill—10, 18.
 Miss V. Cooper—12.
 Mrs. F. Joyce—15.
 Miss Dopping Hepenstall—24.
 C. Laugham—33.
 Miss M. Boyd—36.
 J. H. Davies—38, 39.
 Madame Christen—27, 33.
 Herb. Sci. and Art Mus., Dublin—19.



Census Catalogue of British Mosses.

I. SPHAGNACEÆ.

1. *Sphagnum* Dill.

A. CYMBIFOLIA.

- 1 *cymbifolium* Ehrh. 1—6, 8—19, 21—28, 30, 32, 34—40, 43, 45—52, 54—83, 85—92, 95—112. I. 1—4, 7, 8, 12, 13, 15—21, 27—29, 31—35, 37—39.
β squarrosulum Nees & Hornsch. 1, 2, 6, 9, 14, 16, 24, 25, 30, 32, 36, 38—40, 48, 54, 57—60, 62, 63, 67, 73, 85, 86, 88. I. 20.
γ congestum Schp. 1, 2, 4, 8, 11, 14, 16, 36, 38, 59—62, 64, 69, 70, 85, 86, 111. I. 38.
- 2 *medium* Limpr. 11, 14—17, 24, 27, 40, 48, 58, 60, 62, 65, 66, 68, 69, 72, 73, 75, 77, 79, 83, 86, 88, 96, 102, 109, 111. I. 3, 8, 18, 33—35, 37, 38.
- 3 *papillosum* Lindb. 1—3, (4), 5, 6, 9, 11, 13, 14, 16, 24, 35, 37—40, 42, 44—46, 48—51, 53—55, 57—66, 68—73, 75—78, 83, 85, 86, 88, 90, 91, 95, 96, 98—103, 105, 106, 108—110, 112. I. 1, 3, 7, 8, 13, 16—18, 21, 23, 27—31, 33, 36—39.
β confertum Lindb. 1, 2, 9, 26, 38—40, 48—50, 60—62, 65, 66, 69, 70, 77, 86, 88, 95, 99, (106), 108, (110). I. 1, 17, 34, 38, 39.
γ stenophyllum Lindb. 1, 39, 70, 73.
- 4 *Austini* Sull. (40), 48, 62, 65, 66, 70, 73, 83, 86, 88, 106, 110. I. 18, 39.
β imbricatum Lindb. 69, 73, 86, 109, 110. I. 17.

B. TRUNCATA.

- 5 *rigidum* Schp. 1—4, 6, 9, 11, 13, 16, 24, 45, 48, 49, 54, 60—62, 69, 71—73, 75—78, 83, 85—88, 96—99, 101, 102, 109. I. 38.
β compactum Schp. 2, 9, 11, 12, 17, 26, 49, 54, 56—58, 60—66, 69—73, 80, 81, 83, 85—88, 90—92, 95—97, 103, 104, 108—111. I. 2, 20, 21, 27, 28, 31—35, 38, 39.
γ squarrosulum Russ. 8, 11, 17, 48, 55, 57, 58, 61, 62, 72, 73, 84, 87, 88, 96. I. 27, 31, 33, 35, 37.

C. SUBSECUNDA.

- 6 *tenellum* Ehrh. 1—3, 6, 9, 11—19, 22, 24, 27, 28, 34, 35, 37, 40, 44, 45, 48—50, 56—58, 60—66, 69—73, 75—81, 83, 85, 86, 88, 90—92, 95—98, 100—106, 108, 109, 111, 112. I. 1, 2, 6, 16, 18, 20, 21, 27, 33—35, 37—39.

- 7 **subsecundum** *Nees* 1—4, 6, 8, 9, 11, 12, 14, 16, 17, 20—24, 36—40, 42—46, 48—54, 57—66, 69—75, 77, 78, 83—86, 88, 90, 92, 94—96, 98—101, 103—109, 111. **I.** 1, 3, 16, 20, 21, 27, 31, 35, 37—40.
β contortum *Schp.* 1—4, 6, 9, 11, 13, 14, 16, 22, 24, 25, 28, 32, 35, 36, 38—40, 43, 47—50, 56—66, 68, 69, 71—73, 81, 83—85, 87, 88, 90—92, 97, 100, 105, 106. **I.** 1, 2, 4, 6, 12, 16, 20, 21, 27, 31, 37—39.
γ turgidum *C.M.* 2, 13, 35, 38, 48, 61—66, 73.
δ obesum *Schp.* 1—3, 11, 16, 25, 35, 36, 38—41, 48, 49, 58—60, 62, 69, 71, 73, 77, 88, 90, 100, 108. **I.** 27, 37, 38, 40.
ε viride *Boul.* 2, 11, 14, 16, 22, 38—40, 45, 57, 60—62, 66. **I.** 2, 38.
8 **laricinum** *Spruce* 1, 13, 14, 16, 40, 45, 48, 52, 58, 60—62, 69, 73, 86, 87, 92, 98, 99. **I.** 3, 12, 16, 27, 34, 38.
β platyphyllum *Lindb.* 49, (87).
γ cyclophyllum *Lindb.* 87.

D. ACUTIFOLIA.

- 9 **teres** *Ångstr.* 13, 40, 42, 46—49, 57—60, 62, 64—66, 69, 73, 75—78, 86—88, 90, 91, 96, 99, 109. **I.** 20, 34, 38.
β subteres *Dixon* 13, 14, 40, 42, 48, 57, 59, 60, 62, 65, 66, 69, 109.
γ squarrosulum *Warnst.* 13, 14, 17, 40, 47, 48, 58—60, 66, 69, 91, 109.
δ laxum *Dixon* 59, 30, 60, 62, 69.
10 **squarrosulum** *Pers.* 1—3, 5, 8—10, 12, 14, 16—18, 20, 22, 23, 25—27, 30, 37—40, 44—50, 52, 55—66, 68—73, 75—77, 80, 81, 83, 85, 86, 88, 90, 92, 94—98, 103, 105—109, 112. **I.** 2, 4, 5, 8, 13, 16, 20—22, 31, 34, 37—39.
β imbricatum *Schp.* 12, 14, 18, 35, 58, 59, 62, 99. **I.** 8, 38.
11 **molle** *Sull.* 12, 14, 17, 44, 45, 48, 49, 57, 62, 66, 69, 73, 88, 91, 108, 112. **I.** 34, 37—39.
β tenerum *Braithw.* 13, 14, 16, 17, 39, 48, 57, 62, 73, 91, 109. **I.** 35.
12 **acutifolium** *Ehrh.* 1—6, 9—17, 19—28, 30, 32, 34, 36—40, 45, 47—88, 90—92, 94—105, 107—110, 112. **C. I.** 1, 2, 4, 5, 7—9, 16—21, 27—33, 35, 37—40.
β subnitens *Dixon* 1—3, 5, 6, 9, 11, 13—19, 22, 25—27, 34, 35, 37, 40, 42—51, 55—66, 69, 70, 72, 88, 95, 102, 105, 106, 108—111. **I.** 1, 3, 6—8, 12, 13, 15, 16, 18, 27, 30, 31, 33—39.
γ rubellum *Russ.* 1—3, 8, 9, 11, 12, 14, 16, 17, 24, 27, 30, 38—40, 44—46, 48, 49, 51, 55, 57, 58, 60, 62—66, 69—73, 80, 83, 85, 86, 88—90, 92, 94—97, 100, 102, 104—110. **I.** 1—3, 6—8, 16—18, 20, 21, 27, 28, 30, 31, 33—39.
δ gracile *Russ.* 5, 58, 60, 62, 65, 66, 88.
ε fuscum *Schp.* 1, 46, 48, 49, 60, 62, 65, 66, 68—71, 73, 88, 102, 109. **I.** 18, 32, 34, 39.
ζ quinquefarium *Lindb.* 1, 2, 15, 17, 37—39, 42, 44, 46—48, 57, 60, 62, 64—66, 69, 70, 72, 73, 86, 88, 105, 108, 109. **I.** 1—3, 6, 7, 16, 27, 33—36, 39.
η robustum *Russ.* 42, 48, 49, 60, 65, 66, 69, 109. **I.** 34, 39.
13 **Girgensohnii** *Russ.* 39, 48, 50, 57, 60, 62, 65, 66, 69, 72, 73, 75, (76), 83, 85—88, 90—92, 97—99, 105, 108, 109. **I.** 20, 34, 39.

- 14 *fimbriatum* *Wils.* 1—3, 8, 13, 14, 16, 17, 21, 23, 25, 26, 30, 34, 37—40, 43—46, 48, 50, 57—66, 69, 70, 72, 73, 77, 81, 83, 85, 86, 90—92, 97, 99, 101, 102, 106, 109—112. I. 20, 34, 38, 39.
- 15 *Lindbergii* *Schp.* 106, 112.
- 16 *intermedium* *Hoffm.* 1—5, 8—11, 13—16, 18, 21—25, 28, 30, 32, 35—40, 42—45, 47—50, 54, 56—60, 62—73, 75—78, 83, 85, 86, 88, 90, 91, 98—100, 102, 104, 107—109. I. 6, 7, 13, 16, 20, 27, 29, 31, 35, 38, 39.
β pulchrum *Lindb.* 1, 2, 39, 40, 48, 58—60, 62, 69, 109. I. 3, 34, 38.
γ parvifolium *Warnst.* 27, 45, 57, 62, 64—66, 107. I. 39.
- 17 *riparium* *Angstr.* 2, 39, 60.
- 18 *cuspidatum* *Ehrh.* 1—4, 6, (8), 9, 11—17, 19, 21, 24, 27, 28, 30, 36—40, 42—45, 48, 49, 51, 54—66, 68—81, 83, 85—88, 90—92, 95—99, 101—106, 108—110, 112. I. 1, 2, 8, 9, 16, 18, 21, 27, 29, 31—34, 37—40.
β falcatum *Russ.* 1, 9, 13, 15, 16, 39, 44, 45, 48, 49, 58—62, 65, 66, 69—73, 77, 83, 88, 105, 109, 110. I. 7, 8, 18, 27, 35—37, 39.
γ plumosum *Nees & Hornsch.* 1, 2, 11, 16, 35, 36, 40, 42, 43, 48, 49, 54, 58—66, 69—71, 73, 75, 83, 85, 86, 88, 90—92, 103, 108, 109.
I. 17, 20, 30, 33, 37—39.
δ Torreyanum *Braithw.* 40, 48, 59, 60.
ε brevifolium *Lindb.* 1, 57, 73, 92.

II. ANDREÆACEÆ.

2. *Andreæa* *Ehrh.*

- 19 *petrophila* *Ehrh.* 1—4, (14), 40, 42, 44—46, 48, 49, 57, 60, 62—73, 75—78, 80, 81, 83—92, 95—105, 107—111. I. 1, 2, 6, 16, 20, 31, 35, 37—40.
β acuminata *B. & S.* 48, 62, 65—67, 70, 76, 90—92, 96, 97, 104, 112.
I. 31, 38, 39.
γ gracilis *B. & S.* 48, 69, 70, 92, 97. I. 38, 39.
δ alpestris *Theod.* 86—88, 92, 97.
ε sparsifolia *Lindb.* 69, 88.
- 20 *alpina* *Smith* (41), 46, 48—50, (57), 64—66, 69, 70, 72, 73, 75, 86—92, 97—100, 103—105, 108, 110. I. 1, 7, 16, 20, 28, 31, 35—40.
β compacta *Hook.* 49, 88, 92, 97.
γ flavicans *Hook.* 97.
- 21 *Rothii* *Web. & Mohr* 1—4, 37, 40—42, 44—46, 48—50, 52, 58, 60, 62—66, 69—77, 83, 85—94, 96—101, 104, 108—110. I. 1, 2, 6, 13, 20, 27, 34, 35, 38—40.
β grimsulana *Hook. & Wils.* 64, (88), 92, 96, 97.
γ hamata *Lindb.* 1, 2, 48, 71. I. 20, 37, 38.
δ falcata *Lindb.* 1—3, 42, 44, 46, 48—51, 60, 64, 66, 69—71, 73, 75, 76, 86—88, 90—92, 96—99, 105. I. 6, 27, 29, 35, 38, 39.
- 22 *crassinervia* *Bruch* 3, 48, 49, 57, 58, 60, 63—66, 69—71, 86—89, 91, 92, 96, 98, 99, 105. I. 2, 16, 20, 21, 27, 38.
β Huntii *Braithw.* 48, 70, 92. I. 38.
- 23 *nivalis* *Hook.* [90], 92, 94, 96, 97, 98.
β fuscescens *Hook.* 92, 97.

III. TETRAPHIDACEÆ.

3. *Tetraphis* Hedw.

- 24 *pellucida* Hedw. 1—6, 8, 11, 13, 14, 16—24, 27, 29, 30, 32—42, 44, 45, 47—52, 54—73, 75—77, 80, 81, 83—90, 92, 94—97, 101, 107—109.
I. 1, 2, 6, 18, 20, 21, 27—29, 35, 39, 40.
- 25 *Browniana* Grev. 3, 14, 16, 42, 46, 48, 49, 57—60, 62—66, 68—70, 72, 75, 76, (77), 83, 85, 86, 88, 90, 91, 97—99. I. 20, 21, 39.

IV. POLYTRICHACEÆ.

4. *Catharinea* Ehrh.

- 26 *undulata* Web. & Mohr 1—30, 32—34, 36—103, 105, 107—111.
C. I. 1, 4, 6, 8, 9, 11—13, 18—21, 27, 29—31, 33—40.
 β *minor* Web. & Mohr 10, 16, 18, 19, 20, 22, 32, 36, 38, 39, 42, 48, 55—57, 60, 62, 65, 85, 88, 98, 102.
 γ *Haussknectii* Dixon 20, 37, 38, 56, 59, 70.
- 27 *tenella* Röhl. 16, 85.
- 28 *angustata* Brid. 9, 13, 14, 16, 17, 19, 87.
- 29 *crispa* James 3, 44, 48, 49, 57—61, 63—65.
 β *densifolia* Lindb. 58.

5. *Oligotrichum* De Cand.

- 30 *hercynicum* Lam. 39, 42, 44, 47—50, 57—60, 63—65, 68—73, 75—78, 83, 85—92, 94, 96—98, 100, 103—105, 108, 110, 112. I. 1, 5, 20, 27, 31, 34, 38, 39.
 β *laxum* Braithw. 49, 69, 97.

6. *Polytrichum* Dill.

- 31 *nanum* Neck. 1—6, 8, 9, 11—14, 16—27, 29, 30, 32, 34—40, 42, 44—49, 51, 52, 55—64, 66, 68—78, 83—92, 94—97, 100—104, 106, 109, 111.
C. I. 1, 4, 12, 13, 20, 21, 27, 28, 33, 34, 38—40.
 β *longisetum* Hampe 1—3, 20, 22, 37—39, 48, 57, 71, 85, 91. I. 38—40.
- 32 *aloides* Hedw. 1—6, 8, 9, 11—14, 16—28, 30, 32, 34—65, 68—79, 82—93, 95—99, 101—104, 107—112. C. I. 4, 9, 12, 13, 20, 21, 24, 27, 30, 31, 33—35, 37—40.
 β *Dicksoni* Wallm. 1—3, 19, 25, 38, 48—50, 58—60, 62, 73, 83—85, 88, 90, 96, 105. I. 5, 38—40.
- 33 *urnigerum* L. 1—6, 8, 12—14, 16, 17, 21—23, 26, 27, 30, 32, 34—50, 52, 54—66, 68—81, 83—92, 94—101, 103—111. I. 1, 3—5, 7, 12, 15, 16, 20, 21, 31, 33—40.
 β *humile* Wahl. 60.
- 34 *alpinum* L. (1), 2—4, 36, 40—42, 44, 48—50, 52, 57, 60, 62—66, 68—73, 75—77, 81, 83, 85—94, 96—100, 102—104, 106, 108—112. I. 1, 7, 20, 21, 27—29, 31, 38—40.
 β *septentrionale* Lindb. 97. I. 1, 26, 35.
- 35 *sexangulare* Flörke (86), 88, 90, 92, 94, 96, 97, 105.
- 36 *piliferum* Schreb. 1—9, 11—28, 30, 32, 34—42, 44—78, 80—104, 107—109, 111, 112. C. I. 1, 3, 4, 9, 13, 15, 16, 21, 33—35, 38—40.

- 37 *juniperinum* Willd. 1—4, 6, 8—23, 25—30, 32, 34—73, 75—78, 80—92, 95—103, 107—112. C. I. 1—4, 6, 9, 13, 18—21, 24, 27—29, 31, 33—40.
- 38 *strictum* Banks. 2—4, 9, 14, 15, 25, 28, 39, 42, 44, 48—50, 57—66, 68—73, 75—78, 85—92, 97, 99, 108, 111. I. 1, 3, 38, 39.
- 39 *gracile* Dicks. 1, 3, 6, 7, 10, 12—14, 16, 21, 22, 24, 26, 27, 31, 32, 36—40, 42, 44, 48, 50, 53, 54, 57—65, 69, 71—73, 75—78, 80, 82—90, 97—101. I. 1—3, 8, 20, 33, 36—39.
- 40 *formosum* Hedw. (1), 2—6, 8, 9, 11—14, 16—24, 26—28, 30, 32, 33, 34, 36—73, 75—77, 79, 81, 83, 85—92, 97—101, 103, 108, 109, 111. C. I. 1, 2, 7, 10—13, 16, 18, 20, 24, 27, 32, 33, 38, 39.
- 41 *commune* L. 1—6, 8—12, 13—30, 32—34, 36—50, 52—78, 80—92, 94—104, 107—112. I. 1, 3, 5, 8, 9, 12, 13, 18, 21, 28, 29, 33—40.
β perigoniale B. & S. 2, 3, 32, 36, 38, 39, 48, 54, 59, 62, 85, 88.
γ minus Weis 2, 3, 6, 12—14, 19, 38, 42, 43, 45, 48, 58, 59, 61, 62, 71, 85, 88. I. 38.

Y. BUXBAUMIACEÆ.

7. *Buxbaumia* Haller

- 42 *aphylla* L. 22, 27, 37, 39, 48, 58, 59, (64), 68, 73, 78, 79, 81, 83, 85—88, 90—92, 95, 98, 99. I. 1.
- 43 *indusiata* Brid. 92, 96, 106.

8. *Diphyscium* Mohr

- 44 *foliosum* Mohr 1—4, 14, 35, 36, 39, 41, 42, 44—49, 57, 60, 62—66, 68—73, 75—79, 85—92, 95, 97—99, 101, 103—106, 108, 110. I. 1, 16, 31, 35, 37—40.
β acutifolium Lindb. 3, 14, 45, 46, 48, 49, 60, 66, 70. I. 16, 20, 21, 27.

VI. DICRANACEÆ.

9. *Archidium* Brid.

- 45 *alternifolium* Schp. 1—3, 6, 9, 11, 13, 14, 16—18, 21—24, 29, 30, 36—40, 45, 48, 49, 52, 55, 57—63, 65, 66, 69, 75, 77, 81, 83, 86, 88—92, 97. C. I. 3, 38, 39.

10. *Pleuridium* Brid.

- 46 *axillare* Lindb. 1—3, 6, 9, 10, 11 or 12, 13—23, 26, 27, 30, 32, 36—40, 42, 44—46, 48—50, 55—66, 69—71, 73, 77, 81, 83—85, 90—92, 97, 104, 109. C. I. 1, 4, 21, 38, 39.
β strictum Braithw. 62, Scot.
- 47 *subulatum* Rabenh. 1—6, 8—14, 16—23, 25—30, 32—40, 42—46, 48, 49, 52, 55—64, 66—73, 75, 77, 78, 80, 81, 83, 85—93, 95, 97, 100, 103, 109, 111, 112. C. I. 4, 20, 21, 31, 34, 37—40.
- 48 *alternifolium* Rabenh. 2, 3, 6, 9, 11 or 12, 13, 14, 16, 17, 19, 21—23, 26, 32, 34, 36—40, 44, 45, 48, 52—55, 57—65, 67, 69—74, 77, 80, 83, 85, 86, 88—92, 96, 99, 104. C. I. 1, 3, 31, 38, 39.

11. Ditrichum Timm.

- 49 *tenuifolium* Lindb. 13, 14, 36, 48, 57, 58, 62, (87), 88, 90, 91, 92, 101. I. 39.
- 50 *tortile* Lindb. 6, 14, 16, 60, 62, 64.
β pusillum B. & S. 14, 48, 57, 62, Scot. I. 5, 39.
- 51 *vaginans* Hampe I. 39.
- 52 *homomallum* Hampe 1—6, 14, 16, 19, 24, 27, 32, 35—37, 39, 40, 42, 44—46, 48—50, 55, 57—64, 66, 68—78, 81—83, 85—90, 92, 95—102, 105, 107—109. I. 1, 2, 4, 6, 20, 21, 27, 29, 31, 33—36, 38—40.
- 53 *zonatum* Limpr. 48, 49, 88, 90—92. I. 39.
β scabrifolium Dixon 86, 88.
- 54 *subulatum* Hampe 1—3.
- 55 *flexicaule* Hampe 1—3, 5—15, 17, 20, 22—24, 26, 27, 30, 32—34, 36, 37, 39—42, 44, 45, 47—55, 57—72, 75, 77, 81—83, 85—92, 94, 95, 97, 98, 100, 103, 108, 109, 111. C. I. 1, 2, 6, 8, 10, 16, 20, 21, 27—29, 31, 33—35, 38—40.
β densum B. & S. 2, 6, 8, 10, 14, 32, 36, 39, 44, 48—50, 57, 59, 60, 63—66, 69, 82, 88, 92, 98, 102, 108. I. 35, 39.

12. Swartzia Ehrh.

- 56 *montana* Lindb. 35, 36, 42, 44, 48—50, 52, 57, 60, 62—70, 72, 73, 77, 80—83, 85—92, 95, 97, 99, 101—105, 107—109. I. 1, 3, 16, 20, 21, 27—29, 35, 40.
β compacta (Hübner.) 64, 88.
- 57 *inclinata* Ehrh. 44, 57, 62, 66, 75, 82, 85, 88—90, (92), 107—109.
 I. 16, 27, 28, 34, 35, 39.

13. Seligeria B. & S.

- 58 *Doniana* C.M. 36, 40, 57, 62—67, 69, 75 or 76, 83, 88—90, 92, 94, 96, 98, 108. I. 39.
- 59 *pusilla* B. & S. 6, 11, 16, 21, 33, 34, 36, 38, 39, 48, 54, 57, 58, 60, 62—66, 69, 72, 74, 86, 89, 90, 92, 94, 108. I. 39.
- 60 *acutifolia* Lindb.
β longiseta Lindb. 36, 57, 64, 65, 69.
- 61 *tristicha* B. & S. 57, 64, 65, 89.
- 62 *paucifolia* Carruth. 9, 11, 13—17, 20, 22, 54, 61, (64).
- 63 *calcareo* B. & S. 8—17, 19—21, 23, 24, 26, 28—30, 33, 57, 61. I. 39.
- 64 *recurvata* B. & S. 10, 14, 34—36, 40, 42, 44, 48—50, 54, 57—60, 62—67, 69, 73, 75—77, 83, 85, 86, 88—92, 98, 108. I. 1, 30, 34.

14. Brachyodus Fürnr.

- 65 *trichodes* Fürnr. 13, 14, 17, 42, 49, 57—60, 62—65, 68—70, 75—77, 81, 83, 88, 90, 91, (97), 98, 102, 103, 105. I. 20, 21.

15. Sælania Lindb.

- 66 *cæsia* Lindb. (89), 90.

16. Ceratodon Brid.

- 67 *purpureus* Brid. 1—30, 32—78, 80—105, 107—112. **C. I.** 1—4, 6, 8, 9, 12, 13, 15, 16, 18, 20, 21, 24, 27, 29, 30, 31, 33—36, 38—40.
 68 *conicus* Lindb. 11, 14, 32, 36—39, 48, 53, 62, 63, 66, 87, 96. **C. I.** 21.

17. Rhabdoweisia B. & S.

- 69 *fugax* B. & S. 2, 3, 35, 36, 39, 40, 42, 44, 46—50, 58, 63—66, 68—73, 76, 77, 85—93, 97, 98, 106. **C. I.** 1, 7, 16, 20, 21, 31, 35, 38—40.
 70 *denticulata* B. & S. 2, 3, 40, 42, 44—46, 48—50, 57, 60, 63, 65, 66, 69—73, 75, 76, 84—88, 90, 91, 96—99, 103, 108, 109. **I.** 2, 6, 7, 20, 31, 38, 39.
 71 *crenulata* Jameson 44, 47—49, 66, 69, 73, 75, 86, 98, 99.

18. Cynodontium B. & S.

- 72 *Bruntoni* B. & S. 2, 3, 16, 34, 36, 37, 40, 42—46, 48—50, 57, 58, 62—66, 68—71, 73, 76, 78, 81—83, 85—93, 95, 96, 98, 108, 109. **I.** 1, 6, 20, 39.
 73 *polycarpum* Schp. [3], 48, 65, 68—70, 72, 73, 75, 76, 81, 85—93, 96, 98, 108, 109.
 74 *strumiferum* De Not. 65, 89, 90, 92, 98.
 75 *gracilescens* Schp. 90.
 76 *laxirete* Grebe 49, 66, 88, 98.
 77 *virens* Schp. [3], 70, 88, 90, 92.
 β serratum B. & S. 88.
 78 *Wahlenbergii* Ren. & Card. 87, 88, 92.
 β compactum Schp. 88, 92.

19. Dichodontium Schp.

- 79 *pellucidum* Schp. 2—6, 8—10, 13, 14, 16, 22, 27, 33—45, 47—52, 55—60, 62—78, 80—92, 95, 97—104, 107—109. **I.** 1, 2, 5, 7—9, 16, 27, 29, 31, 33—40.
 β fagimontanum Brid. 39, 43, 50, 57, 59, 60, 66, (69), 71, 72, 86, 88. **I.** 27, 37—39.
 γ strictum Braithw. 35, 49.
 δ compactum Schp. MS. 66, 88.
 80 *flavescens* Lindb. 2, 3, 5, 14, 16, 33, 36, 39, 40, 42, 44, 45, 47—50, 52, 57—60, 62—73, 75—77, (83), 85—90, 94—98, 100, 101, 107—109, 112. **I.** 1, 3—6, 21, 27, 28, 31, 33—35, 38—40.

20. Trematodon Michx.

- 81 *ambiguus* Hornsch. 88.

21. Dicranella Schp.

- 82 *heteromalla* Schp. 1—30, 32—78, 80—93, 95—99, 101—103, 107—112. **C. I.** 1, 2, 4—8, 16, 18—21, 27, 30, 31, 33—36, 38—40.
 β stricta B. & S. 2, 16, 37, 82, 88, 90, 96. **I.** 2, 31, 38.
 γ interrupta B. & S. 2, 10, 14, 37, 38, 48—50, 58—60, 62—66, 83.
 δ sericea Schp. 2, 14, 32, 39, 48, 58—60, 62—66, 71, 98. **I.** 38.

- 83 *cerviculata* Schp. 2—4, 6, 8, 11 or 12, 13, 14, 16—18, 21, 23, 25—28, 30, 32, 34, 36—50, 52, 54, 55, 57—64, 67—75, 77, 81, 83—92, 95, 97, 111, 112. **I.** 1, 2, 4—6, 16, 20, 21, 34, 37—39.
β pusilla Schp. 2, 37, 59, 60, 62.
- 84 *crispa* Schp. 1, 3, 13, 14, 16, 21, 25, (37), 38, 39, 57—59, 61—63, 66, 69—71, 76, 77, 80, 85, 86, 88—92, 95, 96, 98, 101, 106, 111.
I. 2, 5, 16, 34, 38—40.
- 85 *secunda* Lindb. 1, 3, 4, 10, 16, 36, (37), 44, 48, 49, (56), 58, 59, 62, 63, 65, 66, 69—72, 75, 83, 85, 86, 88—92, 95, 96, 98, 99, 108, 109, 112.
I. 1, 5, 13, 21, 38, 39.
- 86 *curvata* Schp. 48, 49, 62, 63, 70, 71, (76), 88, 98. **I.** (6), 27.
- 87 *rufescens* Schp. 1—4, 13, 14, 16, 17, 21, 25, 27, 32, 34, 36—40, 42, 44—50, 55, 57—66, 68—71, 75—77, 80, 83, 85, 86, 88—92, 96, 103, 104, 109. **C. I.** 2, 6, 20, 21, 31, 38—40.
- 88 *varia* Schp. 1—4, 6, 8—14, 16, 17, 19—30, 32—40, 42, 44—46, 48—52, 54—66, 68—71, 73, 75—77, 80—92, 94, 95, 100, 108, 109, 111, 112. **C. I.** 1, 4, 6, 7, 17, 20, 21, 30, 31, 34, 36, 38—40.
β tenuifolia B. & S. 2, 10, 13, 18, 32, 48, 49, 51, 52, 58, 59, 61—63, 69, 85, 89, 91. **I.** 38, 39.
γ tenella Schp. 39, 62, 66.
δ callistoma B. & S. (40), 52, 57—59, 61, 62, 65, 73, 74. **I.** 39, 40.
- 89 *Grevilleana* Schp. 88, 89. **I.** 20.
- 90 *Schreberi* Schp. 6, 13—16, 27, 30, 32, 36, 37, 39, 40, 42, 43, 45, 50, 53—55, 57—67, 69—71, 75, 77, 81, 83, 85, 86, 88—91, 98, 104, 105. **I.** 2, 21, 38, 39.
β elata Schp. 14, 16, 32, 37—40, 48, 55, 57—60, 62, 65, 69, 70, 75, 80, 109. **I.** 2, 21, 39.
- 91 *squarrosa* Schp. 1, 3—5, 14, 33, 36, 38—40, 42, 44—50, 57—60, 62—66, 68—78, 80, 81, 83—92, 94—99, 101, 103—105, 107—109, 112.
I. 1, 6, 7, 21, 27—29, 31, 35, 37—40.
- 22. Blindia** B. & S.
 92 *cæspiticia* Lindb. 88.
 93 *acuta* B. & S. 1, 3, 4, 35, 36, 40, 42, 44—49, 57, 59, 60, 62—66, 68—77, 83, 85—92, 95—105, 107—112. **I.** 1—3, 6, 7, 16, 21, 27, 28, 31, 34, 35, 37—39.
β trichodes Braithw. 36, 40, 42, 48, 58, 59, 62, 63, 66, 69, 88.
- 23. Dicranoweisia** Lindb.
 94 *cirrata* Lindb. 1—22, 24—27, 30, 32—34, 36—40, 42—46, 48—66, 68—78, 80—93, 95, 96, 105, 107, 109. **C. I.** 4, 5, 19—21, 31, 34, 37—40.
 95 *crispula* Lindb. 2, (3), 14, (37), 40, 42, 48, 49, 52, (55), (56), (58), 59, 61, 62, 69, 72, 73, (83), 85, 87—92, 94, 95, 98, 99, 103, 104, 108.
I. [(20), (21)].
- 24. Campylopus** Brid.
 96 *subulatus* Schp. 5, 11, 42, 43, 45, 48, 49, 69, 88—90, 98, 111. **C. I.** 2, 3, 34.
 97 *Schimperi* Milde 86—90, 96—98, 104, 106, 108, 110, 112. **I.** 1, 20, (39).

- 98 **Schwarzii** Schp. 48, 49, 69, 70, 73, 86—88, 90, 97—99, 103—105, 108—110.
I. 1—3, 7, 16, 27, 34, 35.
 β *Huntii* Stirt. 49. I. 35.
- 99 **flexuosus** Brid. 1—6, 9—11, 13—18, 20—23, 25, 28, 30, 32, 34—42,
44—66, 68—81, 83—92, 95, 97—112. C. I. 1—8, 16, 18—21,
27—29, 31, 33—35, 37—40.
 β *uliginosus* Ren. 1, 11, 45, 48, 49, 57, 60, 62, 73, 88, 105. I. 38, 39.
 γ *paradoxus* Husn. 1, 3, 11, 25, 36, 39, 40, 42, 45, 48—50, 57, 60—66,
68, 69, 71, 73, [81], 86, 88, 98, 100, 101. I. 2, 16, 21, 33, 35.
 δ *zonatus* L Impr. 48—50, 60, 88, 110.
- 100 **pyriformis** Brid. 1—4, 6, 9—23, 25—27, 32—34, 36—40, 44—51, 54,
55, 57—66, 68—77, 79—90, 92, 97—100, 102—104, 108—110.
C. I. 1—3, 5—8, 18, 20, 21, 27, 33—40.
- 101 **fragilis** B. & S. 1—4, 6, 9, 11—14, 16, 17, 19, 25, 36—40, 43—45, 48—52,
54, 57—66, 68—78, 82—92, 97—102, 104, 105, 108, 109, 111, 112.
C. I. 1—4, 7, 13, 16—18, 20, 21, 24, 27, 31, 33—35, 37—40.
- 102 **Shawii** Wils. 104, 110. I. 3.
 β *hamatus* Schp. 110. I. 3.
- 103 **setifolius** Wils. 40, 48, 49, 57, 66, 98, 104, 105, 110. I. 1—3, 6, 7, 9, 16,
17, 20, 34, 35, 38.
- 104 **atrovirens** De Not. 1—4, 9, 11, 41, 42, 44—50, 52, 57, 60, 62, 64—66,
69—73, 75—77, 85—92, 96—105, 107—112. I. 1—3, 6, 7, 16,
20, 21, 27, 28, 31, 34, 35, 38—40.
 β *falcatus* Braithw. 102, 104, 108. I. 3, 16, 35.
 γ *muticus* Milde 48, 49, 61, 70, 76, 104, 108.
 δ *gracilis* Dixon 48, 49, 70, 90, 104.
- 105 **introflexus** Brid. 48, 49, (70), (103), (104). C. I. 1—3.
- 106 **brevipilus** B. & S. 1—3, 6, 9, 11—14, 24, 27, 28, 44, 45, 48, 49, 52,
58—62, 69, 71, 73, 87—91, 97, 100, 102—106, 108—112.
C. I. 1, 2, 6—8, 16, 20, 21, 27, 31, 34, 35, 38, 39.
 β *auriculatus* Ferg. 90, 104. I. 3.

25. *Dicranodontium* B. & S.

- 107 **longirostre** B. & S. (3), 14, 39, 44—46, 48, 49, 57—60, 62—64, 69, 70, 73, 78,
86—88, (89), 90—92, 97—101, 103—106, 108. I. 1, 2, 20, 28, 38.
 β *alpinum* Schp. 48, 49, 59, 60, 64, 69, 78, 86—88, 90, 92, 97, 98, 106,
108. I. 16, 20, 21, 39.

26. *Dicranum* Hedw.

- 108 **fulvellum** Smith 49, 62, 65, 69, 70, 72, 86—90, 92, 96—98, 100, 103, 108.
I. 1.
- 109 **falcatum** Hedw. 49, 65, 66, 69, 88—90, 92, 94, 96—100, 102, 104—106,
108.
- 110 **schisti** Lindb. 48, 49, 65, 66, 69, 73, 86—88, 90, 92, 98, 105. I. 7, 38.
- 111 **Starkei** Web. & Mohr 49, 65, 69, 87, 88, 90, 92, 94, 96—98, 105, 106, 108,
109. I. (21).

- 112 *molle* Wils. 88—90, 92, 96—98, 106.
- 113 *undulatum* Ehrh. 17, 34, 38, 61, 85, 88, 90.
- 114 *spurium* Hedw. 3, 13, 14, 16, 38, 54, 61—64, 68, 72, 87, 90—92.
- 115 *Bergeri* Bland. 58, 80, 90 or 91 or 92.
- 116 *Bonjeani* De Not. 1—4, 6—20, 22—28, 30, 32—52, 54—66, 68—73, 75—77, 79—92, 94—99, 101, 103, 105, 107—109, 111, 112. **C. I.** 1, 3, 4, 6, 8, 9, 12, 13, 15, 17, 18, 24, 27, 31, 33, 34, 36—39.
β juniperifolium Braithw. 2, 6, 9, 36, 37, 62, 64, 66, 68, 69, 85, 88.
γ calcareum Braithw. 13, 14, 37, 45, 62.
δ rugifolium Bosw. 16, 34, 37, 40, 48, 49, 52, 54, 60—62. **I.** 18, 39.
- 117 *scoparium* Hedw. 1—30, 32—34, 36—105, 107—112. **C. I.** 1—12, 15, 16, 18—21, 24, 27, 28, 30, 31, 33—40.
β paludosum Schp. (3), 17, 24, 32, 34, 37, 39, 46, 48, 50, 54, 56, 57, 60, 64, 72, 73, 88, 105, 108, 109, 112.
γ orthophyllum Brid. 1, 2, 6, 8—10, 14, 16, 17, 19, 23, 32, 37—40, 45—51, 57—60, 62—64, 69, 71—73, 82, 83, 85, 87, 88, 95, 108, 111. **C. I.** 6, 7, 27, 31, 33, 37—39.
δ spadiceum Boul. 2, 13, 14, 37, 40, 42, 43, 45—51, 56, 59, 60, 62, 64—66, 69, 71, 72, 86, 88, 89, 101, 109, 111. **I.** 6, 24, 28, 29, 31, 38.
- 118 *majus* Turn. 1—6, 8, 9, 11, 12, 16—18, 21, 23, 24, 30, 32—34, 36—40, 42—50, 53—55, 57—77, 80—92, 95—105, 107—112. **C. I.** 1—3, 6, 7, 10—12, 20, 27—31, 33—35, 38—40.
- 119 *fuscescens* Turn. 3, 6, (18), 34, 36—40, 48—50, 52, 57—70, 72, 73, 75—78, 81—83, 85—92, 94—103, 106—109, 111, 112. **I.** 2, 6, 7, 20, 21, 27, 30, 34, 35, 38, 40.
β falcifolium Braithw. 34, 36, 44, 57, 58, 60, 62, 64, 65, 68, 69, 75, 83, 88, 98.
γ congestum Husnot 48, 66, 88, 92, 108.
- 120 *Scottianum* Turn. 1—4, 14, 16, 34, 36, (37), 39, 48, 49, 58, 62, (63), 70, 73, 86, 88, 90, 92, 97—99, 101, 105, 106, 108. **I.** 1—3, 6, 7, 16, 20, 27, 29, 30, 33, 35, 38.
- 121 *elongatum* Schleich. 68, 92, 97, 105, 109.
- 122 *strictum* Schleich. 37, 39, 83.
- 123 *flagellare* Hedw. 16, 21, 37, 39, 62. **I.** 2.
- 124 *montanum* Hedw. 14, 16, 21, 24, 30, 37—40, 55, 56, 89, 90.
- 125 *uncinatum* C.M. 69, 70, 86, 88—90, 92, 94, 96—99, 105, 107, 108. **I.** 27.
- 126 *asperulum* Mitt. (72), (80), 86—88, 90, 92, 94, 96, 98, 99, 105, 106, 108.
- 127 *longifolium* Ehrh. 72, 88, (89), 90.

27. *Leucobryum* Hampe

- 128 *glaucum* Schp. 1—9, 11—27, 30, 32, 34, 36, 37—40, 44—77, 80—93, 95—105, 107—112. **C. I.** 1—5, 7, 13—18, 20, 21, 27—29, 31, 33—35, 37—40.
- 129 *albidum* Lindb. 11.

VII. FISSIDENTACEÆ.

28. *Fissidens* Hedw.

- 130 *exilis* Hedw. 1-6, 9, 10, 12-14, 16-19, 21-23, 32-34, 36-40, 42, 44, 48-51, 53, 55-65, 69, 70, 72, 77, 83, 88-90, 95, 109. **C. I.** 21, 38, 39.
- 131 *viridulus* Wahl. 1-4, 6, 9, 10, 12-14, 16, 17, 19-22, 30, 32-40, 45, 46, 48-52, 55-66, 69, 70, 72, 75, 77, 80, 83, 85, 86, 89-92.
C. I. 7, 18, 20, 21, 31, 37-39.
β *Lylei* Wils. 1-4, 13, 14, 17, 23, 36-39, 45, 48, 57, 58, 60, 62, 64, 67-69, 86.
- 132 *pusillus* Wils. 1, 3-6, 9, 13, 14, 16, 17, 19, 23, 32, 34, 36-40, 44, 45, 48, 49, 53, 55-64, 69, 72, 75-77, 82-84, 86, 89, 90. **C. I.** 39.
β *madidus* Spruce 14, 37, 42, 57, 58, 62, 64, 65, 69.
- 133 *algarvicus* Solms. 3.
- 134 *incurvus* Starke 1-4, 6, 7, 9, 10, 12-14, 16, 17, 19-24, 26, 30, 32, 34-38, 40, 48, 50, 53-66, 69, 75, 77, 80, 83, 85, 90. **C. I.** 31, 37-39.
β *tamarindifolius* Braithw. 1-3, 6, 13, 14, 16, 30, 36-40, 45, 48, 52, 57-59, 61-63, 69, 77, 90, 92. **I.** 3, 21, 31, 35, 37-39.
- 135 *bryoides* Hedw. 1-4, 6-30, 32, 34-42, 44-78, 80-93, 95-101, 103, 108-111. **C. I.** 4, 7-9, 13, 20, 21, 27, 34, 37-40.
β *intermedius* Ruthe 2, 13, 14.
- 136 *Curnowii* Mitt. 1-3, 4, 9, 45, 47-49, 64, 68. **C. I.** 34.
- 137 *rivularis* Spruce 14. **C.**
- 138 *crassipes* Wils. 6, 13, 17, 19, 22, 23, 30, 32-34, 36-38, 40, 50, 57-60, 62, 64-66, 68, 69, 71, 77, 86. **I.** Ireland.
- 139 *rufulus* B. & S. 42, 44, 64, 69, 70. **I.** 38.
- 140 *osmundoides* Hedw. 1-3, 40, 42, 44-50, 57-60, 62-66, 68-73, 75-77, 82, 83, 85-91, 96-101, 103, 106, 108, 110-112. **I.** 1, 2, 6, 7, 12, 16, 18, 24, 28, 31, 33-35, 37-39.
- 141 *serrulatus* Brid. 1.
- 142 *polyphyllus* Wils. 1-3, 47-49. **I.** 3.
- 143 *adiantoides* Hedw. 1-6, 8-27, 29, 30, 32-42, 44-51, 53-92, 94-105, 108, 109, 111, 112. **C. I.** 1, 2, 4, 6-10, 13, 14, 16-18, 20, 21, 27-29, 31, 33-35, 37-40.
β *collinus* (Mitt.) 3, 9, 13-17, 20, 61.
- 144 *decipiens* De Not. 1-4, 6, 9-11, 13, 14, 16, 20, 23, 27, 32, 34, 36, 37, 39, 40, 42-46, 48-51, 53, 57, 58, 60-66, 69-77, 83, 86-88, 91, 98, 99, 101, 105, 107-110. **C. I.** 1-3, 6, 38.
β *brevifolius* Lindb. 32. **I.** 2.
- 145 *taxifolius* Hedw. 1-92, 95-101, 103, 108-112. **C. I.** 1, 2, 4, 6, 8-10, 12, 15, 18-21, 24, 27, 28, 30, 31, 33, 34, 36-40.

29. *Octodiceras* Brid.

- 146 *Julianum* Brid. 37, 40.

VIII. GRIMMIACEÆ.

30. *Grimmia* Ehrh.

- 147 *apocarpa* Hedw. 1—6, 8—17, 19, 20, 22—26, 29—34, 36—104, 106—109, 111, 112. **C. I.** 1—4, 6—8, 11—13, 15, 16, 18, 20, 21, 27, 28, 33—40.
β *alpicola* Hook. & Tayl. 42, 43, 57, 65 or 66, 67, 69, 88, 90, 92.
γ *rivularis* Web. & Mohr 2—4, 6, 36—40, 42—44, 46—50, 52, 55, 57—60, 62, 64—77, 83—90, 92, 95, 102, 103, 108, 109, 111. **I.** 1, 6, 29, 33, 34, 38, 39.
δ *gracilis* Web. & Mohr 2, 3, 16, 36—38, 48—50, 57, 59, 60, 65, 66, 68, 69, 72, 85—88, 90. **I.** 1, 2, 6, 8, 30, 39.
ε *pumila* Schp. 39, 43, 48, 49, 57, 62, 64—66, 69, 70, 88.
- 148 *conferta* Funck 43, 64, 69, 76, 77, 80, 81, 83, 85, 88—90.
β *pruinosa* Braithw. (48), 83, 85, 87, 99. **I.** (9), 38—40.
- 149 *maritima* Turn. 1—5, 44—46, 48, 49, 52, 58—60, 62, 66, 68—71, 73—76, 81—85, 90—92, 94, 95, 97—103, 105, 108—112. **C. I.** 4, 5, 8, 9, 20, 21, 27, 31, 34, 35, 38, 39.
- 150 *anodon* B. & S. 69, 83.
- 151 *crinita* Brid. 38.
- 152 *incurva* Schwæg. 40, (48), 49, 68, 70, 72, 73, 90—92.
- 153 *funalis* Schp. 44, 48—50, 64—66, 69, 70, 72, 73, 87—90, 92, 94, 96—98, 108, 109. **I.** 1, 16, 20, 35, 38, 39.
- 154 *torquata* Hornsch. 42, 44, 48, 49, 65, 66, 68—70, 72, 73, 85—90, 92, 94, 96—98, 106, 108. **I.** 1, 2, 7, 20.
- 155 *pulvinata* Smith 1—34, 36—78, 80—109, 111, 112. **C. I.** 1, 4, [6, 8—13, 15, 16, 18, 19, 21, 27—29, 33—35, 37—40.
β *obtusa* Hübn. 2, 13, 16, 34, 37, 39, 48, 49, 57, 99.
- 156 *orbicularis* Bruch 3, 4, 6, 9, 13, 14, 16, 22—24, 33, 34, 36, 46, 48—50, 52, 64—66, 69, 83, 85, 88, 89, 99. **I.** 4, 21, 38.
- 157 *trichophylla* Grev. 1—4, 6, 7, 13, 14, 16, 35—40, 42—50, 52, 54, 55, 57—59, 62—66, 68—77, 80—92, 95—99, 101, 104, 107—111. **C. I.** 1—3, 6, 20, 21, 34, 37—39.
- 158 *Mühlenbeckii* Schp. 1, 77, 92, 96.
- 159 *Stirtoni* Schp. 45, 48, 50, 52, 57, 64, 69, 70, 73, 83, 88, 99.
- 160 *subsquarrosa* Wils. 1, 36, 37, 43, 45, 58, 69, 70, 73, 82, 83, 85, 86, 88, 89, 99, 101. **C.**
β *edinensis* Braithw. 83, 88.
- 161 *decipiens* Lindb. 1—4, 7, 13, 14, 16, 36, 43—45, 47—49, (50), 52, 55, 62, 69—71, 73, 76, 80, 82, (83), 85, 87—90, 92, 97—99, 103, 108, 109. **C. I.** 6, 16, 20, 21, 31, 38, 39.
- 162 *robusta* Ferg. 3, 48, 49, 69, 86, 88, 90, 92, 98, 99, 105 or 106. **I.** 16, 38, 39.
- 163 *elatior* B. & S. 90, 92.
- 164 *Hartmani* Schp. 3, 42, 43, 45, 48—50, 68—70, 73, 75, 86—91, 94, 97, 99, 101, 108. **I.** 2, 16, 34, 38, 39.
- 165 *retracta* Stirton 42, 43, 48, 49, 69, 87, 88, 98, 99. **I.** 1.

- 166 *patens* B. & S. 1—3, 45, 47—50, 65, 68—73, 75, 85—92, 96—99, 101, 103, 105, 106, 108, 109. I. 2, 3, 6, 7, 16, 20, 27, 31, 33, 35, 38—40.
- 167 *Doniana* Sm. 3, 4, 36, 40, 42, 44—50, 52, 57—60, 63—66, 68—73, 75—78, 80—83, 85—92, 94, 96, 97, 99, 104, 105, 108. I. 34, 37—39.
β sudetica Wils. 48, 49, 72, 73, 90. I. 35, 37.
- 168 *arenaria* Hampe 48—50.
- 169 *ovata* Schwæg. 3, 4, 36, 37, 39, 42, 43, 48, 49, 55, 64, 66, 68—70, 82, 83, 87—93, 104, 109. I. 4, 21, 38.
β cylindrica Hübn. 80, 88.
- 170 *commutata* Hübn. 16, 19, 36, 42, 43, 48, 69, 73, 82, 83, 88—90, 98.
- 171 *montana* B. & S. 3, 36, 40, 43, (44), (45), 48, 69, 70, 73, 92. C.
- 172 *alpestris* Schleich. 90, 92.
- 173 *leucophæa* Grev. 1—3, 7, 14, 16, 36, (37), 43, 45, 48, 71, 82, 83, 85, 87—89, 99 C. I. 3, 39.
- 174 *homodictyon* Dixon 108.
- 175 *elongata* Kaulf. 70, 90, 92.
- 176 *atrata* Mielich. 49, 72, 87, 88, 90, 92.
- 177 *unicolor* Hook. 90.

31. *Racomitrium* Brid.

- 178 *ellipticum* B. & S. 2, 35, 44, 48, 49, 52, 58, 65, 69, 70, 72, 73, 86, 88, 90—92, 96—98, 103, 104, 108, 110. I. 1, 3, 4, 16, 20, 27, 28, 31, 35, 37—40.
- 179 *aciculare* Brid. 1—5, 13, 14, 16, 34, 36, 37, 39, 40, 42—50, 52, 55, 57—60, 62—92, 95—105, 107—112. I. 1, 2, 4, 6, 7, 9, 13, 15, 16, 21, 27, 29, 31, 34—40.
- 180 *protensum* Braun 2—4, 40, 42, 44—50, 55, (57), 60, 64—66, 68—75, 77, 78, 85—92, 97—99, 101, 103—105, 107—109. I. 1, 3, 7, 16, 20, 27, 28, 31, 35, 38.
- 181 *fasciculare* Brid. 1—5, 14, 32, 35—37, 39, 40, 42—50, 55, 57—60, 62—78, 80—92, 94—105, 107—112. I. 1, 3, 4, 6, 7, 13, 15, 16, 20, 21, 27, 29—31, 34, 35, 37—40.
- 182 *heterostichum* Brid. 1—5, 9, 11, 13, 14, 16, 17, 32, 34, 36—40, 42—50, 52, 55—60, 62—78, 80—92, 94—105, 107—109, 111. C. I. 1, 4, 6—9, 12, 16, 20, 21, 27, 31, 33—40.
β alopecurum Hübn. 2—4, 34—37, 39, 45, 46, 48, 49, 52, 60, 64, 68—70, 72, 73, 85, 88, 97, 104, 108. C. I. 1, 6, 13, 21, 31, 35, 38, 39.
γ gracilescens B. & S. 1—5, 36, 40, 42, 45, 46, 48, 49, 57, 60, 64—66, 68—73, 85, 88, 90, 92, 96, 98, 104, 107—109, 112. I. 1, 2, 6, 20, 21, 27, 31, 37, 38.
- *183 *sudeticum* B. & S. 2—4, 41, 47—49, 52, (64), 69, 70, 72, 73, 77, 85—88, 90—92, 94—98, 100, 103—105, 110. I. 1, 6, 7, 16, 20, 27, 31, 33, 35, 37—40.
- 184 *ramulosum* Lindb. 88, 109, 110.

*183 Many of these may belong to 182 γ . Confirmation desired.

- 185 *lanuginosum* Brid. 1—6, 9, 11—14, 16, 21, (27 or 28), 34—40, 42—50, 52, 55, 57, 66, 68—78, 80—92, 94—105, 107—112. I. 1—7, 9, 13, 19—21, 27—29, 31, 33—35, 37—40.
- 186 *canescens* Brid. 1—6, 9, 11, 13, 14, 16, 17, 20—23, 25—29, 34, 36—40, 42, 43, 45, 47—50, 54—60, 62—78, 80—95, 97—105, 107—112. I. 4, 6, 20, 21, 31, 34, 36, 38—40.
 β *ericoides* B. & S. 1—3, 19, 25, 28, 36, 39, 40, 42, 45, 48—50, 52, 54, 57—60, 62, 63, 65, 66, 68—71, 73, 74, 79, 81, 83—90, 95, 96, 98, 102, 104, 107—109, 111. I. 6, 31, 34, 38.
- 32. *Coscinodon* Spreng.**
- 187 *cribrosus* Spruce 45, 48—50, 69, 70, 88.
- 33. *Ptychomitrium* B. & S.**
- 188 *polyphyllum* Fourn. 1—6, 14, 32, 34—42, 44—50, 52, 55, (56), 57—60, 62—66, 68—78, 80—92, 95—105, 107, 108, 110—112. C. I. 1, 3, 4, 6—9, 13, 16, 20, 21, 27, 28, 31, 33—40.
- 34. *Glyphomitrium* Brid.**
- 189 *Daviesii* Brid. 3, 45, 48, 49, 52, 69, 70, 86, (88), 97—99, 103, 104, 108, 110. I. 1—3, 16, 35, 38—40.
- 35. *Campylostelium* B. & S.**
- 190 *saxicola* B. & S. 13, 14, 48, 57, 58, 60, 62—65, 69, 70, (87). I. 1, 20, 21.
- 36. *Hedwigia* Ehrh.**
- 191 *ciliata* Ehrh. 1—5, 13, 14, 34, 36—40, 43—50, 52, 55, (56), 57, 62, 64—66, 68—78, 80—92, 95—106, 108—110, 112. C. I. 1, 3, 4, 6—8, 13, 20, 21, 27—29, 31, 33—35, 37—40.
 β *leucophæa* B. & S. 2, 3, 6, 73.
 γ *viridis* B. & S. 14, 36, 48, 69, 75, 80. I. 20.
 δ *striata* Wils. 48, 49, 69, 73, 87, 98, 108. I. 3.
- 192 *imberbis* Spruce 48, 49, 52, 69—71, 73, 92, 98, 104. I. 1, 3, 20, 39.

IX. TORTULACEÆ.

37. *Acaulon* C.M.

- 193 *muticum* C.M. 1—4, 8, 9, 12—23, 26, 27, 32, 33, 36—40, 45, 46, 48, 50, 52, 55—66, 69, 73, 77, 80, 81, 33, 85, 88, 90—92, 100, 101, 104. I. 1, 4, 21, 34, 39.
 β *minus* Hook. & Tayl. 2, 3, 13, 17, 27, 52, 71.
- 194 *triquetrum* C.M. 3, 9, 13, 14, (91).

38. Phascum Schreb.

- 195 *cuspidatum* Schreb. 1—4, 6—9, 11—30, 32—40, 42, 44, 45, 47—50, 52—67, 69—74, 77, 80—85, 88—92, 95, 109, 112. **C. I.** 4, 5, 18, 21, 34, 37—39.
- * β *piliferum* Hook. & Tayl. 1, 3, 6, 13, 14, 16, 22, 25, 27, 28, 31, 33, 39, 50, 57, 59, 60, 62, (66), 70, 81, 83, 85, 89—91. **I.** 21, 39.
- γ *Schreberianum* Brid. 17, 19, 29, 40, 61, 66, 67.
- δ *curvisetum* Nees & Hornsch. 13, 17, 30, 38, 63.
- 196 *Flerkeanum* Web. & Mohr 12—14, 16, 23, 27, 29, 36, 49, 50, 61—63, 66, 67.
- β *badium* Brid. 13, 49, 50, 62.
- 197 *curvicolle* Ehrh. 2—4, 6, 12—17, 19, 27, 29, 30, 32—34, 36, 37, 50, 56, 57, 61, 63—67, 69, 90. **I.** 21.

39. Pottia Ehrh.

- 198 *recta* Mitt. 1—4, 6, 8—17, 19, 22, 24, 26, 27, 29, 30, 32—34, 36, 45, 49, 50, 52, 53, 56, 57, 59—61, 63—66, 69, 83, 99, 111. **C. I.** 4, 21, 34.
- 199 *bryoides* Mitt. 3, 4, 6, 13, 14, 16, 17, 20, 23, 25—27, 29, 30, 32—34, 36, 39, 40, 49, 53—57, 60—64, 66, 67, 69, 70, 85, 109. **I.** 21, 39.
- β *Thornhillii* Wils. 67.
- 200 *Heimii* Fühnr. 1—4, 6, 9, 13—17, 19, 25—27, 28, 32, 34, 41, 44—46, 48, 49, 52, 54, 56, 58—66, 69—76, 81—86, 90—92, 94, 95, 97—103, 109, 111. **C. I.** 4, 9, 16, 21, 27, 34, 38—40.
- 201 *truncatula* Lindb. 1—4, 6, 8—40, 42, 44—66, 69—78, 80—86, 88—92, 95, 97, 99, 102, 103, 109, 111, 112. **C. I.** 4, 8, 9, 19—21, 27, 30, 31, 34, 36—40.
- 202 *intermedia* Fühnr. 2—4, 13, 14, 16—28, 30, 32—40, 45, 46, 48, 49, 52, 54—62, 64, 66, 69, 75, 83, 85, 88—92, 99, 109. **C. I.** 4, 15, 21, 27, 37—39.
- β *littoralis* (Mitt.) 3, 10, 13, 14, 52, 58—60, 69, 71. **C.**
- 203 *crinita* Wils. 1—4, 6, 9, 13, 14, 25, 26, 45, 48, 49, 52, 58, 71, 74, 81, 82, 85, 90, 91, [92], (98), **C. I.** 1, 4, 21, 39.
- 204 *viridifolia* Mitt. 1—4, 45—48. **C. I.** 39.
- 205 *Wilsoni* B. & S. 1—4, 6, 13, 14, 19, 27, (37), 40, 44, 45, 48—50, 52, 58, 59, 62, (83), 85, 90. **C. I.** 5, 20, 21.
- 206 *asperula* Mitt. 1, 2, 13. **C. I.** 21, 38.
- 207 *minutula* Fühnr. 1—9, 12—17, 19—30, 32—40, 44, 45, 49, 50, 52—64, 66, 69, 70, 75, 77, 80, 81, 83, 85, 86, 90, 103. **C. I.** 38, 39.
- 208 *commutata* Limpr. 1, 14.
- 209 *Starkeana* C.M. 1—4, 9, 10, 12—14, 16, 19, 20, 25—27, 32—34, 36, 37, 52, 56, 57, 60—62, 64, 69, 85. **C. I.** 4, 5, 21, 39.
- β *brachyodus* Wils. 14, 45, 52. **C. I.** 21.
- 210 *cæspitosa* C.M. 13, 14, 16, 17, 36.
- 211 *lanceolata* C.M. 2—4, 6, 8—10, 12—17, 19—30, 32—34, 36—40, 50—58, 60—66, 68, 69, 81, 83—85, 89, 90, 94, 95, 99, 109. **I.** 5, 21.
- 212 *latifolia* C.M. 88—90, 92, 94.

*195 β Confirmation seems desirable here.

40. *Tortula* Hedw. (emend. Lindb.)

- 213 *pusilla* Mitt. 3, 5, 6, 12—17, 20, 22—24, 26—30, 32—34, 36—38, 45, 47, 52—59, 61—64, 66, 70, 72, 77, 81, 83, 85, 90, 92, 95, 99, 112.
I. 4, 21.
β incana Nees & Hornsch. 14, 20, 32, 37, 38, 55, 85, 90.
- 214 *lamellata* Lindb. 3, 6, 13, 23, 24, 26, 28, 32—34, 36, 37, 53, 55, 57, 61—64, 83, 85, 90. I. 21, 38.
- 215 *brevirostris* Hook. & Grev. 57, 61, 64, 83.
- 216 *rigida* Schrad. 1, 3, 4, 10, 11, 13—18, 21—24, 26—28, 31—34, 36—39, 48—50, 52, 55—59, 61—64, 66, 68, 69, 72, 76, 77, 82, 83, 89, 90.
I. 4, 21, 38, 39.
- 217 *ambigua* Ångstr. 1—4, 6, 8—10, 12—14, 16, 17, 19, 21—24, (27), 28—30, 32—34, 36—39, 45—50, 52—64, 66, 69, 77, 81—85, 88, 93.
C. I. 2, 4, 8, 21, 31, 34, 37—39.
- 218 *aloides* De Not. 1—4, 6, 8—10, 13—16, 19—21, 23—27, 29, 32—34, 36—42, 44, 45, 49, 50, 52—66, 68—70, 75, 77, 80, 81, 83, 85, 99.
I. 2, 6, 8, 11—13, 15—17, 20, 21, 27—29, 37—39.
- 219 *cernua* Lindb. 64.
- 220 *suberecta* Drumm. 90.
- 221 *atrovirens* Lindb. 1—4, 9, 13—15, 38, 44—46, 48, 49, 52, 81, 85, 90, 94, 99. C. I. 4, 5, 16, 20, 21, 39.
- 222 *cuneifolia* Roth 1—4, 6, 11 or 12, 14—19, 22, 25, 36, 37, 39, 45, 48, 52, [83]. C. I. 1, 3—5, 14, 21.
- 223 *Vahliana* Wils. 13, 17, 29, 36. I. 20, 21, 29.
β subflaccida Lindb. I. 20, 21.
- 224 *marginata* Spruce 3, 6, 9—17, 19, 22—25, 27, 32, 34, 36—40, 56, 58, 59, 62—64, 69, 85, (99). I. 39.
- 225 *muralis* Hedw. 1—4, 6—78, 80—105, 107—109, 111, 112. C. I. 1—4, 6—11, 13, 15, 16, 18—21, 27—31, 33, 34, 36—40.
β rupestris Schultz 1—4, 6, 14, 16, 23, 32—40, 42, 45, 46, 48—52, 55—60, 62—65, 69, 71, 73, 75, 76, 83, 85—90, 97, 103, 109. I. 8, 9, 16, 21, 29, 39.
γ æstiva Brid. 13, 14, 16, 17, 19, 21, 24, 25, 32, 34, 36—39, 50, 53, 55—58, 63—65.
- 226 *canescens* Mont. 2, 3, (14), 43, 45, 48, 88. C.
- 227 *subulata* Hedw. 1—4, 6—18, 20—30, 32—34, 36—78, 80—97, 99—102, 107—109, 111, 112. I. 4, 5, 8, 9, 11—13, 20, 21, 29, 31, 34, 37—40.
β subinermis Wils. 11, 14, 35, 36, 42, 58, 60, 61, 75, 85, 90.
- 228 *angustata* Wils. 3, 12, 20, 24, 32, 36, 37, 55, 58, 59, 61, 62, 64—66, 82, 83. I. 38.
- 229 *inermis* Mont. 86.
- 230 *mutica* Lindb. 2—4, 6, 8, 9, 12—17, 19—26, 32—34, 36—40, 43, 44, 48, 53—55, 57—62, 64—66, 69, 75—77, 80, 82, 83, 85, 86, 88, 89, 94.
I. 4, 6, 20, 21, 38, 39.

- 231 *lævipila* Schwæg. 1—65, 67—75, 77, 78, 80—83, 85—91, 94, 99, 100, 102, 109. **C. I.** 4, 6, 8, 9, 20, 21, 30, 31, 37—40.
β *lævipilæformis* Limpr. 14, 25, 43, 45, 48.
- 232 *intermedia* Berk. 1—4, 6, 8—14, 16, 17, 19, 21—34, 36—40, 42—45, 47—57, 59—66, 68—71, 73, 77, 78, 82, 83, 85, 87—90, 94, 99, 102, 103. **C. I.** 8, 9, 13, 15, 18, 21, 28, 38, 39.
- 233 *ruralis* Ehrh. 1—4, 6, 8—30, 32—34, 36—40, 42—45, 47—77, 80—83, 85—92, 94, 95, 98—101, 103, 111, 112. **C. I.** 4, 8—11, 13, 16, 18, 20, 21, 27, 31, 34, 37—40.
- 234 *ruraliformis* Dixon 1—4, 6, 9—11, 13—15, 19, 25—28, 41, 44—46, 48—50, 52, 54, 58—62, 66, 68, 70, 73—75, 81—85, 90—93, 97, 100, 108, 109, 111, 112. **C. I.** 1, 6, 9, 21, 27, 28, 31, 34, 35, 37—40.
- 235 *princeps* De Not. 40, 49, 57, 65, 72, 77, 83, 85, [86], 87—92, 99, 106, 108. **I.** 28, 39, 40.
- 236 *papillosa* Wils. 2, 3, 11, 13—16, 19—27, 32—34, 36—40, 48—50, 53—56, 60—66, 69, 71—75, 77, 78, 80—83, 85—90, 98, 99, (111). **I.** 9, 15, 20, 21, 34, 38, 39.

41. *Barbula* Hedw.

- 237 *lurida* Lindb. 1—4, 6, 9—11, 13—18, 21—25, 28, 32—34, 36—40, 42, 45, 47—50, 52—57, 59—66, 69, 70, 74, 83, 85, 94. **C. I.** 1, 2, 4, 6, 38.
- 238 *cordata* Dixon 4.
- 239 *rubella* Mitt. 1—30, 32—34, 36—78, 80—92, 94—105, 107—109, 111, 112. **C. I.** 1, 4, 6, 8, 9, 11—13, 16, 18—21, 27—31, 33—40.
β *dentata* Schp. 33, 36, 46, 48, 50, 56—58, 60, 62, 64, 66, 73, 88, 105.
γ *ruberrima* Ferg. 39, 42, 43, 48, 49, 64—66, 70, 75, 86, 88—90, 108. **I.** 7, 35.
- 240 *tophacea* Mitt. 1—4, 6, 9, 10, 13—17, 19, 21—24, 26—28, 30, 32—34, 36—42, 44—49, 51—66, 68—77, 79—91, 93—95, 98, 99, 108, 109, 111, 112. **C. I.** 1, 4, 6, 8—10, 14—16, 18, 20, 21, 27—29, 31, 33, 34, 38—40.
β *acutifolia* Schp. 23, 45, 48, 50, 55, 59, 60, 62, 85, 111.
- 241 *fallax* Hedw. 1—4, 6—14, 16—67, 69—73, 75—77, 80—92, 95—99, 101, 103, 109, 111, 112. **C. I.** 1, 4—6, 8, 9, 13, 16, 18—21, 26—29, 31, 33, 34, 36—40.
β *brevifolia* Schultz 4, 6, 10, 13, 14, 16, 19, 21, 22, 30, 32, 34, 36—39, 45, 49, 50, 52, 55—64, 66, 69, 73, 83, 86, 88, 90, 108. **I.** 38.
- 242 *recurvifolia* Schp. 1, 6, 9, 14, 27, 32, 34, 36, 38, 39, 49, 50, 52, 56, 57, 59—66, 69, 72, 75, 86, 88—91, 108, 109. **I.** 1, 2, 11, 28, 33, 38, 40.
β *robusta* Braithw. **I.** 28.
- 243 *spadicea* Mitt. (1), 2, 3, 9, 12, 16, (33), 34, 36—40, 42, 43, 45, 48—52, 57, 59, 60, 62—73, 76, 77, 82—94, 108, 109, 111. **I.** 1, 7, 20, 28, 31, 33, 36, 38, 39.

- 244 *rigidula* Mitt. 2—4, 6, 8—11, 13, 14, 16, 17, 19, 23, 24, 26—29, 32—34, 36, 37, 39—42, 44—50, 52, 54, 56—66, 69—78, 80—92, 95, 98, 105, 107—109, 111, 112. **C. I.** 1, 4, 5, 8, 10, 12, 19—21, 27—29, 34, 35, 37—40.
- 245 *cylindrica* Schp. 1—4, 6, 7, 9, 10, 12—16, 19—22, 24, 25, 31—45, 47—50, 52, 54—73, 75—77, 80—90, 94, 96, 97, 99, 107—109, 111, 112. **C. I.** 1, 2, 6, 8, 11—13, 16, 20, 21, 27—29, 31, 34, 36—39.
- 246 *vinealis* Brid. 1—4, 6, 7, 9—17, 20—24, 26—28, 31—40, 45, 48—52, 55, 57—60, 62—66, (69), 72, 73, 82—85, 88, 90, 92, 97, 99. **C. I.** 4, 5, 11, 19—21, 28, 33, 34, 37—39.
- 247 *sinuosa* Braithw. 1—4, 6, 8—10, 12—16, 19, 20, 22—25, 32—37, 40, 45, 48—50, 52, 55—57, 60, 62—66, 68. **I.** 8, 16, 21.
- 248 *gracilis* Schwæg. 4, 9, 13, 14, 34, 36, 50, 56—58, 69, [86]. **C. I.** (4), 8, 26, 38.
β viridis B. & S. 14. **I.** 38.
- 249 *icmadophila* Schp. 88, 104.
- 250 *Hornschuchiana* Schultze 1, 3, 6, 9, 10, 13, 14, 16, 17, 19, 21—24, 27, 32—34, 36—40, 43, 44, 48—50, 52—54, 56, 57, 59—64, 68, 69, 73, 75, 77, 82, 88—90, 96. **C. I.** 3, 39.
- 251 *revoluta* Brid. 2—6, 8—17, 19—26, 28, 31—34, 36—50, 52—60, 62—69, 71—77, 80—91, 97—100, 104, 107—109, 111. **C. I.** 1, 2, 4, 7—9, 11, 16, 18—21, 24, 27—29, 34, 36—40.
- 252 *convoluta* Hedw. 1—4, 6, 8, 9, 11—21, 23, 26—28, 30, 32—34, 36—77, 80—92, 95, 96, 107—109, 111. **C. I.** 1—3, 5, 7, 8, 11—13, 15, 16, 18, 20, 21, 30, 33, 34, 36—40.
β Sardoia B. & S. 2—4, 11—14, 22, 23, 27, 32, 34, 36, 42, 43, 45, 47—50, (52), 57, 60, 61, 63, 64, 69, 83, 86. **C. I.** 20, 21, 38, 39.
- 253 *unguiculata* Hedw. 1—78, 80—92, 94, 95, 97—99, 101, 108, 109, 111, 112. **C. I.** 1, 2, 4, 8, 9, 11—13, 15, 16, 18, 19, 21, 29, 33, 34, 37—40.
β cuspidata B. & S. 4, 6, 19, 32, 37—39, 48, 56, 57, 59—61, 64. **I.** 39.

42. *Leptodontium* Hampe

- 254 *gemmascens* Braithw. 3, 13, 14, 16, 17, 64, 90.
- 255 *flexifolium* Hampe 1, 3, 4, 6, 9, 13, 14, 16, 17, 21—23, 32, 34, 36—40, 43, 46, 48, 50, 55, 57—60, 62—65, 68—70, 72—75, 77, 78, 81, 83, 84, 86—91, 97, 98, 100, 101, 108, 109. **I.** 6, 21, 27, 28, 39, 40.
- 256 *recurvifolium* Lindb. 48, 49, 86, 88, 98, 99, 108. **I.** 1.

43. *Weisia* Hedw.

- 257 *crispa* Mitt. 2, 3, 6, 9—14, 16, 17, 19, 21, 23, 24, 26, 27 or 28, 29, 30, 32—34, 36—40, 49, 53, 55—62, 65, 66, (83), (85). **I.** 19, 38, 39.
β aciculata Braithw. 14, 32, (33), 55.
- 258 *sterilis* Nicholson 13, 14, 15, 17.
- 259 *multicapsularis* Mitt. 13, 14, 16, 22, 23, 30, 36, 38, 58.
- 260 *Mittenii* Mitt. 13, 14.
- 261 *rostellata* Lindb. 13, 14, 38, 55, 58, 67, (92). **I.** 39.

- 262 *squarrosa* C.M. 9, 13, 14, 16, 17, 24, 32, 36, 37, 45, 55—60, 62, 64, 69, 74, 85.
- 263 *microstoma* C.M. 3, 4, 6, 9, 11, 13, 14, 16, 17, 19, 21—23, 26—28, 32—34, 36—40, 45, 46, 48, 49, 52, 54—66, 69, 71, 74, 75, 80, 83, 85, 86, 88—92, 96, 97, 108, 109, 112. C. I. 4, 5, 20, 21, 31, 37—39.
β elata B. & S. 48, 64.
γ brachycarpa C.M. 14, 20, 34, 45, 48, 57,
- *264 *tortilis* C.M. 1, 3, 6, 9—11, 14—16, 33, 37, 39, 48—50, 57, 59, 64, 66. I. 5, 15, 35.
- 265 *crispata* C.M. 3, 4, 9, 13, 14, 16, 36, 39, 43, 45, 48—50, 57, 60, 63—66, 69, 82, 83, 85, 88, 110. I. 34, 38.
- 266 *viridula* Hedw. 1—4, 6—15, 17—30, 32—34, 36—52, 54—92, 94—98, 102—104, 107, 109, 111, 112. C. I. 1, 3—9, 11—13, 16, 18, 20, 21, 27, 31, 33, 34, 36—40.
β amblyodon B. & S. 2—4, 37, 52, 56, 57, 60, 64, 69. C. I. 39.
γ densifolia B. & S. 2, 4, 48, 49, 60, 64—66, 87. I. 1.
- 267 *mucronata* B. & S. 2, 3, 5, 13—17, 19, 20, 34, 36—40, 45, 46, 48, 49, 52, 58, 62, 64, 68, 69, 77, 81, 83, 85, 86, 88, 90—92, 103, 109, 111, 112. C. I. 35, 38.
β subgymnostoma Limpr. 14, 57.
- 268 *tenuis* C.M. 6, 9—11, 13, 14, 16, 21, 23, 32, 34, 36—40, 45, 48, 49, 56—62, 64—66, 68—70, 75—77, 81, 83, 85, 86, 88—91, 99, 101. I. 1, 5, 21, 28, 38, 39.
- 269 *calcareea* C.M. 6, 34, 36, 41, 50, 57, 64, 69, 88, 103. I. 5, 38.
β viridula C.M. 45, 62, 64, (69), 91.
- 270 *rupestris* C.M. 34—36, 39, 42—44, 47—50, 57—60, 62—66, 68—92, 94—101, 103—105, 108, 109, 111, 112. I. 1—3, 6, 7, 20, 21, 27, 31, 34, 35, 38, 39.
- 271 *curvirostris* C.M. [6], 9, [12], 42, 44, 45, 48—50, 52, 57, 62—66, (70), 71, 72, 76, 77, 81—83, (84), 85—91, 96, 98—100, 104, 105, 108, 109. I. 1, 4, 27, 31, 38—40.
β commutata Dixon 41, 42, 49, 50, 57, 64—66, 71, 88, 98, 99, 105.
γ scabra Lindb. 88. I. 38.
δ insignis Dixon 88, 98, 108.
- 272 *verticillata* Brid. 1—4, 6, 9, 12, 14—16, 22, 23, 32—37, 39—46, 48—50, 52, 56—58, 60—71, 74—77, 80, 81, 83—86, 88—91, 94, 95, 99, 106—109, 112. C. I. 1, 2, 20, 21, 28, 34, 35, 37—39.

44. *Trichostomum* B. & S. *emend.*

- 273 *crispulum* Bruch 1—4, 6, 9, 11, 13—15, 17, 23, 32, 34—37, 39—46, 48—50, 52, 57, 59—65, 68—71, 73—75, 77, 81—83, 85, 88, 90, 93, 99—101, 103, 108, 109. C. I. 1, 2, 8, 9, 16, 21, 28, 33—35, 37—40.
β elatum Schp. 48, 50, 64, 65. I. 1, 2, 8, 39.
γ nigro-viride Braithw. 50, 57, 64.
δ brevifolium B. & S. 9, 15, 50. C.
ε viridulum Braithw. 3, 35, 64.

*264 Many of these may belong to 265. Confirmation would seem desirable.

- 274 **mutabile** *Bruch* 1-4, 6, 9, 12-15, 24, 34-37, 39, 41-45, 48-50, 52, 57-60, 62-65, 68-76, 80, 85, 86, 90, 93, 96-99, 101, 103, 107-112. **C. I.** 1-3, 6, 8, 9, 15, 16, 21, 27, 28, 31, 33-35, 38, 39.
- β *littorale* *Dixon* 1-4, 9, 13, 14, 37, 40, 42, 43, 45, 48-50, 52, 57, 59, 60, 62, 65, 68, 69, 71, 73, 74, 76, 81, 82, 85, 88, 89, 91-94, 96-98, 101, 108-110, 112. **C. I.** 1, 2, 6, 8, 21, 27, 28, 31, 34, 35, 38-40.
- γ *cophocarpum* *Schp.* 6, 48, 57, 60, 64, 65. **C. I.** 2, 38.
- 275 **tenuirostre** *Lindb.* 1, 3, 4, 6, 14, 34, 37, 40, 42-45, 47-49, 57, 62, 64-66, 68-70, 72, 73, 75-77, 85-88, 90, 96-99, 104, 105, 108. **I.** 1, 2, 6, 7, 16, 20, 21, 27, 28, 31, 34, 35, 38, 39.
- β *Daldinianum* *De Not.* 48, 49, 70, 87, 88, 97-99. **I.** 2.
- γ *Holtii* *Braithw.* 48, 49, 59, 66, 69, 71, 98. **I.** 1, 2.
- 276 **hibernicum** *Dixon* **I.** 1, 2, [39].
- 277 **flavovirens** *Bruch* 1-6, 9, 13-15, 27, 28, 33, 41, 44, 45, 48-52, 58-60, 68, 81, 82, 84, 85, 90, 91, 93, 94, 98, 101, 107, 109, 111. **C. I.** 1, 6, 20, 21, 34, 38, 40.
- *278 **inclinatum** *Dixon* 1, 2, (23), 48, 65, 70, 71, 73, 85, (90), 108. **C. I.** 9, 31, 38-40.
- 279 **nitidum** *Schp.* 1-4, 6, 9, 34-36, 39, 41, 44, 45, 48-50, 52, 57, 59, 60, 62, 65, 66, 69, 73, 83, 101, 104, 107. **C. I.** 1, 2, 7, 9, 16, 27, 28, 34, 40.
- 280 **tortuosum** *Dixon* 3-6, 14, 16, 17, 23, 29, 33-55, 57-60, 62-78, 82, 83, 85-92, 94, 96-102, 104, 105, 107-109, 111, 112. **I.** 1, 2, 4, 6-10, 15, 16, 18, 27-29, 31, 33-36, 38-40.
- β *dicranoideum* *Dixon* 48, 88, 89.
- γ *fragilifolium* *Dixon* 37, 40, (44), 49, 57, 59, 60, 62, 64, 66, 88, 90, 91, 108-110.
- 281 **fragile** *Dixon* 85, 88, 90, (92), 109, (112). **I.** 2, 16, 28, 35.

45. *Pleurochæte* *Lindb.*

- 282 **squarrosa** *Lindb.* 1-3, 6, 9, 13-15, 23, 24, 34, 36, 45, 57, 60, 69. **C. I.** 20, 21.

46. *Cinclidotus* *P. Beauv.*

- 283 **Breissoni** *Husnot* 3, 6, 8, 9, 13, 14, 16-20, 32, 34-40, 42-45, 49, 52, 66, 69, 80, 93.
- [*riparius* *Arnott* 40. **I.** 8].
- 284 **fontinaloides** *P. Beauv.* 1-8, 12, 13, 15-17, 21-23, 30, 32-37, 39-45, 48-50, 52, 54, 55, (56), 57-70, 72-78, 80, 81, 83-92, 98-100, 102, 103, 108. **I.** 1, 2, 4, 6-10, 12, 13, 15, 16, 20, 21, 27-29, 33-35, 37-40.

* 278 It is probable that some of these belong to 277. Confirmation desired.

X. ENCALYPTACEÆ.

47. *Encalypta* Schreb.

- 285 *commutata* Nees & Hornsch. [64], 87, 88, 90, 92, (98).
β imberbis Lindb. 88.
- 286 *vulgaris* Hedw. 3, 4, 6, 9, 12—14, 16, 17, 19—26, 27 or 28, 29, 32—34, 36, 37, 39, 40, 42, 45—47, 49—57, 59—70, 77, 80—92, 95, 98, 99, 106.
 I. 1, 4, 5, 11, 13, 18, 20, 21, 33, 35, 39, 40.
- 287 *ciliata* Hoffm. 36, (40), 41, 42, 44, 48, 49, 64—66, 68—70, 72, 75, 83, 85—92, 94, 95, 98, 100, 104, 108, 109. I. 27, 39, 40.
- 288 *rhabdocarpa* Schwæg. 49, 64, 65, 82, 85, 87—90, 98, 109. I. 28.
- 289 *streptocarpa* Hedw. 2—6, 9, 10, 12—17, 23, 24, 32—73, 75—78, 80—92, 95, 97—105, 107—109. I. 1, 2, 4—6, 8—12, 16, 17, 20, 21, 27—29, 31, 33, 34, 36—40.

XI. ORTHOTRICHACEÆ.

48. *Ancectangium* Schwæg.

- 290 *compactum* Schwæg. (1), 39, 41—44, 48, 49, 52, (56), 59, 62—66, 69, 70, 72, 73, 75—78, 83, 85—90, 92, 96—98, 100—104, 108, 109. I. 1, 3, 6—8, 16, 20, 28, 31, 34, 35, 38, 39.
β pellucidum Dixon 88, 97, 98.

49. *Zygodon* Hook. & Tayl.

- 291 *lapponicus* B. & S. 43, 44, 48, 49, 66, 68—70, 72, 73, (76), (77), 80, 85—88, 90—92, 99, 104.
- 292 *Mougeotii* B. & S. 2, 3, 35—37, 40, 42—50, 52, 56, 57, 59, 60, 62—66, 68—78, 80, 81, 83—92, 95—105, 107—109, 111, 112. I. 1, 2, 4, 6—9, 16, 20, 27, 28, 31, 33—35, 37—40.
- 293 *viridissimus* R. Brown 1—29, 32—34, 36—50, 52—55, 57, 60—66, 68, 69, 71—91, 95, 97—99, 101—103, 105, 108, 109, 111, 112. C. I. 1, 2, 4—9, 12, 18—21, 27, 28, 30, 33, 34, 36—39.
**β rupestris* Hartm. 4, 14, 16, 21, 23, 33, 34, 36, 37, 45, 48, 50, 52, 57, 61, 64, 65, 69, 71, 73, 83—85, 88, 102, 109. C. I. 38, 39, 40.
- 294 *Stirtoni* Schp. 3, 4, 10, 13, 14, 22, 23, 32, 34, 36, 37, 39, 40, 42, 45, 48—50, 52, 57, 60, 64, 65, 70, 71, 73, 74, 77, 82—86, 88—90, 93, 94, 98—100, 109, 111, 112. C. I. 2, 6, 20—22, 33, 38—40.
- 295 *conoideus* Hook. & Tayl. 1—3, 9, 13, 14, 18, 19, 42, 45, 48, 49, 52, 58—60, 62, 65, (69), 71—75, 86, 88, 91, 92, 97, 98, 101, 103. I. 1, 2, 4, 5, 14, 16, 20, 25, 35, 38, 39.
- 296 *Forsteri* Mitt. 6, 9, (13), (14), 18.
β Sendtneri Dixon 24.
- 297 *gracilis* Wils. 64. I. 16.

*293β This has often been confused with 294. Confirmation is much needed.

50. Ulota Mohr

- 298 *Ludwigii* Brid. 13, 27, 48, 86—88, 90, 92, 98. I. 1, 2.
- 299 *Drummondii* Brid. 47, 48, (57), 60, (62), (64), (65), 66, 68, 70, 72, 73, 75, 81, 83, 85—92, 95, 97, 98, 101, 105, 107—109. I. 1, 2, 6, 7, 20.
- 300 *Bruchii* Hornsch. 2—5, 9, 11 or 12, 13—17, 20, 23, 27, 32, 33, 36, 37, 40, 45, 47—51, 57, 58, 60—62, 64—66, 68—78, 80—83, 85—104, 107—109. C. I. 1, 2, 4, 7, 8, 14, 16, 20, 28, 34, 38—40.
- 301 *crispa* Brid. 1—4, 6, 8—19, 21, 22, 25—29, 32—34, 36—40, 44—50, 52, 54—62, 64, 66, 68—70, 72, 73, 75—77, 80—83, 85—92, 94—103, 105—109. I. 1, 2, 4—6, 8, 9, 11, 12, 16—21, 27, 28, 30, 31, 33—40.
- β intermedia* Braithw. 2, 3, 6, 9, 11, 22, 23, 25, 32—34, 36—40, 47—50, 53—55, 60—64, 66, 68, 70, 72, 73, 83, 86, 88, 89, 95, 97—99, 101—105, 108. I. 1, 36, 38.
- γ crispula* Hamm. 2, 3, 13, 14, 40, 48—50, 62, 64, 65, 69, 70, 72, 73, 75, 87, 88, 97, 103, 105. I. 1, 2, 13—16, 28, 33, 38—40.
- 302 *calvescens* Schp. 49, (69), (70), 75, 86, 98. I. 1, 2, 28, 29, 35, 39.
- 303 *phyllantha* Brid. 1—4, 9, 10, 11, 13—16, 26, 27, 32, 36, 41, 42, 44—50, 52, 58, 60—62, 64—66, 68, 69, 71—77, 80—85, 87—94, 97—112. C. I. 1, 2, 6—9, 11, 16, 20, 24, 28—30, 33—40.
- β stricta* Nicholson 109.
- 304 *Hutchinsiae* Hamm. 2—4, (27), 44, 48, 49, 62, 65, 69, 70, 73, 86—88, 90—92, 95, 97—99, 101, 104, 105, 108—110. I. 1, 3—7, 16, 20, 21, 27, 34, 35, 37, 38.

51. Orthotrichum Hedw.

- 305 *rupestre* Schleich. 3, 7, 8, 14, 19, 37, 38, 40, 48, 49, 51, 52, 60, 64—66, 68—71, 73—83, 85—93, 97—103, 107—109, 111, 112. I. 2, 20, 27, 34, 35, 37—39.
- β Sturmii* Juratz. 69, 75, 83, 85—88, 99. I. 1, 20, 38, 39.
- γ Franzonianum* Vent. 73, 88, (95).
- *306 *anomalum* Hedw. 1, 3, 12, 37, 39, 45, 46, 48, 49, 63, 68, 75—77, 80—83, 85—92, 95, 97, 99, 107. C. I. 2, 4, 10, 21, 28, 35, 37, 39.
- β saxatile* Milde 1—4, 6, 8—11, 13—20, 22, 23, 25—34, 36—42, 44—46, 48—67, 69, 70, 72, 73, 83, 85, 86, 88—92, 94, 99, 101—103, 106—109. I. 8, 9, 11, 15, 16, 18, 20, 21, 27, 31, 33, 34, 36—40.
- 307 *cupulatum* Hoffm. 3, 4, 6, 9, 12—14, 16, 22, 23, 25, 27, 32—34, 36—39, 48—50, 52, 55, 57, 59—72, 75, 77, 78, 80—83, 85—92, 94, 98, 101, 107, 108. I. 4, 8, 16, 21, 28, 38—40.
- β nudum* Braithw. 9, 14, 23, 32, 36, 37, 39, 50, 55, 57, 59, 60, 64—67, 69, 71, 77, 83, 87—89, 108, 109. I. 8, 9, 33, 39.
- 308 *Shawii* Wils. 75.
- 309 *leiocarpum* B. & S. 1—6, 8, 9, 11—19, 22—27, 32—34, 36—38, 40—50, 52, 55—57, 60—62, 64, 65, 68—73, 75, 77, 78, 80—83, 85—92, 95—99, 107—109. C. I. 1, 2, 4, 13, 20, 21, 37—40.

*306 Older records included var. *β*. Confirmation for the segregate is desirable.

- 310 **Lyellii** *Hook. & Tayl.* 1—14, 16—27, 30—34, 36—45, 47—53, 55—62, 64—66, 68—78, 80—83, 85—92, 95, 98, 99, 105—107. **C. I.** 1, 7, 11, 12, 18, 20, 21, 33, 36, 38, 39.
- 311 **speciosum** *Nees* 13, 14, 62, (64), (70), 86, 88—92, 96.
- 312 **affine** *Schrad.* 1—4, 6—30, 32—34, 36—66, 68—78, 80—96, 99, 101, 102, 104, 107—109, 112. **C. I.** 1, 2, 4—6, 8, 9, 11, 12, 16, 17, 20, 21, 27—29, 31, 33—40.
β rivale *Wils.* 2, 36—38, 42, 43, 57, 60, 62, 67, 73, 75, 96. **I.** 39.
γ fastigiatum* *Hüb.* 14, 36, 38, 48—50, 52, 57, 58, 62, 64—66, 69, 73, 75, 76, 86—88, 90, 98. **I. 19, 21.
- 313 **rivulare** *Turn.* 1—4, 9, 13, 14, 16, 36—44, 47—50, (56), 57—60, 62, 64—66, 68, 69, 71—73, 75—78, 80, 81, 84—93, 95, 97, 102, 103. **I.** 1, 2, 4, 20, 21, 38, 39.
- 314 **Sprucei** *Mont.* 3, 9, 13, 14, 16, 17, 19, 32, 34—37, 40, 55, 57, 61, 62, 64, 65, 69, 70, 75—77, 86, 88. **I.** 6, 38, 39.
- †315 **Schimperi** *Hamm.* 14, 17, 19, 32, 36, 48, 52, 62, 64, 65, 75—77, 80, (83), 85, 86, (88), 90. **I.** 3, 19, 21, 22, 37.
- 316 **stramineum** *Hornsch.* 1, 3, 11—14, 16, 24, 34, 36—44, 46, 48—51, 54, 57, 59, 60, 62, 64—66, 68—75, 77, 78, 80, 81, 83, 85—91, 93—95, 99, 107, 108. **I.** 1, 2, 11, 12, 20, 38, 39.
β patens *Vent.* 55, 58, 62, 64, 72, 75.
- 317 **pallens** *Bruch* 1, 2, 14, 19, 59, 62, 64—66, 75, 80. **I.** 4, 17, 20.
- 318 **tenellum** *Bruch* 2—4, 6—9, 11, 13—16, 19, 22—24, 26—28, 32, 33, 36—38, 43, 45, 48—50, 52, 55, 57, 58, 60—65, 69—71, 75—77, 83, 85—91, 97—99, 105. **C. I.** 2, 3, 5, 8, 20, 21, 38, 39.
- 319 **pulchellum** *Smith* 1—3, (4), 9, 12—14, 17, 23, 25, 30, 33, 40, 48, 49, 52, 55, 57, 58, 60—66, 68—73, 75, 77, 78, 80, 83—92, 95, 98, 107—109. **C. I.** 2, 4, 5, 8, 9, 19, 21, 25, 34—40.
- 320 **diaphanum** *Schrad.* 1—27, 29, 30, 32—34, 36—42, 44—51, 53—66, 68—73, 75, 77, 80—86, 88—92, 94, 95, 98, 101, 108, 109, 111, 112. **C. I.** 1, 2, 4, 5, 9, 11, 15, 18, 20, 21, 34, 36—39.
- 321 **obtusifolium** *Schrad.* 22—24, 32—34, 36—38, (62), 65, 91.

XII. SCHISTOSTEGACEÆ.

52. *Schistostega* Mohr

- 322 **osmundacea** *Mohr* 1—3, 6, 13, 17, 32, 36, 39, 40, 48, 49, 55—59, 62—64, 70, 86.

XIII. SPLACHNACEÆ.

53. *Ædipodium* Schwæg.

- 323 **Griffithianum** *Schwæg.* 44, 48, 49, 64, 68—70, 72, 73, 86—90, 92, 97, 98. **I.** 1, 35.

*312 γ This has been much misunderstood. Confirmation is much to be desired.

†315 Older records are very doubtful. Confirmation required.

54. Splachnum L.

- 324 *ampullaceum* L. 2, 3, 9, 11, 12, 14, 16, 17, 22, 23, 25—27, 29, 32, 36, 39, 40, 44—46, 48—50, 52, 56, 58, 59, 62—66, 69, 70, 72—75, 77, 81, 83, 85—92, 95—100, 103. I. 1, 9, 17, 19—21, 28, 33, 34, 38, 39.
- 325 *sphaericum* Linn. *fil.* 3, 36, 42, 44, 48, 49, 57—60, 62—66, 68—73, 75—77, 83, 85—92, 94—109, 112. I. 1, 20, 21, 28, 35, 38—40.
- 326 *vasculosum* L. 65, 86—90, 92. I. 27, 39, 40.

55. Tetraplodon B. & S.

- 327 *mnoides* B. & S. 40, 42, 43, 46, 48, 49, 54, 58—60, 62, 64—66, 68—70, 72, 73, 77, 80, 81, 83, 85, 86, 88—97, 100—109, 111. I. 1, 3, 20, 27, 35, 38, 39.
- *328 *angustatus* B. & S. 49, [61], (64), 89, 90, 92, 94, 96, 97, (98), 105, 106, 108.
- 329 *Wormskjoldii* Lindb. 66, 88.

56. Tayloria Hook.

- 330 *tenuis* Schp. 66, 87, 88, 90—92, 94 or 96, 104, 105, 109. I. 40.
- 331 *lingulata* Lindb. 86—90, 98.

XIV. FUNARIACEÆ!**57. Discelium Brid.**

- 332 *nudum* Brid. 32, 37, 57—60, 62—66, 77, 88.

58. Nanomitrium Lindb.

- 333 *tenerum* Lindb. 13, 14, 16.

59. Ephemerum Hampe

- 334 *serratum* Hampe 2, 9, 12—23, 25, 26, 27 or 28, 29, 32—34, 36—40, 42, 44, 46, 48, 50, 55—64, 69, 70, 77, 80, 81, 83—86, 88—92, 109. I. 4, 18, 34, 38, 39.
β angustifolium B. & S. 16, 19, 59. I. 38, 39.
- 335 *intermedium* Mitt. 13.
- 336 *stellatum* Philib. 14, 16.
- 337 *cohærens* Hampe 13, 14, (91). I. 15.
- 338 *sessile* Rabenh. 13, 14, 16, 58, (92).
β brevifolium Schp. 14, 58.
- 339 *recurvifolium* Lindb. 6, 9, 13—17, 22, 24, 32, 58, 66.

60. Physcomitrella B. & S.

- 340 *patens* B. & S. 3, 13, 14, 16—24, 26, 27, 30, 32, 34, 36—40, 50, 55—59, 61, 62, 66. I. 4, 21, 39.
β Lucasiana Schp. 20, 57—59.

61. Physcomitrium Brid.

- 341 *sphaericum* Brid. 17, 39, 57, 58.

*328 Record for v.c. 61 is over 100 years old. Confirmation required.

- 342 *pyriforme* *Brid.* 1—4, 6, 8—10, 12—30, 32—34, 36—41, 44—46, 48—50, 52—64, 66, 68—73, 75—77, 80—92, 95, 97, 98, 102, 103, 109.
C. I. 3, 4, 11, 18, 20, 21, 28, 34, 37—40.

62. *Funaria* Schreb.

- 343 *fascicularis* *Schp.* 1—4, 6, 8, 11—14, 16—20, 22, 25—28, 30, 32—40, 42—45, 48—50, 52, 55, 58, 59, 61, 62, 64, 66, 69, 70, 72—76, 83, 85—92, 98—100, 111, 112. **C. I.** 1, 4, 5, 21, 27, 31, 38—40.
- 344 *ericetorum* *Dixon* 1—3, 6, 9, 11—14, 16, 24, 34, 36, 40, 44, 45, 47—49, 52, 58—66, 68—75, 77—81, 83, 85—92, 95, 97, 98, 102, 105, 108—111.
C. I. 1, 2, 4, 5, 7, 9, 16, 20, 21, 27, 31, 34, 37—39.
- 345 *Templetoni* *Sm.* 1—4, 21, 44, 45, 47—50, 52, 58, 59, 62, 64, 66, 69—76, 83, 86, 88, 97, 98, 100, 104, 105, 109—112. **C. I.** 1—5, 7, 9, 20, 21, 27, 31, 34, 35, 38—40.
- 346 *calcareae* *Wahl.* 2—4, 6, 13, 14, 33, 34, 36, 39—42, 48—50, 55, 57, 60, 64, 66, 69, 88, 90, 98, 100, 106, 112. **I.** 3, 4, 5, 39, 40.
β patula *B. & S.* 3, 34.
- *347 *hygrometrica* *Sibth.* 1—6, 8—34, 36—66, 68—77, 80—92, 95—105, 108—112. **C. I.** 1, 2, 4, 7—9, 11, 13, 17—19, 21, 27, 28, 29, 31, 33, 34, 37—40.
β calvescens *B. & S.* 2, 19, 37, 38, 40, 48, 53, 56, 57, 59, 61, 83.
 [*microstoma* *B. & S.* (3), (11), (14), (27), (34), (38), (49), (52), (57), (64), (69), (90).]

XV. MEESIACEÆ.

63. *Amblyodon* P. Beauv.

- 348 *dealbatus* *P. Beauv.* 26, 27, 37, 38, 44, 48, 49, 52, 57—60, 62—66, 69, 81—83, 85—90, 92, 94, 96, 108, 109, 112. **I.** 21, 34, 38, 39.

64. *Meesia* Hedw.

- 349 *trichoides* *Spruce* 52, 59, 60, 65, 66, 68, 75, 82, 85—92, 98, 109.
β alpina *Boul.* 88.
γ minor *Boul.* 88.

65. *Paludella* Ehrh.

- 350 *squarrosa* *Brid.* 58, 62. Now extinct in both localities.

66. *Aulacomnium* Schwæg.

- 351 *turgidum* *Schwæg.* 64, 88, 106.
- 352 *palustre* *Schwæg.* 1—6, 8, 9, 11—28, 30, 32, 34—66, 68—78, 80—92, 94—104, 107—109, 111, 112. **C. I.** 1, 2, 4, 6, 8—10, 12, 13, 17—21, 27, 30—35, 37—39.
β imbricatum *B. & S.* 26, 54, 62, 64, 66, 75.
γ laxifolium *Kindb.* 30, 57, 61.
- 353 *androgynum* *Schwæg.* 3, 6, 9, 11—14, 16—18, 20—22, 24, 25, 27, 29, 30, 32, 34, 36—40, 46—48, 50, 51, 53—70, 73, 77, 83, 85, 86, 88—92, 95, 96, 98, 106—109. **I.** 18, 20, 37—39.

*347 *Var. arctica* is included under *F. microstoma*.

XVI. TIMMIACEÆ.

67. *Timmia* Hedw.

- 354 *austriaca* Hedw. 88, 90.
 355 *norvegica* Zett. 88, 90. I. 20.

XVII. BARTRAMIACEÆ.

68. *Catoscopium* Brid.

- 356 *nigritum* Brid. 52, 59, 65, 66, 69, 74, 82, 85, 88—90, 109. I. 40.

69. *Conostomum* Swartz

- 357 *boreale* Swartz 69, 86—90, 92, 96, 97, 99, 100, 102, 108, 112.

70. *Bartramia* Hedw.

- 358 *Æderi* Swartz 34, 36, 42—44, 48—50, 57, 60, 62, 64—66, 69, 70, 75—77, 83, 85, 86, 88—92, 97. I. 1, 39.
 359 *stricta* Brid. 14, 43. C.
 360 *ithyphylla* Brid. 3, 4, 14—16, 35, 36, 40—44, 48—50, 55, 58, 60, 62—66, 68—78, 80—83, 85—99, 101—103, 105, 108—111. I. 1, 6, 7, 20, 21, 27, 31, 34—36, 38, 39.
 361 *pomiformis* Hedw. 1—6, 8—27, 29, 30, 32—50, 52, 54—60, 62—78, 80—92, 94—103, 107—110, 112. C. I. 1, 4, 6, 11—13, 19—21, 27, 31, 34, 36—40.
 β crispa B. & S. 3, 14, 24, 41, 42, 47—49, 52, 65, 66, 68—70, 72, 73, 75, 76, 83—86, 88—90, 92, 96, 99. I. 1, 2.
 362 *Halleriana* Hedw. 35, 36, 42—44, 48, 49, 62, 64, 66, 69, 70, 72, 73, 75, 77, 85—92, 95, 98, 99, 101, 104. I. 1, 4, 6, 7, 20, 27, 36, 39.

71. *Philonotis* Brid.

- 363 *Wilsoni* Braithw. 48, 90. I. 1, 3.
 364 *rigida* Brid. 1, 10, 35, 48, 49, 71. I. 1—3, 20.
 365 *fontana* Brid. 1—6, 8, 9, 11—27, 29, 30, 32—105, 107—112. C. I. 1, 2, 4, 6—10, 13, 15, 18, 20, 21, 27—29, 31, 33—35, 37—40.
 β compacta Schp. 48, 49, 88, 90, 92. I. 31, 35, 39.
 γ falcata Brid. 2, 3, 24, 26, 48, 49, 69, 75, 85, 86, 88. I. 20, 31, 39.
 δ pumila Dixon 4, 14, 37, 49, 59, (62), 64, (65), 88, 90, 108.
 ε ampliretis Dixon 48, 58, 59, 63.
 366 *cæspitosa* Wils. 13, 14, 27, 37—39, 48, 49, 58. I. 20.
 367 *adpressa* Ferg. 48, 57, 64, 66, 70, 88—90, 96, 97, 104, 108.
 368 *seriata* Mitt. 88, 90, 92, 97, 98, 108.
 369 *calcareæ* Schp. 3—5, 9, 12, 22, 23, 27, 32, 34, 36—40, 42, 44—46, 48—50, 52, 53, 55, 57—66, 68—71, 74, 75, 81—93, 95, 108, 109, 111. I. 1, 2, 8, 14, 20, 28, 33, 35, 37—39.
 370 *capillaris* Lindb. 10, 11, 13, 14, 16, 36, 37, 40, 42, 43, 48—50, 58, (65), 68, 70, 73, 86, 88, 96, 98, 104.

72. Breutelia Schp.

- 371 *arcuata* Schp. 2—4, 6, 9, 11, 35, 36, 39, 40, 42—50, 52, 54, 55, 57, (58),
59—62, 64—66, 68—78, 80, 81, 83, 85—92, 95—105, 107—112.
I. 1, 2, 6—9, 13, 20, 21, 27—29, 31, 33—35, 37—40.

XVIII. BRYACEÆ.**73. Oreas Brid.**

- 372 *Mielichhoferi* Brid.
β elongata B. & S. 62, 92.

74. Orthodontium Schwæg.

- 373 *gracile* Schwæg. 3, 14, (16), 39, 40, 50, (54), 58, 64, 75, 83, 86.

75. Leptobryum Wils.

- 374 *pyriforme* Wils. 1—3, 6, 8—11, 13, 14, 16, 17, 19—21, 23, 26, 27, 29, 30,
32—34, 36—40, 48, 49, 54—66, 68—73, 75, 77, 80, 83, 85, 86, 88,
89, 91, 92, 95, 98, 102, 105, 108, 109. C. I. 4, 7, 21, 31, 34, 38,
39.
β minus Husn. 62.

76. Webera Hedw.

- 375 *polymorpha* Schp. 46, 48, 49, (58), 65, 68, (69), 71—73, 86—88, 90, 92,
97, 98, 108. I. 1, 7.
β brachycarpa Schp. 92.
- 376 *acuminata* Schp. 48, 49, 65, 69, 70, 85—88, 90, 96—98, 105, 108. I. 1,
2, 20, 31, 38.
- 377 *elongata* Schwæg. 3, 35, 36, 39, 40, 42—44, 46, 48, 49, 59, 60, 63—66,
68—70, 72, 73, 78, 86—88, 90, 92, 97, 98, 105, 108. I. 1, 7, 20,
31, 34, 36, 38, 40.
- 378 *cruda* Schwæg. 3, 30, 35, 36, 37, 40, 42—44, 46, 48—50, 52, 57, 59, 60,
62—66, 68—70, 72, 73, 75—78, 80—92, 95—99, 104, 107. I. 1,
20, 21, 34, 38, 39.
- 379 *nutans* Hedw. 1—6, 9—28, 30, 32, 34, 36—78, 80—92, 95—105, 107—110,
112. I. 1—3, 6, 8, 9, 12, 20, 21, 29, 31, 33, 34, 37—40.
β longiseta B. & S. 3, 9, 11, 17, 18, 32, 37—40, 48, 50, 57—62, (69), 85,
88, 108. I. 34, 37, 38.
γ bicolor B. & S. 35, 50, 57, 60, 69.
- 380 *cucullata* Schp. 88, (97), 100, 105.
- 381 *annotina* Schwæg. 1, 3, 4, 6, 11, 13, 14, 16—18, 21, 22, 28, 32, 34, 36—40,
42, 43, 46, 48—50, 52, 54, 55 (57), 58—60, 62—66, 68—77, 83, 85,
86, 88, 90, 92, 94, 95, 98, 101, 108, 109, 111. I. 20, 21, 38, 39.
β erecta Correns 28, 57, 60, 68, 107.
γ bulbifera Correns 48, 49, 57, (87), 108.
- 382 *proligerata* Bryhn 1, 14, 28, 32, 37, 39, 44, 45, 48—50, 57, 59, 63, 84, 87,
88.
- 383 *Ludwigii* Schp. 49, 65, 70, 86, 88, 90, 92, 96—98, 107, 108.
β latifolia Schp. 70, 88, 108.

- 384 *commutata* Schp. 49, 59, 69, 83, 86, 88, 92, 96—98, 108, 109.
β catenulata Dixon 88.
- 385 *gracilis* De Not. 85, 86, 88, 90, 96.
- 386 *carnea* Schp. 1—4, 6, 8—10, 13—26, 28—30, 32—42, 45, 47—50, 52, 54—64, 66, 68—72, 75—77, 80, 81, 83, 85, 88—93, 95, 98, 100, 104, 108, 109. **C. I.** 4, 8, 9, 20, 21, 38, 39.
- 387 *albicans* Schp. 1—4, 6, 9, 10, 12—19, 21—23, 32—50, 52—73, 75—78, 80—92, 94—97, 99—102, 108, 109, 111. **I.** 1, 20, 21, 31, 34, 37—40.
β glacialis Schp. 85, 88, 90, 92, 96.
- 388 *Tozeri* Schp. 1—4, 9—11, 13, 14, 16, 36, 42—45, 49. **C. I.** 2, 4, 39.

77. *Plagiobryum* Lindb.

- 389 *Zierii* Lindb. 1, 35, 36, 42—44, 47—50, 57, 60, 62, 64—66, 68—70, 72, 73, 75—78, 80, 83, 85—90, 92, 97—99, 101, 105, 108, 109. **I.** 1, 34, 39, 40.
- 390 *demissum* Lindb. 88, 90, 98.

78. *Bryum* Dill.

A. ANOMOBRYUM.

- 391 *filiforme* Dicks. 3, 36, 42—45, 48, 49, 57, 59, 60, 63—66, 68—73, 75, 76, 78—80, 83, 86—92, 95—99, 101—103, 105, 107—109. **I.** 1, 2, 6, 7, 16, 20, 21, 27, 28, 31, 34, 35, 37—40.
β juliforme Dixon 1.
- *392 *concinatum* Spruce [2], 42, 43, 48, 49, 63, 65, 66, 69, 75, (83), 87, 88, 92, (103). **I.** 1, 7, 16, 20, 28, 34, 39.

B. PTYCHOSTOMUM.

- 393 *pendulum* Schp. 2, 4, 6, 9, 13—16, 21—23, 25, 26, 28, 30, 33, 34, 36—40, 42—46, 48—50, 52, 54—66, 68—73, 77, 82—88, 90, 95, 96, 102, 104, 108. **C. I.** 1, 2, 4, 5, 7, 18, 21, 29, 39, 40.
β compactum Schp. 48, 52, 66, 85.
- 394 *Warneum* Bland. (6), 48, 49, 52, 58—60, 62, 66, 75, 82, 85, 90. **I.** 21.
- 395 *arcticum* R. Br. 88.

C. CLADODIUM.

- 396 *calophyllum* R. Br. 4, 48, 58, 59, 62, 66, 68, 82, 85, 90, 109. **I.** (21).
- 397 *Marratii* Wils. 48, 59, 60, 62, 70, 75, 85, 110. **I.** (21).
- [398 *purpurascens* B. & S. 64.]
- 399 *lacustre* Brid. (6), 9, 25, 26, 37—39, 42, 48, 52, 54, 58—62, 64—66, 85, 90.
- 400 *mamillatum* Lindb. 28.
- 401 *inclinatum* Bland. 1—4, 6, 8, 9, 11—14, 16, 17, 19, 21, 23—25, 28, 30, 32—40, 42, 44, 45, 48—52, 55—66, 69—71, 73, 77, 82, 83, 85—88, 90, 91, 94, 95, 98, 103, 104, 108, 109, 111, 112. **C. I.** 4, 6, 8, 9, 15, 16, 21, 35, 38, 40.
- 402 *uliginosum* B. & S. 4, 13, 19, 22, 23, 36—39, 48, 49, 53, 57—56, 68, 70, 77, 82, 85, 86, 90, 92, 109. **I.** 1 or 2, 7, 18, 19, 21, 33, 40.
- 403 *Lawersianum* Philib. 88.

*392. This has been confused with forms of 391. All need verifying.

D. LEUCODONTIUM.

- 404 **pallens** Sw. 1—4, 6, 8, 9, 13, 14, 16, 17, 19, 21—23, 26, 32—40, 42—73, 75—78, 80—92, 94—98, 100—102, 105, 107—112. **C. I.** 1, 6, 7, 16, 18—21, 27, 31, 34, 35, 37, 40.
β speciosum Schp. 88.
- 405 **fallax** Milde 14, 49. **I.** 20.
- 406 **Duvallii** Voit 40, 64, 69, 70, 72, 77, 81, 87—90, 92, 104, 106, 108, 109, 111. **I.** 6.
- *407 **turbinatum** Schwæg. (6), 13, (21), 22, 23, (27), 28, 36, 37, 39, 48, 58, 59, (62), 66, 77, 88, 96, (100), (110). **I.** 21, 39.
β latifolium B. & S. 86, 88, 112.

E. EU-BRYUM.

- 408 **neodamense** Itzigs. 59, 65, 90, 109.
- 409 **pseudo-triquetrum** Schwæg. 1—6, 8, 9, 11, 13—17, 19, 20, 23, 25—30, 32—50, 52—54, 56—73, 75—78, 80—92, 94—105, 107—112. **C. I.** 2—10, 18—20, 27, 28, 31, 33—35, 37—40.
β compactum B. & S. 2, 4, 13, 48, 49, 52, 59, 60, 70.
- 410 **bimum** Schreb. 1—3, 5, 6, 9, 12—16, 18, 19, 21—23, 26, 27, 29, 30, 32—34, 36—40, 43, 45—50, 53—64, 66, 69—75, 77, 82—86, 88, 90, 91, 94, 104, 105, 108, 109. **C. I.** 2, 4, 5, 8, 13, 20, 21, 28, 30, 31, 33, 34, 37—40.
- 411 **affine** Lindb. 3, 13, 14, 16, 19, 22, 23, 32, 34, 37, 38, 43, 56—60, 62, 63, 65, 66, 71, 75, 88, 90. **I.** 2.
β cirratum Braithw. 88, 97.
- 412 **pallescens** Schleich. 1, 2, 10, 16, 34, 38, 39, 48—50, 57—60, 62—66, 68—71, 85—90. **I.** 1, 7, 21, 28, 39.
- 413 **intermedium** Brid. 1—3, 6, 9—14, 16—19, 23, 26, 32—34, 36—40, 45, 46, 48—50, 52, 53, 55—66, 69, 70, 73, 77, 81, 83, 85, 86, 89—92, 95, 104, 107, 108, 112. **C. I.** 4, 21, 34, 38, 39.
- 414 **cæspiticium** L. 1—4, 6, 8—34, 36—40, 42—78, 80—92, 95, 96, 98, 100, 102, 107—109, 112. **C. I.** 2, 4, 6—9, 13, 15, 18—21, 27, 28, 31, 33, 34, 36—40.
β imbricatum B. & S. 14, 36, 43, 57, 62, 66.
γ badium Brid. 62, 69.
- 415 **provinciale** Philib. 6, 13, 14, 16, 34, 36.
- 416 **capillare** L. 1—30, 32—93, 95—105, 107—109, 111, 112. **C. I.** 1, 4—13, 15, 16, 19—21, 24, 27—30, 33—40.
β torquescens Husn. 1—3, 6, 13—17, 33, 36, 38, 50, 62, 69, 75, 85, 86, 90, 100. **I.** 2, 5, 8, 16, 21.
γ macrocarpum Hübn. 36—38, 40, 48, 57, 60, 73. **I.** 2.
δ rosulatum Mitt. 13, 14, 33, 34, 54, 60, 61.
ε flaccidum B. & S. 4, 13, (15), 23, 37—39, 48, 49, 51, 59, 60, 64, 86.
ζ elegans Braithw. 14, 28, 50, 57, 64, 87, 88, 108.
- 417 **obconicum** Hornsch. 1—4, 11, 13, 14, 28, 34, 36, 38, 40, 49, 50, 58, 62, 64—66, 69, 71, 75, 86, 92, 100, 103. **I.** 2, 21.

*407 Sterile plants of 404 &c., are often so named. It would be well if all could be verified.

- 418 **Donianum** *Grev.* 1—4, 9, 10, 13—17, (21), (26), 36, 37, 45, 49, 52, 53, 57, 59, (86). **I.** 1, 4, 20, 21.
- 419 **erythrocarpum** *Schwæg.* 1—4, 6, 9, 10, 11, 13, 14, 16—19, 21—23, 27, 28, 32—40, 44—46, 48—52, 54, 55, 57—63, 69—71, 79, 81, 85, 86, 88—92, 95, 97, 100, 105, 108, 109, 111. **C. I.** 2, 5, 20, 21, 25, 27, 38, 39.
- 420 **rubens** *Mitt.* 13, 14, 32, 34, 36, 40, 45, 48. **I.** 18, 39.
- 421 **atropurpureum** *Web. & Mohr* 1—4, 6, 9—30, 32—34, 36—40, 44—50, 52, 55—65, 68—74, 76, 77, 80—85, 88—91, 96, 97, 100, 111. **C. I.** 1, 4, 5, 8, 9, 20, 21, 34, 38, 39.
β gracilentum *Tayl.* 3, 13, 14, 16, 22, 32, 37, 39, 45, 57, 62.
- 422 **murale** *Wils.* 1—4, 6, 9—11, 13—19, 22—24, 30, 32—34, 36—42, 44, 45, 47—50, 52, 55, 57, 58, 60, 61, 64, 65, 69—72, 75, 99, 101, 102. **C. I.** 2, 3, 8, 21, 29, 33, 35, 38, 39.
- 423 **alpinum** *Huds.* 1—4, 9, 11, 14, 16, (33), 36, 40, 42—50, 52, (55), 59, 60, 63—66, 68—76, 78, 81, 83, 85—92, 96—112. **C. I.** 1, 3, 4, 6, 7, 9, 13, 20, 27, 31, 34, 35, 37—40.
β viride *Husn.* 4, 48, 49, 64, 70, 110.
γ distantifolium *Dixon* 70.
δ meridionale *Schp.* 1, 45, 62, 65.
- 424 **gemmaiparum** *De Not.* 35, 42.
- 425 **Mühlenbeckii** *B. & S.* [3], 69, 97, 105, 108.
- 426 **Mildeanum** *Jur.* 36, (39), 49, 65, 66, 69, 70, 87, 88, 98, 108, **C. I.** 1, 21, 39.
- 427 **Dixonii** *Card.* 98.
- 428 **argenteum** *L.* 1—9, 11—30, 32—34, 36—40, 42, 44—77, 80—92, 95, 97—105, 109, 111. **C. I.** 4, 6, 8—13, 18—21, 27, 34, 37—40.
β majus *B. & S.* 2, 3, 23, 36, 37, 44, 48, 57—59, 62, 65, 69, 86, 88. **I.** 20, 39.
γ lanatum *B. & S.* 2, 10, 11, 13, 14, 17, 21, 32—34, 36, 37, 39, 45, 48—50, 52, 53, 55, 57—60, 65, 69, 85, 89. **I.** 1, 34, 39.

F. RHODOBRYUM.

- 429 **roseum** *Schreb.* 2—4, 6, 9, 10, 12—17, 20, 23—27, 29, 30, 32—34, 36, 37, 39, 40, 43—46, 48—50, 52, 55—60, 62—66, 68—70, 72—77, 81—92, 95, 98, 100, 102. **I.** 1, 4, 5, 15, 34, 38—40.

79. **Mnium** *L.* (*emend.* *B. & S.*)

- 430 **affine** *Bland.* 2—4, 6, 7, 9—17, 19, 21—23, 26, 28, 30, 32, 36—38, 40, 42, 47—50, 54, 55, 57—60, 62—75, 77, 80, 83—85, 87—91, 95, 112. **C. I.** 1, 2, 15, 21, 35, 37—40.
β elatum *B. & S.* 13, 14, 18, 23, 30, 32, 33, 36—38, 40, 44—46, 48, 56—60, 62—63, 69, 71, 88, 91, 96, 108, 109, 112. **I.** 33.
γ rugicum *B. & S.* 6, 21, 27, 32, 55—57, 85, 90, 96, 112.
- 431 **cuspidatum** *Hedw.* 1—6, 8, 12—20, 22, 23, 25—27, 29, 32—42, 44—46, 48—50, 52, 53, 55—60, 62—66, 68—73, 75—77, 80—92, 95, 97, 109, 110, 112. **I.** 2, 9, 12, 13, 15, 38, 40.

- 432 *rostratum* Schrad. 1—4, 6, 8—10, 12—21, 23—30, 32—40, 42—50, 52—66, 68—77, 81—92, 95—101, 103, 108, 109, 111. **C. I.** 4, 5, 20, 21, 33—35, 38—40.
- 433 *undulatum* L. 1—78, 80—93, 95—101, 104, 107—109, 111, 112.
C. I. 1, 2, 4—6, 8—13, 15, 16, 18—21, 28, 29, 32—40.
- 434 *hornum* L. 1—30, 32—34, 36—105, 107—112. **C. I.** 1, 4—9, 11—13, 15, 18—21, 24, 27—29, 31—40.
- 435 *medium* B. & S. 88.
- 436 *serratum* Schrad. 3, 13, 14, 17, 26, 34—37, 39, 40, 42, 44, 48—51, 53—55, 57—73, 75—77, 81—92, 95, 101, 108, 112. **I.** 20, 28, 39.
- 437 *orthorrhynchum* B. & S. 14, 36, 49, 59, 60, 64, 65, 69, 70, 88, 108.
- 438 *lycopodioides* Schwæg. 88.
- 439 *riparium* Mitt. 13, 14, 36, 62, 70, 88. **I.** 26, 37, 39.
- 440 *spinosum* Schwæg. 88—90.
- 441 *stellare* Reich. 3, 4, 6, 10, 12, 15—17, 32, 34—44, 48—52, 55—60, 62—66, 68—70, 72, 73, 75—77, 81, 83—88, 90, 91, 97, 99, 101. **I.** 2, 6, 20, 39.
- 442 *cinclidioides* Hübn. 48, 69, 75, 76, 87, 88, 90—92, 99, 109.
- 443 *punctatum* L. 1—6, 8—27, 29, 30, 32—34, 36—93, 95—105, 107—112.
C. I. 1, 4, 6—9, 11—13, 15, 20, 21, 27—29, 31—36, 38—40.
 β *elatum* Schp. 42, 56, 57, 62, 88, 90, 92, 108.
- 444 *subglobosum* B. & S. 3, 5, 6, 10, 14, 18, 26, 27, 36—42, 56—60, 62—66, 68—70, 72—77, 80—92, 95—97, 103, 105, 109. **I.** 2, 6, 12, 21, 27, 31, 37—39.

80. *Cinclidium* Swartz

- 445 *stygium* Swartz 26, 60, 64—66, 69, 87—91, 98, 108.

XIX. FONTINALACEÆ.

81. *Fontinalis* Dill.

- 446 *antipyretica* L. 1—6, 8—14, 16—19, 21—27, 29, 30, 32—34, 36—78, 80—92, 94—99, 102, 103, 108—110, 112. **C. I.** 1, 2, 4, 6—9, 11, 17—21, 27—30, 33—35, 37—40.
 β *gigantea* Sull. (2), 49, 57, 64, 89. **I.** 22, 39, 40.
 γ *gracilis* Schp. 1, 37, 39, 45, 48, 50, 57, 64, 65, 68, 70, 71, 83, 86, 88—90, 96, 97, 103, 108, 112. **I.** 1, 21, 38, 39.
 δ *cymbifolia* Nicholson 14, 24, 31, 32.
- 447 *dolosa* Cardot 30, 40.
- 448 *squamosa* L. 1—3, 21, 36, 37, 39, 40, 42—50, 57—60, 62—66, 68—73, 75—77, 80, 83, 86, 88—92, 95, 97—99, 104, 108. **I.** 1, 5, 6, 8, 16, 20, 21, 38, 40.
 β *Curnowii* Cardot 1, (57), 58.
- 449 *dalecarlica* B. & S. (3).
- 450 *Dixonii* Cardot 48, 49, 57, 103, 110.
- 451 *seriata* Lindb. 36.

XX. CRYPHÆACEÆ.

82. *Cryphæa* Mohr

- 452 *heteromalla* Mohr 1—4, 6—23, 25—27, 29, 30, 32—34, 36—38, 40, 45, 48, 49, 52, 54—58, 61, 62, 64—66, 68—73, 75, 77, 80—82, 85, 87, (88), 90, 98. C. I. 2, 4, 8, 9, 12, 13, 16, 18—21, 28, 30, 37—40.
 β *aquatilis* C.M. 3.

XXI. NECKERACEÆ.

83. *Neckera* Hedw.

- 453 *pennata* Hedw. 90.
 454 *crispa* Hedw. 1—4, 6, 8—17, 20, 21, 23, 24, 30, 33, 34, 36, 37, 39, 40, 42—57, 59—66, 68—73, 75—77, 80, 81, 83, 85—92, 94, 97—100, 103, 104, 106, 108, 109. I. 1, 2, 4—9, 15, 16, 28—31, 33, 34, 38—40.
 β *falcata* Boul. 13, 14, 17, 37, 39, 49—51, 57, 59, 60, 62, 64, 65, 69, 88.
 455 *pumila* Hedw. 1—20, 22, 23, 27, 28, 32—34, 36, 37, 41, 44, 45, 47—50, 52, 55—58, 62, 64, 65, 69, 70, 72, 73, 75, 77, 85, 87, 88, 90, 98, 99. I. 1, 4, 5, 9, 14, 18, 20.
 β *Philippeana* Milde 2, 3, 9, 13, 14, 35, 44, 45, 48, 49, 60, 64, 69, 73, 87, 88, 97.
 456 *complanata* Hübn. 1—34, 36—78, 80—92, 95, 97, 98, 103, 104, 108, 109. C. I. 1, 2, 4—6, 8—13, 15, 18—21, 27, 32—34, 37—40.
 β *tenella* Schp. 32, 38.

84. *Homalia* Brid.

- 457 *trichomanoides* B. & S. 1—27, 29, 30, 32—77, 79—92, 97—100, 109. C. I. 4—6, 8, 9, 13, 14, 18, 20, 21, 26, 28, 29, 34, 36—40.

XXII. HOOKERiaceÆ.

85. *Daltonia* Hook. & Tayl.

- 458 *splachnoides* Hook. & Tayl. I. 1, 2, 21.

86. *Hookeria* Tayl.

- 459 *late-virens* Hook. & Tayl. 1. I. 1, 2, 4, 6.

87. *Pterygophyllum* Brid.

- 460 *lucens* Brid. 1—6, 8, 9, 13—16, 18, 27, 34, 36, 37, 39, 40, 42—50, 52, 55, 57—60, 62—64, 66, 68—77, 80, 81, 83—93, 95—100, 102—104, 107—112. C. I. 1, 2, 4, 6—9, 11, 13, 15, 20, 21, 27—29, 32—35, 38—40.

XXIII. LEUCODONTACEÆ.

88. *Leucodon* Schwæg.

- 461 *sciuroides* Schwæg. 1—27, 29, 30, 32—34, 36—45, 47—50, 52—66, 68—73, 80—83, 85, 87—92, 94, 97, 103, 108. I. 3, 9, 11, 18, 20—22, 39.
 β *morensis* B. & S. 2, 17, 22, 73, 88, 90.

89. Pterogonium Swartz

462 *gracile* Swartz 1—5, 7, 9, 11—14, 16, [21], 34, 36, 37, 43—50, 52, 60, 64—66, 68—75, 79—83, 85—92, 97—102, 104, 108, 112. **C. I.** 1, 3, 6, 20, 21, 39.

β minus Jones MS. 48, 88.

90. Habrodon Schp.

463 *Notarisii* Schp. 3, 4, 6, 64, 69, 70, 75, 86, 88, 99, 100.

91. Helicodontium Schwæg.

464 *pulvinatum* Lindb. 9, 36, 58, 59, 61—65, 73, 75, 77, 86, 88, 89.

92. Antitrichia Brid.

465 *curtipendula* Brid. 2—4, 6, 9, 10, 12—15, 18—23, 25, 27, 32, 33, 36, 37, 39, 47—49, 52, 55, 57, 60, 61, 62, 64—66, 68—70, 72—75, 77, 78, 80—83, 85—92, 94—97, 98, 99, 103, 104, 108, 109. **I.** 1, 6, 12, 20, 21, 28, 34, 39, 40.

93. Porotrichum Brid.

466 *alopecurum* Mitt. 1—27, 29, 30, 32—34, 36—78, 80—92, 95—104, 108, 109. **C. I.** 1, 2, 4, 6—9, 11—13, 15, 19—21, 26—29, 31, 33—40.

467 *angustifolium* Dixon 57.

XXIV. LESKEACEÆ.**94. Myurella B. & S.**

468 *julacea* B. & S. 64, 69, 88, 90, 98. **I.** 16.

β scabrifolia Lindb. 88.

469 *apiculata* B. & S. 88.

95. Leskea Hedw.

470 *polycarpa* Ehrh. 1—4, 6, 8, 9, 12—25, 30—34, 36—45, 47—50, 52—67, 69, 70, 72—77, 80, 82—86, 88—91. **I.** 1, 8, 20, 21, 25, 28, 29, 35, 37—40.

471 *nervosa* Myrin 88.

96. Anomodon Hook. & Tayl.

472 *longifolius* Hartm. (6), 34, 64, 65, 66, 88, 90.

473 *attenuatus* Hübn. 88, 90.

474 *viticulosus* Hook. & Tayl. 1—6, 8—10, 12—21, 23—27, 29, 30, 32—34, 36—45, 48—52, 54—66, 68—73, 75—77, 80, 81, 83, 85—91, 98, 108. **I.** 1, 2, 4, 7—9, 11, 15, 18—21, 28, 29, 33—36, 39, 40.

97. Leptodon Mohr

475 *Smithii* Mohr 1—6, 8—15, 18, (41), 45, 52, 70, 71. **C.**

- 587 **Patientiæ** *Lindb.* 1—3, 6, 9, 11—14, 16, 20, 23, 24, 30, 34—40, 43, 44, 48—51, 55, 57—60, 62—67, 69, 70, 72—79, 81, 83—91, 97—101, 103, 105. **I.** 1, 3, 4, 8, 12, 19, 20, 33, 34, 37—39.
- 588 **revolutum** *Lindb.* 88.
- 589 **hamulosum** *B. & S.* 48, 49, (65), (69), (72), 87, 88, 90, 96, 98, 104, 106, 108. **I.** 1, 2.
- 590 **callichroum** *Brid.* 47—49, 69, 70, 72, 73, 86—88, 90, 92, 97—100, 103, 106, 108. **I.** 1, 29.
- 591 **Bambergeri** *Schp.* 88.
- 592 **procerrimum** *Mol.* 88.
- *593 **canariense** *Mitt.* **I.** 1, 2.
- *594 **circinale** *Hook.* **I.** 1, 2.
- 595 **molluscum** *Hedw.* 1—4, 6—30, 32—92, 95—104, 106—111. **C. I.** 1—4, 6—10, 13, 15, 16, 18, 20, 21, 27—29, 31, 33—40.
 β **condensatum** *Schp.* 36, 37, 40, 42, 46, 48, 49, 57, 63—66, 69, 83, 86—88, 92, 98, 110, 112. **I.** 1, 6, 33, 38, 39.
 γ **robustum** *Boul.* 69, 70, 88, 98, 110. **I.** 1, 2, 6, 38.
 δ **fastigiatum** *Bosw.* 39, 57, 62, 70.
- 596 **crista-castrensis** *L.* 49, 62, 64, 65, 69, 70, 72, 73, 78, 80, 81, 83, 85—92, 94—99, 103, 108.

D. LIMNOBIUM.

- 597 **palustre** *Huds.* 1—4, 6, 8, 9, 11, 13, 14, 17, 21—23, 25, 26, (27), (28), 30, 33—45, 47—53, 55—77, 80—92, 95—105, 107—109, 111. **I.** 1, 2, 4, 8, 16, 21, 27, 29, 31, 35, 36, 38—40.
 β **hamulosum** *B. & S.* 14, 37, 60, 108.
 γ **subsphæricarpon** *B. & S.* 36—39, 43, 48, 50, 58—60, 64, 66, 69, 75, 83, 87, 88, 104. **I.** 2, 39.
 δ **tenellum** *Schp.* 62—64.
- 598 **molle** *Dicks.* 90, 92, 96, 97.
 β **Schimperianum** *Schp.* 92.
- 599 **dilatatum** *Wils.* 34, 49, 64, 69, 88, 90, 92, 97, 98. **I.** 1, 2.
- 600 **arcticum** *Sommerf.* 88—90, 92.
- 601 **eugyrium** *Schp.* 4, 40, 45, 48—50, 52, 62, 64, 66, 69, 70, 72, 73, 78, 83, 85—90, 98, 99, 108. **I.** 1, 2, 6, 31, 34, 35, 38, 39.
 β **Mackayi** *Schp.* 4, 48, 49, 64, 68—70, 72, 73, 85, 88, 98, 99. **I.** 2, 3.
- 602 **ochraceum** *Turn.* 1—3, 8, 36, 39, 42—49, (50), 57—60, 62—66, 68—78, 80, 83—92, 94—100, 105, 106, 108, 109, 112. **I.** 1—3, 6, 9, 16, 20, 21, 31, 34, 38—40.
 β **flaccidum** *Milde* 1, 48, 57, 58, 60, 62, 63, 65, 88, 108.
- 603 **scorpioides** *L.* 1—3, 5, 9, 11—13, 25—27, 29, 36, 37, 40—46, 48—52, 54, 57—66, 68—77, 80, 81, 83, 85—92, 94—102, 105—112. **I.** 1, 4, 8, 15, 16, 20, 21, 23, 27, 30—34, 37—40.

*593, 594. Both of these must be held doubtful in absence of good fruiting specimens. Lindberg's specimens in Herb. Mus. Brit. seem clearly *H. cupressiforme*.

E. CALLIERGON.

- 604 **stramineum** *Dicks.* 1—4, 9, 11—19, 21, 25, 27, 30, 34, 36—40, 42, 44, 45, 48—50, 54, 57—66, 68—77, 80, 81, 83, 85—88, 90—92, 94—98, 106—109, 111, 112. **I.** 1, 5, 20, 21, 31, 33, 34, 37—40.
- 605 **trifarium** *Web. & Mohr* 86—90, 92, 97, 98, 104, 108.
- 606 **turgescens** *Schp.* 88.
- 607 **cordifolium** *Hedw.* 1, 3, 4, 9—23, 25, 26, (27), 28, 30, 32, 35—40, 43—45, 48, 49, 51, 52, 54—66, 69—77, 80, 81, 83, 85, 86, 88, 90—92, 95, 97—101, 109, 111, 112. **I.** 1, 2, 4, 8, 16, 20, 21, 27, 31, 34, 37—39.
- 608 **giganteum** *Schp.* 11, 13, 14, 23, 26, 27, 32, 36—40, 42—45, 48, 58—62, 64—66, 69, 70, 73—77, 80, 82, 83, 85—92, 99, 108, 109, 111. **I.** 21, 27, 35, 38, 39.
- 609 **sarmentosum** *Wahl.* (1), (2), 42, 44—46, 48, 49, 52, 59, 60, 64—66, 69—73, 75, 76, 86—90, 92, 94, 96—100, 103, 105—112. **I.** 1, 2, 16, 20, 34, 38, 39.
- 610 **cuspidatum** *L.* 1—66, 68—92, 95—104, 106—112. **C. I.** 1—13, 15, 16, 18—21, 23, 27—29, 31—40.
β pungens Schp. 50, 57, 59, 62, 64, 66.
γ caespitosum Whitehead MS. 53, 57.
- 611 **Schreberi** *Willd.* 1—30, 32—66, 68—92, 95—104, 106—112. **I.** 1, 4, 6—9, 11, 18, 20, 21, 27, 28, 31, 33—40.

115. **Hylocomium** *B. & S.*

- 612 **splendens** *B. & S.* 1—30, 32—66, 68—93, 95—104, 107—112. **C. I.** 1, 2, 5—9, 12, 13, 15, 17, 18, 21, 24, 27—29, 31, 33—35, 37—40.
β gracilius Boul. 48, 49, 52, 59, 60.
- 613 **umbratum** *B. & S.* 48, 69, 70, 72, 86—88, 90, 92, 97—99, 103, 108. **I.** 2, 27.
- 614 **pyrenaicum** *Lindb.* 88, 92, 97, 98, (105).
- 615 **brevirostre** *B. & S.* 1—3, 6, 8, 9, 12, 14, 16, 20, 23, 24, 32—34, 36—40, 42, (43), 44, 47—50, 55, 57—60, 62—65, 69, 70, 72, 73, 75—77, (83), 86—90, 97—99, 103, 104, 108. **C. I.** 1—5, 8, 12, 14—16, 18, 20, 21, 27, 28, 33, 34, 38—40.
- 616 **loreum** *B. & S.* 1—12, 15—17, 19—21, 23, 32—40, 42—50, 52—60, 62—66, 68—83, 85—92, 95—112. **C. I.** 1—3, 5—9, 12, 13, 16, 20, 21, 27—29, 31—35, 37—40.
- 617 **squarrosus** *B. & S.* 1—34, 36—66, 68—93, 95—104, 107—112. **C. I.** 1, 2, 4, 6—9, 12, 13, 15, 18, 20, 21, 24, 27—29, 31, 33—40.
β calvescens Hobkirk 36—39, 48, 57, 58, 64, 69, 71, 88, 104.
- 618 **triquetrum** *B. & S.* 1—30, 32—34, 36—66, 68—93, 95—103, 106—109, 111, 112. **C. I.** 1, 4, 6—13, 15—21, 24, 27—29, 32—40.
- 619 **rugosum** *De Not.* 26, 28, 36, 39, 57, 59, 60, 64—66, 69, 85—90, 92, 98. **I.** 40.

SUPPLEMENT.

Sphagna after Warnstorff (Kryptogamenflora der Mark Brandenburg, 1903).

(Colour varieties are omitted. When species or varieties are synonymous with those given in the Sphagnum List at the beginning of this Catalogue, the records will be found there).

Sphagnum Dill.

I. CYMBIFOLIA Lindb. (1861).

- 1 **imbricatum** (*Hornsch.*) *Russ.* (40), 65, 66, 69, 109.
 α *cristatum* *W.* 48, 65, 66, 69, 73, 88, 106, 109, 110. I. 17, 18, 39.
 β *affine* f. *squarrosula* *W.* (*S. turfaceum* *W.*) 9, 14, 16, 17, 35, 46, 48, 57—60, 62, 65.
— f. *degenerans* *W.* (*S. degenerans* *W.*) 58.
- 2 **cymbifolium** (*Ehrh.*) *W.* (= *S. cymbifolium*, p. 18).
- 3 **papillosum** *Lindb.* 3, 13, 14, 16, 35, 37, 45, 50, 51, 53, 54, 57—66, 69, 70.
I. 7, 13, 16, 18, 27, 33, 37—39.
 α *normale* *W.* 1, 4, 9, 11, 15—17, 24, 27, 35, 38, 40, 42, 44—46, 48, 49, 57—60, 62—66, 69, 72, 76, 77, 86, 88, 96, 100, 101, 105, 108, 109.
I. 38.
 β *sublæve* *Limpr.* 16—18, 24, 35, 39, 40, 42, 45, 48, 49, 56—58, 60—64, 66, 69, 86, 100, 102, 109, 110. I. 1, 18, 37.
- 4 **subbicolor** *Hampe* (*S. centrale* *Jens.*) 60, 62, 88, 109. I. 1, 27.
- 5 **medium** *Limpr.* (= *S. medium*, p. 18).

II. RIGIDA Lindb. (1861).

- 6 **compactum** *De Cand.*
 α *imbricatum* *W.* 18, 19, 35, 48, 49, 54, 57, 58, 60—62, 65, 66, 72, 88, 90, 91, 96, 97, 109, 110. I. 1, 16, 27, 31, 36, 38, 39.
 β *subsquarrosum* *W.* 17, 19, 45, 48, 57, 60, 61, 66, 69, 88, 96, 109.
I. 27, 31, 35, 37.
 γ *squarrosum* *Russ.* 17, 48, 57, 58, 61, 62, 88. I. 27, 31, 33, 35.

III. SQUARROSA Schlieph. (1865).

- 7 **squarrosum** *Pers.* 3, 10, 12—14, 16, 18, 22, 37, 40, 45, 47, 50, 52, 57—60, 62, 64, 65, 109. I. 2, 4, 13, 16, 20—22, 34, 37—39.
 α *spectabile* *Russ.* 5, 15, 37, 40, 44—46, 48, 49, 57—60, 62, 64—66, 72, 106. I. 7, 8, 33, 34, 36, 37, 39.
 β *subsquarrosum* (*Russ.*) *W.* 17—19, 27, 40, 45, 46, 48, 49, 58, 60, 64, 55, 109. I. 37—39.
 γ *imbricatum* *Schp.* 12, 14, 18, 35, 58, 59, 62. I. 8, 38.

- 8 **teres** (*Schp.*) *Ångstr.* 40, 46, 49, 58—60, 62, 65, 66, 69, 109. I. 20, 31, 38.
α imbricatum *W.* 40, 48, 57, 58, 62, 65, 66, 69, 91, 109.
β subteres *Lindb.* (var. *subsquarrosum* *W.*) (= *S. teres* var. *subteres*,
 p. 19).
γ squarrosulum (*Lesq.*) *W.* 13, 14, 47, 48, 58—60, 66, 69.

IV. CUSPIDATA Schlieph. (1865).

- 9 **Lindbergii** *Schp.* (= *S. Lindbergii*, p. 20).
 10 **riparium** *Ångstr.* (= *S. riparium*, p. 20).
 11 **cuspidatum** (*Ehrh.*) *W.* 3, 4, (8), 11, 13, 14, 16, 19, 24, 37, 42, 43, 45, 51,
 54, 58—66, 69, 109, 110. I. 1, 18, 27, 33, 34, 37, 38.
α falcatum *Russ.* 15, 16, 44, 45, 48, 49, 58—62, 65, 66, 69, 72, 88, 105,
 109, 110. I. 7, 8, 18, 27, 35—37, 39.
β submersum *Schp.* 3, 35, 40, 42, 44, 45, 48, 49, 57, 58, 60—62, 65, 66,
 69, 72, 88, 109. I. 8, 18, 27, 33, 35, 37—39.
γ plumosum *Bry. germ.* 16, 35, 40, 42, 43, 48, 49, 58—60, 62, 66, 88, 92,
 109, 110. I. 20, 33, 37—39.
 12 **trinitense** *C. Müll.* 40, 48, 58, 60, 63, 107.
 13 **fallax** *Klinggr.* 56.
 14 **pulchrum** (*Lindb.*) *W.* (= *S. intermedium* var. *pulchrum*, p. 20).
 15 **obtusum** *W.* 59, 60, 69.
α tenellum *W.* 59.
 16 **Torreyanum** *Sull.* (= *S. cuspidatum* var. *Torreyanum*, p. 20).
 17 **recurvum** (*P.B.*) *W.* 9, 13—16, 37, 43—45, 47—49, 54, 57, 59, 60, 62—66,
 69, 102. I. 6, 7, 13, 16, 27, 35, 39.
α mucronatum (*Russ.*) *W.* 3, 14, 15, 17, 18, 35, 40, 42, 45, 48, 50, 56—60,
 62, 64—66, 72, 100, 102, 109. I. 6, 7, 27, 35, 37—39.
β amblyphyllum (*Russ.*) *W.* 17, 40, 42, 45, 48, 50, 57—60, 62, 64—66,
 72, 108, 109. I. 6, 7, 39.
 18 **parvifolium** (*Sendt.*) *W.* (= *S. intermedium* var. *parvifolium*, p. 20).
 19 **balticum** *Russ.* (= *S. cuspidatum* var. *brevifolium* *Lindb.*, p. 20).
 20 **molluscum** *Bruch* (= *S. tenellum* *Ehrh.*, p. 18).

V. ACUTIFOLIA Schp. (1876).

- 21 **fimbriatum** *Wils.* 1, 3, 8, 13, 14, 16, 23, 34, 37, 40, 43—46, 48, 57—66,
 69, 109, 110, 111. I. 20, 34, 39.
α tenue *Grav.* 50, 57, 58, 60, 63, 64, 102. I. 38.
β robustum *Braithw.* 43, 60—62.
 22 **Girgensohnii** *Russ.* 48, 50, 57, 62, 65, 66, 69, 72, 109. I. 20, 34, 39.
α coryphæum *Russ.* 65.
β cristatum *Russ.* 65, 66.
γ spectabile *Russ.* 65.
δ commune *Russ.* 65, 66, 88.
ε hygrophilum *Russ.* 65, 66.
ζ xerophilum *Russ.* 62, 65, 66, 108.
η stachyodes *Russ.* 65, 66, 88.

- 23 **Russowii** *W.* (= *S. acutifolium* var. *robustum*, p. 19).
 24 **Warnstorffii** *Russ.* (= *S. acutifolium* var. *gracile*, p. 19).
 25 **rubellum** *Wils.* (= *S. acutifolium* var. *rubellum*, p. 19).
 26 **fuscum** (*Schp.*) *Klinggr.* (= *S. acutifolium* var. *fuscum*, p. 19).
 27 **quinquefarium** (*Lindb.*) *W.* (= *S. acutifolium* var. *quinquefarium*, p. 19).
 28 **subnitens** *Russ. et W.* (= *S. acutifolium* var. *subnitens*, p. 19).
 29 **acutifolium** (*Ehrh.* p.p.) *Russ. et W.* 13—16, 19, 37, 45, 47—54, 57,
 60—66, 69, 72, 88, 102, 108—110. **I.** 16, 18, 27, 33, 35, 37, 38.
 30 **molle** *Sulliv.* (= *S. molle* and var. *tenerum*, p. 19).

VI. SUBSECUNDA Schlieph. (1865).

- 31 **contortum** *Schultz* (= *S. laricinum*, p. 19).
 32 **platyphyllum** (*Sulliv.*) *W.* (= *S. laricinum* var. *platyphyllum*, p. 19).
 33 **subsecundum** (*Nees*) *Limpr.* (*S. subsecundum* *Nees* p.p.) 11, 12, 14, 17,
 37, 40, 42, 48, 57, 59, 60—62, 66, 69. **I.** 37, 38.
 34 **inundatum** (*Russ.*) *W.* 1, 3, 15—19, 34, 35, 37, 40, 42, 45, 46, 48, 50, 53,
 54, 56, 57, 60—62, 65, 66, 88, 107, 109. **I.** 6, 8, 16, 27, 34, 38.
 35 **auriculatum** *Schp.* (*S. Gravetii* *W.* p.p.) 9, 16, 18, 22, 35, 37, 40, 44,
 48, 57, 60, 62, 64, 66, 69, (70), 108—110. **I.** 38.
 36 **crassicladum** *W.* 4, 16—18, 35, 37, 38, 40, 42, 45, 48, 57, 58, 60—63, 88,
 108, 109. **I.** 6, 35, 38.
 37 **rufescens** (*Bry. germ.*) *Limpr.* 1, 3, 4, 6, 9, 11—14, 16—18, 24, 35, 37, 40,
 42—46, 48, 51, 54, 56—62, 64—66, 69, 100, 102, 108, 109. **I.** 1,
 6—8, 12, 16, 27, 33, 36—39.
 α **aquatile** *W.* (*S. aquatile* *W.*) 48, 60, 66. **I.** 38.
 38 **obesum** (*Wils.*) *W.* 3, 18, 40, 41, 48, 49, 58—60, 69. **I.** 27, 37, 38.



