

Moss Exchange Club,

SECTION II.

REPORT

FOR THE YEAR 1919.

DISTRIBUTER :

Mr. F. RILSTONE, Polperro, S.O., Cornwall.

SECRETARY :

Mr. D. A. JONES, M.Sc., F.L.S., Rock House,
Harlech, N. Wales.

TREASURER :

Mr. J. B. DUNCAN, Bewdley, Worcestershire.

BEWDLEY :

W. E. TOLLEY, PRINTER, 29, LOAD STREET.

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REFEREES:

Sphagnum Mr. W. R. SHERRIN.

Harpidium Mr. J. A. WHELDON, F.L.S.,
60, Hornby Road, Walton, Liverpool.

Pleurocarpi (except Harpidium) .. Mr. G. B. SAVERY.

Hepatics, and remaining genera of Mosses .. Mr. D. A. JONES.

LIST OF MEMBERS, 1919.

	Mosses	Hepatics	Total.
Mr. G. H. Allison, Convamore Road, Grimsby ...	28	...	28
Mr. W. Bellerby, 8, Burtonstone Lane, York ...	97	...	97
Mr. H. Bendorf, 4, Sedgley Avenue, Prestwich, Manchester	...	...	...
Mr. J. Blundell, 29, Aldridge Rd. Villas, London W, 11 ...	...	...	...
Rev. H. Boyden, M.A., 46, St. Leonard's Road, Exeter ...	...	...	...
Mr. D. B. Bradshaw, Northcote, Sandford Road, Dublin ...	...	...	...
Mr. H. C. Broome, Netherthorpe, Failsworth, Manchester	...	...	...
Miss H. I. T. Bruce, 3, Cromwell Terrace, Scarborough ...	...	...	...
Mr. S. Chipperfield, Cromwell House, Ottery St. Mary, Devon	...	...	...
Miss C. M. Cooper, 21, Borstal Road, Rochester ...	4	...	4
Mr. R. H. Corstorphine, B.Sc., Hillside House, Arbroath, N.B.	...	...	...
Mrs. M. Corstorphine, Hillside House, Arbroath, N.B. ...	...	...	...
Dr. H. Downes, F.L.S., Ditton Lea, Ilminster, Somerset ..	...	...	...
Mr. J. B. Duncan, Bewdley, Worcestershire ...	200	16	216
Miss E. J., M.Sc., University College, Aberystwith ...	...	...	...
Mr. J. Glover, Sea View, Kircubbin, Co. Down ...	103	...	103
Mr. G. H. Goode, 86, Adams Avenue, Northampton ...	...	...	...
Mr. J. Groves, F.L.S., Trevarthian, Yarmouth, Isle of Wight	54	12	66
Mr. J. W. Hartley, Mill Head House, Carnforth ...	...	...	...
Rev. H. H. Harvey, Clawton, Holsworthy, Devon ...	3	...	3
Mr. A. R. Horwood, The Museum, Leicester ...	...	...	...
Miss E. M. Hough, Codsall Wood, near Wolverhampton...	...	...	...
Mr. J. D. Houston, Bank House, Elphin, Co. Roscommon	...	...	...
Rev. R. Jackett, F.L.S., St. Ishmael's Vicarage, Milford Haven	140	..	140
Mr. D. A. Jones, M.Sc., F.L.S., Rock House, Harlech, N. Wales	230	174	404
Mr. C. V. B. Marquand, M.A., Y Glyn, Llanfarian, Cardiganshire	83	4	87
Rev. W. R. Megaw, B.A., Trinity Manse, Ahoghill, Belfast	...	...	...
Mr. J. Mennell, 27, Neville Street, York ...	...	..	...
Mr. G. W. Moses, 19, Victoria Street, Bishop Auckland ...	...	...	...
Mr. J. H. Payne, Newhill, West Melton, Rotherham ...	9	...	9
Mr. W. H. Pearson, M.Sc., A.L.S., 18, Palatine Road, Withington, Manchester	...	72	72
Dr. L. H. Pegler, M.D., 58, Harley Street, London W. 1 ...	...	...	...
Rev. P. G. M. Rhodes, M.A., 33, Duchess Rd., Edgbaston, Birmingham	105	30	135
Mr. F. Rilstone, Schoolhouse, Polperro, Cornwall ...	106	10	116
Mr. G. B. Savery, Silvertown, Exeter ...	38	3	41
Mr. W. R. Sherrin, South London Bot. Inst., 323, Norwood Rd., Herne Hill, S.E. 24	62	...	62
Mr. R. W. Smitham, Fowey, Cornwall ...	40	37	77
Mr. H. Stansfield, 20, Park Grove, York ...	66	...	66
Mr. A. Sutton, 9, Bronkfield Park, London, N.W. 5 ...	54	...	54
Mr. N. Temperley, 4, Carlton Terrace, Low Fell, Gateshead	...	...	...
Mr. W. N. Tetley, M.A., Portora, Enniskillen ...	94	89	183
Mr. W. G. Town, Frith's Terrace, Bacup Rd., Todmorden	...	...	...
Mr. W. G. Travis, 9, Barton Road, Liverpool ..	51	45	96
Prof. Lloyd Williams, D.Sc., University College, Aberystwith	...	...	...
Mr. J. C. Wilson, F.L.S., 1500, Ashton Old Rd., Manchester	41	33	74
Miss A. Wyndham, Orchard Wyndham, Williton, Somerset	...	...	...
	1608	525	2133

REPORT OF SECRETARY (1919).

The Club continues to flourish. The number on roll has reached 45, an increase of three this year and the highest on record in the history of the Club.

Much activity has been shown by members during the year, especially in the study of Mosses. There is an increase in the contribution of Hepatics to the distribution as compared with last year. It is unfortunate, however, that this group does not appeal more to members. It is needless to mention that for beauty of form and colour these plants are unsurpassed and as objects for critical study they are instructive and interesting. Members are strongly recommended to take up the study. Every assistance will readily be given in the usual way.

The thanks of the Club is due to Mr. Rilston for the careful and efficient manner in which he has carried out the arduous duties of Distributer. He has again expressed his willingness to fill the office for next year.

To meet the increased expenditure due to the new postal regulations it is proposed to raise the subscription for next year to 3/6 which, it is to be hoped, will meet with the general approval of the Club. It is very desirable that all subscriptions should be prepaid to the Treasurer early in January of each year. Several members are in arrear with their subscriptions, and are kindly requested to remit to the Treasurer at their earliest opportunity.

D. A. JONES,

Hon. Secretary.

Harlech,

June, 1920.

REPORT OF DISTRIBUTER (1919).

Owing to unavoidable delays the distribution this year was not completed till early in May. Plants sent in were more numerous than last year and on the whole of greater interest. Many members will be glad of the continental gatherings sent by Messrs. Bellerby and Savery and Rev. P. G. M. Rhodes.

The Club is again greatly indebted to Mr. H. N. Dixon and Mr. W. H. Pearson for valuable contributions of Mosses and Hepatics, and also to the Referees. Mr. Sherrin has again dealt with the Sphagna, Mr. Savery with Pleurocarpous Mosses, Mr. Wheldon with Harpidia, and Mr. Jones, in addition to the heavy task of refereeing the Acrocarpous Mosses and Hepatics, has written the report on the latter.

F. RILSTONE,

Distributor.

Polperro,

May, 1920.

BALANCE SHEET FOR THE YEAR 1919.

Receipts.		£	s.	d.	Expenses.		£	s.	d.
Balance from last year's Account ..		2	17	2½	Printing Report (1918)		3	0	9
31 Subscriptions 1919		3	17	6	Secretary's Expenses		12	8	
Arrears paid		2	6		Distributer's		18	0	
					Treasurer's		4	4½	
					Balance in hand		2	1	5
							<u>£6</u>	<u>17</u>	<u>2½</u>
							<u>£6</u>	<u>17</u>	<u>2½</u>

J. B. DUNCAN,

Hon. Treasurer.

June, 1920.

MOSSES.

Sphagnum fimbriatum Wils., Flitwick Moor (30), June 1913, C.V.B.M. "var. *validius* Card." W.R.S.; var. *intermedium* Russ., Epping Forest (18), Nov. 1919, W.R.S.

S. rubellum Wils., Carnkief Moor (1), Dec. 1919, F.R. "Yes, colour form near var. *rubescens* but not well marked." W.R.S.; var. *rubescens* W., Moreton Heath (9), Aug. 1919, W.R.S.; var. *purpurascens* Russ., Harlech (48), Aug. 1917, leg. P.G.M.R. & J.B.D. comm. P.G.M.R. "These plants approach somewhat forma *speciosum* in Warnstorff's collection." W.R.S.; var. *versicolor* W., Nant Artro (48), August 1917, leg. D.A.J. et P.G.M.R., comm. P.G.M.R.; *Sphagnum* (Ref. no. 152) Carnkief Moor (1), Dec. 1919, "*S. rubellum*, a very young state."

Sphagnum sp., Sallagh Braes, Aug. 1910, J.G. "*S. acutifolium* Ehrh. var. *versicolor* W." W.R.S.

S. acutifolium Ehrh. var. *sub-nitens* Dixon, Kircubbin (I. 38), Aug. 1919, J.G. "One packet contains *S. fimbriatum* var. *validius* f. *squarrosulum*, and the others are *S. squarrosulum* v. *subsquarrosulum* f. *elegans*." W.R.S.; St. Cleer (2), Easter 1918, R.W.S. "= *S. plumulosum* var. *ochraceum* nr. f. *congestum*." W.R.S.

S. plumulosum Roll. var. *coerulescens* Schielph., bog, Sutton Park, nr. Birmingham, Aug. 1918, P.G.M.R. "Not a well marked plant but certainly a plant showing so much yellow and green should go under the name *versicolor* and not *coerulescens*." W.R.S.; var. *lilacinum* Spr., marsh by Llyn Tecwyn, Aug. 1919, leg. D.A.J. & P.G.M.R., comm. P.G.M.R.; var. *versicolor* W. c. fr., Dartmoor (3), July 1919, C.V.B.M.

S. squarrosulum Pers., Flitwick Moor (30), C.V.B.M., June 1913. "var. *spectabile* f. *patulum*," W.R.S.

S. amblyphyllum Russ. var. *macrophyllum* W. f. *breviapiculatum* W., moorland north of Hawes (65), leg. W.N.T., det. & com. P.G.M.R. "*S. recurvum* v. *robustum* forma?" W.R.S.; var. *mesophyllum* W. f. *sylvaticum* Russ. (No. 249), Moreton Heath (9), Aug. 1919, W.R.S.

Sphagnum (Ref. No. 33). Tregawn Bog (46), Aug. 1919, C.V.B.M. "*S. amblyphyllum* v. *mesophyllum* f. *sylvaticum*," W.R.S.

S. intermedium Hoffm., marsh, St. Cleer (2), at 900 ft., May 1918, R.W.S. " = *S. amblyphyllum* v. *mesophyllum* f. *molle*." W.R.S.

S. pulchrum W. var. *nigricans* f. *densum* (No. 245), Moreton Heath (9), Aug. 1919, W.R.S.; var. *sordido-fuscum* W., (Nos. 244 and 247), Moreton Heath (9), Aug. 1919, W.R.S. Mr. Wheldon agrees.

S. plumosum, boggy ground, St. Cleer (2), May 1918, R.W.S. "*S. cuspidatum* v. *falcatum* f. *molle* subf. *tenellum*." W.R.S.

S. subsecundum Nees var., Dartmoor (3), June 1916, C.V.B.M. = "*S. crassicladum* v. *magnifolium*." W.R.S.; var. *parvulum* W., Silverwell Moor (1), March 1919, F.R.; var. *tenellum* W. f. *subfalcatum* W., Goonhavern Moor (1), April 1919, F.R., det. W.R.S.

S. inundatum R. & W. var. *ovalifolium* W. f. *brachycladum* W., below Three Barrows Tor, Dartmoor (3), July 1919, C.V.B.M.; also, springhead near half-way house, Snowdon (49), leg. H. H. Knight and P.G.M.R., Aug. 1919; var. *lanceifolium* W. f. *tenellum* W., Wheal Frances (1), April 1919, F.R., det. W.R.S.; var. *diversifolium* W. f. *dasybrachycladum* W. subf. *fuscescens* W. (No. 246), Moreton Heath (9), Aug. 1919, W.R.S.

S. aquatile W. var. *turgidum* W., Silverwell Moor (1), 1918, F.R. "*S. turgidulum* var. *sordidofuscoatrum*." W.R.S.

S. crassicladum W. var. *magnifolium* W. f. *lonchocladum* W., below Three Barrows Tor, Dartmoor (3), July 1919, C.V.B.M., teste R.W.S.; f. *fluitans* W., boggy stream on Dartmoor above South Brent (3), C.V.B.M., July 1919. "f. *rufescens*." W.R.S.; f. *rufescens* W., above South Brent (3), July 1919, C.V.B.M.

S. rufescens Nees and Hornsch. var. *magnifolium* W. f. *albescens* W., Fowey Valley (2), June 1918. "Is *S. crassicladum* v. *magnifolium*." W.R.S.; var. *virescens* W., Warthill, York (62), June 1919, W.B. "A form of *S. crassicladum* var. *diversifolium*." W.R.S.

S. turgidulum W. var. *sordidofuscoatrum* W., Goonhavern Moor (1), April 1919, F.R., det. W.R.S.

S. papillosum Lindb. var. *normale* W. f. *majus* Grav., Dartmoor (3), July 1919, C.V.B.M.; Ventongimps Moor (1), Dec. 1919, F.R. "Yes." W.R.S.; var. *squarrosulum* Ingham and Wheldon subf. *neglectum* Ingh. and Wheld., Dartmoor (3), July 1919, C.V.B.M.; var. (Ref. No. 12), Dartmoor (3) January 1916, C.V.M.B. "Is *S. cymbifolium* var. *pallescens*." W.R.S.; var. (Ref. No. 13), Dartmoor (3), January 1916, C.V.B.M., = "var. *normale* f. *brachycladum* subf.

flavofuscum." W.R.S.; var. (Ref. No. 70), Goonhavern Moor (1), Dec. 1919, F.R. "Is var. *sublaeve* f. *breviramosum* subf. *orthocladum*." W.R.S.; var. *sublaeve* Limpr. f. *validum* W., Goonhavern (1), April 1919, F.R. "Is subf. *fuscescens*." W.R.S.

Sphagnum (Ref. No. 34), Tregawn Bog (46), Aug. 1919, C.V.B.M. "*S. papillosum* v. *normale* f. *brachycladum* c. fr." W.R.S.

S. cymbifolium Ehrh. var. *glaucescens* W., Dartmoor (3), July 1919, C.V.B.M. "Some of the packets seem to contain forms approaching var. *flavescens*; none is well-marked var. *glaucescens*." W.R.S.; var. *flavescens* W., Sutton Park (38), Aug. 1918, P.G.M.R.; var. *congestum* Moorland, St. Cleer (2), Easter 1918, R.W.S. "*S. papillosum*." W.R.S.

Tetraphis pellucida Hedw. c. fr., Nermont, Montreux, Switzerland, May 1911, P.G.M.R.

Oligotrichum hercynicum Lam., earthy bank by side of Lane, St. Cleer (2), May 1918, R. W.S. "Correct." D.A.J. "An interesting addition to the Cornish list." F.R.

Polytrichum commune L. var. *perigoniale* B. & S., Strensall (62), June 1919, W.B.

Diphyscium foliosum Mohr., Uwchartro, Harlech (48), April 1919, D.A.J.

Pleuroidium axillare Lindb., ditch, Lavilly near Enniskillen (I. 33), November 1919, W.N.T.

P. alternifolium Rabenh. above Talsarnau (48), November 1917, D.A.J.

Ditrichum homomallum Hampe, a large form, Cwm Caseg, Carnedd Llewellyn (49), August 1919, W.N.T.

D. zonatum Limpr, Carnedd Llewellyn (49), inv. D.A.J., comm. W.N.T.

D. flexicaule Hampe, sand dunes N.W. Donegal, (I. 35), July 1910, J.G.

Seligeria pusilla B. & S., Pyecomb (13), May 1919, A.S. "This was passed last year as correct. It was subsequently sent to Mr. Nicholson who named it a form of *S. paucifolia* Carruth." D.A.J.

Rhabdoweisia crenulata Jameson, Slievemore, Achill (I. 27), April 1919, W.N.T.

Cynodontium virens Schp., c. fr., Croban, Killin (88), August 1903, D.A.J.

Dichodontium pellucidum Schp., Mochras, Llanbedr (48), June 1917, J.C.W.

Dicranella secunda Lindb., in couloir, St. Luc, Val d'Anniviers, Valais, Switzerland, July 1914, P.G.M.R.

D. squarrosa Schp., Cader Idris (48), July 1919, A.S.

—? Devol Glen, Port Glasgow, J.G. "Is *Dicranoweisia cirrata* Lindb." D.A.J.

Campylopus Schwarzii Schp., Ben Nevis (97), July 1909, D.A.J.

C. flexuosus Brid. Boulder by river, St. Breward (2), Sept. 1919, leg. J.C.S., comm. R.W.S. "This is var. *zonatus* Limp." F.R. "Yes, and very beautiful specimens. The stems are red with tomentum, leaves secund and the auricles very well developed and purplish red in colour." D.A.J.

C. introflexus Brid., Barmouth Junction (48), April 1919, D.A.J.

C. brevipilus B. & S., Giant's Causeway, Co. Antrim, Aug. 1906, J. Glover. "It has the areolation of *C. atrovirens* with longer hair points and wider nerve than *C. brevipilus*." D.A.J.

Dicranum fulvellum Smith, Snowdon (49), Aug. 1919, D.A.J. and W.N.T.

D. Molle Wils., near summit of Ben Laoigh (88), July 1887, leg. H. & J. Groves, comm. J.G.

D. scoparium Hedw. var. *paludosum* Schp., boggy heath, Warthill, York (62), June 1919, W.B.

D. fuscescens Turn., Knock of Ballagh, Co. Donegal (I. 35), Sept. 1918, W.N.T. "The colour and habit point to *D. Scottianum* Turn. The leaves are also entire, cells at the base shorter with non-porose walls, and the upper cells smooth. One of the packets contains *Rhacomitrium protensum* which evidently was an oversight." D.A.J.

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

D. longifolium Ehrh., shady rocks near Montreux, Switzerland, May 1915, leg. F. Savery, comm. G.B.S.

D. viride Lindb., beeches, Bois de Châtillon, Posieux, Fribourg, Switzerland, January 1920, P.G.M.R.

Fissidens bryoides Hedw., unusual form, setae apparently lateral, near Virginia Water (17), April 1919, A.S. "Yes, *F. inconstans* Schp. See notes in Handbook." D.A.J.

Fissidens polyphyllus Wils., Mousehole Cave, Penzance (1), July 1886, H. N. Dixon; left bank of Corris River, Montgomery (47), July 1901, H. N. Dixon; male and sterile, Nant Coedwig, Corris Valley (48), July 1901, leg. H. N. Dixon; old quarry, Portmadoc Beddgelert Road (49), Sept. 1915, D.A.J. "Wilson's original Station."

Grimmia orbicularis Bruch, c. fr. et flor., Lausanne, Jura, at 500 m., March 1919, leg. Dr. J. Amann, comm. W.B.

G. subsquarrosa Wils., Silurian rocks, Arco Woods, Austwick (64), March 1918, W.B. "This is, I think, *Grimmia Stirtoni* Schp. The leaves are not squarrose when moist. The shortly rectangular cells are rather incrassate. Gemmae are present on the upper leaves." D.A.J.

G. retracta Stirton, Artro Valley, Merioneth (48), June 1917, D.A.J.

G. montana B. & S., walls, Penrhyndendraeth, (48), April 1919, D.A.J.

G. atrata Mielich., Clogwyn, Snowdonia (49), Aug. 1919, D.A.J.; Carnedd Llewellyn (49), Sept. 1919, D.A.J. & W.N.T.

Rhacomitrium ellipticum B. & S., Cwm Bychan, Harlech, Dec. 1917, D.A.J.

Hedwigia ciliata Ehrh., rocks, Mousehole (1), July 1886, H. N. Dixon; partly var. *leucophaea* Quiraing, Skye, July 1893, H. N. Dixon; var. *striata* Wils, boulders by path on Glas Bheinn, Inchnadamph, Sutherland, July 1899, H. N. Dixon; Uwchartro, Harlech (48), Oct. 1919, D.A.J.

Pottia intermedia Fürn. var. *littoralis* (Mitt.) leg. J. Glover. "Type; not the right colour and the cells are not incrassate and smooth." D.A.J.; *Pottia littoralis* Mitt., bare clay slope, The Common, Yarmouth, I. of Wight (10), Jan. 1919, J. Groves.

P. crinita (Wils.), Mullock Bridge (45), Dec. 1919, R.J. "I should name this *P. viridifolia* from the texture and colour of the leaves." D.A.J.; The Marsh (45), Jan. 1920, R.J.; The Common, Yarmouth, I. of Wight (10), April and May 1919, J.G.

P. viridifolia Mitt., The Drift (45), Jan. 1920, R.J. "Some of the specimens may pass for *P. viridifolia* but the material is not sufficiently satisfactory in others to enable one to decide." D.A.J.

P. starkeana C.M., St. Brides (45), Jan. 1920, R.J. "The fruit is young and the spores too immature. In one or two capsules I have found traces of a peristome. It may belong to this species or the var. *brachyodus* Wils." D.A.J.

Tortula pusilla Mitt. c. fr., Holm Hill, Grimsby (54), January 1912, G.H.A.

T. subulata Hedw. c. fr., Humberstone (54), April and October 1910, G.H.A.

T. laevipila Schwaeg., Fowey (2), March 1919, R.W.S.

Barbula fallax Hedw. with strongly recurved leaves, Harlech sandhills (48), January 1918, D.A.J.

B. rigidula Mitt., sunny wall, Montreux, Switzerland, May 1915, leg. F. Savery, comm. G.B.S.

B. vinealis Brid. cum flor. (m. et f.) Lausanne, Switzerland, March 1919, leg. Dr. J. Amann, comm. W.B.

Leptodontium flexifolium Hampe., Slievemore, Achill (I. 27), April 1919, W.N.T.

L. recurvifolium Lindb., side of stream from Llyn Cae near Minffordd (48), June 1917, J.C.W.

Trichostomum crispulum Bruch., Fairy Steps, Arnside (69), May 1919, W.B. "This is *T. tortuosum*," F.R. "Yes." D.A.J.; The Knot, Arnside (69), May 1919, W.B. "Not unlike *T. crispulum* in habit but the leaves are not cucullate at the apex. It is *T. mutabile* Bruch." D.A.J.; var. *brevifolium* B. & S., near Wrexham (50), Aug. 1916, D.A.J.

T. mutabile Bruch. var. *littorale* Dixon, St. Brides (45), January 1920, R.J. "Is *Barbula unguiculata*." D.A.J.; approaching var. *cophocarpum* Bruch, roadside, Polperro (2), Feb. 1920, F.R. "A very fine form of this species. Some of the leaves remind one of the var. *cophocarpum* in their long acute points but most of them resemble the type in shape." D.A.J.

T. nitidum Schp. Limestone rocks, Arnside, (69), May 1919, W.B. "Long slenderly pointed leaves, laxly recurved when dry spreading and flexuose when moist are characters of this plant which can safely be referred to *T. tortuosum*." D.A.J.

T. tortuosum Dixon, Rowtor (2), August 1919, F.R.

Encalypta streptocarpa Hedw. c. fr., moist earth in wood, Chamby, Montreux, Switzerland, May 1915, leg. F. Savery, comm. G.B.S.

Zygodon Forsteri Wilson, Livorno (= Leghorn), Italy, April 1914, leg. G. Gresino, comm. P.G.M.R. "It belongs to the var. *Sendtneri* Dixon. The nerve is very stout and distinctly excurrent." D.A.J.

Ulota Americana Nutt = *U Hutchinsiae*, Varazze, Liguria, Italy, March 1919, coll. G. Gresino, comm. P.G.M.R.; Slievemore, Achill (I. 27), April 1919, W.N.T.

Orthotrichum rupestre Schleich., dry walls, Meran, Süd-Tirol, May 1913, leg. F. Savery, comm. G.B.S.

O. anomalum Hedw. var. *saxatile* Milde, wall top, Cramb Beck (62), Oct. 1919, H.S. "Some of the packets also contain *Grimmia pulvinata*." D.A.J.; limestone rocks, Bogliaco, Italy, March 1912, leg. F. Savery, comm. G.B.S.

O. cupulatum Hoffm. stone wall, Arnside (69), May 1919, W.B. "One packet contains *O. cupulatum* var. *nudum* Braith., the remainder belonging to *O. anomalum* var. *saxatile* Milde." D.A.J.

O. leiocarpum B. & S., trees at 1800 ft., St. Wolfgang, Salzburg, Austria, July 1912, leg. F. Savery, comm. G.B.S.; on wooden vine props, Locarno, Switzerland, May 1914, leg. F. Savery, comm. G.B.S.

O. Lyellii Hook. & Tayl., tree trunk, Fowey, (2), March 1919, R.W.S.

O. speciosum Nees, on trees, Govt. of Petrokoff, Poland, Sept. 1910, leg. F. Savery, comm. G.B.S.

O. obtusifolium Schrad (and another small *Orthotrichum*), on small trees, St. Wolfgang, Salzburg, July 1912, leg. F. Savery, comm. G.B.S. "The other small *Orthotrichum* is *O. tenellum*." D.A.J.

Schistostega osmundacea Mohr., Sandpit, New Duston, Northants, June 1889, H. N. Dixon.

Meesia trichoides Spruce, approaching var. *alpina* Boul., Bussenwald, Sefinenthal, Bernese Oberland, Switzerzlerland July 1913, P.G.M.R. "The seta is very long and the leaves narrow and acute as in the var. *alpina*." D.A.J.

Aulacomnium turgidum Schwaeg., S.W. side of Ben Chalum, Perthshire, among grass on lower slopes, July 1898, leg. Binstead and Dixon.

A. androgynum Schwaeg., Long Buckley, Northants, March 1888, H. N. Dixon.

Timmia norvegica Tett., Meall nan Tarmachan, above Lochanna-Lairige (88), July 1893, H. N. Dixon.

Conostomum boreale Swartz, upper part of Cwm Glas Mawr, Snowdonia (49), August 1919, D.A.J.

Philonotis fontana Brid. var. *pumila* Dixon, Snowdon (49), Aug. 1919, W.N.T. "This is *P. capillaris* Lindb." D.A.J.

P. seriata Mitt., Col de Balme, Haute Savoie, France, August 1910, leg. E. Cleminshaw and D.A.J., com. D.A.J.

P. calcarea Schp., Carrickreagh, near Enniskillen (I. 33), June 1919, W.N.T.

Breutelina arcuata Schp., c. fr., Maentwrog Valley (48), July 1919, D.A.J.

Webera polymorpha Schp., upper part of Cwm Dyli, Snowdonia (49), August 1919, D.A.J.

W. elongata Schwaeg., Snowdon (49), August 1919, W.N.T.

W. nutans Hedw., Deerpark, Kircubbin (I. 38), May 1913, J.G. "This is *Bryum erythrocarpum*. Note the red gemmæ among the radicles." D.A.J.

W. Ludwigi Schp., near Clogwyn Station, Snowdon (49), June 1919, D.A.J.; Clogwyn, Snowdon, August 1919, leg. D.A.J. and W.N.T., comm. W.N.T.

W. carnea Schp., side of rill, Wheal Unity (1), Easter 1918, R.W.S.

W. albicans Schp., St. Breward (2), Sept. 1919, R.W.S.; var. *glacialis* Schp.,? side of stream, Chapel Porth (1), May 1914, F.R. "It approaches the variety which usually grows on high mountains." D.A.J.

Webera—? c. fr., Growing in black mud, Goonhavern Moor (1), April 1919, F.R. "This is one of the many forms of *Bryum pallens*. There are a few undeveloped capsules present. The inflorescence is apparently dioicous and the border of the leaves is thickened. It has also the rosy tint of that species." D.A.J.

Bryum filiforme Dicks., c. fr., Swindale Head (69), September 1915, W.N.T.

B. pendulum Schp., Sandhills, Freshfield (59), June 1919, W.G.T.; Harlech Sandhills (48), July 1919, leg. D.A.J. and A.S., comm. A.S.

B. lacustre Brid., Grimsby (56), G.H.A. "Only sparingly in fruit. The larger capsules belong to *B. inclinatum*." D.A.J.

B. mamillatum Lindb. c. fr., Cleethorpes (54), June 1919, leg. G.H.A.

B. Duvalii Voit., Cwm Llafar, Bethesda (49), Aug. 1919, D.A.J. "H. H. Knight's Station."

Bryum—? Oak woods, Looe (2), Sept. 1919, H.H.H. "A lax form of *B. pseudotriquetrum*." D.A.J.

B. pseudo-triquetrum Schwaeg. var. *compactum* B. & S., Harlech Sandhills (48), July 1919, leg. D.A.J. and A.S., comm. A.S.

B. affine Lindb. c. fr., Hatcliffe (54), May 1912, G.H.A. "I am inclined to think this plant is *B. capillare* var. *torquescens* Husn. The capsules have the right colour and the inflorescence varies, being both synoicous and dioicous. Some of the leaves also resemble this variety, and are on some of the stems spirally twisted." D.A.J.

Bryum—? Wall of Outhouse, Longcoombe Polperro (2), Feb. 1920, F.R. "Sterile *Brya* are sometimes rather difficult to locate. I should say however that the leaves in this plant are not unlike those of *B. capillare* and are in some cases more or less twisted as in that species." D.A.J.

B. atropurpureum (W. & M.), near Brighton (13), April 1918, A.S. "Bulbiform gemmae are present in the axils of the upper leaves. It is var. *gracilentum* Tayl." D.A.J.

B. argenteum L. var. *majus* B. & S., Damp sandstone rocks, Burton (58), May 1919, W.G.T. "This agrees with *B. atropurpureum* in form of leaf and areolation. Gemmae are present as in the var. *gracilentum*." D.A.J.

Mnium orthorhynchum B. & S., Volcanic ash, Clogwyn, Snowdonia (49), August 1909, D.A.J.; near Llyn Idwal (49), September 1919, W.N.T.

Mnium punctatum L. var. *elatum* Schp., near Barmouth in mountain stream (48), July 1919, A.S.; also, rocks in stream, Chatsworth Park, Sept. 1919, W.B. "Both of these gatherings belong to the type. The var. *elatum* is a much larger plant occurring on mountains." D.A.J.

Fontinalis antipyretica L. c. fr., Pond at Lowick Northants, July 1904, H. N. Dixon; mill stream, Brockenhurst, New Forest, July 1889, H. N. Dixon; Dozmare Pool (2), alt. 892 ft., Easter 1918, R.W.S. "The leaves of these last specimens are concave but not at all keeled as the case in *F. antipyretica*. I think the plant should go under *F. squamosa* although the well-marked auricles show some approach to *F. Dixoni*." G.B.S.; var. *gracilis* Schp., below Greta Fall, Wastdale Head, Cumberland, July 1891, H. N. Dixon.

F. Squamosa L., Hebden Bridge, Yorkshire (63), June 1865, leg. W. Wilson, comm. H. N. Dixon.

Cryphaea heteromalla Mohr, elders, Catesby, Northants, April 1895, H. N. Dixon.

Neckera crispa Hedw. c. fr., Swallow Falls, Bettws-y-coed, N. Wales, August 1888, H. N. Dixon.

Homalia trichomanoides B. & S., foot of trees, Broughton, Northants, April 1889, H. N. Dixon.

Antitrichia curtispindula Brid., oaks, Wistman's Wood, Princetown, Dartmoor, August 1894, H. N. Dixon.

Leptodon Smithii Mohr., Swanage, June 1885, leg. E. M. Holmes, comm. H. N. Dixon; c. fr., tree trunk near Yarmouth, Isle of Wight (10), February 1919, J.G.

Pseudoleskiella tectorum A Br., on old wood roof, Lausanne, Switzerland, March, 1919, leg. Dr. J. Amann, comm. W.B.

Pseudoleskea striata Dixon, on shrubs at 1800 ft., Dent di Merdasson, Montreux, Switzerland, May, 1911, P.G.M.R.

Thuidium abietinum B. & S., Whittington (33), December 1913, D.A.J.

T. delicatulum Mitt., Cwm Glas, Snowdon (49), August 1919, W.N.T.

Brachythecium glareosum B. & S., large form, Burnham-on-Crouch (18), leg. W.R.S. comm. A.S. "I think this is certainly *B. albicans*. Note the entire and closely imbricate leaves, and the crowded, erect stems." G.B.S.

B. reflexum B. & S., on shrubs at 5800 ft., Montreux Switzerland, July 1912, P.G.M.R.

B. velutinum B. & S., very large form, Burnham-on-Crouch (18), April 1915, leg. W.R.S. com. A.S. "This looks more like *Eurhynchium Swartzii*, the leaves being wide and shortly pointed and the branches somewhat complanate." G.B.S.

B. caespitosum Dixon, Linton Lock (62), October 1918, H.S.

Eurhynchium crassinervium B. & S. var. *turgescens* Moll., and var. *auro-nitens* Moll., Lausanne, Switzerland, March 1919, leg. Dr. J. Amann, comm. W.B.

E. pumilum Schp., damp rock face, Fowey (2), March 1919, R.W.S.

E. curvisetum Husn., cave on coast, Guernsey (C), April 1913, C.V.B.M.

E. rusciforme Milde var. *viride* mihi, Malyan Spout, Goathland (62), June 1919, W.B. "This appears to be merely a slender form of *Brachythecium rivulare*." G.B.S.; var. *atlanticum*? Brid., Devol Glen, Port Glasgow (76), October 1915, J.G. "Yes." G.B.S.

E. murale Milde, on stone, old mill, Welburn (62), November 1919, H.S.

E. confertum Milde, block of Permian limestone, Sprotborough (63), February 1920, J.H.P.

Sematophyllum demissum Mitt., Tyn-y-groes, Dolgelley (48), June 1915, D.A.J.

Plagiothecium silvaticum B. & S., Glen at Murlough (I. 39), July 1915, J.G. "Is *P. undulatum*." G.B.S.

P. latebricola B. & S., tree trunks, Bradley Wood, March 1919, G.H.A. "Yes." G.B.S.

Amblystegiella subtilis (Hedw.) Loes., beeches, Bois de Châtillon, near Fribourg, Switzerland, January 1920, P.G.M.R.

A. irriguum B. & S., willow, Stamford Bridge (61), September 1917, H.S. "This is *Leskea polycarpa*. Note the soft texture of the plants and the leaves with wide points and hexagonal areolation." G.B.S.

Hypnum stellatum Schreb., Montreux, Switzerland, May 1915, leg. F. Savery, comm. G.B.S.

H. aduncum Hedw. var. *falcatum*, Goonhavern Moor (1), April 1919, F.R. "Yes." J.A.W.

H. Wilsoni Schp., Sandhills, Freshfield (59), April 1911, W.G.T. "Yes." J.A.W.

H. lycopodioides Schwaeg. Narborough sandhills (52), August 1907, D.A.J.

H. fluitans L., Snowdon (49), September 1919, W.N.T. "This pretty glossy green plant with chlorophyllose cells broader than type and broader-based nerve is var. *atlanticum* Ren." J.A.W.; var. *falcatum* Schp., Thurstaston Common (58), July 1919, W.G.T. "Yes, I submitted this plant to Herr Georg Roth in 1909 and he referred it to *H. fluitans* var. *Schulzei* = *H. aurantiacum* V. Klinggr. which is identical with var. *falcatum* Schimp." J.A.W.

H. exannulatum Gumb. var. *purpurascens* Schp.; Draynes Valley (?), July 1918. "Yes." J.A.W.

H. intermedium Lindb. (deep coloured form) Montreux, Switzerland, May 1915, leg. F. Savery, com. G.B.S. "Yes, for those who do not recognise var. *Cossoni* (Sch.) Ren. It agrees with *H. intermedium* in its dioicous inflorescence but in cell structure etc., it comes well under var. *Cossoni*." J.A.W.

H. cupressiforme L., var. *tectorum* Brid., Polperro (2), 1919, F.R. "I think this is var. *elatum*, the stems being very robust and swollen." G.B.S.

H. callichroum Brid., Artro Valley, Harlech (48), April 1919, D.A.J.; Cwm Idwal, Glyder Fawr (49), August 1919, D.A.J. and W.N.T.

H. molluscum Hedw. var. *condensatum* Schp. Snowdon (49), Aug. 1919, invt. D.A.J., com. W.N.T. "Fine specimens." G.B.S.; var. *robustum* Boul., Thomos Mt., Mourne Mountains (I. 38), June 1917, J.G.

H. scorpioides L., marshy ground, Strensall Common (62), June 1919, W.B. "var. *angustifolium* Sanio which is marked by its longer acumen and distant secund falcate leaves almost throughout." J.A.W.

H. giganteum Schp., Ynys, Talsarnau (48), June 1917, D.A.J.

HEPATICS.

Riccia Crystallina L., Harlech Sandhills (48), November 1919, D.A.J.

Riccia Bischoffii Hüben., dry hillside, Follaterres, Brancon, Valais, Switzerland, December 1919, P.G.M.R. 1225, det. W. E. Nicholson.

Marchantia polymorpha L., roadside near Ashton (76), August 1913, J.G. "This is *Conocephalum conicum* (L.) Dum." D.A.J.

Metzgeria furcata (L.) Dum., Mt. Stewart, Co. Down (I. 38), July 1919, J.G.

Metzgeria conjugata Lindb., Killarney (I. 1), June 1910, W.H.P.

Metzgeria hamata Lindb., Moel'r Ogof, Hebog (49), September 1919, Jones and Tetley, comm. W.N.T.

Metzgeriapubeszens (Schrank), Raddi, Nant-y-Ffrith near Wrexham (50), August 1910, D.A.J.

Pellia Fabbroniana Raddi, c. fr., wet ditch, Fowey (2), March 1919, R.W.S.; var. *lorea* Nees, Devol Glen, Port Glasgow, (76), October 1915, J.G.; also, Harlech (48), Jones and Marquand, comm. C. V. B. Marquand.

Fossombronia pusilla (L.) Dum., Varazre, Liguria, Italy, leg. Gresino, comm. P.G.M.R. "*F. Husnoti* Corb. in part, P.G.M.R." "The latter differs in the lamellae of the spores and in the rhizoids being brown in colour and not violet." D.A.J.

Fossombronia angulosa (Dicks.) Raddi, Varazre, Liguria, Italy, May 1919, leg. Gresino, det. and comm. P.G.M.R. "I have not been able to find any spores although there are remains of empty capsules. I should hesitate to name it *F. angulosa* from the vegetative characters." D.A.J.

Gymnomitrium concinnatum Corda, Snowdon (49), August 1919, Jones and Tetley, comm. W.N.T.

Gymnomitrium obtusum Pears., Cwm Dwythwch (49), September 1919, W.N.T.; also, Ill Bell (69), July 1901, W.H.P.

Gymnomitrium crenulatum Gottsche, Cwm Dwythwch, near Llanberis (49), September 1919, W.N.T.; also, Glyder Fawr (49), June 1911, and, Honister (70), July 1911, W.H.P.

Gymnomitrium adustum Nees, c. fr., upper part of Cwm Dyli, Snowdon (49), June 1919, D.A.J.

Gymnomitrium alpinum (Gottsche) Schiffn. rocks, Cwm Bychan, Harlech (48), April 1912, Jones, Cleminshaw and Wilson, comm. J.C.W. "A form with the habit of *G. andreaeoides* (Lindb.) K-M." D.A.J.

Marsupella Stableri Spruce, Ben Chuirn, Tyndrum (88), August 1913, Duncan, Watson and Jones, comm. D.A.J.

Marsupella emarginata (Ehrh.) Dum., Camlough Mts. (I. 31), May 1913, J.G.

Marsupella Pearsoni Schiffn., Snowdon (49), August 1919, Jones and Tetley, comm. W.N.T.; also, Honister (70), July 1911, W.H.P.; and, Cwm Moch, Talsarnau (48), October 1915, D.A.J.

Alicularia compressa (Hook.) Nees, Tyn-y-Groes, Dolgelley (48), April 1910, J.C.W.

Alicularia Scalaris (Schrad.) Corda, oozing water St. Cleer (2), Easter 1918, R.W.S. "I have not been able to find underleaves. The leaves are also distant, broader than long and on some of the stems they have a border of larger cells. It is **Aplozia crenulata* var. *inundata* (Schiffn.), Macv." D.A.J.; *type*, Egerton (60), Sept. 1918, Broome and Pearson; var. *distans* Carr., Llanberis Pass (49), June 1919, D.A.J.

Eucalyx obovatus (Nees.) Breidl., Snowdon (49), August 1912, W.H.P.

Eucalyx hyalinus (Lyell) Breidl., Quarry, Llanfrothen (48), July 1919, D.A.J.

Aplozia crenulata var. *gracillima* (Sm.) Heeg, Talyllyn (48), April 1919, W.H.P.

Aplozia pumila var. *rivularis* Schiffn., Carr., wood near Rochdale (60), June 1919, W.H.P.

Jamesoniella subapicalis (Nees) Schiffn., Artro Valley, Merioneth (48), April 1911, D.A.J.

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

Gymnocolea inflata (Huds.) Dum., Crowan (1), August 1918; also, Snowdon (49), September 1919, W.N.T.

Lophozia badensis Schiffn., Sandhills, Freshfield (59), June 1912, W.G.T.

Lophozia longidens (Lindb.) Steph., Uwchartro, Harlech (48), November 1917, D.A.J.

Lophozia ventricosa (Dicks.) Dum., St. Cleer (2), Easter 1918, R.W.S.

Lophozia excisa Dum., Sandhills, Freshfield (59), March 1918, W.G.T.

Lophozia atlantica (Kaal.) Schiffn., Cwm-y-Glô., near Llanberis (49), August 1919, Watson, Tetley and Jones, comm. D.A.J.

Sphenolobus minutus (Crantz) Steph., Cwm Moch, Talsarnau (48), June 1916, D.A.J.

Sphenolobus politus (Nees) Steph., King's Seat, Killin (88), Aug. 1913, Duncan and Jones, comm. D.A.J.

Anastrepta orcadensis Schiffn., Cwm Dwythwch (49), September 1919, W.N.T. and D.A.J.

Plagiochila asplenioides (L.) Dum., on granite rocks, Becky Fall, Manaton, Dartmoor (3), April 1918, G.B.S.; also, Devol Glen, Port Glasgow (76), October, 1915, J.G.

Plagiochila spinulosa Dum., Killarney, Kerry, July 1909, W.G.T.; also, Brown Willy (2), September 1919, R.W.S.

Plagiochila punctata Tayl., Slievemore, Achill (I. 27), April 1919, W.N.T.; also, Cwm Bychan, Harlech (48), March 1915, D.A.J.

Plagiochila tridenticulata Tayl., Llandecwyn Ravine, Talsarnau (48), October 1917, D.A.J.; also, Talyllyn (48), April 1919, W.H.P.

Pedinophyllum interruptum (Nees) Pears., Gorge du Chauderon, Switzerland, May 1911, P.G.M.R.; var. *pyrenaicum* (Spruce) Kaal., Glenarte (I. 29), July 1913, leg. J. Hunter, comm. W.H.P.

Leptoscyphus Taylori (Hook.) Mitt., Glen Finnan, Scotland, Aug. 1912, and, Llanberis (49), August 1912, W.H.P.

Chiloscyphus pallescens Dum., Rainford (59), June 1913, W.G.T.

Harpanthus Flotowianus Nees, Ben Laiogh (88), August 1913, Duncan, Watson & Jones, comm. D.A.J.

Harpanthus scutatus (Web. et Mohr) Spruce, Artro Valley, Merioneth (48), April 1914, D.A.J.

Saccogyna viticulosa (Sm.) Dum., c. fr., Nantcol Ravine, Llanbedr (48), October 1919, D.A.J.; also, Killarney (I. 1), June 1910, and Tallyllyn (48), April 1919, W.N.P.

Cephalozia bicuspidata L., Brown's Bog, Grey Abbey (I. 38), July 1919, J.G.

Cephalozia Lammersiana (Hübner) Spruce, peaty ground, Sutton Park, near Birmingham (38), July 1913, P.G.M.R. "This plant was named by me. It much resembles this species in the large concave leaves with unequal lobes, but in the absence of perianth perhaps it had better remain doubtful." D.A.J.

Cephalozia connivens (Dicks.) Lindb., bog, Hir Ynys, Llanfrothen (48), April 1919, D.A.J. v.c.is 48

Cephalozia media Lindb., Waterfall woods, Llanberis (49), Sept. 1919, Jones and Tetley, comm. W.N.T.; var. *pallida* (Spruce) Massal., Artro Valley, Merioneth (48), October 1917, D.A.J.

Cephalozia Nicholsoni Down, old copper mine, near lakes, Llanberis (49), August 1919, D.A.J. "Specimens of this plant, gathered by Miss Armitage at this Station earlier in the month were submitted to Mr. W. E. Nicholson who named them *Ceph. Nicholsoni* but were not so well marked as the Cornish plants in his opinion. The stout stems, relatively small leaves, with rather larger and smoother cells are characteristics of this species. *Prionolobus Massalongi* (Spruce) Schiffn., and *Cephaloziella aeraria* (Pears.) Macv. are intimately associated with the above plant in the same adit." D.A.J.

Cephaloziella aeraria (Pears.) Macv., [= *Prionolobus Massalongi* (Spruce) Schiffn.], Tynygroes, Dolgelley (48), Aug. 1919, D.A.J.

Odontoschisma Sphagni (Dicks.) Dum., c. fr., bog, Tyddyndu, Harlech, (48), April 1919, D.A.J.

Adelanthus decipiens (Hook.) Mitt., Borrowdale (70), April 1893, Carrington and Pearson.

Bazzania trilobata (L.) Gray, Slievemore, Achill (I. 27), August 1911, J.C.W.; also Borrowdale (70), April 1890, Carrington and Pearson; and, Buttermere (70), April 1905, W.H.P.

Lepidozia pinnata (Hook.) Dum., Slievemore, Achill (I. 27), Aug. 1911, J.C.W.; also, Killarney (I. 1), June 1910, W.H.P.

Lepidozia reptans L., on moor, Port Glasgow (76), August 1913, J.G.

Lepidozia setacea Mitt., Thurstaston Common (58), July 1919, W.G.T.

Blepharostoma trichophyllum Dum. Ceunant Llenyrch (48), Aug. 1911, W.G.T.

Anthelia julacea (L.) Dum., Cwm Glas Mawr, Snowdon (49), Aug. 1919,; also, Glyder Fawr (49), Sept. 1919, W.N.T. "The latter is var. *gracilis* Hook." D.A.J.

Anthelia Juratzkana Trevis, Snowdon (49), August 1919, W.N.T. and D.A.J.

Herberta Hutchinsiae Evans, Cwm Bychan, Harlech (48), Sept. 1911, W.G.T.; also, Cwm Dwythwch, Snowdonia (49), Aug. 1919, D.A.J. "Herberta—A. W. Evans in Notes on the Genus *Herberta*" in Bull. Torrey Bot. Club 4, 1917, considers our two forms of *Herberta* as distinct species, the chief characters of which are given by Mr. W. H. Pearson in his article on "*Herberta*" in the Journal of Botany for February 1919.

Herberta adunca (Dicks.) Leaves bifid to about one half; divisions broad, slightly or not at all curved, acute or acuminate; vitta or enlarged cells not distinct, usually indistinct even in the basal region, extending for a short distance into the divisions, but coming to an end considerably below the apex.

Herberta Hutchinsiae (Gottsche) Evans. Leaves bifid two-thirds or four-fifths, divisions narrow, strongly curved, long—acuminate; vitta distinct, extending far into the divisions, but hardly to the apices. Basal portion of leaves entire or nearly so or furnished with a few teeth.

Mastigophora Woodsii (Hook.) Nees, West Inverness (97), May 1897, Macvicar and Pearson.

Diplophyllum albicans (L.) Dum., Glen, near Port Glasgow (76), August 1913, J.G.; also, Brown Willey (2), J.C.S., comm. R.W.S.

Diplophyllum taxifolium (Wahlenburg) Dum., King's Seat, Killin (88), August 1909, Duncan and Jones, comm. D.A.J.

Diplophyllum obtusifolium (Hook.) Dum., near Pantmawr, Harlech (48), April 1919, D.A.J.

Scapania compacta (Roth.) Dum., c. per., St. Breward (2), Sept. 1919, R.W.S.

Scapania———? c. fr., banks above cliffs, Polperro (2), January 1920, F.R. "Is *Scap. compacta*." D.A.J.

Scapania aequiloba (Schwaegr) Dum., Bois de la Raveyre, above Chillon, Switzerland, May 1911, P.G.M.R.

Scapania gracilis (Lindb.), Kaal., c. per., St. Breward (2), Sept. 1919, R.W.S.; also, Killarney (I. 1), July 1909, W.G.T.; and N.W. Donegal (I. 35), July 1910, J.G.

Scapani aspera Bernet, limestone rocks, Cheddar Gorge (5), Aug. 1915, P.G.M.R. 525. "The stems are more slender, leaves more distichous and the lobes more equal; the antical lobe only sometimes crosses the stem and it is more pointed and less dentate than in *Scapania aspera*. I think this plant belongs to *Scapania aequiloba*." D.A.J.

Scapania ornithopodioides (With.) Pears., Slievemore, Achill (I. 27), April 1919, W.N.T.; also, Clogwyn, Llanberis (49), June 1919, D.A.J.

Scapania obliqua Schiffn., Cwm Glas Mawr, Snowdon (49), Aug. 1919, D.A.J. and W.N.T., comm. W.N.T.; also, Carnedd Llewellyn, Bethesda (49), Sept. 1919, W.N.T. and D.A.J.; and Moelwyn Bach (48), June 1919, D.A.J.

Scapania irrigua Dum., Rainford (59), June 1913, W.G.T.; also, Temperley (58), Nov. 1918, H. Bendorf, comm. W.H.P.

Radula complanata (L.) Dum., on trees, Mountetewort, Co. Down (I. 38), March 1913, J.G.

Radula aequilegia Tayl., N. W. Achill (I. 27), April 1919, W.N.T.; also, Killarney (I. 1), June 1910, W.H.P.

Pleurozia purpurea Lindb., Cuilcagh, Co. Fermanagh (I. 33), June 1914, W.N.T.

Madotheca Thuja (Dicks.) Dum., rocks by road, St. Mabyn (2), August 1919, F.R.

Madotheca laevigata (Schrad.) Dum., Borrowdale (70), April 1912, W.H.P.; var. *obscura* Nees, boulders in wood, between Portmadoc and Tremadoc (49), February 1920, D.A.J.; also, var. *Killarneysis* Pears. Killarney (I. 1), June 1910, W.H.P.

Madotheca Porella (Dicks.) Nees, Uwchartro, Harlech (48), June 1917, D.A.J.

Madotheca platyphylla (L.) Dum., c. per., Fribourg, Switzerland, January 1920, P.G.M.R.

Cololejeunea microscopica (Tayl.) Schiffn., near Ogwen Lake, Bethesda (49), June 1919, D.A.J.—W. H. Pearson's Station.

Lejeunea cavifolia (Ehrh.) Lindb., Lambriggan, near Perranporth (1), December 1918, F.R.; var. *heterophylla* Carr., hedgebank, Fowey (2), March 1912, R.W.S.

Microlejeunea ulicina (Tayl.) Evans, trees, Killarney (I. 1), June 1919, W.H.P.

Harpalejeunea ovata (Hook.) Schiffn., Upper Lake, Killarney (I. 1), July 1909, W.G.T.

Marchesinia Mackaii (Hook.) Gray, Killarney (I. 1), June 1910, W.H.P.

Jubula Hutehinsiae Dum., Llyn Padarn Waterfall, Llanberis (49), August 1919, W.N.T.; also, Hebden Bridge (63), September 1917, Broome and Pearson, comm. W.H.P.

Frullania Tamarisci (L.), Dum., Slievemore, Achill (I. 27), August 1911, J.C.W.; also, De Lank R. (2), September 1919, R.W.S.

Frullania fragilifolia Tayl., c. per., rocks, near Hafod Llyn, Harlech (48), April 1919, P.G.M.R.; also, Llyn Padarn woods, Llanberis (49), August 1919, leg. Rhodes & Tetley, comm. W.N.T.; and rocks, above Harlech (48), December 1917, D.A.J.

Frullania dilatata (L.) St. Mary's Isle, Scillies (1), June 1908, J.C.W.; also, tree trunk, Fowey (2), March 1919, R.W.S.

NOTE. "In May 1911 I showed Mr. H. H. Knight a *Lepidozia* in perianth growing in a bog near Hir Ynys, Llanfrothen (48), which somewhat resembled *Lepidozia trichoclados* K. Müll. Mr. Knight has since re-examined it and found that it is *Lepidozia sylvatica* Evans, a plant mentioned in the Handbook in the Notes under *Lepidozia setacea*. I have this year re-discovered it in the same locality." D.A.J.