



The British Bryological Society





Report for 1925

VOL. 1. PART 3.



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**The British
Bryological Society**



REPORT for 1925

VOL. 1.

PART 3.

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The British Bryological Society.**

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Somerset.
Miss Alice G. Young, 194, Holderhurst Road, Bournemouth.
Mr. William Young, Fairview, Kirkaldy.

Mosses and Hepatics sent for Distribution.

1924—1925.

	<i>Sphagna</i>	<i>True Mosses</i>	<i>Hepatics</i>	<i>Total</i>
Mr. G. H. Allison ...	...	49	3	52
Herr H. Andres (Germany) ...	...	115	...	115
Miss E. Armitage ...	72	265	98	435
Mr. H. Beesley ...	12	69	40	121
Mr. W. Bellerby ...	...	98	12	110
Rev. C. H. Binstead ...	...	765	...	765
Mr. D. B. Bradshaw ...	...	37	23	60
Prof. V. F. Brotherus (Finland) ...	69	396	25	490
Mr. H. Van den Broeck (Belgium) ...	259	149	...	408
Mr. W. H. Burrell ...	...	71	23	94
Mr. D. G. Catcheside ...	125	112	39	306
Mr. E. B. Chamberlain (the late) (U.S.A.) ...	...	174	...	174
Mr. J. Charrier (France) ...	6	353	76	435
Miss C. A. Cooper ...	...	17	...	17
Mr. H. N. Dixon ...	...	453	...	453
Mr. J. B. Duncan ...	...	379	72	451
Dr. A. W. Evans ...	...	...	55	55
Mr. J. Groves ...	...	51	...	51
Rev. H. H. Harvey ...	...	2	1	3
Miss A. G. Hebson ...	...	10	...	10
Mr. J. Hennen (Belgium) ...	226	127	...	353
Mr. H. A. Hyde ...	...	40	30	70
Rev. R. Jackett ...	...	519	80	599
Mr. D. A. Jones ...	...	352	204	556
Mr. H. H. Knight ...	...	60	33	93
Mr. Johannes Lid (Norway) ...	10	28	10	48
Rev. D. Lillie ...	155	...	...	155
Mr. J. L. O'Loughlin ...	101	119	39	259
Mr. St. John Marriott ...	...	49	16	65
Rev. W. R. Megaw ...	...	42	...	42
Mr. F. E. Milsom ...	...	40	75	115
Mr. H. W. Monckton ...	46	23	...	69
Mr. W. E. Nicholson ...	...	66	65	131
Dr. L. H. Pegler ...	...	94	...	94
Rev. Dr. P. G. M. Rhodes ...	...	165	76	241
Mr. E. A. Richards ...	...	101	...	101

	<i>Sphagna</i>	<i>True Mosses</i>	<i>Hepatics</i>	<i>Total</i>
Mr. P. W. M. Richards ...	42	60	35	137
Mr. F. Rilstone ...	11	30	...	41
Miss L. I. Scott ...	—	32	...	32
Mr. W. R. Sherrin ...	48	46	...	94
Mr. R. W. Smitham ...	106	...	...	106
Mr. H. Stansfield ...	...	34	...	34
Mr. Carl Stenholm (Sweden) ...	53	142	31	226
Mr. A. Sutton ...	...	42	...	42
Mr. W. N. Tetley ...	...	72	30	102
Mr. W. G. Travis ...	51	108	36	195
Mr. J. A. Wheldon (the late) per				
Mr. H. J. Wheldon...	288	131	...	419
Mr. A. Wilson ...	...	91	...	91
Miss A. Wyndham ...	...	9	...	9
Miss A. G. Young ...	8	63	...	71
	1688	6280	1227	9195

Referees :

MOSSES—

Sphagnaceæ and Harpidia...	...	Mr. SHERRIN
Andreaeaceæ to Grimmiaceæ	...	Mr. SAVERY
Tortulaceæ to Orthotrichaceæ and European		Mr. NICHOLSON
Schistostegaceæ to Leskeaceæ	...	Mr. JONES.
Hypnaceæ except Harpidia	...	Mr. DUNCAN
Non-European and Referee in Chief	...	Mr. DIXON.

HEPATICS...	...	...	...	...	Mr. KNIGHT
Referee in Chief...	...	...	...	...	Mr. MACVICAR.

Report of Secretary.

In presenting the third Annual Report of the British Bryological Society it is encouraging to mention that the number of members has been maintained in spite of the losses by death, lapse and resignation. The total on roll is 103.

It is with feelings of deep regret that I have to announce the death of Mr. J. A. Wheldon, M.Sc., A.L.S., late Treasurer of our Society. We have lost one of our most genial and able members, ready at all times to give the benefit of his great botanical knowledge. Mr. E. B. Chamberlain, late Secretary-Treasurer of the Sullivant Moss Society, is another well-known bryologist and a member of our Society, who has passed away at a comparatively early age, mourned by all who came in contact with him. I regret, also, to announce the death of Mr. J. H. Crabtree and Mr. Frederick Wright, two members who joined the Society during last year. Partly through the kindness of Mr. H. J. Wheldon, we are able to distribute a portrait of his father. Obituaries at the end of the Report supply further information respecting the life and work of our departed colleagues.

As mentioned by Miss Armitage in the Report of the Annual Meeting, Mr. Sherrin has kindly undertaken to take charge of the books and plants belonging to the Society. In due course members may have the free use of the books and specimens on payment of postage both ways. Any botanical books of interest and duplicates of Mosses and Hepatics will be gladly received by him.

Reference has also been made in the above Report to the compilation of the Bibliography of bryological literature kindly undertaken by Dr. Trotter. It is hoped that members will render every assistance by sending copies and any information that may be of use in order to make this onerous undertaking a complete success.

The second edition of the Student's Handbook of British Hepatics is in the hands of the printer and will be

published in 9 or 12 months at 24/- or 25/- per volume.

All new County Records accompanied by authentic specimens should be sent to Mr. J. B. Duncan (Mosses), Mr. A. Wilson (Hepatics), and Mr. W. R. Sherrin (Sphagna and Harpidia).

Circulating Catalogues will again be issued this year and members are requested to expedite their circulation. There was some delay last year.

During the early months of 1925 a Circular was issued appealing for donations towards the Printing Fund. Sums amounting to £14 14s. 6d. have been received. A list of contributors will be printed in next year's Report.

A copy of Messrs. Dixon & Nicholson's paper on "New Bryophytes" extracted from "The Journal of Botany," May, 1925, is sent to each member with the Report.

Thanks are due to Miss Armitage and Mr. Sutton for their help in reading proofs of Report.

The Distribution, especially that of Mosses, has been exceptionally heavy this year, and the Distributors have been kept busy for many months. Members are very grateful to Messrs. Sutton and Rilstone for the thorough manner in which the work has been done. Mr. Rilstone now retires after acting for several years in that capacity and Mr. Milsom has kindly undertaken to distribute the Hepatics while Mr. Sutton has promised to continue his work with Mosses.

Subscriptions for the year were due on the 1st of January, and should be sent to the treasurer, Mr. J. B. Duncan, 6, Summerhill Terrace, Berwick-on-Tweed.

D. A. JONES,

ROCK HOUSE, HARLECH.

Secretary.

June, 1925.

Report of Distributor (Mosses).

The distribution this year is remarkable not only for the unprecedented number of specimens contributed (more than double the total of last year), but also for the value of a large proportion of the plants sent in. The increase in our foreign membership is doubtless to some extent the cause of this, but it is clearly due also, to the increased activity of our members generally, especially some of the younger ones, and to the generosity of some of the senior members who have so industriously collected for the Society during their holidays at home and abroad. In this connexion we have especially to thank the Rev. C. H. Binstead, Miss E. Armitage, the Rev. Dr. Rhodes, and Messrs. Dixon, Jones, Duncan and Knight. The contributions of new foreign members have been particularly welcome, notably those of Prof. Brotherus and Mr. Carl Stenholm, while our older foreign members, Messrs. Charrier, Hennen and Van den Broeck have kept up, and even increased their zealous activity in the work of the Society. It is sad to think, in view of the untimely death of Mr. Chamberlain, that we have received the last of his valued contributions.

The outstanding feature of this distribution, however, for the older members at any rate, will be the deathbed contribution of the late Mr. J. A. Wheldon. In a letter to me, his son Mr. H. J. Wheldon wrote:—"A day or two before my father died I went through all the material which he had prepared for the distribution, and he selected that which he wanted to send in. He seemed so happy when he knew that he would be 'in at the last' in the the Society's exchange for this year. All the specimens were specially prepared by him during his illness, and it is pathetic that he should have got right up to the stage for wrapping up and dispatching to you. I feel sure that members will be glad to have these last efforts." This evidence of our old friend's deep interest in the Society, right up to the last, will be reverently appreciated.

The specimens sent in were, with very few exceptions, well prepared and packeted, members having for the most

part adopted the suggestions made by Mr. A. Wilson in his report for last year, suggestions that I would strongly endorse as a result of my own experience.

The heavy task of the Referees was, of course, rendered still more onerous by the tremendous increase in the amount of material sent in, and we owe them our special thanks accordingly. It is hoped that it will be found possible, by increasing their numbers or otherwise, to diminish their labours in the future. Members may contribute to this end by adhering more strictly to the rule that not less than three packets of each gathering should be sent, and by taking special care in naming their specimens, and in preparing and packeting them so as to ensure that they are reasonably free from admixture and uniform in composition. Single packets are acceptable only in the case of rare plants and new vice-comital records, or in the case of duplicates from previous distributions which have already passed the Referees.

It would be a great help in the next distribution if members would send in their *desiderata* at an early date, so that the Distributor may have definite information of what is acceptable and be thus in a better position to deal with *oblata* lists subsequently furnished. As the catalogue is now out of print, new members may notify their *desiderata* by means of special lists or general indications of what is required. Such a course will also save members the unnecessary labour of preparing specimens which may not be required.

The results of the distribution are most gratifying as showing the increasing usefulness of the Society.

A. SUTTON.

9, BROOKFIELD PARK,
LONDON, N.W. 5.
June, 1925.

Report of Distributor (Hepatics).

The distribution of 1925 followed the same general plan as in the two previous years. Parcels of Hepatics totalling 1227 specimens were sent in by 26 members and 44 parcels were distributed.

British members will be greatly interested in the specimens of *Gongylanthus ericetorum* contributed by Mr. W. E. Nicholson, whose discovery of the plant in West Cornwall last November has added a new species to the British Hepatic list. Valuable parcels were also received from members abroad.

The general use of rubber bands instead of twine is of great help to the distributor, saving much time and work in the handling of the specimens. A further saving of time would result if all contributors sent, as some already do, a list of their plants with full details as given on the packets. The distributor could then forward the packets to the Referees immediately after checking and stamping, and prepare his card index for the Report from the details given on the lists.

Late parcels cause considerable inconvenience both to Referee and Distributor.

The Society is again greatly indebted to Mr. Knight for his careful and thorough refereeing of the Hepatics. He expresses himself as generally satisfied with the material sent. Mistakes were few, and some of these were obviously due to careless packeting rather than to error in identification.

F. RILSTONE.

POLPERRO,
April, 1925.

Statement of Account for 1924.

RECEIPTS.				EXPENDITURE.									
				£	s.	d.							
Subscriptions 1924	20	10	0	Balance from last account...	...	...	...	4	2	1½
,, (arrears)	0	15	0	Distribution costs (1923)...	...	...	...	3	8	6
,, 1225	1	17	6	Printing Report (July, 1924)	...	...	...	13	8	0
Donations	0	10	0	Printing—Circulars	...	...	...	0	16	0
				£23 12 6							£23 12 6		

N.B.—Secretarial Expenses, Distribution Costs, &c. (1924) are not included in the above account, otherwise a large deficit would appear.

6, Summerhill Terrace,
Berwick-on-Tweed.

December, 1924.

J. B. DUNCAN,
Hon. Treasurer.

Resumé of Paper on

Grimmia Andreæoides Limpr.

H. N. DIXON, M.A., F.L.S.

This new species to Britain was discovered on Snowdon by Miss L. I. Scott and afterwards gathered by Mr. J. L. O'Loughlin during the visit of the British Bryological Society to Llanberis, on September 1st, 1924. It is a rare continental species confined to the central alpine range of Tirol, Carinthia, Switzerland, and Savoy, and has only been found sterile. It is a very small, almost minute species, with almost exactly the habit and colour of *Andreæa petrophila*, with short, mostly obtuse and mucous leaves. Under the microscope the nerve at once distinguishes it.

Since the original discovery Mr. D. A. Jones has found it in numerous localities around and above the original station, Clogwyn-du'r-Arddu, always on volcanic ash.

A full description appears in *Journal of Botany* 1925 pp. 125—127.

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Resumé of Paper on

New British Hepatics

W. E. NICHOLSON, F.L.S.

Messrs. H. H. Knight and W. E. Nicholson discovered on the Lizard Down in West Cornwall two species new to Britain in November, 1924, viz.: *Fossombronia Loitlesbergeri* Schiffn., and *Gongylanthus ericetorum* (Raddi) Nees.

Fossombronia Loitlesbergeri was described from material gathered on the island of Arbe off the Dalmatian coast and is allied to *F. pusilla* and *F. Wondraczekii*, but it is a much more robust species than either of these and

more resembles *F. caespitifformis* in general appearance. The spores are much larger than those of *F. pusilla* and *F. Wondraczekii*, measuring between .005 and .006 m.m. in diameter. In sculpture, the spores are intermediate between these two species, having a larger number of crests than the former and fewer than the latter. The crests project on the margin as about 25 spines.

Gongylanthus ericetorum which has a wide distribution in Southern and Western Europe is readily distinguished from any other British hepatic by its crowded opposite leaves, somewhat like those of the recently discovered *Southbya nigrella*, but this may easily be distinguished by the blackish colouring and the appendage on the underside of the leaves. It is more like *Southbya stillicidiorum* and almost indistinguishable in the sterile state, but this plant is confined to dripping places in limestone in the South of Europe while the *Gongylanthus* is confined to siliceous rocks.

Cephalozia compacta Warnst. Mr. Nicholson has gathered this plant among copious specimens of *C. connivens* on the moors near Goathland, Yorkshire. Its position as a species is discussed and reasons alleged for considering it a variety only of *C. connivens* characterized by the dentate segments of the involucrel bracts.

Lophocolea heterophylla (Schrad.) Dum. Attention is drawn to the not infrequent presence of gemmæ on this species and the relation of such gemmiferous forms to *Loph. minor* Nees is discussed. The British plants which have been examined appear to belong unquestionably to *L. heterophylla* rather than to *L. minor*.

A full description appears in *Journal of Botany*, 1925 pp. 127—130.

An Autumn at the English Lakes.

C. H. BINSTEAD, M.A.

An Asterisk (*) denotes New to V. C. 70.

It was indeed a privilege during seven weeks in September and October, 1924, to see both Lakeland at its best and subalpine mosses in months when the majority of bryologists are engaged with other things. In setting down a few reminiscences the writer hopes that readers may derive a little of the pleasure which his autumn rambles were to him.

A month was spent at Portinscale, near Keswick, and amongst the walks taken in that district mention must be made of one to Hobcarton Crag. On the way *Bryum alpinum*, var. *viride* was found by the road, and on the Crag being reached after a long tramp *Grimmia atrata*,* c. fr., was seen in some plenty on moist rocks, and associated with it was *Gr. elongata*, the latter occurring in a much wider area than the former. At a higher elevation there was found a patch of the catenulate var. of *Webera nutans* which resembles *W. cucullata*. At the neighbouring Eel Crag fine *Campylopus Schwarzii* was found on wet banks among rocks, its bright tufts "giving it away" to the approaching bryologist. Though hardly rare in the district, this species is unusually fine on those rocks. In their wet crevices there was some good *Rhabdoweisia crenulata*, c. fr. and *Dicranella curvata* was seen by the stream beyond Force Crag near the summit of the Pass. This little plant proved to be plentiful at Portinscale and a quantity was secured, at the right time of year, for distribution. On rocks on the shore of Derwentwater some *Grimmia commutata* was found, but with some difficulty, as it was growing with other grimmoid mosses which closely resemble it. Here it may be remarked that this species seems to be quite as much at home beside lakes and waterfalls as on sun-baked tiles of roofs in parts of the S.W. Midlands, e.g. where it is common. But it seems to be rare in the mountainous parts of Britain. By the lake, too, on large rocks were bright sheets of moist

Hedwigia imberbis, the grey stone serving to set off this golden-yellow moss with a striking effect of colour.

On tree roots near by some poor *Orthotrichum rivulare* was noticed. More welcome was *Habrodon Notarisii* on an ash near Portinscale. It would be interesting to note on what trees it has been observed, the writer having seen it usually on sycamores and now and again on elders. At Braithwaite *Grimmia montana*, with young fruit, was seen to be holding its own and growing at one place with *Coscinodon cribrosus*, which, though once plentiful thereabouts, has now become scarce in consequence of the disappearance of most of an old wall on which it formerly abounded. It must now be considered quite rare in the Lake District. Coledale Glen furnished some *Cynodontium polycarpum*.

On a sandy vertical bank by the main stream at Braithwaite a quantity of beautifully red *Dicranella rufescens* was obtained. This little plant is abundant in the district, though not generally common. On the river bank at Portinscale a little *Philonotis capillaris* was detected, and locally this is rare.

A day was given to Stonethwaite, Borrowdale, and by the Langstrath stream, wide, dense patches of *Campylopus subulatus* nearly three inches tall were seen on sandy deposit among rocks, and on these there was also some *Grimmia robusta*.

Sematophyllum micans was found in a rocky wood in the Stonethwaite valley, but in small quantity. In Borrowdale the woods are rich in *Hypnum crista-castrensis*, an ever welcome sight, but *Hylocomium umbratum* is less plentiful. *Campylopus flexuosus*, var. *zonatus** and *Bartramia Oederi* were also noticed in the woods, and there too some fertile *Dichodontium flavescens* was seen by a cascade. *Bryum Mildeanum* could not be obtained at a known station for it on account of the flooded state of the stream by which it grows, and the same applies to *Limnobia dilatatum* at Grasmere. The wet autumn made it also impossible to investigate the large area of inviting swampy ground about the foot of Derwentwater and between that lake and Bassenthwaite.

Skiddaw, looking beautiful in its autumn glory absorbed a day, and the summit region proving barren, a descent was made by the stream of the largest of the coombs on the South side, but this part of the mountain was also found to be poor except for some fine tufts of *Leptodontium flexifolium* with some fruit. On the lower slopes of Skiddaw some poor bits of *Bryum erythrocarpum** were found on bracken humus, and by the lane below known as the "Terrace" *Tortula papillosa** was seen on a sycamore.

A fortnight was spent at Grasmere, the streams and hills of which place had been previously investigated by the writer, and it was good to see again *Grimmia ovata* and *Glyphomitrium Daviesii*, both of which are very rare in Lakeland. With regard to the *Grimmia* it may be remarked here that it is one of three which are difficult to know in the field, the others being *Gr. commutata* and *Gr. robusta*. These closely resemble each other, being usually blackish in colour, and they occur in similar situations, viz. rocks in, or beside, streams. If one can get to know these three one is on the way to some understanding of this rather difficult Genus.

One of the few warm days of a dripping autumn was spent in a fine ghyll at the head of the Landale valley, and there *Anoetangium compactum* was found in abundant fruit. *Plagiochila tridenticulata* and *Zygodon lapponicus* were found near together, and in the same ravine was good fruiting *Bryum filiforme*. A pleasant walk from Grasmere over Redbank to Loughrigg Tarn and Skelwith Force proved to have been worth taking, for *Pterogonium gracile* was found with a fair amount of fruit now in a good state on old walls, and with it in one place *Neckera pusilla*, but careful search failed to reveal fruit on the abundant *Antitrichia curtispindula*. At two places *Dicranella squarrosa* was abundantly fertile, the fruit being in excellent condition, and *Barbula spadicea* c. fr. occurred on wet stony banks in an old gravel pit. At Skelwith Force large rocks are covered by fine *Eurhynchium myosuroides*, var. *rivulare* (new to V. C. 69), and on sandy ground near the stream a few stunted plants of

Catharinea crispa (new to V. C. 69) were detected, while on a rock, kept moist by the spray of the Force there are patches of excellent *Grimmia commutata*, and *Gr. retracta* is abundant, its rich green colour catching the eye at once. In the course of this walk some *Trichostomum mutabile*, var. *littorale* was noticed on a rock at an old quarry. This moss is plentiful in Lakeland chiefly on rocks near streams and now and again on the margin of lakes. As it is apt to turn up unexpectedly and to puzzle anyone who is not familiar with it, the bryologist should make a careful study of its vagaries equally with those of *Ceratodon purpureus*.

In Lakeland the mosses are scattered over a wide area which would need many holidays for its thorough investigation, and the writer of these notes can promise truly delightful walks to bryologists coming to see the charm of the district for themselves, with the inducement of adding further novelties to its moss-flora.

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Harpidium Var. Nov.

Hypnum fluitans L., Group *Amphibium* (Sanio) Ren., var. *pseudogracile*, Van den Broeck. Description communicated by Mr. J. Hennen.

Plants soft, glossy green above, purplish brown below. Floating. Stems elongate, 10-20 cm. long, regularly and densely *pinnate*. Leaves distant, upper minutely falcate, curved downwards, the others erect or spreading, not secund, *lanceolate*, 1 mm. broad, *narrowed at base*, finely acuminate, *denticulate* from the base, but strongly *dentate* at acumen. Nerve thin, reaching about half-way. Median cells long and narrow, basal cells red brown, those of the auricles quadrangular or rectangular, not incrassate. Auricles not inflated, ill-defined, *strongly decurrent*.

Marsh, called Moskoeij, at St. Job-in-'t-Goor, near Anvers; collected in the company of M. M. J. Hennen and M. De Decker.

Report of the Annual Meeting 1924.

ELEONORA ARMITAGE.

The British Bryological Society held its Annual Meeting and Excursion at Llanberis, Carnarvonshire, under the presidency of Mr. H. N. Dixon, M.A., F.L.S., from August 29th to September 5th. There was a fair number present.

Saturday, 30th August, was devoted to exploring Cwm-y-Glô, which was near at hand, as the weather was not very favourable. Sunday afternoon was spent in Llanberis Pass in better weather conditions. Monday found the party exploring the Clogwyn precipices under Snowdon, and on Tuesday there was a drive in cars to Llyn Ogwen. The day was spent in Cwm Idwal around the lake and up to the foot of the Devil's Kitchen, some taking another route up Cwm Bochlwyd and clambering over the bleak, rocky heights of Glyder Fach. On Wednesday there was a long drive to Beddgelert. Some visited Pont Aberglaslyn and others climbed Moel'r Ogof. Thursday was spent working round Snowdon summit while others made the descent into Cwm Dyli.

Several interesting finds were made, in spite of this being a well-worked district. The most sensational was that of *Grimmia andreceoides* Limpr. A plant new to Wales was *Grimmia elongata* Kaulf., found near Clogwyn Lake and at the head of Cwm Dyli on boulders and rocks. From the latter place *Encalypta commutata* N. et H. was added to the Welsh Flora, while *Catharinea crispa* James and its rare variety *densifolia* Lindb. were found by the Glaslyn River. Other rare mosses which may be mentioned are *Grimmia conferta* Funck, and *Ditrichum zonatum* var. *scabrifolium* Dixon, at Clogwyn-du'r-Arddu; *Fissidens polyphyllus* Wils. by the Glaslyn; *Tortula princeps* De. Not. on Moel'r Ogof; *Leptodontium recurvifolium* Lindb., near Llyn Bochlwyd; *Oedipodium Griffithianum* Schwaeg. on Snowdon; *Bryum alpinum* var. *viride* Husn. by the Glaslyn; *Hypnum callichroum* Brid. at Clogwyn; *Pterigynandrum filiforme* Hedw. and *Hypnum dilatat-*

um Wils. in Cwm Idwal and *Grimmia incurva* Schwaeg. on Glyder Fach (Mr. Nicholson's Station).

Among the rarer Hepatics were species of *Gymnomitrium* and *Marsupella*, especially *M. sphacelata* (Gies.) Lindb. near Beddgelert; *Gymnocola inflata* forma *nigricans* Nees and *Loph. atlantica* (Kaal.) Schiffn., near Llanberis; *Anthelia Juratzkana* (Limpr.) Trevis, on Snowdon, and *Herberta Hutchinsiae* (Gottsche) Evans, *Scapania ornithopodioides* (With.) Pears., and *Lophozia obtusa* Evans at Clogwyn.

The evenings were enlivened by the members in various ways; two were taken up with the annual business of the Society.

Mr. Dixon having completed his two years of office, his place was taken by the newly elected Vice-President, the Rev. C. H. Binstead, M.A., in the absence of Dr. S. M. Macvicar, President.

Dr. Trotter's offer to compile a Bibliography of Bryological Literature and, also, to epitomise serial bryological papers published during the year, was much appreciated and accepted. Mr. W. R. Sherrin kindly offered to house the books and specimens belonging to the Society in the South London Botanical Institute and to act as Librarian and Curator for the Society, which offer was gratefully accepted.

The choice of next year's meeting-place fell on Ross, Herefordshire, for the Wye Valley, August 14—21, for which Miss E. Armitage will be the local secretary. Votes of thanks to the Officers concluded the meeting.

REPORTS ON PLANTS SENT IN BY MEMBERS.

Sphagna.

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

Sphagnum fimbriatum Wils. var. *validius* Card., Queensmere, Wokingham (22), Feb. 1924, H.W.M. "An interesting form showing character of vars. *intermedium* and *tenue*. It has the leaf measurements of *intermedium*, while the lax growth and the colour are those of *tenue*," W.R.S. ; *f. compactum* W., Studland (9), June, 1922, W.R.S. ; Ranst, Belgium, Aug. 1923, J.H. ; also, H.V.d.B., J.H. and De Decker, com. H.V.d.B. ; var. *intermedium* Russ., Queensmere, Wokingham (22), Feb. 1924, H.W.M. ; var. *tenue* Grav., Artro Valley (48), July, 1923, W.R.S., Cappellen, Belgium, Nov. 1924, J.H. (=var. *trichodes* Russ.).

S. Girgensohnii Russ. var. *microcephalum* W., Snowdon (49), July 1923, W.R.S. ; var. *stachyodes* Russ., Dundonell (105), June 1921, D.L., "a reduced form," J.A.W.

S. Russowii W. var. *Girgensohnioides* Russ. f. *virescens* Russ., Glen Dole and Glen Clova (90), Aug. 1924, leg. D.R.R. com. J.A.W. ; *f. flavescens* Russ., Lomond Hills (85), July 1922, leg. D.R.R., com. D.L. ; var. *rhodochroum* Russ., Clova Mts. (90), July, 1923, leg. D.R.R., com. D.L.

S. fuscum v. Klinggr. var. *medium* Russ. f. *fuscescens* W. s.f. *anocladum* W., Clova Mts. (90), July 1923, leg. D.R.R., com. D.L.

S. rubellum Wils. var. *rubescens* W., Studland Heath (9), March 1924, H.W.M. ; Cwm Idwal (49*), Sept. 1924, E.A. ; St. Cleer (2), Aug. 1920, R.W.S. "It may be mixed, but I can only detect *S. acutifolium* v. *versicolor*," W.R.S. ; var. ? Keston Comm. (16), Nov. 1924, J.L.O'L. "v. *violescens* W., a rare form" W.R.S. ; var. *purpurascens* W., Tilgate Forest (14), Nov., 1924, J.L.O'L. ; Lostwithiel (2), March 1920, R.W.S.

S. acutifolium Ehrh. var. *capitatum* Angstr., Deurne, Belgium, March 1887, H.V.d.B., "var. *viride* W.," W.R.S. ; var. *rubrum* Brid., Sidlaw Hills (90), Jan. 1923, leg. D.R.R., com. D.L. ; Clova Mts. (90), July 1923, leg. D.R.R., com. D.L. ; var. *versicolor* W., Redmoor (2), — 1920, and Luxulyan (2), March 1920, R.W.S. "Both these plants are, I think, best placed under *S. acutifolium*, though not typical, having the branch leaves erectopatent. The leaves of *S. acutifolium* are usually closely imbricate, giving the branches a distinctly terete appearance," W.R.S. ; *f. densum* Wh. Opinan, Gairloch (87), July 1924, leg. D.R.R., com. J.A.W. ; var. *flavo-rubellum* W., Lomond Hills (85), July 1922, leg. D.R.R., com. D.L. ; var. *flavescens* W., Schooten, Belgium, April 1885, H.V.d.B. ; var. *patulum* Schp. (mixed with

S. fimbriatum W. v. *validius* Card.), Schooten, Belgium, Sept. 1888, H.V.d.B., "Most of the packets contain no *S. acutifolium* and the others are mostly *S. fimbriatum*," W.R.S.

S. quinquefarium W. var. *viride* W., Clova Mts. (90), July 1923, leg. D.R.R., com. D.L.; Sidlaw Hills (90), Jan. 1923, leg. D.R.R., com. D.L., "not very typical," J.A.W.; f. *drepanocladum* W., Lochbroom (105), May 1922, D.L., "probably," J.A.W.; f. *brachyanocladum* W., Ben Lui (88), June 1924, leg. D.R.R., com. J.A.W.; var. *roseum* W., Opinan, Gairloch (105), July 1924, leg. D.R.R., com. W.G.T.; Cwm-y-Glo (49), Aug. 1924, D.G.C.; f. *speciosum* W., Glen Clova (90), Aug. 1924, leg. D.R.R., com. J.A.W.; var. *versicolor* Russ., Lochbroom (105) June 1921, D.L., "somewhat doubtfully intermediate," J.A.W. "Yes, I hesitatingly agree. I have forms which exactly match; at one time I have called them *acutifolium* and at another *quinquefarium*," W.R.S.

S. plumulosum Röhl. var. *cærulescens* Schlieph., Dundonell (105), June 1921, D.L.; Ben Lui (88), July 1923, leg. D.R.R., com. D.L.; St. Cleer (2), Aug. 1920, R.W.S.; Common Moor (2), Aug. 1921, R.W.S.; var. *purpureum* W. f. *robustum*, St. Cleer (2), Aug. 1920, R.W.S.; var. *versicolor* W., Vendée, France, Sept. 1923, J.C., "near var. *ochraceum*," W.R.S.; May Hill, (34*), Aug. 1924, E.A.; f. *validum* W., St. Cleer (2), Aug. 1921, R.W.S. "Yes, a well-marked specimen of this beautiful variety," W.R.S.; f. *tenellum* W., St. Cleer (2), — 1924, R.W.S.; f. *ascendens* W., Cwm-y-Glo (49*), Aug. 1924, E.A.; var. *ochraceum* W. f. *congestum* W., Opinan, Gairloch (105), July 1924, leg. D.R.R., com. W.G.T.

S. subnitens Russ. and W. (= *S. plumulosum* Röhl), Vendée, France, March 1920, J.C., "near var. *lilacinum* Spruce," W.R.S.; var. *viride* W., Gerolstein (Eifel), Germany, Aug. 1888, leg. G. Dens, com. H.V.d.B., "near var. *lilacinum*," W.R.S.; Westwezel, Belgium, June 1909, leg. R. Naveau, com. H.V.d.B., "near var. *ochraceum*," W.R.S.; f. *squarrulosum* W., Oelegem, Belgium, July 1888, H.V.d.B.; Raevens, Belgium, Aug. 1888, H.V.d.B.; var. *carneum* W., Turnhout, Belgium, Aug. 1886, H.V.d.B., "near var. *lilacinum*," W.R.S.

S. tenerum Sull., Cwm Idwal (49), Sept. 1924, J.L.O'L. "This is *S. quinquefarium* v. *viride* W. It approaches closely to *S. tenerum* in having large, somewhat undulate leaves, strongly papillose, but it differs from that species in the wood cylinder pale green, which in *tenerum* is a vinous red," W.R.S.

S. molle Sull. var. *compactum* Grav., Nieuwmaer, Belgium, Aug. 1909, H.V.d.B.; Gheel, Belgium, June 1884, H.V.d.B., " = var. *molluscoides* W. f. *tenerum* W.," W.R.S.

S. Angströmii Hartm., Tavastia, Finland, July 1921, leg. M. J. Kotilainen, com. V.F.B. ; Asele Lappmark, Sweden, Aug. 1921, C.S. "This plant agrees with *S. compactum* and *S. Wulfianum* in the shape and position of the chlorophyllose cells, but the stem leaves are large and fimbriate on the whole of the rounded apex, recalling those of the *Squarrosa* group," W.R.S. ; Lulea Lappmark, Sweden, July and Aug. 1923, C.S. ; Tornea Lappmark, Sweden, Aug. 1923, C.S. ; Advent Bay, Spitzbergen, J.L., "A compact form differing greatly in general appearance from the plants from Sweden sent by Carl Stenholm, but agreeing with them in its microscopical characters," W.R.S.

S. Wulfianum Girgens., Asele Lappmark, Sweden, Aug. 1921, C.S. "This distinct species may be known at once by the numerous branches (as many as 13 in a fascicle). It agrees with *S. compactum* in the shape and position of the chlorophyllous cells, as well as in the small size of the stem leaves," W.R.S.

S. compactum D.C. var. *subsquarrosus* Russ., Boldremere (17), — 1924, P.W.M.R. "I think best under v. *squarrosus*. The two vars. *squarrosus* and *subsquarrosus* merge into one another," W.R.S. ; var. *subsquarrosus* W., Schooten, Belgium, May, 1909, H.V.d.B., "v. *squarrosus* f. *laxum* Card.," W.R.S. ; f. *densum* W. Cwm Idwal (49*), Sept. 1924, E.A. ; Ullapool River (105), June, 1921, D.L. ; f. *divaricatum* sf. *fuscescens* W., Glen Clova (90), Aug. 1924, leg. D.R.R., com. J.A.W. ; f. *purpurascens* W., near Westmalle, Belgium, Sept. 1906, leg. R. Naveau, com. H.V.d.B., "v. *imbricatum* f. *purpurascens* W.," W.R.S. ; var. ? Oxshott Heath (17), Oct. 1924, leg. E. C. Wallace, com. A.G.Y., "f. appr. v. *isophylla* Wh.," W.R.S.

S. squarrosus Pers., Cwm Idwal (49*), Sept. 1924, E.A. ; var. *spectabile* Russ. f. *patulum* W., New Ferry (58), July 1924, J.A.W. ; var. *subsquarrosus* Russ., Burnham Comm. (24) — 1924, P.W.M.R. "This is *S. cymbifolium* var. *glaucescens* f. *squarrosulum* Pers. Some extreme forms of this plant do somewhat resemble *S. squarrosus* in the field, but with the use of a lens the cucullate apex of the branch leaves can readily be seen," W.R.S. ; var. *subsquarrosus* Russ. f. *gracile* Russ., Lochbroom (105), June 1921, D.L.

S. teres Angstr. var. *imbricatum* W., Esschen, Belgium, Nov. 1884, H.V.d.B. "Yes, f. *elegans* W.," W.R.S. ; f. *gracile* W., Ballaglass (71), July 1903, H.B. "Yes, but some of the packets contain var. *subteres* Lindb.," W.R.S. ; Glen Clova (90), Aug. 1924, leg. D.R.R., com. J.A.W. ; var. *subteres* (Schp.) Angstr., Esschen, Belgium, Nov. 1884 and Oct., 1886, H.V.d.B.

S. Lindbergii Schp., Tavastia, Finland, Aug. 1921, leg. M. J. Kotilainen, com. V.F.B.

S. riparium Angstr., Tavastia, Finland, July 1921, leg. M. J. Kotilainen, com. V.F.B.; Tornea Lappmark and Lulea Lappmark, Sweden, Aug. 1923, C.S. "var. *coryphœum* Russ.," W.R.S.; var. *coryphœum* Russ. f. *gracilescens* Russ., New Ferry (58*), July 1924, J.A.W. and W.G.T., com. W.G.T. "This fine moss, which is rare in Great Britain, can be readily distinguished from the other species of the group by the large and deeply-cleft stem leaves. It was recorded lately from Burnham Beeches (24), but the authorities in tidying up the water edge of the lake have destroyed all traces of it, at the same time disfiguring one of nature's beauty-spots so often frequented by artists," W.R.S.

S. propinquum H. Lindb. (= *S. Jensenii* Lindb. var. *propinquum* W.), W.R.S., Tornea Lappmark, Sweden, Aug. 1923, C.S.

S. Dusenii C. Jens., var. *plumosum* W., Cappellen, Belgium, May 1918 and Sept. 1924, J.H.; var. *falcatum* C. Jens., Cappellen, Belgium, Sept. 1924, J.H., "v. *plumosum*," W.R.S.

S. amblyphyllum Russ. var. *mesophyllum* W. f. *silvaticum* Russ., Chobham Comm. (17), May 1924, H.W.M. "Yes," W.R.S.; St. Cleer (2), Aug. 1920, W.R.S. "The branch leaves are too long for this var., measuring mostly 2 mm. It is best under var. *macrophyllum*, and agrees with f. *silvestre* in the gradually acuminate leaves; some of the branches measure 2.25 cm.," W.R.S.; var. *parvifolium* W., Keston Comm. (16), Aug. 1924, D.G.C., "This is *S. recurvum* var. *parvulum* W.," W.R.S.

S. angustifolium C. Jens., Lulea Lappmark, Sweden, July and Aug. 1923, C.S. "Correct, = *S. amblyphyllum* v. *parvifolium* W., under which name it is placed in 'Wheldon's Synopsis' p. 18." W.R.S.

S. balticum Russ., Asele Lappmark, Sweden, Aug. 1921, C.S. "This species comes very near to *S. obtusum* W., and is distinguished from it by the chlorophyllose cells not being so deeply enclosed on the upper surface of the leaf, by the presence of fibrils in the stem leaf, and by the distinct stem cortex," W.R.S.

S. pulchrum W., Tavastia, Finland, Aug. 1921, leg. M. J. Kotilainen, com. V.F.B.; var. *virescens* W., Leith Hill (17), May 1924, H.W.M., "This is *S. recurvum* v. *majus* f. *silvaticum*," W.R.S.

S. recurvum P. Beauv., var. *robustum* Breidl. f. *longifolium* W., Bodmin Moor (2), Aug. 1922, R.W.S., f. *latifolium* W., Dozmary (2), Aug. 1922, R.W.S. "This plant is rather on the border line between the vars. *robustum* and *majus*, although the leaves are too large for *majus*. I think Mr. Smitham's suggestion of var. *robustum* is better," W.R.S.; var. *majus* Angstr., Hawley Comm. (12), Feb. 1924, H.W.M. "This is *S. pulchrum* var. *virescens*," W.R.S.; var. *majus* f. *silvaticum* Russ., Broadmoor (22),

Feb. 1924, H.W.M. "Yes," W.R.S.; Lochbroom (105), June 1921, D.L.; f. *sphaerocephalum* W., Medro Moor (2), Feb. 1924, R.W.S.; var. *parvulum* W. f. *viride* W., Loch Brandy (90), July 1923, leg. D.R.R., com. D.L., "a very robust state," J.A.W.; var. *amblyphyllum* (Russ.) W., Achel, Belgium, Aug. 1924, J.H. "This is *S. amblyphyllum* var. *parvifolium* W.," W.R.S.; var. *macronatum* (Russ.) W., Cappellen, Belgium, May 1918, J.H. "This is v. *majus*, near f. *pulchellum* W.," W.R.S.; Zonhoven, Belgium, July 1924, J.H., "This is *S. pulchrum* v. *sordido-fuscum* W.," W.R.S.; Bockryck-Genck, Belgium, July 1924, J.H. "This is v. *robustum* Breidl.," W.R.S.; var. *macronatum* f. *bohemica* W., Westmalle, Belgium, Oct. 1923, J.H. "This is *S. cuspidatum* v. *falcatum* Russ.," W.R.S.; f. *subundulata* W., Oolen, Herenthals, Belgium, Aug. 1909, H.V.d.B. "This is v. *parvulum* f. *pallens* W.," W.R.S.; f. *fibrosa* (Schlieph) W., Westmalle, Belgium, May 1921, leg. H.V.d.B. and H.J., com. H.V.d.B. "This is v. *majus* f. *pulchellum*," W.R.S.

S. apiculatum Lindb. fl. (= *S. recurvum* P. Beauv., W.R.S.), Tavastia, Finland, July 1921, leg. M. J. Kotilainen, com. V.F.B.

S. serratum Aust., Keston (16), May 1924, D.G.C.

S. fallax v. Klinggr, var. *laxifolium* W., Sidlaw Hills (90), — 1923, leg. D.R.R., com. D.L.; var. *plumosum* W., Medros Moor (2), Feb. 1923, R.W.S.

S. cuspidatum Ehrh., Westmalle, Belgium, Oct. 1924, J.H., "One packet is v. *falcatum* f. *molle*, the rest are v. *submersum*, near f. *rigescens*," W.R.S.; var. *falcatum* Russ., Studland Heath (9), March 1924, H.W.M., "This is f. *molle* W. sf. *polyphyllum* W.," W.R.S.; Ossendrecht, Holland, Nov. 1908, H.V.d.B., St. Job-in-t'Goor, Belgium, Sept. 1923, leg. J.H. and De Decker, com. H.V.d.B., "f. *rigidum*, near sf. *pungens* Grav.," W.R.S.; f. *mollis* W., Westmalle, Belgium, Oct. 1924, J.H., "sf. *capitatum* Wh.," W.R.S.; Wuestwezel, Belgium, June 1909, leg. R. Naveau, com. H.V.d.B., "f. *rigidum* sf. *gracile* W.," W.R.S.; Nieuwmaer, Belgium, Aug. 1912, H.V.d.B.; var. *falcatum* Russ. subvar. *molle* W. f. *capitatum* Wh., Opinan, Gairloch (105), July 1924, leg. D.R.R., com. W.G.T.; f. *molle* W. sf. *polyphyllum* W., Clova Mts. (90), July 1923, leg. D.R.R., com. D.L.; var. *rigidum* W. f. *pungens* Grav., Bodmin Moor (2), Aug. 1922, R.W.S.; Dozmary (2), Aug. 1922, R.W.S.; var. *submersum* Schp. f. *rigescens* W. sf. *densum* Ing. and Wh., Cwm Idwal (49*), Sept. 1924, E.A.; sf. *robustum* W., Dundonell (105), June 1921, D.L.; f. *crispatum* W., above Llyn Padarn (49), Aug. 1924, J.L.O'L.; Opinan Gairloch (105), July 1924, leg. D.R.R., com. W.G.T.; Bodmin Moor (2), Aug. 1922, R.W.S., "This is v. *falcatum* f. *molle* sf. *capitatum*; it exactly matches specimens so named by the late J. A. Wheldon," W.R.S.; var. *plumosum* Schp., Esher Comm.

(17), — 1924, P.W.M.R., "I agree. These beautifully prepared plants are a pleasure to examine," W.R.S.; Chobham (17), June 1924, leg. W.R.S. and J.L.O'L., com. J.L.O'L.; f. *remotum* W., Artro Valley (48), July 1923, W.R.S.; Dozmary (2), Aug. 1922, R.W.S.; Esher Comm. (17), March 1924, leg. E. C. Wallace, com. A.G.Y.; f. *densum* W., Cwm-y-Glo (49), Aug. 1924, D.G.C.; Dozmary (2), Aug. 1922, R.W.S.; Bodmin Moor and Fowey Valley (2), Aug. 1923, R.W.S., "These are v. *plumulosum* Schp. f. *densissimum* W.," W.R.S.; var. *plumulosum* Schp., Cwm Idwal (49*), Sept. 1924, E.A.

S. molluscum Bruch., Hawley Comm. (12), Feb. 1924, H.W.M., "This is v. *vulgatum* W., near f. *gracile*," W.R.S.; var. *vulgatum* W. f. *immersum* Schp., Oxshott Heath (17), July 1924, P.W.M.R., "Some of the packets contain plants which match well with specimens so named by H. Van den Broeck and distributed last year. Other packets contain plants intermediate between the forms *immersum* and *gracile*," W.R.S.; var. *vulgatum* W. f. *robustum* W., Opinan, Gairloch (105), July 1924, leg. D.R.R., com. J.A.W.; var. *vulgatum* W. f. *compactum* W., Cwm Idwal (49*), Sept. 1924, E.A.; Bodmin Moor (2), Aug. 1922, R.W.S.; var. *vulgatum* W. f. *gracile* W., Chobham (17), J.L.O'L., "One packet contains *S. cuspidatum*, v. *plumosum*, f. *densum*," W.R.S.

S. tenellum Ehrh. (= *S. molluscum* Bruch.), Tavastia, Finland, Aug. 1921, leg. M. J. Kotilainen, com. V.F.B.; var. *robustum*, Putte, Holland, Sept. 1911, H.V.d.B., "*S. molluscum* v. *vulgatum*, f. approaching f. *immersum* Schp.," W.R.S.; var. *compactum* W., Westmalle, Belgium, Oct. 1904 and Aug. 1906, H.V.d.B.; Calmpthout, Belgium, Oct. 1888, H.V.d.B. "The Belgian plants are all *S. molluscum*, v. *vulgatum*, f. *gracile* W.," W.R.S.

S. obesum W., Keston (16), in a stream, May 1924, D.G.C., "This is *S. crassycladum*," W.R.S.; Esher Comm. (17), March 1924, J.L.O'L.; Chobham Comm. (17), June 1924, leg. W.R.S. and J.L.O'L., com. J.L.O'L.; var. *plumosum* W., Keston (16), May 1924, D.G.C. "The brown colour of these plants, which were growing in a running stream, is due to iron washed out of the neighbouring soil. One plant which I cleaned completely was wholly green," D.G.C. "I do not think this is the v. *plumosum*," W.R.S.; slender form, Clogwyn, Snowdon (49), Aug. 1924, D.G.C., "Mr. Sherrin tells me that he has named similar specimens to these—and from the same locality—var. *insolitum* Card. On re-examining these plants I am inclined to think that that is their name. The leaves on the branches, where these latter occur, are approximately equal in size to the stem leaves. The plants are very lax, green, floating and slender. There are very few pores present on the leaves. The branches are solitary, i.e., one per fascicle," D.G.C. "I agree," W.R.S.; var. *teretira-*

mosum W., Hedge Court, Millpond (17), April 1924, D.G.C., "This is *S. crassycladum* W.," W.R.S.

S. Franconiae W., Esher Comm. (17), — 1924, P.W.M.R., March 1924, D.G.C. and J.L.O'L. "These are all *S. obesum* W. *S. Franconiae* is described by Warnstorf as having the stem cortex in 1—2 layers, and the stem leaves are much smaller, measuring only .8—1.4 mm. In these plants the leaves measure 2.3 mm., and the stem cortex is in one layer. In the submerged forms of the *Subsecundum* group it is not rare for the cortex to be doubled in places, but never more than 2 or 3 cells together; and this is not constant in every section from one stem. This irregularity of the stem cortex I have noticed in plumose forms of *S. crassycladum*, *S. aquatile*, and *S. auriculatum*. No authentic specimen of *S. Franconiae* has ever been seen either by the late Mr. J. A. Wheldon or myself; that name, which was given by Mr. Wheldon to a plant collected by me at Esher in 1915, must only be held tentatively until it can be seen precisely what Warnstorf intended by the words "the stem cortex in 1—2 layers," W.R.S.

S. subsecundum Nees., Vendée, France, Sept. 1923, J.C. "This plant comes near the var. *pusillum* Schlieph. in the small size of the stem leaves which measure only .4 mm. The branches are longer than the measurements given for the var. The stem cortex in transverse view shows a decided approach to *S. hercynicum*," W.R.S.; var. *intermedium* W., f. *dasycladum* W., Dundonell (105), June 1921, D.L. "May be a state of var. *tenellum*," J.A.W.

S. hercynicum W., Cwm Idwal (49*), Sept. 1924, E.A.

S. inundatum Russ. and W., Hawley Comm. (12), Feb. 1924. H.W.M., "I hesitate to put a varietal name to this plant," W.R.S.; St. Job-in-t'Goor, Belgium, Sept. 1923, J.H., "This is *S. cuspidatum*, v. *falcatum*, sf. *pungens* Grav., *S. inundatum* is also present in one packet," W.R.S.; Westmalle, Belgium, June 1921, J.H., "One packet is a lax form of *S. auriculatum*, v. *tenellum*, the other packets are *S. subsecundum* Nees, the stem leaves being small, .9-1 mm., without fibrils except quite in the apex. It is best under v. *tenellum*, f. *subfalcatum* W., though the branch leaves are not so well-marked as in some specimens I have seen," W.R.S.; Cappellen, Belgium, Dec. 1919, J.H. "Yes, v. *gracile*," W.R.S.; Cappellen, Belgium, July 1920, J.H., "*S. subsecundum*, v. *tenellum*," W.R.S.; Brasschaet, Belgium, Sept. 1922, J.H., "Yes, v. *ovalifolium*, f. *gracile* W.," W.R.S.; Esschen, Belgium, May 1914, J.H., "This is *S. bavaricum* W., a very interesting plant known by the short, wide stem leaves and also by the numerous pseudopores on the upper surface of the branch leaves," W.R.S.; Westmalle, Belgium, Oct. 1923, J.H.; var. *ovalifolium*,

f. *brachycladum* W., Bolventor (2), Aug. 1920, R.W.S.; v. *ovalifolium*, f. *eurycladum* W., Luxulyan (2), — 1921, R.W.S.; v. *ovalifolium*, f. *laxifolium* W., St. Cleer (2), Aug. 1920, R.W.S.; var. *lancifolium* W., f. *falcatum* Schlieph., Luxulyan (2), — 1921, R.W.S., and Lochbroom (105), June 1921, D.L.; var. *diversifolium* W., f. *dasybrachycladum* W., St. Cleer (2), Aug. 1920, R.W.S.; sf. *fuscescens* W., Medro Moor (2), Feb. 1923, R.W.S.

S. auriculatum Schp., var. *tenellum* W., f. *rufescens* W., sf. *subsimpler* W., Cwm Idwal (49), Sept. 1924, E.A.; var. *ovatum*, f. *intortum*, Throwleigh (3 or 4), June 1918, W.R.S.; Bodmin Moor (2), Aug. 1922, R.W.S.; Redgate (2), Aug. 1920, R.W.S.; var. *laxifolium* W., Hedge-Court Millpond (17), April 1924, D.G.C. "This is v. *tenellum* W.," W.R.S.; var. *cano-virescens* W., Chobham Comm. (17), May 1924, H.W.M., "Yes," W.R.S.; St. Leonard's Forest (13), — 1924, P.W.M.R., "This is a form near the var. *laxifolium*," W.R.S.; May Hill (34*), Aug. 1924, E.A.; Esher Comm. (17), March 1924, D.G.C., "Near var. *laxifolium*," W.R.S.; Bodmin Moor (2), Aug. 1922, R.W.S., "Not a well-marked form," W.R.S.; var. *submersum* W., Lochbroom (105), June 1921, D.L.; var. *plumosum* W., Burnham Comm. (24), — 1924, P.W.M.R.

S. contortum Schultz., var. *majus* C. Jens., f. *laxifolium* W., Clova Mts. (90), July 1923, leg. D.R.R., com. D.L.

S. crassicladum W., May Hill (34), Aug. 1924, E.A.; Wuestwezel, Belgium, May 1908, H.V.d.B.; Brecht, Belgium, May 1908, H.V.d.B., "This is v. *diversifolium*, f. *inundatum* W.," W.R.S.; var. *magnifolium* W., f. *versicolor* W., Bodmin Moor (2), Aug. 1922, St. Cleer (2), Aug. 1921, R.W.S.; sf. *turgescens* W., Black Hill (2), Aug. 1922, R.W.S.; var. *diversifolium* W., Tilgate Forest (14), April 1924, J.L.O'L.; var. *intermedium* W., f. *leptocladum* W., Esher (17), May 1923, W.R.S.

S. bavaricum W., St. Cleer (2), Aug. 1921, R.W.S.; var. *mesophyllum*, Cwm Idwal (49*) (var. new to Britain), Sept., 1924, E.A.; forma, Ullapool River (105), June 1921, D.L.

S. rufescens Nees & Hornsch., var. *magnifolium* W., f. *rufidulum* W., Lochbroom (105), June 1921, D.L.; f. *bicolor* W., Dundonell (105), June 1921, D.L., "somewhat untypical, appr. *S. Camusii*," J.A.W.; f. *bicolor*, sf. *intortum* W., St. Nest (2), Aug. 1922, R.W.S., "This is *S. auriculatum*, v. *ovatum*, f. *intortum* W.," W.R.S.; f. *albescens* W., Loch Brandy (90), leg. D.R.R., com. D.L.; var. *parvulum* W. f. *fuscescens* W. sf. *intortum* W., Bodmin Moor (2), Aug. 1922, R.W.S., "This is *S. auriculatum*, v. *ovatum*, f. *intortum*, a very small form," W.R.S.

S. rufescens (Br. Germ.) Limpr. (= *S. crassicladum* W.), Nieuwmaer, Belgium, June 1885, H.V.d.B. "This is *S. bavaricum* W., v. *macrophyllum* W.," W.R.S.; Putte, Holland, July 1906,

H.V.d.B., "This is *S. crassycladum* W. in poor condition," W.R.S.; Wuestwezel, Belgium, May 1908, H.V.d.B., "This is *S. obesum* W.," W.R.S.; Schooten, Belgium, Sept. 1923, J.H., "This is *S. crassycladum* W., v. *intermedium* W., f. *leptocladum* W.," W.R.S.; Cappellen, Belgium, Oct. 1919, J.H. "This gathering comprises *S. aquatile* W. (stem leaves dimorphous, stem cortex as in *S. hercynicum*), *S. inundatum*, v. *ovalifolium*, f. *laxifolium* W., and f. *eurycladum* W. One packet contains a mixture, *S. inundatum* being present," W.R.S.; Cappellen, Belgium, Sept. 1918, J.H., "This is *S. auriculatum*, v. *ovatum*, near f. *pungens*," W.R.S.; Esschen, Belgium, May 1914, J.H., "This is *S. aquatile* W. stem leaves 1.9 x 1 mm., auricled, but auricles small, fibrillose to base in some leaves. Branch leaves with many pores on outer surface; few pseudo-pores on inner surface," W.R.S.; var. *batumense* W., Schooten, Belgium, Sept. 1923, J.H. and H.V.d.B., "Yes, = *S. crassycladum*, v. *intermedium*, f. *leptocladum*, but three packets are *S. auriculatum*, v. *cano-virescens*," W.R.S.

S. turgidulum W., Calmpthout, Belgium, May 1908, H.V.d.B., "This is *S. crassycladum*, a stunted form of v. *versicolor*," W.R.S.; var. *brevirameum* W., Opinan, Gairloch (105), July 1924, leg. D.R.R., com. W.G.T.; var. *sordidofuscoatrum* W., St. Cleer (2), Aug. 1921, R.W.S.; Fowey Valley, Aug. 1922, R.W.S., "This is *S. aquatile*, near v. *ochraceo-violascens* W. The dimorphous character of the stem leaves is very remarkable in this species. Leaves less than 1 mm. grow side by side with leaves 1.9 x 2 mm.," W.R.S.

S. imbricatum (Hornsch) Russ. var. *cristatum* W., Cwm Bychan (48), April 1903, W.R.S.; Esschen, Belgium, Oct. 1888, H.V.d.B., "Yes, a very slender form," W.R.S.; var. *affine* f. *glaucescens* W., Lomond Hills (85), July 1922, leg. D.R.R., com. D.L.; sf. *congestum* W., Long Loch of Dundee (90), July 1923, leg. D.R.R., com. D.L.

S. turfaceum W., Tilgate Forest (14), Nov. 1924, J.L.O'L., "*S. turfaceum* W. is described in Schrift. Nat. Ges. in Dantzig, N.F. Bd. ix. Heft. ii., p. 161, 1897. In "Sphagnologia Universalis" (1911) Warnstorf places it under *S. imbricatum*, var. *affine*, f. *glaucescens*, sf. *squarrosulum* W. After examining a number of authentic specimens of *S. turfaceum* I am of opinion, taking into account the shape of the chlorophyllose cells, that it comes nearest to *S. cymbifolium* W., which is sometimes very difficult to distinguish from it," W.R.S.

S. papillosum Lindb., Arthog (48), Aug. 1922, F.R., "This is var. *normale*, f. *squarrosulum*, sf. *neglectum* Ing. & Wh.," W.R.S.; Reckheim, Belgium, June 1924, J.H., "This is *S. cymbifolium*, v. *pallescens*," W.R.S.; var. *normale* W., Cappellen, Belgium, Oct. 1919, J.H., "Of this, one packet is correct, f.

majus W., the remainder is var. *sublaeve* Limpr., two packets being f. *glaucovirrens* Schlieph.," W.R.S.; Zonhoven, Belgium, July and Oct. 1924, J.H., "The Oct. gathering is v. *sublaeve* Limpr., and some packets are f. *breviramosum*," W.R.S.; Cappellen, Belgium, Aug. 1918, J.H., "Yes," W.R.S.; Calmpthout, Belgium, Aug. 1920, J.H., "This is v. *sublaeve*," W.R.S.; Bockryck-Genck, Belgium, July 1924, J.H. "Two gatherings. One is v. *sublaeve*, f. *validum*, sf. *pyncocladum*. The papillosity of the chlorophyllose cells is very slight, almost absent from some of the cells in the upper part of the leaf. The other I make to be *S. cymbifolium*, v. *pallescens*. *S. papillosum* is separated from *S. cymbifolium* by the thickened upper wall of the chlorophyllose cells," W.R.S.; Ogrimby, Belgium, June 1924, J.H., "Yes, f. *squarrosulum*, sf. *neglectum* Ing. & Wh.," W.R.S.; f. *majus* Grav., sf. *subfuscum* Wh., Bodmin Moor (2), Aug. 1922, W.R.S.; Dundonell (105), June 1921, D.L.; f. *confertum* W., sf. *pallidum* Wh., Dundonell (105), June 1921, D.L.; sf. *fuscoluteum* Wh., Ben Lui (88), July 1923, leg. D.R.R., com. D.L.; f. *brachycladum* W., sf. *pallescens* Wh., Ben Lui (88), June 1924, leg. D.R.R., com. D.L.; Leckmelm (105), May 1918, D.L.; sf. *flavofuscum* Wh., Ben Lui (88), July 1923, leg. D.R.R. com. D.L.; var. *confertum* Lindb., Nieuwmaer, Belgium, Aug. 1909, H.V.d.B., "Yes, = v. *normale*, f. *confertum* W.," W.R.S.; var. *confertum* Lindb., f. *strictum* Röhl., Calmpthout, Belgium, Oct. 1886, H.V.d.B. "This is *S. hakkodense* W. The chlorophyllose cells have the upper wall not much thickened and are finely papillose. Stem leaves for the most part strongly papillose," W.R.S.; var. *abbreviatum* Grav., Zonhoven, Belgium, Oct. 1923, J.H., and Calmpthout, Belgium, Oct. 1884, H.V.d.B., "var. *sublaeve*, f. *breviramosum*," W.R.S.; var. *sublaeve* Limpr., Zonhoven, Belgium, July 1924, J.H., "This is *S. cymbifolium*, v. *pallescens* W.," W.R.S.; var. *sublaeve*, f. *validum* W., Trowleigh (3 or 4), June 1918, W.R.S.; f. *breviramosum* W., sf. *orthocladum* W., Glen Dole (90), Aug. 1924, leg. D.R.R., com. D.L.; sf. *heterocladum* W., Ben Iawers (88), June 1922, leg. D.R.R., com. D.L.; f. *compactum* W., Bodmin Moor (2), Aug. 1922, R.W.S.

S. cymbifolium Ehrh., var. *glaucescens* W., f. *squarrosulum* Pers., sf. *pyncocladum* W., Little Haldon (3), Aug. 1918, W.R.S.; f. *brachycladum* W., Oxshott Heath (17), Dec. 1924, D.G.C.; var. *pallescens* W., May Hill (34*), Aug. 1924, E.A.; Cappellen, Belgium, Aug. 1919, J.H., "Intermediate between vars. *flavescens* and *fuscens*" W.R.S.; Bouvel, Belgium, Oct. 1922, J.H.; Doone Valley (4), Aug. 1924, D.G.C.; Opinan, Gairloch (105), leg. D.R.R., com. W.G.T.; Lomond Hills (85), July 1922, leg. D.R.R., com. D.L.; Seater Bower (109), May 1918, D.L.; f. *confertum* Wh., Doone Valley (4), Aug. 1924, D.G.C.; var.

flavo-glaucescens Russ., Tilgate Forest (14), April 1924, D.G.C., "Warnstorf, in his later publications, seems to have dropped this and other similar forms. I should like to know how he would label these forms. It is impossible to call them type, which I take it is represented by var. *glaucescens* W. Var. *flavo-glaucescens* is quite distinct in its yellowish capitulum and glaucous green branches, &c.", D.G.C. "Warnstorf gave more varietal names in his earlier work which he afterwards dropped. He seems to have selected certain well-marked forms which occur again and again, and makes no mention of intermediate forms. I should place Mr. Catcheside's plant as intermediate between vars. *glaucescens* and *flavescens*," W.R.S.; var. *fuscescens* W., Loch Broom (105), June 1921, D.L.; Ullapool River (105), May 1918, D.L.; var. *virescens* Russ., Reckheim, Belgium, June 1924, J.H., "The chlorophyllous cells, seen in section, are those of the *papillosum* type with the upper wall much thickened. The plant being quite without papillæ would be best placed under *S. papillosum* var. *laeve* W., a rare and critical plant," W.R.S.; Bockryck Genck, Belgium, July 1924, and Opgrimby, Belgium, June 1924, J.H., "These are intermediate between vars. *glaucescens* and *pallescens*. Two packets of the first are var. *pallescens*, but there is too much admixture of green for them to be well-marked specimens," W.R.S.; Cappellen, Belgium, Oct. 1919, J.H., "This is intermediate between vars. *glaucescens* and *flavescens*," W.R.S.; var. *virescens* Russ., f. *squarrosula* W., Bouvel, Belgium, Oct. 1922, leg. H.V.d.B., J.H. and R. Naveau, com. H.V.d.B., "A form near v. *pallescens* W.," W.R.S.; var. ? Cranbrook (16), Aug. 1924, J.L.O'L., "I am not prepared to place this under any of Warnstorf's varieties," W.R.S.

S. medium Limpr., Arthog (48), Aug. 1922, F.R.; var. *purpurascens* W., Putte, Holland, Oct. 1884, H.V.d.B.; Esschen, Belgium, Oct. 1886, H.V.d.B.; Cappellen, Belgium, Sept. 1919, J.H.; Westmalle, Belgium, Oct. 1924, J.H.; var. *versicolor* W., Burnham Beeches, Nov. 1923, W.R.S.

S. armoricum W., Wimbledon Comm. (17), Nov. 1924, J.L.O'L., "This is *S. obesum* W.," W.R.S.

S. sp. & var. ? Tilgate Forest (14), Nov. 1924, J.L.O'L. "This is a stunted form of *S. cymbifolium* Ehrh." W.R.S.

True Mosses

European (British and Continental).

Andreæa petrophila Ehrh., Ben Lawers (88), July 1924, C. A. Cooper; Hoher Westerwald, Rhineland, May 1922, leg. A. Ludwig and H.A., com. H.N.D.

A. alpina Smith, Snowdon (49), Sept. 1924, D.B.B.; Stonethwaite (70), Sept. 1921, C. A. Cooper; Llanberis (49), Sept. 1924, W.B.; Clogwyn, Snowdon (49), Sept. 1924, J.L.O'L.

A. Rothii Web. & Mohr., Ogwen (49), June 1923, W.G.T.

A. crassinervia Bruch., Belstone (4), July 1924, W.R.S.

Tetraphis pellucida Hedw., Vosges, France, Sept. 1923, leg. V. Madiot, com. J.C.; c. fr. Altenhof bei Trier, Rhineland, Apr. 1924, H.A.; Lough Bray (I. 20), Feb. & Apr. 1924, D.B.B.; Thusis, Switz., July 1924, J.B.D.

Atrichum undulatum P.B. (= *Catherinea undulata* Web. & Mohr.), Vendée, France, Apr. 1923, J.C.

Catherinea tenella Röhl., Glen Nevis (97), H.H.K. & W.E.N., com. W.E.N.

Oligotrichum hercynicum Lam., Snowdon (49), Aug. 1924, D.B.B.; Coniston (69), May 1913, A.W.; Clogwyn, Snowdon (49), J.L.O'L., "I think this should go under the var. *laxum* Braith. The stems are rather tall for the type and the leaves distant with rather large cells," G.B.S.; var. *laxum* Braith., Clogwyn, Snowdon (49), D.G.C.

O. incurvum (Huds.) Lindb. (= *O. hercynicum* Lam.) Kuusamo, Finland, July 1918, leg. E. af. Hällström, com. V.F.B.

Psilopilum lævigatum Whlub., Kuusamo, Finland, July 1915, leg. E. af. Hällström, com. V.F.B.

Polytrichum nanum Neck., Lawers (88), Aug. 1924, C. A. Cooper, "I should call this *P. aloides*, The fruit is too young for examination, but the leaves are sharply serrate from the base upwards, and several cells are included in each tooth," G.B.S.

Pogonatum aloides P.B. (= *Polytrichum aloides* Hedw.) near Deurne, Belgium, Apr. 1888, H.V.d.B.; var.

Dicksoni Wallm., Vendée, France, March 1913, J.C.

Polytrichum urnigerum L., near Bredenbruch, Rhineland, leg. A. Schumacher, com. H.N.D.; Llanberis (49), Sept. 1924, W.B. and L.H.P.

P. sexangulare Flörke, Ben Lawers (88), July 1905, J.A.W. and A.W., com. A.W.

P. juniperinum Willd., Reigate Heath (17), May 1924, leg. E. C. Wallace, com. A.G.Y.

P. gracile Dicks., Pilling Moss (60), Aug. 1909, A.W.

P. formosum Hedw., Puy-de-Dôme, France, Sept. 1923, leg. A. Luquet, com. J.C.; Haute Saône, France, leg. V. Madiot, com. J.C.

P. commune L., var. *minus* Weiss, Chobham Comm. (17), June 1924, J.L.O'L.

Diphyscium foliosum Mohr., Ben Nevis (97), July 1924, C. A. Cooper; Lydford (3), July 1924, A. Wyndham; Arthog (48), June 1924, D.A.J.

D. scssile Lindb. (= *D. foliosum* Mohr.), Vendée, France, Feb. 1920, J.C.; Herkenrath, Rhineland, May 1923, H.A.; Bengel, Rhineland, Aug. 1924, leg. H.A., com. H.N.D.

Archidium phascoides Brid. (= *A. alternifolium* Schp.), Vendée, France, April 1923, J.C.

Pleuroidium nitidum B. & S. (= *P. axillare* Lindb.), Vendée, France, Sept. 1919, J.C.

P. subulatum Rabenh. (B. & S.), Vendée, France, March 1923, J.C.

Sporledera palustris Hampe, near Siegburg, Rhineland, May 1923, H.A.

Ditrichum homomallum Hampe, Snowdon (49), Sept. 1924, L.I.S.

D. zonatum Limpr., Snowdon (49), Sept. 1924, leg. J.B.D., com. L.H.P.; var. *scabrifolium* Dixon, Clogwyn, Snowdon (49), Sept. 1924, J.L.O'L.

D. subulatum Hampe, Truro (1), Apr. 1923, H.H.K. and W.E.N., com. W.E.N.

D. flexicaule Hampe, Gavarnie, Pyrenees, July 1909, J.C.; Vendée, France, Jan. 1913 and Apr. 1923, J.C.; Grindelwald, Switz., July 1911, E.A.R.; Plaun de Lej; Switz., Aug. 1924, leg. H.N.D. and J.B.D., com. J.B.D. and L.H.P.; Thusis, Switz., July 1924, J.B.D.; var. *longifolium* Zett., Val d'Anniviere, Valais, Switz., July 1914, P.G.M.R.

Swartzia montana Lindb., Killin (88), Aug. 1924, W.N.T.

Seligeria pusilla B. & S., Berwig (50), Aug. 1924, D.A.J.

S. paucifolia Carruth. Hatcliffe (54), June 1924, G.H.A.

S. calcarea B. & S., Hatcliffe (54), June 1924, G.H.A.; Woldingham (17), Jan. 1925, A.S.

S. recurvata B. & S., near Holmfirth (63), Aug. 1924, F.E.M.

Brachyodus trichodes Fürnr., Aspatria (70), Sept. 1924, C.H.B.

Rhabdoweisia fugax B. & S., Ogwen (49), Sept. 1924, C.H.B.; Bala (48), Apr. 1914, E.A.R.; Maloja, Switz., July 1924, J.B.D.; Scafell (70), Aug. 1895, H.N.D.

R. striata (Schrad.) Kindb. (= *R. fugax* B. & S.), Altenhof, bei Trier, Rhineland, leg. H.A., com. H.N.D.

R. denticulata B. & S., Keswick (70), Sept. 1924, C.H.B.; Ceunant Mawr (49), Sept. 1924, E.A. "In some of the packets there are tufts of *R. crenulata* as well as *R. denticulata*," G.B.S.; Borrowdale (70), Aug. 1895, H.N.D.

R. crenulata Jameson, Coledale (70), Sept. 1924, C.H.B., also, com. L.H.P.; Helvellyn (69), Sept. 1911, H.N.D.

Cnestrum schisti Whlbn., Savonia, Finland, June 1924, V.F.B., "This is what we have hitherto known as *Cynodontium schisti* Lindb. See Handbook, Ed. 3, p. 72," W.E.N.

Cynodontium Bruntoni B. & S., Plompton by Knaresborough (64), W.H.B.; Lustleigh Cleave (3), July 1894, H.N.D.

Onocophorus Bruntoni Lindb. (= *Cynodontium Bruntoni* (B. & S.)), Vendée, France, March 1920, J.C.

Cynodontium polycarpum Schp., Glenlyon, Perth, July 1893, H.N.D.; Wengen, Switz., June 1924, C.H.B.

C. virens Schp., Ben Gruban (88), Aug. 1905, leg. E. Cleminshaw, J.B.D. & D.A.J., com. D.A.J.; var. *serratum* B. & S., Ben Lawers (88), July 1893, H.N.D.

Dichodontium pellucidum Schp., Dollywaggon Pike, Helvellyn (69), Sept. 1924, C.H.B.; Killin (88), July 1897, H.N.D., "In leaf character and erect fruit, as also in habit,

= *D. flavescens*, but peristome is typical *pellucidum*," H.N.D.; Tyndrum, Perthshire, July 1898, H.N.D., "Habit of *flavescens*, but peristome of *pellucidum*," H.N.D."; Scafell (70), July 1891, H.N.D.; Brecon (42), Aug. 1894, H.N.D.; Reiler-Hals, Rhineland, Aug. 1924, leg. H.A., com. H.N.D.; Larig Ghru (96), Aug. 1923, D.B.B., "This, I think, should go under the var. *compactum*," G.B.S.; var. *fugimontanum* Brid., Snowdon (19), Sept. 1924, W.B. & L.H.P., "These seem to me to be the var. *compactum* Schp. M.S., rather than v. *fugimontanum*, for the stems are very slender and densely tufted and can by no means be called short," G.B.S. "In spite of the rather tall stems in some of these, I think they may be placed under var. *fugimontanum*. It is a question whether v. *compactum* should not be merged in it," H.N.D.; Craig Chailleach, Perthshire, July, 1898, leg. C.H.B. & H.N.D., com. H.N.D., also, July 1897, H.N.D., "Should be v. *fugimontanum* from habit, small capsules, &c., but leaves not particularly obtuse," H.N.D.; Ben Lawers (88), July 1893, H.N.D.; Llandilo (43), May 1902, leg. C.H.B., com. H.N.D.; Aber (49), Aug. 1892, H.N.D.; var. *compactum* Schp. M.S., Kyloe Hills (68), May 1924, J.B.D.; Skye (104), July 1893, H.N.D.

Dichodontium flavescens Lindb., Borrowdale (70), Oct. 1924, C.H.B.; Ullswater (69), July 1891, H.N.D.

Dicranella heteromalla Schp., var. *interrupta* B. & S., Mount Carron (71), June 1908, H.B.

D. cerviculata Schp., Washburndale (64), Aug. 1924, W.H.B.; Swanton Abbot (27), Jan. 1910, W.H.B.; Burnham Beeches (24*), Sept. 1923, W.R.S.; Hoher Westerwald, Rhineland, Aug. 1922, leg. A. Ludwig & H.A., com. H.N.D.; near Köln, Rhineland, Apr., May and Aug. 1924, H.A.

D. crispa Schp., Aspatria (70), Sept. 1924, C.H.B.; Weston-on-Trent (39), June 1898, leg. J. E. Bagnall, com. J.B.D.

D. secunda Lindb., Lambertton Beach (81), March 1924, J.B.D.; Maloja, Switz., July 1924, J.B.D.

D. curvata Schp., Portinscale (70), Oct. 1924, C.H.B.; Llanbedr (48), May 1913, D.A.J.

D. rufescens Schp., Portinscale (70), Sept. 1924, C.H.B., also, com. L.H.P.; Rhinog Fawr (48), Oct. 1915, leg. W.E.N. & D.A.J., com. D.A.J.

Anisothecium rufescens (Dicks.) Lindb. (= *Dicranella rufescens* Schp.), Bergish-Gladbach, Rhineland, Apr. 1923, leg. H.A., com. H.N.D.; near Altenberg, Rhineland, Apr. 1924, leg. H.A., com. H.N.D.

Dicranella varia Schp., Langdale (69), Oct. 1924, C.H.B.

D. squarrosa Schp., Langdale (69), Oct. 1924, C.H.B.; Borrowdale (69), Aug. 1924, H. H. Harvey; Slemish (I. 39), June 1923, W.R.M.; c. fr. near Penygwrhyd (49), May 1916 D.A.J.

Dicranoweisia cirrata Lindb., Little Cotes (54), May 1923, G.H.A.; Crunwre (45), May 1924, R.J.; Banstead (17), Dec. 1924, D.G.C.

D. crispula Lindb., Ben Lawers (88), July 1893, H.N.D.; Craig Chailleach (88), July 1897, H.N.D.; near Wengen, Switz., June and July, 1924, C.H.B.; Ben More (88), July 1897, leg. C.H.B. & H.N.D., com. H.N.D.; Snowdon (49), July 1888, H.N.D.

Campylopus subulatus Schp., elongated form, Langstrath (70), Oct. 1924, C.H.B.; Keswick (70), Sept. 1924, C.H.B.; Wye (43), Sept. 1924, R.J.; Fridd, Harlech (48), May 1903, D.A.J.

C. Schwarzii Schp., Cader Idris (48), Aug. 1920, E.A.R.; Snowdon (49), Sept. 1924, W.B.

C. flexuosus Brid., Esher Comm. (17), Dec. 1924, leg. E. C. Wallace, com. A.G.Y., "The sterile specimens are correctly named, but those with fruit belong to *C. pyriformis* Brid.," G.B.S.; Vendée, France, Oct. 1923, J.C.; near Altenburg, Rhineland, leg. H.A., com. H.N.D.; var. *uliginosus* Ren., Arthog (43), Aug. 1922, F.R.; var. *paradoxus* Husn., Cappellen, Belgium, Sept. 1912, H.V.d.B.; Stockton Forest (62), June 1906, W. Ingham, com. D.A.J.; var. *zonatus* Limpr., Borrowdale (70), Oct. 1924, C.H.B., also, com. L.H.P.

C. pyriformis Brid., Looe (2), F.R.

C. fragilis B. & S., Grasmere (69), Oct. 1924, C.H.B.

C. setifolius Wils., Tyn-y-groes (48), July 1920, D.A.J.; Cwm Bychan (48), Apr. 1914, D.A.J.

C. atrovirens de Not., Lawers (88), July 1924, C. A. Cooper; Cader Idris (48), Aug. 1922, F.R., "A form between v. *muticus* and v. *gracile*," H.N.D.; Llanwrtyd (42), Sept. 1924, R.J., "The hair point to the leaves is

absent or very short. I think the plant might go under the var. *muticus* Milde," G.B.S.; var. *muticus* Milde, Snowdon (49), Sept. 1924, W.B.; Llanwrtyd (42), Sept. 1924, R.J.

C. polytrichoides de Not. (= *C. introflexus* Brid.), Vendée, France, Apr. 1923, J.C.

C. brevopilus B. & S., Chobham Comm. (17), May 1924, H.W.M.; near Westmalle, Belgium, Aug. 1906, leg. H.V.d.B. and R. Naveau, com. H.V.d.B.

Dicranodontium longirostre B. & S., Borrowdale (70), Sept. 1924, C.H.B.; Dolgelley (48), Oct. 1890, leg. C.H.B., com. H.A.H.; c. fr., Diablerets, Switz., Aug. 1910, leg. E. Cleminshaw and D.A.J., com. D.A.J.; var. *alpinum* Schp., Llyn Dulyn (49), leg. C.P.H., com. J.B.D.; Wild Boar Fell (69), July 1918, A.W.

Dicranum falcatum Hedw., Killin (88), Aug. 1924, W.N.T.

D. elatum Lindb., Lulea Lappmark, Sweden, July 1923, C.S.

D. undulatum Ehrh., Lynwode (54), June 1916, leg. J. J. Marshall, com. G.H.A.; Västergothland, Sweden, Sept. 1923, C.S.

D. Bonjeani de Not., Vendée, France, Sept. 1923, J.C.; var. *rugifolium* Bosw., Ruislip Comm. (21*), Apr. 1924, P.W.M.R., "Some packets contain well-marked v. *rugifolium* and others a form with leaves hardly at all rugose. This last seems to belong to *D. scoparium*; at any rate it cannot be called v. *rugifolium*," G.B.S.

D. scoparium Hedw., Gavarnie, Pyrenees, July 1909, J.C.; Haute Saône, France, Aug. 1923, leg. V. Madiot, com. J.C.; var. *spadiceum* Boul., Skiddaw (70), Oct. 1924, C.H.B.; also, com. L.H.P.; Staveley (69), July 1904, H.B.; Calmpthout, Belgium, Sept. 1907, leg. H.V.d.B. and P. E. Paque, com. H.V.d.B.

D. angustum Lindb., Tervola, Finland, June 1924, leg. M. J. Kotilainen, com. V.F.B.

D. majus Turn., Burnham Beeches (24), July 1924, P.W.M.R.

D. fascescens Turn., Berwick, June 1924, J.B.D.; Crunwere (45), Aug. 1924, leg. L.H.P. and R.J., com. L.H.P., "This is *D. Scottianum**, " G.B.S.; Cwm-y-glô, c.fr. (49), Sept. 1924, D.A.J.

D. fragilifolium Lindb., Lulea Lappmark, Sweden, Aug. 1922, C.S.; Ostrobothnia, Finland, July 1924, leg. M. J. Kotilainen, com. V.F.B.

D. Scottianum Turn., Zennor (1), — 1924, P.W.M.R.

D. elongatum Schleich., Splügen & Maloja, Switz., July and Aug. 1924, J.B.D. & H.H.K.

D. strictum Schleich., Alton Towers (39), June 1894, leg. J. E. Bagnall, com. J.B.D.; near Knaresborough (64*), Aug. 1924, W.H.B.; also, June 1924, com. L.H.P.; near Droitwich (37), Nov. 1924, E.A.

D. flagellare Hedw., Abbeywood (16), Sept. 1916 & Jan. 1925, St.J.M.; Maloja, Switz., July 1924, J.B.D.

D. montanum Hedw., Bewdley (37), March 1920; Maloja, Switz., July 1924, J.B.D.

D. fulvum Hook., Halland, Sweden, July 1923, C.S.

D. longifolium Ehrh., Splügen, Switz., July 1924, H.H.K. and J.B.D.

Leucobryum glaucum Schp., c.fr. Maentwrog (48), April 1898, leg. D.A.J., com. J.B.D.; Barmouth (48), Oct. 1890, C.H.B., com. H.A.H.; Ceunant Llenyrch (48), — 1898, leg. E. C. Horrell, com. H.A.H.; Vendée, France, Nov. 1921 & March 1923, J.C.; Brugel, Rhineland, April 1923 & Aug. 1924, leg. H.A., com. H.N.D.

Fissidens exilis Hedw., Bradley Wood (54), Dec. 1924 and Jan. 1925, G.H.A.

F. pusillus Wils., Coulsdon (17), March 1925, leg. A. H. Carter, com. W.R.S.; Vendée, France, Oct. 1923, J.C.

F. impar Mitt., Vendée, France, Feb. 1920, J.C. "Dr. Braithwaite has shown that this name is a synonym for *F. bryoides* var. *intermedius* Ruthe," W.E.N.

F. Curnowii Mitt., Penzance (1), March 1861, leg. W. Curnow, com. H.B.; Rosemergy (1), Aug. 1924, P.W.M.R.; Catforth (60*), Aug. 1901, H.B.

F. rivularis Spr., Fairlight Glen (14), Dec. 1924, C. A. Cooper. "I should say this is undoubtedly *F. rivularis*; the thickened border and nerve uniting to form a long mucro are unmistakable," G.B.S.

F. Monguillonii Thér., Vendée, France, Oct. 1923, J.C.

F. rufulus B. & S., Bolton Woods (64), Aug. 1904, H.B.

F. osmundoides Hedw., Snowdon (49), Sept. 1924, leg. H.N.D., com. L.H.P.

F. polyphyllus Wils., Aberglaslyn (49), Sept. 1924, L.I.S., W.B., C.H.B. & E.A.; near Beddgelert (49), Aug. 1916, D.A.J.; also, Sept. 1924, L.H.P.; Trevaylor (1), Aug. 1924, P.W.M.R.

F. adiantoides Hedw., Vendée, France, March 1920, J.C.

F. decipiens de Not., Banstead Downs (17), May 1924,

E. C. Wallace, com. A.G.Y. ; Park Downs (17), Dec. 1924, D.G.C. ; Diano Marina, Italy, April 1924, C.H.B. ; Grandola, L. Como, Italy, May 1924, C.H.B.

F. taxifolius Hedw., Vendée, France, March 1923, J.C. ; Haute Saône, France, Nov. 1923, leg. V. Madiot, com. J.C.

F. grandifrons Brid., Gavarnie, Pyrenees, July 1909, J.C.

Schistidium apocarpum B. & S. (= *Grimmia apocarpa* Hedw.), Gavarnie, Pyrenees, July 1909, J.C.

Grimmia apocarpa Hedw., var. *rivularis* Web. & Mohr., Rydal (69), Oct. 1924, C.H.B. ; var. *gracilis* W. & M., Splügen, Switz., July 1924, J.B.D. ; var. *pumila* Schp., Snowdon (49), Sept. 1924, J.L.O'L. "In this plant the leaves are toothed at the apex and the back of the leaves is distinctly scabrous, so, I think, it goes best under the var. *gracilis* W. & M.," G.B.S. "Yes, this is a very small form of v. *gracilis*," H.N.D.

G. gracilis Schwaegr., Creux de Val, Switz., July 1913, P.G.M.R. ; f. *nigra* Loeske, *vide* Amann, Teesdale (65 or 66), Oct. 1883, leg. Sir B. Stone, com. P.G.M.R. "Certainly what the bryologists of the continent, following Loeske and Culmann, consider to be *G. gracilis*. It agrees well with the description of Loeske—Areolation typical. Median cells .0012 x .0012 mm., 6900 to the sq. mm. The colour puts it under f. *nigra* of Loeske," J. Amann, "cf. Amann 'Mousses de la Suisse,' p. 386. The brownish form with papillose nerve is segregated by Culmann as *Schistid. papillosum*, though the name seems ante-dated by some of Stirton's. *Sch. papillosum* is calcifuge, while the true *G. gracilis*, as in this case, is calciphilous," P.G.M.R. "Father Rhodes *G. gracilis* is no doubt correct, but it is only the same thing as *G. apocarpa*, v. *gracilis* W. & M. It has some title, no doubt, to be treated as a species or subspecies, as I have mentioned in the Handbook," H.N.D.

G. conferta Funck., Largo Law (85), Sept. 1909, leg. J. McAndrew, com. J.B.D. ; also, Clogwyn du'r Arddu (49*), D.A.J.

G. angusta (Hag.) Par., Lulea Lappmark, Sweden, C.S. "This should, according to Limpricht, be called *Schistidium lineare* (Chalubinski) Limpr. Chalubinski's name ante-dated that of Dr. Hagen by nearly 40 years," W.E.N.

G. crinita Brid., Les Serrières, Neuchâtel, Switz., July 1913, P.G.M.R.

G. incurva Schwægr., Glyder Fach (49), Sept. 1924, J.B.D. ; also, leg. H.N.D., A.W. & D.A.J., com. D.A.J. ; Piz Langard, Switz., Aug. 1924, leg. H.N.D. & J.B.D., com. J.B.D.

G. funalis Schp., Snowdon (49), Sept. 1924, E.A. ; f. *pilosa* Loeske, *teste* Amann, Lauberhorn, Switz., July 1911, E.A.R.

G. torquata Hornsch., Cader Idris (48), Aug. 1922, F.R.

G. andreavoides Limpr., Snowdon (49*), new to British Isles,

Sept. 1924, L.I.S. & J.L.O'L. det. H.N.D. (see *Journal of Botany*, May 1925, and description in Report, p. 112).

G. pulvinata Smith, Haute Saône, France, April & Sept. 1923, leg. V. Madiot, com. J.C.

G. orbicularis Bruch, Vendée, France, April 1923, J.C.

G. Lisce de Not., Vendée, France, Feb. 1920, J.C.

G. robusta Ferg. (*G. decipiens* Lindb. v. *robusta* Braithw.), Langstrath (70), Oct. 1924, C.H.B.

G. elatior B. & S., Wengen, Switz., July 1924, C.H.B.

G. Hartmani Schp., Splügen, Switz., July 1924, J.B.D.

G. retracta Stirt., Skelwith Force (69), Oct. 1924, C.H.B. ; Berwyn (50*), Dec. 1924, D.A.J. ; The Wye (43), Sept. 1924, R.J. "Some of these packets are correctly named ; others contain *G. apocarpa*, v. *rivularis*," G.B.S.

G. patens B. & S., Langstrath (70), Oct. 1924, C.H.B. ; also, com. L.H.P. ; Llyn Bochlwyd (49), Sept. 1924, D.G.C. ; Grand St. Bernard, Switz., July 1922, P.G.M.R. "This plant has just the appearance of *G. patens*, and the cell structure agrees fairly well with it, but the seta is straight and there are no wings on the back of the nerve. Possibly it belongs to some non-British species," G.B.S. "I am inclined to think it is not *G. patens* at all, but a form of the protean *Rhacomitrium heterostichum*, probably an extreme form of the var. *alopecurum*. I find traces of an obsolescent hair point, and the nerve and areolation are rather those of *Rhacomitrium* than of *Grimmia*. This view also gets over the difficulty of the long straight seta," W.E.N. "A very remarkable plant. I quite agree that it is a *Rhacomitrium* ; perhaps, nearest to *R. heterostichum*, v. *obtusum* Lindb., which, according to Loeske, may now and then have a short hair-point. The recurved margins and stout nerve support this. On the other hand the whole areolation, right to the base, is extremely short, the really long Rhacomitroid basal cells being few and often not present, and the leaf apex does not suggest v. *obtusum* at all," H.N.D.

G. Doniana Sm., Austwick (64), Dec. 1923, W.H.B. ; Ogwen (49), Sept. 1924, W.B. ; Keswick (70), July 1919, W.E.N. ; Llanberis (49), Aug. 1924, L.H.P. ; var. *sudetica* Wils., Snowdon (49), Sept. 1924, J.L.O'L.

G. arenaria Hampe, Nant Gwynant (49), Sept. 1924, leg. D.A.J. & A.S., com. A.S. ; also, March 1925, D.A.J.

G. ovata Schwægr., Kyloe Crag (68), April 1924, J.B.D. ; also, Llyn Ogwen (49), Sept. 1924, C.H.B. and J.B.D.

G. commutata Hubn., Skelwith Force (69), Oct. 1924, C.H.B. ; Derwentwater (70*), Oct. 1924, C.H.B. ; also, com. L.H.P. ; Berwyn (50*), Dec. 1924, E.A.R. & D.A.J., com. D.A.J.

G. alpestris Schleich., Piz Langard, Switz., Aug. 1924,

J.B.D. ; Maloja, Switz., July 1924, J.B.D.

G. mollis B. & S., Surettahorn, Switz., July 1924, leg. H.N.D. & J.B.D., com. J.B.D.

G. leucophæa Grev., Berwyn (50*), Jan. 1925, P.G.M.R. & D.A.J., com. D.A.J.

G. campestris Burch. (= *G. leucophæa* Grev.), St. Luc, Valais, Switz., June 1912, P.G.M.R.

G. elongata Kaulf., Hobcarton Craggs (70), Oct. 1924, C.H.B.; Snowdon (49*), Sept. 1924, H.N.D. & D.A.J.; also, J.B.D., C.H.B., D.G.C. & J.L.O'L.

G. atrata Mielich., Hobcarton Craggs (70*), Oct. 1924, C.H.B.; Snowdon (49), Sept. 1924, J.B.D. & D.G.C.; also, c.fr., June 1919, D.A.J.

G. unicolor Hook., Maloja, Switz., July 1924, leg. H.N.D. & J.B.D., com. J.B.D.

Rhacomitrium ellipticum B. & S., Cwm Idwal (49), Sept. 1924, J.B.D.

R. aciculare Brid., near Dresselndorf, Hesse-Nassau, Sept. 1924, H.A.; Hoher Westerwald, Rhineland, leg. A. Ludwig & H.A., com. H.N.D.

R. protensum Braun., Llanberis (49), Aug. 1924, D.B.B.

R. fasciculare Brid., Snowdon (49), July 1893, leg. R. de G. Benson, com. H.A.H.

R. heterostichum Brid., Haute Saône, France, leg. V. Madiot, com. J.C.; var. *gracilescens* B. & S., Snowdon (49), Sept. 1924, W.B. & L.H.P.

R. lanuginosum Brid., Vendée, France, March 1920, J.C.; Puy-de-Dôme, France, July 1923, leg. A. Luquet, com. J.C.; c.fr., Lydford (3), July 1924, A. Wyndham.

R. canescens Brid., Haute Saône, France, Sept. 1923, J.C.

Coscinodon cribrosus Spr., c.fr., Festiniog (48), Feb. 1919, D.A.J.

Ptychomitrium polyphyllum Fürnr., Llanberis (49), Sept. 1924, W.B.; Bronkastel, Rhineland, April 1924, leg. H.A., com. H.N.D.

Glyphomitrium Daviesii Brid., Rathlin Island (I. 39), July 1924, W.R.M.

Campylostelium saxicola B. & S., Ceunant Mawr (49*), March 1925, D.A.J.

Hedwigia ciliata Ehrh., Vendée, France, Feb. 1920 and March 1923, J.C.; var. *striata* Wils., Llyn Ogwen (49), Sept. 1924, J.B.D.

H. imberbis Spr., Derwentwater (70), Oct. 1924, C.H.B.;

- Llanberis (49), Aug. 1924, D.B.B.
Acaulon muticum C.M., var. *minus* H. & T., near Menton, France, March and April, 1924, C.H.B.
A. triquetrum C.M., Afton Down (10), Dec. 1923, J.G.; Newhaven (14), Jan. 1925, J.L.O'L.
Phascum cuspidatum Schreb., small form, Eyemouth (81), Jan. 1924, J.B.D.
P. Flærkeanum, W. & M., Ringmer (14), Sept. 1923, A.S.
Pottia recta Mitt., Freshwater Bay (10), Jan. 1924, J.G.
P. bryoides Mitt., Scremerstown (68), March 1924, J.B.D.
P. Heimii Fürnr., Crawfordsburn (I. 38), Aug. 1924, W.R.M.; Cleethorpes (54), April 1924, G.H.A.
P. intermedia Fürnr., var. *littoralis* Mitt., Eyemouth (81), Feb. 1924, J.B.D.; Yarmouth (10), Jan. 1919 and March 1924, J.G.
P. Wilsoni B. & S., Marazion (1), Jan. 1922, L.H.P.
P. minutula Fürnr., Eyemouth (81), Jan. 1924, J.B.D.
P. lanceolata C.M., Vendée, France, March 1923, J.C.
Desmatodon nervosus B. & S. (= *Tortula atrovirens* Lindb.), Vendée, France, March 1923, J.C.
Desmatodon latifolius (Hedw.) Brid., near Wengen, Switz., July 1924, C.H.B.
Tortula pusilla Mitt., Freshwater Bay (10), Dec. 1924, J.G.
T. cernua Lindb. (= *Desmatodon cernuus* B. & S.), Schooten, Belgium, March 1923, H.V.d.B., and J.H.; Merxem, Belgium, June, 1887, J.H. "Three of these specimens are very largely intermixed with *Leptobryum pyriforme* Wils., both sterile and with young damaged fruit," W.E.N.
T. atrovirens Lindb., Berwick (68), Feb. 1924, leg. J.B.D., com. L.H.P.; Saunton (4), Sept. 1924, L.H.P.; Menton, France, Feb. 1924, C.H.B.
T. muralis Hedw., var. *rupestris* Schultz., Crunwre (45), Aug. 1924, L.H.P.
T. canescens Mont., Barmouth (48), March 1907, D.A.J.; Menton, France, Feb. 1924, C.H.B.; (*Barbula canescens* Bruch.), Vendée, France, March 1923, J.C.
T. subulata Hedw., Chagford (3), Feb. 1924, L.H.P.; (*Barbula subulata* P.B.), var. *integrifolia* Boul., Vendée, France, March 1923, J.C.
T. inermis Mont., near Menton, France, March and April, 1924, C.H.B.; Eze, near Monaco, April 1924, C.H.B.
T. intermedia Berk., Halton-Holgate (54), Spring 1924, G.H.A.; Burgh Heath (17), Nov. 1924, leg. E. C. Wallace, com. A.G.Y.; Bisley (33), April 1924, E.A.; Cap Martin, France, April 1924, C.H.B.; (*Barbula intermedia* Brid.), Vendée, France, April 1923, J.C.

T. ruralis Ehrh., Gatton (17), Dec. 1924, leg. E. C. Wallace, com. A.G.Y. "I make this plant *T. intermedia* Berk. The leaf cells are much smaller and more obscure than those of *T. ruralis*," W.E.N.; Beulah (42), Sept. 1924, R.J.; near Anvers, Belgium, April 1884 and July 1886, H.V.d.B.; Brunnen, Switz., June 1924, C.H.B.; (*Barbula ruralis* Hedw.), Gavarnie, Pyrenees, July 1909, J.C.

T. norvegica Wahl. (*T. aciphylla* B. & S.), Splügen, Switz., July 1924, J.B.D.; Maloja, Switz., July 1924, J.B.D.; Wengen, Switz., June 1924, C.H.B.

T. princeps de Not., Moel'r Ogof (49), Sept. 1924, J.B.D., also, com. L.H.P.

T. membranifolia Hook, Menton, France, Feb. & April 1924, C.H.B.; La Mortola, Italy, March 1924, C.H.B.; (*Barbula membranifolia* Hook.), Vendée, France, J.C.

Barbula aloides B. & S. (*Tortula aloides* de Not.), Vendée, France, April 1923, J.C.

B. cuneifolia Brid. (*T. cuneifolia* Roth), Vendée, France, Dec. 1912, J.C.

B. latifolia B. & S. (= *T. mutica* Lindb.), Vendée, France, Oct. 1923, J.C.

B. lurida Lindb., Crunwre (45), Aug. 1924, L.H.P.; Halton-Holgate (54), Spring 1924, G.H.A.; (*Didymodon luridus* Hornsch.), Vendée, France, April 1923, J.C.

B. rubella Mitt. (*Didymodon rubellus* B. & S.), Vendée France, Jan. 1913, J.C.; var. *ruberrima* Ferg., Keswick (70), Sept. 1924, C.H.B. "Mr. Dixon has shown in his note on p. 560 of the Handbook (Ed. 3), that this plant should be called *Barbula ferruginescens* Stirt. The multicellular gemmæ mentioned by Mr. Dixon on p. 209 of his book are very noticeable on these specimens," W.E.N.

B. tophacea Mitt., Humberstone (54), Dec. 1924, G.H.A.; Barmouth (48), — 1891, leg. R. de G. Benson, com. H.A.H.

B. fallax Hedw., The Wye (43), Sept. 1924, R.J. "This is *B. cylindrica* Schp. *B. fallax* is a stiffer plant of a duller colour and a different areolation," W.E.N.; Menton, France, March 1924, C.H.B.; var. *brevifolia* Schultz., Strensall Comm. (62), Feb. 1913, H.S.

B. recurvifolia Schp., Silverdale (60), June 1900, leg. J.A.W., com. W.G.T.

B. spadicea Mitt., Langdale (69), Oct. 1924, C.H.B.

B. Nicholsoni Culm., Ladykirk (81), May 1924, J.B.D.

B. rigidula Mitt., Grasmere (69), Oct. 1924, C.H.B.; Cwm-y-Glô (49), Aug. 1924, L.H.P.; Harlech (48), July 1924, C.H.B.

B. cylindrica Schp., Cwm-y-Glô (49), Aug. 1924, W.B.; Halton-Holgate (54), Spring 1924, G.H.A.; (*B. cyl.* Tayl.),

Vendée, France, Oct. 1923, J.C.

B. vinealis Brid., Vendée, France, March 1923, J.C.

B. gracilis Schwægr., Menton, France, Feb. and March 1924, C.H.B.

B. Hornschuchiana Schultz, Vendée, France, Feb. 1913, J.C.

B. revoluta Brid., Carnarvon (49), Sept. 1924, W.B.; Crunwre (45), Oct. 1924, R.J.; pelomorphosis, *fide* Amann, Bouguillon, Fribourg, Switz., Jan. 1922, J. Aebischer and P.G.M.R., com. P.G.M.R.

B. convoluta Hedw., Vendée, France, April 1923, J.C.; Grimsby (54), Jan. 1909, G.H.A.; Box Hill (17), April 1924, D.G.C.

B. tortuosa W. & M. (*Trichostomum tortuosum* Dixon), Hastière and Waulsort, Belgium, June 1885, leg. G. Dens and H.V.d.B., com. H.V.d.B.

Dialytrichia mucronata Broth., Vendée, France, Oct. 1923, J.C.

Leptodontium flexifolium Hampe, Skiddaw (70), Oct. 1924, C.H.B.; Rhinog Fawr (48), Oct. 1915, leg. W.E.N. & D.A.J., com. D.A.J.

L. recurvifolium Lindb., Llyn Bochlwyd (49), Sept. 1924, leg. H.N.D., D.G.C. & D.A.J., com. D.A.J.; also, D.G.C.

Weisia crispa Mitt., Kingswood (17), May 1924, leg. E. C. Wallace, com. A.G.Y.; Maidstone (15*), Feb. 1904, leg. J. Marten, com. H.N.D.; Beachy Head (14), Dec. 1887, H.N.D.; var. *aciculata* Braithw., near Salcey Forest (32), Nov. 1892, H.N.D.; near Cheltenham (34?), April 1910, leg. H.H.K., com. H.N.D.

W. microstoma C.M., Castor Hanglands (32), June 1889, H.N.D.; Collyweston Quarries (32), April 1897, H.N.D.; var. *elata* B. & S., Blaenau Festiniog (48), May 1902, leg. D.A.J., com. H.N.D.; var. *brachycarpa* C.M., emend. Jur., Hamsey (14), — W.E.N., com. H.N.D.; Yeldersley (57), May 1902, leg. W. R. Linton, com. H.N.D.

W. viridula Hedw., var. *densifolia* B. & S., Bettws-y-Coed (49), Aug. 1888, H.N.D.

W. tenuis C.M., New Dunton Quarries (32), Aug. 1897, H.N.D.

W. calcarea C.M., The Doward (36), July 1903, H.N.D.; Inchnadamph, Sutherland, July 1899, leg. E. S. Salmon, W.E.N. and H.N.D., com. H.N.D.; Leixoes, Portugal, Dec. 1923, E.A.; (*Gymnostomum calcareum* N. & H.), Vendée, France, Jan. 1913, J.C.; var. *viridula* C.M., Cramb Beck (62), May 1921, H.S. "This plant is *W. verticillata* Brid. The toothed basal margin of the leaves is very characteristic," W.E.N.

W. rupestris C.M., Borrowdale (70), Oct. 1924, C.H.B.; Berwick (81), May 1924, J.B.D.; High Force, Teesdale (66), Aug. 1896, H.N.D.

W. curvirostris C.M., Berwick (68), May & June 1924, J.B.D.; Aberglaslyn (49), April 1923, D.A.J.; Tyndrum (88), July 1898, H.N.D.; var. *commutata* Dixon, Berwick (68), June 1924, J.B.D.; St. Abbs (81), Feb. & Oct., 1924, J.B.D.; Nant-y-Ffrith (50), Aug. 1912, J.B.D.; Cauldron Snout (66), Aug. 1896, H.N.D.; var. *scabra* Lindb., Loch Tay (88), Aug. 1924, W.N.T.; var. *insignis* Dixon, Ben Laoigh, Perthshire, July 1898, leg. C.H.B. & H.N.D., com. H.N.D.; Inchnadamph, Sutherland, leg. E. S. Salmon, W.E.N. & H.N.D., com. H.N.D.

W. verticillata Brid., Enniskerry (I. 20), Oct. 1924, D.B.B.; Larne (44), Oct. 1924, R.J.

Trichostomum crispulum Bruch, Vendée, France, Jan. 1913, Feb. 1920 & May 1923, J.C.; Crunwere (45), Oct. 1924, R.J.; Diano Marina, Italy, April 1924, C.H.B.; var. *brevifolium* B. & S., Silverdale (60), July 1923, H.B.; Menton, France, March 1924, C.H.B.

T. mutabile Bruch, Menton, France, April 1924, C.H.B.; var. *littorale* Dixon, Langdale (69), Oct. 1924, C.H.B.; Derwentwater (70), Oct. 1924, C.H.B.; Berwick (81), June 1924, J.B.D.

T. tenuirostre Lindb., Hobcarton Crags (70), Oct. 1924, leg. C.H.B., com. L.H.P.; Talsarnau (48), July 1924, C.H.B.

T. hibernicum Dixon, Killarney (I. 1), Aug. 1906, D.A.J.

T. flavovirens Bruch, Charente Inf., France, May 1923, J.C.; Southpool (3), May 1909, H.B.; Leixoes, Portugal, Dec. 1923, E.A.

T. inclinatum Dixon, Thusis, Switz., July 1924, J.B.D.; near Wengen, Switz., July 1924, C.H.B.

T. nitidum Schp., Crunwere (45), Aug. 1924, L.H.P.

Timmiella anomala Limpr., Cadenabbia, L. Como, Italy, May 1924, C.H.B.

Cinclidotus Brebissoni Husn., near Box Hill (17), June 1924, L.H.P.

C. fontinaloides P. Beauv., Vendée, France, April 1912 and Feb. 1920, J.C.

C. riparius Arn., Vendée, France, April 1923 and Sept. 1924, J.C.

C. aquaticus (Jacq.) B. & S., Jaun, Fribourg, Switz., June 1923, P.G.M.R.

Encalypta commutata N. & H., Snowdon (49*), Sept. 1924, leg. H.N.D., com. D.A.J.

E. vulgaris Hedw., Vendée, France, Feb. 1920 and April 1923, J.C.; Banstead Downs (17), Jan. 1925, leg. E. C. Wallace, com. A.G.Y.

E. ciliata Hoffm., Val Fix, Switz., July 1924, J.B.D.

E. rhabdocarpa Schwægr., Killin (88), Sept. 1924, W.N.T.

E. streptocarpa Hedw., Gavarnie, Pyrenees, July 1909, J.C.; Haute Saône, France, April & Nov. 1923, leg. V. Madiot, com. J.C.; Box Hill (17), Feb. 1923, C. A. Cooper; c. fr. Splügen, Switz., July 1924, J.B.D.; Tenby (45), — 1891, leg. J. E. Bagnall, com. H.A.H.; (*E. contorta* (Wulf.) Lindb.) Bergisch-Gladbach, Rhineland, Apr. 1923, leg. H.A., com. H.N.D.

Anæctangium compactum Schwægr., Maloja, Switz., July 1924, J.B.D.; Langdale (69), May 1908, leg. J.A.W. & A.W., com. A.W.; Llanberis (49), Sept. 1924, leg. W.R.S., com. L.H.P.; Snowdon (49), Sept. 1924, J.L.O'L.; Cader Idris, c. fr. (48), Aug. 1914, D.A.J.; Skye (104), July 1893, H.N.D.; var. *pellucidum* Dixon, Falls of Falloch, Perthshire, July 1897, H.N.D.; Kirk Fell, Ennerdale (70*), Aug. 1895, H.N.D.; Finlarig Burn (88), Aug. 1909, leg. D.A.J. & J.B.D., com. J.B.D.

Zygodon lapponicus B. & S., Langdale Head (69), Oct. 1924, C.H.B.

Z. Mougeotii B. & S., Llanberis (49), Aug. 1924, L.H.P. "One of these is correctly named, but the other two are *Trichostomum tortuosum* Dixon, a rather slender form," W.E.N.; (*Amphoridium Mougeotii* Schp.), Gavarnie, Pyrenees, July 1909, J.C.

Z. Stirtoni Schp., Berwick (81), June 1924, J.B.D.

Z. conoideus H. & T., Lewes (14), April 1924, W.E.N.

Z. gracilis Wils., Clapdale (64), Dec. 1924, W.H.B.

Ulotia Ludwigii Brid., near Weissenberg, Alsace, — leg. F. Winter, com. H.N.D.

U. Bruchii Hornsch., Borrowdale (70), Oct. 1924, C.H.B., also, com. L.H.P.

U. crispa Brid., Llanberis (49), Sept. 1924, W.B.; var. *intermedia* Schp., Cwm-y-Glo (49), Aug. 1924, D.G.C.

- U. phyllantha* Brid., Mothcombe (3), Aug. 1924, St.J.M.
U. Hutchinsiae Hamm., Tyn-y-groes (48), April 1915, D.A.J.
Orthotrichum anomalum Hedw., Vendée, France, April 1923, J.C. "I should refer this plant to the var. *saxatile* Milde. I find the capsules uniformly 8-striate," W.E.N.; var. *saxatile* Milde., Halton-Holgate (54), Spring 1924, G.H.A.
O. leiocarpum B. & S., Splügen, Switz., July 1924, leg. H.N.D. & J.B.D., com. J.B.D.
O. Lyellii H. & T., Vendée, France, April 1923, J.C.; Glendalough (I. 20), May 1924, W.R.M.; Little Cotes (54*), — G.H.A.
O. speciosum Nees, Thusis, Switz., July 1924, J.B.D.; Splügen, Switz., July 1924, J.B.D. & H.H.K.
O. affine Schrad., Vendée, France, April 1923, J.C.
O. Sprucei Mont., near Belfast (I. 38), March 1924, W.R.M. "I have found a very small quantity of *O. Sprucei* in these envelopes, and in one case a single capsule. The bulk of the material is, however, a mixture of *O. affine* Schrad. and *O. diaphanum* Schrad.," W.E.N.
O. stramineum Hornsch., Friog (48), April 1924, D.A.J.
O. pallens Bruch., Splügen, Switz., July 1924, H.H.K.
O. pulchellum Smith, Granthouse (81*), April 1924, J.B.D.; Irby (54*), April 1924, G.H.A.; Tyndrum (88), Aug., leg. H.H.K. & D.A.J.
Schistostega osmundacea Mohr., Siegen, Westphalia, June 1924, leg. A. Ludwig, com. H.N.D.; near Altenberg, Rhineland, May 1923, leg. H.A., com. H.N.D.; Zennor (1), Aug. 1924, P.W.M.R., also, com. L.H.P.
Splachnum ampullaceum L., Harlech (48), Sept. 1919, D.A.J.
S. vasculosum L., Lulea Lappmark, Sweden, Aug. 1923, C.S.
Tetraplodon mnioides B. & S., Ballochbuie Forest (92), July 1910, E.A.R.; Glenogle Head (88), Aug. 1924, W.N.T.
Discelium nudum Brid., near Bonn, Rhineland, April 1923, H.A.
Ephemerum serratum Hampe, Wembley Park (21), Dec. 1919, leg. J. Blundell, com. A.S.
Funaria obtusa (Dicks.) Lindb. (*F. ericetorum* Dixon), near Bonn, Rhineland, leg. P. Dreesen, com. H.N.D.; (*Entosthodon ericetorum* Schp.), Vendée, France, Nov. 1912, J.C.
F. Templetoni Sm., Langstrath (70), Oct. 1924, C.H.B.
F. hygrometrica Hedw., Vendée, France, May 1909, J.C.; Haute Saône, Jan. 1924, leg. V. Madiot, com. J.C.; tall growth, Carbis Bay (1*), — I.H.P. "This is the var. *calvescens* B. & S.," D.A.J.
Meesia trichoides Spruce, Meall na Saone (88), July 1905, leg. J.A.W. & A.W., com. A.W.; Sefinenthal, Switz., June 1913,

P.G.M.R. "This plant is taller than the type, with longer seta and acute leaves. It is the var. *alpina* Boul.," D.A.J.

Paludella squarrosa Brid., Lulea Lappmark, Sweden, July 1923, C.S.; Tornea Lappmark, Sweden, Aug. 1923, C.S.; Dovrefield, Norway, Aug. 1906, leg. Mrs. Ewing, com. H.B.

Spherocephalus turgidus (Wahl.) Lindb.), (*Aulacomnium turgidum* Schwæg., Lapponia, Finland, June and July, 1920, leg. M. J. Kotilainen, com. V.F.B.; Tornea Lappmark, Sweden, Aug. 1923, C.S.

Aulacomnium androgynum Schwæg., Kylee Hills (68), April 1924, J.B.D.

Timmia austriaca Hedw., Grimentz, Valais, Switz., June 1914, P.G.M.R.

Catoscopium nigratum Brid., Lulea Lappmark, Sweden, Aug. 1923, C.S.; Holy Island (68), March 1924, J.B.D.

Conostomum boreale Swartz, Ben More (88), July 1905, leg. J.A.W. and A.W., com. A.W.; Killin (83), Aug. 1924, W.N.T.; Snowdon (49), Sept. 1924, "This plant was not found. What was by some taken for it, is an alpine form of *Webera nutans*," D.A.J.

Bartramia Ederi Swartz., Borrowdale (70), Oct. 1924, C.H.B., Buhlen, Berne, Switz., July 1911, E.A.R.; Llanberis (49), Sept. 1924, L.H.P.; (*Plagiopus Ederi* Limpr.), Gavarnie, Pyrenees, July 1909, J.C.

B. ithyphylla Brid., Ben Lawers (88), July 1924, C. A. Cooper; Hay Park (36), May 1924, E.A.

B. pomiformis Hedw., near Altenberg, Rhineland, July 1923, leg. H.A., com. H.N.D.; near Stresa, L. Maggiore, Italy, April 1924, A.S.; var. *crispa* B. & S., Ingleton (64*), March 1924, W.H.B.

B. Halleriana Hedw., Gavarnie, Pyrenees, July 1909, J.C.; (*B. norvegica* Lindb.), near Coblenz, Rhineland, July 1921, leg. H.A., com. H.N.D.

Philonotis Wilsoni Braithw., Cwm Bychan (48), July 1922, D.A.J.

P. fontana Brid., f. *depauperata* Dism., Ben Nevis (97), July 1912, E.A.R. "On first examination of this plant, I classed it as *P. adpressa* Ferg., but later study led me to name it *P. fontana* with attenuated, filiform stems and small distant leaves, for which M. Dismier proposed the above designation. Recently, thinking the plant might be v. *ampliretis*, I submitted a specimen to Mr. Dixon, and his observations are of general interest," E.A.R. "I should hardly refer it to v. *ampliretis*; I should call it an abnormal form, having some approach to that, and perhaps more to v. *adpressa*. No doubt, both *P. fontana* and *P. caespitosa* have parallel forms or vars., corresponding to *falcata*, *adpressa* & *ampliretis*; that

being the case, they are clearly rather forms than vars., and I have retained them rather to call attention to them than as holding them to be good vars.," H.N.D. *in lit.*; var. *ampliretis* Braithw., Moelwyn Bach (48), Oct. 1911, P.G.M.R. "During recent years this plant was placed under *P. caespitosa*, var. *laxa* Loeske & Warnst," D.A.J. "No doubt *P. fontana* and *P. caespitosa* both produce parallel forms or states, and I do not think it is possible to decide from which species they arise, when extreme. If *P. caespitosa*—the normal plant—is known to occur in the immediate vicinity, it would strongly point towards their being derived from that species," H.N.D. "Although *P. caespitosa* often grows in similar habitats—wet slaty rocks—there is no evidence to show that it occurs in the immediate vicinity, so that this specimen might well go under the var. *ampliretis*," D.A.J.

P. caespitosa Wils., Vendée, France, Jan. 1911, J.C.; Snowdon (49), July 1914, E.A.R.; var. *laxa* (Warnst.) Loeske & Warnst., Harlech (48), May 1913, D.A.J.

P. tomentella Mol., Tarvola, Finland, Aug. 1924, leg. M. J. Kotilainen, com. V.F.B.

P. seriata Mitt., Rovaniemi, Finland, July 1924, leg. M. J. Kotilainen, com. V.F.B.

P. calcarea Schp., Killin (88), Aug. 1924, W.N.T.; Newborough (52), Aug. 1908, D.A.J.

P. capillaris Lindb., Vendée, France, Oct. 1923, J.C. "This is *Dicranella rufescens*. I do not find any mixture," H.N.D.

Oreas Mielichhoferi Brid., var. *elongata* B. & S. (*Mielichhoferia nitida* Hornsch, v. *elongata* B. & S.), Thuisis, Switz., July 1924, H.H.K. & J.B.D.

Orthodontium gracile Schwæg., Kylee (68), April 1924, J.B.D.; Belford Moor (68), Nov. 1924, J.B.D.; Tunbridge Wells (14), April 1923, St.J.M.; Nant-y-Ffrith, near Wrexham (50*), Feb. 1925, D.A.J. "The former record for V.C. 50 (see Catalogue), should be for V.C. 51," D.A.J.; var. *heterocarpum* Watson, Holmbridge (63), Sept. 1924, L.I.S.; Ramsden Rocks (63), Aug. 1924, F.E.M.

Leptobryum pyriforme Wils., var. *minus* Husn., Coatham Marshes (62), leg. W. Ingham, com. D.A.J.

Webera polymorpha Schp., Snowdon (49), Sept. 1924, leg. H.N.D. & C.H.B., com. C.H.B.; Ogwen (49), Sept. 1924, leg. J.B.D. & C.H.B., com. C.H.B.; Glyders (49), Sept. 1924, J.B.D.; Cwm Dyli, Snowdon (49), Sept. 1924, W.H.B.

W. elongata Schwæg., Langstrath (70), Oct. 1924, C.H.B.; Nesselthal, Switz., July 1911, E.A.R.

W. nutans Hedw., Grange, Borrowdale (69), Aug. 1924, H.H.H.; var. resembling *W. cucullata* (see Handbook), Grisedale, Pike (70), Oct. 1924, C.H.B.; alpine form, Snowdon (49), Sept.

1924, D.A.J.

W. Ludwiggii Schp., Snowdon (49), Aug. & Sept. 1924, J.L.O'L. & W.B.

W. commutata Schp., Snowdon (49), J.L.O'L. "I should refer this to *W. nutans*, a mountain form similar to the Grisedale Pike plant," D.A.J. "I agree," H.N.D.

W. gracilis De Not., Hinter Rhein, Switz., July 1924, H.H.K.

W. carnea Schp., Waltham (54), — G.H.A.; (*Mniobryum carneum* Limpr.), near Bonn, Rhineland, April 1923, & May 1924, H.A.

W. albicans Schp., var. *glacialis* Schp., Larig Ghru (92), Aug. 1923, D.B.B.; Ben Lawers (88), July 1906, leg. C.P.H., com. J.B.D.; Ben Cruichben (88), July 1905, leg. J.A.W. & A.W., com. W.G.T.

Mniobryum albicans Wahl. (= *Webera albicans* Schp.), Tervola, Finland, Aug. 1924, leg. M, J. Kotilainen, com. V.F.B.; var. *glacialis* Schp., Lapponia, Finland, July 1920, leg. M. J. Kotilainen, com. V.F.B.

W. calcarea Warnst., Offham (14*), new to British Isles (see "Journal of Botany," May 1925), Sept. 1924, W.E.N.

Epipterygium Tozeri Lindb. = *Webera Tozeri* Schp.), Vendée, France, Oct. 1923, J.C.

Plagiobryum Zierii Lindb., Via Gellia (57), Aug. 1923, A.S.

Bryum filiforme Dicks., with excurrent nerve, Snowdon, Sept. 1924, D.A.J. "A striking form with very acute points into which the nerve runs; but, I think, only a form of *filiforme*. I incline to think, however, that similar forms are sometimes recorded as *B. concinnatum*," H.N.D.; var. *juliforme* Dixon, Menton, France, April 1924, C.H.B.; (*Anomobryum juliforme* Solms), Vendée, France, March 1923, J.C.

B. pendulum (H.H.) Alandia, Finland, Aug. 1910, V.F.B.

B. Warneum Bland, Humberstone (54), July 1924, G.H.A. "The narrower leaves and capsule of a different form with smaller spores point to *B. pendulum*, to which it should be referred," D.A.J.

B. calophyllum R.Br., Mochras (48), July 1924, C.H.B.

B. Marratii Wils., Middleton (60), July 1906, leg. J.A.W. & A.W., com. A.W.; Humberstone, and Saltfleet (54), Summer 1924, G.H.A. "This beautiful and rare moss has been gathered at the right time and is in good condition," D.A.J.

B. lacustre Brid., Mochras (48), July 1924, C.H.B.

B. mamillatum, Cleethorpes and Humberstone (54), June 1924, G.H.A.

B. inclinatum Bland., Terrington Carr (62), June 1919, H.S.

"This plant has the perfect inner peristome of the Eu. *Bryum*

group, and has the leaves twisted as in *B. capillare*, to which it belongs," D.A.J.

B. pallens Sw., var. *speciosum* Schp.? Clogwyn, Snowdon (49), Sept. 1924, leg. C.H.B. & E.A., com. E.A. "The lower leaves approach those of the var. in form and areolation, but I should on the whole refer the plant to a lax form of the type," D.A.J. "Scarcely robust enough for var. *speciosum*. I should say a tall form of the type," H.N.D.

B. Duvalii Voit, Ben Avon (92), July 1910, E.A.R.

B. turbinatum Schwæg., var. *latifolium* B. & S., Splügen, Switz., July 1924, J.B.D.

B. Schleicheri Schwæg., near Wengen, Switz., July 1924, C.H.B.

B. pseudo-triquetrum Schwæg., Vendée, France, Feb. 1920, J.C. "I can find no inflorescence, and it may belong here, but the habit much resembles *B. bimum* Schreb.," D.A.J.; var. *compactum* B. & S., Freshfield (59), July 1911, leg. J.A.W., com. W.G.T.

B. bimum Schreb., Snowdon (49), Sept. 1924, D.G.C. "This is *B. pseudo-triquetrum* Schwæg.; inflorescence dioicous," D.A.J.

B. pallescens Schleich., Snowdon (49), Sept. 1924, E.A.

B. intermedium Brid., Somercotes (54), June 1912, and Cleethorpes (54), Sept. 1924, G.H.A.

B. caespiticium L., near Wengen, Switz., July 1924, C.H.B.

B. capillare L., Somersby (54), June 1924, G.H.A. "A little *B. capillare*, but mostly *B. caespiticium*," D.A.J.; Vendée, France, Oct. 1923, J.C. "This is the var. *macrocarpum* Hübn.," D.A.J. "I should agree that this might be referred to the var. *macrocarpum*," H.N.D.; var. *flaccidum* B. & S., Down (16), July 1920, St.J.M. "A lax form of *B. capillare* with leaves not distinctly toothed. It might go under the var. *flaccidum*," D.A.J. "Yes," H.N.D.

B. Donianum Grev., Vendée, France, Feb. 1913, J.C.

B. erythrocarpum Schwæg., Chobham Comm. (17), June 1924, leg. H.A.C., com. L.H.P.; Talsarnau (48), June 1904, leg. D.A.J., com. L.H.P.

B. murale Wils., Greby Spilsby (54*), Summer 1924, G.H.A.

B. alpinum Huds., Ben Lawers (88), Aug. 1924, C. A. Cooper; Thirlmere (70), Oct. 1922, C. A. Cooper; Haute Saône, France, Sept. 1923, leg. V. Madiot, com. J.C.; var. *viride* Husn., Moelwyn Bach (48), July 1924, E.A.R.; var. *angustifolium* Husn., Vendée, France, Oct 1923, J.C.

B. oblongum Lindb., Nylandia, Finland, Oct., 1924, V.F.B.

B. argenteum L., var. *lanatum* B. & S., Formby (59), Oct. 1954, E.A.R.

B. roseum Schreb., Hans-sur-Lesse, Belgium, May 1886,

H.V.d.B. & G. Dens, com. H.V.d.B.

Mnium affine Bland., Abbey Wood (16*), Jan. 1925, St.J.M.
 "I should refer this to the var. *elatum* B. & S.," D.A.J.; var. *elatum* B. & S., Enniskillen (I. 23), Nov. 1920, leg. W.N.T., com. L.H.P.; var. *rugicum* B. & S., Sanderstead Down (17), Feb. 1924, J.L.O'L. "This belongs to *M. affine* and is rather smaller than the type. The margins of the leaves are almost entire as in the var. *rugicum*," D.A.J. "Yes," H.N.D.

M. Seligeri Limpr., var. *decipiens* Warnst., Vendée, France, Aug. 1923, J.C.

M. cuspidatum Hedw., near Stresa, L. Maggiore, Italy, April 1924, A.S.

M. undulatum L., Altenhof, bei Trier, Rhineland, leg. H.A., com. H.N.D.

M. hornum L., Vosges, France, Sept. 1923, leg. V. Madiot, com. J.C.

M. medium B. & S., Splügen, Switz., July 1924, J.B.D.; Abisko, Swedish Lapland, Aug. 1907, leg. W.E.N. & H.N.D., com. H.N.D.

M. serratum Schrad., Oxshott Heath (17), Dec. 1924, leg. E. C. Wallace, com. A.G.Y. "This is *Tetraphis pellucida* Hedw." D.A.J.

M. orthorrhynchum B. & S., Ogwen (49), Sept. 1924, C.H.B.; also, com. L.H.P.; Nesselthal, Berne, Switz., July 1911, E.A.R.; Splügen, Switz., July 1924, J.B.D.; Cwm Idwal (49), Sept. 1924, J.B.D.; Maloja, Switz., July 1924, J.B.D.

M. lycopodioides Schwægr., female flowers, Ben Lawers (88), July 1893, H.N.D.; Cam Creag (88), Aug. 1909, leg. H.H.K., J.B.D. & D.A.J., com. D.A.J.

M. riparium Mitt., Vendée, France, Nov. 1922, J.C.

M. spinulosum B. & S., Wengen, Switz., June 1924, C.H.B.

M. spinosum Schwæg., Splügen, Thusis, and Maloja, Switz., July 1924, J.B.D.; Ben Lawers (88), July 1893, H.N.D.; Wengen, Switz., June 1924, C.H.B.

M. stellare Reich., Barnoldby (54*), Nov. 1910, G.H.A.

M. cinclidioides Hüb., Hoher Westerwald, Rhineland, July 1924, leg. A. Ludwig & H.A., com. H.N.D.

M. punctatum L. (Hedw.), Haute Saône, France, Sept. 1923, leg. V. Madiot, com. J.C.; Puy-de-Dôme, France, Aug. 1922, leg. A. Luquet, com. J.C.; var. *elatum* Schp., Snowdon (49), Aug. & Sept. 1924, D.G.C. "The leaves have an apiculus, with a well-developed, thickened border, and the nerve in most cases reaches the apiculus or just below it. Type," D.A.J.

M. subglobosum B. & S., Rubery (37), and Shirley (38), April 1879, leg. J. E. Bagnall, com. J.B.D.; c.fr., Ilkley Moor (64), June 1909, A.W.; Doone Valley (4), Aug. 1924 D.G.C. "This

plant with thickened border to the leaf, and dioicous inflorescence, is *M. punctatum*," D.A.J.

Cinclidium stygium Swartz., Malham Tarn (64), July 1860, leg. J. Nowell, com. H.B. ; Lapponia, Finland, July 1920, leg. M. J. Kotilainen, com. V.F.B. ; Lulea Lappmark, Sweden, Aug. 1923, C.S.

Fontinalis antipyretica L., Westerwald, Rhineland, June 1921, leg. H.A., com. H.N.D. ; Opgrimby, Belgium, June 1924, J.H.

F. dalecarlica Schp. (1) Bohuslän, Jölanda, Sweden, Sept. 1920, (2) Halland, Sweden, Sept. & Oct. 1920, (3) Västergötland, Sweden, Aug. 1919, C.S. "These specimens support the view I have expressed before, that it is not possible to separate *F. dalecarlica* from *F. squamosa*, certainly, by vegetative characters. In Brotherus' recent work on the mosses of Finland and Scandinavia he divides the two thus:—*F. squamosa*. Leaves shortly and broadly pointed; cells not .012—.014 m.m. wide, distinctly narrowed to margin; glossy. *F. dalecarlica*:—Leaves finely acuminate; cells .005—.007 m.m wide, in 4–6 rows narrower at margin, not glossy. The Västergötland plant above may be ruled out, as it is in any case *F. squamosa*. Nos. 1 & 2 have both distinctly the habit and the leaf form of *dalecarlica*, but while (2) is without gloss, (1) has more or less decided gloss about the younger branches. The cells in (2) are decidedly narrow, but they show no marked narrowing to a border at the margin. Moreover, Schimper, in his description of *F. dalecarlica*, says it is "habitu et magnitudine" similar to *F. squamosa*, and bases his distinction almost entirely on fruiting characters. Further, a plant sent to me by Braithwaite as *F. dalecarlica*, in fruit, collected by S. O. Lindberg, near Helsingfors, Finland (presumably the same as that sent to the Moss Exchange Club by H. Beesley in recent years), has the leaves, while small, decidedly short and rather wide in the acumen. And a Canadian specimen, leg. Dupret, with all the delicacy and very finely acuminate leaves of *F. dalecarlica*, is as glossy as any form of *F. squamosa* I have seen. Apart then from fruiting characters, as to which I offer no opinion, I am convinced that there are no clear characters by which the two can be separated. A comparison of the characters of the two plants as given by me (derived from Cardot) in the "Handbook," and as given by Brotherus, summarized above, in regard to its leaf form and the cell structure, shows that opinions of authors are not only at variance, but are even diametrically opposed! There is, I believe, no better proof of the real identity of two supposedly distinct species than this!" H.N.D. ; Ostrobothnia, Finland, Aug. 1923, leg. M. J. Kotilainen, com. V.F.B.

Fontinalis — ? River Dee, Berwyn (50), Jan. 1925,

P.G.M.R. & D.A.J., com. D.A.J. A series of specimens labelled (a) (b) (c) & (d). "(a) A very delicate plant with the leaves showing some suggestion of seriation; but the rather markedly short and blunt acumen precludes *F. seriata*, and I think it is only a form of *F. squamosa*. (b) Essentially, I think the same as (a), though a little larger and with the leaves more longly acuminate, confirming my view of (a); (c) and (d) support this view I think. They all belong evidently to one and the same plant, a fairly marked form of *F. squamosa*; but perhaps hardly marked or homogeneous enough to be separated as a variety," H.N.D.

Dichelyma falcatum Myrin., Jämtland, Sweden, Aug. 1918, C.S.; Lulea Lappmark, Sweden, Aug. 1923, C.S.

D. capillacea (Dicks) Schp., near Bruhl, Rhineland, May 1923, leg. H.A., com. H.N.D.

Cryphaea heteromalla Mohr., Crunwere (45), March 1924, R.J.

Neckera turgida Jur., Balesmes, France, July 1923, leg. G. Gardet, com. J.C.

N. pennata Hedw., St. Wolfgang, Austria, July 1908, leg. W.E.N. & H.N.D., com. H.N.D.; Czernijew, Volhynia, Russia, Dec. 1916, H.A.

N. crispa Hedw., Vendée, France, Nov. 1921, J.C.; Haute Garonne, France, Aug. 1923, leg. D. Gabriel, com. J.C.; var. *falcata* Boul., St. Abbs (81), April 1924, J.B.D.

N. pumila Hedw., Vendée, France, March 1912 and April 1923, J.C.; Llanbedr (48), c.fr. May 1915, D.A.J.

N. complanata Hübn., Bisley (33), April 1924. E.A. "A form on dry oolite walls, tufted, non-flagellate, with strongly recurved branch tips, as in *N. crispa* v. *falcata*," E.A. "Yes, a striking plant. There are only a few flagella present, and the form appears to be analogous to the var. *falcata* of *N. crispa*, which again may be only a xerophytic form of the type," D.A.J.

Homalia trichomanoides Brid., Haute Saône, France, April 1923, leg. V. Madiot, com. J.C.; Vendée, France, Oct. 1923, J.C.; Wilryck, Belgium, March 1887, H.V.d.B.; East Horsley (17), Dec. 1924, leg. E. C. Wallace, com. A.G.Y.; Bishopston (41), Oct. 1924, R.J.

Hookeria laevivirens Tayl., Mousehole (1), Oct. 1921, L.H.P

Pterygophyllum lucens Brid., Ivybridge (3), Aug. 1924, St.J.M.; Leith Hill (17*), Feb. 1924, leg. A. H. Carter, com. W.R.S.

Leucodon sciuroides Schwægr., Vendée, France, Jan. 1913, J.C.; Tintenhall (5), July 1833, leg. W. Valentine, com. H.B.; c. *gemmae*, Bisley (33), April 1924, E.A.; St. Wolfgang, Austria, July 1908, leg. W.E.N. & H.N.D., com. H.N.D.; var. *morensis* B. & S. (*L. morensis* Schw.), Bouches du Rhone, France, April

1921, leg. D. Gabriel, com. J.C. "The secondary stems are not more robust than in the type. Last year M. Charrier sent a typical specimen of the var. *morensis*," D.A.J.; e.fr. near Menton, France, March 1924, C.H.B.

Pterogonium gracile Swartz, Langdale (69), Oct. 1924, C.H.B., also, com. L.H.P.; Rydal (69), Oct. 1924, C.H.B.; Windermere (69) July 1904, H.B.; Killin (81), Aug. 1924, W.N.T.; var. *harlacense* Jones, Tremadoc (49), Sept. 1915, D.A.J.

Habrodon Notarisii Schp., near Portinscale (70), Oct. 1924, C.H.B., "With well-developed gemmæ," D.A.J.; Killin (88), July 1924, C. A. Cooper.

Antitrichia curtispindula Brid., Grasmere (69), Oct. 1924, C.H.B.; Puy-de-Dôme, France, Sept. 1923, leg. A. Luquet, com. J.C.; Dolgelly (48), July 1914, E.A.R.; Wistman's Wood (3), Aug. 1924, leg. H.A.C. & L.H.P., com. L.H.P.

Porotrichum alopecurum Mitt., Greenbridge (44), Jan. 1925, R.J.; (*Thamnium alopecurum* B. & S.), Vendée, Nov. 1923, J.C.; Altenkof, bei Trier, Rhineland, April and May 1924, H.A.

P. angustifolium (Holt) Dixon, Cressbrook Dale (57), Sept. 1916, H.N.D.

Myurella julacea B. & S., Splügen, Switz., July 1924, J.B.D.; Maloja, Switz., July 1924, H.H.K.; Abisko, Swedish Lapland, Aug. 1907, leg. W.E.N. & H.N.D., com. H.N.D.; Ben Lawers (88), Aug. 1902, D.A.J.

M. apiculata B. & S., Maristuen, Norway, Aug. 1900, leg. W.E.N. & H.N.D., com. H.N.D.; Craig Chailleach (88), July 1897, leg. H.N.D., com. D.A.J.

Leskea polycarpa Ehrh., Vendée, France, Oct. 1923, J.C.; Llanfrothen (48), Aug. 1910, D.A.J.

L. nervosa Myrin, Splügen, Switz., July 1924, J.B.D. and H.H.K.; Diablerets, Switz., Aug. 1910, leg. E. Cleminshaw and D.A.J., com. D.A.J.; Grandola, near L. Como, Italy, June 1924, C.H.B.

Anomodon longifolius Hartm., Symond's Yat (34), April 1924, E.A.

A. attenuatus Hübn., Thusis, Switz., July 1924, J.B.D. and H.H.K.; Glion, Vaud, Switz., May 1911, P.G.M.R.; Bozen, Tirol, Aug. 1904, leg. W.E.N. & H.N.D., com. H.N.D.; Odde, Norway, July 1900, leg. W.E.N. & H.N.D., com. H.N.D.; Grandola, near L. Como, Italy, June 1924, C.H.B.; Rütli, L. Lucerne, Switz., June 1924, C.H.B.

A. viticulosus H. & T., Vendée, France, April 1923, J.C.; Llanberis (49), Sept. 1924, D.B.B. "Note the rhacomitrioid areolation. It is *Rhacomitrium protensum* Braun," D.A.J.; near Stroud (34), April 1924, W.R.S.; Greenbridge (44), Jan. 1925,

R.J.

Leptodon Smithii Mohr., Vendée, France, Dec. 1912 and April 1923, J.C. ; Menton, France, March 1924, C.H.B.

Pterigynandrum filiforme Hedw., Ben Lawers (88), Aug. 1860, leg. R. Braithwaite, com. H.B. ; Craig Chailleach (88), July 1893, leg. H.N.D., com. D.A.J. ; Handegg Falls, Switz., July 1911, E.A.R. ; Splügen, Switz., July 1924, J.B.D. ; Rütli & Brunnen, L. Lucerne, Switz., June 1924, C.H.B. "A very slender form," W.E.N.

Heterocladium heteropterum B. & S., Portmeor (1), Aug. 1924, P.W.M.R. "This is the var. *fallax* Milde," D.A.J. ; small form, Trelawne Hills (2), Feb. 1921, F.R. "This is an interesting form, almost fine enough in stems and branches for the var. *fallax* ; but it differs in the leaves, and the cells are too long," D.A.J. ; Nantcol Ravine (48), March 1925, D.A.J. ; Vendée, France, Nov. 1921, J.C. ; var. *fallax* Milde, Berwick (81), April 1924, J.B.D.

H. dimorphum B. & S., Sierra Morena, Spain, July 1847, leg. W. P. Schimper, com. H.B., ex herb. Dr. Spruce ; Maloja, Switz., July 1924, J.B.D. ; (*H. squarrosulum* (Voit) Lindb.), St. Luc, Valais, Switz., July, 1912, P.G.M.R.

Pseudoleskea atrovirens B. & S., Ben Lawers (88), July 1872, leg. G. E. Hunt, com. H.B. ; Aug. 1893, leg. H.N.D., com. D.A.J. ; Maloja, Switz., July 1924, J.B.D. ; near Scheidegg, Switz., June & July 1924, C.H.B. ; "a nearly smooth form," W.E.N.

P. catenulata B. & S., Ingleborough (64), Aug. 1896, leg. H.N.D., com. D.A.J. ; Thusis, Switz., July 1924 J.B.D. ; Grandola, near L. Como, Italy, June 1924, C.H.B. ; near Scheidegg, Switz., July 1924, C.H.B. ; near Brunnen, Switz., June 1924, C.H.B.

P. striata Dixon, var. *saxicola* B. & S., Maristuen, Norway ——— leg W.E.N. & H.N.D., com. H.N.D. ; (*Lescurea striata* B. & S., v. *saxicola* B. & S.), near Scheidegg, Switz., July 1924, C.H.B.

Platygyrium repens (Brid.) Brem. ? Bohuslän, Sweden, June 1924, C.S.

Thuidium abietinum B. & S., Collymeston Quarries (32), April 1886, leg. H.N.D., com. D.A.J. ; Forest Hill (23), ——— 1924, P.W.M.R. ; Gavarnie, Pyrenees, July 1909, J.C. ; Cadenabbia, L. Como, Italy, May 1924, C.H.B. ; Brunnen, Switz., June 1924, C.H.B. ; "a form approaching *T. hystricosum*," W.E.N.

T. hystricosum Mitt., Ivinghoe (24*), ——— 1924, P.W.M.R. ; Gomshall (17), May 1924, W.R.S. ; Whitedowns (17), April 1924, and Buckland Hills (17). Jan. 1924, leg. E. C. Wallace, com. A.G.Y. "These are well-developed and nicely prepared

specimens," D.A.J.

T. lanatum (Ström.) Hag. (= *T. Blandovii* B. & S.), Lulea Lappmark, Sweden, Aug. 1923, C.S.

T. decipiens de Not., see *Hypnum (Cratoneuron) decipiens* (Limpr.) De Not.

T. tamariscinum B. & S., c.fr., Williton (5), Nov. 1924, A. Wyndham.

T. delicatulum Mitt., Grasmere (69), Oct. 1924, C.H.B.; Borrowdale (70), Oct. 1924, C.H.B., com. L.H.P.; Kendal (69), Nov. 1919, A.G.H.; Aberglaslyn (49), Sept. 1924, E.A.; Ben Lui (88), July 1898, leg. C.H.B. & H.N.D., com. H.N.D.; Scawfell Pike (70), Aug. 1895, leg. H.N.D., com. D.A.J.

T. recognitum Lindb., World's End, Llangollen (50*), April 1925, leg. P.G.M.R. & D.A.J., com. D.A.J.; Luchon, France, Aug. 1902, leg. W.E.N. & H.N.D., com. H.N.D.; c.fr., near Lugano, Switz., April 1924, A.S.

T. Philiberti Limpr., Weldon Quarries (32), April 1898, leg. H.N.D., com. D.A.J.; Vendée, France, April 1923, J.C.; Haute Saône, France, Sept. 1923, leg. V. Madiot, com. J.C.; var. *pseudo-tamarisci* Ryan & Hag., Ben Chalum (88), July 1898, leg. H.N.D., com. D.A.J.

Climacium dendroides Web. & Mohr, Waldbrol, Rhineland, Oct. 1924, H.A., Nov. 1924, leg. A. Schumacher, com. H.N.D.

Cylindrothecium concinnum Schp., Box Hill (17), March 1925, W.R.S.

Myurium Hebridarum Schp., North Uist (110), Aug. 1902, leg. W. West, com. H.N.D.; also, com. D.A.J.

Orthothecium rufescens B. & S., Meall-na-Saone (88), April 1920, A.W.; Maloja, Switz., July 1924, J.B.D.

Homalothecium Philippeanum (Spr.) Bry. Eur., Brunnun, Switz., June 1924, C.H.B.

Camptothecium lutescens E. & S., Aix-en-Provence, France, April 1914, J.H.

C. aureum B. & S., Bouches-du-Rhone, France, April 1921, leg. D. Gabriel, com. J.C.

C. nitens Schp., Prehistoric deposit, Ramsey Fen (31), — 1889, com. H.N.D.; Clova (90), May 1890, leg. H.G.J., com. H.N.D.

Brachythecium plicatum B. & S., Splügen, Switz., July 1924, J.B.D.; near Grindelwald, Switz., July 1924, C.H.B.

B. glareosum B. & S., Ogwen (49), Sept. 1924, leg. C.H.B., com. L.H.P.; Horsley (17), Dec. 1924, leg. C.H.B. & A.S., com. A.S.

B. albicans B. & S., Goswick (68), March 1924, J.B.D.; Vendée, France, March & Aug., 1923, J.C.

B. salebrosum B. & S., Cappellen, Belgium, Sept. 1912,

H.V.d.B ; Cappellen, Belgium, Feb. 1914, J.H. "This is *B. rutabulum* B. & S. It may, I think, be placed under var. *longisetum*," J.B.D.

B. Mildeanum Sch. (= *B. salebrosum*, v. *palustre* Schp.), Alberg, S. Finland, Oct. 1924, V.F.B.

B. rutabulum B. & S., var. *longisetum* B. & S., Stoke Woods (3), April 1924, L.H.P.

B. laetum Br. Eur. f. *corrugata*, Maloja, Switz., July 1924, leg. H.N.D & J.B.D., com. J.B.D.

B. rivulare B. & S., Cwm-y-Glô and Snowdon (49), Sept. 1924, L.H.P. ; Lapponia, Finland, June 1920, leg. M. J. Kotilainen, com. V.F.B.

B. Starkei B. & S., Gd. St. Bernard, Switz., July 1922, P.G.M.R.

B. glaciale B. & S., Maloja & Splügen, Switz., July 1924, J.B.D. ; near Wengen, Switz., July 1924, C.H.B.

B. velutinum B. & S., Goodmanham Rectory (62), April 1920, H.S. ; Orne, France, Jan. 1924, J.C.

B. populeum B. & S., Crunwre (45), Jan. 1925, R.J. ; Haute Saône, France, Sept. 1923, leg. V. Madiot, com. J.C.

B. plumosum B. & S., Grasmere (69), Oct. 1924, C.H.B. ; Vendée, France, Jan. 1913, J.C. ; Haute Saône, France, Sept. 1923, leg. V. Madiot, com. J.C.

B. collinum Br. Eur., Maloja, Switz., July 1924, J.B.D. ; near Wengen, Switz., July 1924, C.H.B.

B. caespitosum Dixon, Lydbrook June. (34), leg. H.N.D., com. D.A.J. ; (*Scleropodium caespitosum* B. & S.), Vendée, France, March and Oct., 1923, J.C.

Scleropodium illecebrum B. & S. (= *B. illecebrum* de Not.), Vendée, France, Jan. 1920, J.C.

Hyocomium flagellare B. & S., c.fr., Croesor (48), April 1906, D.A.J.

Eurhynchium cirrosum Jur., near Scheidegg, Switz., July 1924, C.H.B.

E. crassinervium B. & S., Berwick (81), May 1924, J.B.D. ; Vendée, France, Feb. 1920 and Aug. 1921, J.C.

E. speciosum Schp., Mousehole (1), April 1922, leg. J.B.D., com. L.H.P.

E. Stokesii B. & S. (= *E. praelongum* Hobk.), Orne, France, Aug. 1923, leg. A. Dupont, com. J.C.

E. praelongum Hobk., var. *Stokesii* Brid., near Corwen (50), March 1910, leg. J. Hunter & E.A.R., com. E.A.R. ; Chagford (3), Feb. 1924, L.H.P.

E. Swartzii Hobk., Howsham (62), March 1921, H.S. ; Garrohy Hill, March 1918, H.S. ; var. *rigidum* Boul., Horncliffe (68), Oct. 1924, J.B.D. ; Milne Graden (81), May 1924, J.B.D. ; Paxton (81), April 1924, J.B.D. ; near Menton, France, March

1924, C.H.B.

E. abbreviatum Schp., Llynedor (36), April 1924, E.A.

E. pumilum Schp., Symonds Yat (34), April 1911, J.B.D. ;
St. Ishmaels (45), Aug. 1905, J.B.D.

E. Teesdalei Schp., Tenbury (37), April 1903, J.B.D. ;
Bewdley (37), April 1904 and March 1908, J.B.D. ; Habberley
Valley (37), April 1909, J.B.D.

E. tenellum Milde, Crunwre (45), Oct. 1924, R.J. ; var.
scabrellum Dixon, La Mortola, Italy, March 1924, C.H.B.

E. myosuroides Schp., Vendée, France, April 1923, J.C. ;
Aberglaslyn (49), Sept. 1924, W.B. ; Chagford (3), Feb. 1924,
L.H.P. ; var. *rivulare* Holt, Skelwith Force (69), Oct. 1924,
C.H.B. ; also, com. L.H.P. ; Llanberis (49), Sept. 1924, E.A. ;
Cwm Bychan (48), Sept. 1922, D.A.J. ; Berwyn (50), Dec.
1924, D.A.J.

E. myurum Dixon, Chagford (3), Jan. 1924, L.H.P. ;
(*Isothecium myurum* Brid.), Vendée, France, April 1923, J.C.

E. circinatum B. & S., Durlston Bay (9), March 1924,
H.W.M. ; Killarney (I. 1), Aug. 1906, J.B.D. ; Vendée, France,
April 1923, J.C.

E. meridionale de Not., Cap Martin, France, Feb. 1924,
C.H.B.

E. striatulum B. & S., Ebbor Rocks (6), Aug. 1915, P.G.M.R.

Rhynchostegium rusciforme B. & S. (= *E. rusciforme* Milde),
Vendée, France, July 1909, J.C. ; Haute Saône, France, Sept.
1923, leg. V. Madiot, com. J.C.

E. murale Milde, Crunwre (45), Oct. & Dec. 1924, R.J. ;
also, com. L.H.P. ; Abbey Wood (16), Jan. 1925, St.J.M.

E. confertum Milde, Crunwre, Oct. 1924, R.J.

Sematophyllum micans Braithw., Borrowdale (70), Oct. 1924,
C.H.B. ; Rosthwaite (70), Aug. 1910, J.B.D. ; Killarney (I. 1),
Aug 1906, D.A.J. ; var. *badense* Herzog, Llanbedr (48), April
1913 (not extinct), D.A.J.

Plagiothecium elegans Sull., Crunwre (45), Jan. 1925, R.J. ;
c.fr., Nantcol Ravine (48), March 1925, D.A.J. ; Vendée, France,
April 1923, J.C.

P. silesiacum B. & S., Caux, Vaud, Switz., May 1911,
P.G.M.R. ; (*Isopterygium silesiacum* Selig.), Toppeland, S. Finland,
Sept. 1923, V.F.B.

P. Mühlenbeckii B. & S., Ben Lawers (88), Aug. 1913, D.A.J. ;
Maloja, Switz., leg. H.N.D., J.B.D. & H.H.K., com. J.B.D. and
H.H.K. ; (*P. striatellum* Lindb.), Ben Lawers (88), Aug. 1902,
J.B.D.

P. denticulatum B. & S., Vendée, France, Nov. 1921, J.C. ;
var. *aptychus* Spruce, Abbey Wood (16), Jan. 1925, St.J.M. ;
var. *majus* Boul., Glyder Fach (49), Sept. 1924, D.G.C.

- P. Roseanatum* Hampe, Fribourg, Switz., Jan. 1921, P.G.M.R.
- P. silvaticum* B. & S., Rostrevor (I. 38), Aug. 1924, W.R.M.; Vendée, France, Nov. 1909 and May 1912, J.C.; Haute Saône, France, Sept. 1923, leg. A. Dupont, com. J.C.
- P. undulatum* B. & S., Mary Knowl Valley (36), May 1924, E.A.; Seine Inf., France, leg. R. F. Mail, com. J.C.
- P. latebricola* B. & S., Bewdley (37), Feb. 1920, J.B.D.
- Isopterygium turfaceum* Lindb., Finby, S. Finland, Aug. 1922, V.F.B.
- Amblystegium Sprucei* B. & S., Splügen, Switz., July, 1924, leg. H.N.D. & J.B.D., com. J.B.D.; Fribourg, Switz., Dec. 1920, P.G.M.R.
- A. confervoides* B. & S., Burton (69), Oct. 1906, H.B.
- A. subtile* B. & S., Rütli, L. Lucerne, Switz., June 1924, C.H.B.
- A. compactum* Aust., Berwick (68), Jan. 1924, J.B.D.; Symonds Yat (34), April 1911, J.B.D.; Shrawley Wood (37), May 1916, J.B.D.; Paxton (81), Nov. 1923, J.B.D.; Wolverley (37), March 1914, P.G.M.R.
- A. serpens* B. & S., Holt Fleet (37), June 1922, J.B.D.; var. *salinum* Carr., Holy Island (68), June 1924, J.B.D.
- A. Juratzkanum* Schp., Freshfield (59), June 1911, leg. J.A.W., com. W.G.T.; Coatham Marshes (62), May 1901, leg. W. Ingham, com. D.A.J.
- A. irriguum* B. & S., Berwick (81), June 1924, J.B.D.
- A. fluviatile* B. & S., Rydal (69), Oct. 1924, C.H.B.; Ayton (81), March 1924, J.B.D.; Bewdley (37), Sept. 1906, J.B.D.
- A. filicinum* de Not., Vendée, France, Aug. 1923, J.C.; (*Hypnum filicinum* L.), Schooten, Belgium, April 1909, H.V.d.B.; (*Cratoneuron filicinum* L.), Tervola, Finland, Aug. 1924, leg. M. J. Kotilainen, com. V.F.B.; var. *trichodes* Brid., Eyemouth (81), Oct. 1924, J.B.D.; var. *Whiteheadii* Wheld., Freshfield (59), April 1909, leg. J.A.W., com. W.G.T.
- A. curvicaule* Lindb., var. *strictum* Dixon, Ben Lawers (88), Sept. 1913, J.B.D.
- A. rivulare* (Sw.) Lindb. " = *Hypnum (Limnobium) alpestre* Sw.," W.E.N.; Asele Lappmark, Sweden, July 1922, Lulea Lappmark, and Tornea Lappmark, Aug. 1923, C.S. See, also, under *Hygrohypnum rivulare* Sw.
- A. badium* (Hartm.) Lindb., Lulea Lappmark, Sweden, July 1923, C.S. "Several Scandinavian botanists have followed Lindberg in using the genus *Amblystegium* in a very different sense from that in which it is used by most European authors. Limpricht calls this plant *Hypnum (Calliargon) badium* Hartm.," W.E.N. See, also, under *Drepanocladus badius* Hartm.

A. riparium B. & S. (*Hypnum riparium* L.), Vendée, France, May 1912, J.C.

Hypnum riparium L., var. *longifolium* Schp., Aintree (59), Oct. 1923, leg. J.A.W., com. W.G.T.

H. elodes Spruce, Ross Links (68), March 1924, J.B.D.; Lamberton Moor (81), Oct. 1923, J.B.D.

H. polygamum Schp., Vendée, France, Sept. 1923, J.C.; var. *fallaciosum* (Jur.) Milde, "= var. *stagnatum* Wils.," J.B.D.; Hoboken, Belgium, Sept. 1913, H.V.d.B., and May 1914, J.H.

H. stellatum Schreb., Wyre Forest (37), May 1901, J.B.D.; forma, Woldingham (17), Dec. 1924, W.R.S.; Radnor (43), July 1924, R.J.; Vendée, France, May 1919, J.C.; Maloja, Switz., July 1924, J.B.D.; also, Aug. 1924, com. L.H.P.

H. chrysophyllum Brid., Mold (51), Aug. 1912, J.B.D.; Banstead Downs (17), May 1924, leg. E. C. Wallace, com. A.G.Y.; Box Hill (17), April 1924, D.G.C.; Angoulins-sur-Mer, France, May 1923, J.C.

H. hispidulum var. *Sommerfeltii* Myr., Castle Howard (62), July 1907, H.B.; Cadenabbia, L. Como, Italy, May 1924, C.H.B.

H. Halleri, L. fil., Thusis, Switz., July 1924, J.B.D.; near Scheidegg, Switz., July 1924, C.H.B.; near Wengen, Switz., June 1924, C.H.B.; Treib. & Rütli, L. Lucerne, Switz., June 1924, C.H.B.; (*Campylium Halleri* Lindb.), Pont du Nant, Vaud., Switz., May 1920, P.G.M.R.

H. aduncum Hedw., var. *aquaticum* Sanio, Cleethorpes (54), —, G.H.A.; (*Drepanocladus pseudofluitans* (San) W., subsp., *aquaticus* (San) Wh.), New Ferry (58), June 1924, W.G.T.; Keston (16), May 1924, D.G.C. "This is *Warnstorfia stenophylla* v. *falcifolium* Ren.," W.R.S.; f. *fluitans* W., New Ferry (58), July 1924, J.A.W.; Crunwere (45), Jan. 1925, R.J. "A weak, elongated form," W.R.S.; f. *tenuis* W., Keston (16), May 1924, J.L.O'L. and D.G.C. "*W. stenophylla*, v. *falcifolium* Ren., near f. *inundatum*," W.R.S.; var. *occidentalis* W., Keston (16), May 1924, J.L.O'L., "*W. stenophylla*, v. *falcifolium*," W.R.S.

Drepanocladus aduncus f. *pseudofluitans* Sanio, Nylandia, Finland, June 1911, V.F.B.

Hypnum aduncum, var. *polycarpon* Bland., Deurne,

Belgium, May 1909, H.V.d.B. ; *Drepanocladus polycarpus* (Bland.) W., v. *immersus*, Crunwere (45), Dec. 1924, R.J.

Hypnum aduncum, var. *intermedium* Schp., near Anvers, Belgium, Sept. & Oct., 1924, J.H. ; Cappellen, Belgium, Aug. 1919, J.H. ; f. *laxifolia*, Overpelt and Achel, Belgium, Aug. 1924, J.H. ; (*Drepanocladus polycarpus* (Bland.), W., v. *intermedius* Schp.), New Ferry (58), July 1924, J.A.W. ; f. *laxa* Schp., Crunwere (45), June 1924, R.J. ; Mitcham Comm. (17), June 1924, J.L.O'L., "f. *laxifolia* Sanio," W.R.S.

Hypnum aduncum, var. *paternum* Sanio, Meerpelt, Belgium, July 1924, J.H. ; (*Drepanocladus pseudofluitans* (Sanio) W., s.f. *paternus* Sanio), Chapman's Pool, V.C. 9, March 1924, H.W.M. det. J.A.W. "A small (? juvenile) state," J.A.W. "I do not quarrel with this determination, but I must admit I do not grasp the characters of var. *paternum*. I sent a considerably more robust plant than this to Renault, as *H. pseudofluitans*, var. *paternum*, but he returned it as *H. pseudofluitans*, var. *depauperata*! All the plants I have under var. *paternum* are considerably more robust," H.N.D.

Drepanocladus, sp. ? Mitcham Comm. (17), April 1924, leg. E. C. Wallace, com. A.G.Y. "This is *D. polycarpus*, an intermediate form between v. *intermedius* and the *pseudofluitans* group," W.R.S.

Drepanocladus badius Hartm. (= *Hypnum* (*Calliargon*) *badium* Hartm., W.E.N.), Ostrobothnia, Finland, Sept. 1871, V.F.B., July 1873, leg. E. F. Lackström, com. V.F.B., April 1904, leg. M. J. Kotilainen, com. V.F.B. ; Kuusamo, N. Finland, July 1883, V.F.B. ; Lapponia, Finland, July 1885, V.F.B., Aug. 1902, leg. A. K. Cajandro, com. V.F.B. "See, also, under *Amblystegium badium*).

Hypnum Sendtneri Schp., f. *vulgaris* Sanio, Naburn (61), Nov. 1924, W.B. "This is *Cratoneuron falcatum*. Leaves strongly falcate, margin toothed," W.R.S. ; Oeleghem Belgium, July 1909, leg. R. Naveau, com. H.V.d.B. ; f. *trivialis* Sanio, Oeleghem, Belgium, Aug. 1906, leg. R. Naveau, com. H.V.d.B.

H. lycopodioides Schwæg., Ross Links (68), March and Sept. 1924, J.B.D. ; Schilde, Belgium, July 1909, leg. R. Naveau, & H.V.d.B., com. H.V.d.B. ; (*Drepanocladus lycopodioides* W., f. *obesus* W.), Freshfield (59), Oct. 1908,

leg. J.A.W., com. W.G.T.

H. fluitans L., var. *Jeanbernati* Ren., Skipwith Comm. (61), Nov. 1914 & April 1915, H.S.; St. Job-in-t'-Goor, Belgium, Sept. 1923, J.H.; f. *tenella* Ren., Westmalle, Belgium, Oct. 1924, J.H.; f. *terrestris* Sanio, Finchampstead (22), Sept. 1922, H.W.M., det. J.A.W.

H. fluitans, var. *atlanticum* Ren., Dublin Mts. (I. 21*), May 1924, W.R.M.

H. fluitans, var. *gracile* Boul., St. Job-in-t'-Goor, Belgium, Sept. 1923, J.H.; (*Warnstorfia fluitans*, v. *gracile* Boul.), Esher Comm. (17), March 1924, D.G.C. "Near v. *setiforme* Ren.," W.R.S.

H. fluitans, var. *pseudogracile* Van den Broek., Brecht (Anvers) Belgium, Feb. 1925, J.H. (See Bulletin de la Soc. Roy. de Botanique de Belgique, t. lvi, fasc. I, 1923, and description in Report p. 117).

H. fluitans, var. *falcatum* Schp., Cappellen, Belgium, July 1906, H.V.d.B.; Oolen, Belgium, June 1910, H.V.d.B.; St. Job-in-t'-Goor, Belgium, Sept. 1923, and Westmalle, Belgium, May 1921, J.H. "Yes, but not typical," W.R.S.; Cappellen, Belgium, Oct. 1920, J.H.; (*Warnstorfia fluitans* v. *falcata* Schp.), Esher Comm. (17), March 1924, D.G.C., "Near f. *submersa* Mincken," W.R.S.

H. fluitans, var. *Arnellii* Sanio, Skipwith Comm. (61), Nov. 1914 & 1915, H.S.

H. fluitans, var. *submersum* Sch., Schooten, Belgium, Sept. 1909, H.V.d.B.

H. exannulatum Gumb., Samrée, Belgium, June 1924, J.H.; var. *pinnatum* Boul., Genck, Belgium, July 1924, J.H.; Opgrimby, Belgium, June 1924, J.H.; f. *polyclada* Ren., Nieuwmaer, Belgium, Aug. 1912, H.V.d.B.; var. *falcifolium* Ren., Cappellen, Belgium, Aug. 1919, J.H.

Drepanocladus exannulatus Gumb., Karetia, Finland, June 1911, V.F.B.

Warnstorfia exannulata, var. *Nicholsoni* Wheld., Snowdon (49), Aug. 1924, D.G.C. "*W. fluitans*, near v. *gracile* Boul.," W.R.S.

Drepanocladus uncinatus, var. *plumulosus* Bry. Eur. Satakunta, Finland, June 1912, V.F.B.; var. *subjulaceus*, f. *subfalcata* W., Lapponia, Murmanica, Finland, —, and Ostrobothnia, Finland, July 1882, V.F.B.

Hypnum vernicosum Lindb., Zundert, Holland, April

1885, H.V.d.B.

Limprichtia revolvens Loeske, f. *typica* Ren., Rawford Junction (59), July 1924, W.G.T.

L. intermedia Loeske, Freshfield (59), Sept. 1922, W.G.T.

Hypnum intermedium Lindb., near Oeleghem, Belgium, July 1909, leg. R. Naveau & H.V.d.B., com. H.V.d.B.; Radnor Forest (43), July 1924, R.J.

Cratoneuron decipiens De Not (= *Hypnum decipiens* Limpr.), Ostrobothnia, Finland, June 1923, leg. M. J. Kotilainen, com. V.F.B.

Hypnum commutatum Hedw., Crunwere (45), ——— 1924, leg. R.J., com. L.H.P.; Larne (44), Oct. 1924, R.J.

H. falcatum Brid., Gavarnie, Pyrenees, July 1909, J.C.; Lamberton Moor (81), March 1924, J.B.D.; Killin (88), Aug. 1924, W.N.T.; Radnor (43), July 1924, R.J.; Crunwere (45), Nov. 1924, R.J.

Cratoneuron falcatum, var. *dunale* Wheld., Mochras (48*), July 1924, C.H.B., det. J.A.W.

C. irrigatum Zett. (= *Hypnum falcatum*, v. *virescens* Schp.), Lapponia, Finland, June 1920, leg. M. J. Kotilainen, com. V.F.B.

C. sulcatum Schp., near Scheidegg, Switz., July 1924, C.H.B.; (*Hypnum sulcatum* Schp.), Ben Lawers (88), Aug. 1913, J.B.D.

Hypnum incurvatum Schrad., Lenno and Grandola, L. Como, Italy, May 1924, C.H.B.; Rütli, L. Lucerne, Switz., June 1924, C.H.B.; (*Homomallium incurvatum* Loeske), Neuchâtel, Switz., July 1913, P.G.M.R.

H. cupressiforme L., a form, Splügen, Switz., July 1924, J.B.D.; var. *filiforme* Brid., Machynlleth (46), July 1914, E.A.R.; Cwm-y-Glo (49), Sept. 1924, W.B.; var. *mamillatum* Brid., c.fr. Cwm-y-glo (49), Sept. 1924, W.H.B.; var. *ericetorum* B. & S., Foulshaw Moss (69), leg. J.A.W., com. W.G.T.; var. *elatum* B. & S., Humberstone (54), Dec. 1924, G.H.A.; Llangollen (50), Sept. 1924, D.A.J.

H. Patientiae Lindb., Thusis and Splügen, Switz., July 1924, J.B.D.; Llanberis (49), Sept. 1924, L.H.P.; Radnor (43), Sept. 1924, R.J.

H. hamulosum B. & S., Ogwen (49), Sept. 1924, C.H.B.

H. callichroum Brid., Borrowdale (70), June 1910, A.W.; Snowdon (49), Sept. 1924, E.A.; also, L.H.P.; Killin (88), Aug. 1924, W.N.T.; Llanfrothen (48), May 1915, D.A.J.; Lapponia, Finland, July 1920, leg. M. J. Kotilainen, com. V.F.B.

H. Bambergeri Schp., Ben Lawers (88), Aug. 1913, J.B.D.; Lapponia, Finland, July 1920, leg. M. J. Kotilainen, com. V.F.B.

H. molluscum Hedw., Vendée, France, May & Aug. 1923, J.C.; var. *condensatum* Schp., Skelwith Force (69), Oct. 1924, C.H.B.; Snowdon (49), Sept. 1924, W.H.B.; Llanberis (49), Sept. 1924, L.H.P.

H. crista-castrensis L., Borrowdale (70), Oct. 1924, C.H.B.; Inchnadamph (107 or 108), leg. H.N.D., com. L.H.P.; Killin (88), Aug. 1924, W.N.T.

H. palustre Huds., Bewdley (37), Nov. 1904, J.B.D.; Llangollen (50), Aug. 1912, J.B.D.; Kew (17), June 1924, D.G.C.; var. *alpinum* Amann, Splügen, Switz., July 1924, leg. H.N.D. and J.B.D., com. J.B.D.

Hygrohypnum rivulare Sw. “= *Hypnum (Limnobia) alpestre* (Sw.) Bry. Eur.,” W.E.N.; Lapponia, Finland, June 1920, leg. M. J. Kotilainen, com. V.F.B. (See, also, under *Amblystegium rivulare*).

Hypnum molle Dicks., Ben Nevis (97), Aug. 1909, D.A.J.; (*Hygrohypnum molle* (Dicks.) Lindb.), Grand St. Bernard, Switz., July 1922, P.G.M.R.

H. dilatatum Wils., Aber (49), Aug. 1905, D.A.J.; also, leg. D.A.J., com. J.B.D.; Maloja, Switz., July 1924, J.B.D.; (*Hygrohypnum dilatatum* Wils.), Ostrobothnia, Finland, Aug. 1924, leg. M. J. Kotilainen, com. V.F.B.

H. arcticum Somm., Ben Lawers (88), Aug. 1902, J.B.D.; also, leg. E. Cieminshaw, com. D.A.J.

H. eugyrium Schp., Borrowdale (70), Oct. 1924, C.H.B.

H. ochraceum Turn., Ben Lawers (88), Aug. 1902, J.B.D.; Ben Nevis (97), Aug. 1908, J.B.D.; near Crasmere (69), Oct. 1924, C.H.B.; Cavernie, Pyrenees, July 1909, J.C. “The strong nerve indicates *H. palustre*—a robust form,” J.B.D. “It is certainly *H. palustre*, and, I think, may safely be referred to var. *subsphaericarpon* B. & S., although not in fruit,” H.N.D.; (*Hygrohypnum ochraceum* Turn.), Ostrobothnia, Finland, Aug. 1924, leg. M. J. Kotilainen, com. V.F.B.

H. scorpioides L., Easedale (69), Oct. 1924, C.H.B.; Rævels, Belgium, Aug. 1888, H.V.d.B.

H. stramineum Dicks., Nieuwmaer, Belgium, May 1889, H.V.d.B.

H. trifarium W. & M., Meall Ghaordi (88), April 1920, A.W.

H. turgescens Schp., Ben Lawers (88), Aug. 1909, D.A.J.

- H. cordifolium* Hedw., Vendée, France, Sept. 1919, J.C.
Calliargon Richardsoni (Mitt.) Kind., near Riga, Latvia, June 1909, leg. J. Mikutowitz., com. P.G.M.R.
Hypnum giganteum Schp., Baugh Fell (65), July 1921, A.W.; Radnor Forest (43), July 1924, R.J.; Oeleghem, Schilde, Belgium, Aug. 1920, J.H.
H. sarmentosum Wahl., Killin (88), Aug. 1924, W.N.T.
H. Schreberi Milde, Radnor (43), July 1924, R.J.; Haute Saône, France, Aug. 1923, leg. V. Madiot, com. J.C.
Hylacomium umbratum B. & S., Borrowdale (70), Sept. 1924, C.H.B.; Maentwrog Valley (48), July 1924, leg. C.H.B., com. L.H.P.; also, leg. D.A.J. & P.G.M.R., com. P.G.M.R.
H. pyrenaicum Lindb., near St. Christophe, France, Aug. 1923. "One packet of this plant, which was distributed last year, has been found to be wrongly named. It should be *Antitrichia curtispindula* Brid. Members who received packets should examine them." J.B.D.
H. brevirostre B. & S., Vendée, France, Nov. 1909, J.C.
H. loreum B. & S., Vendée, France, Nov. 1921, J.C.; Haute Saône, France, July and Sept., 1923, leg. V. Madiot, com. J.C.
H. triquetrum B. & S., Puy-de-Dôme, France, Sept. 1923, leg. A. Luquet, com. J.C.; Vendée, France, Aug. 1923, J.C.
H. rugosum de Not., Whitbarrow Scar (69), July 1923, A.W.; Arnside (69), July 1920, A.G.H.; Dalston Crag (60), July 1906, leg. J.A.W., com. W.G.T.

Non-European.

- Polytrichum ohioense* R. & C., Tuxedo, New York, U.S.A., July 1924, E.B.C. "Extremely near to *P. formosum*, but differs in the apical cell of the lamella, which in cross-section is considerably broader than high, *i.e.*, transversely oblong," H.N.D.
Ditrichum pallidum (Schreb.) Hampe, Tuxedo, New York, U.S.A., July 1924, E.B.C.
Blindia tenuifolia Hook. fil. & Wils., Mount Wellington, Tasmania, Feb. 1888, leg. W. A. Weymouth, com. H.B.
Dicranum Drummondii Müll., Bristol, Maine, U.S.A., Aug. 1924, E.B.C. "A very distinct N. American species, differing from *D. spurium*, to which, of our own species, it is perhaps, most nearly allied, in the coarsely serrate leaf margins and clustered capsules, H.N.D.
Octoblepharum albidum (L) Hedw., Bosque Rodrigues Alves,

and Praca Visconde, Rio Branco, Parà, Brazil, on trees, Dec. 1923, E.A.

Ptychomitrium nigricans (Kunze) Schp., Teneriffe, May 1908, leg. N. Bryhn, com. J. Lid.

Calymperes Richardi C.M., Largo da Polvera, Parà, Brazil, on trees, Dec. 1923, E.A.

Barbula pilifera (Hook), Brid., Port Alfred, Cape Colony, July 1923, leg. A. B. Mackay, com. A.S., det. H.N.D. "This is the plant sent in last year as *Tortula* sp. ? regarding which a mistake occurred in the Report (p. 83). By a printer's error, the particulars of the preceding item—*Fissidens* sp. ?—were repeated for this plant," A.S.

Cinclidotus riparius Host, Alpes Alexandri, Turkestan, June 1896, V.F.B.

Schlotheimia Grevilleana Mitt., on bark from Knysna, Cape Colony, ——— 1924, com. W.G.T.

Anomobryum latifolium Card. & P. de la V., Maduré, Indes anglaises, May 1912, leg. R. P. Foreau, com. J.C.

Pilotrichella panduraefolia (C.M.), N. Kandhla, Ekombe, Zululand, Jan. 1910, leg. Titlestad, com. J. Lid.

Aerobryopsis capensis (C. M.) Fleisch., on bark from Knysna, Cape Colony, ——— 1924, com. W.G.T.

Meteoriopsis patula (Sw.) Broth., Parà, Brazil, on trees, Dec. 1923, E.A.

Neckera disticha Hedw., Banks of Rio das Amazonas, near Manaõs, Brazil, on roots of Cacao trees, Dec. 1923, E.A.

N. undulata (Palis) Hedw., Bosque Rodrigues Alves, Parà, Brazil, Dec. 1923, E.A.

Distichophyllum succulentum (Mitt.) Broth., Maduré, Indes anglaises, March 1913, leg. R. P. Foreau, com. J.C.

Fabronia polycarpa Hook., Praca do Sé, Manaõs, Brazil, Dec. 1923, E.A.

Thamnum alopecurum, sub. sp. *caucasicum* Kindb., on boxwood bark from Georgia, Caucasus, March 1924, com. W.G.T.

T. pennæforme (Hornsch.), Eschowe, Zululand, Jan. 1909, leg. N. Bryhn, com. J. Lid. "I quite agree with the determination, but it is not the typical form. I should annotate it *forma*, described by C. Müller under several names, e.g., *T. Molleri* from W. Africa, *T. Hildebrandtii* from E. tropical Africa, and *T. africanum* from S. Africa," H.N.D.

Rhacopilum Schmidii C.M., var. *breviaristatum* Card. & la V., Maduré, Indes anglaises, Dec. 1911, leg. R. P. Foreau, com. J.C.

Thuidium trachypodon Br. Jav., Maduré, Indes anglaises, Sept. 1911, leg. R. P. Foreau, com. J.C.

T. Borbonicum Besch, Victoria Falls, S. Africa, Sept. 1905, leg. W. Cheesman, com. H.B.

Entodon obtusatus Card., Maduré, Indes anglaises, July 1912, leg. R. P. Foreau, com. J.C.

Pleuropus euchloron (Bruch) Broth., on bark of boxwood from Georgia, Caucasus, March 1924, com. W.G.T.

Pterogoniella pulchella (Hook.) Schp., Chapeu Virado, Parà, Brazil, on mango trees, Dec. 1923, E.A.; Praca Visconde Rio Branco, Parà, Brazil, on palm trees, Dec. 1923, E.A.

Sematophyllum admistum Sull., Utinga Forest, Parà, Brazil, Dec. 1923, leg. Major N. Fraser-Tytler, com. E.A. "In my view, *Hypnum admistum* Sull. is one of the forms of the very wide-spread and variable *S. caespitosum* (Sw.) Mitt. (*Rhaphidostegium caespitosum* (Sw.) Jæg.), as I have shown in "Journal of Botany," 1920, pp. 86, 88. If the name is retained, it should be written *S. admistum* (Sull.) Mitt." H.N.D.

Trichostelium ambiguum (Schwægr.) Par., Paricatuba Falls, Rio Negro, Brazil, on tree roots, Dec. 1923, E.A.

Plagiothecium Mühlenbeckii B. & S., Tuxedo, New York, U.S.A., E.B.C.

Sciaromium Lescurii (Sull.) Broth., Bristol, Maine, U.S.A., Aug. 1924, E.B.C. "Allied to *Amblystegium*. The thickened border characterises the genus," H.N.D.

Warnstorfia exannulata (Gümb.) Loeske, var. *stenophylloides* (Ren. et Wheld.) Wheld., f. *submersa* Wheld. (= *Hypnum exannulatum* Gümb., v. *pinatum* Boul., f. *stenophylloides* Ren., = *Drepanocladus exannulatus* Gümb., v. *submersus* Roth. & V. Beck.), Round Pond, Bristol, Maine, U.S.A., Nov. 1923, leg. E.B.C., com. J.A.W.

Hepatics.

Riccia Bischoffii Hüb., among sunny rocks, Mazembroz, Valais, Switzerland, Feb. 1922, leg. P.G.M.R., det. W.E.N.

R. canaliculata Hoffm., Vendée, Puy de Lerre, Oct. 1923, J.C. "Macvicar gives *Riccia canaliculata* as a synonym of *R. fluitans* L. It is the fertile form of *fluitans* and grows on mud at the side of pools. There is, I think, a doubt whether they are really identical," H.H.K.

Targionia hypophylla L., Vendée, St. Maurice-le-grand, Feb. 1913, J.C.

Marchantia polymorpha L. var. *alpestris* Nees, Cam Chreag, Killin (88), Aug. 1909, D.A.J. ; also, Aug. 1913, J.B.D.

Grimaldia dichotoma Raddi, Leixoes, Portugal, Dec. 1923, E.A., det. W.E.N.

Aneura sinuata (Dicks) Dum., side of lake, Brockesley Park (54*), Spring 1924, G.H.A. "Is *A. major*; cross section of main stem not more than 5 or sometimes 6 cells thick in the middle," H.H.K.

Metzgeria furcata (L.) Dum. var. *fruticulosa* (Dicks.) Lindb., Mothcombe (3*), Aug. 1924, St.J.M. ; elder, Houndeane Valley, Lewes (14), April 1921, W.E.N. ; Balbeg (75), Aug. 1910, E.A.

M. conjugata Lindb., Flora Rhenanæ, E. Bartling, Oct. 1923,

Pellia Fabbroniana Raddi, wet earth, Bolton Woods (64), Sept. 1924, F.E.M. ; Vendée, Puy-de-Lerre, Oct. 1923, J.C.

Marsupella Funckii (Web. et Mohr) Dum., Ty'n-y-groes (48), Aug. 1920, J.B.D.

M. emarginata (Ehrh.) Dum. c.fr., Bwlchgwyn, near Wrexham (50), Nov. 1924, D.A.J.

M. Pearsoni Schiffn., Cwm Moch, Talsarnau (48), Aug. 1916, D.A.J. ; Clogwyn (49), Aug. & Sept. 1924, D.G.C. and J.L.O'L.

M. aquatica (Lindenb.) Schiffn., Crinkle Crags (70), June 1916, leg. Wheldon & Wilson, com. W.G.T. ; Lough Bray, Co. Wicklow (I. 20), Feb. 1924, D.B.B.

M. sphacelata (Gies) Lindb., near Beddgelert (49), Aug. 1920, J.B.D. ; Jan. 1921, D.A.J. ; also, Sept. 1924, E.A. and W.H.B.

M. Sullivantii (De Not.) Evans, Ben Lawers (88), Aug. 1913, D.A.J.

Prasanthus suecicus (Gottsche) Lindb., Torneau, Lapland, Sweden, Aug. 1923, C.S.

Gongylanthus ericetorum (Raddi) Nees, Lizard Down (1), Nov. 1924, W.E.N. (new to Britain). See "Journal of Botany," May 1925, and description in Report, p. 112.

Alicularia compressa (Hook.) Nees, wet rocks, Cwm Dyli, near summit of Snowdon (49), Sept. 1924, D.G.C. ; near waterfall, Raikes Dyke (63), Jan. 1925, F.E.M. ; Ben Macdhuì (92), Aug. 1923, D.B.B. ; var. *rigida* Lindb., Tyndrum (88), Aug. 1913, D.A.J. ; var. *gigantea* Macv., Bowfell (69), leg. Wheldon and Wilson, com. W.G.T.

A. scalaris (Schrad.) Corda var. *procerior* Schiffn., marshy ground, Ramsden Rocks (63*), F.E.M., *fide* D.A.J.

Haplozia crenulata (Sm.) Dum. var. *gracillima* (Sm.) Heeg, Clogwyn (49), Aug. 1924, J.L.O'L.

H. cordifolia (Hook.) Dum. c.fr., above Killin (88), Aug. 1913, D.A.J.

H. riparia (Tayl.) Dum. var. *rivularis* Bern., Tarn, Brandreth Mountain (70), Aug. 1910, leg. J.B.D., com. D.A.J.

H. atrovirens (Schleich.) Dum. var. *sphaerocarpoidea* (De Not.) Massal., Ben Lawers (88), Aug. 1913, D.A.J.

H. lanceolata (Schrad.) Dum., rotten logs, la Pouetta Raisse, Canton Neuchatel, Switzerland, July 1920, P.G.M.R.

Jamesoniella subapicalis (Nees) Schiffn., c.fr., Nantcol Ravine, Llanbedr (48), Feb. 1915, D.A.J.

J. Carringtonii (Balf.) Schiffn., Ben Chuirn, Tyndrum (88), Aug. 1913, D.A.J.

Anastrophyllum Donianum (Hook.) Steph., Ben Douran (98), Aug. 1913, D.A.J.

Gymnocolea inflata (Huds.) Dum. f. *nigricans* Nees, Llanberis (49), Aug. 1924, E.A.

Lophozia turbinata (Raddi) Steph.; Glen, Ingleton (64), March 1924, F.E.M.

L. badensis (Gottsche) Schiffn., Chalk-pit, Whiteleaf Cross (24*), 1924, P.W.M.R. "Correct, but very poor as a specimen, H.H.K. ; Mochras, Harlech (48), April 1914, D.A.J.

L. longidens (Lindb.) Macoun, Cwm Bychan, Harlech (48), May 1916, D.A.J. ; f. *compacta*, Uwchartro, Harlech (48), March 1916, D.A.J., *teste* S.M.M.

L. porphyroleuca (Nees) Schiffn., on fallen tree in wood, Maloja, Switzerland, Aug. 1924, H.H.K.

L. alpestris (Schleich.) Evans var. *litoralis* (Arnell) Schiffn., Llanberis (49), Aug. 1919, E.A. "This is a mixture of two distinct gatherings, one being this plant and the other *Alicularia scalaris* var. *distans*. I have made a rearrangement and formed an equal number of specimens of the *Lophozia* and *Alicularia*," H.H.K. "Mr. Arnell thinks the Welsh plant does not agree with his var. *litoralis*. Mr. Macvicar considers it to be a depauperate form of *Loph. alpestris*," D.A.J.

Lophozia bicrenata (Schmid.) Dum., ditch, Chobham Common (17), 1924, P.W.M.R. "Is *Alicularia Geoscyphus** ; the leaves

are not those of a *Lophozia* and the perianths are quite different," H.H.K. ; Uwchartro, Harlech (48), July 1924, D.A.J. ; Vendée, Bourneau, talus de bois, Feb. 1920, J.C.

L. lycopodioides (Wallr.) Cogn., Dorotea, Asele Lappmark, Sweden, Aug. 1921, C.S. ; rocks at 1420 metres, Stillwasserwald, Jaun, Canton Fribourg, Switzerland, July 1923, P.G.M.R. ; Splügen, Grisons, Switzerland, July 1924, leg. H.H.K. & J.B.D., com. J.B.D.

L. Hatcheri (Evans) Steph., near Argentières, Haute Savoie, July 1922, W.E.N.

L. Floerkii (Web. & Mohr) Schiffn., Glen, Ingleton (64), Jan. 1924, F.E.M. ; var. *Naumanniana* Nees, wet rocks, Cwm Moch, Harlech (48), Aug. 1916, leg. D.A.J. & P.G.M.R., com. P.G.M.R.

L. atlantica (Kaal.) Schiffn., Cwm-y-glo (49), Aug. 1924, E.A. "In most of these specimens there is a mixture of this and *Lophozia Floerkii*," H.H.K. ; above Cwm-y-glo (49), Aug. 1924, J.L.O'L.

L. attenuata (Mart.) Dum., on decayed beech trunk, near Neals, Wyfold (23*), Nov. 1924, leg. C.H.B., com. E.A. ; Habberley Rocks (37), March 1913, P.G.M.R. ; Vendée, March 1920, J.C.

L. barbata (Schmid.) Dum., Floræ Rhenanæ, 1923, E. Bartling.

L. Kunzeana (Hüb.) Evans, Murjeln, Jokkmokk, Lulea Lappmark, Sweden, July 1923, C.S.

L. obtusa (Lindb.) Evans, Cwm Idwal (49), Oct. 1916, D.A.J.

Sphenobolus minutus (Crantz) Steph. var. *cuspidatus* Kaal., Stillwasserwald, Jaun, Canton Fribourg, Switzerland, at 1600 metres, July 1923, P.G.M.R. det. Meylan.

S. exsectus (Breidl.) Steph., Nanteol Ravine, Llanbedr (48), April 1912, D.A.J.

S. exsectiformis (Breidl.) Steph. c. per., Patjanen, N. of Skullskulle. Lulea Lappmark, Sweden, Aug. 1923, C.S.

Acrobolbus Wilsoni (Tayl.) Nees, Torc Cascade, Killarney (I. 2), Aug. 1911, D.A.J.

Plagiochila asplenoides (L.) Dum. var. *humilis* Lindenb., Nant-y-Ffrith, nr. Wrexham (50), Aug. 1913, D.A.J.

P. spinulosa (Dicks.) Dum., Ivybridge (3), Aug. 1924, St.J.M.

P. tridenticulata Tayl., Ingleton (64*), March 1924, W.H.B. and F.E.M.

Pedinophyllum interruptum (Nees) Pears., Chee Dale (57), Aug. 1923, D.A.J.

Leptoscyphus anomalus (Hook) Mitt., bog on Chobham Comm. (17), 1924, P.W.M.R.

Lophocolea cuspidata Limpr., Finchampstead (22*), Feb. 1924,

E.A.

L. heterophylla (Schrad.) Dum., Finchampstead (22*), Feb. 1924, E.A. ; Irby (54), April 1924, G.H.A.

L. fragrans Moris et de Not., Singrig, Talsarnau (48), June 1915, D.A.J.

Chiloscyphus pallescens (Ehrh.) Dum. c.fr., Chase Wood, Ross (36), April 1924, E.A.

Saccogyna viticulosa (Sm.) Dum., Pont Aberglaslyn (49), Sept. 1924, E.A. ; Ingleton (64), March 1924, W.H.B.

Cephalozia Lammersiana (Hüb) Spruce, Keston Common (16), Dec. 1924, J.L.O'L.

C. connivens (Dicks.) Lindb., Lough Bray (I. 20), D.B.B. "Is *C. media*; the leaf cells are too small for *connivens*, and the perianths have not long cilia at the mouth," H.H.K.

C. hibernica (Spruce M.S.) Pears., Old Weir Bridge, Killarney (I. 2), Aug. 1906, D.A.J.

C. media Lindb., woods, Penrhyndeudraeth (48), March 1911, D.A.J.

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

C. serriflora Lindb., Tyn-y-groes (48), Oct. 1924, D.A.J.

C. fluitans (Nees) Spruce var. *gigantea* Lindb. S. Lorenz Lake, Marburg, Styria, Austria, June 1905, leg. Glowacki, com. P.G.M.R.

Nowellia curvifolia (Dicks.) Mitt., on rotten, fallen tree, Smithy Burn, Killin (88), Sept. 1924, W.N.T. ; Ceunant Llenyreh, Maentwrog Valley (48), April 1922, D.A.J.

Cephaloziella byssacea (Roth.) Warnst., V.C. 16, Jan. 1925, St.J.M.

C. Limprichtii Warnst., Nant-y-Ffrith, nr. Wrexham (50), Jan. 1925, D.A.J.

Prionolobus Massalongi (Spruce) Schiffn., Cwm Dyli, Snowdon (49), June 1922, D.A.J. ; var. *aeraria* (Pears.) Douin, near Bontddu (48), April 1923, and Rhaiadr-y-Cwm, Ffestiniog (48), Feb. 1918, D.A.J. ; Cwm Dyli (49), Sept. 1924, D.G.C.

Eremonotus mariocarpus (Carr.) Pears, Clogwyn, Snowdon (49), Sept. 1924, D.A.J.

Pleuroclada albescens (Hook.) Spruce, at 8000 ft. on Grand St. Bernard, Switzerland, July 1922, P.G.M.R.

Adelanthus decipiens (Hook.) Mitt., Nantcol Ravine, Llanbedr (48), Feb. 1911, D.A.J.

A. dugortiensis Douin et Lett, Slievemore, Achill Island (I. 27), Aug. 1911, D.A.J. and J.B.D.

Calypogeia Trichomanis (L.) Corda, Floræ Rhenanæ, E. Bartling. "We should name this *C. fissa*; the underleaves are broad and deeply divided with side teeth, and the leaves have a

notch at the apex. Also. I noticed some leaves deeply incised with acute lobes," H.H.K ; var. *aquatica* Ingham, Deer Dyke Moss (69), April 1913, leg. W. H. Pearsall, com. D.A.J.

Bazzania trilobata (L.) Gray, Ivybridge (3), Aug. 1924, St.J.M. ; Gurnos, Crunwre (45), Jan. 1925, R.J. ; Glen, Ingleton (64,) Jan. 1925, F.E.M. ; Grange in Borrowdale (69), Aug. 1924, H.H.H.

B. tricrenata (Wahl.) Pears., Moel'r Ogof, Beddgelert (49), Sept. 1924, J.B.D. ; Wengen, Switzerland, July 1924, leg. C.H.B., com. E.A.

B. triangularis Pears., Ceunant Llenyrch, Maentwrog Valley (48), May 1915, D.A.J. ; Wengen, Switzerland, July 1924, leg. C.H.B., com. E.A.

B. Pearsoni (Steph.) Pearson, Glen Nevis, alt. ca. 1700 ft., W. Inverness (97), July 1923, H.H.K. & W.E.N., com. W.E.N. ; Slievemore, Achill Island (I. 27), Aug. 1911, J.B.D. and D.A.J.

Lepidozia pinnata (Hook.) Dum., peaty bank, Carn Galva (1), 1924, P.W.M.R. "One specimen is all *L. reptans* and most of the others are a mixture of these two species," H.H.K. ; Sandstone rocks, moor near Kyloe (68), April 1924, J.B.D.

L. reptans (L.) Dum., Vendée, Forêt de Vouvant, Nov. 1921, J.C.

L. Pearsoni Spruce, Ceunant Coch, Llanfrothen (48), March 1907, D.A.J.

L. trichocladus K. Müll, Lough Bray (I. 20), 1924, D.B.B.

Blepharostoma triichophyllum (L.) Dum., c.fr. Croesor (48), Jan. 1909, D.A.J. ; Wengen, Switzerland, July 1924, leg. C.H.B., com. E.A.

Chandonanthus setiformis (Ehrh.) Lindb., S. of Kinvasrova, Patjanen, Gellivare, Lulea Lappmark, Sweden, Aug. 1923, C.S.

Anthelia julacea (L.) Dum., in large sheets at margin of lake, Clogwyn, Snowdon (49), Aug. 1924, D.G.C.

A. Juratskana (Limpr.) Trevis, Cam Creag, near Killin (88), Aug. 1924, W.N.T. ; bare soil above Cwm Glas Mawr, Snowdon (49). Aug. 1919, P.G.M.R.

Herberta adunca (Dicks.) Gray, King's Seat near Killin (88), alt. 2600 ft., Sept. 1924, W.N.T.

H. Hutchinsiae (Gottsche) Evans. Three gatherings from Snowdon (49), Sept. 1924, sent by E.A., D.G.C. and J.L.O'L.

Ptilidium pulcherrimum (Web.) Hampe, Nant-y-Ffrith, near Wrexham (50) and (51), Feb. 1925 D.A.J. (new to Wales) ; Wengen, Switzerland, July 1924, leg. C.H.B., com. E.A. ; roots of conifers at 1350 metres, Sefinethal, Bernese Oberland, Switz., July 1913, P.G.M.R.

Diplophyllum taxifolium (Wahl.) Dum., in wood near Maloja, Switzerland, July 124, J.B.D. and H.H.K., com. H.H.K.

D. obtusifolium Dum., gravel pit, Achmore Burn, near Killin (88), Aug. 1924, W.N.T.

Scapania subalpina (Nees) Dum., River Dee, Berwyn (50*), Jan. 1925, D.A.J. ; side of stream, Nant-y-Ffrith, near Wrexham (51*), Jan. 1925, leg. P.G.M.R. and D.A.J., com. D.A.J.

S. Bartlingii (Hampe) Nees, Splügen, Switzerland, July 1924, H.H.K. and J.B.D.

S. verrucosa Heeg, Sufers, Splügen, Switzerland, July 1924, J.B.D. and H.H.K.

S. gracilis (Lindb.) Kaal. (Limestone) boulders, Crunwre (45), Jan. 1925, R.J. "Correctly named, but this *Scapania* is not usually found on limestone. Mr. Jackett sent me some fragments of these boulders and I passed them on to an expert in Geology for examination. He says these rocks are sandstones and contain no carbonate of lime," H.H.K. ; Cwm-y-Glô (49), Aug. 1924, F.E.M. ; Vendée, various localities and dates, J.C.

S. aspera Bernet, Bwlchgwyn, near Wrexham (50), Jan. 1925, D.A.J.

S. nimbose Tayl., Ben Nevis (97), Aug. 1909, H.H.K. and D.A.J. com. D.A.J.

S. ornithopodioides (With.) Pears, Clogwyn, Snowdon (49), Aug. 1919, D.A.J. ; Twll Du, Glyders (49), Sept. 1924, J.B.D.

S. dentata Dum. var. *ambigua* De Not., above lake, Clogwyn (49), at 2000 ft., Sept. 1924, J.L.O'L. "This is *S. obliqua* ; the colour is brownish green, and the antical lobe longly decurrent," H.H.K. ; marshy ground, Rainford Junction (59*), July 1924, W.G.T.

S. uliginosa (Swartz) Dum., Sonka, Rovaniemi, Ostrobothnia, Finland, 1924, leg. M. J. Kotilainen, com. V.F.B.

S. obliqua (Arnell.) Schiffn., Clogwyn, Snowdon (49), Aug. and Sept. 1924, D.G.C. and J.L.O'L. "Both these gatherings are *S. undulata* ; the antical lobe is not decurrent ; also, the colour of *obliqua* is different to this," H.H.K. ; bog, Clogwyn, Snowdon (49), Sept. 1924, W.B. "A mixture of *S. undulata*, *S. gracilis* and *Alicularia compressa*," H.H.K. ; Moelwyn Bach (48), Sept. 1911, D.A.J.

S. paludosa K. Müll. (*Martinellia paludosa* K. Müll.), Luopahta, Jukkusjärri, Tornea Lappmark, Sweden, Aug. 1923, C.S.

S. paludicola Loeske & K. Müller, Tjikivare, Murjik, Jokkmokk, Lulea Lappmark, Sweden, July 1922, C.S. ; in wood near Maloja, Switzerland, July 1924, J.B.D., com. H.H.K. "This species is closely related to *S. irrigua*. In my specimens from Maloja the cell walls of the leaves are not thickened at the angles as in typical plants. Müller remarks on this absence of

thickened angles in some of the specimens sent him from Switzerland. In the specimens from Sweden contributed by Mr. Carl Stenholm the cells are very strongly thickened at the angles. I think these might be referred to the var. *Kaalasi* K. Müll.", H.H.K.

S. umbrosa (Schrad.) Dum., Warshill Wood, Bewdley (37), Oct. 1923, H.H.K. & J.B.D., com. J.B.D.

Radula Lindbergii Gottsche var. *germana* (Jack), Cam Creag and King's Seat, Killin (88), alt. 3000 ft., Aug. 1924, W.N.T.

R. aquilegia Tayl. c.fr., Cwm Bychan, Harlech (48), May 1911, D.A.J.

Pleurozia purpurea (Lightf.) Lindb., Kenmare, Co. Kerry (I. 1), Nov. 1920, D.B.B.

Madotheca levigata (Schrad.) Dum. var. *Thuja* Nees, Mullion Cove (1), Aug. 1924, P.W.M.R.

M. rivularis Nees, Nant-y-Ffrith, near Wrexham (51), Jan. 1925, D.A.J.

M. Porella (Dicks.) Nees, Artro River, Llanbedr (48), May 1911, D.A.J. ; rock in torrent, Uwchartro, Harlech (48), April 1915, D.A.J. & P.G.M.R., com. P.G.M.R. ; River Dee, Berwyn and Llangollen (50*), Jan. 1925, D.A.J. ; Vendée, Puy-de-Lerre, racines d'arbres au bord de la Vendée, Oct. 1923, J.C. ; corticolous form, trees near base, Robinson Spring, Sandford, Florida, U.S.A., Sept. 1924, leg. S. Rapp, com. P.G.M.R.

Cololejeunea calyptrifolia (Hook.) Schiffn., Tyn-y-Groes (48), Aug. 1907, D.A.J.

Cololejeunea Rossettiana (Massal.) Schiffn., Glen, Ingleton (64), Jan. 1925, F.E.M. "Is *C. calcarea* ; the cells of the postical lobe are not papillose, and the margin is incurved and entire," H.H.K. ; Castleton (57), Aug. 1923, J.B.D.

C. minutissima (Sm.) Schiffn., trees, Trevellow (1), April 1925, J.B.D. ; Vendée, La Châtaigneraie, Jan. 1913, J.C.

Lejeunea flava (Swartz) Nees, Old Weir Bridge, Killarney (I. 2), Aug. 1905, D.A.J. ; Torc Glen, Killarney (I. 2), Aug. 1905, J.B.D.

L. Holtii Spruce, Torc Cascade, Killarney (I. 2), Aug. 1905, D.A.J.

L. cavifolia (Ehrh.) Lindb., Glen, Ingleton (64), Jan. 1925, F.E.M. "Is *L. patens* ; it is rather smaller than *cavifolia* ; underleaves not larger than postical lobe and crenulate at margin ; also, the wings of perianth are distinctly crenulate," H.H.K. ; var. *heterophylla* Carr., Minffordd (48), Aug. 1916, D.A.J. ; Doulaw Burn (81), March 1924, J.B.D.

Lejeunea diversiloba Spruce, Torc Mountain, Killarney (I. 2), Aug. 1906, D.A.J.

Microlejeunea ulicina (Tayl.) Evans, Hook, North Hants (12)

May 1924, St.J.M. ; Vendée, Forêt de Vouvant, sur un arbre
 Aug. 1923, J.C.

Jubula Hutchinsiae (Hook.) Dum., Llanberis (49), Aug. 1924,
 D.B.B.

Frullania Tamarisci (L.) Dum., on oak, Cwm-y-Glo (49),
 Aug. 1924, "lobes frequently explanate," E.A. ; var. *cornubica*
 Carr., Muckross, Killarney (I. 2), Aug. 1905, J.B.D. and D.A.J.,
 com. D.A.J.

F. microphylla (Gottsche) Pears., Maentwrog Valley (48),
 Nov. 1906, D.A.J.

CORRECTION.

Report 1924, p. 87. "*Haplozia riparia* (Tayl.) Dum. var.
rivularis Bern., Reigate Heath (17), Jan. 1924 (not 1904),
 J.O'L." This plant was *Chiloscyphus polyanthus*, but Mr. Knight's
 correction was, by an oversight, omitted. F.R.

Non-European.

Marchantia breviloba Evans, Hardware Gap and vicinity, Jamaica, July 1903, A.W.E. (Ref. no. 203).

M. chenopoda L., on earth, Cinchona, Jamaica, July 1903, A.W.E. (Ref. no. 248).

Jamesoniella colorata (Lehm.) Schiffn., on a bank, Newhaven Gap, Jamaica, July 1903, A.W.E. (Ref. no. 166).

Anastrophyllum monodon H.F. & T., Warkopiroo, N. Zealand, 1901, leg. S. Chadwick, com. H.B.

Plagiochila heterostipa Steph., Eschowe, Zululand, Jan. 1909, leg. H. Bryhn, det. Steph., com. J.L.

Syzygiella perfoliata (Sw.) Spruce, on bank, Morce's Gap, Jamaica, Aug. 1906, A.W.E. (Ref. no. 382).

Odontochisma prostratum (Sw.) Trevis, on a sandy bank, Fish River, Baldwin Co., Alabama, U.S.A., Nov. 1924, A.W.E.

Calypogeia portoricensis (Steph.) Evans, on rotten logs, Morce's Gap, Jamaica, Aug. 1906, A.W.E. (Ref. no. 468)

Euosmolejeunea duriuscula (Nees) Evans, on trees, Volanta Baldwin Co, Alabama, Oct.—Nov. 1924, A.W.E.

Frullania hians (L. & L.) M. & N., on a bank, Chestervale, Jamaica, July 1903, A.W.E. (Ref. no. 210)

Anthoceros (*punctatus* group), Terreira da Lucta, Madeira, Nov. 1923, E.A.

Two New European Varieties of *Cratoneuron*

***Cratoneuron glaucum* Lank. var. *scolopendrioides* Rhodes ex Wheldon.**

Profunde caespitans, sursum viride, infra fuscescens. Caules graciles, elongati (8—15 cm.) denso rubro tomento totaliter cooperti, a basi usque ad apicem pinnato-ramosi. Rami brevissimi (3—5 mm) subaequales, non-contigui, divaricati. Folia parva sed lata. Habitu Thuidio abietino simile.

Habitat: Canneti spongiosi al fondo delle vallette dei canali fra Pordenone e Torre, 30 met. supra mare, Veneta, Italy. Leg. V. Mazzuchelli, 6, Nov. 1914, com. C. Sbarbaro.

The tall stems and very short regular branches give the "frond" a narrowly linear outline. The name is derived from a fanciful resemblance to a centipede, although the likeness is no clearer than that of a branch of *Scorpidium scorpioides* to the tail of a scorpion. J.A.W

Mr. Wheldon believed that he had British examples of this variety, but he was unable before his death to verify this. P.G.M.R.

***Cratoneuron falcatum* Roth var. *subjulaceum* Wheldon and Rhodes.**

Planta pallida viridis vel lutescens, gracilis, elongata, aliquantulum ramosa sed vix pinnata, caule et ramis aut non aut vix ad apicem aduncis. Folia satis parva (1.2—1.8 mm.), valde plicata, breviter acuminata, parum secunda, et, nisi in apice, plus minusve ad caulem erecto-appressa. Cellulae alares tenues hyalinae, numerosae. Paraphyllia gracilia numerosa. Rhizoidae perpaucae. Habitu *Cratoneuro* decipienti simile.

Habitat: In palude alpestri, circa 2400 met. supra mare, Rochers de Nava, St. Luc, Valesia, Helvetia. Leg. P. G. M. Rhodes, Jul. 1912.

Also found at Piandelagotti, Modena, Italy. Leg. A. Lunardi, 2 July 1910; com. C. Sbarbaro, det. Wheldon.

Obituaries.

JAMES ALFRED WHELDON, M.Sc., A.L.S., I.S.M. 1862—1924.

By the death of J. A. Wheldon on November 28th, 1924, British Botany generally, and Bryology especially, has suffered a severe loss. To our Society the blow is almost irreparable. He was one of the founders of our parent society, the Moss Exchange Club, in 1896, and from its commencement until the time of his death he spared neither time nor trouble in furthering the club's aims and helping its members. For over twenty years he served the club as Treasurer, and he was also one of its most valued and able Referees. He also served on the editorial committee which published the Club's "Census Catalogue of British Mosses."

J. A. Wheldon was born at Northallerton, Yorkshire in 1862. He was educated at the Cleveland College, Darlington, and afterwards qualified as a pharmacist. As a boy he showed a love for Natural History, and in company with his father, who was a good botanist and ornithologist, he took long rambles on the North Yorkshire hills, collecting birds' eggs, insects, shells and plants. He afterwards became an excellent ornithologist, and also attained considerable skill as a taxidermist. After serving as chemist's assistant at Scarborough and at Brighton, he started business on his own account at York in 1886. Here he became secretary of the York & District Field Naturalist's Society, and devoted much of his spare time to the study of Mosses. In 1888 he compiled the "York Catalogue of British Mosses," a work which filled a want at the time. He had only been at York about four years when a disastrous fire destroyed his stock-in-trade and also the greater part of his Natural History collections and books. He removed from York, and in 1891 obtained the post of Pharmacist to the medical staff at H. M. Prison, Liverpool. Here he remained until his retirement from the prison service in 1922, at which time he was the senior

pharmacist in the service and was decorated with the Imperial Service Medal.

After his removal to Liverpool, botany became his special study. His first bryological work was on the mosses of the Mersey Province. He compiled lists of the species, looking up and verifying the old records where possible, and also did much work in the field. The results were published in the *Journal of Botany*; Cheshire, South Lancashire, and West Lancashire being treated of in turn. During the next eight years much of his spare time was devoted to the preparation of the "Flora of West Lancashire," a work published in 1907 in collaboration with his old botanical friend, Mr. Albert Wilson. The very rich variety of forms of Harpidioid Hypna which West Lancashire contains rendered an intensive study of this group desirable, and Mr. Wheldon entered into the work with enthusiasm. One of the results was the publication in 1902 of his valuable paper on "The North of England Harpidia" (*The Naturalist*, 1902); and later in 1920-1921, in the same Journal, of a "Key to the Harpidioid Hypna." This latter embodies the result of his mature judgment after much study and correspondence with specialists on the group in Europe and North America.

Perhaps not less important than his work on the Harpidia was his work on the Sphagna, upon which group he soon became a recognised authority. For many years he acted as Referee on these plants for our Society. In 1917 he wrote "A Synopsis of the European Sphagna," a work compiled from Dr. Warnstorff's "Sphagnologia Universalis," but containing descriptions of a number of new varieties and forms first described and named by himself.

One of his most original and valuable papers was entitled "Social Groups and Adaptive Characters in the Bryophyta" (*The Lancashire Naturalist*, 1911). This was an important contribution to ecological botany and has been widely quoted from.

But Mr. Wheldon's botanical papers were not confined to Bryology. The "*Flora of West Lancashire*" which included the flowering plants, ferns, mosses, hepatics, and lichens, has already been mentioned. He was for many years a member of the Botanical Society and Exchange Club of the British Isles. He had an excellent and

critical knowledge of several phanerogamic genera, and he wrote a valuable account (not yet published) of the genus *Erythraea* for the "Cambridge Flora." *Chenopodium Wheldoni*, a hybrid *Chenopodium* which he discovered, was named in his honour by Murr, and Renault also named a variety of *Drepanocladus aduncus* after him. In conjunction with Mr. W. G. Travis, Mr. Wheldon named and described the var. *condensata* of *Parnassia palustris*, found on Lancashire sand dunes; and the same authors were the first to show that the Helleborine, which grows on these dunes and which had been considered to be a form of *H. latifolia*, was *H. viridiflora*. He also published papers on the flora of the Isle of Man, either alone or in conjunction with Mr. J. W. Hartley. Along with Mr. A. Wilson he wrote several papers on the cryptogamic flora of the Scottish Highlands, perhaps the most important being one on the "*Lichens of Perthshire*," published as a supplement by the Journal of Botany in 1915. He did much other work on British lichens, and discovered and described several new species. Altogether his works and articles in journals number considerably over one hundred.

Mr. Wheldon was one of the founders of the Liverpool Botanical Society, of which he was a very active member. He was elected a Fellow of the Linnean Society in 1901 and in 1923 had the honour of being made an Associate. In the same year the honorary degree of M.Sc. was conferred upon him by Liverpool University. On the occasion of the meeting of the British Association for the Advancement of Science held in Liverpool in 1923, Mr. Wheldon served as Vice-President of Section K (Botany), and besides acting as leader of botanical excursions, he contributed articles to the botanical section of the Handbook "*Merseyside*," published in connection with the meeting.

Of Mr. Wheldon's personal character the writers of this notice can speak from long experience. He had a kindly, unassuming, genial manner, and endeared himself to all who had the good fortune to make his acquaintance. Although an exceedingly busy man, he was always ready to help others, as many of our members can testify.

Mr. Wheldon had been a widower for about nine years. He leaves two sons and one daughter.

W.G.T. & A.W.

EDWARD BLANCHARD CHAMBERLAIN

Born at Bristol, Lincoln County, Maine, U.S.A., July 2, 1878; died February 2, 1925. He was Headmaster of the Franklin School for Boys, New York City; Secretary-Treasurer of the Sullivant Moss Society and Managing-Editor of the *Bryologist*. He first became interested in Mosses in 1900 when a student at Brown University, Providence, and until his death devoted his leisure time and energies to the study of his favourite subject. He wrote extensively on Mosses to the *Bryologist* and other periodicals, and several new species and varieties were described by him from time to time. This large amount of work Mr Chamberlain tried to counterbalance by a very systematic life, including a regular allowance of time each day out of doors. This plan helped much, but he tried to do too much and for several years worked beyond his strength. He took great interest in the British Bryological Society, of which he was a member. He spared no effort in making the Society well-known among his colleagues, personally and through the *Bryologist*; indeed, British Bryologists can testify to his unfailing courtesy and readiness to help them in the publication of anything of interest whenever applied to.

He had a real place in the affections of those who knew him and his buoyant personality and charming good fellowship won their way to the hearts of all who came in contact with him. As a teacher he was an unqualified success, much esteemed and loved by his boys and staff.

His Herbarium, Books, MSS., and Drawings go to the New England Botanical Club of Boston, Massachusetts.

I am indebted to Messrs. A. T. Beals and Edwin B. Bertram for much of the information given above.

D.A.J.

JOHN HENRY CRABTREE

Born at Norden near Rochdale. He began work in a factory at an early age, but by attending Evening Classes he succeeded in gaining a first class Queen's Scholarship and entered Westminster Training College. In 1885 he became Headmaster of the Wesleyan School at Wardle near Rochdale. In 1894 he was appointed Factory Inspector and held appointments in this capacity successively at Birmingham, West London and several Lancashire Centres. He took great interest in photography which helped him considerably in the study of Nature. He was a Fellow of the Royal Photographic Society. In his later years he wrote several books on Photography, Nature Study including Mosses, and on Lancashire, his native county.

He passed away suddenly July 30th, 1924, having carried on his work right to the end.

D.A.J.

FREDERICK WRIGHT

1845—1924

He was born at Sutton in the County of Cambridge on September 17th, 1845. He had retired from business in the city where he was held in high esteem by his colleagues. He took considerable interest in bryology. Much of his time was taken up in examining specimens and preparing microscopic slides. He was a member of the South London Botanical Institute. He died on May 2, 1924, after a short illness.

D.A.J.

JAMES GLOVER

1814—1925.

Mr. James Glover died at Kircubbin, Co. Down, on the 28th of June, 1925. Born in 1844, for 47 years he was engaged in teaching until he retired in 1910. His pursuits and hobbies ranged over a very wide field. Born near the sea, he set himself to master the Flora and Fauna of the shore and succeeded to a marked degree. He made valuable collections of sea-birds' eggs, marine and inland shells, mosses, hepatics and lichens. He was a linguist of no mean order, and often spent his holidays tramping through France and Germany. Higher Mathematics he placed in the forefront of his many interests, and Chess was his favourite game.

A member of the Moss Exchange Club and afterwards of the British Bryological Society, he forwarded valuable contributions from year to year.

Mr. Glover was tall, and to the end he maintained his erect bearing; of a retiring disposition few realized the extent, depth, and genuineness of the learning of the kindly village schoolmaster.

W.R.M.

Additional Membership Names and Addresses

Prof. V. F. Brotherus, Helsingfors, Finland

Mr R. H. Corstorphine, B.Sc, Hillside House, Arbroath

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