

The British Bryological Society



REPORT FOR 1924

VOL. 1. PART 2.



HARLECH :
PRINTED BY J. D. DAVIES & CO., THE HARLECH PRESS
1924

The
British Bryological Society

REPORT for 1924

VOL. I.

PART 2.

**Executive Officers of
The British Bryological Society.**

President:

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

Vice-President:

DR. S. M. MACVICAR.

Treasurer:

MR. J. A. WHELDON, M.Sc., A.L.S.

Excursion Secretary:

MR. H. C. BROOME.

Distributors:

MOSESSES—MR. A. WILSON. F.L.S., F.R.MET.S.

HEPATICS—MR. F. RILSTONE.

Secretary:

MR. D. A. JONES, M.Sc.

HONORARY MEMBERS.

Rev. C. H. Binstead, M.A., c/o Mr. A. Binstead, 136, Cromwell Road, London, S.W. 7.

Dr. Symers M. Macvicar, Invermoidart, Acharacle, R.S.O., Argyllshire.

LIST OF MEMBERS.

Mr. G. H. Allison, 65, Convamore Road, Grimsby.

Dr. J. Amman, Ave. de Rumine, 45, Lausanne 5, Switzerland.

Miss E. Armitage, Dadnor, Ross, Herefordshire.

Mr. H. Beesley, 55, Long Lane, Ashton-on-Ribble, Preston.

Mr. W. Bellerby, 21, Clifton Green, York.

Mr. H. Bendorf, 4, Sedgley Avenue, Prestwich, Manchester.

Mr. D. Billing, 8, Harbour View, Fowey, Cornwall.

Mr. R. W. Bingham, B.A., Royal School, Dungannon, Co. Tyrone.

Mr. W. Leach, Botanical Dept., University of Birmingham, Edmund Street, Birmingham.

Mr. D. B. Bradshaw, Northcote, Sandford Road, Dublin.

Mr. H. Van den Broeck, Rue de l'Eglise, 120, Antwerp, Belgium.

Mr. H. C. Broome, Netherthorpe, Failsworth, Manchester.

Miss H. J. T. Bruce, 3, Cromwell Terrace, Scarborough.

Mr. W. H. Burrell, F.L.S., 44, West View, Horsforth, Yorks.

Mr. D. G. Catcheside, 28, Greyswood Street, London, S.W. 16.

Dr. E. B. Chamberlain, Ph.D., 18, West 82th Street, New York City, U.S.A.

Mr. J. Charrier, Pharmacien, La Châtaigneraie, Vendée, France.

Capt. C. D. Chaser, M.C., M.A., Campbell College, Belfast.

Mr. C. A. Cheetham, Nutting Grove, Farnley, Leeds.

Miss H. A. Chick, 4, Fleming Road, Kennington Park, London, S.E. 17.

Miss C. A. Cooper, California Lane, Bushey Heath, Herts.

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

Mrs. Corstorphine, B.Sc., Hillside House, Arbroath.

Mr. J. H. Crabtree, Sunnyside, Pine Grove, Prestwich, Manchester.

Mrs. E. M. Dill, Foyle College, Londonderry.

Mr. H. N. Dixon, M.A., F.L.S., 17, St. Matthew's Parade, Northampton.

Mr. A. J. Dodd, Felley Priory, Jacksdale, Notts.

Dr. G. Claridge Druce, M.A., Yardley Lodge, Oxford.

Mr. J. B. Duncan, 6, Summerhill Terrace, Berwick-on-Trent.

Mr. E. J. Elliott, 56, High Street, Stroud, Gloucestershire.

- Dr. Alexander W. Evans, Yale University, Newhaven, Connecticut, U.S.A.
- Miss E. J. Fry, M.Sc., 117, Millbrook Street, Southampton.
- Mr. A. Gepp, British Museum (Nat. Hist.) Cromwell Road, London, S.W.
- Mr. J. Glover, The Glebe, Kircubbin, Co. Down, Ireland.
- Mr. J. Groves, F.L.S., Trevarthian, Freshwater Bay, Isle of Wight.
- Mr. J. W. Hartley, Mill Head House, Carnforth.
- Rev. H. H. Harvey, Clawton, Holsworthy, N. Devon.
- Mr. F. Haxby, 15, Hollingwood Mount, Lidget Green, Bradford.
- Miss A. G. Hebson, 14, Castle Crescent, Kendal.
- Mr. James Hennen, 115, Chaussée d'Anvers, Capellen, Belgium.
- Mr. A. R. Horwood, The Museum, Leicester.
- Miss E. M. Hough, M.A., The School, Brentwood, Essex.
- Mr. J. D. Houston, Bank House, Elphin, Co. Roscommon.
- Mr. Cecil P. Hurst, Ivy House, Great Bedwyn, Hungerford.
- Mr. H. B. Hyde, Bot. Dept., National Museum of Wales, Cardiff.
- Rev. R. Jackett, Crunwre Rectory, Whitland, Carmarthenshire.
- Rev. H. G. Jameson, M.A., Gartymore, Park Rise, Leatherhead.
- Mr. J. W. H. Johnson, B.Sc., F.L.S., Grange View, Walton, Nr. Wakefield.
- Mr. D. A. Jones, M.Sc., Rock House, Harlech, North Wales.
- Mr. H. H. Knight, M.A., The Lodge, All Saints' Villas, Cheltenham.
- Dr. W. A. Lees, M.A., Ph.D., 80, Cavendish Drive, Rock Ferry, Cheshire.
- Mr. Johannes Lid, Botanical Museum, 32, Kristiania, Norway.
- Rev. D. Lillie, M.A., B.D., The Manse, Watten, Caithness.
- Miss F. M. Loader, 11, Denzil Avenue, Southampton.
- Mr. C. V. B. Marquand, M.A., F.L.S., Andreaca, 102, Mortlake Road, Kew Gardens, Surrey.
- Mr. St. John Marriott, 37, Owenite Street, Abbeywood, London, S.E. 2.
- Rev. W. R. Megaw, B.A., The Manse, Rosetta, Belfast.
- Mr. R. H. Meldrum, F.L.S., 3, Muirhall Bank, Perth.
- Mr. F. E. Milsom, B.Sc., High Cross, Kirkburton, Huddersfield.
- Mr. W. Monckton, V.P.L.S., F.G.S., 3, Harcourt Buildings, Temple Gardens, London, E.C. 4.
- Mr. G. W. Moses, 19, Victoria Street, Bishop Auckland.
- Mr. James Murray, Ivy Cottage, Kelsick, Wigton, Cumberland.

- Mr. W. E. Nicholson, F.L.S., 50, St. Anne's Crescent, Lewes.
 Miss E. F. Noel, F.L.S., 37, Moscow Court, London, W. 2.
 Mr. J. L. O'Loughlin, 21, Corsehill Street, Streatham, London, S.W. 16.
 Mr. J. H. Payne, Newhill, West Melton, Rotherham.
 Dr. W. H. Pearsall, D.Sc., The University, Leeds.
 Dr. L. H. Pegler, M.D., 7, Bartholomew Terrace, Exeter.
 Prof. J. H. Priestley, The University, Leeds.
 Rev. P. G. M. Rhodes, M.A., D.D., Oscott College, Leeds.
 Mr. E. A. Richards, Hillside Cottage, Breck Road, Wallasey.
 Mr. P. W. M. Richards, 70, Belsize Park Gardens, London, N.W. 3.
 Mr. F. Rilstone, Schoolhouse, Polperro, S.O., Cornwall.
 Mr. D. R. Robertson, 6, Norman Terrace, Downfield, Dundee.
 Mr. G. B. Savery, Silvertown, Exeter.
 Miss L. S. Scott, B.Sc., Lyddon Hall, Leeds.
 Mr. W. R. Sherrin, A.L.S., Sth. London Bot. Institute, 323, Norwood, London, S.E. 24.
 Mr. J. R. Simpson, The Limes, Selkirk.
 Mr. R. W. Smitham, Fowey, Cornwall.
 Mr. H. Stansfield, 20, Park Grove, York.
 Mr. E. H. Stevens, B.A., Haw House, Rothbury, Northumberland.
 Mr. A. Sutton, A.R.S.M., 9, Brookfield Park, London, N.W. 5.
 Mr. W. N. Tetley, M.A., Portora, Enniskillen.
 Mr. W. G. Town, Frith's Terrace, Bæup Road, Todmorden.
 Mr. W. G. Travis, 2, Barton Road, Liverpool.
 Dr. L. B. C. Trotter, M.D., Rossway, Ledbury, Herefordshire.
 Herr Johannes Warnstorf, Burgerschullehrer, 7, Hohrzollern Strasse, Wittenberg, Potsdam, Brandenburg, Germany.
 Dr. Walter Watson, D.Sc., Taunton School, Somerset.
 Miss M. Weightman, M.Sc., 13, Alexandra Road, Waterloo, L'pool.
 Prof. F. E. Weiss, Victoria University, Manchester.
 Mr. J. A. Wheldon, M.Sc., A.L.S., 26, Marchfield Road, Orrell Park, Liverpool.
 Prof. J. Lloyd Williams, D.Sc., University College, Aberystwyth.
 Mr. A. Wilson, F.L.S., F. R. Met. S., Haverbank, Sedburgh, Yorks.
 Mr. J. C. Wilson, F.L.S., 1500, Ashton Old Road, Manchester.
 Mr. Frederick Wright, 21, Elsie Road, South Dulwich, London, S.E. 22.
 Miss A. Wyndham, Orchard Wyndham, Williton, Taunton.
 Miss Alice G. Young, Clifford, London Road, Waterlooville, Hants.
 Mr. William Young, Fairview, Kirkcaldy.

Mosses and Hepatics for Distribution.

1923—1924.

			<i>Mosses</i>	<i>Hepatics</i>	<i>Total</i>
Mr. G. H. Allison ...	...	...	53	13	66
Miss Armitage ...	...	...	148	50	198
Mr. H. Beesley ...	...	...	87	44	131
Mr. W. Bellerby ...	...	...	87	16	103
Mr. D. B. Bradshaw ...	...	...	36	21	57
Mr. Van den Broeck ...	...	...	187	60	247
Mr. W. H. Burrell ...	...	...	166	26	192
Mr. D. G. Catcheside ...	...	...	95	6	101
Mr. E. B. Chamberlain ...	...	...	52	...	52
Mr. C. Charrier ...	...	...	394	104	498
Miss C. A. Cooper ...	...	...	12	...	12
Mr. H. N. Dixon ...	...	...	91	...	91
Mr. A. J. Dodd ...	...	...	26	3	29
Mr. J. B. Duncan ...	...	...	310	275	585
Mr. James Groves ...	...	...	36	...	36
Mr. J. W. Hartley ...	...	...	15	...	15
Mr. J. Hennen ...	...	...	15	...	15
Rev. R. Jackett ...	...	...	88	51	139
Mr. D. A. Jones ...	...	...	228	103	331
Mr. H. H. Knight ...	...	...	27	71	98
Rev. W. R. Megaw ...	...	...	26	...	26
Mr. F. E. Milsom ...	...	...	...	45	45
Mr. H. C. Monckton ...	...	...	56	9	65
Mr. W. E. Nicholson ...	...	...	56	60	116
Mr. J. L. O'Loughlin ...	...	...	66	16	82
Mr. J. H. Payne ...	...	...	5	...	5
Dr. W. H. Pegler ...	...	...	114	...	114
Rev. Dr. Rhodes ...	...	...	129	47	176
Mr. E. A. Richards ...	...	...	35	...	35
Mr. P. W. M. Richards ...	...	...	65	19	84
Mr. F. Rilstone ...	...	...	40	23	63
Mr. W. R. Sherrin ...	...	...	12	...	12
Mr. R. W. Smitham ...	...	...	93	...	93
Mr. H. Stansfield ...	...	...	113	...	113
Mr. A. Sutton ...	...	...	64	...	64
Mr. W. N. Tetley ...	...	...	72	22	94
Mr. W. G. Travis ...	...	...	51	39	90
Dr. L. B. C. Trotter ...	...	...	94	...	94
Dr. W. Watson ...	...	...	45	19	64
Mr. J. A. Wheldon ...	...	...	41	8	49
Mr. A. Wilson ...	..	...	155	...	155
Miss A. Wyndham ...	...	—	13	—	13
Miss A. G. Young —	—	—	7	—	7
			3505	1150	4655

Report of Secretary.

The Second Annual Report of the British Bryological Society shows a marked increase in the number of new members. The total number is now 100.

We much regret to announce the death of Mr. N. Temperley, J.P., who, though at an advanced age, took much interest in the Society.

We have to acknowledge the generosity of the Rev. C. H. Binstead for presenting a number of valuable books to the Society and, also, of Mr. W. Ingham for some interesting lantern slides of Mosses and Hepatics for the use of members, together with a number of duplicate plants gathered by his late father. It is hoped that at the Annual Meeting arrangements may be made by which these will be placed at the service of members.

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

Circulating Catalogues have been issued again this year and members are requested not to delay the circulation of these Catalogues.

All orders for the 3rd Edition of the Student's Handbook of British Mosses should be sent to the printers, Messrs. V. Sumfield Ltd., Station Street, Eastbourne, who have promised to have the same ready by the middle of May.

We heartily congratulate our Treasurer, Mr. J. A. Wheldon, on the honour conferred on him in being elected an Associate of the Linnean Society (A.L.S.). All members will be pleased to know that he is recovering from his recent severe illness.

A key to the Sphagnaceae has been drawn up by Mr. W. R. Sherrin, and published in the Journal of Botany. Copies may be had from the Secretary at 7d. post free.

The labour of the distribution is becoming now more severe with the more numerous membership of the Society and our gratitude to Messrs. Wilson and Rilstone for their successful efforts must be proportionately greater. Mr. Wilson has been much hampered by illness, and he has our best wishes for a speedy recovery.

Subscriptions for the year were due on January 1st, and should be sent to the Treasurer, Mr. J. A. Wheldon, 26, Marchfield Road, Orrell Park, Liverpool.

ROCK HOUSE, HARLECH.
April, 1924.

D. A. JONES,
Secretary.

REFEREES:

MOSSES—

Sphagnaceae ...	...	MR. SHERRIN
Andreaeaceae to Grimmiaceae	...	MR. SAVERY
Tortulaceae to Orthotrichaceae and European		MR. NICHOLSON
Sehistostegaceae to Leskeaceae, except Bryaceae		MR. JONES.
Bryaceae and Hypnaceae...	...	MR. WHELDON
Non European and Referee in chief	...	MR. DIXON

HEPATICs—

Sphaerocarpus to Pedinophyllum	...	MR. KNIGHT.
Leptoscyphus to Anthoceros	...	MR. JONES.
Referee in chief	...	MR. MACVICAR.

Report of Distributor (Mosses).

The past year has shown considerable activity amongst our members, as evidenced by a large number of specimens, 3505, sent for exchange. 42 parcels were received and 69 were distributed. Two or three of our members abroad contributed very handsomely. Messrs. Binstead and Dixon also kindly sent a quantity of material in bulk, from which valuable specimens were obtained.

The quality of the specimens was generally good, but in a few cases more care should have been taken to remove soil. This can easily be accomplished by gently kneading the specimens in water, care being taken not to disintegrate the tufts. In the case, however, of some small plants growing scattered in patches this method should not be attempted. With a view to improving the standard of the specimens, and reducing the labours of future distributors, I venture to make some other suggestions. With regard to envelopes, a good quality non-glossy white paper, of moderate thickness, is the best. Parchment paper is not very satisfactory; it is too springy and unyielding unless undesirably slipping^{thin} out. In the present exchange some envelopes arrived empty, the mosses being scattered about and mixed in the parcel. Opinions vary as to the most suitable size for envelopes, but even for small plants they should not be less than $3\frac{3}{4} \times 2\frac{1}{2}$ in. Any size smaller does not allow proper space for labelling. Very small plants, e.g. *Seligeria*, may be wrapped in tissue paper before placing in the envelope. Many mosses and especially *Sphagna* require much larger envelopes. The name of the collector should be stated on each envelope—not initials only. The catalogue number and name or number of the vice-county—preferably both—should also be given; some members omitted both of these. Packets of the same species from the same locality should be fastened together—not sent loose. Thin rubber bands are preferable to string, and save much time and trouble to the sender and referees. A full list of the specimens contributed should be sent to the distributor, the names being in proper sequence according to the catalogue, and the numbers given. The number of packets of each species sent should also be stated. Single packets are not generally acceptable, as they give work to the referees out of all proportion to their value for exchange.

At least three from each locality are desirable, except perhaps in the case of new vice-comital records, or very rare plants, where two is a minimum number.

Printed rules giving full particulars of the exchange and perhaps embodying some of the above suggestions would be generally useful, especially to new members.

Special thanks are due to the referees, their work this year having been unusually heavy. It would appear desirable to add to their number in the future, and so further divide the work.

In the following pages most of the plants contributed are mentioned; a few only of the commoner species, and those sent from the same locality in previous exchanges, are omitted.

SEDBERGH,
April 1924.

ALBERT WILSON.

Report of Distributor (Hepatics).

Parcels of hepatics for the exchange were contributed by 25 members and reached a total of 1150 packets. The distribution followed the same general plan as that of last year, and 45 parcels were sent out.

Several plants of great interest were included in the contributions. Special interest attaches to the specimens of *Scapania Degenii* supplied by Messrs. Knight and Nicholson and to Mr. Nicholson's valuable descriptive note on the species, which is included in the Report.

The Referees comment favourably on the material that passed through their hands. It was generally well-prepared and correctly named. In a few cases the contents of packets were so scanty as to be of little use.

The best thanks of the Society are due to Messrs. Knight and Jones for their valuable services as referees.

POLPERRO,
March 6th, 1924.

F. RILSTONE.

STATEMENT OF ACCOUNT FOR 1923.

RECEIPTS.			
	£	s.	d.
By Balance from 1922	...	3	1 8
„ 74 Subscriptions...	...	18	10 0
„ Sale of Publications	...	1	10 5
„ Balance due to Treasurer	...	4	2 1½

26, MARCHFIELD ROAD,
ORRELL PARK,
LIVERPOOL.

J. A. WHELDON,
Hon. Treasurer.

New Forms of Sphagnum.

BY J. A. WHELDON, M.Sc., A.L.S.

Sphagnum imbricatum (Hornsch.) Russ var. *affine* W. *f. glaucescens* W. subf. *condensatum* Wheld. Planta minor, sordide cano-viridis vel saepe pallide-violascens. Rami densi breves, imbricate foliosi. Ramorum fasciculi cumulati——Mombello près Milan, 1898, et Cascina Barozza près Figino, Serenza, Como, 1922, Italy F.A. Artaria.

S. cymbifolium Ehrh. var. *flavescens* W. *congestum* Wheld. (*S. cymbifolium* var. *congestum* Schimp. p.p.). Planta sublutea vel luteo-fuscescens vel pallido-flava, caespitibus humilibus densisque; ramorum fasciculi valde cumulati.——Rossinver More, Co. Fermanagh, Ireland, 1905, and Parish of Montiaghs, Co. Armagh, 1901. Rev. H. W. Lett.

S. Wardellense Wtf. var. *Salesianorum* Wheld & Rhodes, v. nov. Habitu *S. medio* vel *S. papilloso conferto* simile. Planta plus minusve pallido-fusca. Hyalod-caulis stratis 3—4, parietes exteriores cell. superf. foramine uno rarius duobus instructi, cylindrus lign. fusco-vel atro-rufus. Ramor. fasc. densissimi, rami patuli breves ascendentes. Fol. ram. rotundata vel elongato-ovata (1. 6 x 1.3 m.m.), marg. lateral. late incurvata, inter. superf. tantum pori fere rotundi prope margines laterales, dorso pseudopori bini ternisve in cell. ang. conjunctis, pori veri margines laterales siti. C.C. in sect. transv. fusif. vel orciformes, nonnunquam rectangulae. Cell. hyal. intus in pariete leves. Fol. caul. elongata ovata vel spathulata, multifibrosa 1.7 x .8—9 m.m. Baia Loma, Dawson Is., Tierra del Fuego, 1910, Leg. Tonelli. *Forma nigrofusum*. Caespitibus densis (quasi 6—10 c.m.) habitu *S. medio* similibus, deorsum pallido-fuscis sursum nigro-fuscis. Puntarenas verso la Laguna Linche in aqua dolce, 7 iii. 22. Leg. Benove. Comm., C. Sbarbaro.

S. subsecundum Nees var. *intermedium* W. f. *subrufescens*, Wheld. Plantae 6—10 cm. altae caespitibus densis superne glauco-viridibus, flavescentibus et rufo-fuscescentibus. Rami satis attenuati, inferiores laxi, superiores dense imbricate foliosi.—Hardwick Heath, Stone, Staffordshire, 1898, J. E. Bagnall.

S. aquatile W. var. *ochraceo-violascens* W. f. *pachycladum* Sherrin et Wheldon. Planta robusta. Folia ramulina ad 3—4 mm. longa, dense imbricata. Rami expansi tereti Moreton Heath, 1919, W. R. Sherrin & C. Chipperfield.

S. aquatile W. var. *sanguinale* W. f. *brachycladum* Wheld. Planta (10—15 cm.) gracilis cano-viridis sursum rufescens et flavescent. Ramorum fasciculi plus minusve remoti, rami patuli plerumque divaricati, breves, superiores non intorti.

S. crassycladum W. var. *intermedium* W. f. *rubrotinctum* Wheld. Forma gracilior, deorsum cano-viridis sursum sanguineo et pallescenti-viridi-variegata. Raikes Dyke, Holme, Yorks., Aug., 1922, W. H. Burrell.

S. compactum D.C. var. *subsquarrosum* W. f. *rubens* Wheld. Caespites superne vel ubique purpurei vel roseo-rubicundi. Folia ramorum laxa arcuate erecte patentia. Olgellasca près Cautu, alt. 250 m., Como, Italy, 1921. F. A. Artaria.

Note on *Orthodontium*.

By W. H. BURRELL, F.L.S.

In the Journal of Botany 1922 p. 139—41 Dr. Watson described, under the name of *O. gracile* var. *heterocarpum* a form of the plant, gathered on both the Cheshire and Yorkshire sides of the Pennines which differed from the type in the shorter, broader, often more or less gibbous capsule, which may be smooth or deeply sulcate, straight or curved, sometimes very strongly so. Teeth of the inner peristome minutely punctate. Antheridia usually in separate gemmiform groups. Leaves often less flexuose and shorter. The genus *Orthodontium* as established by Schwaegrichen had *antheridia*, axillary among the terminal leaves, or, in axillary gemmiform flowers; *inner peristome*, with short or long processes. The former of these alternatives distinguished *O. gracile* Schwaeg., and the latter *O. lineare* Schwaeg. In his treatment of the *Bryeæ* in Engler & Prantl Pflanzenfamilien, Brotherus segregated the plant with short processes and paucicous inflorescence in a genus *Stableria*, and placed *O. lineare* with several other exotic species in a section of *Orthodontium* distinguished by axillary gemmiform male inflorescences, long processes to the inner peristome and striated capsules.

The recent creation of *O. gracile* var. *heterocarpum* Watson has cut across this arrangement, and it seems that the whole genus should be reviewed in order to determine whether a dozen or more species scattered throughout the world are based on unstable characters and are merely variable states of the European *O. gracile* Schwaeg., or whether Dr. Watson's var. belongs more properly to a section of which *O. lineare* Schwaeg. stands as a type.

During the past two years, a plant, now issued to the B.B.S. from "Midhope Moor, July, 1923," has been seen in

considerable quantity in the Southern Pennines and as far north as Ingleborough. It appears to be restricted to peat, to have gemmiform male inflorescences, long processes, and striated capsules. With it, typical *O. gracile* is distributed to the Club from Bolton Abbey, where it appears to have retained its rock habitat and structural characters since Spruce found it there many years ago. A character of the exothecium should be noticed. Several rows of cells in the upper part of the capsule, in the peat plant, have the walls strongly thickened, the lumen being reduced and altered in shape. In the rock plant the cell walls are less strongly thickened, a fact of doubtful value since, although it holds good for all the Yorkshire material examined, a rock plant from Tunbridge Wells, ex. herb. E. M. Holmes, has thick walled exothecium cells, but otherwise the general structural characters of typical *O. gracile*.

Note on *Scapania Degenii* (Schiffn. M.S.) K. Müll.

This species was described by Dr. K. Müller in "Die Lebermoose Deutschland's, Oesterreich's u.d. Schweiz," pl. II., p. 499, published on the 1st March, 1915. It is named after Dr. A. von Degen of Budapest, who gathered it in the Oetzthal in Tyrol in 1910, and it was sent to Dr. Müller by Dr. V. Schiffner with the above name in M.S. It had also been gathered by Mr. Macvicar on the Creag-an-Lochain-Lairige, in Perthshire as long ago as 1900, and it was found by Mr. H. H. Knight and myself at Saas Fee in Switzerland in July, 1913, and these plants were also submitted to Dr. Müller.

The following diagnosis is largely adapted from that of Dr. Müller (loc. cit.):—

Dioicous. In brownish-green tufts, on damp earth in the mountains. Stems 3—6 c.m. long, less rigid than in *S. aspera* brownish-black with two rows of darker cortical cells rhizoids few. Leaves approximate or slightly imbricate above, somewhat accrescent, rather flaccid, divided to one half, the two lobes often not very different in size, commissure arched with or without a narrow wing; antical lobe rounded-

REPORT ON PLANTS SENT IN BY MEMBERS.

Sphagna.

(An Asterisk (*) denotes New Vice-Comital Records).

Sphagnum Girgensohnii Russ. var. *gracilescens* Grav., Ben Lawers (88*), July, 1902, C.H.B.

S. Russowii W. var. *rhodochroum* Russ., Ben Lawers (88*), July, 1902, C.H.B.

S. fuscum v. Klinggr. var. *medium* Russ. f. *fuscescens* W., Widdy Bank Fell (66), July, 1903, H.B.

S. Warnstorffii Russ. var. *versicolor* Russ., Schiehallion (88*), July, 1902, C.H.B.

S. rubellum Wils. var. *rubescens* W., Wellington College and Easthampstead Moor (22*), April, 1923, H.W.M. "Yes, a common form of *S. rubellum*," W.R.S.; Burnham Beeches (24*), Nov., 1923, D.G.C. "Correctly named. but the material too scrappy for so common a plant," W.R.S.; Fowey Valley (2*), Aug., 1922, R.W.S.; var. *purpurascens* Russ., Ben Lawers (88*), July, 1902, C.H.B.; var. *versicolor* W. Burnham Beeches (24*), Nov., 1923, D.G.C. "An interesting plant, best under *versicolor*," W.R.S.

S. rubellum Wils. var. ? Fowey Valley (2), Aug., 1922, R.W.S. "Is var. *flavum*," W.R.S.

S. subtile W. var. *pulchellum* W., Ben Lawers (88*), July, 1902, C.H.B.

S. acutifolium Ehrh. var. *flavescens* W., Ben Lawers (88*), July, 1902, C.H.B.

S. acutifolium Ehrh. var. *viride*? Dozmary (2), Aug., 1922, R.W.S. "A weak form near the var. *versicolor*," W.R.S.; var. *versicolor*? Bodmin Moors (2), Aug., 1922 R.W.S. "This plant does not fit well any of the named varieties of *S. acutifolium*. There is too much admixture of red to place it under *pallescens*, and certainly it does not look well under var. *versicolor*. With these colour varieties of the *Acutifolium* Group we are too much inclined to force them under some given name. I prefer to separate them from well-grown and more typical forms," W.R.S.

S. quinquefarium W. var. *viride* W. f. *heterocladum* W., Marros Mountain (44*), Oct., 1923, R.J.

S. plumulosum Roll. var. *viride* W. f. *squarrosulum* W., near Coalbrookdale (40*), 1902, W. H. Painter, ex herb. C.H.B.; var. *coerulescens* Schlieph., Black Mountains (42*), Sept., 1897, and Ben Lawers (88*), July, 1902, C.H.B.; var. *purpureum* W., f. *robustum* W., moor above Gurnard's Head (1*), March, 1885, C.H.B.; St. Cleer (2*), Aug., 1920, R.W.S.; f. *gracile* W., Alwyn Vitchell Burn (71*), Sept., 1923, J.A.W. & A.W.; var. *versicolor* W., Ben Lawers (88*), July, 1902, C.H.B.; f. *validum* W., St. Clear (2*), Aug., 1920, R.W.S.; Black Mountains (42*), Sept., 1897, C.H.B.; f. *tenellum* W., Ventongimps Moor near Perranporth (1*), Dec., 1918, F.R. "A well marked form," W.R.S.; f. *ascendens* W., Bodmin Moors (2*), 1922, R.W.S.; Teign Head (3*), July, 1921, H. J. Wheldon, com. J.A.W.; var. *ochraceum* W., Black Mountain (42*), Sept. 1891, C.H.B., and Castle Douglas (73*), Nov., 1885, J. McAndrew; f. *Schillerianum* W., Rhos Goch Bog (43*), Sept., 1893, C.H.B.; f. *immersum* W., Bosullon Moor, Penzance (1*), Feb., 1885, C.H.B.; Redmoor (2*), Feb., 1921, and Bodmin Moors (2), Aug., 1921, and Bodmin Moors (2), Aug., 1922, R.W.S.

S. plumulosum Roll. var. *versicolor* W. f. *ascendens* W., Bodmin Moors (2), 1922, R.W.S. "This is var. *pallens* W. f. *strictum* W.," W.R.S.

S. molle Sull. var. *compactum* Grav., Calmpthout, Belgium, Aug., 1909, H.v.B. *S. molle* var. *molluscoides* W. subf. *tenerum* W. of Wheldon's Synopsis," W.R.S.

S. compactum D.C. var. *imbricatum* W. f. *flavescens* Wheld., Burnfoot Hill (75*), July, 1885, J. McAndrew, com. C.H.B.; var. *squarrosum* Russ. f. *laxum* Card., Cairn Edward (73), July, 1885, J. McAndrew, ex herb., C.H.B.

S. squarrosum Pers. var. *imbricatum* Schimp., Banffshire (94), 1862, H. Boswell, com. C.H.B.

S. teres Angstr. var. *imbricatum* W., Ben Lawers (88), July, 1902, C.H.B.

S. obtusum W. var. *plumosum* W., near Lyndhurst (11*), July, 1923, P.W.M.R. "So named by myself for Mr. Richards, but on second examination I cannot find any obtuse stem leaves. The plant must come under *S. pulchrum* W. var. *sordido-fuscum* W.," W.R.S.

S. Dusenii C. Jens. var. *fulcatum* Jens., Westwezel, Belgium, June, 1909, H.v.B. & R. Naveau.

S. amblyphyllum Russ. var. *mesophyllum* W. f. *silvaticum*

Russ., St. Cleer (2*), Aug., 1920, R.W.S. and Wimbledon Common (17*), Nov. 1923, D.G.C.; f. *molle* Russ., Burnham Beeches (24*), Nov., 1923, J.L.O'L. "Is var. *macrophyllum* W. f. *breviapiculatum* W.," W.R.S.

S. pulchrum W., Fowey Valley (2*), 1922, R.W.S. "Near var. *virescens* W.," W.R.S.; var. *fuscoflavens* W., Bodmin Moors (2*), 1922, R.W.S.

S. recurvum F. de Beauv. var. *robustum* Breidl. f. *fuscescens* W., Sleddale Forrest (69*), July, 1886, C.H.B.; var. *majus* Angstr., Chobham Common (17*), May, 1923, H.W.M.; f. *silvaticum* Russ., Burnham Beeches (24*), Nov., 1923, J.L.O'L.; f. *sphaerocephalum* W., Fowey Valley (2*), Aug., 1922, R.W.S.

S. recurvum P. de Beauv. var. *mucronatum* Russ. f. *sphaerocephalum* W., bogs between Calmpthout and Esschen, Belgium, July, 1909, H.v.B. "These are evidently from two gatherings, and although best placed under f. *sphaerocephalum*, some seem to approach f. *pulchellum*." W.R.S.

S. recurvum P. de Beauv. var. *amblyphyllum* W.. St. Paul-en-Gatine, France, May, 1922, J. C. "Yes, *S. amblyphyllum*, var. *mesophyllum*, f. *silvaticum* subf. *imbricatum*," W.R.S.

S. fallax v. Klinggr., Reigate Heath (17*), May, 1923, D.G.C. "A poorly grown specimen of the var. *robustum*. The plant sent for naming was in much finer condition," W.R.S.; ditch at Calmpthout, Belgium, April, 1909, H.v.B. "Is var. *laxifolium* W." W.R.S.; Bodmin Moors (2*), Aug., 1922, R.W.S. "Not well-marked, I think young," W.R.S.

S. cuspidatum Ehrh. var. *falcatum* Russ., f. *molle* W., subf. *tenellum* W., Alwyn Vitchel Burn (71*), Sept. 1928, J.A.W. & A.W.; subf. *capitatum* Wheld., Bodmin Moors (2*), Aug., 1922, R.W.S.; f. *rigidum* W. subf. *pungens* Grav., Bodmin Moors (2*), Aug., 1922, R.W.S., and Groyne Valley (42*), Sept., 1901, C.H.B.; subf. *aquaticum* W., Foulshaw Moss (69*), Sept., 1875, G. Stabler com. H.B.; var. *submersum* Schimp. f. *rigescens* W. subf. *aquaticum* W., Leigh Hill (17*), Dec., 1923, W.R.S.

S. molluscum Bruch. var. *confertulum* Card., between Brecht and Westmalle, Belgium, Aug., 1906, H.v.B. & Naveau. "It is very gratifying to see our continental member sending in such interesting *Sphagna*. A specimen of this variety was collected on Widdy Bank Fell, Teesdale, Durham, in Aug. 1901,

by D. A. Jones & E. C. Horrell and forms No. T. 44 of the set issued by Mr. Horrell," W.R.S.; var. *vulgatum* f. *immersum* Schimp., ditches at Westwezel, Belgium, June, 1909, H.v.B. & R. Naveau. "This very distinct form at first sight seems very short of the size given in Warnstorff's *Sphagnologia Universalis*. The measurements being given at from 20—30 cm. One stem I carefully dissected out from the rest measured 17cm. The plants are very fragile and must require very careful collecting to get complete plants," W.R.S.

S. obesum W., Goonhavern Moor (1*), Mar., 1921, F.R., "Yes, the var. *brachycladum* W," W.R.S.; var. *sanguineum* W., St. Cleer (2*), Aug., 1920, R.W.S.

S. auriculatum Schimp., var. *tenellum* W., Ben Lawers (88*), July, 1902, C.H.B.; var. *ovatum* W. f. *brachycladum* W., Schiehallion (88*), July, 1902, C.H.B.; Chobham (17*), April, 1923, D.G.C. "Near f. *pallidoflavum* W," W.R.S.; f. *variegatum* W., Liphook (12*), June, 1890, C.H.B.; f. *rufescens* W., Goonhavern Moor (1*), March, 1921, F.R.; var. *cano-virescens* W., Fowey Valley (2*), Aug., 1922, R.W.S., and near Wellington College (23*), Sept., 1922, Sept., 1923. H.W.M. ! var. *submersum* W., Goonhavern Moor (1*). Merch, 1921, F.R.; var. *ovatum* W. f. *pallidoflavum* W., Bolventor (2*), Aug., 1922, R.W.S.

S. contortum Schultz var. *najus* C. Jens. f. *falcifolium* W., Schiehallion (88*), July, 1902, C.H.B.

S. Canusii W., Goonhavern Moor (1*), March, 1921, F.R. "Yes, near var. *venustum* W., W.R.S.; Wolla, St. Cleer (2*), Aug., 1921, R.W.S.

S. crassycladum W. var. *diversifolium* W., Bodmin Moors (2*), Aug., 1922, R.W.S., var. *intermedium* W., Finchampstead (22*), H.W.M. "f. *leptocladum*," W.R.S.; f. *leptocladum* W., Black Mountains (42*), Sept., 1891, C.H.B.

S. armoricum W., Wimbleton Common (17), Nov., 1923, D.C.C. "These are from the same bog from which the original plants were collected and mentioned in last year's report," W.R.S.

S. armoricum W. Reigate Heath (17), April, 1924, J.L.O'L. "Is *S. crassycladum* W. var. *intermedium* W. f. *leptocladum* W," W.R.S.

S. rufescens Nees var. *magnifolium* W. f. *virescens* W., Glen Mona (71), Sept., 1923, J.A.W.

S. turgidulum W. var. *sordidofuscatum* W., Goonhavern Moor (1*), Mar., 1921, F.R.; var. *fulvum* W. Goonhavern

Moor (1), Mar., 1921, F.R.

S. imbricatum Russ. var. *cristatum* W. f. *congestum* W., Calmpthout, Belgium, Oct., 1886, H.v.B. ; f. *fuscescens* W., Moss Raphael (73*), July, 1882, J. McAndrew, ex. herb., C.H.B.

S. papillosum Lindb. var. *normale* W., Fowey Valley (2*), Aug., 1922, R.W.S. ; f. *squarrosulum* Ingham & Wheldon subf. *neglectum* Ingh. & Wheld., Bodmin Moors (2*), Aug., 1922, R.W.S., and Witherslack Moss (69*), July, 1876, J. M. Barnes, com. H.B. ; f. *brachycladum* W., St. Cleer (2*), 1921, R.W.S. ; subf. *pallescens* Wheldon, Bodmin Moors (2*), Aug., 1922, R.W.S. ; subs. *flavofuscum* Wheld., St. Neot (2*), Aug., 1922, R.W.S. ; f. *confertum* W. subf. *fuscoluteum* Wheld., Pensance (1*), 1876, W. Carnow, com. H.B., and Bodmin Moors (2*), Aug., 1922, R.W.S. ; var. *sublaeve* Limpr., St. Cleer (2*), Aug., 1920, R.W.S. "The f. *breviramosum* W.," W.R.S. ; f. *validum* W. subf. *fuscescens* W., Bodmin Moors (3*), Aug., 1922, R.W.S. ; f. *breviramosum* W. subf. *heterocladum* W., Alwyn Vitchel Burn (71), Sept., 1923, J.A.W. & A.W.

S. cymbifolium Ehrh. var. *glaucescens* W., Skipwith Common (61*), W. Ingham, ex. herb. C.H.B. ; f. *squarrosulum* Pers. subf. *pycnocladum*," W., Burnham Beeches (24), Nov., 1923, D.G.C. "These are hardly fine enough specimens to come under the subf. *pycnocladum*," W.R.S. ; subf. *immersum* W., Reigate Heath (17*), May, 1923, D.G.C. "Nearest to f. *deflexum*," W.R.S. ; var. *flavescens* W., Trengwainton, Penzance (1*), Feb., 1885, C.H.B.

S. medium Limpr., Lochar Moss, Dumfries (72*), July, 1902, W.R., Hamilton, ex. herb. C.H.B. ; var. *versicolor* W., Burnham Common (24*), Nov., 1923, D.G.C. Also sent by P.W.M.R. and J.L.O'L.

True Mosses.

Andreaea alpina Smith, Ben Mac Dhui (92), Aug., 1923, D.B.B.

A. Rothii Web. & Mohr var. *falcata* Lindb., Maentwrog Valley (48), Apr., 1915, D.A.J. & P.G.M.R.

A. nivalis Hook., summit of Ben Nevis (97), Aug., 1921, D.B.B.

Tetraxis pellucida Hedw., Glen Eunach (96), Aug., 1923, D.B.B.

Catherinea tenella Röhl., sandy field at Schooten, Belgium, March, 1907, H.v.B.

C. crispa James, Little Don Valley, nr. Penistone (63), July, 1923, W.H.B.

Polytrichum nanum Neck., Mordiford (36), Dec., 1923, C.H.B. ; Vendée, France, Mar., 1923, J.C.

P. alpinum L., Worcestershire Beacon (87), June, 1923, C.H.B. "Not in Census Catalogue but was recorded by Dr. Streeton, 1831, on North Hill, Malvern," J.B.D. "The border cells of the lamellae are grooved longitudinally. It is *P. commune* L.," D.A.J.

P. sexangulare Flörke, Ben Mac Dhui (92), Aug., 1923, D.B.B.

P. strictum Banks, Milford (39), April, 1913, W.W.

Pleuridium axillare Lindb., Vendée, France, Dec., 1921, J.C.

P. subulatum Rabenh., Bradley Wood (54), G.H.A.

Ditrichum tortile Lindb., Schooten, Belgium, April, 1909, H.v.B.

D. homomallum Hampe, Hoy (111*), June, 1922, L.B.C.T.

D. zonatum Limpr., summit of Cader Idris (48), Aug., 1920, J.B.D., var. *scabrifolium* Dixon, Clogwyn, Snowdon (49), July, 1922, D.A.J.

D. subulatum Hampe, hedgebank near Truro (1), April, 1923, W.E.N. & H.H.K. com. H.H.K. ; Loire Inférieure, May, 1916, J.C.

D. flexicaule Hampe, Buxton (57), Aug., 1923, C.A.C. ; var. *densum* B. & S., Waterlooville (11*), 1924, A.G.Y. ; Cefn Caves (50), April, 1911, E.A.R.

Swartzia inclinata Ehrh., Burbage (57), Aug., 1923, E.A.

Seligeria tristicha B. & S., Foss Gill, Bishopdale (65), Aug., 1922, C.A.C. & W.H.B. ; How Stean Beck, Nidderdale (64), June, 1923, W.H.B.

S. paucifolia Carruth., Wolds (54), G.H.A.

S. recurvata B. & S., Sutton Bank (62), May, 1923, C.A.C. & W.H.B. "One packet contains a good deal of *Weisia crispata*," G.B.S.

Saelania caesia Lindb., Bourg d'Arnel, nr. St. Christophe France, Aug., 1923, P.W.M.R.

Ceratodon chloropus Brid., Bouches-du-Rhône, France, Jan., 1921, Dr. Gabriel, com. J.C. "An interesting species which may be looked for on our south-western coast. The immature capsules with the specimen are those of *Barbula convoluta* Hedw.," W.E.N.

Rhabdoweisia fugax B. & S., Llanfrothen (48). April, 1921, D.A.J.

Cynodontium Bruntoni B. & S., Brendon Hills (5), Sept., 1923, A. Wyndham ; Vendée, Jan., 1923, J.C.

C. polycarpum Schimp., Hoy (111*), June, 1922, L.B.C.T.

C. jenneri Stirton (*C. laxirete* Grebe), Glen Lochay (88), July, 1923, H.H.K.

Dicranoweisia cirrata Lindb., Crunwere, Jan., 1924, R.J.

Campylopus subulatus Schimp., Pistyll-y-Cain (48), Aug., 1920, J.B.D.

C. pyriformis Brid. var. *Mülleri* Jur., Great Doward (36*), Aug., 1923, E.A.

C. Shawii Wils., nr. Tarbert, Harris (110), W. West, com. D.A.J.

C. introflexus Brid., Lamorna (1), Mar., 1922, L.H.P. ; Minffordd (48), Aug., 1921, D.A.J. ; Forêt de Vauvant, Vendée, France, Mar., 1919, J.C.

C. brevipilus B. & S., Beaulieu Heath (11), July, 1923, P.W.M.R. ; Hoy (111), June, 1922, L.B.C.T. ; Sliswood (I. 28*), May, 1914, W.N.T. ; var. *compactus* Cardot et Van den Broeck, Calmpthout, Belgium, Feb., 1885, H.v.B. & Jules Cardot.

Campylopus? Chobham Common (17), April, 1923, A.S. ; "Is *C. brevipilus*," G.B.S.

Dicranum fulvellum Smith, Coire an Lochain, Braeriach (96), Aug., 1923, D.B.B.

D. fatcatum Hedw., Ben More (88), Aug., 1903, J.B.D. & D.A.J. ; summit of Ben Nevis (97), Aug., 1921, D.B.B.

D. schisti Lindb., Glen Callater (92), 1869, G. E. Hunt, com. H.B.

D. Starkei Web. & Mohr, Ben Mac Dhui (92), July, 1910, E.A.R.

D. molle Wils., Braeriach, at 3250 ft. (96), June, 1911, A.W.

D. undulatum Ehrh., Round Pond, Bristol, U.S.A., Aug., 1923, E.B.C.

D. spurium Hedw., Skipwith Common (61), Sept., 1923, W.B.

D. Bonjeani De Not. var. *rugifolium* Bosw., Skipwith Common (61), Oct., 1914, H.S.; and Jan., 1922, W.B.

D. scoparium Hedw. var. *spadiceum* Boul., Berwig (50), D.A.J. & E.A.R., July, 1914; Gormire (62), June, 1923, W.H.B.; Hoy (111), June, 1922, L.B.C.T.

D. fuscescens Turn., Hatcliffe (54), April, 1919, G.H.A. "This is *D. montanum*. The appearance of the stems when dry is owing to the strongly crisped leaves, very different from that in *D. fuscescens*. The fact of this plant growing on wood also suggests *D. montanum*," G.B.S. A new record for V.C. 54—Ed.

D. fuscescens Turn. var. *fulcifolium* Braithw., Crianlarich (88), July, 1912, E.A.R.; var. *congestum* Husnot, Loen, Norway, July, 1923, L.B.C.T.

D. Scottianum Turn., c.fr., nr. Harlech (48), Dec., 1920, D.A.J. & P.G.M.R.; Correll Glen (I. 33), July, 1907, W.N.T.

D. fulvum Hook., on boulder in moist wood, Round Pond, Bristol, U.S.A., Aug., 1922, E.B.C.

D. elongatum Schleich., Pointe Tounot, Valais, Switzerland, June, 1914, P.G.M.R.

D. strictum Schleich., nr. Abbots Bromley (59), Apr., 1923, P.W.M.R.; Zinal, Valais, Switzerland, July, 1912, P.G.M.R.

D. montanum Hedw., Bremgarten, Berne, Switzerland, Feb., 1916, G.B.S. com. L.H.P.; Vendée, March, 1923, J.C.

D. uncinatum C.M., Slievemore, Achill (I. 27), April, 1919, W.N.T.

D. asperulum Mitt., Cuilcagh Mountain (I. 27), April, 1910, W.N.T.

D. longifolium Ehrh., Nordfjord, Norway, June, 1923, L.B.T.; Schaffhausen, Swiss Frontier, Sir Benj. Stone, Aug., 1887, com. P.G.M.R. "I should refer this plant to *Dicranodontium longiroste*. The leaves are flexuose and less inclined to be circinate than is usual in *D. longifolium*; also the auricles are large and inflated and distinctly wider than the leaf-base,"

G.B.S.

Fissidens exilis Hedw., Waterlooville (11*), April, 1923, A.G.Y. ; Bosbury (36), Dec., 1922, L.B.C.T. ; Little Coates (54*), Jan., 1920, G.H.A.

F. impar Mitt., Vendée, France, Apr., 1923, J.C. "I think that this is *F. viridulus* Wahl. The leaves quite agree with that species in structure, apex, border, etc., and the dorsal lamina in the upper leaves reaches the base. I cannot find any axillary male flowers," G.B.S. "*F. viridulus* Wahl. has signified for a century many synonyms (*F. impar*, *F. incurvus*, *F. Holzingeri* . . .), so that the referee and I are in absolute agreement in regarding the Vendée plant as *F. viridulus* Wahl." J.C. *in litt.*, May 8th, 1924.

F. incurvus Starke, Bosbury (36), Dec., 1921, L.B.C.T. ; Vendée, Feb., 1923, J.C.

F. Mouguillonii Ehrh., Puy-de-Serre, Vendée, Oct., 1923, J.C.

F. Curnowii Mitt., Mousehole (1), May, 1922, L.H.P.

F. polyphyllus Wils., Trevaylor (1), Dec., 1922, L.H.P.

F. decipiens De Not., Mickleham (17), Dec., 1923, E. Wallace, com. A.G.Y. ; La Châtaigneraie, Vendée, Jan., 1923, J.C.

Grimmia apocarpa Hedw. var. *alpicola* Hook. & Tayl., boulders by the Tweed, Norham (68*), Dec., 1923, J.B.D., var. *rivularis* Web. & Mohr, Grisedale (69), Apr., 1923, W.B.

G. maritima Turn., Port Erin (71), July, 1920, D.B.B.

G. anodon B. & S., La Gérondie, Valais, Switzerland, June, 1914, P.G.M.R.

G. crinita Brid., Vendée, March, 1923, J.C.

G. incurva Schwaeg., Clee Hills (40), Sept., 1920, J.B.D.

G. funalis Schimp., Ben Lawers (88), July, 1922, A.J.D.

G. torquata Hornsch., Cader Idris (48), Aug., 1922, D.B.B.

G. Lisae var. *submutica* Boul., Vendée, Oct., 1922, J.C.

G. Stirtoni Schimp., North Hill, Malvern (37), June, 1923, C.H.B.

G. decipiens Lindb., Hirynys, near Llanfrothen (48), Aug., 1915, W.W. ; Vendée, Oct., 1922, J.C.

G. elatior B. & S., Ayer, Valais, Switzerland, June, 1914, P.G.M.R.

G. Hartmani Schimp., Torrent Walk, Dolgelley (48), Aug., 1920, J.B.D.

G. Doniana Sm., Worcestershire Beacon (37*), Aug., 1920,

G.H.B.

G. arenaria Hampe, Bont Ddu (48), April, 1923, D.A.J.

G. montana B. & S., c.fr., Burway Hill, Church Stretton (40), April, 1923, C.H.B.

G. leucophaea Grev., Vendée, March, 1923, J.C.

Rhacomitrium aciculare Brid., Grisedale (69), April, 1923, W.B. ; Vendée, May, 1914, J.C.

R. protensum Braun, Ben Mac Dhui (92), Aug., 1923, D.B.B. "This is certainly *R. canescens* with the hair points completely wanting. The growth with very numerous short branchlets is quite different from that of *R. protensum*, and, also, the ovate-acuminate spreading leaves, and strongly papillose cells are typical of *R. canescens*," G.B.S.

R. heterostichum Brid. var. *gracilescens* B. & S., Great End (70), June, 1920, L.B.C.T. ; Ben Ledi (87), July, 1922, A.J.D. ; Slemish Mountain (I. 39*), June, 1923, W.R.M. ; var. *alopecurum* Hüon., Burway Hill, Church Stretton (40), Nov., 1912, P.G.M.R.

R. sudeticum B. & S., Honister (70), May, 1921, and Loen, Norway, July, 1923, L.B.T.C.

R. canescens Brid. var. *ericoides* B. & S., Larig Ghru (96), Aug., 1923, D.B.B.

Hedwigia ciliata Ehrh. var. *striata* Wils., Harlech (48), March, 1921, D.A.J.

H. imberbis Spruce, c. fr., Tremadoc (49), Jan., 1921, D.A.J.

Acaulon triquetrum C.M., Downs near Freshwater Bay (10), Dec., 1923, J.G. ; near Brighton (14), Dec., 1923, J.L.O'L. "(15 specimens). Three of these specimens are correct, but the remaining twelve consist of an admixture of various species, in which *Pottia recta* Mitt. is perhaps the most frequent constituent," W.E.N.

A. triquetrum C.M., Salonika, Macedonia, Jan., 1917, J.C.

Phascum mitraeforme Wolf., Mervent, Vendée, Feb., 1923, J.C. "This species is very close to *P. cuspidatum* Schreb., but the upper cells in the leaves are somewhat papillose and the seta is bent into an S shape. It has been recognised in various parts of the continent and it is possible that we have similar plants in this country," W.E.N.

Pottia recta Mitt., near Freshwater Bay (10), Jan., 1924, J.G. ; Hatchliffe (54), April, 1911, G.H.A. ; Vendée, Feb., 1923, J.C.

P. recta Mitt., near Brighton (14), Dec., 1923, J.L.O'L.
 "Three of the twelve specimens are correct, but the remaining nine contain other species, mostly *P. minutula* Fürnr. or *P. commutata* Limpr." W.E.N.

P. Heimii Fürnr. Cleethorpes (54), April, 1910, G.H.A.

P. intermedia Fürnr., Marele Hill (36), March, 1922, L.B.C.T.

P. crinata Wils., Newlyn Cliffs (1), April, 1922, L.H.P.

P. viridifolia Mitt., Penzance (1), March, 1922, L.H.P.

P. Wilsoni B. & S., Mervent, France, Feb., 1923, J.C.

P. minutula Fürnr., Marele Hill (36), March, 1923, L.B.T.C.;
 nr. the Humberstone shore (54), Oct., 1923, G.H.A.

P. lanceolata C.M., Swallow (54), March, 1920, G.H.A.;
 La Châtaigneraie, April, 1923, J.C.

Desmatodon Guepini B.E., Salonika, Macedonia, March, 1917, J.C. "A difficult species very closely allied to our *Pottia lanceolata* C.M. The characters mostly relied on in the Bry. Eur. are slight differences in the operculum and peristome. The leaves of *D. Guepini* appear to me to be more papillose and obscure than those of the *Pottia*, but I gather from Mr. Dixon that this character is unreliable. No doubt M. Charrier's plant is that recognised on the continent," W.E.N.

Tortula pusilla Mitt., on the Downs, Freshwater Bay (10), Dec., 1923, J.G.; Scremerston (68*), Nov., 1913, J.B.D.

T. ambigua Angstr., Newlyn (1), May, 1922, L.H.B.; Little Billing (32), April, 1918, P.G.M.R.; Vendée, Oct., 1922, J.C.

T. aloides De Not., nr. Williton (5*), Dec., 1923, A. Wyndham.

T. cernua Lindb., Aberford, Nov., 1923. C.A.C., com. W.H.B.

T. atrovirens Lindb., Harlech (48), Oct., 1923, D.A.J.; sea banks near Berwick (68), Oct., 1923, J.B.D.

T. luneifolia Roth, Mervent, Vendée, Feb., 1923, J.C.

T. Vahliaana Wils., Cleethorpes (54), G.H.A.

T. canescens Mont., Le Marillet, Vendée, March, 1923, J.C.

T. subulata Hedw., var. *subinermis* Wils., on willows by the Wye, Sellack (36), Aug., 1923, E.A.

T. mutica Lindb., Morden Avenue (20), June, 1923, C.A.C.;
 nr. Watford (20), May, 1923, A.S.; Little Cotes (54), G.H.A.

T. laevipila Schwaeg., nr. Falmouth (1), June, 1922, L.H.P.

T. intermedia Berk., Buxton (57), Aug., 1923, C. A. Cooper;

Eastnor (36), May, 1923, L.B.C.T. ; Vendée, April, 1921, J.C.

T. ruraliformis Dixon, c. fr., Harlech Sandhills (48), March, 1917, D.A.J. ; Humberstone (54), G.H.A.

T. princeps De Not., Moel Hebog (49), Aug., 1919 D.A.J. ; Binevenagh Mountain (I. 40), July, 1923, W.R.M. "The marked comal tufts are peculiar, but they appear to have female flowers only and Mr. Dixon agrees with me in referring the plant to a form of *T. ruralis* Ehrh," W.E.N.

T. papillosa Wils., Sheddeltorpe (54), May, 1912, G.H.A.

Tortella caespitosa Limpr., Bouches-du-Rhône, France, March, 1923, Dr. Gabriel, com. J.C.

Barbula lurida Lindb., Goodmanham (61), April, 1920, H.S.; Vendée, Feb., 1923, J.C. ; also Linton Lock (62), Oct., 1918, H.S., "This plant is *Leskea polycarpa* Ehrh. At least in five of the specimens this plant very largely predominates. The other three contain a form of *B. lurida*, W.E.N.

B. cordata Dixon, Montorge, Sion, Switzerland, May, 1920, P.G.M.R.

B. rubella Mitt. var. *dentata* Schimp., Loen, Norway, June, 1923, L.B.C.T.

B. tophacea Mitt., cliff near Watchet (5), Dec., 1923, A. Wyndham. ; Stromness (111), June, 1922, L.B.C.T.

B. fallax Hedw., Waltham (54), Jan., 1909, G.H.A. ; var. *brevifolia* Schultz, via Gellia (57), Aug., 1923, L.H.P.

B. recurvifolia Schimp.? var. *robusta* Braithw. (or approaching it) nr. Glen Maye (71), July, 1903, H.B. "Good *B. recurvifolia* but I should say that it falls a good deal short of the var. *robusta*," W.E.N.

B. membranifolia Hook., L'Hermenault, Vendée, Dec., 1923, J.C.

B. spadicea Mitt., Enniskillen (I. 33), Feb., 1920, W.N.T.

B. Nicholsoni Culman, by the Whiteadder nr. Paxton (81), and by the Tweed, Twizel (68), Nov., 1923, J.B.D.

B. cylindrica Schimp., Patterdale (69), April, 1923, W.B. ; Mervent, France, Feb., 1923, J.C.

B. sinuosa Braithw., Loseley, Guilford (17), Sept., 1923, H.C.M. ; Vendée, April, 1923, J.C.

B. Hornschuchiana Schultz., Deux-Sèvres, France, Feb., 1922, J.C.

Leptodontium flexifolium Hampe, Williton (5*), May,

1923, A. Wyndham.

Weisia crispa Mitt., Woldnewton (54*), G.H.A.

W. calcarea C.M., Miller's Dale (57), Aug., 1923, W.N.T. ; also, sent by L.H.P.

W. curvirostris C.M. var. *commutata* Dixon, Nant y Ffrith, nr. Wrexham (50), D.A.J.

W. verticillata Brid, Salonika, Dec., 1917, J.C.

Trichostomum crispulum Bruch, Vendée, May, 1921, J.C. ; var. *brevifolium* B. & S., Berwig, nr. Wrexham (50), Aug., 1923, D.A.J.

T. mutabile Bruch, Spanish Head (71), July, 1903, H.B. ; var. *cophocarpum* Schimp., Berwig (50), Aug., 1923, D.A.J. ; also, Grassington (64), Nov., 1923, W.H.B.

T. tenuirostre Lindb., Bewdley (37), Oct., 1904, J.B.D. ; Pavey Ark (69), May, 1921, L.B.C.T. ; var. *Holtii* Braithw., Dulverton (5), Dec., 1918, W.W.

T. hibernicum Dixon, Cromaglowm (I. 2), Aug., 1911, J.B.D. & D.A.J.

T. flavovirens Bruch, Land's End (1), Oct., 1921, L.H.P. ; Tetney (54), May, 1912, G.H.A.

T. nitidum Schimp., Anstey's Cove (3), June, 1922, L.H.P.

T. tortuosum Dixon var. *fragilifolium* Dixon, Via Gellia (57), Aug., 1923, E.A. ; Dwarfie Hamars (111), June, 1922, L.B.C.T.

Pleurochaeta squarrosa Lindb., Braunton Burrows (4), June, 1922, L.H.P. ; St. Hilaire de Vaust, France, March, 1923, J.C.

Didymodon giganteus Funck, Klus nr. Kandersteg, Switzerland, July, 1923, P.G.M.R.

D. ruber Jur., ascent from Kandersteg to Gemmi, Switzerland, July, 1923, P.G.M.R.

Cinclidotus Brebissoni Husnot, Burford Bridge (17), Dec., 1922, A.S. ; Linton Lock (62), June, 1920, H.S. "This plant, a fair proportion of which is in fruit, is *C. fontinaloides* P. Beauv. The long stems and the immersed capsules are altogether different from those of *C. Brebissoni*," W.E.N.

C. fontinaloides P. Beauv. forma., on mill wheel, Stanford Bridge (37), March, 1915, C.H.B. ; Vendée, April, 1921, J.C.

Encalypta commutata Nees & Hornsch., Cam Creag nr. Killin (88), July, 1923, H.H.K.

E. vulgaris Hedw., Box Hill (17), Feb., 1923, C. A. Cooper. "This is *E. streptocarpa* Hedw. It is considerably more robust

than *E. vulgaris* and has the nerve of the leaves scabrid on the back towards the apex," W.E.N.

E. streptocarpa Hedw., Mickleham (17), Feb., 1923, A.S.

Anoetangium compactum Schwaeg., Ben Lawers (88), July, 1922, A.J.D.; Coombe St. Nicholas (5*), Dec., 1923, W.W.; Borrowdale (70), June, 1920, L.B.C.T. "This plant is *Trichostomum tortuosum* Dixon," W.E.N.

Ulotia Ludwigi Brid., Killin (88), Aug., 1909, J.B.D. & D.A.J.; nr. Fort William (97), July, 1923, H.H.K.; Loch Tulla (98), Aug., 1913, D.A.J.

U. Bruchii Hornsch., Hampton Loade (40), June, 1922, A.J.D.; Penzance (1), Mar., 1922, L.H.P.

U. calvescens Schimp., on hazels near Fort William (97), W.E.N. & H.H.K.

U. phyllantha Brid., nr. Penzance (1), March, 1922, L.H.P.; Sheddlethorpe (54*), May, 1912, G.H.A.

U. Hutchinsiae Hamm., nr. Dolgelley (48), Aug., 1922, D.B.B.; also, from R.J.

Orthotrichum rupestre Schleich., Dunmail Raise (70), May, 1921, L.B.C.T. "This is *O. anomalum* Hedw. var. *saxatile* Milde. The elongate capsule on a long seta is quite different from that of *O. rupestre*," W.E.N.

O. rupestre Schleich. var. *Sturmi* Juratz., Mervent, Vendée, Feb., 1923, J.C.

O. anomalum Hedw. var. *saxatile* Milde., Lypiatt Park (33), April, 1923, E.A.; Swanage (9), March, 1923, H.W.M.; Torquay (3), Jan., 1920, L.H.P.

O. cupulatum Hoffm. var. *nudum* Braithw., Minera (50), Aug., 1913, D.A.J.

O. leiocarpum B. & S., Crunwre (44), Jan., 1924, R.J. "Is *O. affine* Schrad. The strongly ribbed capsules are very different from those of *O. leiocarpum*," W.E.N.

O. Lyellii Hook. & Tayl., nr. Ide (3), Mar., 1918, W.R.S. com. A.S.

O. affine Schrad., nr. Stroud (33), July, 1923, L.H.P.; Much Marcle (36), Sept., 1922, L.B.C.T.

O. tenellum Bruch, Antigny, France, Feb., 1923, J.C.

O. pulchellum Smith, Irby (54*), Apr., 1915, G.H.A.

Schistostega osmundacea Mohr, in rabbit holes, Williton (5), May, 1923, A. Wyndham.; Rumbles Moor above Keighley (64), Dec., 1915, C.A.C. & W.H.B. com. W.H.B.

Oedipodium Griffithianum Schwaeg., Cautley Spout (65*),

July, 1923, J.A.W. & A.W.

Splachnum vasculosum L., nr. Killin (88), Aug., 1913, J.B.D. & D.A.J.

Tetraplodon annioides. B & S., Hoy (111), June, 1922, L.B.C.T.

T. angustatus B. & S., Loen, Norway, July, 1923, L.B.C.T.

T. Wormskjoldii Lindb., Widdy Bank Fell (66), May, 1918, C.A.C. & W.H.B.

Taylora lingulata Lindb., Meall Tarmachan (88), Aug., Aug., 1913, D.A.J. & J.B.D.

Physcomitrella patens B. & S., Laceby (54*), J. J. Marshall, com. G.H.A.

Funaria fascicularis Schimp., Bouievant, France, Feb., 1923, J.C.

F. ericetorum Dixon, Savenay, France, J.C.

Amblyodon dealbatus P. Beauv., Ainsdale (59), M.W.

Aulacomnium turgidum Schwaeg., Meal na Soane (88), Aug., 1903, J.B.D. ; Krudsho, Norway, July, 1890, Sir Benj. Stone, com. P.G.M.R.

A. androgynum Schwaeg., woods, near Exeter, May, 1923, L.H.P.

Catoscopium nigratum Brid., sandhills, Freshfield (59), Sept., 1923, W.G.T. ; nr. St. Christophe, France, Aug., 1923, P.W.M.R.

Conostomum boreale Swartz, Ben Douran (98), Aug., 1913, J.B.D. & D.A.J.

Bartramia Oederi Swartz, nr. Matlock (57), Aug., 1923, W.G.T. & W.N.T. ; Miller's Dale (57), Aug., 1923, C. A. Cooper.

B. stricta Brid., Salonika, Feb., 1917, J.C.

B. ithyphylla Brid., Ankerdine (37*), C.H.B. ; Hoy (111), June, 1922, L.B.C.T.

B. Halleriana Hedw., nr. St. Christophe, France, 1923, P.W.M.R.

Philonotis rigida Brid., Harlech (48), Sept., 1922, D.A.J.

P. fontana Brid. var. *compacta* Schimp., King's Seat, Killin (88), Aug., 1913, J.B.D.

P. caespitosa Wils., Campbon, Loire-Inférieure, March, 1916, J.C.

P. seriata Mitt., Ben Nevis (97), July, 1912, E.A.R.

Orthodontium gracile Schwaeg. (paroicous), The Strid, nr. Bolton Abbey (64), alt. 400 ft. on gritsone rock, July, 1923, W.H.B.; var. *heterocarpum* Watson (autoicous), Midhope Moor, nr. Penistone

(63), alt. 750-1600 ft. on peat, associated with *Calluna*, *Vaccinium*, *Aira flexuosa*, etc., July, 1923, W.H.B.

Leptobryum pyriforme Wils., Saltfleet (54), Aug., 1923, G.H.A.; greenhouse, Rosetta Manse, Belfast, Dec., 1923, W.R.M.; greenhouse, York, April & May, 1922. "Two gatherings by H. Stansfield. One correct—the other (York, 31:5:22) is apparently *Amblystegium Juratzkanum* improved by greenhouse treatment." J.A.W.

Webera nutans Hedw. var. *caespitosus* Br. Eur., Antwerp, March, 1921, H.v.B. "Yes," J.A.W.; Schooten, Belgium, April, 1921, J.H. "This is all *Bryum pallens* Sw.," J.A.W.

W. annotina Schwaeg., Manton Moor (54), June, 1919, G.H.A. "Near var. *erecta* Correns, but bulbils too few and young for certainty," J.A.W.

W. Ludwigii Schimp. var. *latifolia* Schimp., between Great End and Scawfell Pike (70), April, 1920, L.B.T.

W. commutata Schimp., top of Ben Douran (98), Aug., 1913, J.B.D. & D.A.J.; also, from Cader Idris (48), Aug., 1920.

W. albicans Schimp., Ben Lawers (88), July, 1922, A.J.D.; Vendée, Jan., 1923, J.C.

W. Tozeri Schimp., Newlyn Cliff (1), Apr., 1922, J.B.D.

Bryum filiforme Dicks., Glenariff (I. 39), July, 1923, W.R.N.

B. pendulum Schimp., Lelant (1), Sept., 1921, L.H.P.; Humberstone (54), G.H.A.; Lelant (1), March, 1922, L.H.P. "Belongs to *B. pallens* group. Processes nearly obsolete and it may be a form a subsp. *fallax*, but has longer leaf points," J.A.W.

B. Warneum Bland., Humberstone Shore (54), 1914, G.H.A.

B. arcticum R. Br., Ben Lawers (88), Aug., 1909, H.H.K. and J.B.D.

B. Marratii Wils., Cleethorpes (54*), Nov., 1919, G.H.A.

B. inclinatum Bland., Highgate (21), June, 1923, A.S.; Saltfleet (54*), Aug., 1923, G.H.A.

B. turbinatum Schwaeg. var. *latifolium* B. & S., nr. St. Christophe, France, Aug., 1923, P.W.M.R.

B. binum Schreb., Pixley (36), June, 1921, L.B.C.T.; Mordiford (36), June, 1921, L.B.C.T.; Mordiford (36), June, 1923, C.H.B.

B. intermedium Brid., Holm Hill (54*), 1921, G.H.A.

B. capillare L., Sheddlethorpe (54), G.H.A. "Is *B. inclinatum*. Peristome cladodoid. Synoicous. Spores 24 u," J.A.W.

B. capillare L. var. *torquescens* Husn., Hatcliffe (54), G.H.A.

B. Bonianum Grev., Vouvant, Vendée, Feb., 1923, J.C.

- B. rubens* Mitt., Haugh Wood (36), June, 1923, C.H.B.
- B. artropurpureum* Web. & Mohr, Grimsby Docks (54), G.H.A. ; Salonika, Jan., 1918, J.C.
- B. alpinum* Huds. var. *viride* Husn., Llyn Gafr (48), Aug., 1920, W.N.T. ; var. *angustifolium* Husn., La Châtaigneraie, Vendée, Jan., 1923, J.C.
- B. Mühlenbeckii* B. & S., Glen Dubh, Inchmadamph (108), July, 1921, H.H.K. & W.E.N.
- B. roseum* Schreb., Yeo., nr. Chagford (3), Feb., 1924, L.H.P. ; Mordiford (36), Dec., 1923, C.H.B.
- Mnium affine* Bland., Box Hill (17), Feb., 1923, A.S. ; Vouvant, Vendée, Feb., 1923, J.C. ; var. *elatum* B. & S., Chandler's Whin (62), March, 1920, W.B. ; King's Seat, Killin Aug., 1913, J.B.D. & D.A.J. ; nr. Enniskillen (I. 33), Nov. 1920, W.N.T. ; var. *rugicum* B. & S., Loseley, Guildford (17*), Sept., 1923, H.C.M.
- M. cuspidatum* Hedw., Matlock (57), Aug., 1923, W.B.
- M. undulatum* L., c. fruct., Wallington (67), April, 1835, Sir Walter C. Trevelyan Bart., com. E.A.
- M. orthorrhynchum* B. & S., Clogwyn, Snowdon (49), Aug., 1919, W.W.
- M. riparium* Mitt., Caplar (36), Apr., 1923, W.N.T. ; also, sent by C. A. Cooper.
- M. cinclidoides* Rübn., nr. Killin (88), Aug., 1913, J.B.D. & D.A.J.
- M. subglobosum* B. & S., Hawley Common (12*), Miss E. de V. Hinde, com. H.C.M. ; Moel'r Ogof (49), April, 1923, D.A.J.
- Fontinalis antipyretica* L. f. approaching var. *gigantea* Sull., Gordale (64), Sept., 1920, C.A.C., com. W.H.B. ; var. *laxa* Milde, Malham Cove (64), Sept., 1920, C.A.C., com. W.H.B. ; var. *gracilis* Schimp., Ravensgill Beck (64), Aug., 1920, C.A.C. & W.H.B.
- F. Dixoni* Cardot, Cwm Bychan (48), Aug., 1913, W.W.
- Dichelyma pallescens* B. & S., on stems of *Cephalanthus* in a stagnant pool, Ravensgill Park, N. York, U.S.A., Aug., 1896, D. A. Burnett, com. E.B.C.
- Cryphaea heteromalla* Mohr, nr. Enniskillen (I. 33), Feb., 1921, W.N.T. ; Vendée, March, 1923, J.C.
- Neckera crispa* Hedw., on boxwood from Salonika imported into Liverpool, March, 1923, W.G.T. ; var. *falcata* Boul., Dove-dale (57), Aug., 1923, E.A. ; Clawthorpe Fell (69), Dec., 1923, J.W.H.

N. pumila Hedw. var. *Philippeana* Milde, nr. Dolgelley (48), Aug., 1920, J.B.D.

Homalia trichomanoides B. & S., Horsley (17), Sept., W.R.S. & H.W.M.; Castle Howard (62), April, 1921, H.S. "This is mostly *Diplophyllum ablicans*—no *Homalia* found," J.A.W.

Hookeria laete-virens Hook. & Tayl., Mousehole, Penzance (1), Aug., 1921, L.H.P.; O'Sullivan's Cascade (I. 2), Aug., 1905, J.B.D.

Leucodon sciuroides Schwaeg., c. fruct., La Jandonnière, Vendée, April, 1923, J.C. One packet contained var. *morensis* B. & S.

Pterogonium gracile Swartz c. fruct., Llanbedr (48), Oct., 1920, D.A.J.

Habrodon Notarisii Schimp., Killin (88), July, 1923, W.E.N.

Antrichia curtispindula Brid., Wistman's Wood, Dartmoor (3), Aug., L.H.P.; Vendée, Sept., 1921, J.C.

Myurella julacea B. & S., Cam Creag, Killin (88), Aug., 1907, H.H.K. & J.B.D.; Ben Lawers (88), Aug., 1902, D.A.J.; wet rocks at 700 ft. under Combaz Vert, Valais, Switzerland, July, 1912, P.G.M.R.

Leskea polycarpa Ehrh., Bamford (57), Sept., 1923, W.N.T.

Anomodon longifolius Hartm., Wye Valley (35), April, 1911, J.B.D.

A. viticulosus Hook. & Tayl., Fermoy (I. 5*), June, 1920, D.B.B.; Vendée, March, 1923, J.C.; imported into Liverpool from Salonika on boxwood, March, 1923, W.G.T.

Heterocladium heteropterum B. & S., c. fruct., nr. Prenteg (49), Apr., 1921, D.A.J.

H. dimorphum B. & S., Ben Lawers (88), J.B.D.

Pseudoleskea catenulata B. & S., Mickle Fell (65), Aug., 1901, E. C. Horrell & D.A.J.; Cross Fell (70*), Aug., 1923, A.W.

P. radicata Mitt., Mitt., rocky marsh, 2480 metres, Mont Mort, Grand St. Bernard, Switzerland, June, 1922, P.G.M.R.

Thuidium abietinum B. & S., Whittington (33), April, 1915, W.N.T.

T. Blandovii B. & S., Loen, Nordfjord, Norway, July, 1923, L.B.C.T. "Is *T. delicatulum* Mitt." J.A.W.

T. decipiens De Not., Cam Creag, Killin (88), Oct., 1913, D.A.J.

T. Philiberti Limpr., Antigny, Vendée, Feb., 1923, J.C.

Cylindrothecium concinnum Schimp., Mordiford, nr.

Hereford (36), Dec., 1923, C.H.B. ; Narin (I. 35), Aug., 1918, W.N.T. ; Cezais, Vendée, Feb., 1923, J.C.

Climacium dendroides Web. & Mohr, c. fruct., Deurne, Belgium, Oct., 1916, H.v.B.

Pylaisia polyantha B. & S., Norton Canon (36), Oct., 1920, C.H.B. ; Stockton-on-Teme (37*), C.H.B. ; nr. Welburn Old Mill, Castle Howard (62), Feb., 1921, H.S. ; also, from Stamford Bridge, Strensall and Buttercrambe (62), H.S. "Possibly, the Welburn Mill plants may be this, but their sterility and the absence of inflorescence render it doubtful, and they may be with equal probability, *Hypnum resupinatum*. The Strensall and Buttercrambe Moor plants have some of the leaves denticulate, and I cannot separate these from *Hyp. cupressiforme*, not having found autoicous flowers. Members receiving these packets must carefully examine them," J.A.W.

Orthothecium intricatum B. & S., White Force, Teesdale (65), Aug., 1901, E. C. Horrell & D.A.J.

Camptothecium lutescens B. & S., c. fruct., Woodburn nr. Exeter (3), July, 1923, L.H.P.

C. nitens Schimp., Lochan na Larig (88), April, 1907, J.B.D.

Brachythecium plicatum B. & S., Ben Lawers (88), Aug., 1913, J.B.D. ; Grimentz, Valais, Switzerland, June, 1914, P.G.M.R.

B. glareosum B. & S., nr. Hereford (36), Dec., 1923, c. fruct., C.H.B. ; Abberley Hills, Stourport (37), May, 1913, J.B.D. ; Vendée, Oct., 1922, J.C.

B. albicans B. & S., Humberstone (54), Feb., 1914, G.H.A. ; St. Hilaire-de-Voust, France, March, 1923, J.C.

B. salebrosum B. & S., Preston (34), Dec., 1922, L.B.C.T. ; Fownhope, near Hereford (36), Nov., 1923, C.H.B.

B. rutabulum B. & S., var. *robustum* B. & S., Via Gellia (51), Aug., 1923, D.A.J.

B. glaciale B. & S., Saas-Fée, Switzerland, 1923, P.W.M.R.

B. reflexum B. & S., Lent de Merdosson, Montreaux, Switzerland, July, 1912, P.G.M.R.

B. velutinum B. & S., Stamford Bridge (62), April, 1919, H.S. ; Vendée, Feb., 1923, J.C.

B. populeum B. & S., Crunwere (45), Oct., 1923, R.J. ; Barriedale, Hoy (111), June, 1922, L.B.C.T.

E. crassinervium B. & S., Box Hill (17), Feb., 1923, C. A. Cooper ; Mordiford, nr. Hereford (36), c. fruct., Dec., 1923

C.H.B. ; Castleton (57), Aug., 1923, W.B. ; Ayton (81*), Nov., 1923, J.B.D. ; Vendée, May, 1920, J.C.

E. speciosum Schimp., nr. Mousehole (1), April, 1922, J.B.D.; Crunwere (44), Jan., 1924, R.J. ; nr. Preston (60), July, 1901, H.B.

E. praelongum Hook. var. *Stokesii* Brid., Fowey (2), 1920, D.B., com. L.H.P. ; var. *rigidum* Boul., La Jandonnière, Vendée, April, 1923, J.C. "Of course this belongs to our *E. Swartzii* Hook. which is regarded by continental bryologists as the *Hypnum praelongum* of Linnaeus. I should consider this hardly extreme enough for the variety, but nearer to typical *E. Swartzii* Hook," J.A.W.

E. Swartzii Hook., Portora, Enniskillen (I. 33*), Nov. 1923, W.N.T.

E. Schleicheri Hartm., Antigny, Vendée, Feb., 1923, J.C. "Yes, and this appears to be the earliest specific name for *E. abbreviatum* Schimp," J.A.W.

E. abbreviatum Schimp., near Crowcombe (5*), April, 1923, W.W. ; Fownhope (36), Nov., 1923, C.H.B. ; Twizel (63), Nov., 1923, J.B.D.

E. pumilum Schimp., near Southpool (3), May, 1909, H.B. ; Vendée, Jan., 1923, J.C.

E. curvisetum Husn., Mordiford (36), Nov., 1923, C.H.B.

E. Teesdalei Schimp., nr. Levens (69), May, 1869, J. M. Barnes, com. H.B.

E. tenellum Milde, Crunwere (44), Jan., 1924, R.J.

E. myosuroides Schimp. var. *rivulare* Holt, Ceunant Llenyrch, Maentwrog (48), May, 1915, D.A.J. & P.G.M.R. ; var. *brachythecioides* Dixon, Slievemore, Achill (I. 27), April, 1919, W.N.T. ; Culcagh Mountain (I.30), June, 1917, W.N.T. ; com. D.A.J.

E. nyurum Dixon, Crunwere (44), Jan., 1924, R.J. ; var. *scabridum* Limpr., on boxwood from Salonika, imported into Liverpool, March, 1923, W.G.T. det. H.N.D.

E. circinatum B. & S., Lelant (1), April, 1922, J.B.D. ; Vendée, Feb., 1923, J.C.

E. meridionale Schimp., Le Castelet, France, March, 1922, Dr. Gabriel, com. J.C.

E. rusciforme Milde var. *alopecuroides* Brid., Post Bridge (3), W.R.S., com. A.S.

E. murale Milde, Crunwere (44), Jan., 1924, R.J. ; Butter-

crambe (62), Nov., 1918, H.S. ; Tadcaster (64), Mar., 1923, W.B.

E. megapolitanum Milde, Silverton (3), G.B.S., com. L.H.P. ; var. *meridionale* Schimp., ravine between Kapandjilar and Hortchiatch, Macedonia, Feb., 1918, J.C.

Sematophyllum demissum Mitt., Tyn-y-groes (48), Aug., 1920, D.A.J.

Plagiothecium depressum Dixon, St. Abb's (81), Aug., 1923, J.B.D. ; Stromness, Orkney (111), June, 1923, L.B.C.T. "Is *P. elegans* Sull." J.A.W.

P. Borrerianum Spruce, Irby (54), April, 1912, G.H.A. "Yes,—*P. elegans* Sull." J.A.W.

P. pulchellum B. & S., Berriedale, Hoy (111), June, 1922, L.B.C.T.

P. silesiacum B. & S., Loen, Norway, July, 1923, L.B.C.T.

P. denticulatum B. & S., var. *aptychus* Spruce, Eastnor (36), Jan., 1923, Mrs. Trotter.

P. silvaticum B. & S., Coleford (34), March, 1923, L.B.C.T. ; Slemish Mountain (I. 39), June, 1923, W.R.M. ; Vendée, Feb., 1923, J.C.

P. undulatum B. & S. c. fruct., Brendon Hills (5), Sept., 1923, A. Wyndham

P. latebricola B. & S., Bradley Wood (54), Nov., 1919, G.H.A.

Amblystegium Sprucei B. & S., ascent from Kandersteg to Gemmi, Switzerland, at 1300 metres, July, 1923, P.G.M.R.

A. compactum Aust., Dovedale (57), Sept., 1912, W.E.N., rocks nr. the Till, Twizel (68), Nov., 1923, J.B.D.

A. Juratzkanum Schimp., Fowey (2), Feb., 1922, D.B. ; Bilham (63), April, 1923, L.H.P. ; sandstone cliffs nr. Berwick, (68), Jan., 1924, J.B.D.

A. varium Lindb., Crambe Beck (62), Feb., 1921, H.S.

A. filicinum De Not., Portora (I. 33), June, 1921, W.N.T. ; & D.B.B. ; Vouvant, France, Feb., 1923, J.C.

Hypnum riparium L., Waterlooville (11), April, 1923, A.G.Y. ; var. *longifolium* Schimp., Mitcham Common (17), June, 1923, D.G.C. "Has not the sub-bifarious and complanate leaves and irregular branching of Schimper's plant. I should call it *Drepanocladus polycarpus* W. var. *intermedius* Schimp. f. *laxa* Schimp. with the leaves less markedly secund above than usual," J.A.W.

H. polygamum Schimp., nr. Enniskillen (I. 33), Feb., 1920,

W.N.T. ; var. *stagnatum* Wils., Naburn (61), June, 1920, H.S. ; var. *fallaciosum* Milde, Hoboken, nr. Antwerp, Sept., 1913, H.v.B. "I agree ; but Juratzka's name was not published until 1861 and was placed under *H. polygamum* by Milde in 1869, (Bryol. Siles. p. 346), so that var. *stagnatum* Wils. (Bryol. Brit. 1855) appears to be the correct citation." J.A.W.

H. chrysophyllum Brid., Jackdaw Quarry, Tadcaster (64), Feb., 1917, H.S. ; Vendée, Feb., J.C.

H. hispidulum Brid. var. *Sommerfeltii* Myr., nr. Castle Howard (62), July, 1907, H.B.

H. Halleri Linn fil., in sylvis subalpinis Carpathorum Centralium, 1865, leg. Kalchbranner, com. H.B.

H. aduncum Hedw., forma ? Mitcham (17), April, 1923, J.L.O'L. "Is *Drepanocladus polycarpus* W. var. *intermedius* Schimp. f. *laxa* Schimp. with a fluitant form of *Acrocladium cuspidatum* Lindb., the latter in some packets dominant," J.A.W.

H. aduncum Hedw. var. *intermedium* Schimp. f. *penna* Sanio, Ranst, Belgium, Aug., 1923, H.v.B., J.H. & M. de Decker. "Yes, *Drep. polycarpus* W. var. *intermedium* Schimp. f. *penna* Sanio, in a lax submerged state," J.A.W. ; var. *paternum* Sanio, Streedagh sandhills (I. 28), April, 1918, W.N.T.

Drepanocladus polycarpus W. var. *intermedius* Schimp. f. *laxa* Schimp., Crunwere (45), Nov., 1923, R.J. ; var. *pseudosendtneri* Ren. & Loeske, sand-dunes, Braunton (4), June, 1914, W.W.

H. lycopodioides Schwaeg., Grimscoote Downs (38), Nov., 1921, J.B.D. ; Skipwith Common (61), Sept., 1923, W.B. "Yes, *Drep. lycopodioides*, but largely diluted with *Linprichtia revolvens*, very similar in colour. I have separated the material into 16 packets of the former and 4 of the latter. This last approaches my f. *attenuata*," J.A.W.

H. fluitans L., var. *falcatum* Schimp., Thurstaston Common (58), May, 1923, W.G.T. "Yes, *Warnstorfia fluitans* Loeske var. *falcata* Schimp. f. *submersa* Moenken," J.A.W.

Warnstorfia fluitans (Dill.) Loeske var. *gracile* Boul. f. *abbreviata* Ren., Greygarth Fell at 2000 ft. (60), June, 1904, J.A.W. & A.W.

W. exannulata (Gümb.) Loeske var. *pinnata* Boul. f. *gracilescens* Ren., Dovrefjeld, Norway, July, 1888, P. Ewing, com. H.B.

H. vernicosum ? Cader Idris Aug., 1920, R.J. ; "A delicate form of *Linprichtia vernicosa* Loeske (female plants) with

slightly plicate leaves, and habit of *L. intermedia*, but the stem section of the former," J.A.W.

Hypnum intermedium Lindb., Cardigan (46), July, 1917, R.J. com. L.H.P. "Yes, *Limprichtia intermedia* Loeske," J.A.W.

H. comutatum Hedw., Dovedale (57), Apr., 1923, P.W.M.R.

H. falcatum Brid., banks of R. Dodder (I. 21), Jan., 1924, D.B.B. ; Cavarnie, Spain, July, 1920, G. Durand, com. J.C. ; var. *virescens* Schimp., Austwick Beck (64), Oct., 1923, C.A.C. com. W.H.B.

H. cupressiforme L. var. *minus* Wils., Stoke Wood, Exeter (3), W.R.S. com. A.S. ; var. *filiforme* Brid., Lodore (70), June 1911, E.A.R.

H. imponens Hedw., Strensall Common (62), G. Webster, com. H.B. ; Zundert, Belgium, May, 1889, H.v.B.

H. hamulosum B. & S., Moel'r-Ogof (49), April, 1923, D.A.J. ; Ben Lawers (88), July, 1910, J. C. Bond, com. H.B. ; Creag-an-Lochain (83), July, 1923, H.H.K. ; Loen, Norway, July, 1923, L.B.C.T.

H. callichroun Brid., Borrowdale (70), July, 1921, L.B.C.T. ; Bracklinn Falls, Callander (87), July, 1897, H.N.D.

H. procerrimum Mol., nr. St. Christophe, France, Aug., 1923, P.W.M.R.

H. molluscum Hedw. var. *fastigiatum* Bosw., Miller's Dale (57), Aug., 1899, H.N.D. ; var. *condensatum* Schimp., Ben Lawers (88), Aug., 1922, D.A.J. ; Ben Narain (98), July, 1898, H.N.D.

H. crista castrensis L. c. fruct., Loch Assynt, Inchnadamph (108), July, 1899, H.N.D.

H. molle Dicks., Red Burn, Ben Nevis (83), alt. 3500 ft. (97), July, 1893, H.N.D., and Aug., 1909, D.A.J.

H. arcticum Sommerf., Ben Lawers (88), Aug., 1887, L.H.P. ; Ben Chalum at 3000 ft., (88), July, 1898, H.N.D.

H. eugyrium Schimp., Barrow Falls (70), Aug., 1895, H.N.D. ; var. *Mackayi* Schimp., Tyndrum (68), July, H.N.D.

H. scorpioides L. var. *julaceum* Sanio, between Turnhout and Raevens, Belgium, Aug., 1888, H.v.B. "Yes, f. *flavovirens* mihi," J.A.W.

H. trifarium Web. & Mohr, Allt Dubh Ghalair (88), July, 1905, J.A.W. & A.W. ; Meall Chuirn at 2400 ft. (88), July, 1912, A.W. ; summit of Ben Douran (98), July, 1898, C.H.B. & H.N.D.

H. turgescens Schimp., Ben Lawers (88), July, 1902, C.H.B.

& H.N.D. ; also, Aug., 1909, J.B.D.

H. cordifolium Hedw., Mitcham Common (17), April, 1923, J.L.O'L. ; Laughton Moor (54), June, 1911, G.H.A. ; Vendée, 1921, J.C.

H. giganteum Schimp., Mitcham (17), April, 1923, J.L.O'L. ; Holm Hill, Grimsby (54), 1912, G.H.A.

H. sarmmentosum Wahl., Loen, Norway, July, 1923, L.B.C.T. ; Glas Bheinn, Inchnadamph (108), July, 1899, c. fruct., H.N.D.

H. Schreberi Wahl., c. fruct., Mordiford (36), Dec., 1923, C.H.B.

Hylocomium splendens B. & S. var. *gracilius* Boul., Mochras (48), Jan., 1921, D.A.J.

H. pyrenaicum Lindb., Ben Lawers (88), July, 1899, H.N.D. ; near St. Christophe, France, Aug., 1923, P.W.M.R. ; Grimentz, Valais, June, 1914, P.G.M.R. ; Loen, Norway, July, 1913, L.B.C.T.

H. brevirostre B. & S., Lodore (70), Aug., 1895, H.N.D. ; near Avallon, France, Aug., 1923, P.W.M.R.

H. squarrosum B. & S., c. fruct., Box Hill (17), Feb., 1923, A.S.

H. triquetrum B. & S. c. fruct., near St. Christophe, France, Aug., 1923, P.W.M.R.

H. rugosum De Not., Clawthorpe Fell (69), Dec., 1923, J.W.H. ; Craig Chailleach (88), July, 1893, H.N.D. ; Magilligan sandhills (I. 40), July, 1923, W.R.M. ; Cousin-la-Roche, near Avallon, France, Aug., 1923, P.W.M.R.

Non-European.

Polytrichum sp. ? Witpoortje, Transvaal, Feb., 1923, Bertha G. Mackay, com. A.S. "This is *P. capense* Hampe. The capsule may be either smooth or ribbed," H.N.D.

Dicranum dicarpon Hornsch., Mount Wellington, Tasmania, Dec., 1887, W. A. Weymouth, com. H.B.

Fissidens sp. ? Witpoortje, Transvaal, Feb., 1923, Bertha G. Mackay, com. A.S. "Is *F. glaucescens* Hornsch.," H.N.D.

Tortula sp. ? Witpoortje, Transvaal, Feb., 1923, Bertha G. Mackay, com. A.S. "Is *F. glaucescens* Hornsch.," H.N.D.

Dicranoloma patentifolium Ren. et Card., forest to the S.W. of Tananarsve, Madagascar, 1922, M. Carougeau, com. J.C. "Yes, but I consider this, and *D. scopareolium* (C.M.) and *D. dichotomum* (P. Beauv.) to be simply *D. Billardieri* (Schwaegr.), scarcely to be distinguished from one another even as forms. According to Cardot, *D. patentifolium* differs from *D. scopareolium* only in having the leaves more toothed; but a specimen of the former I have *ex herb.* Cardot has many of the leaves quite entire!" H.N.D.

Mielichhoferia ? Witpoortje, Transvaal, Feb., 1923, Bertha G. Mackay, com. A.S. "Is *M. transvaaliensis* C.M.," H.N.D.

Leucoloma Rehmannii (C.M.) Rehm., on boxwood from Knysna, Cape Colony, imported into Liverpool, Feb., 1920, W.G.T., det. H.N.D.

Papillaria africans (C.M.) Jaeg., on boxwood imported into Liverpool from East London, South Africa, April, 1923, W.G.T.

Rhizogonium spiniforme (L.) Bruch., Warkopiroo, New Zealand, 1895, S. Chadwick, com. H.B.; forest to the S.W. of Tananarive, Madagascar, 1922, M. Carougeau, com. J.C.

R. mnioides Hook. fil. et Wils., Sassafras Gully, Hobart, Tasmania, Oct., 1888, W. A. Weymouth, com. H.B.

Leucobryum isleanum C.M., forest to the S.W. of Tananarive, Madagascar, 1922, M. Carougeau, com. J.C. "Would be

var. *molle* (C.M.) Card., I should say. The nerve is only 'subhomostrosic,' sometimes so nearly 'homostrosic' as to suggest *L. parvulum* Card.," H.N.D.

Pterogonium simlaensis Tayl. MS., on trees, Simla, 1837, Capt. F. Strange, com. H.B. "Is *Cryptoleptodon flexuosus* (Harv.) Renn. & Card. Taylor's name has not been published," H.N.D.

Porotrichum pennaeforme C.M., on boxwood from Knysna, Cape Colony, Feb., 1920, W.G.T., det. H.N.D.

Thuidium aculeoserratum Renn. et Card., forest to the S.W. of Tananarive, Madagascar, 1922, M. Carougeau, com. J.C.

Hepatics.

Sphaerocarpus texanus Aust., Sellack (36), and near Foy (36), March, E.A. "I found *S. Michelii* in one of these packets, the rest seems to be all or nearly all *texanus*. Some of the plants have no mature spores, and it is impossible to name with certainty." H.H.K.

Riccia bifurca Hoffm., Vendée, Mervent, affleurements de granit près Perrure, J.C. "Is *Riccia Lescuriana*. The section of the frond and size of spores agree with this." H.H.K.

R. commutata Jack, field, near Foy (36), Mar. 1923, E.A. det. W.E.N.

R. glauca L., Vendée, in Mervent, Feb., 1923, J.C.—"Is *Riccia sorocarpa*. Fronds with deep narrow furrow, and epidermal cells with thickened walls." H.H.K.

R. nigrella D.C., Vendée, Aubigny, talus, Feb., 1923. J.C.

Tessellina pyramidata Dum., Macedoine, Salonique, collines au-dessus de Toumba, Feb., 1917. J.C.

Corsinia marchantioides Raddi, banks by Lake Maggiore, 216 metres, Brissago, Canton Ticino, Switzerland, Feb., 1923. P.G.M.R.

Targionia hypophylla L., Vendée, Aubigny; talus près les Granges, Feb., 1923. J.C.

Grimaldia fragrans Corda, rocks, between Ascona and Brissago, L. Maggiore, Switzerland, Feb., 1923. P.G.M.R. (No. 1329), det. W.E.N.

G. dichotoma Raddi, Macedoine, Salonique; collines au dessus de la Toumba, Feb., 1917, J.C.; also Vendée, talus près les Granges, Feb., 1923. J.C.

Aneura pinguis (L.) Dum., Burbage, Buxton (57), Aug., 1923. E.A.

A. incurvata (Lindb.) Steph., Mochras, Harlech (48), Jan., 1921. D.A.J.

A. sinuata Dum., Dunge Brook, nr. Hathersage (57), Sept., 1923. W.N.T.

Metzgeria furcata (L.) Dum., Vendée, Rochetretoux; sur un arbre, Mar., 1923, T.C.; var. *fruticulosa* (Dicks.), Lindb., tree trunks, Trelawne near Looe, East Cornwall (2), March, 1923. F.R.

M. conjugata Lindb., Lodore Falls, Keswick (70), Sept. 1907, leg. H.B.; Killin (88), Aug. 1913, J.B.D.; Vendée, various localities, J.C.

M. hamata Lindb., Killarney (I. 2), Aug. 1906. J.B.D.

M. pubescens (Schränk) Raddi, Nant y Ffrith (50), August, 1912, J.B.D.

Mærckia Flotowiana (Nees) Schiffn., Mochras, Harlech (48), Oct., 1923, D.A.J.

Pellia Fabbroniana Raddi, var *lorea* Nees, rills on Cefn Hill (36), Sept., 1922, E.A.; wet rocks, Harlech (48), Sept., 1913, leg. D.A.J., E. Cleminshaw, and P.G.M.R., com. P.G.M.R.

Petalophyllum Ralfsii (Wils.) Gottsche, Mochras, Harlech (48), Oct., 1923, D.A.J.

Fossombronia Dumortieri Lindb., Sol tourbeux, Calmpthout Belgium, Oct. 1910, H.V.

Gymnomitrium concinnatum (Lightf.) Corda, Ben Lawers (88), Aug., 1909, J.B.D.

G. corallioides Nees, Ben Lawers (88), Aug., 1909, J.B.D.; Ben McDhui (92), leg. G. Stabler, July 1884, com. H.B.

Marsupella condensata (Angstr.) Kaal., Ben Lawers (88), July, 1923, H.H.K.

M. apiculata Schiffn., with *Gymnomitrium concinnatum* etc., summit of Ben Nevis (97), July, 1923, H.H.K.

M. Stableri Spruce, Cader Idris (48), Aug., 1922, D.A.J.

M. emarginata (Ehrh.) Dum., Vendée, Borneau talus de bois, Feb., 1923, J.C.

M. Pearsoni Schiffn., rocks in swamp, Moelwyn Bach (48), Sept., 1911, P.G.M.R.; Honister Pass (70), Aug., 1910, J.B.D.

M. aquatica (Lindb.) Schiffn., tarn, Cader Idris (48), W.B., August, 1922. "This is *Madotheca laevigata* (Schr.) Dum., H.H.K.; in stream, circa 2000 ft, Ben Lawers (88), July, 1922, A.J.D. "Correct." H.H.K. Glen Finglas (87), July, 1922, A.J.D. "This is *Frullania Tamarisci*." H.H.K.

M. Jorgensenii Schiffn., sec. D.A.J. and S. M. Macvicar, wet rocks by River Irfon, Abergwesyn (42),* June, 1923, H.H.K.

Southbya nigrella Spr., en mélange, Vendée, Bazayes-en-Parids, talus rocheux calcaire, Avr. 1923, J.C.

Alicularia compressa (Hook.) Nees, Mount Carron, Isle of Man (71), June 1908, H.B.; Raikes Dyke near Holmfirth (63), Nov., 1921, F.E.M.

A. scalaris (Schr.) Corda, sur le sol sablonneux, Cappellen, Belgium, Jan., 1887, H.V.

Eucalyx obovatus (Nees), Breidl., Ben MacDhui (92), Aug., 1923, D.B.B. "A form of *Alicularia compressa* with

spreading leaves," H.H.K.; var. *rivularis* Schiffn., on rocks in stream, Cwm Bychan (48), Aug., 1915, W.W.

E. hyalinus (Lyell) Breidl., ditch, Croesor (48), April, 1915, D.A.J. and P.G.M.R., com. P.G.M.R.

Haplozia cordifolia (Hook.), Dum., Cader Idris, Dolgelley (48), Aug., 1922, W.B.; near Glen Darragh, Isle of Man (71), July, 1903, H.B.

H. riparia (Tayl.), Dum., Beetham (69), July, 1913, H.B. "An aquatic form, var. *rivularis* Bern.," H.H.K.; var. *rivularis* Bern., Reigate Heath (17), Jan., 1904, J.O'L.

H. atrovirens (Schleich.) Dum. var. *sphaerocarpoidea* (De Not.) Massal., Millersdale (57), Aug., 1913, J.B.D.; molasse, Bois de Grandfly, Fribourg, Switzerland, April, 1923, P.G.M.R.

Anastrophyllum Donianum (Hook.) Steph., Coire nam Feusgan, Glen Nevis (97), July, 1923, H.H.K.; Ben Dourain (98), Aug., 1923, J.B.D.; Ben Fhurain, alt. ca. 1800 ft. (108), July, 1921, W.E.N.

Gymnocolea inflata (Huds.) Dum., (as *Lophozia inflata* Howe) Bord d'un fossè, Wetwezel, June, 1909, H.V.; near Hawley Pond, Farnboro' (12), Jan., 1923, H.W.M.; var. *compacta* Nees, Bruyère marécageuse, Westmalle, Belgium, May, 1921, H.V.

Lophozia badensis (Gottsche) Schiffn., damp sand, dunes, Birkdale (59), April, 1898, J.A.W.; hollows in wet gravel hills Freshfield (59), June, 1912, W.G.T.

L. Muelleri (Nees) Dum., Creag an Lochain, Killin (88), Aug., 1913, J.B.D.

L. bantriensis (Hook.) Steph., Killin (88), Aug., 1913, J.B.D. "This is var. *Libertae* (Huben.) of *L. Muelleri*. The involucreal leaves are scarce," H.H.K.; Tyndrum (88), Aug., 1913, J.B.D.; Eagle's Nest, Killarney (I. 2), Aug., 1911, J.B.D.

L. Schultzii (Nees) Schiffn., var. *laxa* Schiffn., Florden Common (27), alt. 80 ft., Oct., 1910, leg. W.H.B.

L. ventricosa (Dicks) Dum., Vendée; Mervent; rochers vers les Cuillères, Feb., 1923, J.C.

L. alpestris (Schleich), Evans, near Penrhyndeudraeth (48) Oct., 1922, D.A.J.

L. excisa (Dicks) Dum. f. *arenaria* (Nees) Schiffn., railway cutting, Harlech (48), Nov., 1920, D.A.J.

L. quinquedentata (Huds.) Cogn., Grass Wood, Grassington (64), Nov., 1923, F.E.M.

L. lycopodioides (Wallr.) Cogn., Killin (88), Aug., 1913

J.B.D.; in mountain wood, St. Luc, Cant. Valais, Switzerland, July, 1921, P.G.M.R.

L. Floerkii (W. & M.) Schiffn., unusual form, among *Sphagnum*, South Barrule, Isle of Man (71), Sept., 1908, J.A.W.; Ben Lawers (88), Aug., 1907, J.B.D.

L. attenuata Mart. Dum., Burnham Beeches (24), 1923, P.W.M.R.; also, Nov., 1923, D.G.C.

L. barbata Schmid. (Dum.), Coniston (69), Aug., 1921, W.N.T.

L. quadriloba (Lindb.) Evans, King's Seat (88), Aug., 1909, J.B.D.; Cam Creag near Killin (88), July, 1923, H.H.K.; Creag-an-Lochain (88), July, 1923, H.H.K. and W.E.N.

Sphenolobus politus (Nees) Steph., Killin (88), Aug., 1912, J.B.D.

S. exsectiformis (Breidl.) Steph., Bolton Woods (64), Jan., 1921, F.E.M.

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

Anastrepta orcadensis (Hook.) Schiffn., Killin (88), Aug. 1913, J.B.D.

Plagiochila asplenoides (L.) Dum., Vendée, Bourneau, Feb., 1923, J.C.; var. *minor* Lindenb., Dovedale (57),* Aug., 1923, E.A.; Snaefell, Isle of Man (71), July, 1902, H.B.; var. *major* Nees, Grass Wood, Grassington (64), Nov., 1923, F.E.M.; vertical wall face, Patterdale (69), Apr., 1923, W.B.; f. *subintegerrima*, brookside under Cefn Hill (36), Sept., 1922, E.A.

P. spinulosa (Dicks.), Dum. c. per., Llanfrothen (48), Oct., 1922, D.A.J.; Vendée: La Châtaigneraie: rochers, Jan., 1923, J.C.

P. punctata Tayl., Cwm Bychan (48), Aug., (1921), D.B.B.; Tyndrum (88), Aug., 1913, J.B.D.

Pedinophyllum interruptum (Nees), Pearson, molasse, Grabenholz, Dürdingen, Fribourg, Nov., 1920, P.G.M.R.

Leptoseyphus Taylori (Hook) Mitt., Coire an Lochain Braeriach (96), Aug., 1923, D.B.B.

L. anomalus (Hook) Mitt., fossé dans une sapinière, Calmpthout, Belgium, Oct., 1910, H.V.

L. cuneifolius (Hook) Mitt. (*Clasmatocolea cuneifolia* Spruce), Killarney (I. 2), Aug., 1906, J.B.D.; rocks near Crinagh River (I. 2), Aug., 1906, D.A.J.

Lophocola alata Mitt. c. per., on heap of flints, Linnington 5), Feb., 1921, W.W., teste H.H.K. "This is not well-marked

alata. When Dr. Watson sent it to me some time ago, I agreed to this name. Now I should prefer to call it *L. cuspidata*," H.H.K.

Chiloscyphus polyanthus (L.) Corda, Horsley (27), Nov., 1923, H.W.M. "The paler colour, the occasional bilobed leaves of the branches and the larger areolation point to *Chiloscyphus pallescens* (Ehrh.) Dum., to which this plant belongs," D.A.J.; var. *rivularis* (Schrad.) Nees, submerged in a pool, Ardingly Rocks (14), Feb., 1912, W.E.N.; on stones in running water, Kinsale, 1920, D.B.B. "The specimens are not very satisfactory and may belong to the type." D.A.J.

C. pallescens (Ehrh.) Dum., Rainford Junction (59), June, 1913, W.G.T.

Harpanthus Flotowianus Nees, Killin (88), Aug., 1913, J.B.D.

Cephalozia bicuspidata (L.) Dum., Ben Nevis (97), Aug., 1908, J.B.D.

C. connivens (Dicks.) Lindb., Finchampstead Ridges, near Workington (22)*, Oct., 1923, H.H.K.; sur les rochers, Godinne (Namur), Belgium, Sept., 1888, H.V.

C. media Lindb., Reigate Heath, Jan., 1924, J. O'Loughlin, "Is *C. bicuspidata* (L.) Dum.," D.A.J.; var. *pallida* (Spruce) Massal., Ceunant Llenyreh, Maentwrog (48), June, 1913, D.A.J.

C. macrostachya Kaal., Thursley Common, March, 1913, leg. Ll. J. Cocks, com. F.R.

C. leucantha Spruce, Ceunant Llenyreh, Maentwrog (48), June, 1913, D.A.J.

C. Francisci (Hook.) Dum., fossé, Nieuwmoer, Belgium, Aug., 1909, H.V.

C. fluitans (Nees) Spruce, in pool with *Gymnocolea inflata* v. *laxa*, Oakmere (58), Sept., 1916, W.W.

Nowellia curvifolia (Dicks.) Mitt., Cromaglow, Killarney (I. 2), Aug., 1906, J.B.D.

Cephaloziella Starkei Schiff., Vendée and Loire Inférieure, J.C. "I presume this name is synonymous with *C. byssacea* (Roth.) Warnst. It is probably dioicous and should be placed here," D.A.J.

C. Baumgartneri Schiffn., Vendée: Bazayes-en-Parids; talus rocheux calcaire, April, 1923, J.C.

C. Limprichtii Wamst., Vendée, La Châtaigneraie, Côteau à Coquilland, Jan., 1923, J.C.

Dichiton calyculatus (Dur. & Mont.) Schiffn., by Hayle, River near Relubbus (1), April, 1923, leg. W.E.N. & H.H.K.:

Vendée : La Châtaigneraie, Jan., 1923, J.C.

Prionolobus Turneri (Hook.) Schiffa., Deux Lèvres ; Bourneau ; talus de bois, Feb., 1923, J.C.

Hygrobiella laxifolia Hook. (Spruce,) Killin (88), August, 1907, J.B.D.

Pleuroclada albescens (Hook.), Spruce, Ben Nevis (97), Aug., 1909, D.A.J. ; Combe des Morts, 2230 metres, Grand St. Bernard, Canton Valais, Switzerland, July, 1922, P.G.M.R.

Odontochisma Sphagni Dicks. (Dum.), cfr., above Harlech (48), May, 1921, D.A.J. ; marais, "Putsche Moer," Putte, Belgium, July, 1907, H.V.

O. denudatum (Nees) Dum., Llanfrothen (48), April, 1912, D.A.J. ; Haida, Bohemia, April, 1886, leg. A. Schmidt, com. H.B.

Calypogeia Trichomanis L. Corda, Sandy bank, Chulworth Common, Hants, 1923, P.W.M.R.

Bazzania trilobata (L.) Gray, Bolton Woods (64), Dec., 1917, F.E.M. ; rocky woods near Avallon, Yonne, France, 1923, P.W.M.R.

B. tricrenata (Wahl.) Pears., Cwm Bychan, Harlech (48), August, 1922, D.B.B.

B. Pearsoni (Steph.) Pears., Slievemore, Achill (I. 27), April, 1919, W.N.T. "The antical base of the leaf is not greatly arched nor does it cross the stem to any great extent as in *B. Pearsoni*. The underleaf is irregularly three-lobed as in *B. tricrenata* which is the correct name for the plant. Mr Tetley has sent the true *B. Pearsoni* from this locality in former years," D.A.J.

B. Braziliensis Nees, S. Carlo, S. America, 1853, leg. R. Spruce, com. H.B.

Lepidozia pinnata (Hook.) Dum., Mangerton (I. 2), August, 1905, J.B.D. ; Cuilcagh Mt., Co Cavan (30), June, 1917, W.N.T.

L. reptans Dum., Burnham Beeches (24), 1923, P.W.M.R.

L. Pearsoni Spruce, Cwm Bychan (48), April, 1909, J.B.D.

L. sylvatica Evans, Llanfrothen (48), Oct., 1920, D.A.J.

Blepharostoma trichophyllum (L.) Dnm., Whernside (64), June, 1923, F.E.M.

Anthelia julacea (L.) Dum., Hardrigg Beck (70), April, 1921, W.N.T. ; var. *gracilis* Hook., Ben Nevis (97), August, 1908, J.B.D.

A. Juratzkana (Limpr.) Trevis, Coire nam Feusgan, Glen Nevis 97, July, 1923, H.H.K.

Herberta Hutchinsiae Gottsche, Cwm Bychan (48), August, 1922, J.B.D.

H. adunca (Dicks.) Gray, Cam Creag, near Killin (88), July, 1923, H.H.K. ; moist rocks, Upper Falls, Glen Nevis (97), July, 1923, leg. H.H.K. & W.E.N., com. W.E.N.

Ptilidium ciliare (L.) Hampe, Whernside (64), June, 1921, F.E.M.

P. pulcherrimum (Web.) Hampe, Little Coates (54), G.H.A.

Trichocolea tomentella (Ehrh.) Dum., Crunwere (44), Dec., 1923, R.J.

Diplophyllum albicans (L.) Dum., damp sandy bank, in woods by Highland Water, N. Forest (11), July, 1923, P.W.M.R. ; Vendée, Bourneau ; talus de bois, Feb., 1923, J.C.

D. taxifolium (Wahl.) Dum., Cam Creag, Killin, Mid Perth (88), Aug., 1909, D.A.J.

Scapania compacta (Roth.) Dum., Vendée : Rochetrejoix ; bois de la Debutrie, March, 1923, J.C.

S. subalpina (Nees) Dum., Meall Tarmachan (88), August, 1909, J.B.D.

S. gracilis (Lindb.) Kaal., Crunwere (45), Feb., 1924, R.J. ; also, as *S. resupinata* Dum., Vendée : La Châtaignerniaie, Jan., 1923, J.C.

S. Degenii (Schiffn. M.S.) K. Müll., Moist ledge, alt. ca. 1100 ft., Creag-an-Lochain-Lairige (88), July, 1923, H.H.K. and W.E.N.

S. nimbose Tayl., North Precipice, Ben Nevis (97), August, 1909, J.B.D.

S. ornithopodioides (With.) Pears., Snowdon (49), August, 1912, J.B.D.

S. dentata Dum., Moelwyn Bach (48), June, 1912, J.B.D.

S. undulata (L.) Dum., Coire an Lochain, Braeriach (96), August, 1923, D.B.B. "Is *S. dentata* Dum.," D.A.J.

S. obliqua (Arnell) Schiffn., Cwm Glas, Snowdon (49), August, 1919, W.N.T. ; Ben Nevis (97), July, 1923, H.H.K., Ben Macdhuì (97), Aug., 1923, D.B.B. "Not *S. obliqua* but *S. dentata*. The leaves in the former are entire and the antical lobe quite different in shape," D.A.J.

S. irrigua (Nees) Dum., Rainford Junction (59), June, 1913, W.G.T. ; Crinagh River (I. 2), Aug., 1906, J.B.D.

S. umbrosa (Schräd.) Dum., Hazelwood Moor, Bolton Abbey (64), April, 1921, W.H.B.

Radula Lindbergii Gottsche, Killin, Mid Perth (88), Aug.,

1907, J.B.D. ; "Is var. *germana* (Jack)," D.A.J. ; var. *germana* (Jack), King's Seat, Killin (88), Aug., 1909, D.A.J.

R. aquilegia Tayl., Eagle's Nest Mt., Killarney (I. 2), Aug., 1911, J.B.D.

R. voluta Tayl., woods, Rosthwaite (70), Aug., 1910, J.B.D.

Madotheca laevigata (Schr.) Dum., Cader Idris (48), Aug., 1922, D.B.B. ; Crunwere (44), Jan., 1924, R.J. ; Torc Waterfall, Killarney (I. 1), W.G.T.

M. Thuja (Dicks.), Dum., rocks, Harlech (43), April, 1909, J.B.D. ; Deux-Lévres ; rochers au Puits-d'Enfer, Feb., 1923, J.C.

M. platyphylla (L.) Dum., Crunwere (44), Jan., 1924, Jan., 1924, R.J. ; rocks, near Avallon, Yonne, France, 1923, P.W.M.R.

M. rivularis Nees, West Stonesdale, near Keld (65), May, 1920, W.H.B.

M. porella (Dicks.) Nees, Loch Garragarry, Kerry (I. 2), Aug., 1906, J.B.D.

Cololejeunea Rossettiana (Massal.) Schiffn., Castleton (57), Aug., 1923, E.A. & W.N.T. ; Scotcher Gill, near Dent (64), June, 1911, F.E.M. ; Muckcross, Killarney (I. 2), Aug., 1906, J.B.D.

C. minutissima (Sm.) Schiffn., Loire Inférieure ; abré a Blanche-Couronne, April, 1918, J.C. ; on elm trees, Llechwedd, Harlech (48), May, 1924, D.A.J.

Lejeunea flava (Swartz.) Nees, dry rocks with mosses, Killarney (I. 2), Aug., 1906, J.B.D.

Microlejeunea ulicina (Tayl.) Evans, tree trunks, Trelawne near Looe, E. Cornwall (2), F.R. ; Burnham Beeches (28), Nov., 1923, J.O'L. ; Vendée ; Forêt de Nouvant ; arbres, Sept., 1920, J.C. ; Vendée, Rochetroux ; also, bois de la Debutrie, March, 1923, J.C.

Drepanolejeunea hamatifolia (Hook.) Schiffn., Artro Valley above Harlech (48), July, 1920, D.A.J.

Marchesinia Mackaii (Hook.) Gray, Muckcross, Killarney (I. 2), Aug., 1906, J.B.D.

Jubula Hutchinsiae (Hook.) Dum., Glen Lyon, Lynmouth (4), June, 1923, F.E.M. ; Torc Mountain, Killarney (I. 2), Aug., 1906, J.B.D.

Frullania Tamarisci (L.) Dum., forma, Ravens Falls, Maentwrog Valley (48), Aug., 1907, D.A.J. ; stones and rocks above Bantry (I. 3), May, 1920, D.B.B. ; Vendée, Mervent ; rochers vers les Quillères, J.C.

F. replicata Nees, near Para, Brazil, July, 1849, leg. R.

Spruce, com. H.B.

Anthoceros crispulus (Mont.) Douin, Sellack (36), Dec., 1922, E.A.

A. Husnoti Steph., moist, sandy ground, Boswase (1), April, 1923, leg. H.H.K. & W.E.N., com. W.E.N.

* * * *

ANNUAL MEETING of the British Bryological Society, 1923.

The Annual Meeting and Excursion of the British Bryological Society was held at Buxton, Derbyshire, on August 3rd to 10th. There was a fairly good gathering in favourable weather; the more distant parts of the district were visited by parties in motors, and most of the interesting grounds explored. Dove Dale, Chee Dale, Burbage and Via Gellia yielded interesting mosses and hepatics, such as—*Amblystegium compactum* Auct., *Eurhynchium Teesdalei* Schimp., *Trichostomum nitidum* Schimp., *T. mutabile cophocarpum* Schimp., *Weisia calcarea* C.M., *Seligeria pusilla* B. & S., *Barbula convoluta* Sardoa, B. & S., *Swartzia inclinata* Ehrh., *Scapania aspera* Bernet, a peculiar form of *S. curta* (Mart.) Dum., *Pedinophyllum interruptum* (Nees) Pears., *Cololejeunea calcarea* (Lib.) Schiffn., *C. Rossettiana* (Mass.) Schiffn., *Plagiochila asplenoides humilis* f. *laxa* Schiffn., *Chiloscyphus pallescens* (Ehrh.) Dum., *Lophozia quinquedentata* (Huds.) Cogn., c. fr., *L. turbinata* (Raddi), Steph., *L. badensis* (Gott.) Schiffn., *L. Müelleri* (Nees) Dum., *Aplozia riparia* (Tayl.) Dum., *Pellia Fabbroniana* Raddi, *Pallavicinia Flotowiana* (Nees) Lindb., *Aneura major* (Lindb.) K. Müll., *A. pinguis angustior* Hook., *Metzgeria pubescens* (Schränk) Raddi, *M. conjugata* Lindb., *Preissia quadrata* (Scop.) Nees, *Riccia sorocarpa* Bisch.

The next annual meeting and excursion of the Society will be held at LLANBERIS, at the foot of Snowdon, from AUGUST 29th to SEPT. 5th, 1924.

Obituaries.

EDWARD CLEMINSHAW, M.A.

1849--1922.

Edward Cleminshaw was born in 1849 and displayed an interest in Natural History from his earliest youth. He was educated at Rugby under the famous Dr. Temple, and at school took a prominent part in the foundation of the School Natural History Society, which was destined to attain repute, both for good work done in the neighbourhood of Rugby, and as the training ground of several naturalists. Dr. Temple predicted that the young Cleminshaw would become a leading man of science, and the promise of his school days was followed by a brilliant career at Oxford. Here he obtained a scholarship at Merton, and, later, first-class honours in Natural Science. On going down from Oxford Mr. Cleminshaw took up a position as science master at Sherborne School, where he remained several years, but finally took up a much more lucrative appointment as Analyst at the famous works of Messrs. Chance at Oldbury. He resided in Edgbaston, and took a great interest in microscopy and other scientific pursuits throughout his life. He was a prominent member of the Birmingham Natural History Society, and especially devoted much time in introducing young men to scientific studies, in many cases equipping them with the requisite apparatus. He joined the Moss Exchange Club in 1901, and did much quiet and reliable work upon the Bryophyta. After his retirement from business he continued to reside at Edgbaston and devoted his leisure chiefly to these plants, and among other work arranged the important collection of mosses belonging to the University of Birmingham. He had also a very sound knowledge of geology, a subject which occupied him greatly in his frequent visits to Switzerland and the South of Europe. In the autumn of 1918, after a hard morning's gardening, he suffered a seizure from which unhappily he was never able to recover. He died in 1922 in a nursing home, without having regained the use of his faculties. His extensive collections are now in the possession of Rugby School. His unassuming kindness and quiet friendliness, coupled to shrewd insight into human nature and a real goodness of character, have caused his loss to be much felt among his friends.

NICHOLAS TEMPERLEY, J.P.**1844--1923.**

Nicholas Temperley, J.P., was born at Hexham in 1844. He was in business in Newcastle-on-Tyne from 1863 till 1908, when he retired, but still continued to do much public work. He was a magistrate for Gateshead for 31 years, and on the Town Council for 12 years, retiring in 1903. He worked hard for many Educational Societies and was a strong supporter of the University Extension Movement and a keen student, attending the Summer Meetings at Oxford and Cambridge. In 1906 the Cambridge University awarded him the Gilchrist bronze medal for an essay on the Early English Churches of Northumberland.

He took a real interest in Nature and especially in Field Botany from his boyhood. He was on the Council of the Royal English Arboricultural Society and for many years rarely missed the excursions in the British Isles and abroad. In August, 1923, he spent a week visiting French forests with the R.E.A.S.

He was a member of the Botanical Society and Exchange Club, and the Mycological Society, and took active interest in the British Bryological Society. For many years he was a member of the Northumberland and Durham Natural History Society and was particularly glad when he could do anything to encourage young people in the study of plant life.

He frequently visited Italy and Switzerland. During his last visit in his 80th year his enthusiasm for the alpine flora was as great as ever.

He passed away at his home, Low Fell, Gateshead, on September 30, 1923, after scarcely any illness.

rectangular to reniform, markedly convex, generally crossing the stem, not decurrent, entire or slightly toothed towards the obtuse apex; postical lobe slightly to two thirds larger, oval, obtusely pointed and sparingly toothed, sometimes strongly recurved in the lower leaves, as broad at the base as just below the apex, the lower half of the leaf semi-circular, shortly decurrent, not crossing the stem; teeth small, 1—2 cells long; cells 15—20 *u* oblong-rotund with large nodulose trigones, smaller and rounder with almost equally thickened walls towards the margin; cuticle smooth or slightly granulate, Perianth oval, shortly lobed at the entire mouth.

S. Degenii has a somewhat distinctive appearance in the field owing to its brownish-green colour and the very concave antical lobes. I was inclined to think it a form of the *S. irrigua* group, but on closer examination I have no doubt but that Dr. Müller is correct in seeing a closer affinity with *S. aspera*. It differs from this in being more flaccid and often, in the continental forms, in having the two lobes of almost equal size, in the oval shape of the postical lobe which is not narrowed towards the base, as in *S. aspera*, in the entire mouth of the perianth and in the smooth or faintly granulate cuticle.

The Scotch plant is considerably larger than that which we gathered in Switzerland and there is rather more disparity in the size of the antical and postical lobes, but it agrees in other respects and it is included in Dr. Müller's original description. Besides gathering the plant in Mr. Macvicar's original locality, we found a few tufts quite low down near the entrance to Glen Lochay, only a few feet above the level of Loch Tay.

W. E. NICHOLSON.

29th Dec., 1923.

NOTE this is page 58A. It has been located here to minimise difficulty in synchronising pages within Acrobat Pro XI. Page 58 is in normal place