

MOSS EXCHANGE CLUB.

THE FIFTEENTH ANNUAL REPORT.

MARCH, 1910.

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1910.

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SECRETARY'S REPORT.

The Club continues in a flourishing state, as indicated by the increased number of members, the larger number of plants exchanged, the fewer number of mistakes in the naming of specimens, and the very satisfactory Balance Sheet.

The Club will be pleased to welcome the three new members—Mr. W. G. Travis, Mr. T. C. Thrupp, and Mr. Ed. A. Richards.

Mr. G. Stabler, who some 20 or 30 years ago did so much work among the Hepaticae, died early in January. He was never a member of the Club, but took much interest in it at the start, and read our Reports. I have also to record with regret, the death of one of our members, Mr. G. Holmes.

It will be noticed that the sales on the Census Catalogues of Mosses and Hepatics have exceeded the cost of production of those Catalogues, a very gratifying result to this department of the Club's work.

As two copies only of the Census Hepatic Catalogue are now left, and, as there are numerous additional records, and several new species and varieties recorded, it is clear that the next work of the Club should be the publication of a new Census Hepatic Catalogue. The special interleaved Catalogue that I keep for this purpose of additions is now crowded with new records well authenticated.

I shall be glad if members will keep in view, during the present year, this intention of publishing a new Census Hepatic Catalogue, and help all they can to make it as complete as possible, both by sending me well authenticated records of additions, and by sending me "Lists of Sources," so that we may attempt what was done so well in the Census Moss Catalogue in the "Sources of Records" and "Sources of V.C. Records."

I offer the thanks of the Club to Mr. H. H. Knight for the good work he has done as Distributer during the last two years. Mr. W. H. Burrell has kindly promised to act as Distributer during the next two years.

WM. INGHAM, *Hon. Secretary.*

YORK, 1st March, 1910.

MOSSES AND HEPATICS FOR DISTRIBUTION, 1910.

	MOSSES.		HEPATICS.		TOTAL.	
	Species and Vars.	Packets.	Species and Vars.	Packets.	Species and Vars.	Packets.
Miss E. Armitage ...	49	149	15	49	64	198
Mr. H. Beesley ...	20	70	4	17	24	87
Mr. W. H. Burtell ...	8	79	3	24	11	103
Mr. C. A. Cheetham ...	13	80	—	—	13	80
Mr. E. Cleminshaw ...	2	13	—	—	2	13
Mr. L. J. Cocks ...	11	55	4	18	15	73
Mr. K. H. Corstopline ...	10	37	—	—	10	37
Mr. H. Darton ...	19	66	—	—	19	66
Mr. H. N. Dixon ...	11	20	—	—	11	20
Mr. J. B. Duncan ...	30	92	13	58	43	150
Mr. E. J. Elliott ...	10	30	1	3	11	33
Mr. P. Ewing ...	1	4	7	34	8	38
Mr. A. R. Horwood ...	11	39	2	13	13	52
Mr. J. Hunter ...	8	25	1	3	9	28
Mr. W. Ingham ...	24	140	6	25	30	165
Mr. D. A. Jones ...	28	104	28	100	56	204
Mr. J. W. H. Johnson ...	7	25	1	6	8	31
Mr. H. H. Knight ...	31	123	16	75	47	198
Rev. Canon Lett ...	4	17	4	13	8	30
Rev. D. Lillie ...	7	36	4	22	11	58
Mr. St. John Marriott ...	3	4	—	—	3	4
Mr. R. H. Meldrum ...	2	10	—	—	2	10
Mr. W. E. Nicholson ...	10	58	7	50	17	108
Mr. S. J. Owen ...	18	81	16	72	34	153
Mr. E. A. Richards ...	15	22	—	—	15	22
Mr. T. C. Thrupp ...	2	32	—	—	2	32
Mr. W. G. Travis ...	5	29	18	80	23	109
Rev. C. H. Waddell ...	19	57	6	28	25	85
Mr. W. B. Waterfall ...	5	19	—	—	5	19
Mr. W. Watson ...	12	33	8	47	20	80
Mr. J. A. Wheldon ...	27	120	1	1	28	121
Mr. A. Wilson ...	10	52	—	—	10	52
Mr. J. C. Wilson ...	10	34	5	21	15	55
Mr. W. Young ...	40	145	18	88	58	233
	<u>483</u>	<u>1902</u>	<u>196</u>	<u>847</u>	<u>679</u>	<u>2749</u>

MOSSES.

Sphagnum papillosum Lindb. var. *sublaeve* Limpr., an extreme form approaching var. *laeve* W., Craig Ellachie, near Aviemore, Easternness (96^f), July /09, A.W. and J.A.W.

Sphagnum Austini Sull. var. *imbricatum* Lindb., Cwm Bychan, Merioneth (48), May /03, J.C.W.; also Geashill, King's Co., Oct. /03, H.W.L.

Sphagnum compactum DC. var. *imbricatum* W., Cairngorm, 3500 ft., Banff (94^a), July /09, A.W. and J.A.W.

Sphagnum molluscum Bruch forma *compacta* Warnst., Cairngorm, 3800 ft., Banff (94^a), July /09, A.W. and J.A.W.

Sphagnum subsecundum Nees var. *contortum* Schp., Greenfield (63), Jan. /09, W.W. "Is *S. rufescens* W.," J.A.W.

Sphagnum subsecundum Nees var. *obesum* Schp. (= *S. obesum* Warnst.), Black Pond, Esher, Surrey (17^a), April /09, L.J.C.

Sphagnum subsecundum Nees var. *viride* Boul. f. *squarrosula* Grav., Strensall Common, Yorks. (62), April /98, W.I. "Yes, a form of *S. inundatum* W., having very few pores in the branch leaves. Warnstorff describes the pores as very numerous or sometimes few, in the latter case agreeing with Mr. Ingham's examples. The stem leaves are characteristic," J.A.W.

Sphagnum contortum Schultz (= *S. taricinum* Spruce), The Curraghs, near Ballaugh, Isle of Man (71^a), Sept. /09, Hartley and J.A.W.; also Bog near Docker (60), Aug. /02, A.W.

Sphagnum teres Ångstr. var. *subsquarrosum* W., The Curraghs, near Ballaugh (71^a), Sept. /09, Hartley and J.A.W.

Sphagnum teres Ångstr. var. *imbricatum* W., Moaney Moor, near Ballasalla, Isle of Man (71^a), Sept. /09, Hartley and J.A. W.

Sphagnum squarrosum Pers., Hartshead, S. Lancs. (59), April /09, W.W. "Very poor and ill-developed specimens of var. *subsquarrosum*, W.; the same remarks applying to a specimen from Greenfield (63), Aug. /09," J.A.W.; also West End Common, Esher, Surrey (17), March /09, L.J.C. "Is var. *spectabile* W.," J.A.W.

Sphagnum squarrosum var. *subsquarrosum* Rus., The Curraghs, near Ballaugh, Isle of Man (71^a), Sept. /09, Hartley and J.A.W.

Sphagnum molle Sull., unusual colour, Eller Beck, Goathland (62), Sept. /09, W.I.

Sphagnum subnitens Russ. and W. var. *purpurascens* Schleipl., Wheeldale, Gonthland (62), April /08, W.I.

Sphagnum fuscum Klinggr. var. *fuscescens* Warnst., Glen Feshie, Easternness (96*), July /09, A.W. and J.A.W.

Sphagnum Russowii W., Scorriclete, Caithness (109), July /01, D.L. "Yes, var. *flavescens* W.," J.A.W.

Sphagnum Girgensohnii Russ., Black Hambleton, Northallerton (62), Aug. /08, W.I.

Sphagnum riparium Angstr., Cockerham Moss (60), Nov. /03, A.W.

Sphagnum cuspidatum Ehrh. var. *fabratum* Russ., Ulbster, Caithness (109), June /00, D.L.

Sphagnum cuspidatum var. *plumosum* Nees and Hornsch., Killinster Moss, Caithness (109), Aug. /09, D.L.; also forma *serrulatum* Schleipl., Whitmoor Common, Worplesdon, Surrey (17*), Nov. /09, L.J.C.

Andreaea petrophila Ehrh. var. *acuminata* B. & S., at 3700 ft. and var. *gracilis* B. & S. at 3800 ft. on Ben McDhui, Banff (94*), July, /09, A.W. and J.A.W.

Andreaea Hartmani Thed., Storhatten, Romsdal, Norway, Aug. /89, W.B.W.

Andreaea alpina Smith, Coire na t'Sneachda, Cairngorm, Easternness (96*), and Ben McDhui, at 3000 ft., Banff (94*), July /09, A.W. and J.A.W.

Andreaea Blyttii Schp., Storhatten, Romsdal, Norway, Aug. /89, W.B.W.

Catharinaea angustata Brid. var. *rhysophylla* Dixon, Laughton Woods, E. Sussex (14*), Jan. /10, W.E.N. See Journal of Botany, June 1909, p. 212.

Oligotrichum hercynicum Lam., near Teifi lakes, Cardiganshire (16*), July /08, H.H.K.

Polytrichum nanum Neck., 4550 ft., Poizo Pass, Madeira, Jan. /09, E.A.

Polytrichum nanum var. *longisetum* Haupe, Bramfield Woods, Hertford (20), Jan. /09, H.D.

Polytrichum aboides Hedw., Hillside above Monte, 3000 ft. Madeira, Jan. /09, E.A.

Polytrichum aboides var. *Dicksoni* Wallm., Lindfield, Sussex, Dec. /09, T.C.T. "Type only. The variety has very much shorter setae as a reference to Braithwaite's figure in Brit. Moss Flora will show," R.H.M.

Polytrichum gracile Dicks., Gors Goch Glan Teifi, Tregaron (16*), July /08, H.H.K.

Polytrichum commune L. var. *perigoniale* B. & S., Strensall Common, Yorks. (62), Aug. /07, W.I.

Diphyscium foliosum Mohr var. *acutifolium* Lindb., Cautley Spout, Yorks. (65*), Feb. /09, C.A.C.

Pleuridium axillare Lindb., Hertford Heath (20), Sept. /08, H.D.

Ditrichum zonatum Limpr., The Glyders, Carnarvon (49), Oct. /09, D.A.J.

Ditrichum zonatum var. *scabrifolium* Dixon, Ben Nevis (97*), Aug. /09, D.A.J.

Swartzia montana Lindb., Sluggan Bridge, Easternness (96*), Sept. /09, E.A.

Seligeria Doniana C. M., Lyncedor Wood, Foy, Herefordshire, May /09, E.A.; also Allt au Socaich, Killin (88), Oct. /09, R.H.C.

Brachyodus trichoides Fühnr., on damp sandstone, Calder Valley, near Garstang, W. Lanes. (60), Dec. /09, A.W.

Rhabdoweisia junca B. & S., Traprain Law, Haddington (82*), June /08, coll. J. McAndrew, comm. W.Y.

Rhabdoweisia crenulata Jameson, Moelwyn Bach, Merioneth (48), May /04, S.J.O.

Oreas Martiana Brid., above Glocknerhaus, Gross Glockner, Carinthia, alt. 7500 ft., Aug. /04, leg. W.F.N. and H.N.D., comm. H.N.D.

Cynodontium polycarpum Schp., typical, and form approaching *C. lacivete* Grebe, Croesor (48), Oct., Nov. /09, S.J.O.

Dichodontium pellucidum Schp. var. *compactum* Schp.? Derriagky, co. Antrim, 1909, C.H.W. "The plant is too robust and the leaves as a rule too long for var. *compactum*. I make it a form of type only," R.H.M.

Dicranella heteromalla Schp., forma, Grafenmatt, near the Feldberg, Baden, June /07, W.H.B. "Mr. Burrell suggests Herzog's var. *falcata*. Herzog's description as quoted by Mr. Burrell contains no character to separate var. *falcata* from var. *interrupta* as described in the Students' Handbook, and I should name this var. *interrupta*," R.H.M.

Dicranella crispa Schp., Ardeonaig, Perthshire (88), Aug. /09, J.H.

Dicranella rufescens Schp., Llanfrothen (48), Oct. /09, S.J.O.

Dicranella Schreberi Schp. var. *glata* Schp., Stanley Pontlarge, E. Gloster (33rd), July /09, H.H.K. "Robust enough for the variety, but the areolation is not quite up to the best marked forms. In the handbook, Mr. Dixon remarks on the difficulty in some cases of drawing the line between type and variety, and I do not in this case demur to Mr. Knight's determination," R.H.M.

Dicranoweisia crispula Lindb., Feldberg, Baden, June /07, W.H.B.

Campylopus subulatus Schp., Croesor (48), Nov. /09, S.J.O.; also Moncreiffe Hill (88), Oct. /04, R.H.M.

Campylopus Schwarzii Schp., New Galloway (73), May /93, coll. J. McAndrew, comm. W.Y.

Campylopus flexuosus Brid. var. *paradoxus* Husn., New Galloway (73), May /93, coll. J. McAndrew, comm. W.Y. "I think this would be more safely labelled as a form of type," R.H.M.

Campylopus flexuosus var. *zonatus* Limpr., Tyn-y-groes, Merioneth, May /03, D.A.J. and Sept. /04, J.B.D.

Campylopus setifolius Wils., Tyn-y-groes (48), Sept. /04, J.B.D.

Campylopus atrovirens De Not. var. *gracilis* Dixon, Maentwrog Valley (48), Nov. /09, S.J.O.; also Cwm Mawr (48), Sept. /04, J.B.D., and Cautley Spout, Yorks. (63rd), Aug. /09. "New to Yorkshire," W.I. "I consider Mr. Owen's specimens as good *gracilis*. Those of Messrs. Duncan and Ingham connect the variety with the type, though no doubt nearer variety than type," R.H.M.

Campylopus polytrichoides De Not., 2000 ft., Monte, Madeira, Jan. /09, E.A.

Campylopus brevipilus B. & S., Whitmoor Common, Surrey (17th), Nov. /09, Ll.J.C.

Dicranodontium longirostre B. & S., Killin (88), July /85, coll. J. McAndrew, comm. W.Y.

Dicranum fulvellum Smith, Ceann-Mor, S. Aberdeen (92), July /09, E.A.R.

Dicranum falcatum Hedw., near Loch Kander, S. Aberdeen (92), July /09, E.A.R.

Dicranum schisti Lindb., Ben Lawers, Aug. /09, H.H.K.

Dicranum Starkei Weh. & Mohr, Ben More (88), Aug. /03; also Ben Laoigh, July /08, W.Y.

Dicranum undulatum Ehrh., in Spruce Fir Wood, Market Weighton, Yorks. (61), May /01, W.I.; also Oxshott Heath, Surrey (17), Oct. /09, Ll.J.C.

Dicranum spurium Hedw., Strensall Common, Yorks. (62), July /72, leg. M. B. Slater, comm. H.B.

Dicranum elatum Lindb., Karelia, par. Suistamo, July '76, leg. V. F. Brotherus, comm. C.H.W.

Dicranum Bergeri Bland., c. fr. Killinster Moss, Caithness (109*), Aug. '09, D.L.

Dicranum Bonjeani De Not. var. *calcareum* Braithw., Warthill, Yorks. (62), June '08, W.I.

Dicranum scoparium Hedw. var. *orthophyllum* Brid., Sluggan Bridge and Broomhill (96), and Ben More, Elgin (95), Sept. '09, E.A. "I make the specimens from Ben More, Elgin, *Dicranum fuscescens*," R.H.M.

Dicranum scoparium var. *turfosum* Milda, Greygarth Fell. at 2000 ft., W. Lanes. (60), July '06, A.W.

Dicranum Muchlenbeckii B. & S., Karelia, par. Suistamo, ad rmpes siccas, July '76, leg. V. F. Brotherus, comm. C.H.W.

Dicranum fuscescens Turn., Clougha. W. Lanes. (60), July '09, W.G.T.

Dicranum fuscescens var. *falcifolium* Braithw., on rotten wood, Grafenmatt, near the Feldberg, Baden, June '07, W.H.B.; also Clougha Pike (60), Dec. '08, J.A.W.; and Pateley Bridge, Yorks. (64), Jan. '09, C.A.C.

Dicranum Scottianum Turn., Colvend, Dalbeattie, Ayr (75*), July '83, coll. J. McAndrew, comm. W.Y.

Dicranum viride Lindb., Firs, Ischl, Salzkammergut, Austria, Aug. '08, leg. W.E.N. and H.N.D., comm. H.N.D.

Dicranum Sauteri Schp., Beech roots above Gasau See, Upper Austria, leg. W.E.N. and H.N.D., comm. H.N.D.

Dicranum uncinatum C.M., Slieve More, Achil Island, Mayo, June '09, C.H.W.; also Glen Stron-a-Chreagain, near Fort William (97), and Glencoe (98), Aug. '09, D.A.I.

Dicranum asperulum Mitt., Ben More (88), Aug. '09, J.B.D. and H.H.K., also "with hair points," D.A.J. "A number of leaves from some cause or other have to a varying extent lost their chlorophyll, but it seems to me somewhat misleading to label them 'with hair points,'" R.H.M.

Leucobryum candidum Hampe, near Tangariro, New Zealand, March '02, leg. J. Kay, comm. H.B.

Fissidens exilis Hedw., Leckhampton, near Cheltenham (33), Dec. '09, H.H.K.

Fissidens viridulus Wahl., Anstey Lane, Leicester (55), Feb. '07, A.R.H.

Fissidens atlanticus Ren. and Card., 2000 ft., Monte, Madeira, Jan. /09, E.A. "New to Madeira."

Fissidens serrulatus Brid., 1800 ft., Monte, Madeira, Jan. /09, E.A.

Grimmia maritima Turn., Penrhyn-deudraeth (48), Nov. /09, S.J.O.

Grimmia trichophylla Grev. var. *meridionalis* Schp., 2000 ft., Monte, Madeira, Jan. /09, E.A. "New to Madeira."

Grimmia azorica Ren. and Card., 3000 ft., Curral das Freitas, Madeira, Feb. /09, E.A. "New to Madeira."

Grimmia decipiens Lindb., Traprain Law (82), Aug. /08, coll. J. McAndrew, comm. W.Y.

Grimmia Hartmani Schp., shore of Loch Tay (88), July /85, and shore of Loch Ken (73*), Oct. /01, coll. J. McAndrew, comm. W.Y. "The Loch Tay specimens are correct, but those from Loch Ken I make *G. retracta*. I have, however, a specimen of *G. Hartmani*, from Loch Ken, gathered by Mr. McAndrew," R.H.M.

Grimmia retracta Stirton, on rocks Loch Tay (88), Oct. /09, R.H.C.

Grimmia patens B. & S., rocks above Lock Avon, Ben Mc Dhui, Banff (94*), July /09, A.W. and J.A.W.

Grimmia commutata Hüb., New Galloway (73), April /92, coll. J. McAndrew, comm. W.Y.

Racomitrium ellipticum B. & S., Cader Idris (48), April /09, D.A.J.

Racomitrium protensum Braun, Ord Bain, Easternness (96), Sept. /09, E.A. "This is *Grimmia patens*," R.H.M.

Racomitrium heterostichum Brid. var. *alopecurum* Hüb., Cairngorm, at 3800 ft., Banff (94*), and Sgoran Dubh, at 3500 ft., Easternness (96*), July /09, A.W. and J.A.W.

Racomitrium heterostichum Brid. var. *gracilescens* B. & S., Am Binnein (88), July /08, W.Y.; also Cairngorm, at 4000 ft., Banff (94*), July /09, A.W. and J.A.W.

Ptychomitrium nigricans Schp., Curral dos Romeiros, Madeira, Jan. /09, E.A.

Hedwigia ciliata Hedw. var. *striata* Wils., Shore of Llyn Gaf, Cader Idris (48), May /09, D.A.J.; also New Galloway (73), July /07, leg. J. McAndrew, comm. J.H.

Hedwigia imberbis Spruce, Knockdolian, Ayrshire (75*), Oct. /09, E.A.

Pottia intermedia Fühnr., Rodborough Fields, Stroud (34), Oct. /02, E.J.E.

Pottia lanceolata C. M., near Edinburgh (83), Feb. /07, coll. J. McAndrew, comm. W.Y.

Tortula pusilla Mitt., Stoneshy, Leicester (55), Dec. /07. A.R.H. : also Bishop's Cleeve and Withington, E. Gloster (33), Jan. /10, H.H.K.

Tortula lamellata Lindb., Buckland, E. Gloster (33), Jan. /10, H.H.K.

Tortula ceruua Lindb., near Doncaster, Yorks. (63*), Nov. /09, T.C.T.

Tortula suberecta Drumm., St. Moritz, Switzerland, Sept. /09, W.B.W.

Tortula Valliana Wils., near Newent, W. Gloster (34*), April /09, H.H.K.

Tortula angustata Wils., Scraptoft, Leicester (55), March /05, A.R.H.

Tortula intermedia Berk., Priddy, Somerset (6), May /06, H.D.

Tortula papillosa Wils., Oxshott, Surrey (17*), Jan. /09, L.L.C.

Barbula rubella Mitt. var. *dentata* Schp., on wet rocks, Ben Lawers (88), Aug. /09, H.H.K. "I should have no hesitation in referring this plant and another from Craig-an-Lochain, Perthshire, to the var. *dentata* as suggested by the sender. The margins of the leaves are much less revolute than in the type and strongly dentate above. The variety is somewhat variable in general facies, and in some forms the leaves are longer and closer. Limpricht and other authorities following Venturi, have elevated this variety to the rank of a species under the name of *Didymodon alpinus* Vent." W.E.N.

Barbula fallax Hedw. var. *brevifolia* Schultz, c.fr., Strensall Common, Yorks. (62), April /07, W.I.

Barbula Nicholsoni Culmann, Houghton Bridge, Amberley, W. Sussex (13), Oct. /08, W.E.N.

Didymodon validus Limpr., Rock ledges, Ischl, Salzkammergut, Austria, Aug. /08, leg. W.E.N. and H.N.D., comm. H.N.D.

Didymodon rufus Lor., Zaythal, Sulden, Tirol, alt. 3500 ft., Aug. /04, leg. W.E.N. and H.N.D., comm. H.N.D.

Barbula cylindrica Schp., c.fr., New Galloway (73), Sept. /85, coll. J. McAndrew, comm. W.Y.

Barbula gracilis Schwaeg., Kuaresbro', Yorks. (64), March /09, C.A.C., and Tilgate Forest, Sussex (14), Sept. /09, W.E.N.

Barbula Hornschuchiana Schultz, Gullane Links (82), April /07, coll. J. McAndrew, comm. W.Y.

Barbula revoluta Brid., Langness, Isle of Man (71), June /07, H.B.

Barbula convoluta Hedw. var. *Sardoa* B. & S., Gannicox, Stroud, E. Gloster (33*), Jan. /10, E.J.E.

Weisia tortilis C.M., Painswick Hill, E. Gloucester (33), April /09, H.H.K. "As suggested by Mr. Knight, it is difficult to separate this plant from *W. crispata*, except by the complete absence of a peristome. It differs from typical *W. tortilis* in being smaller in all its parts, and in growing more closely adherent to the soil," W.E.N.

Weisia crispata C.M., Cranham Common, E. Gloucester (33*), April /09, H.H.K.; also Great Whernside, Yorks. (61), Jan. /09, C.A.C. "The latter plant is probably correctly identified, but several tufts have no capsules, and in all cases there is nothing beyond young setae present, so the material is quite inadequate to represent the species," W.E.N.

Weisia viridula Hedw. var. *densifolia* B. & S., Croesor (48), Nov. /09, S.J.O.

Weisia mucronata B. & S., Quarry at Ravelston, Edinburgh (83), Jan. /05, coll. J. McAndrew, comm. W.Y.

Weisia tenuis C.M., Bourton-on-the-Water, E. Gloucester (33*), June /09, H.H.K.

Weisia calcarea C.M., Duffanaghy, N. Douegal (35*), April /09, J.H.; also shady wall, Funchal, Madeira, Jan. /09, E.A. New to Madeira.

Weisia calcarea var. *mutica* Boul., Wall at Santo Antonio, Madeira, March /09, E.A. New to Madeira.

Weisia rupestris C.M., Taren'r Esgob, Brecknockshire (42), July /09, E.A.

Weisia curvirostris C.M., Ardeonaig, Perthshire, August /09, J.H.; also Auchmore Burn, Killiu, Sept. /09, R.H.C.

Weisia curvirostris var. *cataractarum* Schp., Dripping rock above Pierrefitte, Htes. Pyrénées, Aug. /02, H.N.D.

Eucladium verticillatum B. & S. var. *angustifolium* Jur., Curral dos Romeiros, Madeira, Jan. /09, E.A.

Chechelia gigantea Boul., Engstligen Falls, Adelboden, Switzerland, July /06, H.N.D.

Trichostomum crispulum Bruch, Shurdington Hill near Cheltenham (33*), Dec. /09, H.H.K.

Trichostomum crispulum var. *elatum* Schp., Newborough, Anglesey (52*), Aug. /08, D.A.J.

Trichostomum crispulum var. *nigro-viride* Braithw., Minerva Mt. near Wrexham (50), Aug. /08, D.A.J.; also Settle, Malham, Yorks. (64), Jan. /09, C.A.C.

Trichostomum crispulum var. *breccifolium* B. & S., Taren 'r Esgob, Brecknockshire (42^b), July /09, E.A. "Although this is not quite the same form as the plant from Bredhurst distributed by the late Mr. Marten, it may I think be brought under this variety. It is very difficult to fix the limits of the varieties of this variable species. Limpricht admits no varieties of *T. crispulum* except *viridulum* which, to adopt an Hibernicism, he makes into a species." W.E.N.

Trichostomum mutabile Bruch var. *littorale* Bruch, Arncliffe Wood, Goathland (62), Aug. /07, W.I. "Note leaf variation."

Trichostomum mutabile var. *cophocarpum* Schp., Cader Idris (48), June /09, leg. D.A.J., comm. J.C.W.

Trichostomum tenuirostre Lindb., c.fr., Croesor (48), Nov. /09, S.J.O.

Trichostomum flavovirens Bruch, Mochras, Harlech (48), Sept. /07, D.A.J.

Trichostomum fragile Dixon, Durmet Links, Caithness (109), Nov. /04, D.L.

Trichostomum Warnstorffii Limpr., wet rocks below Rheinfalls, Switzerland, Aug. /08, leg. W.E.N. and H.N.D., comm. H.N.D.

Cinclidotus Brebissoni Husn., Trees by the Mole, Esher, Surrey (17), Aug. /09, Ll.J.C.

Anectangium compactum Schwaeg. var. *pellucidum* Dixon, Crom Allt, Tyndrum, Perthshire (88), July /09, H.H.K.

Molendoa Sendtneriana Limpr., Gossnitz Fall, Heiligenblut, Carinthia, Aug. /04, leg. W.E.N. and H.N.D., comm. H.N.D.

Amphoridium curvipes (C.M.) Jaeg., 2,000 ft., Riheira de Santa Luzia, Madeira, Feb. /09, E.A.

Zygodon Mougeotii B. & S., near Barmouth (48), Aug. /01, E.J.E.; also c.fr., Feldberg, Baden, June /07, W.H.B.

Zygodon viridissimus R. Brown, on walls, Woodmancote, Gloucestershire (33), Dec. /09, H.H.K. "This plant is perhaps slightly more robust than the ordinary typical form growing on trees, but the leaves are recurved, when moist, in much the same way, and it only shows a slight approach to the var. *rupestris*." W.E.N.

Zygodon conoides Hook. & Tayl., New Galloway (73), Dec. /83, coll. J. McAndrew, comm. W.Y.

Ulota Ludwigii Bridl., Barenthal, Baden, June /07, W.H.B.

Ulota Drummondii Bridl., Glenbeg, Elgin (95), Sept. /09, E.A.; also on Alders, Glen Foshie, Easternness (96^b), July /09, A.W. and J.A.W.

Ulota crispa Brid. var. *intermedia* Braithw., New Galloway (73), Sept. /92, and var. *crispula* Hamm., New Galloway, Aug. /84, coll. J. McAndrew, comm. W.Y. "Some of the capsules are fairly well marked examples of this variety. Others are difficult to distinguish from those of the plant sent as *U. crispa* var. *intermedia*, from the same locality," W.E.N.

Ulota calcescens Schp., on Laurels, 4000 ft., Poizo Pass, Madeira, Feb. /09, E.A.

Orthotrichum rupestre Schleich., shore of Loch Lomond (86), May /06, coll. J. McAndrew, comm. W.Y.

Orthotrichum anomalum Hedw., Himmelreich, Baden, June /07, W.H.B.

Orthotrichum speciosum Nees, Findlarig Burn, Elgin (95^a), Sept. /09, E.A.

Orthotrichum affine Schrad. var. *ricale* Wils., New Galloway (73), coll. J. McAndrew, comm. W.Y.

Orthotrichum riculare Turn., Rocks in R. Severn, near Arley, Worcs., July /07, C.H.W.; also New Galloway (73), May /97, coll. J. McAndrew, comm. W.Y.

Orthotrichum stramineum Hornsch., New Galloway (73), May /95, coll. J. McAndrew, comm. W.Y.

Orthotrichum pulchellum Smith, Stirkoke Plantation, Caithness (109), May /09, D.L.; also Scarborough (62), May /04, J.W.H.J.; and Black Den, Arbroath (90), March /09, R.H.C.

Splachnum amplaceum L., Wasdale Moor, Shap, Westmorland (69), Aug. /09, J.A.W.

Tayloria lingulata Lindb., Meall nan Tarmachan (88), Oct. /09, R.H.C.

Haplodontium Notarisii (Mitt.) Broth., 1,500 ft. Curral dos Romeiros, and 3,000 ft. Ribeira de Santa Luzia, Madeira, Jan. /09, E.A.

Leptobryum pyriforme Wils., Coatham Marshes, Yorks. (62), June /01, W.L. "This seems to be a form just intermediate between type and var. *minus*. The cilia are shorter than usual but still distinctly appendiculate, and the outer peristome is shorter and paler than in the type, thus showing approach to var. *minus*. After seeing this specimen I can fully appreciate Mr. Dixon's remarks at foot of page 330 of the Handbook," J.A.W.

Webera polymorpha Schp., Ben More (88), July /08, W.Y. "Is *W. polymorpha* specifically distinct from *W. elongata*? The plants sent are variable in appearance. In some the neck is as long or longer than the capsule, there are occasionally cilia which are rather more than rudimentary, and the external peristome is pallid. I

should consider this an alpine state of *W. elongata*, which seems to differ from the type mainly in habit," J.A.W. "I agree with Mr. Wheldon that this must be referred to *W. elongata*. The differences between the two species appear very slight on paper, but in reality they are I think distinct enough; the colour of the peristome is very different in *W. polymorpha*. It appears to be a rare species," H.N.D.

Webera elongata Schwæg., Corrie Ceanmor (92), July /04, W.Y.; also Cwm Mawr, Merioneth (48), Sept. /04, J.B.D.

Webera longicolla Hedw., Domaas, Gudbrunsdal, Norway, Aug. /89, W.B.W.

Funaria Templetoni Sm., New Galloway (73), coll. J. McAndrew, comm. W.Y.

Funaria hygrometrica Sibth., Wall at Camara de Lobas, Madeira, Feb. /09, E.A.

Paludella squarrosa Brid., Jerkin, Dovrefjeld, Norway, Aug. /09, leg. W. West and J.W.H.J.

Bartramia stricta Brid., Cural dos Romeiros, Madeira, Jan. /09, E.A.

Bartramia pomiformis Hedw. var. *crispa* B. & S., Cader Idris (48), April /09, S.J.O.; also Rawtheydale (65), Feb. /09, C.A.C.

Bartramia Halleriana Hedw., Glenridding, Westmoreland (68), April /08, J.W.H.J.

Philonotis fontana Brid. var. *ampliretis* Dixon, Brunn, Staley, Cheshire (58), June /09, W.W. "Not good *ampliretis*. The lax leaves, here and there homomalous, and general habit suggest *P. caespitosa* Wils., though I find it impossible to separate this in the absence of male bracts. It is too robust for var. *ampliretis*, nor is the cell structure that of *ampliretis*," J.A.W.

Philonotis tomentella Mol., Dovrefjeld, Norway, July /08, P.E.

Philonotis adpressa Ferg., Ben Nevis (97) and Ben Douran (98*), July /09, H.H.K.

Breutelia arcuata Schp., c.fr., Mynydd Moel, Dolgelly (48), April /09, D.A.J.

Webera cruda Schwæg., Sluggan Bridge, Easternness (96), Sept. /09, E.A.

Webera prolifera Bryhn. Arbrook Common, Fisher, Surrey (17*), Sept. /09, L.L.C. "I agree with Mr. Cock's suggestion, although the bulbils do not match well those plants sent out by Prof. Barker under this name. But they are much less fusiform when fully ripe than when immature. When collected early in the year, the bulbils are long and narrow, as they ripen they broaden, until finally, in August, they approach in shape those of *Webera erecta*, but are much more numerous and not single in the axils," J.A.W.

Webera Ludwigii Schp., Rocks above Lock Kander, S. Aberdeen (92), July /09, E.A.R.; also Ben McDhui, at 3800 ft., Banff (91*), July /09, A.W. and J.A.W.

Webera Ludwigii, ? near var. *latifolia* Schp., Rocks at head of Glen Eunach, Easternness (96), July /09, A.W. and J.A.W. "Certainly approaching the variety very nearly, but perhaps best retained as an approach. The leaves vary considerably at different stages of growth; here and there they might well belong to var. *latifolia*. I do not think the varietal characters in that are very stable, and probably they are greatly due to the direct response to environment, showing a form rather than a good variety. This specimen illustrates that view very well," H.N.D.

Webera commutata Schp., Ben Lawers (88), Aug. /09, leg. D.A.J., comm. J.C.W.

Webera Tozeri Schp., 2000 ft., Fonte, Monte, Madeira, Feb. /09, E.A.

Bryum filiforme Dicks. var. *juliforme* Dixon (= *Anomobryum juliforme* Solms), Etruria, Lurigliani, April /86, and in insula Giglio, Archipel Etruria, April /89, leg. A. Bottini, comm. C.H.W.

Bryum pendulum Schp., sandy fields near Banks, S. Lancs. (59), May /09, W.G.T.

Bryum pallens Sw. var. *speciosum* Schp., Ben Lawers (88), Aug. /02, D.A.J.

Bryum Duvalii Voit., Y Foel Frás, near Aber (49*), Oct. /09, D.A.J. "New to Wales."

Bryum bimum Schreb., Rainford Moss, S. Lancs. (59), July /03, J.A.W.

Bryum provinciale Philib., Chalk Downs, Lewes, March /09, W.E.N.

Bryum canariense Schwaeg., Ribeira Joao Gomes, Curral dos Romeiros, and Curral das Freitas, Madeira, Jan. /09, E.A.

Bryum capillare L. var. *elegans* Braithw., Craig Chailleach (88), Aug. /09, J.H.

Bryum obconicum Hornsch., on wall above Muckross on Manger-ton Road, Kerry, June /85, leg. S. A. Stewart, comm. C. H.W.

Bryum platyloma Schwaeg., Curral dos Romeiros, and Ribeira de Santa Luzia, Madeira, Jan. /09, E.A.

Bryum rubens Mitt., Clearing in Lord's Wood, Doward, Herefordshire (36), May /09, leg. Rev. A. Ley and C. H. Brinstead, comm. E.A. "I always approach the subject of *B. rubens* with some diffidence, but from the narrow leaves with narrow cells and no distinguishable border in those which I examined, I should be inclined to refer this plant to *B. erythrocarpum*," W.E.N.

Bryum murale Wils., Wall top, Wigmore, Herefordshire (36), March /07, E.A.; also Oxshott, Surrey (17), May /09, L.J.C.

Bryum gemmiparum De Not., Monte, Madeira, Jan. /09, E.A.

Bryum roscum Schreb., c.fr., Harlech Sandhills, Nov. /09, D.A.J.

Mnium affine Bland., King's Norton, Leics. (55), Sept. /09, A.R.H.

Mnium rostratum Schrad., Hungarton, Leics. (55), May /09, A.R.H.

Mnium orthorhynchum B. & S., Hubberholme, Yorks. (64), Jan. /10, C.A.C.

Mnium lycopodioides Schwaeg., Ben Lawers (88), June /09, W.E.N.; also Cam Chreag, Killin (88), Aug. /09, J.B.D. and D.A.J.

Mnium punctatum L. var. *elatum* Schp., Ben Nevis (97*), Aug. /09, D.A.J.

Cinclidium stygium Swartz, Damgate, Acle, Norfolk (27*), Jan. /09, leg. Miss M. Pallis, comm. J.W.H.J.

Fontinalis antipyretica L. var. *gigantea* Sull., between Raughan Park and Stewartstown, co. Tyrone (36*), May /07, H.W.L.

Fontinalis antipyretica var. *gracilis* Schp., Malham Cove, Yorks. (64), April /09, C.A.C.

Dicelasma falcatum Myr., Teiches, Giant Mountains, Germany, Aug. /85, leg. McNair, comm. H.B.

Cryphaea heteromalla Mohr, New Galloway (73), Aug. /97, coll. J. McAndrew, comm. W.Y.

Neckera pumila Hedw. var. *Philippeana* Milde, Llanfrothen (48), Oct. /09, S.J.●.

Lencodon sciuroides Schwaeg. var. *morensis* B. & S., New Galloway (73), Jan. /99, coll. J. McAndrew, comm. W.Y.

Helicodontium pulvinatum Lindb., New Galloway (73), June /05, coll. J. McAndrew, comm. W.Y.

Antitrichia curtipendula Brid., on *Vaccinium madrense*, 4550 ft., Poiz● Pass, Madeira, Jan. /09, E.A.

Myurella julacea B. & S., Ingleboro', Yorks. (64), Jan. /08, C.A.C.

Myurella apiculata B. & S., Ben Lawers (88), Aug. /08, J.B.D.

Leskea nervosa Myrin., with gemmiform axillary branchlets, Diablerets, Switzerland, July /09, E.C.

Leptodon Smithii Mohr, Southpool, S. Devon (3), May /09, H.B.

Heterocladium heteropterum B. & S. var. *fallax* Milde, Nantool Ravine, Llanbedr (48), June /02, D.A.J.

Pseudoleskea atrovirens B. & S., c.fr., Diablerets, Switzerland. July /09, E.C.

Myurium Hebridarum Schp., Barra, Hebrides (110), coll. P.E., comm. W.Y.

Pylaisia polyantha B. & S., King's Norton, Leicester (55), Feb. /05, A.R.H.; also Market Weighton, Yorks. (61), April /09, C.A.C.

Orthothecium intricatum B. & S., near Glen Maye, Isle of Man (71*), May /06, H.B.

Orthothecium chryseum Schp., Dovre, Kongsvold, Norvegia, leg. Kindberg, Herb. A. le Jolis, comm. C.H.W.

Homalothecium Philippeanum Spruce, In Jurasso, in sylvaticis neocomicatis, leg. W. P. Schimper, comm. H.B.

Camptothecium nitens Schreb., Terrington Carr, Yorks. (62), leg. M. B. Slater, comm. H.B.

Brachythecium glareosum B. & S., Welsh Bicknor, Herefordshire (36), July /09, E.A.; also Airton, Malham, Yorks. (64), May /09, C.A.C.; and c.fr. Pen Wood, near Stroud (34), Jan. /07, E.J.E.

Brachythecium rutabulum B. & S. var. *robustum* B. & S., Welsh Bicknor Woods, Herefordshire (36), July /09, E.A. "I consider this quite ordinary *B. rutabulum*. The variety is much more robust with dense foliation and larger leaves." W.I.

Brachythecium rivulare B. & S., above Caminho do Meio, 2000 ft., Madeira, Jan. /09, E.A.

Brachythecium reflexum B. & S., St. Wilhelmsthal, Baden, June /08, W.H.B.; also Ben Lawers (88), July /08, E.A.R. "This, to my mind, is too robust for *B. reflexum*, the leaves are too large, and the nerve too short. I think its proper name is *B. Starkei*." W.I.

Brachythecium caespitosum Dixon, New Galloway (73), July /07, coll. J. McAndrew, comm. J.H. and W.Y.

Brachythecium illecebrum De Not., c.fr., Monte, Madeira, Jan. /09, E.A.

Eurhynchium crassinerveum B. & S., Mackhouse Wood, Stroud (33), July /09, G. Holmes.

Eurhynchium Swartzii Hobk., Monte, Madeira, Jan. /09, E.A.

Eurhynchium curvisetum Husn., damp bricks, Alfriston, E. Sussex (14), Jan. /05, W.E.N.

Eurhynchium tenellum Mildw., Bennane Head, Ayrshire (75), Oct. /09, E.A.

Eurhynchium myosuroides Schp. var. *brachythecioides* Dixon, wall near Grantown-on-Spey, Elgin (95*), Sept. /09, E.A.

Eurhynchium circinatum B. & S., Monte, Madeira, Jan. /09, B.A.

Eurhynchium rusciforme Milde var. *alopeuroides* Brid., Bed of River, Tanygrisiau (48), June /04, D.A.J.

Eurhynchium murale Milde var. *complanatum* B. & S., Derby Bar, Yorks. (63), April /09, W.W.

Platylostegium Wolwitschii Schp., in silvis ad arboros. Pissa, Italy, Jan. /88, leg. Bottini, comm. C.H.W.

Senatophyllum micans Braithw. var. *padense* Herzog, Nanteol Ravine, Llanbodr, Merioneth (48²), May /09, D.A.J. and H.H.K. "Tufts flatly adpressed, delicate, with an oily sheen, bright green. Stems prostrate attached to the underlying rock by a few stout rhizoids, irregularly branched. Branches almost parallel to the stem and prostrate, so that the tufts appear flatly spreading. Plants 1—3 cm. long. Leaves of the stem and branches similar, spreading, concave, loosely squamose, about 6—8 mm. long, 3—4 mm. broad, ovate-lanceolate from a narrow base, apex more or less suddenly acuminate, very concave, occasionally with a few plicae, margin sharply dentate-serrate from the apex to the middle, nerve double, often very distinct reaching to the middle of the leaf, very rarely hardly distinct, green. Cells generally very long and narrowly prosenchymatous, almost vermicular .056—064 mm. long, .006 mm. wide, .035—40 mm. long, .006 broad at the apex, shorter at the base; alar cells wide, distinct from the rest .32 x .3 mm, hyaline or yellowish quadrate and rectangular. Fruit unknown. Plants larger in all their parts than those examples (of the type) with which I have compared them." Translated from the Latin description in *Rev. Bryologique*, 1901, p. 76.

Platyothecium depressum Dixon, New Galloway (73), March /97, coll. J. McAndrew, comm. W.Y.

Platyothecium denticulatum B. & S. var. *majas* Boul., below Skiddaw, Cumberland (70²), Aug. 03, H.B.

Platyothecium denticulatum var. *obtusifolium* Hook. & Tayl., an extreme form approaching *Hypnum Kindermannii* Stirton, teste Dixon, damp slope below granite cliffs, Loch Coire an Lochain at 3,300 ft., Braeriach, Easternness (96²), July /09, A.W. and J.A.W.

Amblystegium Sprucei B. & S., Ardenaig, Mid Perth (88), Aug. /09, S.L.O.

Amblystegium compactum Aust., in cave, Warton Crag, Carnforth, Lancs. (60), July /09, H.B. "This is clearly *Eurhynchium pumilum*," W.I.

Amblystegium serpens B. & S. var. *salinum* Carr., Gullane Links, Haddington (82²), Aug. /00, leg. J. McAndrew and J.B.D.

Amblystegium Juratzkanum Schp., Bardsley, S. Lanes., May /09, and Frome, Somerset, Jan. /10, W.W. "Both these are *Amb. serpens*. Note the quadrate cells at the basal margins." W.I.

Amblystegium Kochii B. & S.? Marshy ground by the side of a pool, Walton Junction, Liverpool (59), May /09, W.G.T. "This should come under *A. Juratzkanum* from its small size, leaf shape, and cell structure." W.I.

Amblystegium irriguum B. & S., Greenfield, Yorks. (63), Sept. /09, W.W. "One specimen is correct, the other is *A. filicinum*. Comparison of the leaves of the two will show the difference," W.I.

Amblystegium fluriale B. & S., R. Mint, Westmorland, May /86, C.H.W.

Amblystegium filicinum De Not. var. *Whiteheadii* Wheldon, Freshfields, S. Lanes. (59), April /09, W.G.T.

Amblystegium curvicaule Lindb., Cam Chreag, Killin (88), Aug. /09, J.B.D. and D.A.J.

Hypnum riparium L., var. *longifolium* Schp., Monte, Madeira, Jan. /09, E.A.

Hypnum polygamum Schp., polyandrous form, Naburn, Yorks. (61), Oct. /01, W.I.

Hypnum polygamum var. *stagnatum* Wils., Rainford Junction, S. Lanes. (59), July /03, J.A.W.; also Coleman's Heath, Ashdown Forest, Sussex (14), May /00, W.F.N.

Hypnum polygamum? var. *minus* Schp., Damp sand dunes, near Ainsdale, S. Lanes. (59), Dec. /08, J.A.W. "The plant sent last year and referred by the Referee to 'immature' type. Can a moss be called immature which shows a crop of old capsules and a second crop of young ones just appearing?" J.A.W.

"I have a distinct recollection of the leaves of last year's plant being considerably larger than the leaves of this plant. The present fruiting plant might pass for the var. *minus* if we consider the small leaves and small size alone, but it scarcely reminds one of *H. chrysophyllum* in habit. Compared with a specimen of var. *minus* I have, and tested by Mr. Dixon, and which I first named *H. chrysophyllum*, the present plant has longer leaf-point, and longer and narrower cells. I should like Mr. Dixon's opinion on this plant," W.I.

"I think Mr. Wheldon may justifiably object to a plant being described as immature when in ripe and over-ripe fruit. I incline, however, to doubt whether it is actually referable to the variety. I have no specimens of Schimper's to go upon, but have compared the figures in the Bry. Eur. to which he refers. The noticeable point there is the *short-pointed* and *squarrose* leaves. This character

is fully borne out in a plant from Sheringham, Norfolk, leg. E. M. Holmes, the only British plant I have seen which I should unhesitatingly refer to var. *minus* (a Shropshire plant may perhaps be the same, but being sterile it is uncertain). Mr. Wheldon's plant as compared with this and the Bry. Eur. figures has the leaves distinctly long-pointed, in fact almost identical with those of type except in smaller size and shorter nerve.

I incline to think it a stunted form of type. The specimen submitted to me shows 5 out of 6 capsules shrivelled or abnormally undeveloped, indicating some stress of circumstances; though the specimen received last year showed the (2) capsules in quite good condition," H.N.D.

Hypnum aduncum Hedw. gr. *typicum* Ren. fide H. N. Dixon, Aylestone Meadows, Leics. (55), April 1905, A.R.H. "Yes, it is the *H. aduncum* (*typicum*) var. *diversifolia*, Ren. of my 'North of England Harpidia' in the Naturalist, 1902, p. 69. It is possibly derived from the var. *aquaticum* Sanió," J.A.W.

Hypnum aduncum Hedw. gr. *Kneiffii*? Croogpatrick, co. Mayo, alt. 1,500 ft., June 1909, C.H.W. "This would be in my experience a quite remarkable altitude for *H. aduncum*. The specimens are *H. fluitans* var. *gracile* Boul. forma *longifolia* Ren. This plant was placed by Dr. Braithwaite under *H. aduncum*, from which it appears distinct in its serrate leaves and cell structure," J.A.W.

Hypnum aduncum forma *falcata* Ren., Strensall Common (62), April 1907, W.I.

Hypnum Sendtneri Schp., Luffness Links, Gullane (82¹), Oct. 08, coll. J. McAndrew, comm. W.Y.

Hypnum Wilsoni Schp. var. *hamatum* Lindb., Skipwith Common (61), April 1906, W.I. "Quite correct, but a poor starved state which ill represents this beautiful moss. In some of the packets a slender form of *H. lycopodioides* is the dominant species, and *H. Wilsoni* is very sparingly present," J.A.W.

Hypnum fluitans L., Greenfield (63), Jan. 1909, and Hartshhead (59), April 1909, W.W. "Both under var. *gracile* Boul.," J.A.W.

Hypnum fluitans L. gr. *amphibium*, near Loddington, Leics. (55), June 1908, A.R.H. "Is a somewhat puzzling plant, rather intermediate between var. *atlanticum* Ren. and var. *Jeanbernati* Ren. On the whole it seems to agree best with the former," J.A.W.

Hypnum fluitans L. var., in bogs near Ballygowan, co. Down, June 1903, C.H.W. "Is *H. exannulatum* Gimh. var. *pinnatum* Boul.," J.A.W.

Hypnum fluitans var. *gracile* Boul., Keld Moor, Westmorland (69), May 1909, A.W. and J.A.W.; also Moorside and Piethorne (59), May 1909, W.W. "Both apparently var. *Jeanbernati* Ren., but material very poor," J.A.W.

Hypnum fluitans var. *anglicum* Sanio f. *Holtii*, Strensall Common, Yorks. (62), Aug. /07, W.I.

Hypnum fluitans var. *falcatum* Schp., Black Pond, Esher, Surrey (17⁵), May /09, L.J.C.

Hypnum fluitans var. *Arnoldii* Sanio, Skipwith Common, Yorks. (61), Sept. /08, W.I.

Hypnum exannulatum Gimb. var. *pinnatum* Boul. f. *gracile*, Ben More, Elgin (95), Sept. /09, E.A. "Is var. *purpurascens* Schp.," J.A.W.

Hypnum exannulatum var. *purpurascens* Schp., Swindale, Westmorland (69), May /09, A.W. and J.A.W. "This has scarcely the bright red or purplish colour of the vars. of *purpurascens* I possess, nor the habit. The alar cells in the leaves examined are of the var. *pinnatum* character, whereas those of var. *purpurascens* should according to Renauld be of the *falcifolium* character. It would be well to have Mr. Dixon's opinion on this plant," W.I.

"This is certainly very near to the border line between var. *pinnatum* and var. *purpurascens*; and a very little would, I think, send it over either way! The alar cells are certainly rather those of the *pinnatum* form than the (*Gr. Rotae*). On the whole I should think Renauld's note in the Muscol. Gallica would apply here—'Les formes des basses régions sont plutôt des transitions tachetées de pourpre de la var. *pinnatum* vers la véritable var. *purpurascens* à port trapu, à feuilles petites, sériées.' " H.N.D.

Hypnum exannulatum var. *falcifolium* Ren. f. *innudata* Ren., small quarry, 5 miles from York (62), Sept. /08, W.I.

"This, with a good deal more of our plants hitherto referred to group *Rotae* belongs to *Drepanocladus serratus*. I should call these examples of Mr. Ingham, in that they are sterile, *Hypnum exannulatum* var. *Mildei* Ren. The monoicous form of *D serratus* I have not yet seen from a British station," J.A.W.

"This moss was distributed in 1909 (see p. 315 Annual Report). Since that distribution, Renauld in Rev. Bry. 1909, p. 137, has given some new names to our familiar Harpidia. This accounts for Mr. Wheldon giving the name var. *Mildei* to the above moss," W.I.

Hypnum uncinatum Hedw., Roeburndale, W. Lancs. (60), May /02, A.W.

Hypnum vernicosum var. *maius* Lindb., Bog near Docker, W. Lancs. (60), May /02, A.W.

Hypnum revolvens Swartz var. *Cossoni* Ren.? Sand hills, Freshfield, S. Lancs. (59), March /08, W.G.T. "Correct!" J.A.W.

Hypnum intermedium Lindb., Sevenhampton Common, E. Gloster (33²), Jan. /10, H.H.K.

Hypnum (Drepanocladus) pellucidum Wils., = *H. intermedium* var. *tenellus* Roth et v. Bock., Bavelon Moss, Balerno (89), Oct. 09, coll. J. McAndrew, comm. J.A.W.

"I cannot but think Wilson was right in separating his *H. pellucidum* from *H. intermedium* with which it seems to have little in common. Roth, to whom I sent original specimens of Wilson's, refers them to *H. intermedium* var. *tenellum*. *H. pellucidum* (Wils.) agrees with *H. intermedium* in stem structure, but differs in its strongly plicate leaves, shorter nerve, more delicate texture and in other minor features. From *H. verrucosum* it differs in the presence of a distinct cortical layer and absence of a central strand in the stem," J.A.W.

Hypnum falcatum Brid. var. *virescens* Schp., Chorley, S. Lanes. (59^b), April 09, H.B.; also Gordale, Yorks. (64), Jan. 07, J.W.H.J.

Hypnum badium Hartm., Fennia Tavastia par. Karstula, July 70, leg. V. F. Brotherus, comm. C.H.W.

Hypnum Haldani Grev., Karelia, par. Pälkjarvi ad truncos putridos, Aug. 76, leg. H. Hjelt and V. F. Brotherus, comm. C.H.W.

Hypnum fastigiatum Brid., St. Moritz, Switzerland, Sept. 90, W.B.W.; also Fennia, Ostrobothnia, ad rupes calcarias, Sept. 72, leg. V. F. Brotherus, comm. C.H.W.

Hypnum cupressiforme L. var. *filiforme* Brid., Saintfield, co. Down, Feb. 09, H.W.L.; also Findlarig Burn, Elgin (94), Sept. 09, E.A.

Hypnum cupressiforme var. *tectorum* Brid., Ben More, Elgin (95), Sept. 09, E.A. "I find var. *tectorum* very variable in size and this might be called a slender form of the variety," W.I.

Hypnum imponens Hedw., heathy ground, Blackdown, W. Sussex (13), May 09, W.H.N.; also Pray Heath, Worplesdon, Surrey (17), Nov. 09, L.J.C.

Hypnum revolutum Lindb. (= *H. Heustleri* Jur.), Piz Languard, 10,000 ft., Engadine, Switzerland, Sept. 90, W.B.W.; also Lapponia or Kantalaks in alpe Schelesnaja, Aug. 72, leg. V. F. Brotherus, comm. C.H.W.

Hypnum procerinum Mol., Dovre, KongsvoId, Norway, July 85, leg. Erich Nyman, comm. C.H.W.

Hypnum canariense Mitt., Monte, 1,900 ft., Jan. 09, and Boca dos Namorados, March 09, Madeira, E.A.

Hypnum molluscum Hedw.? var. *fastigiatum* Bosw., Railway cutting, Mallaraney, co. Mayo, May 09, C.H.W. "The var. *fastigiatum* is very small, and as the Handbook says might be mistaken for *H. canariense*. The present plant is much more robust, and the branches are erect along the stems and not fastigate. I think its proper name is var. *erectum* Schp.," W.I.

Hypnum crista-castrensis L., s.l.r., Woods near Killin (88), Sept. /08, R.H.C.; also Glenridding, Westmorland (69), J.W.H.J.

Hypnum dilatatum Wils., Corrie Burn, Clova (90), May /09, R.H.C.; also Margin of Mer de Glace, Chamonix, May /07, J.C.W.

H. micans var. *badense*, with the margin less denticulate than in the Welsh specimen. I quite agree with Mr. Knight's naming of the plant," W.I.

Hypnum eugyrium var. *Mackayi* Schp., Glona, Killarney, Kerry, June /85, leg. S. A. Stewart, comm. C.H.W.; also Ballingear Glen (73), May /97, coll. J. McAndrew, comm. W.Y.

Hypnum ochraceum Turn. var. *flaccidum* Milde, Woodale, Thongsbridge, Yorks. (63), Jan. /10, W.W. "This is clearly the var. *complanatum*, but as Mr. Dixon unites this with the var. *flaccidum*, the latter name is correct," W.I.

Hypnum cordifolium Hedw., Sutton Broad, Norfolk (27*), J.W.H.J.

Hypnum surmentosum Wahl., Findlarig Burn, Elgin (95*), Sept. /09, E.A.

Hypnum cuspidatum L. forma, Walton Junction, S. Lanes., Dec. /07, J.A.W.

Hylacomium brevirostre B. & S., New Galloway (73), Oct. /94, coll. J. McAndrew, comm. W.Y.

Hylacomium septarrosum B. & S. var. *calvescens* Hobkirk, Buckden, Yorks. (64), Jan. /09, C.A.C.



HEPATICS.

Riccia Crozalsii Lev., Harlech (48), Dec. /09, D.A.J.

Ricciocarpus nutans (L.) Corda, Flordon, E. Norfolk (27*), Oct. /09, W.H.B.

Corsinia marchantioides Radcl., 2000 ft., Monte, Madeira, Jan. /09, E.A.

Fargionia hypophylla L., Blakeshall, Wores. (37), Nov. /06, J.B.D.; also Harlech, Merioneth, Dec. /08, leg. D.A.J., comm. J.C.W.

Plagiochasma rupestre (Forster) Steph., on wall, Funchal, Madeira, Jan. /09, E.A.

Preissia quadrata (Scop.) Nees, Glen Meay, Isle of Man (71*), June /01, H.B.; also Taren'r Esgob, Brecknockshire (42*), July /09, E.A.

Sphaerocarpus Michelii Bell., Postwick and other places in E. Norfolk (27), Jan. /09, W.H.B.

Aneura pinguis (L.) Dum., Market Harboro', Northants (32*), Oct. /08, and Crown Hills, Evington, Leics. (55*), Dec. /08, A.R.H.

Aneura multifida (L.) Dum., Tilton, Leics. (55*), May /09, A.R.H.

Aneura sinuata (Dicks.) Limpr., on timber in well, Saintfield, co. Down, Dec. /03, C.H.W.; also 1900 ft., Monte, Madeira, Jan. /09, E.A.

Aneura latifrons Lindb., damp hollows in sandhills, Freshfield, S. Lanes. (59*), Oct. /09, W.G.T.

Aneura palmata (Hedw.) Dum., New Galloway (73), Dec. /90, coll. J. McAndrew, comm. W.Y.

Pallavicinia Blyttii (Mörek.) Lindb., Am Binnein (88), P.E.; also on rocks above Loch Avon at 3800 ft., Banff (94*), July /09, J.A.W.

Fossombronia Wondraczewii (Corda) Dum., Pray Heath, Surrey (17*), Dec. /09, L.L.C.

Fossombronia pusilla (L.) Dum., Netherton, near Liverpool (59), March /09, W.G.T.

Fossombronia caespitiformis De Not., 1800 ft., Monte, Madeira, Jan. /00, E.A.

Marsupella ustulata Spruce, Mynydd Moel, Merioneth (48), April /09, D.A.J. and S.J.O.

Marsupella Funckii (Web. et Mohr) Dum., Croesor (48), Nov. /09, S.J.O.

Marsupella emarginata (Ehrh.) Dum., 2800 ft., under Pine Trees, Alegria, Madeira, March /09, E.A.

Marsupella Pearsoni Schffn., Cwm Bychan (48), April /09, J.B.D.; also Ben Nevis (97), Aug. /09, S.J.O.

Marsupella aquatica (Lindenb.) Schffn., Croesor (48), Oct. /09, S.J.O.; also Ousdale, Caithness (109), Nov. /03, D.L.

Nardia compressa (Hook.) Gray, "a form with distant spreading leaves," Cwm Tryfan, Carnarvonshire, Aug. /08, W.G.T.

Nardia Breidleri (Limpr.) Linclb., Carn Gorm, Rannoch (88), alt. 3400 ft., May /09, W.E.N.

Gongylanthus ericetorum (Raddi) Nees, 2000 ft., Ribeira Santa Luzia, Madeira, Feb. /09, E.A.

Aplozia autumnalis (DC.) Schffn., Harlech (48), Dec. /09, D.A.J.; also Rowardeman, Loch Louond (86), May /06, coll. J. McAndrew, comm. W.Y.

Aplozia crenulata (Sm.) Dum. var. *gracillima* (Sm.), Loch Paol-sport, Cantyre (101), April /09, P.E.; also Watten, Caithness (109), Jan. /10, D.L.; and Saintfield, co. Down, Jan. /10, C.H.W.

Aplozia sphaerocarpa (Hook.) Dum., Wheeldale, Goathland (62), April /08, W.I.

Aplozia riparia (Layl.) Dum., by R. Windrush, Bourton-on-the-Water. E. Gloster (33^c), Nov. /09, H.H.K.

Aplozia pumila (With.) Dum., Bronsberrow, W. Gloucester (31*), Nov. /09, H.H.K.

Aplozia lanceolata (Schrad.) Dum., Ardingly Rocks, E. Sussex (14), Oct. /09, leg. H. G. Jameson and W.E.N.

Anastrophyllum Donianum (Hook.) Steph., Glen Nevis (97), June /09, W.E.N.; and Ben Nevis, Aug. /09, D.A.J.

Lophozia inflata (Huds.) Howe var. *laxa* Nees, Foulshaw Moss, Westmorland (69*), Nov. /09, W.G.T.

Lophozia turbinata (Raddi) Steph., Cramond (83), Nov. /04, coll. J. McAndrew, comm. W.Y. "In this station both *L. turbinata* and *L. badensis* occur. Some at least of these packets contain the latter." S.M.M.

Lophozia Mülleri (Nees) Dum., Flordon, E. Norfolk (27*), Oct. /09, W.H.B.

Lophozia Mülleri var. *bantriensis* (Hook.), Glen Beag, East Perth (89), July /09, W.Y.; also Glen Meay, Isle of Man (71*), June /04, H.B. "The latter is a form of *L. Mülleri*, and is not *bantriensis*," S.M.M.

Lophozia heterocolpa (Thed.) Howe, Ardeonaig, Mid Perth (88), Aug. /09, S.J.O.

Lophozia ventricosa (Dicks.) Dum., c.per. Bolton Woods (64), Sept. /99, W.I.

Lophozia alpestris (Schleich.) Evans var. *gelida* Tayl., Ben Lawers, July /03, W.Y. "I can only see a small *Gymnomitrium* like *G. crassifolium* here," S.M.M.

Lophozia Wenzelii (Nees) Steph., Ben Nevis, Aug. /09, D.A.J.

Lophozia bicrenata (Schmid.) Dum., Oxshott Heath, Surrey (17*), April /09, L.L.C.

Lophozia creisa (Dicks.) Dum., Sandhills, Freshfield, S. Lanes. (59), Oct. /08, W.G.T.

Lophozia incisa (Schrad.) Dum., Loch Paolsport, Cantyre (101), April /09, P.E.

Lophozia lycopodioides (Wallr.) Cogn., Ben Lawers (88), Aug. /09, J.B.D.

Lophozia Kuntzeana (Hüb.) Schiffn., Schiehallion (88), Aug. /09, J.B.D. and H.H.K.

Sphenolobus politus (Nees) Steph., Ben Lawers, Aug. /09, S.J.O. and H.H.K.

Sphenolobus Hetterianus (Nees) Steph., Killin (88), July /03, W.Y.

Sphenolobus Pearsoni (Spruce) Steph., Croesor (48*), Nov. /09, S.J.O.; also New Galloway (73), Sept. /87, coll. J. McAndrew, comm. W.Y.

Sphenolobus exsectus (Schmid.) Steph., Nanteol Ravine, Llanbedr (48*), Dec. /09, D.A.J.

Sphenolobus exsectaeformis (Breidl.) Steph., Oxshott Heath, Surrey (17*), Oct. /09, L.L.C.; also New Galloway (73), Feb. /09, coll. J. McAndrew, comm. W.Y.

Plagiochila punctata Tayl., Glendarary, Achil Island, Mayo, May /09, leg. H.W.L. and C.H.W.; also Horses Glen, Killarney, July /09, W.G.T.

Plagiochila spinulosa (Dicks.) Dum., near Laxey, Isle of Man (71*), July /04, H.B.; also Pont-rhyd-y-groes, Cardiganshire (46*), July /08, H.H.K.

Plagiochila asplenioides (L.) Dum. var. *Dillenii* Tayl., Chase Wood, Herefordshire (36*), July /09, E.A.

Mylia Taylori (Hook.) Gray, Pont-rhyd-y-groes, Cardiganshire (46), July /08, H.H.K.

Mylia anomala (Hook.) Gray, Glen Meay, Isle of Man (71*), June /04, H.B. "This is *M. Taylori*." W.I.; also Ben More, Elgin (95*), Sept. /09, E.A.

Chiloscyphus polyanthos (L.) Corda var. *ricularis* Nees, stony margin of lake, Lough Trosk, Carnlough, co. Antrim. July /89, leg. S. A. Stewart, comm. C.H.W.

Chiloscyphus pullescens (Schrad.) Nees, boggy ground, Rainford Junction, S. Lanes. (59*), Feb. /09, W.G.T.; also Greenfield, Yorkshire (63), Oct. /09, W.W.

Harpanthus scutatus (Web. et Mohr) Spruce, O'Sullivan's Cascade, Killarney, July /09, W.G.T.

Cephalozia Lammersiana (Hüb.) Spruce, on sandy cutting, Stockton Forest (62), June /08, W.I.

Cephalozia Lammersiana var. *grandifolia* Spr., MS., Arneliffe Wood, Goathland (62), Sept. /01, W.I.

Cephalozia comirens (Dicks.) Spruce, Whitmoor Common, Surrey (17), Nov. /09, Ll.J.C.

Cephalozia reclusa (Tayl.) Dum., Cillepste, Brecon (43^b), May /09, H.H.K.

Cephalozia curvifolia (Dicks.) Dum., Glen Meay, Isle of Man (71^b), June /04, H.B.

Cephalozia Francisci (Hook.) Dum., Ashdown Forest, E. Sussex (14), Oct. /05, W.F.N.

Eremonotus myriocarpus (Carr.) Lindh. et Kaal., Ben Lawers (88), Aug. /09, D.A.J.; also Cwm Glas, Snowdon (49), April /09, S.J.O. "This is the same plant as was distributed in 1908 as *Sphenolobus Pearsoni*," S.J.O.

Cephaloziella hispida (Schreb.) Schiffn., Sandhills, Freshfield, South Lancs. (59^b), Dec. /08, W.G.T.

Cephaloziella Limprichtii Warnst., moist sandy clay soil, Hamsey, E. Sussex (14), March /08, W.F.N.

Cephaloziella integerrima (Lindh.) Warnst., St. John's Common, Crowborough, E. Sussex (14), Sept. /06, W.F.N.

Odontoschisma denudatum (Nees) Dum., Badlipster, Caitness (109), Sept. /03, D.L.

Adelantus decipiens (Hook.) Mitt., Killarney, Aug. /05, D.A.J. and Aug. /06, J.B.D.

Kantia Trichomanis (L.) Gray, Aghagallon, co. Antrim, June /05, H.W.L.; also Southpool, S. Devon (3), May /09, H.B. "This is *K. Sprengelii*," S.M.M.

Kantia Trichomanis var. *aquatica* Ingham, Deepdale, Yorks. (64), Aug. /04, J.W.H.J.

Kantia Sprengelii (Mart.) Pears., Greenfield, Yorkshire (63), Dec. /09, W.W.

Bazzania trilobata (L.) Gray, Pont-rhyd-y-groes, Cardiganshire (46^b), July /08, H.H.K.

Lepidozia Pearsoni Spruce, Invermoidart, West Inverness (97), May /09, W.F.N.

Lepidozia trichoclados C. Müll. Frib., Pont-rhyd-y-groes, Cardiganshire (46^b), July /08, H.H.K.

Blepharostoma trichophylla (L.) Dum. In large pure patches, Arncliffe Wood, Goathland (62), April /07, W.I.

Chondranthus setiformis (Ehrh.) Lindb., var. *alpinus* Hook., Morven, Caithness (109), July /09, D.L.

Anthelia julacea (L.) Dum., Glen Meay, Isle of Man (71*), June /04, H.B.

Anthelia Juratzkana (Limpb.) Trevis., King's Seat, Killin (88), Aug. /09, D.A.J.; also Ben Heasgarnich (88), June /01, W.Y. "I cannot find parvicous inflorescence in Mr. Young's plant. It is probably *A. julacea*," S.M.M.

Ptilidium ciliare (L.) Hampe, Ben More, Elgin (95*), Sept. /09, E.A.

Ptilidium pulcherrimum (Web.) Hampe, Kinghorn (85), Jan. /10, W.Y.

Diplophyllum taxifolium (Wahl.) Dum., Cam Chreag, Killin (88), Aug. /09, J.C.W.; and Ben Lawers, Aug. /09, J.B.D. and D.A.J.

Scapania compacta (Roth) Dum., Ashes Hollow, Church Stretton (40), April /03, W.G.T.

Scapania subalpina (Nees) Dum., New Galloway (73), June /01, coll. J. McAndrew, comm. W.Y.; also Ben Chnirn (88), July /03, W.Y. "The latter is *S. gracilis* var. *taxifolia*," S.M.M.

Scapania Bartlingii (Hampe) Nees, old limestone quarries, Gwynfe, Carnarthenshire (44*), May /09, H.H.K.

Scapania aspera Bernet, Mount Caron, Isle of Man (71*), June /08, H.B.

Scapania gracilis (Lindb.) Kaal., Ben More, Elgin (95*), Sept. /09, E.A.

Scapania gracilis var. *taxifolia* Carr., Croesor (48*), Oct. /09, S.J.O.

Scapania nimbosea Tayl., The Glyders, 2800 ft., Carnarvonshire (49*), Oct. /09, D.A.J.

Scapania ornithopodioides (With.) Pears., Beinn Chnirn (88), P.E.; also Cwm Idwal, Carnarvonshire (49), Sept. /09, S.J.O.

Scapania purpurascens (Hook.) Tayl., Arncliffe Wood, Goathland (62), Aug. /07, W.I.

Scapania paludosa var. *coyesiaca* C. Müll., Maenclochog, Pembroke, July /06, leg. A. Brinkman, comm. H.H.K. "This is *S. nemorosa*, note the ciliate dentate leaves. Mr. Brinkman in the *Journal of Botany*, 1908, p. 91, has recorded *S. paludosa* and var. *coyesiaca* for Pembrokeshire. They are alpine plants in Britain, and not likely to occur in S. Wales," S.M.M.

Scapania irrigua (Nees) Dum., boggy ground, Rainford Junction, S. Lanes. (59), Feb. /09, W.G.T.

Scapania umbrosa (Schrad.) Dum., Ben More (88), Aug. /09, S.J.●.

Radula Lindbergii Gottsche, Ptarmigan (88), and Loch Caolsport, Cantyre (101), April /09, P.E.; also Kirkaldy (85), Oct. /03, and Canlochan Glen (90), July /04, W.Y.

Radula Lindbergii var. *germana* Jack., Cam Chreag, Killin (88), Aug. /09, D.A.I. and J.C.W.; also Ben Lawers, July /89, P.E., and Aug. /07, J.B.D.

Madotheca laevigata (Schrad.) Dum., Worgan's Wood, Slad, near Stroud (33*), Dec. /09, E.J.E.

Madotheca Thuja (Dicks.) Dum., Kinghorn (85), Feb. /03, W.Y.

Madotheca rivularis Nees, Light Spout, Longmynd, Church Stretton (40*), April /09, W.G.T.; also Saintfield, co. Down, Oct. /08, C.H.W.

Madotheca canariensis Nees, near Pico das Rosas, 2000 ft., Madeira, Jan. /09, E.A.

Cololejeunea microscopica (Tayl.) Schiffn., Camasnagaul, near Fort William (97), Aug. /09, D.A.J., J.C.W. and H.H.K.

Lejeunea cavifolia (Ehrh.) Lindb., Loch Caolsport, Cantyre (101), April /09, P.E.; also Rossinure-More, co. Fermanagh, July /05, H.W.L.

Lejeunea patens Lindb., Commeragh Mountains, co. Waterford, July /02, H.W.L.

Microlejeunea ulicina (Tayl.) Evans, Horses Glen, Killarney, July /09, W.G.T.

Drepanolejeunea hamatifolia (Hook.) Schiffn., Ogwen Falls (49*), Oct. /09, D.A.J.

Frullania microphylla (Gottsche) Pears., Maentwrog Valley (48), July /07, S.J.O.

Frullania germana Tayl., Connor Hill Pass, Kerry, Aug. /05, C.H.W.

Frullania Teneriffae Nees, on *Vaccinium Madagense*, 4550 ft., Poizo Pass, Madeira, Jan. /09, E.A.

Frullania polysticta Lindenb., 1800 ft., Ribeira de Joao Gomes, Madeira, Jan. /09, E.A.

Anthoceros dichotomus Raddi, 1500 ft., Ribeira de Joao Gomes, Madeira, Feb. /09, E.A.

Anthoceros punctatus L., Tarbet, Loch Lomond (86*), May /05, coll. J. McAndrew, comm. W.Y.