



ORCHIS PRAETERMISSA DRUCE.

From a photograph of a plant from Abingdon, Berks., grown at Scampston Hall, Rillington, York, by W. H. St Quintin, Esq. The middle lobe of the labellum is longer than usual. The flowers are from drawings made by Miss R. M. Cardew.

THE BOTANICAL SOCIETY
AND EXCHANGE CLUB
OF THE BRITISH ISLES.

(VOL. V. PART I.)

REPORT FOR 1917

BY THE

SECRETARY,

G. CLARIDGE DRUCE,

to whom, at YARDLEY LODGE, 9 CRICK ROAD, OXFORD, the Subscription, 7s 6d per annum, and Non-Contributing Member's Subscription of 5s per annum, should be paid on and after January 1, 1918.

Parcels for 1918 should be sent post paid, on or before 11th December 1918 to W. C. BARTON, Esq., 43 ROSARY GARDENS, LONDON, S.W.

The Distributor's Report on Plants sent in for 1917 will appear in due course.



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September 1918.

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This list includes those joining for 1918.
 Asterisks denote Exchange Club Members.

THE
BOTANICAL SOCIETY & EXCHANGE CLUB
OF THE BRITISH ISLES.

THE REPORT OF THE TREASURER & SECRETARY,
G. CLARIDGE DRUCE, YARDLEY LODGE, OXFORD,
FOR 1917.

BALANCE SHEET FOR 1916.

By Subscriptions received, £73 14 0 Sale of Reports, " " 5 9 9 Sale of Secy.'s Supplement, 0 9 0 Donation to do., J. Platts, 1 1 0 Donation, " " " 20 0 0 <hr style="width: 50%; margin-left: auto; margin-right: 0;"/> <p style="text-align: right; margin-right: 20px;">£100 13 9</p>		Balance from 1915, - - - £13 11 6 Printing Reports, &c., 61 12 10 Printing Secy.'s Supplement, 11 10 0 Expenses of Distribution, 1 15 0 Postages, Carriage, Stationery, and Incidental Expenses, 11 13 3 Balance in hand, - - - 0 11 2 <hr style="width: 50%; margin-left: auto; margin-right: 0;"/> <p style="text-align: right; margin-right: 20px;">£100 13 9</p>
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Balance in Treasurer's hands, £0 11s 2d.

Life Members' Fund, invested in War Savings, £9.

Audited and found correct, January 9, 1918.—F. TWINING.

All subscriptions should be paid to the above address on the first of January each year. Exchange Members pay 7s 6d, Ordinary Members 5s. Payment in advance for two or more years is preferred. The application for and acknowledgment of small sums necessarily entails trouble and expense. Members joining in 1918 pay 10s (Exchange Members 12s 6d), to cover entrance fee and the *Report* for 1917.

There are still a few complete sets of the *Reports* from 1879 to 1916, forming four volumes. These are available for members at £3 10s. Odd numbers may be had at a considerable reduction.

Despite the stress of war with the curtailment it has meant of time and means of locomotion and increased economic strain, the results of the past year from a botanical point of view are very encouraging. In no previous year have we had so many accessions

to our ranks or such a large number of specimens sent for observation. The financial position of the Society has greatly benefitted by the increase of members and by kindly help. For the first time for many years there is no adverse balance.

We have to express our warm thanks to Mr D. Lumb and Mr W. H. Pearsall for acting as Distributors and for editing the *Report* for 1916. The plants were returned with most commendable promptitude. The *Report* gained much by the concise and valuable critical notices on the plants sent in and we are much indebted to those botanists—British and foreign—who supply them. Never has there appeared a *Report* freer from ambiguity or more helpful to the collector. No fewer than 5453 plants were sent by 30 contributors.

We are under great obligation to the Director and Staff of the Herbarium at Kew, to the Director and Staff of the National Herbarium at South Kensington and to Professor Vines, F.R.S., of Oxford, for facilities in consulting the specimens under their charge and for other kind assistance. To Dr Albert Thellung of Zurich we are specially indebted for naming many alien species. We heartily congratulate him on his recent marriage, and trust the slight souvenir sent him in the name of the members will be significant of the good-will we have for him. We have also to thank those critics and referees whose names appear in the *B.E.C. Report*, and also Messrs C. C. Lacaite, J. W. White, Professor Percival, Rev. E. S. Marshall, Mr E. D. Marquand—the latter has placed us under special obligation by translating the French papers on *Batrachian Ranunculi*, which we hope to reprint—Rev. F. Bennett, the Rev. H. J. Riddelsdell, and Mr R. H. Corstorphine for editorial assistance.

Thanks are also due to the donors to the Benevolent Fund for kindly help. They include Mrs Shipley, the Hon. N. C. Rothschild, Messrs C. Bailey, H. Graveson, and W. Sanderson.

We are also very grateful to Sir D. Prain for allowing us to publish M. Gay's paper on Channel Island Plants, which had been brought to my notice by Mr F. N. Williams, and to the Rev. S. A. M'Dowall, the President of the Winchester College Natural History Society for not only allowing us to republish the valuable notes on Orchids, but also for most kindly lending us the blocks of the beautiful drawings made by Miss Corfe, which give such a great additional value to the paper.

During the year we have lost seven members by death. Major Sanderson was killed in France, and through his death we lose a valued member and a skilled horticulturist. Sir Edward Evans, D.L., and Mr J. Platts were well-known figures in the world of pharmacy and valued colleagues. The former, a well-known political worker, had been President of the Pharmaceutical Conference; the latter, one of the writer's oldest friends, died suddenly in Oxford, as he was about to call on him. His sister, Mrs Shipley, has helped our Benevolent Fund by a donation, and she has given £1000 to establish a bed in his memory at the Royal Leicestershire Hospital. Mr S. Margerison of Calverley, Rev. C. W. Peck of Billingford Rectory, Rev. W. Butt of Oakwood, Chepstow, and Mr J. G. Geake of Guildford have also passed away. We have also to record the death of Mr P. N. Vaughan of Redland, Bristol, that distinguished philanthropist who was the life and soul of the Convalescent Home on Durdham Downs which he did so much to support. For the past twenty years it was the writer's privilege to meet our late member at the annual Christmas dinner to the inmates, and on one of these occasions he was asked to propose a vote of thanks to the donors, one of whom was Mr Vaughan, who had given a donation (not the first of its kind) of £5000. It may be remembered that *Lamium maculatum* (recorded in *English Botany*) was found by his mother, Mrs Vaughan, in 1813, at Bristol, close to where he lived at Redland Court.

Our new members for 1917 and 1918 include Lady Edina Ainsworth, Rev. F. S. Alston, Mr J. E. Arnett, Rev. E. Benwell, Mr E. B. Bishop, Miss Ada Cameron, The Charterhouse, Miss A. B. Cobbe, Miss Coles, Rev. E. C. Crutwell, Mr W. Davidson, Mr Docker-Drysdale, Sir Edward Evans, D.L.; Mr W. P. Evans, J.P.; Mr J. G. Everitt, Mr J. Ewing, LL.D.; Mr J. Meade Falkner, M.A.; Mr Reginald Farrer, Mr J. Maurice Franklin, the Earl of Gainsborough, Mr T. R. Gambier-Parry, Mr J. S. Gamble, F.R.S.; Mr C. E. Gardner, D.L., J.P.; Mr T. E. Goodyer, Mr C. B. Green, Mr J. E. Griffith, F.S.A.; Mr R. G. Gwatkin, Mr J. W. Heslop-Harrison, D.Sc.; Rev. J. Clare Hudson, Dr Hurry, Hon. Mrs Ingilby, Mr T. F. Jeyes, Mr R. Kennedy, Rev. C. Q. Knowles, Lady Joan Legge, Mr L. V. Lester-Garland, M.A.; Mr G. E. C. Maconchy, Miss I. H. Martin, Lieut. C. Marquand, Mr H. Messel, Mr H. W. Monckton, F.L.S., F.G.S.; Lord Moreton, Mr W. E. Nicholson, Sir

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We offer our sincere congratulations to the Raj Rana of Jhalawar on the high dignity of Maharajah recently conferred upon him for his distinguished service to the State.

Many of our members are serving at the front, in other active war service, or in matters appertaining to the war. They include, among others, Lieut. W. James, Lieut. P. M. Hall, Lieut. T. H. Leach, who had the honour of having the General in his Tank at the Cambrai attack at Gouzeaucourt, and who was the only one in the Tank who escaped being killed or wounded; Lieut. H. E. Porter, Lieut. A. R. Horwood, Lieut. C. Marquand, Lieut. Whympers, Mr W. B. Turrill, who received an injury in Macedonia and is now in England; Mr G. C. Brown, Mr R. H. Corstorphine, Colonel H. Halero Johnston, Major Wolley-Dod, Major W. Harford, Major F. J. Smith, Mr T. Bates Blow, and Major C. C. Vigers.

Contributions of books, specimens, &c., are welcomed for presentation in after days to the University of Louvain. Each should bear the donor's name.

Our honorary member, Mr J. Gilbert Baker, F.R.S., now in his 86th year, kindly sends the following letter on the commencement of the fifth volume and the sixtieth annual Report:—

3 Cumberland Road, Kew, November 14, 1917.

MY DEAR DRUCE,—I am very pleased to hear "The Botanical Exchange Club" is expanding so wonderfully under your active and able management. When I began it in 1857 I had no idea of starting a new institution. I was a member of the old "Botanical Society of London," and a large contributor to its annual distributions, then managed by the Curator, Mr J. T. Syme, afterwards Boswell Syme. The Society decided that it could not bear the expense of a room in Central London and a paid curator, and soon ceased to exist. It was then expected that it would be soon reconstituted, and I undertook to carry on the distributions until the new Society got into working order, which never took place. In its early days the Club was largely helped by Mr H. C. Watson,

who sent large and extensive contributions, and Dr Boswell Syme. In 1864, when my house and collections were entirely destroyed by fire, fortunately after the distributions for the year had been made, my old friend, Mr William Foggitt, kindly placed at our disposal his large stock of duplicates. I think you yourself were one of the very early members, together with T. R. Briggs, F. N. Webb, and G. E. Hunt

With my very best wishes for the continued prosperity of the Club,

Yours faithfully,

J. G. BAKER.

PLANT NOTES, ETC., FOR 1917.

(*Mostly New Plants to the British Isles.*)

Following the usual procedure, the Secretary, Mr G. C. Druee, has prepared the Annual Report on the salient features of British Botany. This being his own compilation in no way assumes to express other than individual opinion, but all rights in its publication are reserved.

The Secretary is always glad to receive specimens which he will determine himself, or if necessary refer them to special authorities. Any of these which are new county records or undescribed forms will be published in the next *Report*. New county or other records should be accompanied by a specimen as a voucher, and with full particulars of its occurrence, *e.g.*, "No. 4. On the sand dunes, Yarmouth, Norfolk E., July 6, 1917." If a duplicate is retained with a similar number it saves the trouble of returning specimens. Return postage should always be enclosed with a direction label or a directed post card. The Secretary's services are always at the disposal of any member either for naming specimens, or, if possible, for supplying any special plants, books, or general information.

9. ANEMONE NEMOROSA L. The following note on a pascual form of the Wood Anemone may elicit information as to the occurrence of it in pastures elsewhere. In Oxfordshire it occurs in open fields in the woodland area bordering on Otmoor, but the presence of *Geum rivale*, *Serratula*, &c., suggests that the woodland has been cleared at no very distant date. In fact, the plants are degenerates of a damp oak-wood formation. "It grew near Pontypant station, and between it and Roman Bridge, Carnarvonshire, in open fields. Those appeared as if covered with daisies from the abundance of the flowers. It grew on alluvial soil and on drier fields at an altitude of 500—700 feet. It also occurred near Pant Glas as far as to Brynkir, in a country practically bare of trees, without woodland near. The soil there is drift, not alluvium. In one case it grew in a moist meadow near Pontypant. The plants differ from type *nemorosa* (1) in the root-stock being yellowish to brown, not black; (2) leaves more downy; (3) sepals definitely 2-whorled, outer 3, inner usually 4; (4) in the

more dwarfed stature, the plants being however quite vigorous. In the Brynkir locality the following variations in the perianth segments were noted:—P6 (3), P7 (3 and 4), P8 (3 and 5), P9 (4 and 5). The last was a handsome form. There was a considerable range of colour variation from pure white to pale lilac and deep purple-lilac on both surfaces. Roots of these plants continue their purple colouring in garden soil. The greater part of the lilac-purple flowered plants had 7 perianth segments." T. J. JENKINS.

126 (2). *RADICULA NANA* (Weddell) comb. nov. *Nasturtium nanum* Weddell in Act. Sc. Nat. Ser. iv., vol. v., i., 290, 1864. Alien, Bolivian Andes, Peru. Ettrick side, Selkirk, 1916, Miss I. M. HAYWARD. Teste A. THELLUNG.

135 (2). *ARABIS AURICULATA* Lam. Enc. i., 219. Alien, Europe, Orient. Several near Musselburgh, 83, J. FRASER in *Trans. Bot. Soc. Edin.* 405, 1915.

185 (2). *SISYMBRIUM ERYSIMOIDES* Desf. Fl. Atl. ii., 84, t. 158, 1798-1800, forma *XEROPHYLLUM* Fourn. Récher. Sisym. Alien, Spain, Sardinia. St Philip's Marsh, Bristol, 1916, Miss COBBE and G. C. DRUCE.

188 (2). *S. VOLGENSE* M. Bieb., ex Fourn. Thèse Crucif. 97. Alien, Russia. St Philip's Marsh, Bristol, 1916, G. C. DRUCE.

191 (3). For *S. PINNATUM* (Walt.) Greene in *Rep. B.E.C.* iii., 152, 1887 (not of Barnwell 1845) read *S. MULTIFIDUM* (Pursh) MacMillan, sub-sp. *S. BRACHYPHYLLUM* (Richardson) Thellung, forma *EGLANDULOSUM* Thell. in *Hegi Ill Fl. Mitt. Eur.* iv., 153, 1916. Alien, N. America. Par, Cornwall, 1909, G. C. DRUCE; Galashiels, Selkirk, 1916, Miss I. M. HAYWARD. Det. A. THELLUNG.

193 (4). *S. MYRIOPHYLLUM* (Willd. MS. Humboldt, Bonp. & Kunth ined.) DC. Syst. ii., 477, 1821. Alien, base of Cotopaxi, Quito. Ettrick side, Selkirk, 1916, Miss I. M. HAYWARD. Dr THELLUNG with some reservation thus identifies it with the rare South American species.

228 (2). *ERUCA CAPPADOCICA* Reuter Cat. Hort. Genev. 1857. Alien, Asia Minor. Portniadoc, Carnarvonshire, 1916, Miss COBBE. This differs from *sativa* in its yellow petals, glabrescent leaves which

are less deeply divided, having obtuser segments, larger seeds and longer siliquas.

232 (2). BURSA GRACILIS (Gren.) *Capsella gracilis* Grenier Fl. Mass. Adv. 17, &c. × *C. gracilis* Rouy & Foue. Fl. Fr. ii., 96, 1895. Focke Pflanzenmisch. 41. (?) *C. rubella* × *Bursa-Pastoris*. Sil. très petites (2½ mm. long) équilatérales ou plus larges que longues, à graines la plupart avortées, sépales rougâtres; pétales dépassant peu le calice. Fl. Fr., l.c. Sewage Works, Leeds, E. C. HORRELL. See Rep. B.E.C. 558, 1916. Det. A. THELLUNG.

247 (18). LEPIDIUM BIPINNATIFIDUM Desv. Journ. Botanique iii., 165, 1814. Alien, S. America. Ettrick side, Selkirk, 1916, Miss I. M. HAYWARD. Det. A. THELLUNG.

247 (19). L. CALYGINUM Godr. in Mem. Acad. Aet. Montp. Medic. i., 416, 1853. Alien, S. America. Tweedside, near Galashiels, Selkirk, 1909, Miss I. M. HAYWARD. Det. A. THELLUNG.

247 (20). L. TEXANUM Buekley in Proe. Ac. Se. Philad. 499, 1861 (1862). *L. virginicum* L., sub-sp. *texanum* Thellung Mon. 163. Alien, North and Central America, Azores. Lyndhurst, S. Hants., 1916, Miss M. COBBE. Swanage, J. Green, 1917. Det. A. THELLUNG.

247 (21). L. TRIFURCUM Sonder in Linnaea xxiii., 4, 1850. Alien, Modder river, South Africa. Tweedside, Galashiels, Roxburgh, 1916, Miss I. M. HAYWARD.

247 (22). L. PAPILLOSUM F. v. Mueller in Linnaea xxv., 370, 1852. Alien, Australia. Galashiels, Selkirk, 1916, Miss I. M. HAYWARD. This is the true plant of von Mueller. the previously recorded *papillosum* being *L. oxytrichum* Sprague.

253 (2). IBERIS PECTINATA Boiss. Diagn. ser. 1, i., 75. Alien, Spain. Dean Clough, Halifax, York, 1916, E. C. HORRELL. The specimen is in fruit, but it is almost certainly this species.

330 (2). GYPSOPHILA ELEGANS Bieb. Fl. Taur.-Cauc. i., 319. Alien, Asia Minor. Waste ground, Scarborough Mere, York, E. C. HORRELL.

356 (4). *SILENE ANTIRRHINA* L. Alien, N. America. Wrentham, Suffolk, 1917, A. R. HORWOOD. Det. A. THELLUNG.

435 (2). *HYPERICUM DESETANGSHI* Lam., var. *PUNCTATUM* E. Bonnet. Lamberton, Devon, A. SHARLAND in *Rep. Bot. Devon*, 1916.

441 (3). *MALOPE HISPIDA* Boiss. *Diagn. ser.* 2, i., 100. Alien, N. Africa. Turnip field, Flasby, near York, September 1916, F. ASHWELL, ex E. C. HORRELL.

443 (2). *LAVATERA TRILOBA* L. Alien, Spain. Chicken run, Woodhall Spa, Lincoln, 1917, Rev. F. ALSTON.

470. *LINUM CATHARTICUM* L., forma *DUNENSE*. In the damp hollows on Branton Burrows, N. Devon, August 1917, coll. C. P. HURST. A small compact plant, having very short stems and with the habit and appearance of *Sagina maritima*. Plantis 2.5 cm., ramosis, foliis ellipticis, 2—3 × 1.5 mm., internodiis brevioribus 3 mm., capsulis 2 mm. latis. The plant is strongly infected with *Malampsora Linii*. G. C. DRUCE.

486. *GERANIUM PUSILLUM* Burm. f., var. *CONDENSATUM* mihi. A very compact, densely branching plant, 18 cm. diameter, with very small leaves 20 × 10 mm., short internodes, carpophore 5—7 mm., occurred at The Haven, Muddiford, Hants., and was sent by Mr C. B. Green in 1917. It is very near to var. *humile* Cav. G. C. DRUCE.

490 (3). *ERODIUM BRACHYCARPUM* (Godr.) Thellung, comb. nov. *E. Botrys*, var. *brachycarpum* Godr. *Fl. Juv.*, 16 in *Mém. Acad. Montpell. sect. méd.* i., 424, 1853; *Fl. Juv.*, ed. ii., 72, 1854; *Thell. Fl. Advent. Montpell.* 351, 1912; Kunth in *Engler's Fl. Reich.* iv., 129; *Geran.* 585, 1912; *Aschers. et Graebn. Syn.* vii., 80, 1913. *E. Botrys*, f. 2 *montanum*, Brunhard Monogr. *Uebers. Erod.*, 48, 1905 [nomen] et in *Fedde Repert.* ii., 18, 1906; *Thell. l.c.* 351, 1912; *Aschers. et Graebn. l.c.* 81, 1913. *E. Botrys* auct. *Chil.*: *Gay Fl. Chil.* i., 390, 1845; *Reiche Fl. Chil.* i., 288, 1896; auct. *Am. bor. occ.*: *Gray et Watson Syn. Fl. N. Am.* i., 362, 1897; *Jepson Fl. West Middle Califor.* 247, 1901 ["naturalised plant, scarcely known in California ten years ago, but . . . become common"]; *Hanks & Small in N. Am. Fl.* xxv., i., 22, 1907, ["depauperate forms"]; auct.

Belg. Halin ap. Troch in Bull. Soc. Roy. Bot. Belg. xxxiv., ii., 147, 1895; Höck in Beih. Bot. Centralbl. ix., 329, *quoad loc.* Belg.; Durand in De Wild. et Dur. Prodr. Fl. Belge iii., 13, 948, 1903—non [Cav.] Bertol. Differt ab *E. "Botrys"* quocum ab auctoribus confusum vel pro cuius forma perperam habitum est, non solum statura gracili, floribus minoribus (sepalis in flore 5 mm., sub fructu 9 mm. longis.), carpellorum rostro brevior (3—6 cm. tantum longo), sed praesertim carpellorum fovea (apicali) plica concentrica unica tantum (nec plicis binis) circumscripta et inde specificè diversum videtur. Habitat in Chile (teste Brumhard, *l.c.*); advent. et jus civitatis nactum in California (Hansen, No. 502, teste Brumhard; Le Roy Abrams, No. 3350 !); introd. in Galliam (in portu Juvenali pr. Montpelium, ca. 1840, Touchy! see Godron et Thellung, *l.c.*); Belgium—ad ripam fl. Vesdre pr. Ensival, 1904, Halin!; Angliam—Edenbridge, Kent, 1917, coll. G. J. TALBOT. A. THELLUNG. Meanwood, Yorks., E. C. HORRELL.

499 (21). *MONSONIA BIFLORA* DC. Prod. i., 138. Alien, S. Africa. Meanwood, York, 1917, E. C. HORRELL. Det. A. THELLUNG.

501. *TROPAEOLUM MAJUS* L., var. *ATRO-SANGUINEUM* Hook. Bot. Mag. t. 3375. Hortal. On waste ground, Iffley, Oxon. G. C. DRUCE.

509 (2). *OXALIS FLORIBUNDA* Lehm. Ind. Sem. Hort. Handb. 17, 1826. Alien, Brazil. Falmouth Docks, Cornwall, 1917, Miss M. COBBE. Det., with some slight doubt, A. THELLUNG.

542 (3). *ONONIS VISCOSA* L. Alien, S. Europe. Elland, York, 1917, E. C. HORRELL. Det. A. THELLUNG.

560 (3). *TRIGONELLA INCISA* Benth. Alien, India, Beluchistan, Persia, Turkestan. Spring Hollow, Stalybridge, 1914; Valley Road, Rochdale, S. Lancs., T. COLLIER. Det. A. THELLUNG.

564 (2). *MEDICAGO VARIA* Martyn Fl. Rustica 387. (?) *M. Falcata* × *sativa*. Alien, Europe. St Philip's Marsh, Bristol, 1916, Miss COBBE and G. C. DRUCE.

581. *M. MINIMA* Desf., var. *CANESCENS* Ser. in DC. Prod. ii., 178. Plant not glandular but canescent with whitish tomentum. Alien. On waste ground near Abingdon, Berks., probably from fellmonger's refuse, August 1917, G. C. DRUCE.

Var. *VISCIDA* Koch Syn. ii., 180, 1846. Stem and leaves glandular-pubescent. Alien. Galashiels, Selkirk, September 1917, Miss I. M. HAYWARD and G. C. DRUCE.

Var. *ELONGATA* Rochel Enum. Fl. Banat. 15. Plant pubescent, not glandular, with elongate stems and larger leaflets. Covering a diameter of a metre, Galafoot, Selkirk, September 1917, Miss I. M. HAYWARD and G. C. DRUCE.

582. *M. LACINIATA* Mill., var. *INTEGRIFOLIA* Godt. Leeds, 1916, E. C. HORRELL.

631 (2). *TRIFOLIUM CERNUUM* Brot. Phyt. Lusit. i., 150, t. 64, 1816. Alien, Spain and Portugal. On pebbles at the junction of the Gala and Tweed, Selkirk, August 1917, Miss I. M. HAYWARD. Det. A. THELLUNG.

641 (2). *ANTHYLLIS RUBRA* Gouan Herb. 173. *A. Vulneraria* L., var. *coccinea* L. *A. Dillenii* Schultes. Plants of this species from Aberfraw Common, and near Newborough, Anglesey (locus classicus), were brought to my garden where they flowered freely and produced seedlings. All show the flower-characters of the parent. Although the plants have increased in size, yet the leaflets retain their narrow shape, the plant is more slender, the hairs on the stem appressed, and the petals rosy pink with darker tips. Dillenius cultivated it in the Eltham garden of James Sherard and figured it in *Hort. Eltham*, t. 320, f. 413. It was first discovered by Dr Richardson (see Richardson *Corresp.* 259), and seems well worthy of specific rank. Having distinctly a Western distribution, it must not be confounded with a form having yellow flowers with red or crimson tips. G. C. DRUCE.

691. *VICIA LUTEA* L., var. *CAERULEA* Archangeli Fl. Ital. 201, 1882. Differs from the type in its bluish flowers and in having 9—10 pairs of leaflets. Evington, Leicester, 1916, ex A. R. HORWOOD; Ware, Herts., 1916, G. C. DRUCE.

696 (2). *V. MACROCARPA* Bert. Fl. Ital. vii., 511. In a cornfield off the Hallatrow Road, Chewton Mendip, Somerset. Identified at Kew. B. W. T. Wells in *Rep. Wells N. II. Soc.* 21, 1917.

698. *V. ANGUSTIFOLIA* Reichb., forma *RACEMOSA* Beck. Chobham Common, Surrey 1909, C. E. BRITTON. Teste A. THELLUNG.

705 (2). *V. PUBESCENS* Link Handb. i., 190, 1831. Alien, Reg. Medit., Lydia, Taurus, Caucasus, and Canaries. Galashiels, Selkirk, 1917, Miss I. M. HAYWARD. Det. A. THELLUNG.

707 (2). *LENS NIGRICANS* Gren. Fl. Lorr. ed. i., 1, 173. Alien, Reg. Medit. Bristol, 1917, Miss I. M. ROPER, in *lit.*

910. *ALCHEMILLA ARGENTEA* G. Don. Valley of the Dole, Clova, Forfar, v.-c. 90, September 25, 1917. Found when returning with Mrs Wedgwood and my wife from a visit higher up the valley in September 1917. We have frequently searched for Mr A. O. Black's locality given for this plant with so much precision but hitherto without success. The ravines on Craig Rennet are well marked on the high ground, and it would seem easy to follow Black's directions, but the streams flowing down these gullies make many channels in the lower ground which are continually changing owing to rock falls. The station is on lower ground than we had previously searched. The plants are in fair abundance, but so far as we could see are confined to a longish straggling patch which is easily discernible from a considerable distance. R. CORSTORPHINE.

Alchemilla argentea G. Don ex Trevelyan Veg. Faroe Islands, 10, 1837 (pro parte) emend. *A. conjuncta* Bab. in Ann. & Mag. Nat. Hist. x., 24, 1842 pro parte, et in Eng. Bot. Suppl. under t. 2983, 1864, pp.; Bab. Man. 89, 1851, pro parte. *A. alpina* var. b. (et *A. hybrida* Hort. in syn.) Hook. & Arnott Brit. Fl. 134, 1855. *A. alpina* var. *podophylla* Tausch in Flora 108, 1841. *A. alpina* var. *Godeti* Ducommun Taschenb. Schweiz. Bot. i., 227, 1869. *A. conjuncta* Matthews in Journ. Bot. 91, 1881 spec. collect. includes *A. conjuncta* em. Buser, *A. Hoppeana* Reichb. and *A. pallens* Buser. A sport of *A. alpina* Hook. f. Stud. Fl. 127, 1884. *A. alpina* sub-sp. *conjuncta* Rouy & Camus Fl. Fr. vi., 443. *A. alpina* × *vulgaris* and *super-alpina* Rostr. in Bot. Tids. xvi., 173. *Exsiccata*:—*A. argentea* Don in Herb. Borrer. Isle of Arran, Dr Tyacke in Herb. Chichester Mus. *A. conjuncta* Marret Fl. du Valais 247, a narrow leafletted form. Dorfl. Herb. Norm. 3616, 3617 forma *truncata*. Baenitz Herb. Eur. 8227, 8 Val d'Ardran, Jura Gall. Fig. E. B. Suppl. i., 2983. Gardiner's *Flora Forfarshire* 64, 1848. Watson *Cyb. Brit.* i., 363, iii., 423, and *Comp.* 469-70, 510. Syme *E.B.* iii., 139, t. 424. *Rep. B.E.C.* i., 48, 334; iii., 323. Baker *Flora Lake Dist.* 89. Hodgson *Fl. Cumb.* 107, 1898.

Druce *Brit. Pl. List* 23. *Notes from the Royal Botanic Garden, Edin. Biog. George Don*, Druce, 107, 1904. *Journ. Bot.* 308, 1872; 306, 1913. *Ann. Scot. Nat. Hist.* 120, 1906.

The rediscovery of this very rare plant by Mr R. H. Corstorphine is the chief botanical event of the year, and an opportunity may be taken of giving its history in Britain. It was discovered in the Clova district by George Don of Forfar prior to 1812. There are specimens at Kew in Borrer's and Dawson Turner's Herbariums the labels of which are in Don's own writing:—"*Alchemilla argentea* Nova Species. Habitat Clova mountains. It differs from *A. alpina* in the divisions of the leaves—being not divided to their base as in this species." There is no reference to it, however, in Don's writings, nor did he send it out in his *Fasciculi*; yet (as we shall see) his son David knew of this discovery and said that his father had found it in the Isle of Skye. It was first published as a British plant in an incidental reference by [Sir] Walter E. Trevelyan in his *Vegetation of the Faroe Islands (l.c.)*, a small treatise published in Florence in 1857. The book being rare, the reference is given here in full:—

"In all the specimens of *Alchemilla alpina* in the Linnean and Smith's Herbaria the leaflets are divided to the base, but in the plant which is not in these collections they are divided only about half way and are also wider towards the point and serrated rather lower down. In Faroe where it grows in similar situations to *A. alpina* I frequently found it in abundance where that plant did not occur. I am informed by Mr D. Don that the same plant was gathered by his father in the Island of Skye, and that he considered it to be a good species, naming it *A. argentea*, under which name it is occasionally to be found in gardens, though it is often confounded with the true *alpina*, for which plant it is published in *Fl. Davica* t. 49." George Don visited Skye about 1798. Five years after the appearance of Trevelyan's notice, C. C. Babington published it as *A. conjuncta* in *Ann. & Mag. Nat. Hist.* x., 24, 1842, "Foliis radicalibus peltato-palmatis, 5—7 partitis, laciniis oblongis, obtusis, apice adpresso serratis subtus albo-sericeis et conjunctis, corymbis parvis lateralibus terminalibusque distantibus = *A. argentea* G. Don in Borrer Herb. Trevelyan Veg. of Faroes sec. ed. 8." Babington adds "Borrer's is an original wild specimen gathered by the late George Don upon (*sic*) the Clova mountains many years since. Prof. (David) Don also informs me that his father had gathered it in Skye. George Don sent living specimens to

various gardens." Babington says that as Don never published the name *argentea*, and as Lamarck had already used the name, to prevent confusion he gives it the name *conjuncta*. In *Eng. Bot. Suppl.* t. 2983, 1864, Babington supplies an account of *A. conjuncta*, and says the garden plant from which the figure is derived "is from one of Mr Don's original specimens gathered at Clova, Forfarshire." He adds that "*alpina* (*E.B.* t. 244) was also drawn from a garden specimen of *conjuncta* altered to its present state by the directions of Sir J. E. Smith, who saw it did not represent true *alpina*. The original drawing with notes annexed is a proof of this. Thus t. 244 does not represent either plant. In this *Supplement* drawing the engraver has made the lowest and outline leaves appear as if peltate, whereas the external smaller lobes are never quite connected together, although at times they even overlap. Wherever we can trace the history of plants of *conjuncta* they are stated to have been obtained from the late Mr G. Don. In 1853 Mr A. O. Black found a large patch 8—10 feet square in Clova. (See spec. in Herb. Borrer.) In 1832 Dr N. Tyache (Tyacke) gathered it near the head of Glen Sannox, Goat Fell, Arran." On J. W. Salter's drawing (at Oxford) for the *Supplement*, Babington remarks, "Look at form of leaf in its hollow—drawing beautiful there, not so plate. Dear Sowerby, make the leaves exactly shape of . . . I must finish the root." The figure is from G. Don's original specimen, Clova; the colour is from the Royal Botanic Garden specimen July 1, 1848. On a separate sheet are two dried specimens from the Roy. Bot. Gard., dated 1848. In the *Manual*, 90, 1843, Babington adds a locality "Gatesgarth Pass, Cumberland, Messrs Dovaston and Bowman," which was withdrawn in subsequent editions. The admission of *A. argentea* to our British list was not, however, to remain unchallenged. Watson (*Cybele Brit.* i., 363, 1847) queries it as "Incognit, 12—15. Said to have been collected by Mr J. E. Bowman in Gatesgarth Dale or Pass, in Cumberland, as also by Mr G. Don on the Clova Mountains. Mr Don's specimens are still in herbaria; but I suspect some mistake, the specimens appearing so like these from gardens. And the late Mr Bowman expressly stated that the plant brought by himself from Gatesgarth Dale was *A. alpina*, which remained unchanged in his garden." Watson in later years (*Comp. Cybele* iii., 471, 1870) discusses its claims for inclusion in the British flora. In addition to the foregoing records he says there was a living example shown in a

collection of British plants competing for a prize at a flower show at the Botanic Garden. It was labelled "*A. alpina*—Wales," the mistake or trick of a gardener (*Cyb.* 423, 1852). Regarding the Gategarth locality he says Bowman himself said the plant was *alpina*, and the plant he brought thence remained unchanged in his garden. Borrer searched the locality in vain. Watson, however, very hastily and erroneously dismisses the Forfarshire locality—"George Don distributed examples ostensibly from Clova, but Don habitually sent garden examples of supposed wild plants, so that his testimony alone goes for nothing." It did not rest on Don alone, for it had been corroborated by Black in 1853. Mr A. O. Black says "The exact station is about 300 feet from the base of the Glen Dole side of Craig Remmet, Clova, on the left-hand side of the first *large* ravine which comes down from Craig Remmet on entering Glen Dole." But Black is treated as summarily, for Watson says—"Black also reported the plant from Forfarshire, but he was convicted of reporting a planted American shrub as if also a true native of that county." The facts are these;—In *Gard. Chronicle* Black reported having seen "*Diervilla canadensis* near Gannachy growing in large scattered clumps, often for as much as forty feet, preventing by the denseness of its foliage the growth of all other plants except the *Pyrola secunda*, which luxuriated beneath it. There are no houses near, and the plant, if not truly wild, which its abundance would induce a person to consider it, is at least perfectly naturalised." Having thus unfairly misrepresented Black, Mr Watson rather rudely attacks Dr Tyacke, spelling his name with inverted commas, who "is also stated to have found the plant in Arran, an island frequently visited by botanists, less fortunate than this Dr Tyacke. If that habitat can be verified by some second collector it will remove *conjuncta* from the group of ambiguities." Dr Tyacke was a member of the Botanical Society of Edinburgh, and was critical enough to distinguish *Lamium intermedium* as British, a plant that Don had previously detected as a new species in Forfarshire. Fortunately four of Tyacke's original specimens are still preserved in the Museum at Chichester, as the Rev. Prebendary Burdon has kindly ascertained. Boswell Syme (*Eng. Bot.* ed. 3, iii., 139) under *A. conjuncta* says, "Very rare, if really occurring wild in Britain." He describes it from a cultivated plant as follows:—"Rootstock branched; stems several, decumbent at base, then ascending, 6 to 15 inches long, silky. Root leaves on petioles 2 to 6 inches

long; lamina 2 to 3 inches in diameter; lobes blunt and rounded at the apex, sharply serrated nearly half way down, plicate when young, flat when mature, deep green above, with an edging of silky hairs, brilliant silky beneath, the basal lobes scarcely more separated than the others, so that the leaf appears peltate; stem leaves reniform. Stipules of the lower stem leaves submembraneous, silky, with a few large triangular teeth at the apex, those of the uppermost leaves with the free portion entirely herbaceous and longer than the tubular part. Flowers $\frac{1}{8}$ inch across, greenish yellow, with the segments ovate, spreading in the form of a cross. Calyx and pedicel silky; achene $\frac{1}{16}$ inch long, broadest a little above the base, then narrowing gradually to the point." The Rev. R. Wood, incumbent of Westward, Cumberland (Trimen's *Journ. Bot.* 308, 1872), says a plant "was found by Mr Dickinson of Thorncroft, many years ago, on one of our fells and preserved in his garden as *alpini*, . . . some specimens [from the garden] were sent to me which I discovered to be *A. conjuncta*." Mr Wood sent me specimens from his garden, but he said they were originally gathered [by Dickinson] in Cumberland. He never, so far as I am aware, collected it himself, as is suggested (*Rep. B.E.C.* 48, 1881). There it still awaits discovery. A cultivated specimen from R. Wood is in Herb. Kew. Hooker speaks of it not as variety but as a sport. In *Notes from the Royal Botanic Garden Edin.* 107, 1904—*Life and Work of G. Don*—I gave a summary of its history, and speaking of the Clova locality said it awaited discovery there. In my herbarium there is a garden specimen dated 1871 said to have been brought from Ben Lawers by Mr J. Morley of Birmingham. In 1916 Mr W. Barclay of Perth kindly conducted me to a little-used railway cutting on the west side of the Tay near Perth, where a nice patch of *argentea* was growing which he had known for some years, but this was probably of garden origin.

This completes its history as a British plant until Mr Corstorphine's fortunate rediscovery of it in Black's and doubtless also Don's original Clova station, which is a perfectly natural habitat, giving the plant a distinct status as a native species. The question of its name is not clear from difficulty. *A. argentea* Don ex Trevelyan is a compound species, that is, Trevelyan added to Don's plant another distinct species which Buser (*Bericht. Schweiz. Bot. Ges.* iv., 58, 1894 in obs.) separated and named *A. jaroensis*. This and *alpina* were the only

Alchemilla seen by Ostenfeld in the Faroes (Warming *Bot. Faroes* 76). There is an earlier *A. argentea* (that of Lamarek *Fl. Fr.* iii., 303), but as botanical authors are unanimous in treating it as a mere synonym of *alpina* (even M. Buser in his large number of segregates has not identified it with either), and as Rouy and Camus ignore it in *Flore de France*, Lamarek's name sinks in synonymy, and *argentea* is open for application to another species. Since the dual nature of *A. argentea* Trevelyan has been simplified by the removal of the Faroe plant, *A. argentea* Don emend. is available for the Scottish plant. *Conjuncta* was given by Babington not because he thought it distinct from Trevelyan's plant, but from the mistaken idea that *argentea* once having been used in a different sense was not again available owing to a possible confusion. His *conjuncta* was also a compound species, including *faroensis* as well as *argentea*. Even in Groves' edition of the *Manual*, *A. fissa* (Fl. Dan. t. 2101) is cited for it, and this Lange (Nov. Fl. Dan.) says is *faroensis*. *A. faroensis* has its affinity with *splendens*. It has much less silvery undersides to its leaves than *argentea*, and the teeth of the leaflets are longer and more acute. Buser restricts *conjuncta* and uses it for the narrower-leaved limestone plant of the Dauphiny and Jura. Therefore it seems best to call our British plant by the name Don originally gave it—*A. argentea*.

What is its correct grade—a species, sub-species, variety, sport, or hybrid? There exist authorities for each grade. In favour of its being a full species are the facts that it seeds freely, and that its seedlings are like its parent and show no reversions to *alpina* or *vulgaris*. That it differs physiologically is proved by its flourishing even in suburban gardens where *alpina* soon dies out, and by its hybridising with *alpina*. That it is a hybrid is very doubtful, and appears to be without supporting evidence. Is it a sport? Its remarkable distribution in Britain—which, however, is by no means properly ascertained—does indeed somewhat favour its being a mutant. The last word on this has not been said, but with our present inadequate knowledge it may at present be dismissed. Its differences from *alpina* are too great for a variety and the question of calling it a sub-species is one rather for individual opinion. Much may be said for and against. The plant will stand in our List as—*A. argentea* G. Don emend. Ang. 1? Scot. 2 [2] 11. 70 Cumberland? Dickinson; 88 M. Perth (!) Barelay, adventit.; 90 Forfar (!) G. Don, Black, and Corstorphine; 100 Glen Sannox, Arran (!) Tyacke and

Slater; 104 Skye, G. Don, teste D. Don?; 112 Shetland, Beeby, adventit.

Mr Corstorphine's discovery therefore not only establishes its occurrence as a native plant in Scotland, it does more—it offers a salutary rebuke to botanists who make dogmatic statements about old plant-records culled from the limited horizon of a small library. It also shows how difficult it is to be sure that a place has been thoroughly explored. Black's locality was given far more precisely than is usual, yet, among others, I had made at least half a dozen visits to the Dole after this plant and failed to find it. I had searched the ravine far too high, and it was only last year that it dawned on me that the trough of the valley rather than the cliffs was more likely to be the station. Surely with this example other plants of Don's may be refound. *Savastana* in Glen Kelly, and '*Sagina maritima*' on Ben Nevis are at once suggested.

A. argentea × *alpina* = × *A. Bakeri*, hybr. nov. This appeared growing with both parents in the rock-work at Kew (see J. G. Baker in Herb. Kew.) in 1869. The seedlings have the central lobe almost cut to the base and the side ones connate. They are more elongate than in *argentea*.

952 (2). *ROSA RUGOSA* Thunb. Fl. Jap. 213, sub-var. ALBA Druce. In the *Gard. Chron.* 65, August 18, 1917, Sir Herbert Maxwell says he found that on the sandy coast of Monreith, Wigton, far from houses, a stray plant of this well known Japanese species had spread far and wide along a sandy bank. Here, established on pure sea-sand, it has acquired a character vastly superior to that which it displays in cultivation. The bank is thickly covered with *Convolvulus Soldanella*.

966. *CRATAEGUS MONOGYNA* Jacq., var. SIMPLICIFOLIA, var. nov. This plant has the large petals of *oxyacanthoides*. Leaves sub-simple, elliptic, nearly entire, slightly notched in the upper half, thin in texture; style 1, erect, Hardwick Wood, Cambridge, 1897, G. GOODE. Another form with a 3-lobed leaf, the veins rather incurved, coriaceous, style 1, bent, Brean Down, Somerset, 1896, Mrs GREGORY in *Hb. C. E. Salmon*. This variety may include hybrids of *monogyna* and *oxyacanthoides*. It differs from the latter in the less glossy foliage and solitary style.

966. *C. MONOGYNA* Jacq., var. *GLABRA* Sonder, forma. A beautiful form with the petals persistent when the fruit has well developed. It has one bent style, glabrous fruit, leaves rather small. Saintfield, Co. Down, Mrs C. H. WADDELL, ex C. E. SALMON.

966. *C. MONOGYNA* Jacq. Epsom, Surrey. Mr H. C. Watson's specimen, 1845, labelled *C. Oxyacantha*, var. *eriocarpa*, is *C. monogyna*.

966. *C. MONOGYNA* Jacq., var. *SUBCRISTATA* Druce. A curious form. The leaves 3-lobed, veins somewhat incurved; style, one; fruit long, narrow, and one-stoned; calyx lobes, erect. Bicknell, near Wroughton, Wilts., Miss TODD. This form is not unlikely of hybrid origin.

993 (5). *SAXIFRAGA TRIFURCATA* Schrad. Hort. Gott. fasc. i., 13. Alien, Spain. Wall top, Adel, near Leeds, 1916, E. C. HORRELL.

976 (2). *S. LEPTOPHYLLA* D. Don Mon. Sax. in Trans. Linn. Soc. xiii., 450 (? not of Persoon). See *Rep. Wats. Ech. Club*, 17, 1916. Root from Cwm Idwal, Carnarvonshire. Coll. J. GRIFFITH many years ago and sent as *S. groenlandica*, var. nov. *Griffithii* Guermonprez, in *lit.* Cult. Bangor, 1916. The Rev. E. S. Marshall (*l.c.*) identifies it as being the same as a well-marked saxifrage which he gathered in Cwm Idwal and on and near Snowdon. Mr F. N. Williams doubts its identity with Persoon's *leptophylla*, and proposes to call it *arvonica*. Mr J. Griffith, however, thinks *leptophylla* is not uncommon on the Snowdon range, although, in spite of searching for many subsequent years, he only once collected this plant. He showed me *Griffithii* growing in his garden last year. It seems a distinct species, remaining quite constant in culture. M. Guermonprez, who made a close study of this group, named it *S. groenlandica*, var. *Griffithii*, but never published the name. In a letter of his in my possession he says: "In this the leaf-lobes are somewhat mucronate or . . . aristate pointed . . . The plant is not stoloniferous."

1015. *SEDUM DRUCEI* Graebner, in *Rep. B.E.C.* 160, 1912. The specific grade of this plant has been recently challenged. The *Sedum* was noticed on the Phyto-Geographical Excursion in 1911, and was stated by the erudite author of the *Syn. Fl. Mitt.-Eur.*, Dr Graebner, Professor of Botany at Berlin, to be quite distinct from the common

form of *S. acre* on the continent. The statement came quite as a surprise to me, because one had never questioned the identity of the British with the continental *acre*. Descriptions are not of great value and herbarium specimens are usually inadequate in dealing with critical forms of this group. Dr Graebner took plants back with him and grew them side by side with the continental plant and found they kept quite distinct. He considered it to be an endemic form. In the *Rep. B.E.C., l.c.*, I ventured to suggest that the occurrence of our plant in France, etc., was not unlikely. Illness prevented my visiting the continent until 1913, when a flying visit was paid to the Auvergne. There I saw *acre*, a different form from our British plant, but from which I should only have separated it varietally. Plants brought home died in my garden. In 1914 I saw the same plant in Dalmatia and on the Rhine side near Schaffhausen. The petals were half as long again as those of our plant; the leaves much larger, more succulent and more closely approximate; the plants more erect and lacking the trailing shoots. No plants like the British one Graebner described were seen. Plants brought from the Rhine side died, although *S. sexangulare* from the same place is still living. To obtain independent opinions, I sent British plants to Sweden (about which I have had no report), and to Dr Schroeter of Zurich, who is by no means a splitter. He cultivated them and compared them with Swiss *acre*, and considers that the differences "vis-à-vis du *S. acre* ne sont très suffisantes pour en faire une espèce distincte, mais qu'il s'agit d'une variété (race?) voisine de la var. *neglectum* (Ten.) Rouy & Camus." My own view was and is that our common British plant is not distinct as a big species from *acre*. Therefore, without giving it any grade, I put it under *acre* in the thirteenth edition of *Hayward's Bot. Pocket Book*. It essentially differs in its acidity from *neglectum* Tenore, which is almost devoid of taste. It must be remembered that Prof. Graebner is not only a highly skilled critical botanist, but a practical horticulturist, and that his view of species is a generous one. Unfortunately he cannot now give evidence.

1058 (2). *EPILOBIUM PEDUNCULARE* A. Cunn. sens Hausskn. = *E. nummulariifolium*, sub-sp. *nerterioides* (A. Cunn.) T. Kirk. Alien, New Zealand. Near Leeds, York, 1916, F. A. Lees.

1126. *ANTHRISCUS SYLVESTRIS* (L.) Hoffm. H. E. Petersen *Dansk. Bot. Arkiv.* i., 1-152, 1915 (see *Rep. B.E.C.* 412, 1916, and

Bot. Centralb. 115, 1917) has divided the forms of this plant into 16 groups based upon the leaf-form. The description of the groups is as follows:—

Division 1. The foliaceous part of the median nerve of the terminal segments clearly broadening from the 6th to the 8th lateral lobe (counted from the terminal lobe) to the terminal lobe.

Group 1. BREVISECUNDA. The terminal lobes of the lateral segments of the 3rd order with a base more than 8-tenths of their length, often as much as 3 times longer than the edge of the next lateral lobe.

Group 2. LATIOR BREVIDIVISA. The term. lobes of the lat. seg. of the 3rd ord. have a base of about 7—9 tenths of their length. The sup. lat. lobe of these leaflets with an edge generally longer than $\frac{1}{2}$ of the base.

Group 3. LATADIVISA. The base of the term. lobes of the lat. seg. of the 3rd ord. with a breadth of 6—10 tenths of the length. The term. lobes often oblong, more or less ovate.

Group 4. ENSIS. The term. lobes of the seg. of the 3rd ord. have a broad base of 6—10 tenths of their length. They are always distinctly acute and are generally broadest near the base.

Group 5. MOLLIS. The term. lobes of the seg. of the 3rd ord. have a base the breadth of which is 6—9 tenths of their length. They are always distinctly acute and are generally broadest a little above the base.

Group 6. DIVENSIS MAJOR. The lobes, etc., are distinctly pointed.

Group 7. ACIPHYLLA MAJOR. The lobes, etc., all very long and pointed.

Group 8. BREVIDIVISA. The lobes, etc., have a base of about 5—7 tenths of their length. The entire lat. lobes are never 3 times longer than broad, and have generally an inferior contour, which shows concave and convex parts almost equally long.

Group 9. MOLLITERES. The lobes, etc., are pointed and narrowed at the base.

Group 10. DISSECTA. The lobes, etc., are oblong, pointed.

Group 11. SEMIENSIS. The lobes, etc., are sometimes pointed and narrowed at the base.

Group 12. DENSIMINOR. The lobes, etc., with a base 7—8 tenths of their length. The ent. lat. lobes are not 3 times longer than broad,

and the convex part of the inferior contour is generally two-thirds longer than the whole length.

Group 13. DIVENSIS MINOR. Like the 6th group, except that the term. lobes of the seg. of the 3rd ord. have a shorter base (4—6 tenths of their length), and the spaces between the ent. lat. lobes are usually larger than the lobes themselves.

Group 14. ACIPHYLLA MINOR. Like the 7th group, except that the term. lobes of the seg. of the 3rd ord. have a shorter base (about 4-tenths of their length), the spaces between the ent. lat. lobes are usually larger than the lobes themselves, and the involucreal bracts are typical.

Group 15. PUGIENSIS. The ent. lat. lobes are linear, serrate, less than 3 times longer than broad, and the convex part of the inferior contour is quite twice the length of the concave.

Division II. The foliaceous part of the median nerve not broadening from the 6th to the 8th lat. lobe.

Group 16. TERES. The term. lobes, etc., with a base of about 4-tenths of the length, generally acuminate. The ent. lat. lobes are linear, serrate, generally 3 times longer than broad, with the convex part longer than the concave.

Matonshek (*l.c.*) says it is evident that the differences between these groups are essentially based on the development of the extent of the limb and on the breadth of the lobes. One sees by a comparison of the various figures on plates 2-18 that it is a question of a series of forms of which the foliaceous area becomes smaller and smaller. The broadest types are in the groups *Brevisecunda*, *Lator*, *Brevidivisa*, *Latadivisa*, *Mollis*, and *Ensis*; the narrowest in the groups *Teres*, *Pugiensis*, *Aciphylla minor*, *Divensis minor*, *Densiminor*; and the medium types in the groups *Divensis major*, *Aciphylla major*, *Brevidivisa*, *Molliteres*, *Dissecta*, *Semiensis*. Alongside these differences there is a varied development of the limb of the lobes—broad and rounded to narrow and pointed. Analogous differences are similarly to be found in other polymorphous species, as for example, in *Oenothera Lamarckiana* and *Erophila verna*. Some of the forms have been cultivated, seeds obtained by self-pollination, and young plants grown (in several cases to the third generation). The result of these experiments is that there is generally great geno-typical differences between the forms of the various groups—for example, between the forms of *Brevisecunda* and those of *Aciphylla major*—always perhaps

with the exception of the groups *Dirvensis major* and *minor*, *Aciphylla major* and *minor*, and *Dirvensis* and *Ensis*. Experiments appear to indicate that each of these groups is only a fluctuating variation of a single type. It is, however, the opinion of the author that these groups differ also in their genotypical character. Experiments alone can prove it. The study of the distribution of the forms of the groups 1—16 in Denmark and in part of Sweden has been carried out by statistical methods.

1137 *b*. *OXANTHE LACHENALII* Gmel., var. *APPROXIMATA* (Mérat) Koch. Syn. 1251, 1857. *O. approximata* Mérat Nouv. Fl. Paris, 115. Benacre Broad, Suffolk, E., A. R. HORWOOD, teste A. BENNETT. This (teste Rouy & Camus *Fl. Fr.* vii., 261) differs from the type in having the trifid segments of the pinnatisect radical leaves "cunéiformes obtus;" in the type the bipinnatisect radical leaves have obovate "incisés crénelés" segments. In Britain I have the type from Headington, Oxford; Wick; and Freshwater, Isle of Wight. *Approximata*, however, seems the more general form. I have collected it at Dawlish, S. Devon; Newquay, Cornwall; Marcham, Berks; Surlingham, Norfolk; Treardur, Anglesey; and Port Logan, Wigtou, G. C. DRUCE.

1140. *CAPNOPHYLLUM PEREGRINUM* Lange in Willk. & Lange Prod. Fl. Hisp. iii., 33, 1874. *Tordylium peregrinum* L. Mant. 55, 1767. *C. dichotomum* Lange. Alien, S. Europe. St. Philip's Marsh, Bristol, Miss COBBE and G. C. DRUCE. Already recorded in the *Brit. Pl. List*, 32, as *C. dichotomum*. The above retains the earlier trivial.

1160. *DAUCUS CAROTA* L., var. *COMOSUS* Grognot ap. Carion Cat. Pl. Saône et Loire 156. Involucral leaves much longer than umbel. Ventnor, Isle of Wight; Oxford, G. C. DRUCE.

1164 (2). *D. HISPANICUS* (Lam.) comb. nov. *Caucalis hispanica* Lam. Enc. i., 658. *Durieuva hispanica* Boiss. & Reut. Diagn. Pl. Hisp 14. *Daucus durieuva* Lange Prod. Fl. Hisp. iii. 23, i., 1880. Alien, Spain, N. Africa. Galashiels, Selkirk, 1916, Miss I. M. HAYWARD. Dr Thellung suggests this name. *Daucus hispanicus* Gouan is (teste *Ind. Kew.*) *D. Gingidium* L.

Gen. 264 (2). VALANTIA (Tourn.) L. (*Vaillantia*).

1191 (5). V. MURALIS L. Alien, S. Europe. Several plants near Musselburgh, Edinburgh, J. FRASER in *Rep. Bot. Soc. Edin.* 404, 1915.

1193. GALIUM MOLLUGO L. × G. VERUM L., var. MARITIMUM DC., hybr. nov. Hayling Island, S. Hants., in great plenty and showing all grades between *verum* on one side and *Mollugo* on the other. Since the only form of *verum* there was the var. *maritimum* DC., this is a new hybrid. The enormous quantities gave very pleasing colour effects from the bright golden yellow nearest *verum* through various tints of yellow to cream and creamy white. The Rev. Prebendary Burdon and the Rev. J. Parrington were with me when it was observed. (Var. *maritimum* = *littorale* Bréb.)

1237. SCABIOSA SUCCISA L., var. OVALIS Rouy *Fl. Fr.* viii., 115, 1903. Stem short, 15--25 cm., simple; cauline leaves sublinear. Moel Hebog, Carnarvon; The Glen, Peebles. In these plants the leaves were glabrescent.

1242 (3). GRINDELIA GRANDIFLORA Hook. *Bot. Mag.* t. 4625. Alien, W. America. A garden escape, Headington, Oxon., ex Hon. Mrs GUY BARING.

1242 (4). G. ROBUSTA Nutt. in *Trans. Am. Phil. Soc.* n.s. vii., 314, 1841. Alien, California. Southport, Lancs., 1916, J. D. FIRTH.

1262 (5). ERIGERON PHILADELPHICUM L. Alien, N. America. Tintern, Monmouth, 1916, J. LAMB—to replace *E. caucasicum*, which it was first thought to be.

1294 (2). XANTHIUM CANADENSE Mill. *X. macrocarpum* DC. *Fl. Fr. Suppl.* 356. Alien, N. America. Birkenhead, J. A. WHELDON.

Gen. 299 (2). LEPACHYS Rafin. *Journ. Phys.* vol. 89. 100, 1819.

1297 (5). L. COLUMNARIS Torrey & Gray *Fl. N. Amer.* ii., 315. *Rudbeckia columnaris* Sims *Bot. Mag.* t. 1601. Alien, N. & N.-W. America. It is known on the western plains and prairies as the Prairie Cone-flower. On remount ground, Bristol, 1917, Miss I. M. ROPER.

1302 (4). *HELIANTHUS STRUMOSUS* L., var. *MOLLIS* (Willd.) Torrey & Gray. Alien, N. America. Waste ground, Oxford, 1898, G. C. DRUCE. Det. A. THELLUNG.

1302 (5). *H. BOLANDERI* A. Gray in Proc. Am. Acad. vi., 544, 1865. Alien, California. On fields at Patrieroft, S. Lanes., 1914, T. KILSBY, teste A. THELLUNG. This is made synonymous with *H. scaberrimus* (quid) in *Ind. Kew.* It is said to be a different species from *H. scaberrimus* Elliot.

1302 (6). *H. SEROTINUS* Tausch in Flora xi., 504, 1828. Alien, N. America. Waste heaps, Ware, Herts., 1916, J. HIGGENS, teste A. THELLUNG.

1302 (7). *H. LAETIFLORUS* Pers. Syn. ii, 476. Alien, N. America. Galashiels, Selkirk, 1916, Miss I. M. HAYWARD, teste A. THELLUNG (with reservation).

Gen. 301 (2). *SPILANTHES* Jacq. Enum. Pl. Carib. 8, 1760.

1304 (5). *S. DECUMBENS* (Sm.) A. H. Moore in Proc. Am. Acad. xlii., 549, n. 55, 1907. *Rudbeckia decumbens* Sm. in Rees Cycl. xxx., ii. 11, 1815.

Var. *LEPTOPHYLLA* (DC.) A. H. Moore. (*S. leptophylla* DC. Prod. v., 621, 1836, in *Ind. Kew.*, made = *arnicioides*). Alien, S. America—Brazil, Paraguay, Uruguay, Argentina. St. Philip's, Bristol, 1916, Mrs SANDWICH. Det. A. THELLUNG.

1309. ?*BIDENS CERNUA* × *TRIPARTITA*. On the borders of a pond at Brownlow Harts Farm, Sibbertoft, Northants., is a *Bidens* exactly like the one at Putney-on-Thames which I saw years ago, and which Sir J. D. Hooker names in the third edition of his *Student's Flora*. Surely both are the above hybrid or more likely *B. tripartita* × *cernua*. The characters are wholly mixed. Leaves generally entire, perhaps 1 in 20 (this season) three-cleft, always more or less stalked; heads sub-erect as a rule, but a few nodding; pappus bristles 2—4, generally but not always 3. It is just like the Putney form as regards its mixed characters. It is quite fertile and may be *B. tripartita* × (*cernua* × *tripartita*). It is certainly neither type *cernua* nor *tripartita*. E. A. WOODRUFFE-PEACOCK, in *lit.* Hooker (*Student's Flora* 211, 1870) says a Thames form has broader heads,

more numerous florets, and 3—4 pappus bristles. In 1878 I found a somewhat similar plant by the Canal at Northampton. The upper leaves were simple and much resembled those of *cernua*. (*Flora Northants. N. H. J. of Nton.* ii., 279, 1883).

1311 (3). *BIDENS BIPINNATA* L. Spanish Needles. Alien, N. America, Mexico, Trop. America. Near woollen mills, Selkirk, 1916, Miss I. M. HAYWARD.

Gen. 310 (2). *BAHIA* Lag. *Gen. et Sp.* Nov. 30, 1816.

1319 (10). *B. NEOMEXICANA* A. Gray in *Proc. Am. Acad.* xix., 27, 1883. Alien, N. America, Colorado, Mexico. Near woollen mills, Selkirk, 1916, Miss I. M. HAYWARD. The name is suggested (with a query) by Dr THELLUNG.

1320. *SCHKUIRIA PINNATA* O. Kuntze, vice *S. abrotanoides* Roth.

1320 (3). *S. ADVENA* Thell. in *Fedde Rep.* xi., 308, 1912. A lanal alien. Native home uncertain, probably S. America. Adventive in Transvaal, S. Africa; Hanover; Rodleben, Holland; Wormeweer, etc. Bristol, Mrs SANDWITH, teste A. THELLUNG.

1329. *ACHILLEA MILLEFOLIUM* L., var. *CONSPICUA* mihi. Ligules large, pink or white; the blade 3—4 mm. by 3 mm.; plant usually robust. Beddgelert, Carnarvon, August 1917; on the trenches, The Parks, Oxford, September 1917; Pembrey, Carmarthen, 1916; sent also by W. J. GREENWOOD from Foss Cross, E. Gloster, 1917, G. C. DRUCE.

Gen. 322 (5). *ISOETOPSIS* Turcz. in *Bull. Soc. Nat. Mosc.* xxiv., i., 174, 1851.

1363 (2). *I. GRAMINIFOLIA* Turczaninow. Alien, Australia. Tweedside, between Galashiels and Melrose, Roxburghshire, 1916, Miss I. M. HAYWARD.

1365 (12). *SOLIVA NASTURTIIFOLIA* DC. *Prod.* vi., 142, 1837. *S. stolonifera* Loudon. *Gymnostyles nasturtiifolia* A. Juss. in *Ann. Mus. Par.* iv., 212, 1804. Alien, S. America. Lanal. Ettrick side, Selkirk, 1916, Miss I. M. HAYWARD. Suggested to compare, A. THELLUNG. The plant is naturalised in N. America from N. Carolina to Florida, and in Louisiana.

1384. TUSSILAGO FARFARA L. With pink florets, Bentley, Durham, J. HESLOP-HARRISON, in *lit.*

1393 (2). SENECIO ERRATICUS Bert. Amoën. Ital. 92. *S. aquaticus* Sm. Prod. Fl. Gr. ii., 178. *S. Jacobaea*, var. *erraticus* Beck. Fl. N. Oester., 1222. Lower leaves deeply lyrate, the terminal segment large, cordate, truncate or slightly narrowed at base, rounded at the top, oval or oblong; lateral segments of cauline leaves patent, with straight angles, oblong, toothed; peduncles divaricate, slender; flower-heads small. This differs from *Jacobaea* in the thickened root-stock; in the larger terminal lobe to the upper leaves being distinctly larger than the lateral; in the spreading peduncle, and the elliptic-lanceolate (not lanceolate) phyllaries; and from *aquatica* in the less deeply lyrate lower leaves, the more oblique and narrower lateral segments of the stem leaves, which are entire or only slightly toothed, and the spreading or ascending peduncles. The flower-heads of *S. aquatica* are about a third larger than in *erraticus*. Koeh (*Syn. Fl. Germ.* 388) italicises the characters of *erraticus*, "pinnis dentatis subquinis lateralibus patentissimis obovato-oblongis." Babington (*Prim. Fl. Sarn.* 53, 1839) records *erraticus* from Jersey on the authority of La Gasca, and from marshes behind Ivy Castle, Guernsey, and he says it grows at Buttington, Montgomery. Babington's record has been thought to belong (Hook. *Stud. Fl.* 582, 1884) to a large state of *aquaticus*. That Babington was mistaken is borne out by the fact that he has a var. *major* of *aquaticus* (*Manual* 179, 1847) which he queries as *erraticus* Bert. In the edition of 1851, p. 178, he leaves out any reference to Bertoloni's plant, and in the seventh edition of 1874 the variety *major* as a name itself disappears. He, however, refers to "a larger much branched form, leaves all lyrate, terminal lobe truncate or subcordate below, segments subspathulate." In the ninth edition, 214, 1904, he adds, "this was supposed to be *erraticus* Bert." In 1832 M. J. Gay visited the Channel Islands and found *S. erraticus* Bert., a plant he doubtless knew well, on August 10, between Cobo and Vale, Guernsey, but sought for it in vain in Jersey. That portion of the island has, however, in recent years undergone so great a change that the plant may well have disappeared, but it is highly desirable that careful search should be made to rediscover the plant. It seems at best to deserve only the rank of sub-species under *aquaticus*, although Koeh, Brébisson, Grenier and Godron, Boreau,

Coste, and Nyman keep it as a distinct species. Brébisson says that it differs from *aquaticus* in its stronger and less hairy stem; its larger number of slender, open, divaricate branches; the terminal segment of the leaves being broad, ovate and rounded at the apex; in its smaller flower-heads and leaves of a more sombre green.

1412 (11). BERKEYHA PINNATA Less. Syn. Comp. 75. *Stobaea pinnata* Thunb. Alien, S. Africa. Bradford, York, 1917, J. CRYER. Det., with some doubt, A. THELLUNG.

1422 b. CARDUUS NUTANS L., var. MACROCEPHALUS (Desf. Fl. Atlant. ii., 245, 1800, as a species). *C. nutans*, sub-sp. *macrocephalus* Gugler. St. Philip's, Bristol, 1916, Miss COBBE and G. C. DRUCE; Woodhall Spa, Lincoln, 1917, Rev. F. ALSTON.

1430. CIRSIUM PRATENSE (Huds.) Druce, var. POLYCEPHALUM (Coss. & Germ.) Druce in Rep. B.E.C. 417, 1916. Recently a type specimen of Watson's labelled *Carduus pratensis*, var. *Pseudo-Forsteri*, gathered near Esher Station, Surrey, in 1866, has come into my hands. It is quite ordinary *Cirsium pratense*, about 6 dm. high, except that the stem bifurcates about half-way up, thus bearing two heads of quite normal flowers. Watson does not seem to have described it as a variety, but he distributed it through the *B.E.C.* in 1866 (see *Rep.*, p. 10) under the name *Carduus Pseudo-Forsteri*, and adds "this luxuriant form of *C. pratense* has been often misnamed *C. Forsteri*" (e.g., by Sir W. Hooker, Mr Mill, &c.). The curators, Baker and Trimen, add a note that "it does not differ from the usual *pratensis* except in size." Therefore, *Pseudo-Forsteri* is a nomen nudum, but even if it had been described it is antedated by Cosson & Germain's trivial *polycephalum*, which dates from the *Fl. Env. Paris* 417, 1845. In the *Rep. B.E.C., l.c.*, I have associated that name with a plant especially common in Ireland which has two or more heads of flowers and the leaves rather deeply sinuate or cut—a plant often mistaken for the hybrid with *palustre*, e.g., \times *C. Forsteri*. G. C. DRUCE.

1451 (5). CENTAUREA TRICHOCEPHALA M. Bieb., ex Willd. Sp. Pl. iii., 2286. *C. Simonkaiana* van Hayek. Alien, Hungary to Persia, E. Europe, and West Asia. Chicken run at Tower-le-Moor, Lincoln, Rev. F. ALSTON.

1457 (2). *C. STOEBE* L., sub-sp. *RHENANA* (Bor.) Schinz & Thell.
With the above, 1917.

1459 (4). *C. DIFFUSA* Lam. × *C. STOEBE* L. (? sub-sp. *RHENANA*)
= *C. PSAMMAOGENA* G. Gayer in Maygar Bot. Lapok viii., 59, 1909.
Alien, E. Europe. Chicken run at Tower-le-Moor, Lincoln, Sep-
tember 1917, Rev. F. ALSTON. Teste A. THELLUNG.

1480 *b.* *CICHORIUM INTYBUS* L., var. *GLABRATUM* (Presl). Hutton
Bushell, York, August 1916, E. C. HORRELL.

1486. *RHAGADIOLUS* ["]*CRETICUS* (L.) All. Fl. Pedem. i., 226, 1785.
Hedypnois cretica Willd. Sp. Pl. iii., 1617. *R. Hedypnois* All. *L.K.*
Alien, Europe. Ware, Herts, 1916, J. HIGGENS and G. C. DRUCE.
Teste A. THELLUNG. Previously recorded.

1645. *TARAXACUM VULGARE* Schrank, var. *RUBRINERVE* (Jord.).
The stalk and the median nerve of leaf red, external involueral bracts
reddish. Bangor, Carnarvon, August 1917, G. C. DRUCE.

1650. *LACTUCA SALIGNA* L., var. *CRACOVIENSIS* Rouy Fl. Fr. ix.,
198, 1905. Whitstable, Kent. Cauline leaves for the most part
entire, elongate, linear, smooth at the sides. In *runcinata* the median
cauline leaves are runcinate, and the edges have spinescent hairs: in
Ruppiana the median and upper cauline leaves are entire, lanceolate,
the sides having rough hairs.

1652 (2). *LACTUCA PLUMIERI* Gren. & Godr. Fl. Fr. ii., 322, 1852.
Mulgedium Plumieri DC. Prod. vii., 248. *Sonchus Plumieri* L.
Alien, mountainous woody places of Central Europe and N. Spain.
This differs from *L. alpina* in having glabrous peduncles and in-
volueral bracts. Found by Mr F. W. Stansfield, apparently wild, in
the neighbourhood of Preston, Lancs. See *Gard. Chron.* 235, 1917.

Gen. 365 (2). *UROSPEMUM* Scop. Introd. 122, 1777.

1663 (9). *U. PICROIDES* F. Schmidt in Samm. Phys. Ausf. i., 276,
1795. Alien, S. Europe. Galashiels, Selkirk, Miss I. M. HAYWARD.

1666 (2). *JASIONE PERENNIS* Lam. Enc. iii., 216. St Martin,
Guernsey, "Rochers maritimes," J. Gay *MS.*, 1832. Rouy (*Fl. Fr.*
i., 91) keeps this as a distinct species, with a restricted and peculiar

distribution, namely, the silicious mountainous districts of the Vosges, the Pyrenées and Corsica, N. Spain, and W. Germany. It differs primarily from *J. montana* in its stoloniferous root-stock, sterile rosettes, and flat leaves. *J. montana* has a simple stem, without barren rosettes, and the leaves are ordinarily undulated. My plants, from the coast near Boulay Bay, seem to be this species, but further investigation is desirable before definitely including it in our List.

G. C. DRUCE.

1682 (2). *LEGOUSIA BIFLORA* Britton in Mem. Torr. Club v., 309, 1894. *Campanula biflora* Ruiz and Pavon Fl. Peruv. ii., 55, t. 200, f. 6, 1799. *Specularia biflora* Fisch. & Mey. Alien, America. Galashiels, Selkirk, 1916, Miss I. M. HAYWARD. Teste A. THELLUNG.

1727. *PRIMULA FARINOSA* L., sub-var. *ALBIFLORA* (pure white flowers) and forma *ACAULIS*. Middleton, Teesdale, Durham, J. HESLOP-HARRISON, in *lit.*

Ord. 56 (3). *LOGANIACEAE* Lindl. Nat. Syst. 306, 1836.

Gen. 404 (10). *DESFONTAINIA* Ruiz & Pavon Prod. 29, t. 5, 1794.

1751 (20). *D. SPINOSA* Ruiz and Pavon, *l.c.* Bot. Mag., t. 4781. Alien, S. America. An ornamental garden shrub, now naturalised at Madryn Castle, Carnarvonshire. Teste J. GRIFFITH.

1762. *GENTIANA VERNA* L., sub-var. *ALBA*. Middleton, Teesdale, Durham, J. HESLOP-HARRISON, in *lit.*

1788 (3). *LAPPULA STIPITATA* (Greene as *ALLOCARYA*) comb. nov. *Allocarya stipitata* Greene in Pittonia i., 19, 1887. Alien, W. Amer. Watton, Norfolk, 1916, F. ROBINSON. Teste A. THELLUNG.

1806 (2). *NONNEA PULLA* DC. Fl. Fr. iii., 626. Alien, S. Europe. St. Philip's Marsh, Bristol, 1916, Miss COBBE.

1820. *MYOSOTIS COLLINA* G. F. Hoffm., var. *LEBELII* Corbière Fl. Norm. 407. *M. adulterina* Lebel Obs. Pl. Manche 17. *M. Lebelii* Gren. & Godr. Fl. Fr. ii., 532, much altered. *M. hispida*, var. *Lebelii* Rouy, Fouc. & Cam. Fl. Fr. x., 328. Stems much branched from base, with spreading ascending branches; leaves spathulate, upper lanceolate; flowers small, bluish-white or yellowish-white; inflorescence often bracteate at base. Dry sunny banks near Wool, Dorset, May

1917, G. C. DRUCE. To this probably belongs the sand-dune plant at Littlestone-on-Sea, Kent.

1826. *ECHINUM ITALICUM* L., var. *PYRAMIDALE* (Lap. Abr. Pyr. 91, 1913, as a species). Cothill, Berks., 1907, G. C. DRUCE; Ware, Herts., 1907, Miss TROWER; on a chicken run at Woodhall Spa, Lincoln, 1917, Rev. F. ALSTON. Mr C. C. LACAITA, who kindly named this segregate of *italicum*, says it agrees with La Perouse's own specimens at Kew, and with the Toulouse plant distributed by Bordère and others. It may be worth the specific distinction claimed for it by its original describer. G. C. DRUCE.

1828 (2). *E. TUBERCULATUM* Hoffing. & Link Fl. Port. i., 183. *E. violaceum* Linn. Herb. Alien, S. Europe. Near Bristol, 1917, No. 7, Miss I. M. ROPER. Det., C. C. LACAITA, as probably their var. *latifolium*.

1848 (2). *SOLANUM FONTAINESIANUM* Dunal in Poir. Enc. Suppl. iii., 777. *Nycterium Fontainesianum* Sweet Bot. Reg. t. 177. Alien, Brazil. On farm waste near Swanage, Dorset, Miss I. M. ROPER.

1851 (6). *PHYSALIS MINIMA* L. Alien, S. America, etc. Meadow, Leeds, 1916, E. C. HOBRELL; Bradford, York, 1917, J. CRYER, teste A. THELLUNG.

1867. *VERBASCUM NIGRUM* L. × *OLYMPICUM* Boiss., hybr. nov. This appeared at Oxford with both parents and in two distinct forms—one a broad and the other a narrow-leaved plant. The flowers are about 25 mm. diameter (in *olympicum* they are 50 mm., in *nigrum*, 15 mm.); the tint is darker than in *olympicum*; the filaments have pale purplish hairs (in *olympicum* they are deep yellow); and the leaves are less soft than in *olympicum*. The narrow-leaved form has linear-lanceolate leaves with sharper crenatures than the broad-leaved form. August 1917, G. C. DRUCE.

1895. *SCROPHULARIA SCORODONIA* L., sub-var. *VIRIDIFLORA* mihi. This grows with the type near Par, Cornwall, Miss M. COBBE. Its foliage is of a paler green, and its corolla is pure green (foliis læte-virentibus, corolla viridi). An analogous condition to the sub-var. *Bobarti* (Pryor) as a var. July 1917, G. C. DRUCE.

1906. *VERONICA HYBRIDA* L., sub-var. *ALBIFLORA*. Flowers pure white, coming true from seed. Originally found at Gloddaeth, Carnarvonshire, by J. E. GRIFFITH.

Sub-var. *PURPURASCENS* grows with the above and also keeps true in cultivation.

1943. *EUPHRASIA KERNERI* × *ROSTKOVIANA* = × *E. RECHINGERI* Wettst. Mon. Euphr. 2, 289. In boggy ground in a valley, and in thick spongy turf on Mendip, near Rowberrow, N. Somerset, September 8, 1916, Dr C. BUCKNALL. See *Rep. B.E.C.* 580, 1916. Wettstein says it differs from *Kernerii* in the leaves, bracts and calyces being sparingly clothed with rather short glandular hairs; from *Rostkoviana* in the glandular hairs covering the leaves and calyces being shorter and less numerous. Dr Drabble is inclined to think that these plants are merely forms of *Rostkoviana* . . . and resemble plants collected at Cym Idwal by G. Goode, and from Helvellyn, Grisedale, and Cathole, Derby, by himself.

The Genus *MELAMPYRUM* L.

M. Beauverd in his most valuable and elaborate Monograph, which is reviewed on p. 66, has very minutely described a large series of forms of *M. pratense*. These, and those of the other species, are given here for convenience of reference. All the British specimens cited are in *Herb. Druce* at Oxford and were found by him unless otherwise stated. The spelling of place-names is corrected.

1958. *M. CRISTATUM* L. Ang. 11 (cited from *Brit. Pl. List*). Two varieties of this are described—*maritimum* Beauv. and *solstitialc* Maly—as well as the type, which alone occurs in Britain. Of the type, he describes four sub-varieties, and of *solstitialc* two.

1959. *M. ARVENSE* L. Ang. 8 (1). Under this he has four sub-species—*elatius*, *eu-arvense*, *barbatum*, and *ciliatum*. Of *elatius* there are two sub-vars. *Eu-arvense*, to which our British plants belong, has three varieties—*genuinum*, *impunctatum*, and *versicolor*, and four sub-varieties. The British plants are sub-var. *TYPICUM* Beauv. from Costessy, Norfolk, *Pitchford* in *Dickson Fasc. Brit.* and sub-var. *SCHINZII* Beauv. in Schinz & Keller *Fl. der Schweiz* 304, 1914. This is mixed with the type in *Dickson Fasc. Brit.* n. 74, but differs from it in the stem being about 40 cm. high and the thick scabrid leaves

being about 15 mm. broad. In the type the leaves are narrower (about 4—8 mm. broad) and the plant is rather smaller. The sub-species *barbatum* has four varieties. The sub-species *ciliatum* has a var. *transiens* Beauv. The sub-species *clatius* has two sub-vars. and a form.

1960. *M. PRATENSE* L. 109. Hib. 39. Beauverd removes the names of two varieties from our list of British Plants—var. *latifolium* Schueb. & Mart. Fl. Würt. 401, 1834, introduced into the *Student's Flora* 274, 1870, without the varietal authority supplied in the 9th edition of Babington's *Man.* 311, 1904 (he says our plant differs from *latifolium* Schueb. & Mart.) and the var. *purpureum* of British authors (see *Rep. B.E.C.* 467, 1909), which he considers to come under *alpestre*. In the elaborate treatment of *M. pratense* M. Beauverd first divides it into two sub-species—*eupratense* and *vulgatum*.

M. EUPRATENSE Beauverd. Corolla post anthesin purpurea vel \pm rosco-diluta: antherarum pili basales appendiculas antherarum (appendiculis 2 exterioribus antherarum anticarum exceptis) perspicue excedentes; bracteae inferiores semper integrae; herbae heliophilae. The corolla after flowering more or less pale rose-purple; the basal hairs conspicuously exceeding the appendage of the anthers except in the case of the two exterior appendages of the anterior anthers; the lower bracts always entire. Plants of sunny places.

M. VULGATUM (Persoon) Beauv. Corolla [albida, lutea vel versicolor] post anthesin nigrescens; antherarum pili basales appendiculas antherarum (appendiculis 2 antherarum anticarum exceptis) aequantes subbreviares vel eis sublongiores; bracteae inferiores subdentatae, sequentes gradatim profunde dentatae apicales \pm regulariter pectinatae (rarius parum dentatae). The whitish, yellow, or versicoloured corolla becoming black after flowering; the basal hairs of the anthers equalling, or slightly shorter or longer than the appendages of the anthers, except in the case of the two appendages of the anterior anthers; lower bracts subdentate, those above more deeply cut, the apical more or less regularly pectinate, rarely slightly dentate.

Sub-sp. *pratense* has the following varieties, sub-varieties, and forms:—

Var. *purpureum* Hartm. differs from the plant of British authorities in the narrower leaves, subsimple habit, and in the corolla being purple (not white or variegated) before flowering. It is recorded only

for Sweden and Norway. Var. *maculatum* Behm has spotted stem and leaves, Sweden. Var. *purpurascens* Ascherson, N. Germany and Russia. Var. *fragrans* Behm, corolla small, yellow with purple striae, Sweden. Var. *alpestre* Beauv. with its sub-var. *tenerum* Dahl., Norway, and sub-var. SCOTIANUM Beauv. This is the *purpureum* from Glen Eunach 720 m., *A. Wilson*. It is also the "var. *purpureo* of Hooker *Hibernia* 1816" in *Hb. DC.* and the one gathered in "mt. bogs, Mangerton, Kerry, 1844." Stem slender, simple or slightly branched, about 10 cm. high; the lower internodes short, about 10 mm.; cauline leaves rather thick, scabrous on both sides, 15—35 by 2—3 mm. broad; bracts ovate-lanceolate, broader than the leaves, the lower entire, the apical distinctly shorter and more or less dentately cut at base; corolla at flowering small (10 mm.), yellow, with white lower lips rose-striate, after flowering blackish-purple. The inflorescence begins at the third or fourth, rarely at the second node (in *purpureum* from the third to the fifth). Type sub-var. *alpestre* occurs in Austria, Switzerland, and Italy. Sub-var. *sabaudum* Beauv. is limited to the Alps of Annecy. Sub-var. *rhodanicum* Beauv., Switzerland. Var. TYPICUM (*M. pratense* sensu stricto), sub-var. *brachycladum* Beauv. Vosges. Sub-var. FOLIATUM Neum. Plant rather strong, 25 cm. high; stem (diam. $1\frac{1}{2}$ mm.) glabrous at base, with short bent brownish hairs towards the top; branches oblique, erect, longly naked at the base, the top bearing leaves and flowers at the apex; cotyledons (about 30 by 7 mm.) present during flowering; cauline leaves remote (internodes 40 mm.), ovate-lanceolate, about 50 by 5 mm., erect-spreading; no intercalary leaves; lower bracts entire, about 40 by 7 mm.; upper cuneate-sub-hastate at base; inflorescence beginning at second or third, rarely at the fourth node; calyx-tube short (2 mm.) with arcuate-filiform teeth; corolla about 13 mm. long, open, white or yellow, after flowering pale purple. Clogher Valley, Tyrone, 1907, *C. L. Peck*; Middlehath Wood, Graffham, Sussex, *C. C. Lacaita*, as a new form—*lacium* Beauv., with a pale yellow corolla which becomes purple after flowering. Sub-var. *quercetorum* Beauv., Germany, Sweden, Switzerland, France. This has intercalary leaves and smaller cotyledons (15 by 5 mm.) and might be found in Britain. Var. PALUDOSUM Gaud., sub-var. EU-PALUDOSUM Beauv. Inch Garth, M. Perth, shown me by *D. Haggart*; see also *Rep. B.E.C.* 487, 1913, *Marshall* and *Shoobred*; Wybonbury, Cheshire, n. 1960, August 1906, *G. C. Druce*. Rigid, erect, slightly branched; stem about 23 cm. high,

the erect branches sterile or sparsely flowering; intercalary leaves 0--2 entire, erect: cauline leaves and bracts linear-lanceolate, about 54 by 2 mm.: corolla whitish, about 12 mm. long (not cm.), bearing a ring of hairs round the base of both the superior filaments: smaller cotyledons, about 18 by 3 mm., absent or dry at flowering. This also occurs in France, Switzerland, and Austria. Sub-var. *platyphyllum* Beauv. and sub var. *neocomense* Beauv., Switzerland. Var. *elongatum* Beauv., France. Var. *rhaeticum* Beauv., Switzerland. Sub-var. *abyssale* Beauv. and sub-var. *culminale* Beauv., both Switzerland. Var. *castaneorum* Murr, Austria, Switzerland, and Italy. Var. *thinobia* Beauv., France.

Var. MONTANUM Johnston. Johnston's name should be in brackets. He described it as *M. montanum* sp. nov., in the *Flora of Berwick on Tweed*. Beauverd's contrasting descriptions of *montanum* and *ericetorum* are as follows:—MONTANUM. Caulis nanus \pm 8 cm. altus,—subnudus vel parum ramosus, ramis brevibus (\pm 4 cm. lg.)—oblique erectis: folia intercalaria (2—4 paria) anguste elliptico-lanceolata (superf. \pm 20 by $1\frac{1}{2}$ mm.) inflorescentiae initium ad 6—8 um. nodum situm (area britannica). Alltnaharra, Suth. W. Miller 1889: Gran Wood, C. E. Palmer: Dunbeag Bog, Co. Clare, 1882, B. King: also since publication of *Mon.* Lawers, M. Perth: Glen Dole, Forfar. ERICETORUM. Caulis (\pm 15 cm. altus) medio ramosus, ramis elongatis (\pm 15 cm. lg.) flexuosis horizontaliter patulis: folia intercalaria (0—2 paria) elliptico-lanceolata (\pm 35 by 4 mm.) inflorescentiae initium ad 5—7 um. nodum situm. Aberglaslyn, Carnarvonshire, 1851, C. E. Palmer: Hook Common, N. Hants., 1890, C. E. Palmer: near Richmond, York, Ward: Teallach and Braemore, W. Ross, Druce: Wybonbury Bog, Cheshire, Marshall and Wolley-Dod: Lough Derg, Lomar: Roundstone, B. King: Galway: Dissersh, Radnor, 1899, W. H. Painter: Birch Copse [Berks.], 1858, Holliday: Dunbeath, Caithness, 1888, W. R. Linton: Leith Hill, Surrey, 800 ft., No. 49555c, C. B. Clarke: Huddersfield, York (in quercetis), 1911, C. Schroeter: and now recently, Bellside, Lanark: Downton, Hereford.

Sub-sp. VULGATUM (Pers.) emend. Beauverd. Under this there is var. *oligocladium* Beauv., which has a wide continental area, but is not as yet reported from Britain, with a sub-var. *pinetorum* Beauv. and sub-var. *rigidum* Beauv., both from Switzerland—the latter from near Lugano. Sub-var. *mesophyllum* Beauv. with *ovatum* and *natum*,

Belgium, France, Switzerland, and Italy. Sub-var. *platyphyllum* Beauv., Belgium, Hungary, and Switzerland. Sub-var. *acuminatum* Beauv., Scandinavia. Var. *vallesiacum* Beauv., Switzerland, with f. *elongatum*.

Var. BRITANNICUM Beauv. This has a brittle stem about 20 cm. high; axillary branches flexuous, arcuate, spreading, sterile or bearing a few flowers; stem leaves usually 50 by 5 up to 60 by 19 mm., absent after flowering; inflorescence from the third or fourth node; calyx \pm 6 mm. long with falcate-filiform teeth; corolla pale yellow, soon turning blackish, about 12 mm. long. New Forest, Brockenhurst, S. Hants, 1887, No. 1074, *C. E. Palmer*; "Higachan pr., Killarney, 1910, Druce." [Probably Sligachan, Isle of Skye.]

Var. COMMUTATUM Beck. (*M. vulgatum* Dorfler Herb. Norm. 4749 non. Pers.) This is characterised by the inflorescence starting from the fourth to the twelfth node. In *britannicum* it starts from the second to the fourth. Sub-var. *paradoxum* Beauv. (*M. paradoxum* Rönninger) et f. *paludosum* etc., Austria, Switzerland, Italy, France. Sub-var. *pseudo-nemorosum* Beauv., Austria, Switzerland, Italy.

Sub-var. CONCOLOR (Schönheit). This is *M. commutatum* Tausch in the restricted sense. It has 3—5 pairs of intercalary ovate-lanceolate leaves, and the lower bracts are deeply pectinately cut. Bagley Wood, Berks., *Baxter*; Killarney, *C. Schroeter*. The corolla is greenish-white, about 14 mm., with the upper part spotted with black and yellow or citron-yellow, soon turning black. Its range extends into France, Italy, Austria, and Hungary. Var. *congestum* Beauv., Alsace.

Var. VULGATUM (Pers.) Beck., sub-var. *eburneum* Beauv., Switzerland. Sub-var. *hastatum* Beauv., France, Switzerland, Austria, Russia. Sub-var. BREVIDENTATUM Beauv., France; and I have since had it from Tarbert, Argyll. Sub-var. *monticolum* Beauv., Austria, Switzerland, Italy, France. Sub-var. *calidorum* Beauv., ff. *robustum* and *elongatum* Switzerland; f. *transiens* Beauv., Austria; f. *fallax* Beauv., Switzerland, Italy.

Sub-var. LAURIFOLIUM Beauv. (*M. pratense*, var. *latifolium* auct. Brit. non Schueb. & Mart.) Stem strong, 2 mm. diam., about 40 cm. high, branched from the base with elongate, arcuate-erect, simple or slightly compound branches; cauline leaves ovate-lanceolate (80—110 by 15—22 mm.), erect, remote, with rarely a pair of intercalary leaves; lower bracts entire (69—90 by 14—20 mm.), more or less

narrowed at base, apex acuminate, the others sub-entire or more or less dentate or pectinate digitate at the base; narrowed into a short petiole; more or less floriferous, the inflorescence from the fourth to the sixth node; calyx 7 mm., including the teeth, which are $4\frac{1}{2}$ mm. long; corolla 14 mm., sulphur-white, the top somewhat open. Wootton-under-Edge, Gloucester, 1900; Oaresbury, Berks., 1891; Brickhill, Bucks., 1881; Rotherfield, etc., Oxon., 1883; Woburn, Beds, all *Druce*; Brecon, 1882, *Peyer*. Sub-var. *digitatum* Beauv., f. *laciniatum* Beauv., Russia, Switzerland, France: f. *nurorum* Beauv., Ticino.

Sub-var. DIGITATUM, f. OVATUM (Spenner as var.) Beauv. (*M. pratense*, var. *latifolium* Schueb. & Mart. p.p.), Weir Head, S. Devon: Wynd Cliff, Monmouth; Glendalough, Wicklow (not Mecklorn), all *Druce*. M. Beauverd has since determined sub-var. DIGITATUM—my plant from Wood Perry, Oxon., 1916. It verges towards *laurifolium*. *Latifolium* differs from *laurifolium*, which has its area in Britain, in its much shorter leaves (50 by 20.5, against 110 by 20 mm.) and in its eu-asiatic distribution—Belgium, Germany, Switzerland, France, Serbia, Spain.

F. LANCEOLATUM Spenner (*M. pratense*, var. *angustifolium* Lange. *M. nemorosum*, var. *angustifolium* Caruel). Herba vulgarissima. Cauline leaves narrow lanceolate, 40 by 5.8 mm. Widely distributed in Europe. In Britain—Holten wood, Bath (! Holten wood, Oxon.), 1890, *Druce*; Alverstone, Isle of Wight, C. E. Palmer; Dunbeath, Caithness, Linton. F. *extremum* Westerl., Sweden. F. *divaricatum* Kerner (*M. pratense*, var. *aurum* Norman), Sweden.

Var. HANS *Druce*, f. STENOPHYLLUM Beauv. Polycladous rarely oligocladous: about 20 cm. high; stem (1 mm. thick) flexuous, glabrous below, slightly goniotrichous above; cotyledons about 20 by 5 mm., disappearing before flowering; cauline leaves 1—3 pairs, more or less distant (internodes 20—35 mm.), ovate-lanceolate (about 35—70 by 3—14 mm.), glabrous on both surfaces; branching from the base; the branches elongate, flagelliform, flowering and leafy at the top; the intercalary leaves (0—2 pairs) similar to those of the stem; lower bracts entire, ovate lanceolate (30—70 by 3—16 mm.), shortly stalked; the upper (5—10 pairs) cuneate at base, more or less toothed or sub-entire; inflorescence from the fourth to the seventh node; calyx tube short with arcuate-setiform teeth; corolla golden-yellow, the mouth open, about 15 mm. long. The form STENOPHYLLUM

has the inflorescence from the fifth to sixth node; the intercalary leaves (1—2 pairs) about 40 by 3 mm. M. Beauverd thus names my specimens from Glen Dole, Forfar, 1843, *Gardiner*; near Moffat and Millaw Burn, Dumfries, *Druce*; Bridge of Brown, 1905, *Marshall*; near Betty Hill, *Shoolbred*; Findhorn, Nairn, 1887; Beauly, Easternness, 1889; Pandy Mill, Carnarvon, 1909; Boughrood, Radnor, 1908; Aber, Llanberris; Penmaenmawr, Carnarvon, *Loydell*; Keswick, Cumberland; Templemore, Co. Down; Killarney, Kerry [not Kelly], all *Druce*; Ashopton, Derby, *Linton* (see *Rep. B.E.C.* 1893); Derwent Dale, *Painter*. To these may be added the classic station Glen Cree, Wigton; Boat of Garten, Easternness; Blairgowrie, E. Perth; Kirkcudbright; Lake Lancashire (*Pearsall*)!; Arthog, Merioneth (*Barton*)!; Ambleside, Westmoreland; Somerset, N.; Beddgelert, Carnarvon.

F. PLATYPHYLLUM Beauv. differs in the less branched stronger stem—2 mm. broad; stem leaves ovate-lanceolate (50—70 by 10—14 mm.); intercalary leaves one pair or none, broadly lanceolate; upper bracts conspicuously toothed or pectinate-lanceolate; inflorescence from the fourth to fifth node. This is the southern and western analogue of the previous form. It occurs at Weir Bridge, S. Devon, 1895; Watersmeet, N. Devon, 1896; Winch Bridge, York, 1909; Glendalough, Co. Wicklow, 1901; Glengariff, Co. Cork, 1890; Glenariff, Co. Antrim, all *Druce*; also from Killarney, 1911, *C. Schroeter* in *Herb. Polytechnic Zurich*. Recently I have gathered it at Millook, Cornwall. Var. *chrysanthum* Beauv. and ff. *stenophyllum*, *dubium* and *latifolium*, Switzerland. Italy. Var. *sibiricum* Beauv., Siberia.

Var. INTEGERRIMUM Doell (*M. pratense*, sub-sp. *hians*, var. *rogesiacum* Beauv.), f. PSEUDOSILVATICUM Beauv. (*M. pseudosilvaticum* Schur). A polymorphous plant. The form has much the aspect of *silvaticum*, having the intercalary leaves (1—3 pairs) narrow, 35 by 4 mm., and the upper bracts entire or very slightly subdentate at base; Wassails Copse, Odiham, N. Hants., *C. E. Palmer*; Burnham Beeches, Bucks., *Loydell*. F. *rogesiacum* Beauv., Germany, Austria, France, Switzerland. Var. *linifolium* Römiger, Germany, Switzerland.

This notice has been drawn up under difficulties. All my specimens of the *pratense* group prior to 1914 were sent to M. Beauverd, and in consequence of the war he has been unable to return them.

The identification, therefore, of some of the localities cited is somewhat conjectural, and I had no opportunity of checking the spelling of place-names. With regard to the forma *platyphyllum* of var. *hians*, it is probable that if M. Beauverd could have seen living examples in situ he might have given it a higher grade, to which Dr Schroeter, to whom I showed it at Killarney, thought it was entitled. See also *New Phyt.* and *Rep. B.E.C.* 362, 1915.

1961. *M. SILVATICUM* L. This *M.* Beauverd divides into three subspecies. *M. Guinieri* Beauv., France: *M. saxosum* (Baumg.) Beauv., and *M. eu-silvaticum* Beauv. The latter has two vars. and two sub-vars. from Hungary and Bulgaria. *M. eu-silvaticum* is divided into the pale and dark yellow forms. Those with the pale corolla are: var. *tricolor* Beauv., sub-var. *abietiuorum* Beauv., and *cebrarum* Beauv., Switzerland: sub-var. *roseum*, Switzerland, Austria: var. *albidum* Beauv., Sweden, Austria: var. *bicolor* Behm, Sweden: var. *pallens*, Austria: var. *ochroleucum* Beauv., Switzerland: var. *angustissimum* Schur, Hungary. The darker yellow forms are: var. *nanum* Beauv., Austria, France: var. *decumbens* Westerl., Sweden, Switzerland: var. *dentatum* Schur and sub-var. *laricetorum* Beauv., Germany: f. *macrodontum*, f. *obscurum*, and f. *typicum* Westerl., Germany, Sweden, Switzerland, Hungary, Italy, France: f. *reflexum* Schur, sub-var. *intermedium* Beauv., Sweden: f. *sinnuatum*, Switzerland: f. *subdentatum*, Sweden, Germany, Austria, Switzerland: var. *edentatum* Schur, sub-var. *gracillimum* and f. *maritimum*, Switzerland, Italy, France: f. *norvegicum*, Scandinavia, Russia: f. *montanum*, Germany, Switzerland, Italy, France: sub-vars. *latifolium* Hartm., *angustifolium*, *NEPHELOBIUM*, *turfosum*, *genuinum*, *vulgatum*, *dubium*. No British localities are cited for any of the varieties or subordinate forms except in the case of the var. *EDENTATUM*, sub-var. *NEPHELOBIUM*. This is my plant from Coshieville and Lawers, M. Perth.

In a tabular form the British species of *Melampyrum* therefore stand as:—

Gen. 463. *MELAMPYRUM* (TOURN.) L.

1958. *M. CRISTATUM* L., Ang. 11.

1959. *M. ARVENSE* L., Ang. 9 (1), sub-var. *Schinzii* Beauv.

1960. *M. PRATENSE* L., 109, H. 39, sub-sp. *pratense* [var. *alpestre* Beauv.], sub-var. *scotianum* Beauv. (var. *purpureum* auct. ang.). Scot. 2, Kerry.

[Var. *typicum* Beauv.], sub-var. *foliatum* Neum., Tyrone; f. *laxum* Beauv., Sussex.

Var. *paludosum* (Gaud.), sub-var. *eu-paludosum* Beauv., Cheshire, M. Perth.

Var. *montanum* Johnst. 15, H. 1.

Var. *ericetorum* D. Oliv., 10, H. 2.

Sub-sp. *vulgatum* (Pers.) em. Beauv., var. *britannicum* Beauv., Hants., Skye.

[Var. *commutatum* Beck.], sub-var. *concolor* (Schönheit) Beauv., Berks., Kerry.

[Var. *vulgatum* Beck.], sub-var. *laurifolium* Beauv. (*latifolium* auct. ang.), Ang. 6.

[Sub-var. *digitatum* Schur], f. *ovatum* (Spenner) Beauv., Ang. 2, H. 1; f. *lanceolatum* Spenn., 3.

Var. *hians* Druce, f. *stenophyllum* Beauv., 17, H. 2; f. *platyphyllum* Beauv., 2, H. 4.

[Var. *integerrimum* Doell], f. *pseudosilvaticum* Beauv., Ang. 2.

1961. M. SYLVATICUM L. Brit. bor. 21, H. 2 (1).

Var. *pallidiflorum* F. B. White, Scot.

Var. *edentatum* Beauv., sub-var. *nephelobium* Beauv., Scot. 2.

2026. SALVIA VERBENACA L., a large flowered form. Between Shoreham and Hove, Sussex, 1917, Miss TODD. An entirely different plant from *S. Marquandi* so that the length of the corolla tube is not necessarily correlated with other characters.

2044. PRUNELLA VULGARIS L., var. DUNENSIS mihi. Plants small, 3—4 cm., with arched lower branches; leaves with a few blunt teeth or sub-entire, thinly clothed, as is the stem, with strong white hairs; inflorescence in short compact heads, 1—1.5 cm., the bracts large and fringed with white hairs. In the slacks of sand-dunes at Pembrey, Carmarthen, and at Whiteford Point, Glamorgan, July 1916, G. C. DRUCE.

2050 (2). MARRUBIUM PEREGRINUM L. Alien, S. Europe. Chicken run near Woodhall Spa, Lincoln, 1917, Rev. E. A. WOODRUFFE-PEACOCK and Rev. F. ALSTON.

2060. STACHYS OFFICINALIS Trevis, lusus PELORIA Druce. A fine peloric form with the terminal florets perfectly regular and campanu-

late. Gibside Wood, Durlham, J. HESLOP-HARRISON in *Vasculum* 95, 1917.

2065. *LEONURUS CARDIACA* L., var. *HIRSUTUS* Hornem. Suppl 66. Leaves for the greater part trifid, more rugose and more softly hairy than the type; calyces softly hairy and less strongly spinescent. Chicken run, Tower-le-Moor, Lincoln, Revs. F. ALSTON and E. A. WOODRUFFE PEACOCK; Didcot, Berks., and waste ground, Oxford, G. C. DRUCE.

2077. *BALLOTA NIGRA* L., var. *MOLLISSIMA* Druce. Mitcheldean, Hereford, Miss TODD; Llenford, Monmouth, DRUCE. Foliis tenuibus, magnis, molliter pubescentibus, calyci pilis albis longissimis copiose hirsuto. This differs from *membranacea* in the soft pubescence of the leaves and the densely long white hairs of the calyx. In *membranacea*, which has the same thin large leaves, the pubescence is much sparser and shorter.

2079. *TEUCRIUM SCORODONIA* L., var. *CRISPUM*. Devonshire, F. W. STANSFIELD. This has been in cultivation for 50 years and still retains the curious crisped margin to the leaves. The plants are under experimental culture by Miss Rayner at the University College, Reading.

2091. *PLANTAGO MARITIMA* L., sub-var. *BRACTEATA*, comb. nov. Leaves broad, slightly toothed; lower flowers of the inflorescence strongly bracteate; bracts gradually diminishing in size (the lowest 10—15 mm. long) upwards. Polperro, Cornwall, 1916, F. RILSTONE. This is a *lusus* rather than a variety.

2091. *P. MARITIMA* L., var. *LEPTOPHYLLA* Mert. & Koch *Deutsch. Fl. i.*, 808. Cape Grosnez, Jersey, August 6, 1832, J. GAY MS., in *Bibl. Kew.*

2111 (2). *AMARANTHUS ANGUSTIFOLIUS* L., var. *GRAECIZANS* (L.) Thell. in *Asch. & Graeb. Syn. v.*, 306, 1914. *A. graecizans* L., *A. Blitum* (not of L.) Th. *Dyer Fl Trop. Afr. & Fl. Cap.* Alien, Asia, occ., Africa. Tweedside, Selkirk, 1913, Miss I. M. HAYWARD; ash-heap, Aldrington, W. Sussex, 1911, T. HILTON. Det. A. THELLUNG.

2116 (7). *A. PANICULATUS* L. Alien, tropical and semi-tropical areas. Cult. fields, Gorey, Jersey, 1900, S. GUITON. This is placed under *A. hybridus* L. by Thellung in his erudite Monograph in Asch. & Graeb. *Syn.*, *l.c.*

2116 (8). *A. QUITENSIS* Humb. Bonpl. & Kunth Nov. Gen. et Sp. ii., 194 [156], 1817. Alien, S. America, Argentine, etc. West Drayton, Middlesex, 1916, Miss COBBE; Malvern, Worcester, DRUCE.

2124. *CHENOPODIUM ALBUM* L. Under the group *ALBA* Dr Standley in the North American Flora xxi., i., 11, 1916, has made a key of the allied species as follows:—

Blades of the lower leaves about as broad as long.

Young leaves and inflorescence bright red; plants 1-3 metres high,
stout.....*C. amaranticolor*

Plants bluish-green, never red, 3-10 dm. high, usually slender...*C. VIRIDE* L.
(*opulifolium* Schrad.)

Blades of all the leaves conspicuously longer than broad, often twice as long or longer.

Calyx open, exposing the fruit.....*C. ferulatum*

Calyx closely enclosing the fruit.

Plants coarsely and loosely farinose yellowish; seed coarsely punctate.....*C. dacoticum*

Plants very finely and closely farinose; seed finely punctulate or smooth.

Seed dull; blades of leaves conspicuously hastate.....*C. petiolare*

Seed shining.

Leaf-blades, all except the lowest, entire, lanceolate or oblong-lanceolate, bright green....*C. LANCEOLATUM*
(*album*, var. *integerrimum*)

Leaf-blades nearly all dentate or lobed, broader than lanceolate.

Seed 1.3-2 mm. broad; plants not ill-scented.

Plants bright green; inflorescence usually loose and open.....*C. PAGANUM*

Plants copiously farinose; inflorescence usually dense.....*C. ALBUM*

Seed 0.8-1 mm. broad; plants usually ill-scented.

Leaf-blades conspicuously three-lobed, the upper hastate; plants stout, yellowish.

C. HIRCINUM

Leaf-blades dentate, never three-lobed; plants slender, never yellowish....*C. BERLANDIERI*

The plants of this section which have been found in Britain are printed in capitals, and as some of them are of frequent occurrence on

waste ground, remount areas, etc., it was thought that this key might be useful, especially as in the most recent British Flora they are either not included or inadequately described. It will be noted that Dr Standley makes *opulifolium* Schrad. = *viride* L.

2130 (3). *CHENOPodium PANICULATUM* Hook. in Bot. Misc. ii., 237, 1831. Alien, S. America—Peru, etc. Woollen mill, Selkirk, 1916, Miss I. M. HAYWARD, teste A. THELLUNG. Probably this from Pye Hall Farm, Suffolk, E., 1917, A. R. HORWOOD.

2151 (3). *ATRIPLEX MUELLERI* Benth. Fl. Austr. v., 175. Alien. Plants probably belonging here were found at Bradford, York, in 1917, by J. CRYER.

(Gen. 510 (3). *BASSIA* All. Misc. Taur. iii., 177, t. 4, 1766 (not of L. Mant. 1771). *Chenolea* Thunb. Nov. Gen. 10, 1781, L.K.

2153 (20). *B. QUINQUECUSPIS* F. v. Muell. Census 30. *Anisacantha quinquecuspis* F. v. Muell. Trans. Vict. Inst. 134, 1855. *A. muricata* Moq. Chenopod. 84, L.K. *Chenolea quinquecuspis* F. v. Muell. Fragm. x., 91. Alien, Australia—N.S. Wales, Queensland. Between Galashiels and Melrose, Roxburghshire, 1913, Miss I. M. HAYWARD, teste A. THELLUNG.

2161 (2). *SALICORNIA GRACILLIMA* × *RAMOSISSIMA*. Brading Harbour, Isle of Wight, September 8, 1916, W. C. BARTON.

2161 (3). *S. DISARTICULATA* × *PROSTRATA*, var. *APPRESSA*. Newtown, Isle of Wight, September 1916, W. C. BARTON.

S. DISARTICULATA × *RAMOSISSIMA*. Newtown, Isle of Wight, September 1916, W. C. BARTON in *lit.*

S. DISARTICULATA × (*DISARTICULATA* × *RAMOSISSIMA*) with above, W. C. Barton. All these determined by Dr E. J. SALISBURY.

2168 (2). *SALSOLA PESTIFER* A. Nelson, Coult. & Nels. Man. 169, 1909. *S. Tragus* Reichb. Fl. Germ. Exc. 583, 1832 (not of L.). *S. Kali*, var. *tenuifolia* Tausch in Flora xi., 326, 1828. *S. Kali*, var. *pseudotragus* Beck in Reichb. Ic. Fl. Germ. xxiv., 172, 1909. Alien, Medit. region, Western Asia, Russia, central and south. Completely naturalised in N. America. Wrentham, Suffolk, 1917, A. R. HORWOOD.

Ord. 72 (2). PHYTOLACCACEAE Lindl. Nat. Syst. 210, 1836.

Gen. 515 (10). PHYTOLACCA L.

2168 (30). *P. DECANDRA* L. Of American origin, now quite naturalised in Europe. Alien, waste ground, Bradford, York, M.W., J. CRYER, *vide* sp.

2183. *POLYGONUM PATULUM* M. Bieb. *P. Bellardi* auct., non All. Port Talbot, Glamorgan, 1904, G. C. DRUCE; N. Wales, 1917, A. DALLMAN.

2186 (2). *P. POLYSTACHIUM* Wallich Cat. n. 1686. Alien, India. Hortal. Near Lynton, N. Devon, 1917, Miss COBBE. From a little hollow in a sand pit near the golf links at Woodhall Spa, Lincoln, Rev. F. ALSTON. A very large plant which looks as if it had been established for some years. This is a very ornamental and freely growing species which, like *cuspidatum*, may become naturalised. Planted at Welbeck, Notts., R. W. GOULDING.

Gen. 536 (2). *HELXINE* Req. in Ann. Sc. Nat. ser. I., v., 384, 1825.

2253 (5). *H. SOLEIROLII* Req., *l.c.* Alien, Corsica, Sardinia. Hortal. St. Just in Roseland, Cornwall, May 1917, Miss COBBE.

2261. *QUERCUS ROBUR* L., var. *CRISTATA* Henry in Gard. Chron. 34, 1917, fig. 13. *Lusus insignis*, foliis parvis, contortis, obliquis, glandibus-glabris, apice depressis. Cluster Oak. Savernake Forest, Wilts. The acorns are quite glabrous and have a flattened apex with a depression containing the remains of the styles. The leaves, much smaller than those of the type, are clustered together, owing to the abbreviated growth of the shoot. They are twisted and very oblique, the midrib dividing the blade into unequal parts. This seems to be a very interesting teratological condition—a *lusus* rather than a true variety. A. HENRY.

2313. *CEPHALANTHERA DAMASONIUM* Druce (*GRANDIFLORA*). A narrow-leaved form has been sent by Mr J. EDWARDS from Colesborne, Gloucester. It flowers a full fortnight before the ordinary broad-leaved form, and has, he says, a different habit.

2326. *ORCHIS INCARNATA* L., var. *PULCHELLA* Druce. (For details of this and the following Orchids see Supplement). Lyndhurst, Teesdale, Sutherland,

2326 (2). *O. PRAETERMISSA* Druce, *lusus ECALCARATA* mihi. Pudmore, Surrey, J. C. E. BOYS. *Lusus reversa* mihi. Charlbury, Oxford. Sub-var. *albiflora* mihi. Abingdon, Berks., G. C. DRUCE.

2327. *O. MACULATA* L., sub-var. *LEUCANTHA* mihi. Longmer, Salop: Tregaron, Cardigan, T. N. STEPHENSON; Wool, Dorset; Tackley, Oxon.: Ballyvaughan, Co. Clare. O'KELLY.

O. maculata × *foliosa* = × *O. scampstoui* mihi. This shows the natural hybrid. It occurred spontaneously at Scampston Park, York, and was sent me by Mr W. H. ST. QUINTIN.

O. maculata × *Habenaria Gymnadenia*. Tregaron, Cardigan, T. N. STEPHENSON; Birkenhead, Cheshire, 1917, E. F. PAYNE.

2327 (2). *O. FUCHSI* × *H. GYMNADENIA* Fermoy, Cork, 1916, T. H. LEACH.

Sub var. *albiflora* mihi. Wool, Dorset.

2338. *HABENARIA GYMNADENIA* Druce, var. *BOREALIS* Druce. Borrowdale, Cumberland, G. C. DRUCE.

Var. *bicolor* et *spiralis* (Heslop-Harrison in *Vaseulum* 8, 1917). Durham.

2349. *IRIS PSEUDACORUS* L., sub var. *AURANTIACA*. Flowers deep orange. In great plenty near Oxwich, Glamorgan, July 1917, Miss VACHELL.

2416 (3). *LILIUM CANADENSE* L. Alien, N. America. One plant far from houses in Tilgate Forest, Sussex, July 1917, Mr STEPHENS, ex A. WEBSTER, vide sp.

2429 (2). *JUNCUS VAGINATUS* R. Brown Prod. Nov. Holl. 218, 1810. *J. pallidus* R. Br., *l.c.* Alien, Australia. Tweedside, Selkirk, 1916, Miss I. M. HAYWARD.

2440. *J. GERARDI* Lois., var. *SORANTHUS* (Trautv. Bull. Bot. Soc. Mosc. xl., 3, 110, 1867). *J. soranthus* Schrank. Wyke Regis, Dorset; Anglesey, J. GRIFFITHS; Islay, Inner Hebrides. See A. BENNETT in *Rep. Wats. Exch. Club* 35, 1916-17. Buchenau describes it "flores turmatim, approximati, pallidiores (ferruginei vel straminei)." Engl. *Pflanz.* iv., 36, 112.

2448. *J. URUGUENSIS* Griseb. in Guett. Abh. xxiv., 317, 1870. Alien, Argentina. Tweedside, between Galashiels and Melrose, Roxburghshire, 1915, Miss I. M. HAYWARD. Det. (with reservation) A. THELLUNG.

2527. *CYPERUS DECLINATUS* Moench Meth. 317, 1794. *C. vegetus* Willd. Sp. Pl. i., 283, I.K. Alien, Chile. Border of Batchmore Lake, Rickmansworth, Herts., 1914, G. C. MACONCHY.

2614. *CAREX MURICATA* L., var. *FUMOSA* Grenier Fl. Jurass. 835. Husnot Cyperac. 18. Race *C. fumosa* Rouy Fl. Fr. xiii., 412. Spikelets in a compact head, glumes blackish, fruits black and shining. Near Didcot, Berks.; Wansford, Northants., G. C. DRUCE.

Var. *REMOTA* F. Schultz (name suggested by Rev. E. S. Marshall). Asthully, Oxon., July 1917, G. C. DRUCE.

Gen. 634 (10). *ELEUSINE* Gaertn. Fruct. i., 7, t. 1, 1788.

2631 (20). *E. INDICA* Gaertn. i., 8, 1788. Alien, tropical and sub-tropical areas. On ballast at Liverpool, 1872, J. HARBORD LEWIS; Meanwood, Leeds, 1916, E. C. HORRELL; Galashiels, Selkirk, 1916, Miss I. M. HAYWARD.

2656 (2). *PHALARIS LEMMONI* Vasey Ill. N. Amer. Grasses ii., t. 5, 1892. Alien, America—California, Arizona. Near Thetford, Norfolk, introduced with forage, 1916, F. ROBINSON.

2662. *ALOPECURUS PRATENSIS* L., var. In a pond near the Sewage Works, Galashiels, Selkirk, September 1916, Miss I. M. HAYWARD. An extraordinarily robust plant, with broad glaucous leaves, resembling those of *Elymus arenarius*. The flowers, however, are normal. The condition may have been induced by the strong nitrogenous mud in which it grew. In stature and coarseness it resembles *A. antarcticus*. G. C. DRUCE.

2673. *PHLEUM PRATENSE*, var. *INTERMEDIUM* (Jord.) F. Schultz Arch. Fl. Fr. et All. 325 as a species. *P. pratense*, race *P. nodosum*, var. *intermedium* Rouy Fl. Fr. xiv., 50. This chiefly differs from *nodosum* in being a more robust plant, 3-7 dm., with the stem not much bent below, in the long inflorescence, 8-10 cm. (other vars. 2-4 cm. only). This is the plant which Mr Chester sent to the Club in 1916 (see *Rep. B.E.C.* 593, 1916). This year I have seen the same

robust plant at Nuffield, Oxon., and near Wilston, Wilts. Mr H. J. Goddard has also sent some for distribution from the vicinity of Salisbury. It has the swollen stem base of *P. nodosum*.

Var. LONGIARISTATUM Parnell Brit. Grasses 176, 1845. Root bulbous, awns nearly as long as glumes. Moist shady places, Roslyn Wood, etc., Midlothian, Parnell, *l.c.* As the author says, this variety occasionally occurs with a very short spike, in which case it closely resembles *P. alpinum*.

Var. ARMATUM, var. nov. Differs from type in the long awn (as long as the glume), and the usually shorter inflorescence. Parnell describes his var. as having a bulbous root, and thus var. *nodosum* L. But we have the same long-glumed form occurring in fibrous-rooted plants, as at Galafoot, Selkirk, Miss I. M. HAYWARD and G. C. DRUCE; Alyth, Mid Perth, M^T. COWAN; Slough, Bucks., 1900 (a short inflorescenced plant); Port Talbot, Glamorgan, 1904, G. C. DRUCE.

2697. DEYEUXIA NEGLECTA Kunth, var. BOREALIS (Lacst.) Druce in *Rep. B.E.C.* 238, 1888. One of the most important discoveries of 1917 is that of the above arctic grass by Mr JAMES FRASER. It was originally found by me close to Killin Pier, Mid Perth, in 1888, and is one of our most northern grasses, being recorded from Finnmark, Finland, West Bothnia and Greenland. It was still at Killin in 1891. After the hurricane, however, sawmills were erected for the cutting up of the uprooted pines. The sawdust from these mills gradually filled up the marsh, and in a few years the plant was destroyed. It seemed curious that no other marsh in the neighbourhood should yield it. Searches round the western end of Loch Tay on several occasions proved fruitless. There were good hopes that the somewhat extensive marshes between Killin and Crianlarich, part of which I vainly explored in 1916, might afford it a home. It was, however, reserved for Mr Fraser (who has kindly sent specimens for distribution) to discover it within a mile of its original station in 1917, so that this very rare and interesting grass is once more to be restored to the Scottish flora. The Vienna Actes seem to demand the name *Deyeuxia neglecta*, var. *elatior* (Hartm.) comb. nov., since it was first described as a variety by Hartman, under that name in *Anders. Skand. Vaxt.* ii., 95. Nyman places it as a sub-species *borealis* under *neglecta*. G. C. DRUCE.

2735 (4). *DANTHONIA PILOSA* R. Br. Prod. 177, 1810. Alien, Australia. Lanal. Selkirk, 1917, Miss I. M. HAYWARD.

2735 (5). *D. NUDA* Hook. f. Fl. Nov. Zel. ii., 337. Alien, New Zealand. Lanal. Selkirk, 1917, Miss I. M. HAYWARD.

Gen. 679 (5). *DISSANTHELIUM* Trin. in *Linnaea*, x., 305, 1836.

2744 (10). *D. SUPINUM* Trinius, *l.c.* Alien, Chile, Bolivia, Peru, Mexico. Galashiels, Selkirk, 1916, Miss I. M. HAYWARD. Det. Professor HACKEL through Dr A. THELLUNG.

2748 (6). *ERAGROSTIS CAPILLARIS* Nees *Agrost.* Bras. 505. Alien, N. America, West Indies. On canal bank, Aintree, Lancs., 1914. J. A. WHELDON.

2759. *POA PRATENSIS* L., var. *e. PLANICULMIS* Parnell *Grasses* 74, 1845. Stem stout, compressed; leaves short, broad, upper leaf folded, compressed, with the summit rounded behind; panicle erect; spikelets large; lowermost branches smooth and mostly in pairs; whole plant dark green. Common by roadsides. Var. *umbrosa* Parnell, *l.c.* Tall, slender; panicle somewhat drooping; branches rough, lower ones generally in fives; leaves long, narrow; whole plant light pleasant green. Shady places (often mistaken for *P. nemoralis*). Var. *i. arida* Parnell, *l.c.* About a foot high; panicle somewhat drooping; stem sheathed nearly to the summit, with the upper leaf passing behind the panicle; whole plant soon assuming a bleached appearance. Common in dry exposed places. Var. *j. retroflexa* Parnell, *l.c.* A small slender plant, with the lower branches of the panicle suddenly bent downwards. Frequent in pastures under shady trees. Occasionally mistaken for *Poa distans*. Var. *k. muralis* Parnell, *l.c.* Slender; 5-8 inches high, with short upright panicle. Frequent on wall-tops in shady places. Var. *l. arenaria* Parnell, *l.c.* Stout, upright, with large somewhat angular spikelets; outer palea 7-ribbed, inner palea frequently divided to base; whole plant somewhat glaucous. Sandy places on sea coast.

2761 *g.* *P. TRIVIALIS* L., var. *RIGIDIOR* Fl. Ingr. 760, 1861. Hungerford, Berks., July 1892; near Chatteris, Cambridge. G. C. DRUCE.

2776. *GLYCERIA MARITIMA* Wahl. Fl. Gothob. 17, 1820. *Poa maritima* Hudson Fl. Angl. 35, 1762. *Schlerochloa maritima* Lindl. Syn. 315, 1829. *Puccianellia maritima* Parl. Fl. Ital. i., 370, 1848. *Atropis maritima* Griseb. in Led. Fl. Ross. iv., 389, 1853. *Brachypodium maritimum* Roem. & Schultes Syst. ii., 743. *Hydrochloa maritima* Hartm. Gram. 8, 1819. *Molinia maritima* Hartm. Handb. 27, 1820. *Festuca maritima* Nyman Consp. 942, 1882; DC. Fl. Fr. iii., 47. *Festuca thalassica* Kunth Gram. i., 129, 1829. This is one of our most polymorphic grasses with a range of variation quite inadequately described even in Syme's *English Botany*. It has a wide geographical distribution, being found on the coast of nearly every British and all the Irish maritime counties. It is most abundant in muddy estuaries within the reach of tidal influence, salt marshes, gravelly margins of coast-line, or even in damp, rocky places, thinning out and disappearing where fine sea-sand occupies the shore. J. W. White (*Flora Bristol* 660) records *maritima* as growing on blown sand at Burnham, N. Somerset. With so wide a range of habitat and of geographical, edaphic, and soil conditions we might expect such a plastic species (or conglomeration of micro-species) to be a source of confusion to systematic writers. The above synonyms—and the list is by no means exhaustive—show the difficulty there has been in assigning even the generic name. Boswell Syme and Babington chose *Schlerochloa*; Hooker, *Glyceria*; Ascherson & Graebner, *Festuca*; Rouy, *Atropis*; Parlatore, *Puccianellia*; and Grenier & Godron, *Scleropoa*. Not only is the geographical range extensive, but *Glyceria maritima* extends to the limit of the mud seawards, only *Salicornia*, with occasionally submerged *Zostera* (as at Montrose, Poole, etc), acting as advance guards. Landwards it extends as far as the salt wash of the tide reaches. In salt mud-flats *Glyceria maritima* is a very conspicuous feature. The grey-green foliage, with numerous barren shoots and sparse small panicles, often prostrate or decumbent, occupy great tracts through which the tide-waters force their way, making runnels over which the procumbent branches hang. In the soft mud the branches occasionally root. The leaves are often rush-like, but they are folded, not truly junceiform. When the wash of the tide becomes less pronounced and the mud changes into a less liquid consistence, the branches tend to become more compact and the stems more erect. In these drier marshes, especially where cattle feed, the plant is only about 3 dm. high, but it has a more upright

stem and large panicle. When the ground becomes gravelly, or rather when a stratum of gravel covers a mud-flat or the clayey margin of a tidal stream, the plant becomes distinctly caespitose (here and there a runner suggests what it might do if opportunity offered), and grows to the height of 6—8 dm. It has erect stout stems and comparatively few barren shoots with the characteristic distichous, spreading leaves of the mud form. On distinctly rocky or shingly coasts the plant assumes slightly different modifications. It is the plant which was reported from Ireland as *festuciformis*, and which I named as var. *hibernica* of that species. This *Glyceria* association on our coasts (the *Glycerietum* of Yapp, Johns & Jones) consists of *G. maritima* and *Salicornia*. When the mud is more solidified it forms the *Armerietum* of the same authors. This consists of several species, including *G. maritima* as a more tufted form. As those authors say (*Journ. Ecol.* v., 1917) when *G. maritima* colonises “bare silt, long creeping shoots are formed, which spread rapidly. Later, as the sward becomes higher and denser, the mode of growth changes. The main shoots take up a more erect position, and grow slowly or even die away, while a succession of lateral shoots of limited growth appears, giving the plant a close tufted habit.” This tufted habit, however, becomes more specialised as the drainage becomes more complete, and with it come other variations, the cause for which does not at present appear to be ascertained. *Glyceria maritima* is a grass which seems to have been unknown to Linnaeus, its first binomial being given by Hudson in *Fl. Ang.* 34, 1762, where it is defined “*Poa paniculata subspicata, spiculis secundis coarctatis, foliis convolutis.*” Hudson gives two Raian names, *Gramen paniculatum, maritimum vulgatissimum*, Syn. 409, and *Gr. caninum maritimum paniculatum*. In the *Historia* ii., 128, 1286 Ray describes it “*Radix fibris albis tenuibus constat, unde plura exeunt germina. Folia breviter longitudine vix palmari, perangusta, carinata lateribus ita adductis et quasi complicatis ut teretia seu juncea videantur. Culmi satis firmi, pedales duobus tribusve geniculis intercepti in summo paniculam gestant palmarem, non multum diffusam, purpurascentem, e locustis seu spicis oblongis angustis, squamosis, non aristatis compositam. In palustribus maritimis ubique frequentissimum est. Hujus alia species occurrit major et elatior multo, ad bicubitalem altitudinem assurgens, stipulis, crassis etiam triticeis majoribus, quam nobis ostendit D. Newton.*” The first

Raian plant is represented in the Dillenian Herb. and the second is in Bobart's Herb. (*Hist. O.c.* iii., 202, n. 31) The latter consists of panicles only. The character of "radix fibris albis" distinguishes it from *Festuca rubra*.

Smith (*English Flora* i., 118, 1824) unites both plants of Ray under his *G. maritima*. Despite the polymorphism of the Grass few varieties have been described in British Floras. Parnell (*Grasses* 222, 1845) has a variety *hispida* under *Poa maritima*, which essentially differs in the weak and variable characters of the hispid or slightly toothed panicle branches (these also occur in *hibernica*, etc.), and in the more compressed stem. Townsend (*Fl. Hamps.* 648, 1904), under *Sclerochloa*, describes a var. *riparia*, which is a slender plant with fewer spikelets, nerves closer together, and a narrower white border to the lower pale, a character which Syme attributes to the type. Syme (*Eng. Bot.* xi., 103) has a var. *deflexa*, in which the panicle branches are deflexed or reflexed in fruit. In more recent times Praeger records *Glyceria festuciformis* from Strangford Lough. This I went to collect, but found that it graded towards *maritima*, and seemed to differ from the Adriatic plant in several points. Therefore (*Rep. B.E.C.* ii., 482, 1909) I named it var. *hibernica*. (Hackel agreed that it might be a local form). Recently I have seen similar plants in abundance in W. Sussex and S. Hants. The Rev. E. S. Marshall found about Port Victoria and Grain Port in Kent a remarkable form which was identical with one found by M. Foucaud on the coast of Charente-Inférieure, and which was subsequently named by Hackel as *Atropis Foucaudii* Hackel, ex Fouc. in Bull. Soc. Bot. Rochell 173, 1893 (see Husnot *Gram.* 49, 1896). The Kent specimen has flat leaves, and was (*Flora Kent* 405, 1899) 30 inches high, with an inflorescence 9 inches long. It had the silky pubescence on the nerves of the flowering glumes and ciliated upper palea, characters common to other *maritima* forms. It was afterwards reported from Muddiford, Hants., and Auginish Island, Co. Limerick (see *Rep. B.E.C.* 260, 1907). My type specimen from Mr Marshall, though of caespitose growth, has a runner. With the exception of the flat leaves, the presence of a runner, the larger central cavity of the culm, the silky hairs on the lower glume and the ciliate scales it resembles var. *hibernica* from Hants., Sussex and Kent, and Mr Praeger's *festuciformis* from Strangford Lough. Some specimens have the hairs and ciliation of *Foucaudii*. The spikelets

of *hibernica* are larger than the true *festuciformis* (10-15 mm. long as against 6-10); the flowers 5 mm. long as against 3-4 mm.; the central hollow of the culm about 1 mm.; the glumelles less unequal than in *festuciformis*. *Hibernica* differs from *Foucaudii* in having usually glabrous glumes and non-ciliate pales; more or less enrolled leaves; broader and often larger spikelets. Therefore *Foucaudii* may be worth separation as a variety. Rouy makes it a Race. One may add, that under the continental specimens sent out as *festuciformis* there is a very considerable range of variation, notably those from Sarepta, and those of Ahlberg from Sweden. These have long capillary panicle branches, but even in Fiori and Beguinot's cult. spec (507 bis) from Val Figheri the plants are truly caespitose; the leaves narrow, convolute; the spikelets small (6-7 mm.), and the glumes not quite glabrous. In wild specimens from Tre Porti the spikelets are from 7-9 mm. This is indeed very close to my V791 from Pagham, except that the outer glumes are nearly sub-equal in the Italian plant. They measure 3 and 4 mm. against 1.75 and 3.5 mm. in the Pagham specimen. In a luxuriant plant of Praeger's the glumes measure 3.5 and 5 mm. On the whole the Irish plants show less divergence in the size of the glumes. Dr Rendle describes the lower glume of the Irish plant as $1\frac{1}{2}$ to 2 lines long, the upper glume 2-2 $\frac{1}{2}$ lines. Some of my own gathering measured 2.5 and 3.5 mm. The spikelets of the Irish plant are less regular, coarser, and the florets less enrolled than continental *festuciformis*. Both Dr Rendle and Dr Stapf, I believe, now agree that true *festuciformis* has not been found in the British Isles. Therefore a problem in plant distribution, which presented great difficulties—the presence of an Adriatic plant in the eastern shore of North Ireland—does not at present exist. The varied forms of *maritima* require much further study. It is a question whether a number of them can be sufficiently isolated from their allies to be made separate varieties. A very large series of specimens collected in recent years seems to afford a few sub-varieties. The possible occurrence of two hybrids, one with *Borreri* and the other with *distans* are here described. In addition to these there is a northern form from the Forfarshire coast which may possibly be identical with the Swedish *suecica*, but this awaits further study. It may be added that continental authors by no means agree in their descriptions of *festuciformis*. For instance, Reichenbach (*Fl. Excurs.* ii., 45, 1833) says: "panicula oblonga

spiculis teretibus multifloris, bracteola ext. obtusa hispida, radice repente," but in *Icon. Fl. Germ. et Helv.* i., 48, 1850, he changes his description to "panicula aequali patente; ramis inferioribus subquinis, fructiferis arrectis; spiculis 5-9 floris; floribus lineari-oblongis obsolete 5-nervi subtrienatis; culmo simplicis; turionibus nullis; radice fibrosa." Archangeli (*Fl. Italica* 783) emphasises the stoloniferous growth of *maritima*, and says the glume is not half as long as the glumelle, whereas in *festuciformis* it is more than half as long. Rouy (*Fl. Fr.* xiii., 191, under *Atropis* as a Race) describes *festuciformis* as having no stolons or only upright barren shoots: spikelets shorter than in *Poucaudii*; flowers 2-3 mm. long; stem robust: leaves thick, conduplicate or enrolled, junceiform; glumes rather unequal, elliptic, acute; the lower $\frac{3}{4}$ or $\frac{1}{2}$ as long as the contiguous glumelle; the upper roundish-oval or roundish trilobed at the apex: anthers about $1\frac{1}{2}$ mm. (in *maritima* $\frac{1}{2}$ mm). Ascherson and Graebner say the anthers of *festuciformis* are 1.75 to 2 mm. long, in *maritima* 1.75 to $2\frac{1}{2}$ mm. long—a distinction of little value. The anthers of *maritima* vary considerably. I am unable to correlate their size with other characters.

2776. *G. MARITIMA* × *BORRERI* = × *G. BURDNI*. Growing with both the assumed parents at Pagham and, when fresh, looking a good intermediate. It has mostly flat glaucous leaves. The spikelets are broader than in *maritima*. The panicle branches are arranged so as to simulate *Borreri*, but it is a slenderer and taller plant. The glumes and spikelets of the upper branches approach the Kentish *Poucaudii*, of which it has the ciliate pales, which seem to occur in all the *maritima* forms.

2776. *G. MARITIMA* × *DISTANS*. Pagham, Sussex W., 1917. Ref. No. V742. This has the stout habit of *G. maritima*, var. *hibernica*. The leaves, however, are mostly flat, the panicle branches long, slender, the lowest 3-4 cm., naked for 1 to 1.2 cm. from the base, the branches straddling or spreading nearly at right angles. This is very near to the var. *deflexa*, differing chiefly in the flatter leaves, the long capillary lower panicle-branches and the more spreading panicle. To this hybrid may also be referred some plants gathered at Pagham in 1916 by the Rev. Preb. Burdon, which had an unusually large and open panicle and narrower spikelets, and also plants from Hayling Island, S. Hants.;

seen in 1917. These had many of the spikelets sterile, the panicle branches patent, ascending and flat leaves. They were growing with both parents, and had something of the facies of *suecica*.

2776. *G. MARITIMA* Wahl., sub-var. *AMETHYSTINA* (Meyer Chlor. Hann. 629), Ref. Nos. V 747, Pagham, July 1917; V 731 Chichester Harbour, Sussex W., July 1917. The latter forms a passage to var. *hibernica* in its larger size and more caespitose habit. G. C. DRUCE.

2776. *G. MARITIMA* Wahl., sub-var. *SUB-CAESPITOSA*. Ref. No. V 760. An intermediate between *maritima* and var. *hibernica*, having a loosely caespitose habit, but being usually of smaller stature than *hibernica*. In gravelly soil, Chichester Harbour, Sussex W., July 1917. G. C. DRUCE. Ref. No. V 782 from Pagham, Sussex W., scarcely differs, but is slightly nearer *hibernica*.

2776. *G. MARITIMA* Wahl., var. *DEFLEXA* (Syme E.B. xi., 103, under *Sclerochloa*). Ref. No. V 741 (*distantiformis*). This suggests a possible cross with *distanis*, but I could see no positive evidence of the latter species, nor was *distanis* itself noticed in the vicinity. Chichester Harbour, Sussex W., July 1917. This also occurred as the sub-var. *amethystina* (Meyer). G. C. DRUCE.

2776. *G. MARITIMA* Wahl., var. *HIBERNICA* (Druce under *festuciformis*). Ref. No. V 740 = *Atropis Foucaudii* Hackel em. Rony as a Race. *G. festuciformis* Praeger non Heyn. sensu stricto. Chichester Harbour, Sussex W., July 1917. G. C. DRUCE. This differs from Hackel's type *Foucaudii* from Kent, in the smaller spikelets, enrolled leaves, and caespitose growth without runners. Also Ref. No. V 735 from Pagham, Sussex W., July 1917, with smaller spikelets, and something of the look of *peisonis* from Corfu.

2849. *HORDEUM MURINUM* L., var. *INTERMEDIUM* Gunther Beck as forma. *H. leporinum* Link. *H. pseudo-murorum* Tapp. Alien, E. Europe. On a newly made embankment, Southport, Lancs., 1911, J. A. WHELDON; Skinwork, Meanwood, Yorks., 1916, E. C. HORRELL.

2893. *POLYSTICHUM ACULEATUM* Roth, var. *PULCHERRIMUM* Wills. This beautiful alien fern was for a long time supposed to be barren. Eventually Mr C. T. Druery and Mr Green found a few spores. The majority of the resulting plants came true, but 30 per cent. were a

curious and beautiful mutant. As these matured, the majority were "quite of the parental," *i.e.* *pulcherrimum* type. A few were reversions towards the normal, but, singularly enough, rather towards *angulare* than *aculeatum*. This suggests that hybridisation may have been a factor in the original mutation. The rest were of great beauty, and formed the *gracillimum* Shield Ferns. See Druery in *Brit. Fern Gaz.* ii., 200, 1915.

2893. *P. ACULEATUM* × *SETIFERUM*. What are almost without doubt hybrids of these species have been found near Kintbury, Berks.: Lynton, Devon; Throwley Moor, Staffordshire; Chyverton, Cornwall. These have the pinnae and stalk as in *aculeatum*, but the toothling and texture of *angulare* – *setiferum* Woynar.

2896. *DRYOPTERIS REMOTA* A. Br. See *Rep. B.E.C.* 260, 1907. Dr F. W. Stansfield queries this being true *remota*. He thinks it may be a form of *dilatata*. See *Brit. Fern Gaz.* iii., 1916.

2906. *CYSTOPTERIS FRAGILIS* Bernh., var. *SEMPERVIRENS* Moore. See *Rep. B.E.C.* 260, 1907. Lowe (*Native Ferns*) remarks, "Said to have been found at Tunbridge Wells and in Devonshire." Druery (*Brit. Fern Gaz.* 78, 1910) received it from Corrie Clannmor (!Ceannmor, S. Aberdeen), from Mr W. Young, of Kirkcaldy. Mr Druery sowed spores, and obtained a considerable number of plants. These proved their distinctness winter after winter by remaining not only perfectly evergreen, but practically growing all the year through. It is a robust grower.

2932 (2). *SELAGINELLA KRAUSSIANA* A. Br. See *Rep. B.E.C.* 434, 1916. In answer to my question about the occurrence of this plant in Donegal, Mr W. A. Lee says, "The possibility of the *Selaginella* having been planted would hardly be entertained, I think, by anyone who knows the situation referred to. It is quite remote from property, and, so far as my observation went, there were few evidences of green-house culture in the nearest town, Bundoran. If any botanist had been unscrupulous enough to plant the species, I think it would have appeared in greater quantity." This record should stimulate further investigation. The geographical distribution, which includes the Azores, where I have seen it, suggests that it might occur as a native species in Ireland. At present its isolated

occurrence in such small quantity seems insufficient to warrant its inclusion as an undoubted native species.

NOTES ON PUBLICATIONS, NEW BOOKS, ETC., 1916-7.

(Owing to exigencies of space and the erratic receipt of foreign works this is necessarily incomplete.)

FLORA OF THE COUNTY OF KERRY. REG. W. SCULLY, F.L.S. Six plates and map, pp. lxxxii., 406. Hodges, Figgis & Co., Dublin, 1916. In this portly volume is contained a very excellent and comprehensive account of the plants found in the most romantic county in Ireland, and one of the richest in plants peculiar to a single county. Nowhere in the British Islands is there a greater mingling of beauties than that which lies between Killarney and Glengariff. There are no more finely outlined mountains than the Reeks, and the sea coast along Kenmare Bay is extraordinarily beautiful. Such views as are to be seen from the Reeks or from Brandon Mountain live long in the memory. Nowhere are to be found finer contrasting prospects than those one sees in looking down the mountain slopes of Brandon, distant only a mile and a half from the sea, and then turning landwards towards the north-eastern side to view the rough, saxifrage-laden precipices, which have a grandeur peculiarly their own. It has been my good fortune to visit the county repeatedly, and in most brilliant weather, when even on Carrantuohill, the highest Irish summit, one looked in vain for a cloud. I have wandered in March among the bamboos and azaleas at Derreen, when the Reeks were snow-capped and looked like an alpine range. The county is of considerable extent, 1853 square miles, or 1,190,000 acres, of which no less than 191,000 is waste bog and mountain, and 32,800 under water. Kerry has seven mountains over 3000 feet (Carrantuohill is 3414). Eighty-eight are over 2000 and 190 over 1500 feet. It is over this extensive area, in many places exceedingly difficult of access that Mr Scully has so indefatigably laboured, and this Flora is a monument to his industry and skill. He has given a very complete and accurate bibliography and history of the building up of the knowledge of its plants. The physical features of the county are excellently detailed, and there is a sketch of its geology and a description of its districts. Mr Scully claims for Kerry 840 species