

The British
Bryological Society



REPORT FOR 1930.

VOL. II PART 4.



Berwick-upon-Tweed :

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1931.

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for 1930.

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Lahore, India.
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- Mr. A. Thompson, 15, Bannercross Drive, Sheffield.
- Mr. Harry Tully, Newton Hall, Stocksfield-on-Tyne.

**MOSESSES AND HEPATICS SENT FOR
DISTRIBUTION, 1930—1931.**

	<i>Sphagna</i>	<i>True Mosses</i>	<i>Hep-atics</i>	<i>Total</i>
Mr. J. H. Albrecht	28	....	28
Mr. G. H. Allison	17	81	10
Herr H. Andres (Germany)	10	35	5
Miss E. Armitage	47	197	124
Mr. E. B. Bartram (U.S.A.)	98	....
Mr. W. Bellerby	7	113	7
Rev. C. H. Binstead	698	....
Miss M. Buchanan	46
Mr. W. H. Burrell	55	16
Mons. J. Charrier (France)	105	37
Miss C. A. Cooper	12	....
Mr. H. N. Dixon	244	....
Mr. J. B. Duncan	243	70
Rev. F. W. Gray (U.S.A.)	12	81	....
Mrs. E. A. Hodgson (New Zealand)	174	....
Mr. G. F. Horsley	46	16	....
Mr. H. A. Hyde (Nat. Museum of Wales)	69	....	....
Mr. D. A. Jones	120	65
Mr. H. H. Knight	52	67
Mr. J. R. Lee	70	35
Mr. J. Lid (Norway)	16	94	....
Rev. D. Lillie	174	161
Miss E. M. Lobley	74	70	53
Herr L. Loeske (Germany)	186	....
Mr. C. V. B. Marquand	9	112	133
Rev. W. R. Megaw	30	....
Mr. W. C. Millar	83	....
Mr. F. E. Milsom	45	....
Mr. W. E. Nicholson	100	112
Mr. J. L. N. O'Loughlin	130	....
Rev. P. G. M. Rhodes	189	36
Mr. P. W. M. Richards	43	....
Mr. F. Rilstone	21	8
Dr. S. P. Rowlands	230	....
Miss A. M. Saunders	17
Herr A. Schumacher (Germany)	80	217	120
Mr. W. R. Sherrin	11	4

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				<i>True</i>	<i>Hep-</i>	<i>Total</i>
				<i>Sphagna</i>	<i>Mosses</i>	<i>atics</i>
Mr. F. A. Sowter	16	16
Mr. H. Stansfield	51	51
Mr. E. H. Stevens	....	....	....	145	....	145
Mr. A. Sutton	....	....	....	12	....	12
Mr. W. G. Travis	....	....	....	42	58	100
Dr. L. B. C. Trotter	....	....	....	76	....	76
Mr. A. Turner	....	....	....	6	....	6
Mr. E. C. Wallace	....	....	16	91	80	187
Dr. W. Watson	....	....	....	58	46	104
Mr. A. Wilson	....	....	....	96	71	167
Mr. W. Young	....	....	....	243	52	295
				414	5003	1412
						6829

REFEREES.

Mosses :—

Sphagnaceae and Harpidia	....	Mr. SHERRIN.
Andreaeaceae to Grimmiaceae	....	Mr. SAVERY.
Tortulaceae to Orthotrichaceae, and European	....	Mr. NICHOLSON.
Schistostegaceae to Leskeaceae	....	Mr. JONES.
Hypnaceae, except Harpidia	....	Mr. DUNCAN.
Non-European, and Referee-in- Chief	....	Mr. DIXON.

Hepatics :—	....	Mr. KNIGHT.
Referee-in-Chief	....	Dr. MACVICAR.

REPORT OF SECRETARY.

The year 1930 has been a prosperous one in the history of the British Bryological Society. The number on roll is the highest on record, having now reached 120, including three Honorary Members. Our balance is well on the right side and the Distributors report very favourably on the contribution of both Mosses and Hepatics.

We have lost two valued members by death. Professor W. Robertson, D.Sc., University College, Aberystwyth, passed away in March, 1930, and Mr. Horace Monckton, F.G.S., Vice-President of the Linnean Society and Treasurer for 25 years, in January of this year. Mr. Monckton attended our London meetings regularly and had arranged to guide a party of members over Chobham Common last January, but, owing to illness, was unable to do so.

The duties of Distributors, Referees and Bibliographer have been admirably carried out this year for which the Society tenders its grateful thanks and appreciation.

Some items of information may again be repeated this year :—(1) Mr. W. R. Sherrin is Librarian and Curator, to whom all gifts of bryological books and specimens will be very acceptable ; (2) Dr. L. B. C. Trotter is proceeding with the compilation of the Bibliography of Bryological Literature and will welcome copies of new papers ; (3) All new County Records should be sent direct, with specimens for verification during the year to Mr. J. B. Duncan (Mosses), Mr. A. Wilson (Hepatics), and Mr. W. R. Sherrin (Sphagna and Harpidia).

D. A. JONES.

3 Oxford Buildings,
Cheltenham,

April, 1931.

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STATEMENT OF*RECEIPTS.*

Balance from last Account	£66	4	3
Subscriptions—1930	£46	12	9
„ Arrears	....	....	2	15	0
„ 1931 (paid before due)	....	....	3	15	0
Special Donation	....	....	16	6	
			53	19	3
Donations—Visitors at Annual Excursion	....	....	10	0	
Publications sold	....	....	14	3½	
Bank Interest	....	....	11	0	
			£121	18	9½

MOSS CENSUS

Sales—1930, per Mr. W. R. Sherrin	....	....	£1	6	6
Balance due 31st December, 1930	....	....	9	18	1
			£11	4	7

HEPATIC CENSUS

Sales—per Mr. W. R. Sherrin	....	....	£3	16	0
Balance due 31st December, 1930	....	....	15	5	2
			£19	1	2

BALANCE SHEET*LIABILITIES.*

Subscriptions, 1931—paid before due	....	....	£3	15	0
Distribution Costs, 1930-31 (estimated)	....	....	5	0	0
Printing Report, 1930 (estimated)	....	....	25	0	0
Deficit on Moss Census Catalogue Account	....	....	9	18	1
„ Hepatic Census Catalogue Account	....	....	15	5	2
Balance (excess of Assets over Liabilities)	....	....	20	9	9
			£79	8	0

Examined and found correct—J. Y. ELDER,

Barclays Bank, Berwick-on-Tweed.

19th January, 1931.

ACCOUNT for 1930.

<i>EXPENSES.</i>					
Printing—Report, 1929	....	....	....	....	£25 11 0
" Circulars, etc.	....	....	....	....	2 9 3
Stationery	....	....	....	....	12 0
Distribution Costs, 1929-30	....	....	....	....	5 3 3
Secretary's Expenses	....	....	....	....	3 8 2
Treasurer's	..	....	....	....	1 1 8
Librarian's	..	....	....	....	1 7 1½
Annual Meeting (1930) Expenses	....	....	....	....	4 3 4
Balance in hand, 31st December, 1930	....	....	....	....	78 3 0
					£121 18 9½

CATALOGUE ACCOUNT.

Balance—31st December, 1929	....	....	....	....	£11 3 4
Expenses—Postage	....	....	....	....	1 3
					£11 4 7

CATALOGUE ACCOUNT.

Printing Catalogue (400 copies)	....	....	....	....	£18 18 8
Expenses—Postage	...	....	....	....	2 6
					£19 1 2

31st DECEMBER, 1930.

<i>ASSETS.</i>					
Cash in hand (Ordinary Account)	....	....	....	....	£78 3 0
Subscriptions in arrear (£2 10s.), estimated to produce	....	....	....	....	1 5 0
780 copies unsold, Moss Census Catalogue	....	....	....	....	.....
357 copies unsold, Hepatic Census Catalogue	....	....	....	....	.....
					£79 8 0

J. B. DUNCAN, *Treasurer.*

N.B.—Subscription, 10/- per annum, Foreign and Colonial Members, 5/-, should be paid not later than 31st March, each year.

REPORT OF DISTRIBUTORS (Mosses).

It is satisfactory to note that the number of true mosses sent in for distribution this year is about 25 per cent. greater than last year, and also greater than in any recent year since 1926. The number of sphagna is also slightly greater than last year. The number of British plants has increased to over 65 per cent., showing that our members in this country have been more active. In this connection, too, it is gratifying to find that so large a number of new vice-comital records have been sent in, amounting to 38 for true mosses and 37 for sphagna. This is largely the work of some of our newer members, whose energy and keenness are to be highly commended. The plants from the continent of Europe are somewhat fewer than last year, though some of them are of exceptional interest, notably the *Orthotrichum Shawii* Wils., from Auvergne, France. The non-European plants, however, are 50 per cent. more numerous than last year, owing chiefly to the fact that we have been fortunate enough to enrol an active member in New Zealand. We have also received some very interesting plants from Arctic North America, sent by Mr. Johannes Lid, and from Mexico, sent by Mr. Bartram, while Miss Armitage has sent a number of plants collected by her in the West Indies and the Azores. Mr. Paul Richards also has sent some interesting samples of his collections in British Guiana, and by the kindness of the Rev. D. Lillie we have a series of plants from Northern India.

The number of contributors is slightly in excess of last year. It is gratifying to see several new names, but perhaps even more pleasing to note that so many of our old and tried members are still active on our behalf. Of the latter, the Rev. C. H. Binstead has contributed more than in any previous year since 1925, the area of his activities as a collector extending from Corsica to the Highlands of Scotland. Our grateful thanks are due to all who have so generously contributed the results of their labours in the field.

The increase in the number of plants sent in has, of course, entailed additional labour on the part of the Referees, and especially on Mr. Dixon, to whom all the non-European mosses were submitted, as well as critical British and European specimens regarding which the other Referees were doubtful. Apart from a few pardonable errors in determination, the

Referees have had little to complain of. They report that the bulk of the material sent in was good, well prepared, and well packeted. There were a few cases, however, in which the material was poor and inadequate in quantity, and others in which there had been a lack of care in the preparation and packeting of large gatherings, so that, although some packets were correctly named, the contents of others were found to consist wholly or mainly of a different plant. In a few cases too the plants had been gathered at the wrong time of the year. Contributors who send in plants growing in their own districts are urged to endeavour to gather them when they are in the best possible condition. Attention is also called to the inconvenience arising from the use of unduly thin paper for packeting. The value of the distribution is mainly to be attributed to the arduous and responsible work so freely given by the Referees, and the Society is under a heavy debt of gratitude to them.

A. SUTTON.

A. M. SAUNDERS.

26th March, 1931.

REPORT OF DISTRIBUTOR (Hepatics).

The number of packets contributed is easily a record, totalling 1,412 sent by 23 members. This includes a much larger number than ever before of foreign species. Our thanks are due to the old members, as well as to the several new ones, for this gratifying result. It is hoped that this is evidence of re-awakened interest in Hepatics, which have not been so popular as Mosses of late years.

There may be mentioned here the very valuable assistance to Distributors of full lists of plants together with catalogue numbers and full localities. Such lists are already sent by many members, and an appeal is made that all members should send them.

Our thanks to Mr. Knight for his onerous work as Referee are once again very grateful. His report is that the quality of material is in the great majority of cases very good, while there have been few corrections to make in naming.

F. E. MILSOM.

Shepley, Huddersfield,

April, 1931.

REPORT OF THE ANNUAL MEETING, 1930.

(Extracted from the *Journal of Botany*, November, 1930.)

BRITISH BRYOLOGICAL SOCIETY.

The Annual Meeting and Excursion were held at Wareham, Dorset, from April 23rd to 30th last; about thirty members and friends were present. Wareham was an excellent centre for bog and heathland studies. Morden Heath with its sand-pits and bog-holes yielded some interesting plants; *Campylopus brevipilus* is abundant on Studland Heath, also many *Sphagna*. Corfe Castle for the Purbeck Hills, and Lulworth Cove showed bryophytes under dry conditions in the short turf, *Bryum atropurpureum* var. *gracilentum* and *Pottia intermedia* growing on ant-hills. A day was spent on Portland Island for the rare hepatic *Southbya nigrella*; a close search among the tumbled rocks in the great quarries was rewarded by a few stems being found of this tiny blackish-green liverwort. On the dry exposed turfy banks by the quarries there was a form of both *Neckera crispa* and *N. complanata* in erect densely tufted clumps. The special Portland moss, *Eurhynchium meridionale*, grew in similar situations, also *E. circinatum*. The uncommon moss *Leptodon Smithii* grew in some quantity on trees near Wareham. A day was spent in the New Forest, Hampshire; two large boggy areas were visited, the flat Holmsley Bog and the steeply-sloping, but very wet, Matley Bog—these produced many *Sphagna*, amongst which, and also in tufts of *Leucobryum glaucum*, species of *Cephalozia* were densely matted. Here *Dicranum spurium* and *Hypnum imponens* were seen.

Lists follow of the more important finds; new county records for v.c. 9 Dorset and v.c. 11 South Hants are starred. The *Sphagna* are not included, but will be dealt with separately:—

TRUE MOSSES. V.c. 9. **Cinclidotus fontinaloides*, **Funaria calcarea*, **Philonotis capillaris*, **Webera calcarea* (Lulworth Cove), **Bryum atropurpureum* var. *gracilentum*, **Brachythecium salebrosum* var. *palustre*, **Eurhynchium myosuroides* var. *cavernarum*, **Hypnum cupressiforme* var. *filiforme*. V.c. 11. *Campylopus atrovirens*, **Mnium rostratum*, **Pterygophyllum lucens*.

HEPATICS. V.c. 9. *Riccia* **bifurca* and **sorocarpa*, *Pellia* **epiphylla* and forma **undulata*, **Fossombronia pusilla*, **Lophozia bicrenata*, *Cephalozia connivens*, *macrostachya*, *Francisci* and *fluitans*, **Odontoschisma denudatum* (also new to v.c. 11), **Calypogeia arguta*, *Microlejeunea ulicina*, **Anthoceros laevis*. V.c. 11. **Aneura latifrons*, **Lepidozia setacea*.

The President, Mr. W. E. Nicholson, F.L.S., took the Chair at the Annual Meeting on April 26th, when the usual election of officers took place. The new (3rd) edition of the "Hepatic Census Catalogue" may be obtained from Mr. W. R. Sherrin, A.L.S., the Librarian. The Meeting in 1931 will take place at Harlech, Merionethshire, in mid-August.

A few of the members visited Cornwall after the Wareham meeting, and Mr. Nicholson found *Lejeunea Macvicari* Pears. near the Lizard; it had only been found in Inverness before, so is new to England.

ELEONORA ARMITAGE.

REPORT ON PLANTS SENT IN BY MEMBERS FOR DISTRIBUTION.

An Asterisk (*) denotes a new Vice-Comital Record.

SPHAGNA.

Sphagnum fimbriatum Wils., near Hexham (67*), Sept., 1929, E.M.L.; Bröhltal, Rheinland, Germany, 1927, A. Schumacher. "The Rheinland plant is near var. *flavescens*," W.R.S.; var. *flavescens* Warnst., near Otterburn (67*), Aug., 1930, E.M.L.

S. Girgensohnii Russ., Eshells Moor, near Hexham (67*), July, 1930, E.M.L.; Spruce, near Cass, W. Virginia, U.S.A., Aug., 1927, F.W.G. "The Virginian plant is near the var. *robustum* Warnst. in having large capitula; but the branch leaves are rather small for the variety," W.R.S.

S. Russowii Warnst., var. *Girgensohnioides* Russ., Craigowl (90), March, 1924, leg. D.R.R., com. H.A.H., ex herb. Gent. Cambr. "This is *S. rubellum* Wils. Note the absence of pores in the stem cortex and the fibrillose and porose stem leaves, characters which preclude *S. Russowii*," W.R.S.; var. *rhodochroum* Russ., Nutscheid, Rheinland, Germany, 1927, A. Schumacher.

S. Warnstorffii Russ., Henhole, Cheviot (68*), Sept., 1930, E.M.L.; Armboth, Thirlmere (70*), Aug., 1930, G.F.H.

S. rubellum Wils., Sinderhope, Allendale (67*), Aug., 1930, leg. W.R.S. and E.M.L., com. E.M.L.; Patschenkofl., near Innsbruck, Austria, C.V.B.M.

S. acutifolium Ehrh., Woodhall Spa (54), June, 1930, G.H.A. "This is *S. plumulosum* Roell., with *S. cymbifolium* Ehrh.," W.R.S.; var. *viride* Warnst., Bröltal, Rheinland, Germany. "Only one packet of this contains *S. acutifolium*. The rest are *S. quinquefarium* Warnst." W.R.S.

S. capillaceum Sw., var. *tenellum*., Spruce, near Cass, W. Virginia, U.S.A., F.W.G. "According to Warnstorff, *S. capillaceum* Swartz is a synonym of *S. acutifolium* Ehrh., and this plant agrees with that, but I do not know anything about the var. *tenellum*, or who is the author of that variety," W.R.S.

S. quinquefarium Warnst., near Crowborough (14), Oct., 1930, E.C.W. ; Eshells Moor, near Hexham (67*), Sept., 1929, E.M.L. ; Henhole, Cheviot (68*), Sept., 1930, E.M.L. ; var. *viride* W., f. *gracilescens* W., Sidlaw Hills (90), May, 1924, leg. D.R.R., com. H.A.H. "I do not go beyond *S. quinquefarium*," W.R.S.

S. plumulosum Roell., Ashdown Forest (14), Sept., 1930, c.fr., E.C.W. ; Eshells Moor, near Hexham (67*), July, 1930, E.M.L. ; The Bizzle, Cheviot (68*), Sept., 1930, E.M.L. ; Easedale (69), Oct., 1926, C.H.B.

S. molle Sull., Sallbachhügel, Rheinland, Germany, Aug., 1928, A. Schumacher. "This is the var. *molluscoides* (C.M.), f. *heterophyllum* W." W.R.S.

S. americanum Warnst. (*S. molle* var. *limbatum* W., See Warnst. "Sphagnologia Universalis, p. 132), Helensburgh (99*), Aug., 1929, W.R.S.

S. compactum D.C., var. *subsquarrosus* W., Morden Heath (9), and Matley Bog, New Forest (11), April, 1930, E.A. "Yes, the common form of the species," W.R.S. ; near Otterburn (67*), Aug., 1930, E.M.L. ; var. *imbricatum* W., Morden Heath (9), April, 1930, E.A. ; var. *isophyllum* Wheld., Trelleck Bog (35), Aug., 1930, E.A. "This is either a monstrosity or possibly a young form of the var. *imbricatum*," W.R.S.

S. squarrosus Pers., Spruce, near Cass, W. Virginia, U.S.A., Sept., 1927, F.W.G. "This is the var. *spectabile* Russ.," W.R.S. ; var. *subsquarrosus* Russ., near Stagshaw Bank (67*), July, 1930, leg. W. Philipson, com. E.M.L.

S. teres Ångstr., Jan Mayen Island, Arctic Ocean, July, 1930, the first record of *Sphagnum* from this isolated island, J.L. "This is the var. *imbricatum* Warnst. It seems to fit the description of Warnstorf's forma *strictum*. In some packets the branches are more erect than in others. There is, growing with the *Sphagnum*, an interesting-looking *Drepanocladus*," W.R.S. ; var. *subteres* Lindb., Brölgebiet, Rheinland, Germany, 1927, A. Schumacher.

S. amblyphyllum Russ., Hildener Heide am Jaberg, Rheinland, Germany, Oct., 1928, A. Schumacher ; var. *mesophyllum* Warnst., f. *molle*, Easedale (69), Oct., 1926, C.H.B.

S. pulchrum Warnst., Scarthnick, Swainby (68*), Sept., 1930, G.F.H. ; Hühnerbruch, Rheinland, Germany, Aug., 1930, A. Schumacher.

S. recurvum P. Beauv., Manton (54*), March, 1930, G.H.A. "Yes, an aberrant form of the var. *majus*," W.R.S. ; near

Cass, W. Virginia, U.S.A., Aug., 1927, F.W.G. "This is *S. amblyphyllum*, var. *parvifolium* Warnst. Note the obtuse stem leaves, 0.8 x 0.7 mm.; also the small size of the branch leaves, 1.2 x 0.3 mm." W.R.S.; var. *robustum* Breidl., Henhole, Cheviot (68*), Sept., 1930, E.M.L.; var. *majus* Ångstr., Westburnhope, near Hexham (67*), Sept., 1929, E.M.L.; The Bizzle, Cheviot (68*), Sept., 1930, E.M.L. "A large form known as f. *pulchellum*," W.R.S.; Grisedale (69), Oct., 1930, G.F.H.; f. *silvaticum* Russ., Craigowl (90), March, 1924, leg. D.R.R., com. H.A.H., ex herb. Gent. Cambr. "In this case I do not go beyond the var. *majus*," W.R.S.

S. fallax v. Klinggr., Manton (54*), March, 1930, G.H.A.; Nettleton (54), May, 1930, G.H.A.; var. *plumosum* W., Sinderhope, Allendale (67*), Aug., 1930, leg. W.R.S. and E.M.L., com. E.M.L.; var. *Roellii* Schlieph., Cringle Moor (62*), Nov., 1928, G.F.H.

S. cuspidatum Ehrh., Matley Bog, New Forest (11), April, 1930, E.A. "This is the var. *plumosum* Schpr.," W.R.S.; var. *falcatum* Russ., Morden Heath (9), April, 1930, E.A.; var. *submersum* Schpr., Morden Heath (9), April, 1930, E.A. "An abnormal growth, not the var. *submersum*," W.R.S.; Malkin Bower, Bilsdale (62), Nov., 1928, G.F.H. "This is *S. obesum*, var. *recurviforme* W.," W.R.S.; var. *plumosum* Schpr., near Otterburn (67*), Aug., 1930, E.M.L.

S. molluscum Bruch., var. *vulgatum* Warnst., Matley Bog, New Forest (11), April, 1930, E.A.

S. obesum (Wils.) Warnst., Nettleton (54*), May, 1930, G.H.A.; near Whitley Chapel (67*), Oct., 1930, E.M.L.

S. subsecundum Nees, Woodhall Spa (54), June, 1930, G.H.A. "This is *S. crassicladum*, var. *diversifolium* W.," W.R.S.; var. *tenellum* Warnst., Wielgebiet, Rheinland, Germany, Oct., 1926, A. Schumacher; var. *intermedium* Warnst., Sinderhope, Allendale (67*), Aug., 1930, leg. W.R.S. and E.M.L., com. E.M.L.

S. inundatum Russ., Henhole, Cheviot (68*), Sept., 1930, E.M.L.; Morden Heath (9), April, 1930, E.A. "The Morden Heath plant is the var. *diversifolium* W.," W.R.S.; var. *lancifolium* Warnst., Armboth, Thirlmere (70*), Aug., 1930, G.F.H.; f. *tenellum* Warnst., Nutscheid, Rheinland, Germany, 1928, A. Schumacher; var. *diversifolium* Warnst., Nettleton (54*), March and May, 1930, G.H.A.; near Slayby (67*), Oct., 1930, E.M.L.

S. auriculatum Schpr., Sinderhope, Allendale (67*), Aug., 1930, leg. W.R.S. and E.M.L., com. E.M.L.; var. *ovatum* Warnst., Holmbury Hill (17), Oct., 1927, E.C.W.; Nutscheid, Rheinland, Germany, 1926, A. Schumacher.

S. aquatile Warnst., var. *intortum* Warnst., Morden Heath (9*), April, 1930, leg. W.R.S. and E.M.L., com. E.M.L.; Matley Bog, New Forest (11*), April, 1930, E.A.; var. *sanguinale* Warnst., Ellerbeck, Goathland (62), May, 1929, W.B.

S. crassycladum Warnst., var. *magnifolium* Warnst., Worth Forest (14), April, 1930, E.C.W.

S. turgidulum Warnst., near Hexham (67*), June, 1930, E.M.L.

S. hakkodense Warnst., Grisedale (69), Oct., 1930, G.F.H. "Mr. Horsley sent this to me as *S. hakkodense* and I agreed; but on a second examination I fail to see the characters which pointed to that species. I now think that it is best placed as an immature form of *S. papillosum*," W.R.S.

S. papillosum Lindb., var. *normale* Warnst., Sinderhope, Allendale (67*), Aug., 1930, leg. W.R.S. and E.M.L., com. E.M.L.; Sidlaw Hills (90), 1924, leg. D.R.R., com. H.A.H., ex herb. Gent. Cambr.; Ebbegebirge, Westfalen, Germany, Aug., 1929, c.fr., A. Schumacher; var. *sublaeve* Limpr., Sinderhope, Allendale (67*), Aug., 1930, leg. W.R.S. and E.M.L., com. E.M.L.

S. cymbifolium Ehrh., Armboth, Thirlmere (70), Aug., 1930, "a hemi-isophyllose form, with stem leaves fibrillose, almost to the base," G.F.H.; var. *versicolor* Warnst., Brölgebiet, Rheinland, Germany, Oct., 1927, A. Schumacher.

S. medium Limpr., Sinderhope, Allendale (67*), Aug., 1930, leg. W.R.S. and E.M.L., com. E.M.L.; Silberkuhle, Rheinland, Germany, Aug., 1928, A. Schumacher.

TRUE MOSSES.

EUROPEAN (British and Continental).

Andreaea petrophila Ehrh., var. *acuminata* B. & S., The Bizzle, Cheviot (68*), Sept., 1930, leg. J.B.D. and E.M.L., com. E.M.L.; var. *gracilis* B. & S., Cairngorm (96), July, 1930, leg. D.A.J., H.H.K. and J.B.D., com. J.B.D. "I am doubtful about this," J.B.D. "I think that this plant agrees best with the var. *alpestris* Thed. The leaves are minute and densely imbricate when dry; also they are somewhat less papillose than usual," G.B.S. "I do not think this is the var. *gracilis*, which has rather long, distant leaves. It may, I think, very well be the var. *alpestris* Thed., which the continental botanists seem to find so distinct; but I cannot find it so," H.N.D.

A. alpina Smith, Cam Creag, Killin (88), July, 1930, J.R.L.; Cruach Ardran (88), July, 1908, W.Y.; forma, Creag Mhor (88), Aug., 1929, J.L.N.O'L. "Mr. Dixon writes:—This is certainly a marked form. I have had similar plants sent me as var. *flavicans* Hook., but have called them forms only. I gathered nearly the same thing on Ben Douran with Mr. Binstead," J.L.N.O'L.

A. Rothii Web. & Mohr., Rothbury (68), Nov., 1930, E.H.S.; var. *falcata* Lindb., Buttermere (70), June, 1929, W.G.T.

A. nivalis Hook., Cairngorm (96), July, 1930, leg. H.H.K., J.B.D. and D.A.J., com. J.B.D. and D.A.J.; Ben Nevis (97), 3,100 ft., June, 1924, C.V.B.M. "This large sterile form is from an exceptionally low altitude for this species, from a spot where the avalanches fall in early spring from the northern precipices of the mountain," C.V.B.M.

Tetraphis Browniana Grev., Golden Clough (63), April, 1930, W.H.B.; Dipton Dene, Hexham (67), Oct., 1930, E.M.L.

Catherinea undulata Web. & Mohr., forma *polycarpa* Moenkem., Aggertal, Rheinland, Germany, Oct., 1929, W.W.

C. crispa James, Greenfield (63), April 1929, W.W.

Oligotrichum hercynicum Lam., Penrhyndeudraeth (48), Aug., 1930, c.fr., S.P.R.; Little Langdale (69), June, 1916, c.fr., A.W.

Polytrichum nanum Neck. (*Pogonatum nanum* P. Beauv.), Waldbröl, Rheinland, Germany, March, 1930, A. Schumacher.,

P. urnigerum L., Wapley Hill, Byton (36), Aug., 1930, C.H.B.

P. strictum Banks, Ebbegebirge, Westfalen, Germany Aug., 1929, A. Schumacher.

P. gracile Dicks., Wehner Heide, Rheinland, Germany, June, 1929, c.fr., A. Schumacher.

P. formosum Hedw., Waldbröl, Rheinland, Germany, July, 1929, A. Schumacher.

Archidium alternifolium Schpr., Greenlaw (81), Oct., 1928, J.B.D.

Pleuridium subulatum Rabenh., Ashdown Forest (14), May, 1930, E.C.W.; Denklingen, Rheinland, Germany, March, 1927, A. Schumacher.

Ditrichum tenuifolium Lindb., Ferleiten, Hohe Tauern, Austria, June, 1930, c.fr., P.W.M.R.

D. homomallum Hampe, Rothbury (68), Oct., 1929, E.H.S.; Criánlarich (88), July, 1924, J.R.L.; Brölgebiet, Rheinland, Germany, Oct., 1927, A. Schumacher.

D. zonatum Limpr., Ben Lawers (88), July, 1930, C.H.B., det. D.A.J. and H.N.D.

D. subulatum Hampe, Truro (1), May, 1930, W.E.N.; Hyères, Var, France, March, 1930, C.H.B.

D. flexicaule Hampe, Cheddar (6), May, 1930, E.C.W.; Cam Creag, Killin (88), July, 1929, J.R.L.; Péault, Vendée, France, April, 1926, J.C.; var. *densum* B. & S., Ben Lawers (88), July, 1929, J.B.D.; Lusia Pass, Dolomites, Austria, July, 1930, c.fr., L.B.C.T. "This is *Swartzia montana* Lindb. Note the distichous leaves with densely papillose cells. *D. flexicaute* very rarely fruits," G.B.S.

Swartzia montana Lindb., Mürren, Switzerland, Aug., 1930, F.A.S.

Seligeria pusilla B. & S., below Cleeve Hill, near Cheltenham (33), May, 1929, leg. D.A.J., H.H.K. and C.V.B.M., com. C.V.B.M.; Bröltal, Rheinland, Germany, April, 1930, A. Schumacher. "In the German specimens the seta is arcuate and the leaves are entire. The plant should be called *S. recurvata* B. & S.," G.B.S.

S. paucifolia Carruth., Ditcham (11), Aug., 1922, W.W.; Pyecombe (13), May, 1930, A.S.; Streatley (22), Oct., 1925, P.G.M.R.

S. calcarea B. & S., Cherry Hinton (29), May, 1929, P.G.M.R.

S. recurvata B. & S., Rothbury (67), Nov., 1930, E.H.S.

Brachyodus trichodes Fuernr., Cheviot (68), Sept., 1930, leg. J.B.D. and E.M.L., com. E.M.L.

Saelania caesia Lindb., Ferleiten, Hohe Tauern, Austria, June, 1930, P.W.M.R.

Ceratodon corsicus Schpr., La Croix, Var, France, April, 1930, c.fr., C.H.B.

C. chloropus Brid., Hyères, Var, France, March, 1930, c.fr., C.H.B.

Rhabdoweisia denticulata B. & S., Glen Fee (90), June, 1930, W.Y. "In these specimens the leaves are narrow and acutely pointed. Also the rows of cells on each side of the nerve are not numerous. The plant must be called *Rh. fugax* B. & S.," G.B.S.

R. crenulata Jameson, Easedale Fells, Grasmere (69), Wythburn Head (70), June, 1930, and Eagle Crag, Borrowdale (70), July, 1930, C.H.B.

Cynodontium Bruntoni B. & S., Touch Hills (86), Aug., 1930, J.R.L.

C. strumiferum De Not., Rolle Pass, Dolomites, Austria, July, 1930, L.B.C.T. "This is *C. virens* Schpr. The dark brown capsule, not sulcate when dry, the tall stems and the smooth leaves are conclusive," G.B.S.

C. Jenneri Stirt., Henhole, Cheviot (68), Sept., 1930, leg. J.B.D. and E.M.L., com. E.M.L.

C. virens Schpr., Ben Chalum (88), July, 1910, A.W. ; Ben Lawers (88), July, 1929, J.L.N.O'L.

Dichodontium pellucidum Schpr., Nant-y-Ffrith (50), Jan., 1915, c.fr., leg. P.G.M.R. and D.A.J., com. D.A.J. ; Rothbury (67), Oct., 1930, c.fr., E.H.S. ; var. *compactum* Schpr., Lawers Burn (88), July, 1930, C.H.B. ; Craig Chailleach (88), July, 1927, W.Y.

D. flavescens Lindb., Tyndrum (88), Aug., 1929, W.Y.

Dicranella heteromalla Schpr., Billing Lings (32), March, 1897, H.N.D. ; Ben More (88), July, 1897, leg. C.H.B. and H.N.D., com. H.N.D. ; forma, Great Bedwyn (48), May, 1912, leg. C.P.H., com. H.N.D. ; forma, Cape Wrath (108), July, 1899, H.N.D. ; forma *alpina*, Penmaenmawr (49), Aug., 1892, H.N.D. ; var. *elata* Ferg., Canisp (108), July, 1899, H.N.D. ; forma near var. *sericea* Schpr., with seta often short

and sometimes curved, Kingsthorpe (32), Oct., 1897, H.N.D. ; var. *sericea* Schpr., Eridge Rocks (14), Oct., 1928, leg. W.E.N., H.H.K. and D.A.J., com. D.A.J. ; New Duston (32), June, 1891, H.N.D.

D. cerviculata Schpr., Totland Bay (10), July, 1889, H.N.D. ; Flitwick Marsh (30), Aug., 1887, leg. J. Saunders and H.N.D., com. H.N.D. ; Corby (32), April, 1899, H.N.D. ; Langsett Reservoir (63), Nov., 1929, W.H.B. "This is *D. rufescens* Schpr. Note the red seta and large leaf cells," G.B.S. ; Thorne Waste (63), Sept., 1929, S.P.R. ; Schwalental, Rheinland, Germany, July, 1928, A. Schumacher.

D. secunda Lindb., Ben Laoigh (88), July, 1893, and Craig Chailleach (88), July, 1897, H.N.D.

D. curvata Schpr., Kirk Fell, Ennerdale (70), July, 1891, and Aug., 1895, H.N.D.

D. rufescens Schpr., Tal-y-Llyn (48), July, 1901, and Aber Falls (49), Aug., 1892, H.N.D. ; Westburnhope (67*), March, 1929, E.M.L. ; (*Anisothecium rufescens* Lindb.), Waldbröl, Rheinland, Germany, March, 1929, A. Schumacher.

D. varia Schpr., Blakesley (32), Jan., 1896, H.N.D. ; Brinkburn (67), Oct., 1930, E.H.S. ; Pease Dean (81), March, 1930, leg. J.B.D. and W.C.M., com. W.C.M. ; varr. formae, Heyford (32), Jan., 1898, H.N.D. "These appear to show a regular series of graduations from the typical short-stemmed plant to the var. *tenuifolia* B. & S.," H.N.D. ; var. *tenuifolia* B. & S., Weedon (32), June, 1891, H.N.D.

D. Schreberi Schpr., Bodenham (36), Oct., 1930, C.H.B. ; var. *elata* Schpr., Dipton Dene, Hexham (67*), Feb., 1930, E.M.L.

D. squarrosa Schpr., Cynicht (48), July, 1888, H.N.D. ; Ilwyngwrl (48), Aug., 1930, c.fr., S.P.R. ; Tal-y-Fan (49), Aug., 1926, c.fr., A.W. ; Ceunant Bach, Gwynant (49), May, 1916, c.fr., leg. J. C. Wilson and D.A.J., com. D.A.J. ; Grange, Borrowdale, and Sea Fell Pike (70), Aug., 1895, H.N.D.

Blindia acuta B. & S., Ben Lawers (88), July, 1930, C.H.B.

Dicranoweisia cirrata Lindb., Velluire, Vendée, France, May, 1928, J.C.

Campylopus Schimperi Milde, Meall-na-Saone (88), Aug., 1903, D.A.J. ; Creag Mhor (88), July, 1929, J.B.D., and Aug., 1929, J.L.N.O'L.

C. flexuosus Brid., a fine form, Dob Ghyll, Thirlmere (70), July, 1930, leg. A.J.G. and C.H.B., com. C.H.B. ; Waldbröl,

Rheinland, Germany, Oct., 1927, c.fr., A. Schumacher; var. *paradoxus* Husn., Oxshott (17), Sept., 1930, J.H.A.; var. *zonatus* Limpr., Tyn-y-Groes (48), Aug., 1930, S.P.R.

C. pyriformis Brid. (*C. turfaceous* B. & S.), var. *Muelleri* Milde, Waldbröl, Rheinland, Germany, March, 1927, c.fr., A. Schumacher. "This form is dealt with by Mr. Dixon in the Handbook, Ed. 3, p. 96. He thinks very little of it, and even the alleged character seems to be lacking in the present plant, as the calyptra is distinctly fringed in the specimens I have examined," W.E.N.

C. fragilis B. & S., Dipton Dene, Hexham (67*), June, 1930, E.M.L.; Kylloe Hills (68), Oct., 1928, J.B.D.; Stonethwaite, Borrowdale (70), S.P.R. "The Borrowdale plant is not *C. fragilis*, but *C. subulatus* Schpr. The slender stems, the very wide nerve, and the narrow basal cells of the leaves are conclusive," G.B.S.

C. Shawii Wils., Adrigole (I.3), Aug., 1905, leg. S. J. Owen, J.B.D. and D.A.J., com. D.A.J.

C. atrovirens De Not., Tyn-y-Groes (48), Aug., 1930, S.P.R. "This plant is *C. setifolius* Wils. There is no trace of a white hair point to the leaves, and the areolation is less elongated than in *C. atrovirens*," G.B.S.; Ben Arthur (98), April, 1923, J.R.L.; var. *muticus* Milde, Grasmere (69), July, 1930, C.H.B. "A short hair point is present on most of the leaves, but I think the plant is rightly named." G.B.S.

C. introflexus Brid., Portlet Bay and Boulay Bay, Jersey (C.I.), May, 1930, C.H.B.

C. brevipilus B. & S., Studland Heath (9), April, 1930, J.B.D.; Worplesdon (17), Sept., 1930, E.C.W.; Thurstaston Comm. (58), Aug., 1926, W.G.T.

Dicranodontium longirostre B. & S., Tyn-y-Groes (48), Aug., 1930, S.P.R.; Stonethwaite, Borrowdale (70), July, 1930, C.H.B.; Diablerets, Switz., Aug., 1910, c.fr., leg. E. Cleminshaw and D.A.J., com. D.A.J.; var. *alpinum* Milde, Ingleborough (64), Jan., 1915, leg. C. A. Cheetham, com. W.H.B.

Dicranum fulvellum Smith, Cruach Ardran (88), Aug., 1929, W.Y. "This is *Blindia acuta* B. & S. The erecto-patent leaves and orange-coloured basal cells are well marked," G.B.S.; Ben Douran (98), July, 1898, leg. C.H.B. and H.N.D., com. H.N.D.

D. falcatum Hedw., Ben More (88), July, 1905, A.W.; Cam Creag (88), July, 1929, "forming carpets with *Anthelia Juratzkana*," C.V.B.M.; Ben Lawers (88), July, 1930, C.H.B.;

Glas Maol (92), July, 1930, H.H.K. ; Ben More (108), July, 1899, leg. W.E.N. and H.N.D., com. H.N.D.

D. schisti Lindb., Snowdon (49), July, 1888, H.N.D. ; Ben Lawers (88), and Ben Douran (97), Aug., 1929, W.Y. ; Glas Maol (92), July, 1930, H.H.K.

D. Starkei Web. and Mohr., Ben Lawers (88), July, 1893, c.fr., H.N.D., and July, 1930, C.H.B. ; Ben More (88), July, 97, c.fr., H.N.D., and Aug., 1929, c.fr., C.V.B.M. ; Cruach Ardran (88), Aug., 1929, W.Y. ; Bachnagairn, Clova (90), June, 1930, J.B.D. ; Ben Narnain (98), July, 1898, " a stunted form," H.N.D.

D. molle Wils., Ben Lawers (88), July, 1929, J.B.D. ; Ben More (88), July, 1897, H.N.D., Aug., 1903, c.fr., D.A.J., and Aug., 1929, J.B.D. ; Aonach Mor (97), July, 1898, " a golden form, and a form approaching *D. Starkei* in habit, etc., but with leaf cells porose below," H.N.D.

D. undulatum Ehrh., Muzzano, near Lugano, Switz., Feb., 1923, P.G.M.R.

D. spurium Hedw., Holmsley Bog, New Forest (11), April, 1930, A.S.

D. Bergeri Bland., Dogden Moss (81), June, 1928, J.B.D.

D. Bonjeani De Not., Brown Willy (2), Aug., 1886, H.N.D. ; Shere (17), Feb., 1928, E.C.W. ; Cynicht (48), July, 1888, H.N.D. ; Stamford Bridge (61), June, 1920, H.S. ; Buttercramb Woods (62), Nov., 1913, H.S. ; Whernside (64), July, 1896, " a robust, falcate-leaved form," H.N.D. ; Blue Loch (75), April, 1922, J.R.L. ; Ben Ledi (87), July, 1897, H.N.D. ; Ben More (88), July, 1897, H.N.D. ; Quiraing Hills, Skye (104), July, 1893, H.N.D. ; St. Vincent sur Graou, Vendée, France, Aug., 1928, J.C. ; var. *juniperifolium* Braithw., Cheviot (68), July, 1905, H.N.D. ; Craig Chailleach (88), July, 1899, H.N.D. ; Dunbeath (109), June, 1904, leg. D.L., com. H.N.D.

D. scoparium Hedw., Camelford (2), Aug., 1886, H.N.D. ; Great Doward (36), Sept., 1930, " proliferating condition," E.A. ; Lochay Bridge, Killin (88), July 1897, H.N.D. ; Tobermory, Mull (103), July, 1898, H.N.D. ; between Costalunga Pass and Moena, Dolomites, Austria, July, 1930, " form with multiple setae," L.B.C.T. ; var. *alpestre* Milde, Ben Lawers (88), July, 1893, H.N.D. (see Handbook, Ed. 3, p. 112). " The books differ as to the authorship of the var. *alpestre*. Some say Milde, some Huebener. If Huebener's var. was the same thing as Milde's, his name should stand, as it has priority; if not, Milde's name is, properly speaking, invalid. However,

as we generally mean Milde's plant, I should be inclined to use his name until someone finds a better solution," H.N.D. ; var. *orthophyllum* Brid., Knockdolian Hill (75*), Nov., 1927, E.A., det. H.N.D. ; Rolle Pass, Dolomites, Austria, July, 1930, L.B.C.T. "I should call the Austrian plant var. *spadiceum* Boul," G.B.S. "I agree that this plant should be referred to the var. *spadiceum* as defined by Dixon. The vars of *D. scoparium* are not very satisfactory," W.E.N. ; var. *spadiceum* Boul., Allendale (67*), June, 1928, c.fr., E.M.L. ; var. *recurvatum* Schpr., Genkeltal, Rheinland, Germany, Oct., 1929, c.fr., A. Schumacher. "This plant agrees fairly well with another continental specimen which I have of this var. The present plant has somewhat the habit of *D. majus*, which is characteristic of the var., and it is perhaps as well characterised as most vars of *D. scoparium*, which may not be saying much." W.E.N.

D. majus Turn., Beddgelert (49), July, 1888, H.N.D. ; Badby Woods (32), March, 1888 and 1897, H.N.D. ; Lawers Burn (88), July, 1930, c.fr., C.H.B.

D. fuscescens Turn., Elan Valley (42*), Sept., 1930, c.fr., C.H.B. ; Rothbury (68), Nov., 1930, E.H.S. ; Stonethwaite,, Borrowdale (70), July, 1930, c.fr., C.H.B. ; Ben More (88), July, 1897, "a form somewhat approaching var. *congestum*," H.N.D. ; Craig Chailleach (88), July, 1897, "two or three forms, one with basal cells porose, but upper cells as in the type, others with aspect of var. *congestum*, but cells of the type in all the leaves I have examined," H.N.D. ; Loch Garten, Inverness (96), July, 1910, leg. J. H. Russell, com. H.N.D. ; Bach-na-Gairn, Clova (90), June, 1930, H.H.K. ; var. *falcifolium* Braithw., Ilkley (64), July, 1896, H.N.D. ; var. *congestum* Husn., Ben More (88), July, 1897, H.N.D. ; Moidart (97), Aug., 1910, leg. W. Ingham, com. P.G.M.R.

D. Scottianum Turn., Carn Galvin, Penzance (1), April, 1886, H.N.D. ; Brown Willy (2), Aug., 1886, H.N.D. ; Lustleigh Cleave (3), July, 1894, "upper cells rather more regularly rounded-quadrate than is typical," H.N.D. ; Coed Crafnant, Llanbedr (48), Aug., 1929, P.G.M.R. ; Rothbury (68), Nov., 1930, E.H.S. "The Rothbury plant is *Campylopus flexuosus* Brid," G.B.S. ; Poison Glen, Donegal (35), July, 1890, H.N.D.

D. strictum Schleich., Abbot's Bromley (39), March, 1927, P.G.M.R. ; Rothbury (68), Nov., 1930, E.H.S. ; near Aviemore (96), July, 1930, leg. H.H.K., D.A.J., and J.B.D., com. D.A.J. and J.B.D. ; St. Pierre du Chemin, Vendée, France, March, 1926, J.C.

D. montanum Hedw., Stoke Wood (24), July, 1929, leg. D.G.C., P.W.M.R. and J.L.N.O'L., com. J.L.N.O'L.; Stowe Wood (34), May, 1909, H.N.D.; Forêt de Chantemerle, Deux-Sevres, France, Dec., 1921, J.C.; Wiehlgebiet, Rheinland, Germany, April, 1928, A. Schumacher.

Leucobryum glaucum Schpr., Ceunant Llenyrch (48), March, 1910, c.fr., D.A.J.

Fissidens pusillus Wils., Sprotborough (63), Sept., 1930, S.P.R.

F. Curnowii Mitt., Hodder's Combe, Quantocks (5), April, 1929, W.W.

F. rivularis Spruce, Fairlight Glen (14), Oct., 1930, H.H.K. and D.A.J.

F. osmundoides Hedw., Borrowdale (70), June, 1930, S.P.R.; Craigellachie, Aviemore (96), July, 1930, J.B.D.

F. polyphyllus Wils., Aberglaslyn (49), Aug., 1930, S.P.R.

F. grandifrons Brid., Donaueschingen, Baden, Germany, 1898, leg. W. Bauer, com. L.L.

Grimmia apocarpa Hedw., var. *alpicola* Hook. and Tayl., Blaen Hepste (42), Aug., 1927, leg. D.A.J. and P.G.M.R., com. P.G.M.R. "A short apiculus is present on some of the leaves. I think, however, that the plant is properly placed under the variety," G.B.S.; var. *rivularis* W. & M., Doone Valley (4), July, 1929, E.C.W. "This is not a *Grimmia*, but *Cinclidotus fontinaloides* P. Beauv. The elongated leaves with thickened border are characteristic," G.B.S.; R. Whiteadder, below Elba (81), June, 1930, W.C.M.; Glen Falloch (87), Aug., 1929, W.Y. "The Glen Falloch plant is *G. patens* B. & S.," G.B.S.; var. *gracilis* W. & M., Craig Chailleach (88), Aug., 1922, ex herb. W.R.S., com. J.H.A.

G. plagiopoda Hedw., Naumburg, Thuringia, Germany, no date, leg. Lindner, com. L.L.

G. crinita Brid., Hyères, Var, France, March, 1930, C.H.B.

G. incurva Schwaegr., Clee Hills (40), Aug., 1927, J.B.D.

G. funalis Schpr., Ben Lawers (88), July, 1930, C.H.B.; Rolle Pass, Dolomites, Austria, July, 1930, L.B.C.T.

G. torquata Hornsch., Talvik, Norwegian Lappland, Aug., 1892, leg. W. Bauer, com. L.L.

G. orbicularis Bruch, Great Orme's Head (50), Aug., 1921, c.fr., C.V.B.M., and Feb., 1930, A.W. Note.—The map in Watson's "Topographical Botany" shows Gt. Orme's Head in V.C. 50, not 49, the Conway River being the boundary.

G. trichophylla Grev., Abinger Bottom (17), July, 1930, E.C.W.

G. decipiens Lindb., Slieve Donard (I.38), Aug., 1928, leg. D.A.J. and F.E.M., com. F.E.M.

G. retracta Stirt., Lawers (88), July, 1929, J.B.D.

G. patens B. & S., Ben Lawers (88), July, 1930, c.fr., C.H.B.

G. Doniana Sm., near Rhayader (43), Sept., 1930, C.H.B. ; Braedownie, Clova (90), June, 1930, J.B.D.

G. arenaria Hampe, Talsarnau (48), April, 1926, P.G.M.R. (distributed in Bauer's "*Musci europaei exsiccata.*"); *ibid.*, Aug., 1930, c.fr., S.P.R.

G. commutata Hueben., Hoardweel (81), Dec., 1930, J.B.D. ; Annot, Basses Alpes, France, May, 1925, C.H.B., det. G.B.S. and W.E.N.

G. leucophaea Grev., Cavalaire, Var. France, March, 1930, c.fr., C.H.B.

G. atrata Mielich., Loch Kander (92), July, 1930, c.fr. H.H.K., D.A.J. and J.B.D.

Rhacomitrium ellipticum B. & S., Glen Shannock (90), June, 1930, W.Y.

R. aciculare Brid., Llanbedr (48), Aug., 1928, c.fr., S.P.R. ; forma, Ben Nevis (97), June, 1924, C.V.B.M. ; Engelskirchen, Rheinland, Germany, June, 1929, A. Schumacher.

R. protensum Braun, Nant Cader, Dolgelly (48), Aug., 1930, c.fr., S.P.R. ; Lochgoilhead (98), July, 1925, J.R.L.

R. fasciculare Brid., Cairngorm (92), July, 1913, W.Y. "This is *Grimmia Hartmani* Schpr., The upper cells are short and quadrate, while the basal cells are not so elongated and nodulose as in a *Rhacomitrium*," G.B.S.

R. heterostichum Brid., var. *alopecurum* Hueben., Glen Fee, Clova (90), June, 1930, J.B.D. ; var. *gracilescens* B. & S., Hafod-y-Llyn, Harlech (48), July, 1925, P.G.M.R. ; Ben Macdhui (92), July, 1913, W.Y. "Judging from Mr. Sherrin's recent paper in the "Journal of Botany," Oct., 1930, all these plants must, I think, be considered to be *R. sudeticum* B. & S. In the Clova plant the nerve is not particularly wide, and one margin of the leaf is plane. Also the coloured band of cells at the mouth of the capsule is narrow," G.B.S. Note.— In view of Mr. Sherrin's paper above referred to, members should re-examine all the plants which have been distributed in former years as *R. heterostichum*, var. *gracilescens* and *R. sudeticum*.

R. ramulosum Lindb., Ben Lawers (88), July, 1927, J.B.D., and July, 1929, c.fr., J.L.N.O'L. ; Cairngorm (92), July, 1913, W.Y. "I can find no trace of a white hair-point to the leaves of the Cairngorm plant. I should name it *R. fasciculare* Brid," G.B.S.

R. lanuginosum Brid., Cader Idris (48), April, 1930, c.fr.. S.P.R. ; Glen Rievach (87), May, 1928, leg. R. Mackechnie, com. E.C.W. Note.—The plant from Ben More (108), distributed last year as *R. lanuginosum*, forma *epilosa*, was afterwards found by Herr Loeske to be *R. canescens* Brid, (a forma *longifolia*), and Mr. Dixon agreed, though, as he pointed out, the cells are almost smooth.

R. canescens Brid., Lawers Burn (88), July, 1930, c.fr., C.H.B. ; var. *ericoides* B. & S., Llanelltyd Bridge, Dolgelly (48), Aug., 1930, S.P.R. ; Rothbury (68), Nov., 1930, E.H.S.

Glyphomitrium Daviesii Brid., Fair Head (I.39), Aug., 1928, J.B.D. ; Rathlin Island (I.39), July, 1924, W.R.M.

Hedwigia ciliata Ehrh., Mürren, Switz., Aug., 1930, F.A.S.

H. imberbis Spruce, Buttermere (70), June, 1930, C.H.B.

Acaulon muticum C.M., Dinmore Hill (36), Nov., 1930, C.H.B.

Phascum mitraeforme Warnst., Mont Mercure, St. Michel, Vendée, France, April, 1929, J.C. " (Syn. *P. lotharingicum* Copp., Rev. Bryol., 1909, p 77), cf. Bull. Soc. Bot. France LVIII (1911), p. 151, and LXVIII (1921), p. 244. Smaller in all its parts (including cells, capsule and spores) than *P. cuspidatum*. Seta curved in S form ; spores more highly and acutely muricate," H.N.D. Note.—This was distributed last year, but was inadvertently omitted from the Report.

Pottia recta Mitt., Kingsdown (15), Sept., 1930, E.H.S. ; Withcall (54), Oct., 1930, G.H.A.

P. Heimii Fuernr., Humberstone (54), May, 1930, G.H.A. ; St. Helier, Jersey (C.I), May, 1930, c.fr., C.H.B.

P. truncatula Lindb., Waldbröl, Rheinland, Germany, Nov., 1929, A. Schumacher.

P. intermedia Fuernr., Lulworth Cove (9*), April, 1930, E.A. ; Rothbury (68), May, 1930, E.H.S. ; Nauen, Berlin, Germany, Feb., 1913, L.L. ; var. *littoralis* (Mitt.) Dixon, Eyemouth (81), Feb., 1929, J.B.D.

P. crinita Wils., Portstewart (I.40*), Aug., 1930, W.R.M.

P. lanceolata C.M., Tetney and Walton-le-Marsh (54), May, 1930, G.H.A.

P. latifolia C.M., Glen Beag (89), July, 1930, W.Y. "Two packets are correct, but the rest contain only *Encalypta rhabdocarpa*." W.E.N.

Crossidium squamigerum Jur., Menton, Alpes Marit., France, April, 1930, C.H.B.

Tortula pusilla Mitt., Kingsbarns (85), March, 1930, W.Y.

T. rigida Schrad. (*Aloina rigida* Kindb.), Elberfeld, Rheinland, Germany, Oct., 1928, c.fr., A. Schumacher.

T. ambigua Ångstr., Walton-le-Marsh and Irby-on-Humber (54), Dec., 1919 and 1930, G.H.A.; Rothbury (67), Feb., 1930, and Jan., 1931, E.H.S. "There may be some admixture in all these specimens, but the capsules of all the plants which I have examined belong to *T. aloides* De Not., with spores over .02mm." W.E.N. Note.—*T. aloides* appears to be new to V.C. 67.

T. cernua Lindb., Aberford (64), Oct., 1929, c.fr., W.H.B.

T. atrovirens Lindb., Aberdovey (48), Aug., 1930, c.fr., S.P.R.; Crail (85), Feb., 1930, W.Y.

T. cuneifolia Roth (*Barbula cuneifolia* Brid.), Bourneau, Vendée, France, March, 1928, J.C.; Gassin, Var, France, April, 1930, C.H.B.

T. marginata Spruce, Sprotborough, Doncaster (63), Nov., 1930, c.fr., S.P.R.

T. Solmsii (Schpr.) Limpr., Menton, Alpes Marit., France, April, 1930, C.H.B.

T. muralis Hedw., var. *aestiva* Brid., Kinver (39), Nov., 1927, P.G.M.R.

T. canescens Mont., Hyères, Var, France, March, 1930, C.H.B.

T. angustata Wils., Redmarley D'Abitot (37), March, 1930, H.H.K.; Tetney (54), May, 1930, G.H.A.; Pease Dean (81), March, 1930, J.B.D.

T. mutica Lindb., Pauperhaugh (67), Oct., 1930, E.H.S.

T. laevipila Schwaegr., Selsdon (17), May, 1929, E.C.W.; Durisdeer (72), Sept., 1927, J.R.L.

T. intermedia Berk., Dolgelly (48), Aug., 1930, S.P.R.; Burnsall, Wharfedale (64), Dec., 1929, W.C.M.; Whitfield (67), March, 1929, E.M.L. "I make the Whitfield plant to be a rather slender form of *T. ruralis* Ehrh." W.E.N.

Barbula lurida Lindb., Robin Hood's Bay (62), Sept., 1930, W.B. "I make this plant an unusually green form of the ubiquitous *Ceratodon purpureus* Brid. The areolation and

form of leaf are characteristic of that species," W.E.N.; Naburn (62), April, 1917, c.fr., H.S., and Sand's End (62), on boggy ground, May, 1930, W.B. "I make both these *B. tophacea* Mitt. The true *B. lurida* does not grow on boggy ground."

B. ferruginascens Stirt. (*B. rubella* Lindb., var. *ruberrima* Ferg.), Ben Lawers (88), July, 1930, C.H.B.

B. tophacea Mitt., Naburn (62), April, 1917, H.S.; (*Didymodon tophaceus* Jur.), Brétignolles, Vendée, France, Aug., 1929, J.C.

B. fallax Hedw., Garraby Hill (61), March, 1918, H.S.

B. recurvifolia Schpr., Nash (36), Aug., 1930, C.H.B.; Ben Lawers (88), July, 1929, J.B.D.; var. *recurvifolia* Braithw., Gleniffe, Ben Bulben (I.28), Sept., 1928, C. H. Cooper, J.B.D. and F.E.M.

B. spadicea Mitt., forma, Gleniffe, Ben Bulben (I.28), Sept., 1928, J.B.D.; forma *irrorata* Loeske, Berchtesgaden, Königsee, Germany, July, 1914, L.L.; (*Didymodon spadiceus* Limpr.), Herognia, Bodetal, Germany, April, 1928, leg. L.L., com. W.B.

B. rigidula Mitt., Haydon Bridge (67*), Oct., 1929, E.M.L.; Haw Hill, Rothbury (68), Nov., 1930, E.H.S.; (*Didymodon rigidulus* Hedw.), Gumberbach, Rheinland, Germany, Oct., 1927, c.fr., A. Schumacher. "This last is *Barbula rubella* Lindb.," W.E.N.

B. Nicholsoni Culm., Warkworth (67), May, 1930, J.B.D. and W.C.M.; Hutton (81), April, 1930, J.B.D.

B. cylindrica (Tayl.) Schpr., Puy de Serre and Le Marillet, Vendée, France, March, 1923, J.C.

B. vinealis Brid., Deal Castle (15), Oct., 1930, E.H.S.; Compton (17), May, 1930, E.C.W.

B. rufa Jur., Gaisstein, Salzburg, Austria, Sept., 1927, L.L.

B. sinuosa Braithw., Bishop's Cleeve (33), Jan., 1928, leg. D.A.J. and P.G.M.R., com. P.G.M.R.

B. gracilis Schwaegr., Sprotborough, Doncaster (63*), Oct., 1930, S.P.R.

B. Hornschuchiana Schultz., Sandwich (15*), Aug., 1929, E.H.S.; Rothbury (67*), Aug., 1930, E.H.S.

B. convoluta Hedw., Tal-y-Llyn (48), Aug., 1930, c.fr., S.P.R.; Nettleton (54), May, 1930, c.fr., G.H.A.

B. unguiculata Hedw., Robin Hood's Bay (62), Sept., 1930, W.B.

Leptodontium gemmascens Braithw., White Stanton (6), April, 1928, leg. W.W., H.H.K. and D.A.J., com. D.A.J.

L. flexifolium Hampe., Westburnhope, near Hexham (67), Nov., 1929, E.M.L.; Rothbury (68), Nov., 1930, E.H.S.; Oersdorf, Hanover, Germany, Sept., 1927, leg. Timm, com. L.L.

Weisia crispa Mitt., Shurdington Hill (33), March, 1928, leg. H.H.K. and D.A.J., com. D.A.J.

W. microstoma C.M., near Riva, L. Garda, Italy, July, 1930, c.fr., L.B.C.T. "This plant has a rudimentary peristome and should be referred to *W. crispata*," W.E.N.

W. crispata C.M., Shurdington Hill (33), March, 1928, leg. H.H.K. and D.A.J., com. D.A.J.

W. viridula Hedw., var. *amblyodon* B. & S., Lowton, Blackdowns (5), April, 1918, Brandon Incline (5), April, 1919, and Greenaleigh Farm, Minehead (5), March, 1929, W.W. "The peristome teeth in all these plants are short and truncate. The other characters mentioned in the Handbook (leaves shorter, broader; lid shorter) are somewhat inconstant. We have two plants in Somerset:—(1) the type with well-defined peristome, (2) this plant with short truncate teeth. The lid is usually slightly shorter and the leaves may be shorter and broader," W.W. "I think that these plants may all be referred to the variety; but the plants from Brandon Incline are rather less well marked than the others," W.E.N.; var. *densifolia* B. & S., Wapley Hill (36*), Aug., 1930, C.H.B.

W. mucronata Bruch (*W. rutilans* (Hedw.) Lindb.), Arnstadt, Thuringia, Germany, May, 1911, leg. Krahnert, com. L.L.

W. tenuis C.M., Reigate (17*), June, 1930, leg. A.M.S. and A.S., com. A.S.; Rothbury (67), Dec., 1930, E.H.S.

W. curvirostris C.M., var. *commutata* Dixon, Nant-y-Ffrith (50), Aug., 1907, c.fr., D.A.J.; Arble Beck (60), June, 1915, c.fr., A.W.; var. *insignis* Dixon, Cam Creag, Killin (88), July, 1929, J.B.D.; Creag an Lochain (88), July, 1930, J.R.L.

W. verticillata Brid., near Riva, L. Garda, Italy, July, 1930, c.fr., L.B.C.T.

Trichostomum crispulum Bruch, var. *elatum* Schpr., Looe (2), Dec., 1928, F.R.; var. *brevifolium* B. & S., Bwlchgwyn, Wrexham (50), Jan., 1925, leg. D.A.J. and P.G.M.R., com. P.G.M.R.

T. mutabile Bruch, Alford (54), May, 1930, G.H.A. "These plants are *Barbula unguiculata* Hedw.," W.E.N.; Hyères,

Var, France, Feb. and March, 1926, c.fr., C.H.B., det. W.E.N. ; var. *littorale* Dixon, Southerscales, near Chapel le Dale (64), May, 1926, J.R.L. "Mr. Dixon says of this plant :—I agree with you that it cannot be referred to var. *littorale* ; the habit is against it, the lower margin is not toothed, and the apex is not obtuse, though the very broad and short leaves suggest the var. at first. It is a very striking form however," W.E.N. ; Cove Harbour (81), Dec., 1929, W.C.M. ; var. *cophocarpum* Schpr., World's End, Llangollen (50), April, 1925, leg. D.A.J. and P.G.M.R., com. P.G.M.R.

T. tenuirostre Lindb., Grasmere (69), June, 1930, C.H.B. ; Dob Ghyll, Thirlmere (70), July, 1930, C.H.B.

T. hibernicum Dixon, Eagle's Nest, Killarney (I.1), Aug., 1906, D.A.J.

T. flavovirens Bruch, Hayle (1), July, 1926, C.H.B. ; Pagham (13), May, 1928, E.C.W. ; La Moye, Jersey (C.I.), May, 1930, C.H.B.

T. inclinatum Dixon (*Tortella inclinata* (Hedw. fil.) Limpr., Schönenberg, Bröhltal, Rheinland, Germany, April, 1929, A. Schumacher.

T. nitidum Schpr., Talsarnau (48), June, 1924, D.A.J.

T. tortuosum Dixon, near Riva, L. Garda, Italy, July, 1930, c.fr., L.B.C.T. ; var. *dicranoideum* Dixon, Kaprunerthal, Austria, July, 1929, c.fr., L.B.C.T. "This plant is more or less lacking in the thick tomentum which characterises my British specimens of this variety, which is not recognised as occurring on the continent. I am inclined to think that a continental botanist would refer it to the var. *angustifolia* Jur," W.E.N.

T. fragile Dixon, Ben Lawers (88), July, 1930, C.H.B.

Pleurochaete squarrosa Lindb., Oxenbar, Austwick (64*), Aug., 1930, leg. C. A. Cheetham, com. W.H.B. First Yorkshire record, see "Naturalist," 1930, p. 362.

Cinclidotus fontinaloides P. Beauv., R. Whiteadder, below Elba (81), June, 1930, c.fr., leg. J.B.D. and W.C.M., com. W.C.M. ; St. Laurent-sur-Sèvre, Vendée, France, Sept., 1929, J.C.

C. riparius Arn., Mervent, Vendée, France, Sept., 1924, J.C. ; Alpes Algoviae, Bavaria, Germany, Aug., 1921, leg. L.L., com. W.B.

C. danubicus Schiffn. and Baumg., Ichenheim, Baden, Germany, 1898, leg. W. Bauer, det. and com. L.L.

Encalypta ciliata Hoffm., Craig Chailleach (88), July, 1927, W.Y. ; Glen Beag (89), July, 1930, W.Y.

E. rhabdocarpa Schwaegr., Ben Lawers (88), July, 1930, C.H.B.

Anaectangium compactum Schwaegr., var. *pellucidum* Dixon, Tyndrum (88), Aug., 1929, W.Y. "I should refer this plant to the type rather than to the variety," W.E.N.

Molendoa Hornschuchiana Lindb., Alpes Algoviae, Bavaria, Germany, Aug., 1906, L.L.

Zygodon lapponicus B. & S., Ben Lawers (88), July, 1930, C.H.B. ; Craig Chailleach (88), July, 1927, W.Y.

Z. Stirtoni Schpr., Singrig, Harlech (48), Aug., 1929, P.G.M.R. ; Burnmouth (81), Dec., 1929, W.C.M.

Z. conoideus (Dicks.) H. & T., Houndean Valley, Lewes (14), April, 1928, W.E.N.

Z. gracilis Wils., Clapdale (64), April, 1924, F.E.M. ; Trow Ghyll, Ingleborough (64), Dec., 1929, W.H.B. ; Haseltine Ghyll, Pen-y-Ghent (64), Sept., 1930, leg. C. A. Cheetham com. W.H.B.

Ulota Drummondii Brid., below Marrone, Braemar (92), July, 1930, leg. H.H.K., J.B.D. and D.A.J., com. D.A.J.

U. Bruchii Hornsch., West Dipton Dene, Hexham (67), Nov., 1930, E.M.L. ; Bröltal, Rheinland, Germany, June, 1926, A. Schumacher.

U. crispa Brid., Tyn-y-Groes (48), Aug., 1928, c.fr., S.P.R.

U. Hutchinsiae, Tyn-y-Groes (48), Aug., 1930, c.fr., S.P.R.

Orthotrichum rupestre Schleichr., Hoardsweel (81), June, 1930, J.B.D. ; Ben Douran (97), Aug., 1929, W.Y.

O. cupulatum Hoffm., by R. Whiteadder, near Hutton Bridge (81), May, 1930, leg. J.B.D. and W.C.M., com. W.C.M. "From the slightly more emergent capsule and the more highly developed peristome I am inclined to refer this plant to the var. *nudum* Braithw. The locality points rather to the variety than to the type," W.E.N.

O. Shawii Wils., Mont Dore, Puy de Dôme, France, May, 1928, leg. C.H.B., det. A.S., conf. W.E.N.

O. Lyellii H. & T., near Llanbedr-y-Cennin (49), Oct., 1930, c.fr., A.W. ; near Whittington (60), June, 1914, W.G.T. ; Rothbury (67), Oct., 1930, E.H.S.

O. speciosum Nees, King Craig, near Aviemore (96), July, 1930, H.H.K., J.B.D. and D.A.J.

- O. affine* Schrad., Aviemore (96), July, 1930, D.A.J.
- O. rivulare* Turn., R. Whiteadder, below Elba (81), June, 1930, leg. J.B.D. and W.C.M., com. W.C.M.; Faymoreau, Vendée, France, Sept., 1929, J.C.
- O. Sprucei* Mont., by R. Leadon, Pauntley (34), March, 1930, H.H.K.
- O. Schimperii* Hamm., Brandon (26), July, 1911, and Aylmerton (27), April, 1907, W.H.B.
- O. stramineum* Hornsch., Clova (90), July, 1930, leg. W.Y. and D.A.J., com. D.A.J.; *ibid.* June, 1930, W.Y. "With the exception of one packet, the June gathering consists almost exclusively of *O. affine* Schrad," W.E.N.
- O. gymnostomum* Bruch, Stadtwald, Allenstein, E. Prussia, Germany, March, 1914, leg. W. Freiberg, com. L.L.
- Schistostega osmundacea* Mohr., Broomfield (5), May, 1908, c.fr., W.W.
- Splachnum sphaericum* L. fil., Thimbleby Moor (62), July, 1928, c.fr., G.F.H.; below Conninisch, near Ben Laoigh (88), June, 1924, c.fr., mixed with *S. ampullaceum* L., C.V.B.M.; Craig Chailleach (88), July, 1927, W.Y.; Ben Lawers (88) July, 1930, leg. C.H.B., det. D.A.J.
- S. vasculosum* L., Ben Cruben, near Killin (88), July, 1929, c.fr., C.V.B.M.
- Tetraplodon mnioides* B. & S., Eas Anie, above Conninisch (88), July, 1920, J.R.L.; Oetz, Tirol, Austria, July, 1930 P.W.M.R.
- T. Wormskjoldii* Lindb., Craig Chailleach (88), July, 1918, W.Y.
- Tayloria Froehlichiana* (Hedw.) Mitt., Studl Hut, near Kals, Austria, Sept., 1929, leg. C. A. Cooper, det. A.S.
- T. lingulata* Lindb., Ben Lawers (88), July, 1930, C.H.B.
- Discelium nudum*, Nelson (59), April, 1930, A.T.
- Ephemerum recurvifolium* Lindb., Woldnewton (54*), Dec., 1930, G.H.A.
- Physcomitrella patens* B. & S., Bramham (64), July, 1929, leg. W.H.B., H.H.K. and D.A.J., com. D.A.J.
- Physcomitrium pyriforme* Brid., Saltwick, Whitby (62), Aug., 1929, c.fr., S.P.R.; Siebengebirge, Rheinland, Germany, May, 1927, c.fr., A. Schumacher.
- Funaria ericetorum* Dixon, Eshells Moor, near Hexham, July, 1930, E.M.L.; Ben More (88), Aug., 1929, W.Y.

F. Templetoni Sm., near Rhayader (42), Sept., 1930, C.H.B.

Meesia trichoides Spruce, Ben Lawers (88), July, 1929, c.fr., J.L.N.O'L. ; *ibid*, July, 1930, C.H.B. ; Meall Garbh (88), Aug., 1929, c.fr., J.L.N.O'L. ; Riffelalp, above Zermatt, Switz., Aug., 1923, c.fr., C.V.B.M.

Timmia austriaca Hedw., Kaprunerthal, Austria, June, 1929, c.fr., L.B.C.T. "This plant is monoicous, the cilia are appendiculate, and the leaf insertions are not red. It is *T. bavarica* Hessel. *T. megapolitana* Hedw. agrees with *T. bavarica* in the above respects, but it differs in the nerve being dentate at the back, and the leaf margin being toothed almost to the sheathing base and not at the apex only," D.A.J.

T. norvegica Zett., Ben Lawers (88), July, 1930, C.H.B. ; Cruben, Killin (88), July, 1929, J.L.N.O'L.

Catoscopium nigratum Brid., Ainsdale (59), June, 1930, W.G.T. ; Ben Lawers (88), June, 1911, c.fr., leg. D. A. Haggart, com. W.Y.

Bartramia Oederi Swartz (*Plagiopus Oederi* Limpr.), Gavaranie, Hautes Pyrénées, France, July, 1909, J.C. ; near Kongsvall, Norway, July, 1878, leg. F. Kiaer, com. J.L., ex herb. Univ. Osloensis.

B. stricta Brid., Nouza, Corsica, May, 1926, c.fr., C.H.B.

B. ithyphylla Brid., Killin (88), July, 1930, C.H.B. ; Ben Douran (97), Aug., 1929, W.Y.

B. pomiformis Hedw., var. *crispa* B. & S., Eagle Crag, Stonethwaite (70), July, 1930, C.H.B.

B. Halleriana Hedw., Borrowdale (70), June, 1930, c.fr., S.P.R. ; Thirlmere (70), May, 1929, E.M.L.

Philonotis fontana Brid., Cader Idris (48), Aug., 1930, c.fr., S.P.R. ; Ben More (88), Aug., 1929, a slender form, W.Y. ; var. *adpressa* (Ferg.), Loeske & Moenk., Glas Maol, Glen Beag (89), June, 1930, leg. H.H.K., D.A.J. and J.B.D., com. J.B.D. ; Meal Odhar (92), June, 1930, W.Y. ; var. *ampliretis* Dixon, Aberglaslyn (49), Aug., 1930, S.P.R.

P. caespitosa Wils., forma *laxiretis* Loeske, Tannenbergstal, Saxony, Germany, Sept., 1905, leg. C. Stolle, com. L.L. Note.—The plant from near Berwick (68), distributed last year as *P. caespitosa*, was afterwards found by Herr Loeske to be a juvenile state of *P. calcarea*. Mr. Duncan and Mr. D. A. Jones agreed.

P. seriata Mitt., Ben Lawers (88), July, 1930, C.H.B. ; Glas Maol, Glen Beag (92), July, 1930, leg. J.B.D., H.H.K. and

D.A.J., com. D.A.J.; *ibid*, com. J.B.D.; Meal Odhar (92), July, 1930, W.Y.

Breutelia arcuata Schpr., Eshells Moor, near Hexham (67*), June, 1930, E.M.L.

Mielichhoferia nitida Hornsch., var. *elongata* B. & S. (*Oreas Mielichhoferi* Brid., var. *elongata* B. & S.), rocks above Loch Kander, Glen Callater (92), July, 1930, leg. H.H.K., D.A.J. and J.B.D., com. J.B.D.; *ibid*, com. D.A.J. See Mr. Dixon's note under *Mielichhoferia* in the list of Non-European Mosses.

Orthodontium gracile Schwaegr., Nant-y-Ffrith (51), Jan., 1925, leg. D.A.J. and P.G.M.R., com. P.G.M.R.; var. *heterocarpum* Watson, Edale (57*), July, 1930, A.M.S.; Sandal Beat Wood, Doncaster (63), Sept., 1930, c.fr., S.P.R.; Bolton Abbey (64), July, 1928, W.H.B.; Scaleber Beck, Settle (64), March, 1929, W.H.B.

Leptobryum pyriforme Wils., Capenhurst (58), June, 1930, W.G.T.

Webera elongata Schwaegr., near Rhayader (42), Sept., 1930, c.fr., C.H.B.

W. cruda Schwaegr., by R. Whiteadder, below Elba (81), June, 1930, W.C.M.; Braeriach (92), July, 1913, c.fr., W.Y. "The inflorescence of the Braeriach plant is paroicous and the capsule is different from that of *W. cruda*. It is *W. elongata*," D.A.J.

W. nutans Hedw., var. *longiseta* B. & S., Clova (90), June, 1930, W.Y.

W. cucullata Schpr., Ben Lawers (88), July, 1929, J.B.D.

W. annotina Schwaegr., var. *bulbifera* Correns, Reigate Heath (17), June, 1930, A.M.S. and A.S.; (*Pohlia bulbifera* Warnst.), Belgard, Pomerania, Germany, June, 1930, leg. F. Hintze, com. L.L. "The Pomeranian plant is the true var. *bulbifera*; the Reigate plant is, I should say, normal *W. annotina*," H.N.D.

W. proligera Bryhn, Porth Kea, near Truro (2), May, 1930, J.B.D.; Rothbury (68), Nov., 1930, E.H.S. "The Rothbury plant has not the characteristic bulbils of *W. proligera*. They are more like those of ordinary *W. annotina*, although they are very few. It may be worth remarking that continental botanists do not allow our British plants to be *W. proligera*, but regard them as a form of var. *decipiens* of *W. annotina*. See my note on p. 336 of the Handbook (Ed. 3)," H.N.D.

W. Ludwigi Schpr., Wells of Dee, Braeriach (92), June, 1911, A.W. ; Glas Maol, Glen Beag, and Lochnagar (92), June, 1930, leg. H.H.K., D.A.J. and J.B.D., com. J.B.D. ; Cairngorm, (96), July, 1930, J.B.D.

W. commutata Schpr., Ben Lawers (88), July, 1930, c.fr., C.H.B.

W. carnea Schpr. (*Mniobryum carneum* (L) Limpr.), Sieben-gebirge, Rheinland, Germany, April, 1930, c. fr., A. Schumacher.

W. albicans Schpr., Barrow-on-Humber (54), April, 1930, c.fr., G.H.A. "This is *W. carnea*," D.A.J. ; var. *glacialis* Schpr., Ben Cruben (88), July, 1927, W.Y.

W. Tozeri Schpr., Deriagh (I. 39), July, 1926, W.R.M.

Plagiobryum Zierii Lindb., Glen Fee (90), June, 1930, W.Y.

Bryum filiforme Dicks., Moel Hebog (49), Aug., 1930, S.P.R. ; var. *juliforme* Dixon, Carbis Bay (1), April, 1923, leg. H.H.K. and W.E.N., com. W.E.N. ; *ibid.*, May, 1930, leg. H.H.K. and J.B.D., com. J.B.D.

B. pendulum Schpr., Chesil Beach (9), June, 1928, E.C.W.

B. Warneum Bland., Hirschgarten, Berlin, Germany, June, 1904, leg. M. Fleischer, C. Osterwald and L.L., com. L.L.

B. pallens Sw., Glen Falloch (87), July, 1922, J.R.L.

B. Duvalii Voit., near Sedburgh (65), May, 1926, A.W. ; Ben Lawers, (88), July, 1930, C.H.B.

B. cyclophyllum B. & S., Hedwigshof, Pomerania, Germany, July, 1929, leg. F. Hintze, com. L.L.

B. neodamense Itzigs, Ainsdale (59), June, 1929, W.G.T.

B. pseudo-triquetrum Schwaegr., Langdale Head (69), July, 1930, C.H.B. ; forma, Riffelalp, above Zermatt, Switz., Aug., 1923, C.V.B.M.

B. bimum Schreb., Lawers Burn (88), July, 1930, c.fr. C.H.B.

B. intermedium Brid., Waltham (54), July, 1930, C.H.A.

B. provinciale Philib., La Moye, Jersey (C.I.*), May, 1930, C.H.B. ; Hyères, Var, France, March, 1926, C.H.B., det. W.E.N.

B. capillare L., var. *macrocarpum* Hueben, Beaufront Castle, Hexham (67*), March, 1929, E.M.L.

B. erythrocarpum Schwaegr., The Lizard (1), May, 1930, c.fr., W.E.N. ; Scotton Moor (54), June, 1930, c.fr., G.H.A.

B. atropurpureum var. *gracilentum* Tayl., Morden Heath, and Lulworth Cove (9*), April, 1930, E.A. ; Holmsley (11*), April, 1930, W.W.

B. alpinum Huds., Ceunant Mawr, Gwynant (49), May, 1916, c.fr., D.A.J. ; near Fintry (86), May, 1928, J.R.L. ; near head of Loch Long (98), July, 1923, J.R.L. ; near Killin (88), July, 1927, c.fr., W.Y. ; green form, Langdale Head (69), June, 1930, C.H.B. "I should call this green form the var. *viride* Husn." H.N.D. ; forma, La Châtaignerie, Vendée, France, Jan., and March, 1923, J.C. ; var. *meridionale* Schpr., Cavalaire, Var, France, March, 1930, C.H.B.

B. gemmiparum De Not., Cavalaire, Var, France, March, 1930, C.H.B.

B. Muehlenbeckii B. & S., Glen Dubh, Inchnadamph (108), July, 1921, W.E.N.

B. argenteum L., var. *lanatum* B. & S., Abbotsbury (9), June, 1928, E.C.W. ; St. Aubin, Jersey (C. 1*), May, 1930, C.H.B.

B. roseum Schreb., Betchworth Hill (17), Nov., 1930, E.C.W.

Mnium affine Bland., var. *elatum* B. & S., Ben Lawers (88), July, 1930, C.H.B. ; (*M. Seligeri* Jur.), Grötzenberg, Rheinland, Germany, May, 1929, A. Schumacher.

M. cuspidatum Hedw., by R. Coquet, Rothbury (67), Oct., 1930, E.H.S.

M. rostratum Schrad., Clandon Downs (17), April, 1930, E.C.W. ; by R. Coquet (67), May, 1930, W.C.M.

M. hornum L., forma, Creag Mhor (88), Aug., 1929, J.L.N.O'L. "Mr. Dixon writes:—This is *M. hornum*, probably. The nerve is spinose at the back and ceases below the apex. It is difficult to separate from *M. lycopodioides*, but the short nerve seems to preclude that. The leaves are *very* slightly decurrent. Another characteristic of this puzzling plant is that, in all the leaves I have examined, the nerve is deflected before it vanishes," J.L.N.O'L.

M. serratum Schrad., by R. Coquet (67), May, 1930, W.C.M.

M. lycopodioides Schwaegr., Creag Mhor (88), Aug., 1929, J.L.N.O'L. "This is correct," H.N.D.

M. spinosum Schwaegr., Ben Lawers (88), July, 1930, C.H.B.

M. stellare Reich., Cheddar (5), May, 1930, E.C.W.

M. cinclidoides Hueben., Cruban, near Killin (88), July, 1929, C.V.B.M.

M. punctatum (L.) Hedw., Aggerthal, Rheinland, Germany, April, 1927, c.fr., A Schumacher ; var. *elatum* Schpr., Langdale Head (69), July, 1930, C.H.B. "I should consider this plant scarcely large enough for the variety. The nerve does not

reach the summit, and the apiculus is absent as in the variety ; but the border is very distinct, as in the type," D.A.J. "The variety is of no great importance ; but one of its main characters is the weak border, and I should therefore think that this plant ought not to be placed there," H.N.D.

M. subglobosum B. & S., Edlingham (68), Aug., 1930, E.H.S. ; Ben Cruben, Killin (88), July, 1927, W.Y. "I should consider the Killin plant to be *M. cinclidioides*," D.A.J.

Cinclidium hymenophyllum (B.E.) Lindb., Kongsvoll, Norway, Aug., 1878, leg. F. Kiaer, com. J.L., ex herb. Univ. Osloensis. In the "Revue Bryologique" for 1909, pp. 33-36, Mr. Dixon has given good reasons for retaining this species under the genus *Mnium*, and for uniting it with *M. hymenophyllum* under the name of *M. hymenophylloides* for the two plants," W.E.N.

C. stygium Swartz, Obersee, Berlin, Germany, Oct., 1928, L.L.

Cryphaea heteromalla Mohr., Trelawne, near Looe (2), May, 1929, F.R.

Neckera turgida Jur., Oberstein, Rheinland, Germany, July, 1916, leg. Fr. Mueller, com. L.L.

N. crispa Hedw., a short, densely-tufted form, Isle of Portland (9), April, 1930, E.A. ; Côradonga, Cantabrian Mts., Asturias, Spain, July, 1929, C.V.B.M. ; var. *falcata* Boul., Lulworth Cove (9*), April, 1930, E.A. ; Great Orme's Head (50), July, 1927, P.G.M.R. See note under *Grimmia orbicularis*.

N. pumila Hedw., Broomfield (5), Feb., 1916, c.fr., W.W. ; Glen Falloch (87), Aug., 1929, J.B.D.

N. complanata Hueben., a densely-tufted form, Isle of Portland (9), April, 1930, E.A.

Hookeria laetevirens H. & T., Mousehole Cave (1), June, 1927, W.E.N.

Pterygophyllum lucens Brid., Holmesley, New Forest (11*), April, 1930, E.A.

Pterogonium gracile Swartz., Crafnant, Llanbedr (48), Aug., 1930, c.fr., S.P.R. ; Lawers (88), July, 1921, J.R.L.

Habrodon Notarisii Schpr., Lawers (88), July, 1930, C.H.B.

Antitrichia curtispindula Brid., Ben Lawers (88), July, 1930, C.H.B.

Myurella julacea B. & S., Ben Lawers (88), July, 1930, C.H.B. ; King's Seat, Killin (88), July, 1927, W.Y.

Leskea nervosa Myrin, Ben Lawers (88), July, 1930, C.H.B. ; "This is, I think, a form of *Pseudoleskea atrovirens*, which simulates *Leskea nervosa* in the shape of the leaf, but the nerve is too short for that species," D.A.J. "It is a marked form of *P. atrovirens* (I think the male plant), with cells almost smooth, and leaves very variable in form," H.N.D.

Anomodon attenuatus Schreb., Siegtal, Rheinland, Germany, Dec., 1929, A. Schumacher.

A. viticulosus H. & T., Saint Ethelbert's Camp, Hereford (36), Oct., 1930, c.fr., C.H.B.

Leptodon Smithii Mohr, Marsais, Vendée, France, March, 1928, J.C.

Pterigynandrum filiforme Hedw., Ben Lawers (88), July, 1912, J.R.L. ; *ibid*, July, 1930, C.H.B. ; Creag Mhor (88), Aug., 1929, J.B.D. ; var. *heteropterum* B. & S., Loch Brandy, Clova (90), June, 1930, J.B.D. ; var. *fallax* Milde, Black Force (65*), May, 1926, W.H.B.

Heterocladium dimorphum B. & S., Ben Lawers (88), July, 1930, C.H.B.

Pseudoleskea atrovirens B. & S., Ben Lawers (88), July, 1929, J.B.D. ; *ibid*, July, 1930, c.fr., C.H.B. ; Rolle Pass, Dolomites, Austria, July, 1930, L.B.C.T.

P. catenulata B. & S., Pen-y-Ghent (64), June, 1930, F.E.M. ; Knock Fell (69), Sept., 1930, A.W. ; Ben Lawers (88), July, 1930, C.H.B.

Thuidium abietinum B. & S., New Romney Warren (15*) July, 1930, E.C.W. ; Magilligan (I. 40), Aug., 1929, W.R.M.

T. hystricosum Mitt., Hackhurst Downs (17), April, 1930, E.C.W.

T. delicatulum Mitt., Rhayader (43*), Sept., 1930, C.H.B. ; Nant Col Ravine, Llanbedr (48), Aug., 1930, S.P.R.

T. recognitum Lindb., Meal-na-Saone (88), July, 1906, W.Y. "The upper stem leaves have filiform points as in *T. Philiberti*, to which it belongs." D.A.J.

T. Philiberti Limpr., Nash (36), Aug., 1930, C.H.B. ; Rosses Point, Sligo (I. 28), Sept., 1928, W.Y.

Climacium dendroides W. & M., Waldbröl, Rheinland, Germany, Oct., 1927, c.fr., A Schumacher.

Pylaisia polyantha B. & S., Sarnesfield (36), Oct., 1930, C.H.B.

Orthothecium chryseum B. & S., Gross Glockner, Carinthia, Austria, July, 1930, P.W.M.R.

Entodon Schleicheri (B.E.) Broth., Hohen-Hoever, Baden, Germany, Sept., 1909, c.fr., leg. W. Bauer, com. L.L. See note under *E. Cladorrhizans* in the list of non-European Mosses.

Camptothecium lutescens B. & S., Whitcomb Wood, (33) Aug., 1930, c.fr., leg. A. J. Grout, H.H.K. and D.A.J., com. D.A.J.; Bröltal, Rheinland, Germany, Nov., 1928, c.fr., A. Schumacher.

C. nitens Schpr., Wybunbury Moss (58), Aug., 1907, leg. J. C. Wilson and D.A.J., com. D.A.J.; Cartington (68), Oct., 1930, E.H.S.

Brachythecium plicatum B. & S., Ben Lawers (88), July, 1930, C.H.B.; Kaprunerthal, Austria, June, 1929, c.fr., L.B.C.T.

B. glareosum B. & S., Dormington, near Hereford (36), Nov., 1930, c.fr., C.H.B.

B. albicans B. & S., Porth-y-gest (49), Jan., 1923, c.fr., ex herb, W.R.S., com. J.H.A.

B. salebrosum B. & S., Fownhope and Whitbourne, near Hereford (36), Oct., 1930, C.H.B.; var. *palustre* Schpr., Lulworth Cove (9*), April, 1930, E.M.L.; Nash (36), Aug., 1930, C.H.B.; Harlech (48), April, 1915, leg. D.A.J. and P.G.M.R., com. P.G.M.R.

B. rivulare B. & S., Ravensfield Park, Doncaster (63), June, 1930, S.P.R.; Craig Chailleach (88), Aug., 1922, ex herb. W.R.S., com. J.H.A.; var. *chrysophyllum* Bagnall, Cannock Chase (39), *locus classicus*, June, 1926, P.G.M.R. (distributed in Bauer's "*Musci Eur. exsiccata.*").

B. reflexum B. & S., Ben Lawers (88), July, 1930, C.H.B., det. J.B.D.; Alpes Salisburgensis, Austria, Aug., 1927, L.L.; Haga Park, Stockholm, Sweden, June, 1925, L.L.

B. populeum B. & S., Long Preston (64), March, 1929, W.H.B.; Rothbury (68), Nov., 1930, E.H.S.

B. plumosum B. & S., Nutscheid, Rheinland, Germany, Dec., 1926, c.fr., A. Schumacher.

B. illecebrum De Not., Menton, Alpes Marit., France, Jan., 1928, c.fr., C.H.B.; Bourneau, and St. Hilaire de Voust, Vendée, France, Feb. and March, 1923, J.C.

Eurhynchium piliferum B. & S., Llanbedr (48), Nov., 1923, c.fr., D.A.J.; Wilsick, near Doncaster (63), July, 1930, S.P.R.

E. crassinervium B. & S., Saint Ethelbert's Camp, near Hereford (36), Oct., 1930, c.fr., C.H.B.; var. *turgescens* Mol., Dowlah Dean (81), Aug., 1930, leg. J.B.D. and W.C.M., com. W.C.M.

E. speciosum Schpr., near Lewes (14), Nov., 1907, c.fr., W.E.N.

E. praelongum Hobk., var. *Stokesii* Brid., Hoardweel (81), June, 1930, leg. J.B.D. and W.C.M., com. W.C.M.

E. Swartzii Hobk. (*Oxyrrhynchium Swartzii* (Turn.) Warnst.), Bredower Forst, Brieselang-Wald, and Fänger See, near Berlin, Germany, May, 1926, April, 1929, and May, 1929, L.L. "The Brieselang-Wald gathering comes near to the var. *rigidum* Boul., but the leaves are not, or rarely, striate when dry, which they are in the var. *rigidum*. I have an exactly similar plant coll. C.P. Hurst at Condicote, E. Gloucestershire. If I had to give it a name I should call it var. *atrovirens* (Sw.) B. & S.; var. *rigidum* Boul., by R. Whiteadder, below Hoardweel (81), June, 1930, leg. J.B.D. and W.C.M., com. W.C.M.

E. abbreviatum Schpr. Pen Wood (34), Aug., 1930, leg. A. J. Grout, H.H.K., and D.A.J., com. D.A.J.

E. pumilum Schpr., St. Hilaire de Voust, Vendée, France, March, 1928, J.C.

E. tenellum Milde, St. Margaret's Bay (15), Sept., 1930, E.H.S.; var. *scabrellum* Dixon, Lewes (14), April, 1922, W.E.N.

E. myosuroides Schpr. (*Isothecium myosuroides* (Dill.) Brid.), Sieggebiet, Rheinland, Germany, Nov., 1928, A. Schumacher; var. *rivulare* Holt, Rhayader (43), Sept., 1930, C.H.B.

E. myurum Dixon, Ben Douran (97), Aug., 1929, W.Y. "This is *Camptothecium sericeum* Kindb.," J.B.D.

E. circinatum B. & S., Cheddar (6), May, 1930, E.C.W.; var. *deflexifolium* Boul. (*Scorpiurium rivale* Schpr.), Pardigon Var, France, April, 1930, C.H.B.

E. striatum B. & S. Perranzabuloe (1), Dec., 1926, c.fr., F.R.

E. meridionale De Not., Portland (9), June, 1928, E.C.W., and April, 1930, D.A.J.

E. striatulum B. & S. near Menton, Alpes Marit., France, March, 1928, C.H.B.

E. rusciforme Milde, Preston Moor (65), May, 1930, G.F.H.; Allerford, near Porlock (5), July, 1929, E.C.W. "This robust form from Allerford may certainly be placed under var. *atlanticum* Brid., a new record for V.C.5." J.B.D.; var. *atlanticum* Brid., Anwick, near Hexham (67*), March, 1929, E.M.L.

E. murale Milde (*Rhynchosstegium murale* B. & S.), Le Marillet, Vendée, France, Oct., 1927, J.C.; Bröltal, Germany, April, 1929, c.fr., A. Schumacher.

Sematophyllum demissum Mitt., Tyn-y-Groes (48), Aug., 1930, S.P.R.

S. micans Braithw., Nantcol Ravine (48), June, 1909, D.A.J.; near Rosthwaite (70), June, 1910, A.W.; Borrowdale (70), June, 1930, S.P.R.; var. *badense* Herzog, Nantcol Ravine (48), Aug., 1930. I cannot see any reason to call this the var. *badense*. The plant is not specially robust, and the leaves have only occasionally any trace of a nerve," J.B.D. "The var. was first recorded as British from this locality, see Moss Exch. Club Rep., 1910, p. 348. The specimen that I have of that gathering seems to me a fairly well marked form, and is no doubt Herzog's plant. I have several other specimens so named, but they all appear to me nearer to the type, as does the present gathering. It is, of course, possible that both type and variety grow together, but it seems equally probable that the variety is only an unstable and inconstant form," H.N.D.

Plagiothecium depressum B. & S., Fownhope (36), Oct., 1930, C.H.B.

P. elegans Sull., Luccombe (5), July, 1929, E.C.W.; Rothbury (68), Nov., 1930, E.H.S.; Cheffois, Vendée, France, March, 1921, J.C.

P. silesiacum B. & S., Crowborough Warren (14), Oct., 1930, leg. H.H.K., D.A.J. and W.E.N., com. W.E.N.

P. Muehlenbeckii B. & S., Ben Lawers (88), July, 1930, C.H.B.; Ben Macdhui (92), July, 1913, W.Y.

P. denticulatum B. & S., Glen Fee (90), June, 1930, W.Y. "A robust form, monoicous," J.B.D.; forma, Forêt de Vouvant, Vendée, France, April, 1926, J.C.; var. *obtusifolium* H. & T., Ben Lawers (88), July, 1929, J.B.D. Note—This plant was distributed last year, and was afterwards named by Herr Moenkemeyer *P. silvaticum*, forma; Mr. Dixon, however, maintains the opinion expressed in the Report (p. 186).

P. silvaticum B.E., Réaumur, Vendée, France, April, 1925, J.C.; var. *succulentum* Wils. (*P. succulentum* (Wils.) Lindb. var. *longifolium* Moenkem.), Strausberg, Berlin, Germany, May, 1923, L.L., det. Moenkem. "As I have not seen an authentic specimen of Wilson's species, I am naming the moss only on the authority of Mr. Moenkemeyer," L.L. "This is no doubt Moenkemeyer's plant, judging from his description and figures, but I do not think he is justified in giving it Wilson's name. Wilson's *Hypnum succulentum* M.S. was first published as a var. of *P. denticulatum*. 'Leaves with almost plane margins, inflorescence synoicous.' The note in the Bry. Brit. adds that it is remarkable for its great similarity

in habit and foliage to *H. sylvaticum*, and for its large, tumid, synoicous flowers. Lindberg raised it to the rank of species, while Husnot placed it as a var. under *P. silvaticum*. As Wilson distinctly says that his plant has the foliage closely like *P. silvaticum*—of which the most marked character is its very wide cells—Moenkemeyer's plant, characterised by its very narrow (*sehr eng*) cells, and with polygamous, but not synoicous, inflorescence, can hardly be the same thing. As to Wilson's plant, I should be inclined to consider it simply a synoicous form of *P. silvaticum*. The plant described by Moenkemeyer—no doubt represented by Loeske's specimens—is of much greater value, more closely allied, I should have thought, to *P. denticulatum*. I am not aware if it is represented in our British forms, but I believe that it is. The continental plants corresponding to our *P. denticulatum* and *P. silvaticum* are divided by Limpricht into five species, by Moenkemeyer into eight (with a considerable number of varieties). Most, if not all, of these are probably represented in Britain, and it would be a valuable piece of work if some bryological student would make a careful comparison of our forms with the continental ones. It would probably not be possible to correlate them all; I do not know of any continental species or variety corresponding to our var. *obtusifolium* of *P. denticulatum*. There is, too, a very curious perversity as to the smoothness or striation of the capsules, as between the continental and British plants, which needs careful investigation," H.N.D. Note—The plant from Am Binnein (88), sent in last year as *P. silvaticum* var. *orthocladum* (see Report, p. 186), was afterwards named by Herr Loeske and Herr Moenkemeyer *P. succulentum* Wils. Mr. Dixon, however, still regards it as coming under *P. denticulatum*.

P. undulatum B. & S., Waldbröl, Rheinland, Germany, Aug., 1927, c.fr., A Schumacher.

Amblystegium Sprucei B. & S., Monsal Dale (57), Oct., 1930, F.E.M.

A. compactum Aust., Berwick (68), Nov., 1930, J.B.D.

A. irriguum B. & S., R. Usk, near Brecon (42), Sept., 1925, C.H.B., det., J.B.D.

A. fluviatile B. & S., Boston Spa (64), Sept., 1929, S.P.R.; R. Whiteadder, Hoardweel (81), June, 1930, J.B.D.; R. Whiteadder, below Elba (81), June, 1930, leg. J.B.D. and W.C.M., com. W.C.M.

A. curvicaule Lindb., Creag Mohr (88), Aug., 1929, J.L.N.O'L. "I have seen similar plants so named, but they

do not agree very well with a continental example that I have, in which the leaves are larger, the nerve weaker and vanishing at the base of the acumen, and the cell structure longer and less incrassate," J.B.D. "A difficult plant. It has the stems almost free from tomentum, and the stem leaves have the form of *A. curvicaule*; but the cell structure is more like *A. filicinum*. It is somewhat on the border line between the two. I received a specimen of the same gathering earlier, and admitted it was *A. curvicaule*; but I am now more inclined to put it under *A. filicinum*," H.N.D.

Hypnum riparium L., Lyminster (13), Aug., 1930, E.C.W.; var. *longifolium* Schpr., Manton (54*), March, 1930, G.H.A.; Malton Road (62), Sept., 1926, H.S.

H. elodes Spruce, Scotton Moor (54), June, 1930, G.H.A.

H. polygamum Schpr., Scotter (54), June, 1930, G.H.A. "I am doubtful about this. Some leaves have a well defined nerve, while in others on the same plant the nerve is absent or faint," G.H.A. "This is *H. stellatum*. The leaves are scarcely squarrose, and the plant has some resemblance to *H. polygamum*," J.B.D.; Rolle Pass, Dolomites, Austria, July, 1930, L.B.C.T. "This is a slender form of *Brachythecium plicatum* B. & S.," J.B.D.; var. *stagnatum* Wils., Ainsdale (59), July, 1924, leg. J. A. Wheldon, com. W.G.T.

H. stellatum Schreb., var. *protensum* Roehl., Wicken Fen (29*), Aug., 1930, E.A.; Sprotborough, Doncaster (63), Sept., 1930, S.P.R.

H. Halleri L.fil., Ben Lawers (88), July, 1930, C.H.B.

H. aduncum Hedw., Westburnhope, near Hexham (67), May, 1930, E.M.L. "This is *H. fluitans*, var. *gracile* Boul., new to V.C. 67," W.R.S.; gr. *typicum*, f. *falcata* Ren., Ainsdale (59), Sept., 1928, W.G.T.; var. *gracilescens* Schpr., Nash (36*), Aug., 1930, C.H.B., det. W.R.S.; gr. *pseudofluitans* Sanio (*H. pseudofluitans* Sanio), Le Bourg sur La Roche, Vendée, France, Sept., 1927, J.C.

H. Sendtneri Schpr. (*Drepanocladus Sendtneri* Warnst., var. *vulgaris* Sanio), Naburn (62), June, 1930, W.B. "This is *H. decipiens* Limpr.," W.R.S.

H. lycopodioides Schwaegr., Scotter (54), June, 1930, G.H.A.; "This is *H. scorpioides*," W.R.S. "Yes, I should say it is the var. *angustifolium* Sanio," J.B.D.

H. fluitans L. (*Drepanocladus fluitans* Warnst.), var. *Jean-bernati* Ren., Kronensee, Rheinland, Germany, June, 1928, c.fr. A. Schumacher; var. *Robertsiae* Ren. and Dixon, Christchurch

(11*), Sept., 1926, W.R.S. ; Rufford Forest (56), July, 1930, F.A.S., det. W.R.S. ; var. *anglicum* Sanio, Horncastle (54), June, 1930, G.H.A. "This is *H. aduncum*, forma *falcata* Ren. Note the entire stem leaves," W.R.S.

H. exannulatum Guemb., Ben More (88), Aug., 1929, W.Y. ; var. *pinnatum* Boul., Angoulins sur Mer, Charente Inférieure, France, May, 1925, J.C. "I should call this plant *H. aduncum* gr. *typicum*. The stem leaves are entire at the base as well as at the apex," W.R.S. ; var. *purpurascens* Schpr., White Fell, near Sedburgh (65*), Aug., 1923, A.W.

H. uncinatum Hedw., Beaufront Castle, Hexham (67), March, 1929, E.M.L. "This is the forma *plumosa* Ren.," W.R.S. ; Ben Lawers (88), July, 1919, W.Y. ; Craig Chailleach (88), Aug., 1922, ex herb., W.R.S., com. J.H.A.

H. vernicosum Lindb., Mochras (48), Aug., 1929, P.G.M.R. ; (*Drepanocladus vernicosus* Warnst.), Brölgebiet, Rheinland, Germany, June, 1929, A. Schumacher.

H. revolvens Swartz., forma, Lizard Down (1), May, 1930, W.E.N. "Near f. *Cossoni* Ren., det. W. Moenkemeyer," W.R.S. ; Ross Links (68), Sept., 1928, J.B.D. "This is also near f. *Cossoni* Ren.," W.R.S.

H. intermedium Lindb., Cringle Moor (62), Nov., 1928, G.F.H. "This is *H. fluitans*, var. *Jeanbernati* Ren.," W.R.S. ; Eshells, near Hexham (67*), Sept., 1929, E.M.L.

H. decipiens Limpr., Ben Lawers (88), July, 1930, C.H.B. ; near Riva, L. Garda, Italy, July, 1930, c.fr., L.B.C.T. "The Italian plant is *H. commutatum* Hedw.," W.R.S.

H. commutatum Hedw., Afon Aran, Dolgelly (48), Aug., 1930, S.P.R. ; Tealby (54), March, 1930, G.H.A. ; (*Cratoneuron glaucum* C. Jens, var. *subirrigatum* Wheld.), Sandsend (62), May, 1930, W.B. "This is *Amblystegium filicinum* De Not," W.R.S. ; Juget de Luchon, Haute Garonne, France, July, 1927, C.V.B.M.

H. falcatum Brid., var. *gracilescens* Schpr., Ben Lawers (88), July, 1930, C.H.B. ; King's Seat, Killin (88), July, 1930, J.R.L. "The Ben Lawers plant is, I think, *H. sulcatum* Schpr., but the Killin plant is correct. *H. falcatum* v. *gracilescens* approaches very nearly in general habit to *H. sulcatum* and is with difficulty distinguished from it, even with the aid of the microscope. The length and density of the nerve is somewhat unreliable as a distinguishing feature, as the nerves vary on the leaves of a single stem. The most satisfactory distinction is based on the median cells of the stem leaf. In *H. sulcatum* the cells are short and wide ; in *H.*

falcatum v. *gracilescens* they are longer and narrower," W.R.S. ; var. *virescens* Boul. (*H. irrigatum* Zett.), near Innsbruck, Austria, July, 1925, leg. Berger, com. L.L.

H. sulcatum Schpr., Ben Lawers (88), July, 1929, J.L.N.O'L.

H. Haldanianum Grev. (*Heterophyllum Haldanianum* Kindb.), Herzberg, Pomerania, Germany, no date, leg. Hintze, det. L.L., com. W.B.

H. incurvatum Schrad., Ingleton (64), April, 1925, leg. C. A. Cheetham and D.A.J., com. D.A.J.

H. reptile Rich. (*H. pallescens* B.E., var. *reptile* Husn.), Möhrisch-Schönberg, Czechoslovakia, 1917, leg. F. Schenk, det. and com. L.L. ; *idem*, com. W.B.

H. cupressiforme L. var. *filiforme* Brid., Dipton Dene (67*), Oct., 1930, E.C.L. ; var. *mamillatum* Brid., Cusop Dingle, Black Mountains (36*), Sept., 1930, leg. C.H.B., com. E.A. ; var. *ericetorum* B. & S., Great Doward (36), Sept., 1930, c.fr., E.A. ; var. *tectorum* Brid., Robin Hood's Bay (62), Sept., 1930, W.B. "A rupestral form, but not in any way typical of the var. *tectorum*," J.B.D. ; near Riva, L. Garda, Italy, July, 1930, L.B.C.T. "These packets contain a mixture of *Brachythecium purum* Dixon and a form of *H. cupressiforme* which may be placed under the var. *elatum* B. & S.," J.B.D.

H. imponens Hedw., Ambersham Common (13), Oct., 1928, leg. H.H.K. and W.E.N., com. W.E.N.

H. pratense Koch., Birkenwerder, Berlin, Germany, June, 1926, L.L. ; *idem*, com. W.B.

H. Patientiae Lindb., Ordley, near Hexham (67), Nov., 1930, E.M.L.

H. hamulosum B. & S., Ben Lawers (88), July, 1930, C.H.B. ; Craig an Lochain (88), July, 1930, J.R.L. ; Craig Chailleach (88), July, 1929, J.L.N.O'L.

H. Bambergeri Schpr., Ben Lawers (88), July, 1929, J.B.D.

H. crista-castrensis L., Ben Lawers (88), July, 1929, J.B.D. ; Ben Douran (97), Aug., 1929, W.Y. ; Kofal, Oberammergau, Bavaria, Germany, July, 1930, c.fr., L.B.C.T.

H. palustre Huds., by R. Coquet, Rothbury (68), Oct., 1930, E.H.S. ; Clova (90), June, 1930, W.Y.

H. dilatatum Wils., Clova (90), June, 1930, J.B.D. ; *ibid.*, W.Y.

H. arcticum Sommerf., Ben Lawers (88), July, 1921, J.R.L., and July, 1930, C.H.B.

H. eugyrium Schpr., Nant Col, Llanbedr (48), Aug., 1925, P.G.M.R. ; Edramucky Burn (88), Aug., 1922, c.fr., ex herb. W.R.S., com. J.H.A. "The nerve in the latter plant, is variable, but often single and well-defined, and the angular cells are obscure. It is *H. palustre* Huds.," J.B.D. ; Clova (90), June, 1930, W.Y.

H. ochraceum Turn., Clova (90), June, 1930, c.fr., J.B.D. ; Kaprunerthal, Austria, June, 1929, c.fr., and Rolle Pass, Dolomites, Austria, July, 1930, c.fr., L.B.C.T. "Both of the Austrian gatherings are *H. palustre* Huds.," J.B.D. ; var. *flaccidum* Milde., Cader Idris (48), Aug., 1916, leg. D.A.J. and P.G.M.R., com. P.G.M.R.

H. alpinum Schpr., (*Hygrohypnum alpinum* Loeske), Hohe Tauern, Austria, Aug., 1930, L.L.

H. scorpioides L. (*Scorpidium scorpidioides* Limpr.), var. *angustifolium* Sanio, Naburn (62), June, 1930, W.B. ; Panneveggio, Dolomites, Austria, July, 1930, c.fr., L.B.C.T. "The Austrian plant is *H. Patientiae* Lindb. It fruits occasionally on the continent of Europe, but not in Britain," J.B.D.

H. stramineum Dicks., Edlingham (68), Aug., 1930, E.H.S. ; Eaglesham (76), May, 1928, leg. R. Mackechnie, com. E.C.W. ; Crianlarich (88), July, 1918, J.R.L. ; Piburger See, Oetz, Austria, July, 1930, c.fr., P.W.M.R.

H. trifarium W. & M., Ben Lawers (88), July, 1928, J.R.L., and July 1930, C.H.B.

H. turgescens Schpr., Riva, L. Garda, Italy, July, 1930, L.B.C.T. "This is a large form of *Eurhynchium myurum* Dixon, approaching var. *robustum* B. & S., not uncommon on the continent," J.B.D.

H. cordifolium Hedw., Liepnitzsee, Berlin, May, 1925, c.fr., L.L.

Hylocomium umbratum B. & S., Tyn-y-Groes (48), Aug., 1930, S.P.R.

H. pyrenaicum Lindb., Ben Lawers (88), July, 1929, J.B.D. ; Voralberg, Austria, July, 1928, leg. J.B.D., and C.V.B.M., com. C.V.B.M.

H. brevirostre B. & S., Dunkery Beacon (5), July, 1929, E.C.W. ; Witcombe Wood (33), Nov., 1930, c.fr., H.H.K.

H. loreum B. & S., Nant Col Ravine, Llanbedr (48), Aug., 1930, c.fr., S.P.R.

**NON-EUROPEAN, (including specimens of European
species from Countries outside Europe.)**

Arranged according to Brotherus, in Engler and Prantl.
("Pflanzenfamilien," Ed. 2.).

Fissidens atlanticus Ren. and Card., Sete Cidades, São Miguel, Azores, March, 1930, leg. Miss Crosse, com. E.A.

F. subbasilaris Hedw., Greenbank, W. Virginia, U.S.A., March, 1929, F.W.G.

Pleuroidium alternifolium (Dicks). Rabenh., Cass, W. Virginia, U.S.A., May, 1928, F.W.G.

Ditrichum pallidum (Schreb.) Hampe, Alderson, W. Virginia, U.S.A., Spring, 1929, F.W.G.

Distichium capillaceum (Sw.) B. & S. (*Swartzia montana* Lindb.), Upper Indus (near Gilgit) and Aster Valleys, India, Aug., 1924, leg. J. Garrett and W. Lillie, com. D.L. "One packet contains *Weisia rupestris* C.M.," G.B.S.

D. inclinatum (Ehrh.) B. & S. (*Swartzia inclinata* Ehrh.), Takalangha, Marangha and Baralacha Passes, Ladakh and Lahoul, India, Aug., and Sept., 1927, leg. A. M. Kerr and W. Lillie, com. D.L.

Blindia tenuifolia (H. fil. and Wils.) Mitt., Okahuna Mt., North Isl., New Zealand, 1930, leg. G. O. K. Sainsbury, com. E.A.H.

Dicranella Perrottetii Mitt., Blanchisseuse Valley, Trinidad, B. West Indies, Feb., 1930, E.A.

Campylopus clavatus (R. Br.) H. fil. and Wils., Nelson, New Zealand, 1927, misit Mrs. J. Meiklejohn, com. D.L.

C. introflexus Brid., Ponta Delgada, São Miguel, Azores, March, 1930, E.A.

C. laetus (Mitt.), Jaeg., Darjeeling, India, June, 1921, leg. H. Lillie, com. D.L.

Oncophorus virens (Sw.) Brid. (*Cynodontium virens* Schpr.), Gaasefjord, King Oscar Land, Arct. N. America, Aug., 1901, leg. H. G. Simmons, com. J.L. ex herb. Univ. Osloensis.

O. Wahlenbergii Brid. (*Cynodontium Wahlenbergii* Ren. and Card.), Cass, W. Virginia, U.S.A., Spring, 1928, F.W.G.

Dicranum Kashmirense Broth., between Gurez Pass and Gadsan, Kashmir, India, leg. J. and H. Garrett, com. L.L., det. H.N.D.

Dicranoloma dicarpum (Hornsch.) Par., Paradise and Diamond Lake, Otago, New Zealand, Nov., 1929, leg. A. Meiklejohn, com. D.L., det. H.N.D.

D. setosum (H. fil. and W.) Par., Raetehi, near Wanganui, New Zealand, Feb., 1927, misit Mrs. J. Meiklejohn, com. D.L., det. H.N.D.

D. grossialare (C.M.) Dixon, Paradise and Diamond Lake, Otago, New Zealand, Nov., 1929, leg. A. Meiklejohn, com. D.L., det. H.N.D.

D. Billardieri (Schwaegr.) Par., Marlborough, S. Isl., New Zealand, 1928, leg. J. H. McMahon, com. E.A.H.

Dicnemon calycinum (Hook) Schwaegr., Ngahere, Puketitiri, Hawk's Bay, New Zealand, Sept., 1930, E.A.H.

Leucobryum glaucum Schpr., Martinique, F. West Indies, Feb., 1930, E.A.

Octoblepharum albidum Hedw., Blanchisseuse Valley, Trinidad, B. West Indies, Feb., 1930, E.A.

Syrrhopodon rigidus Hook. & Grev., Grand Etang, Grenada, West Indies, Aug., 1929, c.fr., P.W.M.R., det. H.N.D.

Anaetangium euchloron (Schwaegr.), Mitt., Zacuapan, Vera Cruz, Mexico, Oct., 1918, leg. C. A. Purpus, det. and com. E.B.B.

Hymenostylium curvirostre (Ehrh.) Lindb., (*Weisia curvirostris* C.M.), Ladakh, India, Aug., 1927, leg. A.M. Kerr and W. Lillie, com. D.L., det. H.N.D.

Trichostomum involutum Sulliv., Coral walls, Paget, near Hamilton, Bermuda, Feb., 1930, E.A. "Jaeger, in his *Genera et spec. muscorum*, Vol. 1., p. 391, mentions this as a Cuban species ; but I can find no mention of it in Engl. & Prantl. (Ed. 2), though in the Supplement (B. 11, p. 528) there is mentioned a *T. involutum* Broth., as occurring in China," A.S. "This is not the *T. involutum* of Brotherus (China). Brotherus has duplicated Sullivant's name, either by oversight or because he referred *T. involutum* Sill. to another genus, viz.—*Weisia*, though it does not appear under *Weisia* in the 'Musci', I do not know Sullivant's plant, nor by whom the Bermuda specimen has been referred to it ; but this is, without doubt, the plant described by Mitten as *Tortula* (*Trichostomum*) *bermudana* in Journ. Linn. Soc. Bot. XV, 60 (1876), which may no doubt be identical with the Cuban species. It is very closely allied to *Weisia viridula*," H.N.D.

T. rivale (Mitt.) Jaeg., Bog Walk (Boca d'Agua), Jamaica, B. W. Indies, Feb., 1930, E.A.

Timmiella anomala (B.E.) Limpr., Kukte Pass, and Budhil and Ravi Valleys, Lahoul and Chamba, India, Sept., 1927, leg. A. M. Kerr and W. Lillie, com. D.L., det. H.N.D.

Triguetrella curvifolia Dixon ined. (sp. nov.), Havelock, North Hills, New Zealand, June, 1930, E.A.H.

Hyophila tortula (Schwaegr.) Hampe, Old Panama, Central America, Feb., 1930, E.A.

H. involuta (Hook) Jaeg., Lohogard Fort, near Poona, India, April, 1916, leg. Rev. Dr. J. W. Youngson, com. D.L., det. H.N.D.

Barbula crispula Hampe, Mountains, Jamaica, B. W. Indies, Feb., 1930, c.fr., E.A. "This was united by Mitten and some other authors with *B. subulifolia* Sull.," H.N.D.

B. Crugeri Sonder, Bog Walk (Boca d'Agua), Jamaica, B. W. Indies, Feb., 1930, E.A.

Calypotropogon mnioides (Schwaegr.) Mitt., Ngahere, Puketitiri, H.B., New Zealand, Sept., 1930, E.A.H.

Tortula agraria (Hedw.), Castillo de Morro, Havana, Cuba, Feb., 1930, E.A. "This is *T. agraria* Sw. (1799), *Barbula agraria* Hedw. (1787-1796). Under the new rules of nomenclature neither can stand, as both date from before 1801. But *B. agraria* Hedw. Sp.M. is valid, so that it will stand as *Tortula agraria* (Hedw.) followed by the name of the first succeeding author who placed it in *Tortula*. I do not at present know who this is," H.N.D.

T. muralis Hedw., Ponta Delgada, São Miguel, Azores, March, 1930, E.A.

Grimmia azorica Card., Ponta Delgada, São Miguel, Azores, March, 1930, E.A.

Funaria mediterranea Lindb., Ponta Delgada, São Miguel, Azores, March, 1930, E.A. New to the Azores.

Mielichhoferia Porsildii Hagen, Havhestberget, North Devon, Arct. N. America, July, 1902, leg. H. G. Simmons, det. N. Bryhn, com. J.L., ex herb. Univ. Osloensis. "Unfortunately sterile. A full description with figures of this interesting species will be found in Meddelelser om Grönland, t. xxvi, (1904), p. 437, Copenhagen. It is well for British Bryologists to become accustomed to this generic name, which must replace that of *Oreas*," H.N.D.

Haplodontium Notarisii (Mitt.) Broth., Ponta Delgada, São Miguel, Azores, March, 1930, E.A. New to the Azores.

Anomobryum plicatum Card., forma *robustum*, Zacuapan, Vera Cruz, Mexico, 1908, leg. C.A. Purpus, det. and com. E.B.B.

Bryum Stirtoni Schpr., Brevort Island, Ellesmere Land, Arct. N. America, July, 1899, leg. Ivar Fosheim, det. N. Bryhn, com. J.L., ex herb. Univ. Osloensis. "Quite correct ; but if it is treated as a species the right name for it should surely be *B. elegans* Nees," H.N.D. See "Handbook," Ed. 3, p. 367.

B. canariense Brid., Ponta Delgada, São Miguel, Azores, March, 1930, E.A.

B. procerum Schpr., Zacuapan, Vera Cruz, Mexico, 1908, c.fr., leg. C. A. Purpus, det. and com. E.B.B.

Rhodobryum Swartzianum (C.M.) Par., Tlacozintha, Mexico, no date, leg. C. A. Purpus, det. and com. E.B.B.

Mnium affine Bland., var. *ciliare* (Grev.) C.M. (*M. ciliare* Grev.), Cass, W. Virginia, U.S.A., May, 1928, F.W.G. "This agrees with the description of the plant. Limpricht, while citing it as a species, suggests that it would better be considered as a var. of *M. affine*, and I quite concur in this view," W.E.N.

Rhizogonium bifarium (Hook.) Schpr., Ngahere bush, Puketitiri, H.B., New Zealand, Sept., 1930, E.A.H.

Mniodendron comatum (C.M.) Lindb., North Auckland, New Zealand, 1930, leg. H. B. Matthews, com. E.A.H.

Leptotheca Gaudichaudii (Spreng.) Schwaegr., Lake Wakatipu, New Zealand, 1918, leg. J. Meiklejohn, com. D.L.

Aulacomnium heterostichum (Hedw.) B.E., Cass, and Sitlington-Dunmore, W. Virginia, U.S.A., May, 1927, and June, 1928, F.W.G.

Philonotis tenuis (Tayl.) Jaeg., Glenorchy, Lake Wakatipu, New Zealand, Nov., 1929, leg. A. Meiklejohn, com. D.L., det. H.N.D.

P. tenella Jaeg., Blanchisseuse Valley, Trinidad, B.W. Indies, Feb., 1930, c.fr., and between La Guaira and Caracas, Venezuela, S. America, Feb., 1930, E.A. "I believe *P. tenella* (C.M.) Besch. is the correct citation," H.N.D.

P. uncinata Brid., Bog Walk (Boca d'Agua), Jamaica, B. W. Indies, Feb., 1930, E.A.

P. australis (Mitt.) Jaeg., Wairoa, New Zealand, Jan., 1930, E.A.G.

Breutelia jamaicensis (Mitt.) Jaeg., Barranca, near Tenempa, Vera Cruz, Mexico, no date, leg. C. A. Purpus, det. and com. E.B.B.

B. pendula (Hook) Mitt., Marlborough, S. Isl., New Zealand, no date, leg. J. H. McMahon, com. E.A.H.; Kiwi, Wairoa, New Zealand, 1930, E.A.H.

Timmia bavarica Hessel., Bhutna Valley, Ladakh, India, July and Aug., 1928, leg. A. M. Kerr and W. Lillie, com. D.L., det. H.N.D.

Zygodon viridissimus R. Brown, Ponta Delgada, São Miguel, Azores, March, 1930, E.A. New to the Azores.

Z. intermedius B. & S., Ngahere, Pukatitiri, H.B., New Zealand, Sep., 1930, E.A.H.

Ulota Ludwigii Brid., Cass, W. Virginia, U.S.A., Summer, 1929, F.W.G.

Drummondia clavellata Hook., Cass, W. Virginia, U.S.A., Dec., 1928, and April, 1929, F.W.G.

Macromitrium eucalyptorum Hampe & C.M., Puketitiri, H.B., New Zealand, Sep., 1930, E.A.H.

M. mucronifolium (Hook. & Grev.) Schwaegr., Castleton Gardens, Jamaica, B. W. Indies, Feb., 1930, E.A.

Micromitrium Schlumbergeri Schpr., Zacuapan, Vera Cruz, Mexico, Dec., 1918, leg. C. A. Purpus, det. and com. E.B.B.

Rhacopilum strumiferum C.M., North Auckland, New Zealand, 1930, leg. H. B. Matthews, com. E.A.H.

R. robustum Hook. & Wils., Wairoa, H.B., New Zealand, Jan., 1930, E.A.H.

Fontinalis Novae-Angliae Sull., Oka, P.Q., Canada, Aug., 1929, leg., H. Dupret, com. P.G.M.R.

Pilotrichopsis dentata (Mitt.) Besch., Nikko, Japan, May, 1891, leg. Sir B. Stone, det and com. P.G.M.R.

Leucodon curvirostris Hampe, Esperanza, Pueblo, Mexico, 1908, leg. C.A. Purpus, det. and com. E.B.B.

Ptychomnion aciculare (Brid.) Mitt., North Auckland, New Zealand., 1930, leg. H. B. Matthews, com. E.A.H.; Wai-raumosa, L. Waikaremoana, New Zealand, April, 1930, leg. G. O. K. Sainsbury, com. E.A.H.

Prionodon densus (Sw.) C.M., Zacuapan, Vera Cruz, Mexico, Dec., 1918, leg. C. A. Purpus, det. and com. E.B.B.

Pilotrichella pulchella Schpr., Zacuapan, Vera Cruz, Mexico, Nov., 1918, leg. C. A. Purpus, det. and com. E.B.B.

Orthostichopsis tetragona (Sw.) Broth., near Guapo, Trinidad, W. Indies, Dec., 1929, P.W.M.R., det. H.N.D. "This will have to stand in future as *O. tetragona* (Hedw.) Broth.," H.N.D.

Papillaria appressa (Hornsch.) Jaeg., Maraval Valley, Trinidad, B. W. Indies, Feb., 1930, E.A.

P. filipendula (H. fil. & Wils.) Jaeg., Puketitiri, H.B., New Zealand, Sep., 1930, E.A.H.

P. flexicaulis (Tayl.) Jaeg., Puketitiri, H.B., New Zealand, Sep., 1930, E.A.H. "This is *P. filipendula* (H. f. & W.) Jaeg.," H.N.D.

P. crocea (Hampe) Jaeg., Puketitiri, H.B., New Zealand, Sep., 1930, E.A.H.

Meteorium teres Mitt., Zacuapan, Vera Cruz., Mexico, Dec., 1918, leg. C. A. Purpus, det. and com. E.B.B.

M. patulum Sw. (*Meteoropsis patula* (Sw.) Broth.), Castle-ton Gardens, Jamaica, and Maraval Valley, Trinidad, B. W. Indies, Feb., 1930, E.A.

Neckera hymenodonta C.M., Ngahere, Puketitiri, H.B., New Zealand, Sept., 1930, E.A.H.

N. disticha Hedw. (*Neckeropsis disticha* (Hedw.) Fleisch.), Bog Walk (Boca d'Agua), Jamaica, B. W. Indies, Feb., 1930, E.A.

Neckeropsis undulata (Hedw.), Broth., Maraval Valley, Trinidad, B. W. Indies, Feb., 1930, c.fr., E.A.

Homalia glabella (Sw.) Mitt., Zacuapan, Vera Cruz, Mexico, Nov.-Dec., 1918, leg. C. A. Purpus, det. and com. E.B.B.

Camptochaete ramulosa (Mitt.) Jaeg., Ngahere, Pukatitiri, H.B., New Zealand, Sept., 1930, E.A.H.

C. angustata (Mitt.) Jaeg., Otaiio River, S. Canterbury, New Zealand, 1926, misit Mrs. J. Meiklejohn, com. D.L., det. H.N.D.

C. arbuscula (Hook.) Jaeg., var. *deflexa* (Wils.) Jaeg. (*C. deflexa* (Wils.) Jaeg.), Lake Wakatipu, New Zealand, 1918, misit Mrs. J. Meiklejohn, com. D.L., det. H.N.D.

Lembophyllum clandestinum (Hook. fil. & Wils.) Lindb., Kiwi, Wairoa, H.B., New Zealand, 1929, E.A.H.; Otaiio River, S. Canterbury, New Zealand, 1926, misit Mrs. J. Meiklejohn, com. D.L., det. H.N.D.

L. divulgum (H. f. & W.) Lindb., Port Hills, Lyttleton, Canterbury, New Zealand, April, 1927, misit Mrs. J. Meiklejohn com. D.L., det. H.N.D.

Echinodium hispidum (H. f. & W.) Jaeg., Ngahere, Puketitiri, H.B., New Zealand, Sep., 1930, E.A.H.; Marlborough, S. Isl., New Zealand, no date, leg. J. H. McMahon, com. E.A.H.

Cyclodictyon humectatum Card., Zacuapan, Mexico, Dec., 1918, leg. C. A. Purpus, det. and com. E.B.B.

Hypopterygium concinnum (Hook.) Brid., (*Lopidium concinnum* (Hook.) Fleisch.), Marlborough, S. Isl., New Zealand, 1924, leg. J. H. McMahon, com. E.A.H.

H. Novae-Seelandiae C.M., var. *nudicaule* Dixon, Ngahere, Puketitiri, H.B., New Zealand, Sept., 1930, E.A.H.

H. setigerum P. Beauv., Harris Bush, Marlborough, New Zealand, Nov., 1921, leg. J. H. McMahon, com. E.A.H.; North Auckland, New Zealand, 1930, leg. H. B. Matthews, com. E.A.H.

H. filiculaeforme (Hedw.) Brid., North Auckland, New Zealand, 1930, leg. H. B. Matthews, com. E.A.H.

Cyathophorum bulbosum Hedw., Waikaremoana, New Zealand, Jan., 1929, E.A.H.; Wairoa, H.B., New Zealand, Jan., 1930, E.A.H.

Helicodontium capillare (Sw.) Jaeg., Bog Walk (Boca d'Agua), Jamaica, B. W. Indies, Feb., 1930, c.fr., E.A. "This will now have to stand as *H. capillare* (Hedw.) Jaeg.," H.N.D.

Haplocladium microphyllum (Sw.) Broth. (*Thuidium gracile* B.E.), Cass, W. Virginia, U.S.A., July, 1928, F.W.G.

Thuidium sparsum (H. fil. & Wils.) Jaeg. (*Thuidiopsis sparsa* Broth.), Kiwi, Wairoa, New Zealand, 1930, E.A.H.; Lake Wakatipu, New Zealand, 1911 and 1917, leg. J. Meiklejohn com. D.L., det. H.N.D.

Campylium decussatum (H. f. & W.), (*Cratoneurosis decussata* (H. f. & W.) Fleisch.), Lake Wakatipu, New Zealand, 1910, 1911, and 1914, leg. J. Meiklejohn, com. D.L.

C. relaxum (H. f. & W.), (*Cratoneurosis relaxa* (H. f. & W.) Fleisch.), Lake Wakatipu, New Zealand, 1918, leg. J. Meiklejohn, com. D.L.; Port Hills, Lyttleton, New Zealand, April, 1927, leg. A. and J. Meiklejohn, com. D.L., det. H.N.D.

Amblystegium orthocladon (P. Beauv.) Kindb., Onoto, W. Virginia, U.S.A., June, 1930, F.W.G. "Brotherus gives, as the authors of this species, (Brid.) Card," A.S. "The correct citation is as above. Bridel used the name, but it dates from Palisot Beauvais, a good deal earlier. Paris cites Jaeger, but this is quite incorrect. The combination appears to have been first made by Kindberg in Macoun & Kindberg, Cat, of

Canadian Mosses, 1922. Brotherus overlooked this, but found Cardot's use of it. It is considered by most authors as a var. or at most a subspecies of *A. varium*," H.N.D.

Drepanocladus brevifolius (Lindb.) Warnst., Gaasefjord, King Oscar land, Arct. N. America, Aug., 1901, leg. H. G. Simmons, det. N. Bryhn, com. J.L. ex herb. Univ. Osloensis.

Eurhynchium circinatum B. & S. (*Scorpiurium circinatum* (Brid.) Fleisch. & Loeske), Ponta Delgada, São Miguel, Azores, March, 1930, E.A.

Brachythecium stereopoma (Spr.) Jaeg., Bog Walk (Boca d'Agua), Jamaica, B. W. Indies, Feb., 1930, E.A.

Bryhnia Novae-Angliae (Sull. & Lesq.) Grout, Mt. Royal, Montreal, Canada, Aug., 1930, leg. H. Dupret, com. P.G.M.R. "Some *Brachythecium rivulare* is present in the gathering," P.G.M.R. "As the two may sometimes be rather alike, it may be pointed out that the *Bryhnia* has the cells (in the branch leaves particularly) short, and frequently more or less papillose," H.N.D.

Cirriphyllum Boscii (Schwaegr.) Grout, Lewisburg, W. Virginia, U.S.A., Sept., 1927, G.F.W.

Entodon cladorrhizans (Hedw.) C.M., Cold Run, and Extract Plant, Cass, W. Virginia, Nov., 1927, F.W.G. "Moenkemeyer in his 'Laubmoose Europas' (1927) p. 850, makes this species to include *E. Schleicheri* Broth.," A.S. "This is the true *E. cladorrhizans* as distinct from *E. Schleicheri*, according to Limpricht. The present plant grows on wood, and the capsule has an annulus," W.E.N.

Acroporium pungens (Sw.) Mitt., Grand Etang, Grenada, W. Indies, Aug., 1929, P.W.M.R.

Hypnum curvifolium Hedw., Dunmore, and Alderson, W. Virginia, U.S.A., June, 1928, and Spring, 1929, F.W.G.

H. revolutum (Mitt.) Lindb., var. *subjulaceum* Bryhn, Hevhestberget, North Devon, Arct. N. America, July, 1902, leg. H. G. Simmons, com. J.L., ex herb. Univ. Osloensis.

Catherina angustata Brid., Cass, W. Virginia, U.S.A., Feb., 1924, F.W.G.

Polytrichum tortile (Sw.) Brid., Blanchisseuse Valley, Trinidad, B. W. Indies, Feb., 1930. c.fr., E.A. "This should be cited as *Polytrich. tortile* Sw., or *Pogonatum tortile* (Sw.) P. Beauv. P. Beauvais made the combination before Bridel," H.N.D.

Polytrichum alpinum L., Admiralty Bay, South Shetlands, Nov., 1925, leg. A. G. Bennett, det. and com. H.N.D.

HEPATICS.

EUROPEAN (British and Continental).

Riccia Beyrichiana Hampe, Askintinny, Arklow Head (I. 20), Aug., 1929, leg. A.W.S., com. M.B.

R. glauca L., Laceby (54), Nov., 1930, G.H.A. "This is *R. sorocarpa*, with fronds sharply furrowed above," H.H.K.

R. sorocarpa Bisch., Glenasmole, Dublin (I. 21*), Sept., 1930, leg., A.W.S., com. M.B. ; also, Clifton Down, Bristol (34), Jan., 1931, Idris and D.A.J.

R. fluitans L., amongst *acorus*, Frencham Pond (17), Aug., 1926, E.C.W. ; "Berberis Pond," Kew Gardens (17), Oct., 1923, C.V.B.M. ; Rheinland, June, 1926, A. Schumacher.

Ricciocarpus natans (L.) Corda, Basingstoke Canal, near Odiham (12), Jan., 1924, C.V.B.M. ; Nettleton (54), April, 1930, G.H.A.

Grimaldia fragrans Corda, Walls, near Crespera, Switz., Feb., 1925, P.G.M.R.

Marchantia polymorpha L., Bergisches Land, 1924, H.A. ; forma *aquatica*, submerged in pool, Shapwick (6), Aug., 1930, W.W.

Aneura latifrons Lindb., decaying log. Braedownie, Clova (90*), June, 1930, H.H.K.

Metzgeria conjugata Lindb., Rheinland, 1926, A. Schumacher.

M. pubescens (Schrank.) Raddi, Nant-y-Frith (50), Aug., 1913, D.A.J., com. E.C.W.

Pallavicinia Lyellii (Hook.) Gray, Harrison's Rocks, Oct., 1930, W.E.N., H.H.K., D.A.J., com. W.E.N. and D.A.J.

Moerckia Blyttii (Moerk.) Brocken., above Loch Kander, Glen Callater (92), July, 1930, D.A.J., H.H.K., J.B.D., com. J.B.D.

Pellia epiphylla (L.) Corda, Morden Heath (9*), April, 1930, E.A.

P. Fabbroniana Raddi., near Hexham (67*), Oct., 1930, E.M.L. ; var. *lorea* Nees, associated with the type, Sept., 1929, M.B. "In this there are thickened bands in the midrib of the frond, so it cannot be *P. Fabbroniana*. Perhaps the associated plant was the dioicous *P. Neesiana* and not *P. Fabbroniana*," H.H.K.

Blasia pusilla L. Westburnhope, Hexhamshire (67), Oct., 1930, E.M.L. ; Rheinland, Aug., 1929, A. Schumacher.

Petallophyllum Ralfsii (Wils.) Gottsche, N. Bull., Dublin (I. 21), Oct., 1930, M.B.

Fossombronia pusilla (L.) Dum., Howth Demesne (I. 21), Sept., 1930, M.B.

F. Wondraczeki (Corda.) Dum., Rheinland, Sept., 1929, A. Schumacher.

Gymnomitrium concinatum Corda, Cruach Ardran (88), July, 1924, J.R.L. ; above Zermatt, 11,400 feet, Aug., 1923, C.V.B.M. "This is *G. corallioides*; the branches are compressed, and the leaf-cuticle quite smooth," H.H.K.

G. obtusum Lindb., Llyn Llagi (49), April, 1930, A.W.; near Humshaugh (67*), Nov., 1930, E.M.L.

G. crenulatum Gottsche, Arenig Fawr, 2,000 feet (48), March 1929, A.W.

G. varians (Lindb.) Schiffn., summit of Ben Lawers (88), Aug., 1929, W.W.

G. alpinum (Gottsche) Schiffn., rocks near Loch Kander (92), July, 1930, H.H.K. ; Harrison's Stickle, Langdale (69), June, 1916, leg. A.W. and J.A.W., com. W.G.T. and A.W.

Marsupella condensata (Ångstr.) Kaal., Cairngorm (96*), July, 1930, H.H.K., and D.A.J., com. H.H.K. and D.A.J.

M. Boeckii (Aust.) Lindb., (= *M. Stableri* Spruce), rocks above Loch Kander, Glen Callater (92), July, 1930, H.H.K., J.B.D., and D.A.J., com. H.H.K., J.B.D., and D.A.J.

M. sparsifolia (Lindb.) Dum., on rocks by spring, 3,500 feet, Lochnagar (92), July, 1930, D.A.J. and H.H.K., com. H.H.K.

M. Funckii (Web. et Mohr.) Dum., Rheinland, Nov., 1930, A. Schumacher.

M. Pearsoni Schiffn., Cader Idris (48), Aug., 1922, C.V.B.M.

M. sphacelata (Girs.) Lindb., Beddgelert (49), April, 1923, D.A.J., com. E.C.W. ; Lochnagar (92), July, 1930, H.H.K., J.B.D., D.A.J., com. J.B.D. and D.A.J.

Alicularia scalaris (Schrad.) Corda, Bergisches Land, Dec., 1926, A. Schumacher.

A. compressa (Hook.) Nees, Coronation Plantation (I. 20), May, 1930, M.B. ; Snowdon, (49) Sept., 1921, C.V.B.M. ; in stream, Coire Leiss, Ben Nevis (97), very lax-leaved and apparently without underleaves, June, 1924, C.V.B.M.

“The underleaves of *A. compressa* are small and inconspicuous. They are present here near apex of stem,” H.H.K. ; var. *rigida* Lindb., Tyndrum (88), Aug., 1929, W.W.; var. *gigantea*, Bowfell (69), leg. J.A.W. and A.W., Sept., 1908, com. W.G.T. and A.W.

Aplozia crenulata (Sm.), Dum., Ordley, Hexhamshire (67*), Nov., 1930, E.M.L. “This is var. *gracillima*; the marginal row of cells do not form a distinct border even in the leaves below the perianth, and the calyptra is rose-coloured,” H.H.K.

A. sphaerocarpa Dum., Ellerbeck, Goathland (62), May, 1930, W.B. “Mr. Bellerby’s plant is *Alicularia compressa*,” H.H.K. ; West Dipton Dene, Hexham (67*), Oct., 1930, E.M.L.

Jamesoniella Carringtoni (Balf.) Schiffn., Ben Chuirm (88), Aug., 1929, D.A.J.

Anastrophyllum Donianum (Hook.) Steph., Ben Chuirm (88), Aug., 1929, D.A.J., A.M.S., and C.V.B.M., com. D.A.J. and C.V.B.M.

Gymnocolea inflata (Huds.) Dum., near Otterburn (67), Aug., 1930, E.M.L.

Lophozia turbinata (Raddi.) Steph., Reigate Hill (17), April, 1928, E.C.W.

L. badensis (Gotts.) Schiffn., Freshfield (59), June, 1912, W.G.T.

L. Schultzei (Nees) Schiffn., var. *laxa* Schiffn., Flordon (27), Oct., 1927, H.H.K. and W.E.N.

L. bicrenata (Schmid.) Dum., siliceous moorland, Washburndale (64), May, 1930, W.H.B.; Morden Heath (9*), April, 1930, E.A.

L. Hatcheri (Evans) Steph., Ulleswater (70), Sept., 1930, E.M.L.

L. Floerkii (Web. et Mohr.) Schiffn., rocks, Arthog Quarry (48), March, 1916, D.A.J. and P.G.M.R.

L. attenuata (Mart.) Dum., Glen Beag (89), July, 1930, W.Y. ; Dipton Dene, Hexham (67), Oct., 1930, E.M.L.

Sphenolobus saxicolus (Schrad.) Steph., above Green Loch, Glenmore Forest (96), July, 1930, H.H.K. and D.A.J.

S. minutus (Crantz.) Steph., var. *cuspidatus* Kaal., Kanderstag, Ct. Berne, Switz., July, 1927, P.G.M.R.

S. politus (Nees) Steph., Glas Maol (92), July, 1930, H.H.K. ; Meal Odhar (92), July, 1930, W.Y.

Anastrepta orcadensis (Hook.) Schiffn., Glen Doll, Clova (90), June, 1930, W.Y.; Glen Lochay (88), July, 1929, A.W.

Plagiochila asplenoides (L.) Dum., var. *minor* Lindenb., on stone, Broomfield (5), Feb., 1930, W.W.; also, forma *laxa* Nees, Buckstone (34*), Aug., 1930, E.A.

P. spinulosa (Dicks.) Dum., Porlock (5), July, 1929, E.C.W.; also, Eskdale (70), June, 1929, W.G.T.

P. punctata Tayl., Eskdale (70), June, 1929, W.G.T.

Pedinophyllum interruptum (Nees) Pears., Bourguillon, Fribourg, Switz., May, 1923, P.G.M.R.

Leptoscyphus Taylori (Hook.) Mitt., Ben Chuirn (88), Aug., 1929, C.V.B.M.

L. anomalus (Hook.) Mitt., Rheinland, April, 1929, A. Schumacher.

Lophocolea heterophylla (Schrad.) Dum., Corbridge-on-Tyne (67*), May, 1929, E.M.L.; also, Ost-Eifel, March, 1925, leg. H.A., det. E.B.

L. fragrans Moris et de Not., Pease Dean, Berwick (81), March, 1930, J.B.D.

Chiloscyphus polyanthus (L.) Corda, var. *fragilis* (Roth.) K. Müll., Canlochan (90), July, 1930, D.A.J.; also, Meal Odhar (92), July, 1930, W.Y.; and var. *rivularis* (Schrad.) Nees, Ponsanooth (1), Aug., 1926, F.R.

Saccogyna viticulosa (Sm.) Dum., Lizard (1), May, 1930, W.E.N.

Cephalozia Loitlesbergeri Schiffn., Clova, Forfar (90*), June, 1930, D.A.J. and H.H.K.; also, Braemar (92), July, 1930, H.H.K.

C. media Lindb., Ceunant Llenyrch (48), Nov., 1920, D.A.J., com. E.C.W.; also, Rheinland, Aug., 1930, A. Schumacher. "This is *C. Loitlesbergeri*; perianths are scarce, but there are plenty of bracts, and these are quite different from those of *C. media*; also, this plant is monoicous," H.H.K.

C. macrostachya Kaal., Ambersham Common (13), Sept., 1910, W.E.N.

C. leucantha Spruce, Ceunant Llenyrch (48), Nov., 1920, D.A.J., com. E.C.W.; Glen Doll, Clova (90), June, 1930, W.Y. "The leaf cells are too large for *C. leucantha*. There are plenty of perianths and the lobes of bracts are entire. It is a small *C. media*," H.H.K.

C. Francisci (Hook.) Dum., Bawsey Wood, King's Lynn (28), June, 1930, H.H.K.

C. fluitans (Nees) Spruce, Liffey Head Bridge (I. 20), June, 1929, M.B.

Nowellia curvifolia (Dicks.) Mitt., Naddle Forest (69), May, 1909, A.W.

Cepholoziella Starkii (Funk.) Schiffn., Lymphstone Common (3), March, 1929, P.G.M.R.; Vendée, France, March, 1926, J.C.; Rheinland, Jan., 1930, A. Schumacher.

C. Hampeana (Nees) Schiffn., Glen Doll, Clova (90*), June, 1930, H.H.K.; Eskdale, (70) June, 1929, W.G.T. "This is a small *Cephalozia media*. It is dioicous, and mostly consists of male plants, but there are a few perianths in some packets," H.H.K.

C. striatula (Jens.) Douin., Hole of Horcum (62*), Sept., 1930, H.H.K.

C. Massalongi (Spruce) K. Müll., Carbis Bay (1), Nov., 1919, H.H.K. and W.E.N.; also May, 1930, W.E.N., H.H.K. and J.B.D.

C. Nicholsoni Douin et Schiffn., Carbis Bay (1), May, 1930, W.E.N., H.H.K., J.D.B.

C. dentata (Raddi.) K. Müll., Lizard Down (1), April, 1924, H.H.K. and W.E.N.

Odontoschisma sphagni (Dicks.) Dum., Rheinland, Aug., 1930, A. Schumacher.

O. denudatum (Nees) Dum., Harrison's Rocks (14), Oct., 1930, W.E.N., H.H.K., and D.A.J.

Adelanthus decipiens (Hook.) Mitt., Artro Valley, Harlech (48), Oct., 1921, D.A.J., com. E.C.W.

Calypogeia Trichomanis (L.) Corda, var. *aquatica* Ingham, Liffey Head Bridge (I. 20), May, 1929, M.B. "The var. *aquatica* is not given in the 2nd Edition of the Handbook, so this plant is best described as an aquatic form of *C. Trichomanis*."

C. Neesiana (Carr. et Mass.) Mass., Harrison's Rocks (14), Oct., 1930, H.H.K., D.A.J., and W.E.N.

Bazzania trilobata (L.) Gray, Derrycunihy, Killarney (I. 2), June, 1930, M.B.; Thirlmere (70), May, 1930, E.M.L.

B. triangularis Pears., Ben Narnain (98), April, 1930, J.R.L.

Lepidozia pinnata (Hook.) Dum., Artro Wood, Harlech (48), Aug., 1915, W.W.

L. reptans (L.) Dum., Vendée, France, Nov., 1926, J.C.; var. *julacea* Nees, Buckstone (34), Aug., 1930, E.A.

L. Pearsoni Spruce, Holme Moss (63), March, 1928, W.H.B. ; Inversnaid (86*), May, 1930, J.R.L.

Blepharostoma trichophyllum Dum., Lawers Burn (88), July, 1926, J.R.L.

Chandonanthus setiformis (Ehrh.) Lindb., Glen Doll, Clova (90), June, 1930, W.Y. and J.B.D., com. W.Y. and J.B.D. ; Cairngorm (96), July, 1929, C.V.B.M. ; var. *alpinus* (Hook.) Kaal., Loch Brandy (90), June, 1930, D.A.J. and W.Y., com. D.A.J., and W.Y. ; Glen Doll, Clova (90), June, 1930, W.Y. "Mr. Young's specimens from Glen Doll best represent the variety. The others from Loch Brandy I should name type, but the plant varies much in size, and it is not always easy to draw the line between type and variety," H.H.K. ; Cheviot (68), Sept., 1930, J.B.D. and E.M.L.

Herberta adunca (Dicks.) Gray, Glen Lochay (88), Aug., 1929, A.W.

H. Hutchinsiae (Gottsche.) Evans, Llyn Llagi, 1,300 feet, (49), April, 1930, A.W. ; Ben Chuirm (88), Aug., 1929, C.V.B.M. ; "large form," Loch Maree (105*), April, 1926, C.V.B.M. ; "small form," Loch Toll an lochain an Teallach (105), June, 1924, C.V.B.M.

Mastigophora Woodsii (Hook.) Nees, Ben Chuirm (88), Aug., 1929, D.A.J., A.M.S., C.V.B.M., com. D.A.J. and C.V.B.M.

Ptilidium ciliare Hampe., Siegtal, Rheinland, Dec., 1929, A. Schumacher.

P. pulcherrimum (Web.) Hampe., on birch, Morrone Hill, Braemar (92), July, 1930, H.H.K. ; Glen Doll, Clova (90*), June, 1930, W.Y. ; Bachnagairn, Forfar (90*), June, 1930, D.A.J.

Trichocolea tomentella (Ehrh.) Dum., Rheinland, 1926, A. Schumacher.

Diplophyllum gymnostomophilum Kaal., Glen Beag, Glen Shee (89), July, 1930, H.H.K., W.Y., J.B.D., D.A.J., com. H.H.K., and D.A.J.

Scapania compacta (Roth.) Dum., near Humshaugh (67*), Nov., 1930, E.M.L.

S. subalpina (Nees) Dum., Canlochan (90), July, 1930, H.H.K.

S. aequiloba (Schwaegr.) Dum., Glen Beag (89), July, 1930, W.Y.

S. aspera Bernet, Boxhill (17), Feb., 1929, E.C.W. ; Llanferres (51), June, 1930, W.G.T.

S. nemorosa (L.) Dum., Bergisches Land, July, 1929, A. Schumacher; var. *alata* (Kaal.) K. Müll., Bettws-y-Coed (49*), Oct., 1930, W.G.T. "I agree with Mr. Travis in naming this var. *alata*. The commissure is often keeled," H.H.K.

S. ornithopodioides (With.) Pears., Ben Chuirn (88), Aug., 1929, D.A.J., A.M.S., C.V.B.M.

S. dentata Dum., Westburnhope, Hexhamshire (67), Oct., 1930, E.M.L.

S. undulata (L.) Dum., Wotton (17), April, 1926, E.C.W.; Stoborough, near Wareham (9*), April, 1930, W.R.S., com. H.H.K.

S. uliginosa (Swartz.) Dum., Glas Maol (90), July, 1930, W.Y.

S. obliqua (Arnell.) Schiffn., Ben Lawers, (88) July, 1929, J.B.D.; Glen Fee, Clova (90*), June, 1930, H.H.K., D.A.J., J.B.D. "Buch in his recent work 'Die Scapanien Nord europas und Siberiens, Systematisches Teil, 1928,' considers *S. obliqua* to be a form of *S. uliginosa*. I have always found a difficulty in distinguishing between these two," H.H.K.

S. paludosa K. Müll., Glas Maol (90), July, 1930, W.Y.; Lochnagar (92), July, 1930, H.H.K., D.A.J., J.B.D.

S. irrigua (Nees) Dum., West Dipton Dene, Hexham (67), Oct., 1930, E.M.L.

S. curta (Mart.) Dum., Rheinland, Nov., 1929, A. Schumacher.

S. umbrosa (Schrad.) Dum., Glenesk, Clova (90), June, 1930 W.Y.

Radula Lindbergiana Gottsche., var. *germana* Jack., Meall-na-Saone (88), April, 1920, A.W.

Pleurozia purpurea Lindb., Ben Narnain (98), July, 1925, J.R.L.; Creag Mhor (88), Aug., 1929, J.R.L.; bog near Bridge of Orchy (98), June, 1924, C.V.B.M.

Madotheca laevigata (Schrad.) Dum., Ballagan (86), April, 1923, J.R.L.; var. *Thuja* Nees, Boxhill (17), Feb., 1929, E.C.W.

M. Thuja (Dicks.) Dum., Lynmouth (4), May, 1930, H.H.K. and J.B.D.

M. Cordeana Dum., Fin Glen (86), May, 1926, J.R.L.; Pease Dean (81), March, 1930, J.B.D.

M. Porella (Dicks.) Nees, Altadore Glen (I. 20), Oct., 1929, M.B.; Vendée, France, Sept., 1929, J.C.

Lejeunea patens Lindb., Whistlefield (99), June, 1929, J.R.L.

Microlejeunea ulicina (Tayl.) Evans, on oak and sycamore, Bough Fell (65), Aug., 1927, W.H.B. ; Deerleap Woods (17) April, 1927, E.C.W. ; Vendée, France, Jan., 1922, J.C.

Marchesinia Mackaii (Hook.) Gray, Cheddar Rocks (6), May, 1928, D.A.J.

Jubula Hutchinsiae (Hook.) Dum., Devil's Glen (I. 20), Oct., 1929, M.B.

Frullania germana Tayl., Cromaglown, Killarney (I. 2), Aug., 1924, P.G.M.R.

F. microphylla (Gottsche.) Pears., Lizard (1), May, 1930, W.E.N.

F. fragilifolia Tayl., Luss (99), June, 1930, J.R.L.

Anthoceros punctatus L., Llanfarian (46), July, 1922, C.V.B.M. ; Laceby (54*), Nov., 1930, G.H.A. "Correctly named ; this is the form known as *A. crispulus*," H.H.K.

A. laevis L., Coldharbour (17), Sept., 1927, E.C.W. ; Glenasmole (I. 21*), Sept., 1930, M.B.

NON-EUROPEAN, (including specimens of European species from Countries outside Europe).

Reboulia hemisphaerica (L.) Raddi., Hamilton, Bermuda, Feb., 1930, E.A.

Marchantia chenopoda L., Martinique, F.W.I., Feb., 1930, E.A.

M. inflexa M. & N., c.fr., Martinique, F.W.I., Feb., 1930, E.A.

M. linearis L. et L., Bog Walk (= Boca d'Agua), Jamaica, B.W.I., Feb., 1930, E.A.

Aneura portoricensis St., Martinique, F.W.I., Feb, 1930, E.A.

A. pinnatifida Dum., Blanchisseuse Valley, Trinidad, B.W.I. Feb., 1930, E.A.

Symphyogena Hymenophyllum (Hook.) N. et N., Otago, New Zealand, Feb., 1930, leg. Mrs. J. Meiklejohn, com. D.L.

S. Brongniartii Mont., Blanchisseuse Valley, Trinidad, B.W.I., Feb., 1930, E.A.

Metzgeria chilensis St., Lake Wakatipu, New Zealand, 1913, leg. J. Meiklejohn, com. D.L.

Fossombronia caespitiformis de Not., Ponta Delgada, São Miguel, Azores, March, 1930, E.A.

Jamesoniella colorata (Lehm.,) Spr., Falkland Isles, 1923, leg. Y. Hamilton, com. D.L.

Plagiochila arbuscula (Brid.) L. et. L., Greymouth, New Zealand, 1925, leg. Mrs. J. Meiklejohn, com. D.L.

P. Reckettiana St., Lake Wakatipu, New Zealand, 1911, leg. J. Meiklejohn, com. D.L.

P. Ferdinandi Mülleri St., Lake Wakatipu, New Zealand, 1910, leg. J. Meiklejohn, com. D.L.

P. Howlana St., Lake Wakatipu, New Zealand, 1914, leg. J. Meiklejohn, com. D.L.

P. Lyallii Mitt., Lake Wakatipu, New Zealand, 1911, leg. J. Meiklejohn, com. D.L.

P. squarrosa St., Lake Wakatipu, New Zealand, 1911, leg. J. Meiklejohn, com. D.L.

P. Volkensii St., near Mt. Kenya, E. Africa, 1910, leg. H. V. Allan, com. D.L.

Chiloscyphus conistipulus St., Lake Wakatipu, New Zealand, 1910, leg. J. Meiklejohn, com. D.L.

C. triacanthus H. et T., Lake Wakatipu, New Zealand, 1910, leg. J. Meiklejohn, com. D.L.

Herberta juniperinum (Sw.) Dum., Newcastle, Jamaica, 1923, leg. N. Morison, com. D.L.; Martinique, F.W.I., Feb., 1930, E.A., (previously known only from Jamaica).

Omphalanthus debilis (Lehm.) Ldbg., Martinique, F.W.I. Feb., 1930, E.A.

Phragmicoma Bongardiana Ldbg., Bog Walk (= Boca d'Agua) Jamaica, B.W.I., Feb., 1930, E.A.

Lepidozia concinna Col., Lake Wakatipu, New Zealand, 1909, leg. J. Meiklejohn, com. D.L.

Radula complanata (L.) Dum., Ponta Delgada, São Miguel, Azores, March, 1930, E.A.

Madotheca queenslandica St., Kikuyu, B.E. Africa, 1910, leg. H. V. Allan, com. D.L.

M. Stangeri L. et G., Lake Wakatipu, New Zealand, 1910, leg. J. Meiklejohn, com. D.L.

Lejeunea flava Sw., Martinique, F.W.I., Feb., 1930, E.A.

L. contractiloba Evans, Sandford, Florida, Aug., 1924, leg. S. Rapp., com. P.G.M.R.

Eusmolejeunea trifaria (Nees) Schiffn., Castletown Gardens, Jamaica, B.W.I., Feb., 1930, E.A.

E. opaca St., Blanchisseuse Valley, Trinidad, B.W.I., Feb., 1930, E.A.

Eulejeunea Sinclairii St., Lake Wakatipu, New Zealand, 1909, leg. J. Meiklejohn, com. D.L.

Ceratolejeunea spinosa Spr., Martinique, F.W.I., Feb., 1930, E.A.

Taxilejeunea martinicensis Lb., Blanchisseuse Valley, Trinidad, B.W.I., Feb., 1930, E.A.

Mastigolejeunea auriculata Spr., near Kingstown, Jamaica, B.W.I., Feb., 1930, E.A.

Frullania falciloba Tayl., Lake Wakapitu, New Zealand, 1916, leg. J. Meiklejohn, com. D.L.

F. spinifera H. et T., Lake Wakatipu, New Zealand, 1916, leg., J. Meiklejohn, com. D.L.

F. dilatata (L.) Dum., Ponta Delgada, São Miguel, Azores, March, 1930, E.A.

Anthoceros Husnoti St., Ponta Delgada, São Miguel, Azores, March, 1930, E.A.

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(This list also contains some works published in 1929. An asterisk (*) denotes that a copy of the work has been presented to the Library.)

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I would like to take this opportunity of thanking all those who have kindly informed me of new works, and also those who have generously presented copies of works to the Library. A number of reprints are presented from time to time which do not appear in the bibliography, as they do not happen to come into the year concerned. Finally I would repeat my request that bryologists should notify me as early as they can of new publications in order that they may appear in the bibliography of the current year.

LESLIE B. C. TROTTER.

March 31st, 1931.

OBITUARY.

WILFRED ROBINSON.
(1885-1930).

By the death of Professor Wilfred Robinson on March 7th, the Bryological Society loses a member, who, although he had not been able to take an active part in its doings, gave it his sympathetic support. He had inherited a keen interest in field-work from his father. He was a most active worker, an efficient and inspiring teacher and did not spare himself in trying to carry out his ideals. His uprightness and the charm of his personality endeared him to his friends.

He was born at Hull in 1885, the eldest son of James Fraser Robinson, author of the Flora of the East Riding of Yorkshire. After taking a London Science degree with honours in Botany, he taught Botany and Chemistry at the Hull Technical College and at the Friends' School at Penketh near Warrington. After four years of teaching he went to the Manchester University where he obtained the M.Sc. degree, and was appointed on the Staff of the Department of Botany, subsequently becoming Senior Lecturer. He was awarded the D.Sc. degree by merit of his researches.

His investigations at Manchester were mainly connected with fungal diseases, of which the "Rust" of Hollyhocks, Wilt disease of Asters, and the Crown Gall of Chrysanthemums may be mentioned.

He did not confine his interest to Fungi, his knowledge of Chemistry gave him a leaning towards experimental work connected with nutrition and its effects on plant organisms, and after his appointment to the Chair of Botany at Aberystwyth in 1926 he enthusiastically started physiological work on Seaweeds. The promising results of his experimental work at Aberystwyth were communicated in a paper and read before the Manchester Literary and Philosophical Society a short time before his death.

G. W.