THE

LONDON BOTANICAL EXCHANGE CLUB.

REPORT OF THE CURATOR

FOR 1868,

AND

LIST OF DESIDERATA

FOR 1869.

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THE

BOTANICAL EXCHANGE CLUB.

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REGULATIONS OF THE CLUB.

1. The object of the Botanical Exchange Club is to facilitate the exchange of dried specimens of British plants, especially of critical species and varieties. Any one wishing to become a member will be admitted on payment, to either of the Secretaries, of an annual subscription of Five Shillings, and on sending a parcel of dried plants in accordance with the subsequent rules. He will then be entitled to share in the distribution of specimens made in January of the year following that in which his subscription and parcel were sent.

2. Specimens sent for distribution must be carefully dried; must not exceed in size half a sheet of demy (16 by 10 inches); and must illustrate the species they represent as completely as possible. Plants more than 16 inches long should be once or twice folded, if by so doing the roots can be preserved. (In the *Cyperaceæ*, *Gramina*, and smaller Ferns no speciment should be sent without roots.) No plant need be sent that is not included in the list of desiderata for the current year, unless it be additional to those enumerated in the 6th edition of the 'London Catalogue of British Plants.'

3. Each specimen must have a label, bearing the number and name of the species as given in the 6th edition of the 'London Catalogue;' also the locality and county where, and the date when, the specimen was collected, and the collector's name. The label should be affixed to the specimen by entting a transverse slit in the base of the label, through which the specimen may be pushed. Any facts connected with a species which the sender thinks important and suitable for the 'Report' should be communicated on a separate piece of paper.

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written on one side only. Specimens sent not in accordance with Rules 2 and 3 will be destroyed.

4. Each parcel should be accompanied by a list of the plants the member wishes to receive from the Club. This list is to be made by drawing a short line before their names in the 6th edition of the 'London Catalogue.'* The name of the member and address to which the return parcel is to be sent should be written on the outside of the Catalogue. Manuscript lists of desiderata will not be received.

5. Parcels may be sent (*carriage paid*) either to Mr. J. G. Baker or to Mr. Boswell-Syme not later than the 31st of December; those that arrive after that date will not be available for the distribution for the current year. Members sending more valuable parcels will have their return parcels selected before those who send inferior ones.

6. Members who do not send parcels, but who have paid their subscriptions for the year, and sent lists of desiderata before December 31st, will share in the annual distribution; but the specimens for such non-contributing members will not be selected until the parcels of all the contributing members have been made up.

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REPORT FOR THE YEAR 1868.

BY THE CURATOR.

In the following Report, I have confined myself to remarks on the plants sent for distribution by the members of the Botanical Exchange Club, or those which have come under my own observation.

Thalictrum saxatile, Schleich. Little Trees Hill, Gogmagogs, Cambridge; Mr. F. A. Hanbury. In the third edition of 'English Botany' I expressed a suspicion that the flowers of this plant were not erect, and that it might be the T. collinum of Wallroth. I am now able to say that this is the case; the flowers are drooping. In 1863 I brought a root, gathered before it flowered under the guidance of Professor Babington, in the station mentioned above. This root I cultivated until I came to Scotland last year, so that I was able to observe its flowers for several seasons. The pedicels are thicker and less flexible than in T. minus and T. Kochii, but the flowers always droop when expanded. The Cambridge plant cultivated beside T. Kochii, Fries (received from Mr. H. C. Watson, who brought it from the Lake district), produced far fewer and much shorter stolons than the latter, which increased rapidly, new plants appearing on its subterranean stolons one or even two feet from the parent. The fruit of these two plants is very similar, and strikingly different from that of T. minus.

Ranunculus aquatitis, Linn. Several of the forms, including var. Pseudo-fluitans, near Warwick; Mr. H. Bromwich. In the third edition of 'English Botany' I arranged four subspecies under R. aquatilis. I now believe these ought to be reduced to two; the first, R. pettatus, with its varieties vulgaris, floribundus, and Pseudo-fluitans; the second, to which I propose to give the name R. stenopetalus, under which R. heterophyllus, Bab.; R. Drouettii, Schultz; and R. trichophyllus, Auct. Angl. (R. paucistamineus, Tausch.) must be arranged as varieties. These three plants differ from R. peltatus in their narrower non-contiguous petals, which give a star-like appearance to the expanded flowers, and have the nectariferous pore with a nearly straight, not horseshoe-shaped border. I have seen no British specimens of the plant called R. trichophyllus by the Belgian botanists, which has short rigid leaf-segments, somewhat resembling in the dried state those of R. circinatus, Sibth. Probably R. Bandotii, Godr., ought to be added as a third subspecies of R. aquatilis, as I have observed transition states closely connecting it with R. stenopetalus, var. paucistumineus.

Ranunculus Flammula, Linn., var. Pseudo-reptans. Isle of Wight, Mr. F. Stratton; and Coniston Lake, Cumberland, Mr. A. G. More. The Isle of Wight plant is intermediate between the ordinary form of R. Flammula and the slender plant sent by Mr. A. G. More. The latter is precisely similar to examples which I possess from Braunton Burrows, Devon, collected by Mr. G. Maw, but is certainly not the same as my specimens of the Loch Leven plant. The latter locality still continues to be the only British station known to me for the subspecies R. reptans. I hope in the ensuing summer to procure this plant, and try if, by cultivation, it will pass into R. Flammula.

R. Steveni, Reich. In the list of desiderata for 1869 I have entered the name of this plant, and should be much obliged if any of our members who should meet with a form of R. acris with an elongate, oblique or horizontal creeping rhizome would send specimens. I believe that R. acris consists of two very distinct subspecies, or possibly, ver-species. 1st, R. Steveni, "Andr." Reich., with a horizontal or oblique elongated creeping rootstock; and, 2nd, R. Boreanus, Jord., with a very short perpendicular and usually premorse rootstock. Of the first of these subspecies I have no certainty that it occurs in England, though it is that represented in Sowerby's 'English Botany,' if the rootstock was drawn from a British specimen. About London, Edinburgh, and in the south of Fife, the only form of R. acris is R. Boræanus, Jord. The typical R. Boræanus I have not seen in Britain, but my R. acris, var. vulgatus is a variety of R. Borceanus. It is the R. tomophyllus of Jordan ('Diagnose d'Espèces nouvelles ou méconnues,' p. 71), not the R. vulgatus of Jordan ; and my R. acris, var. rectus is not the R. rectus of Boreau, but apparently R. tomophyllus, growing in a shady place. I fell into these errors from not having

access to British specimens of R. acris with complete rootstocks at the time (November) when I was called upon to write the description for 'English Botany,' ed. 3. In the case of common plants, herbarium specimens are usually few and imperfect, and, unfortunately, I had only a month's notice before the publication of the third edition commenced on the 1st of January, 1863. The double yellow Ranunculus, cultivated in gardens under the name of "Yellow Bachelor's-buttons," is a good example of R. Steveni. It has usually the lower leaves less deeply divided, and with broader ultimate lobes than R. Borcanns.

Fumaria Boræii, Jord. Auchtertool, Fife; and Aberlady, Haddington; J. Boswell-Syme. This is the only one of the forms of *F. capreolata*, Linn., which I have seen in Seotland. It is certainly distinct from *F. pallidiflora*, Jord., which is a mere variety of his *F. speciosa*, and is a much more southern plant. I have seen British specimens of *F. pallidiflora* only from Somersetshire, communicated by Miss Gifford.

Oxalis stricta, Linn. Garden at "Tilehonse, Denham, near Uxbridge, Bucks, where it comes up spontaneously," Miss Drummond. Communicated by Mr. J. Britten.

Trifolium hybridum, Linn. Roadside between Long Niddry Station and the sea, Haddington; J. Boswell-Syme. Very abundant along the sides of the road between the footpath and the causeway. Ten years ago the plant was not there.

Epilobium anagallidifolium, Lam. High ground between Storr and Quirang, Isle of Skye; Professor M. A. Lawson and Rev. H. E. Fox. I mention this because the distribution of the true E. alpinum and this plant is not yet known, though there can be little doubt that E. anagallidifolium is much the commoner of the two.

Herniaria ciliata, Bab. Garden examples. "The root was sent to H. C. Watson from the Cambridge Botanical Garden as being certainly the *H. ciliata*, Bab. It was kept in a flower-pot some few years ago, producing very short branches and comparatively few flowers, examples of it in that state having been dried and distributed heretoforc. In the spring of 1868 the root was turned into the open ground, where it throve vigorously in loose mould, and produced the more elongate branches and denser clusters of flowers, as now sent for distribution."—H. C. Watson. The specimens sent show no disposition to approach the habit of *H. glabra* of the castern counties, as defined in the eighth volume of the third edition of 'English Botany,' Aster salignus, Willd.? Shores of Derwentwater; Miss Edmonds. Concerning this plant, Miss Edmonds writes, "It has been seen for many years by a local botanist, but has never been noticed at the flowering season, till this autumn. I visited the spot immediately on its being made known to me, and found the said plant in great luxurianee, established in a bed of sedges, perhaps to the extent of the eighth of an acre, and full of blossom, though passing into seed . . . It seems that the plant was known by Miss Wright and her late father, for thirty years past, but, although puzzled about it, they were content to suppose it some stray production, and the reason of their never having seen it in flower may be that the said reedy spot is very generally under water. There have been drains lately eut aeross it, and, the late summer favouring it, the locality has been more readily aecessible. The colour of the flowers when fresh was a delicate lilac." —MARY EDMONDS.

Mr. H. C. Watson and Mr. J. G. Baker concur in considering this as *A. salignus*, Willd. Professor Babington says it is not that plant. Having now no herbarium but my own within reach, for consultation, I am unable to decide the question. I do not think it is the same as the plant which I have from the Rhine, near Strasbourg, under the names of "*A. salignus*, Willd.," and "*A. salicifolius*, Scholler," which is the common American *A. longifolius*, Lam.; but Wirtgen, in his 'Flora of the Rhine Provinces,' intimates his doubts of the Rhine plant being *A. salignus*, Willd. The Derwentwater plant has a more hispid stem, and the leaves seabrous all over the upper surface. I have not seen specimens of the so-called *A. salignus* from the banks of the Tay, or from Wieken Fen, but judging from Professor Babington's description, the Cambridgeshire plant is the same as the Rhenish one.

If I might venture to apply a name to the Derwentwater Aster, it would be *A. puniceus*, Linn., but my American specimens of this plant are poor, and it belongs to the most puzzling group of that very intricate genus.*

* I must confess myself unable, after examining specimens from many distant localities, to draw any clear line of distinction between the European Asters, which have been called *salignus*, on the one hand, and on the other, the American *A. simplex*, Willd., and *A. longifolius*, Lam., both very common and well-known as wild plants in the United States and often cultivated in gardens. *A. simplex* and *longifolius* quite correspond in the size of the heads, the general habit of the plant, and the shape of the leaves. The character principally reSenecio viscosus, Linn. Railway banks, near Frant station. Not previously recorded from Sussex, but the locality, "railway banks," indicates its being an introduced plant.

Andromeda polifolia, Linn., var. curta, Tate. Coombes Moss, Derby; Rev. Augustin Ley. In the 'Journal of Botany,' for 1866, p. 377, Mr. Ralph Tate called attention to a variety of Andromeda polifolia, with the pedieels about as long as the flowers, for which he proposed the name A. curta. At the time when I wrote the description of A. polifolia for the third edition of 'English Botany,' all the specimens I had seen had the pedieels twice or thrice as long as the flowers, and I supposed that the plate in 'English Botany,' in which they were represented, as only equalling the flowers, had been drawn from a speeimen in bud,-the buds in A. polifolia appearing of a large size long before the flowers are open, and then having short pedicels. The Rev. A. Ley, however, has sent specimens of A. polifolia with the flowers fully expanded, in many of which the pedicels are only as long as the flowers, and in none more than twice as long, so that in this plant the pedicels really vary from the length of the flowers to thrice their length. In no other particular, however, do the short-pcdiceled plants differ from those which have long pedieels.

Gentiana Pneumonanthe, Linn. "On the heath, eastward from the paling of Woking Cemetery, Surrey; a locality not recorded in the 'Flora of Surrey,' but within very few miles from that of 'Whitmoor Common, Worplesdon,' given in the Flora."—H. C. WATSON.

Linaria vulgari-repens, E. B., ed. 3. West Cowes, Isle of Wight; Mr. F. Stratton. This form of the hybrid plant is apparently the same as that found by Mr. H. C. Watson at Shirley, Southampton, mentioned in 'English Botany,' ed. 3, vol. vi. p. 143.

lied upon to separate them is in the involuere, the seales of which are narrower, more distinctly bordered with white, and more distinctly multiserial in *simplex*. A great many of the so-called species of *Aster* have been described from garden specimens, and never matched with wild plants. *A. puniceus* is generally distinguishable from *longifolius*, with which it agrees in the involuere, by its roughly hairy stems, broader and more distinctly cordate-amplexicaul leaves and larger heads. To me, of the three American species, Miss Edmonds' plant seems nearest *longifolius*, and Wimmer's Silesian plant, which he first called *salignus* and afterwards *pulchrum*, to have just the scales of *simplex*.—J. G. BAKER.

(A. simplex has the leaves searcely at all amplexieaul, and usually much narrower than those of A. longifolius, and I am eonvineed the Rhenish A. "salignus" is not A. simplex, but the latter from the Elbe under the name of "A. salicifolius."—J. BOSWELL-SYME.)

"Mentha Nouletiana, Timbal-Lagrave, Essai Mou. Menth. p. 11. Dr. St. Brody sends from Crantram Hill, Gloncestershire, a Mint, just intermediate between the ordinary forms of sylvestris and viridis, of which the following is a detailed description. Stem square, dark purple in exposure, erect, nearly or quite naked downwards, clothed upwards with short, soft, white, cottony, crisped hairs, which are very dense towards the top. Leaves quite sessile or the lowest with a very short petiole, the blade oblong-lanccolate, $1\frac{1}{2}-2\frac{1}{2}$ inches long, 12-14lines broad, acute or subacute, with 6-9 sharp, erecto-patent teeth on each side, the upper surface bright green, nearly naked, the lower paler, generally, especially in the upper leaves, furnished with a moderately dense coating of adpressed cottony pubescence, the veins often purple. Flowers in a dense spike, half inch thick when expanded, quite coutinuous, or the lowest whorl with a short space above it. The lower bracts lanceolate, slightly exceeding the whorl. Pedicels purple, half a line long, very slightly pubescent. Bracteoles conspicuously ciliated. Calyx between campanulate and tubular, three-quarters of a line long, thinly covered with short spreading shining hairs; teeth lanceolate, rather shorter than the tube. Corolla one-eighth of au inch long, glabrous or very slightly pubescent.

"This form comes under the *M. viridis*, var. *pubescens* of Grenier and Godron, and is almost precisely the plant described by Timbal-Lagrave. So far as we are aware, it has not been gathered in Britain previously."—J. G. BAKER.

I have not seen this plant, so that I can add no notes to Mr. Baker's description. I hope Dr. St. Brody may be able to send specimens for the next distribution.

Calamintha menthifolia, var. Briggsii; 'English Botany,' cd. 3. Carisbrook Castle, Isle of Wight; Mr. F. Stratton. These specimens show the worthlessness of the character derived from the length of the peduncle compared with the length of the pedicel of the central flower of the cyme. In some the peduncle of the lowest cymes is as long as or longer than the primary pedicel, as in the Devonshire plant, but in others it is shorter. These plants all agree in being larger, more hairy, and with deeper-coloured flowers than ordinary C. menthifolia,—in this, agreeing with the Devonshire plant.

Galeopsis Tetrahit, Linn., var. bifida. Auchtertool and Pitkiunie, Fife; J. Boswell-Syme.

In the potato fields round Balmuto, this small-flowcred form of *G. Tetrahit* exclusively prevails; the large-flowered form, var. genuina, I have seen only once in a wood not far from Balmuto House. The var. bifida is rarely above a foot high, varies with red or white flowers, with the lower lip notched or nearly entire, and its lateral lobes reflexed or spreading, so that the small flowers are really the only distinctive mark of the variety.

Galeopsis versicolor, Curt. Auchtertool and Pitkinnie, Fife; J. Boswell-Syme. This plant is abundant here, growing with G. bifida, but showing no tendency to variation. I am now convinced it is a verspecies, and that I was wrong in placing it as a subspecies of G. Tetrahit in the third edition of 'English Botany.'

Pulmonaria angustifolia, Linn. Near Newport, Isle of Wight; Mr. F. Stratton, who finds both the long-styled and the short-styled plants. In reference to this, I may mention that I have found the long-styled form of *P. officinalis* abundantly fertile, producing longstyled and short-styled plants, though I had in my London garden the long-styled form only.

Chenopodium rubrum, Linn. Weston Green, Surrey. Examples sent in order to illustrate the conversion of variety Pseudo-botryoides into almost typical rubrum. On Weston Green, in the parish of Thames Ditton, is a shallow pond much frequented by geese. As the water of the pond evaporates under the summer sun, a gravelly strand or shore is left bare, and is much trodden by the geese. Here, in past years, the prostrate variety of Pseudo-botryoides has regularly occurred in the autumn. In the hot season of 1868, evaporation was more rapid, exposing a much wider strand, and one earlier free of water. The tramp of the geese followed the retiring edge of the water; and on the less-trodden outer side of the widened strand, the plants developed into the upright, branched or unbranched, forms now sent; some of them fair typical examples of Chenopodium rubrum. Unfortunately, very few of the larger examples were dried, through an intention to return for more not having been soon enough carried into effect. The variety Pseudo-botryoides was so named because it had been mistaken by various botanists for the true C. botryoides of Smith. Its proper relation to typical C. rubrum is now placed beyond question. (See 'English Botany,' 3rd edition.)"-H. C. WATSON.

Chenopodium album, Linn. "A series of examples, numbered 1, 2,

3, 4, to illustrate the experiment recorded in the 'Journal of Botany' for October, 1868, as stated on their labels. Also, some wild specimens, to show what are intended by the names 'candicans' and 'virens' in the 'London Catalogue of British Plants,' 6th edition, with forms more or less intermediate between these and 'viride.'"— H. C. WATSON. Most of the enltivated specimens sent by Mr. Watson, raised from the seeds of *C. candicans*, are intermediate forms, but some of them are true *C. paganum*; and some of the specimens of *C. candicans*, which have been cut down and have subsequently thrown out fresh branches, are true *C. viride*,—so that the supposition that these are anything more than varieties is untenable.

Polygonum aviculare vars. Mr. T. R. Archer Briggs sends from Plymouth what I believe to be var. microspermum; Mr. F. Stratton, var. littorale, from the Isle of Wight. Of the latter, I have also communicated a few specimens from Haddingtonshire. With this exception, var. vulgatum is the only form I have seen since I came to Scotland.

Euphorbia Esula, Linn., var. genuina. Railway bank, Leek Wooton, Warwick; Mr. H. Bromwich.

Euphorbia Esula, var. Pseudo-cyparissias. Walls of Hulme Abbey, near Alnwick; Mr. William Richardson.

Leucojum æstivum, Linn. Littlemoor, Oxford; Rev. Augustin Ley. Oxfordshire, as a published locality for this plant, rested previously on old authority; but several stations near Oxford are known by local botanists.

Asparagus officinalis, Linn. Norton Spit, Isle of Wight; Mr. F. Stratton. This is not the same as the Cornwall plant, but evidently the common Asparagus of gardens, so that, in the Isle of Wight, it can only be considered an escape from cultivation.

Polygonatum officinale, All. Kyloe Crays, Northumberland; Mr. William Richardson; and Dursley, Gloucester, Mr. J. Marsten. The specimens sent from both these stations belong to the typical form of the plant, having the peduncles 1-flowered or a few of them 2flowered, and in the latter case forked from the very base.

Colchicum autumnale, Linn., var. album. Sutton Court, Pensford, near Bristol; Mr. J. F. Duthie. Mr. Duthie informs me that the white-flowered variety occurs not unfrequently together with the common form. Alisma Plantago, var. lanceolatum. Kew Gardens; Mr. Baker. The wild state of var. lanceolatum is usually smaller than that of var. genuinum, but the cultivated specimens sent by Mr. Baker are of large size, showing that var. lanceolatum is not merely a stunted state of A. Plantago; and I can see no reason to alter the opinion I expressed in 'English Botany,' 3rd edition, that it does not deserve to be considered a subspecies.

Potamogeton filiformis, Nolte. Loch Gelly and Camilla Loch, Fife; J. Boswell-Syme. Although not previously recorded from Fife, this plant grows in immense abundance in both these Lochs. When fresh, the leaves are of a bright grass-green colour, by which it may be distinguished from *P. pectinatus* at some distance. The stems are shorter and the lateral branches much more nearly parallel to the main stem than in *H. pectinatus*, giving the plant much resemblance to *Ruppia* maritima! It is most abundant in shallow water, and very fine in the stream running out of Loch Gelly, where it forms a dense mat at the bottom of the water, the long peduncles floating with the current quite clear of the leaves. *P. pectinatus* also grows in Loch Gelly, but very sparingly, and in deeper water.

Wolffia arrhiza, Wimm. "From a pond in a large meadow on Apse Farm, near Sunbury Lock, between Walton-on-Thames and Moulsey Hurst, Surrey. The same plant occurs also in a splash of water, very near the church, in the parish of East Moulsey, a short halfmile from Hampton Court station."—H. C. WATSON.*

Juncus nigritellus, Don? Shore of Coniston Lake, Cumberland; Mr. A. G. More. These specimens seem to me ordinary J. lamprocarpus. They have 8 or 9 heads, and the perianth-leaves are all blunt. In a dried state, I am, of course, unable to say whether the leaves are terete or compressed, but, if they be the former, it will be a proof that one of the alleged distinctive characters of J. nigritellus is sometimes to be found on J. lamprocarpus. On Ben Lawers, Braemar, and in Orkney, I have collected J. lamprocarpus with strongly-compressed leaves and decidedly aente inner perianth-leaves, with the number of heads varying from 2 to 20.

Scirpus parvulus, Röm. et Schultes. On mud flats at the mouth of the river Avoca, Wicklow, Ireland; Mr. A. G. More and Mr. Charles

^{*} The Rev. W. W. Spicer found it this year (1869) in a ditch at Byfleet, near Weybridge, Surrey.-H. TRIMEN.

Bailey. In the sixth edition of the 'London Catalogue,' Scirpus parvulus was placed in the list of excluded species, as it was believed to be extinct in the only known British locality, namely near Lymington, Hants, where it was found by the Rev. G. E. Smith about 1840; the discovery of this plant last summer, therefore, on the east coast of Ireland, by Mr. A. G. More, was a welcome surprise to British botanists, and the members of the Botanical Exchange Club will doubtless have been gratified at receiving specimens of this species which the abundant supply has enabled me to include in every parcel. To Mr. More's admirable paper on S. parvulus in the 'Journal of Botany' for 1868, p. 321, I have nothing to add in the way of description; but, as both he and Mr. Bailey sent me recent specimens of the plant, I am able to confirm the opinion that the plant has no leaves, the supposed leaves being evidently barren stems, each surrounded with a very short transparent basal sheath, which I could detect only in the recent plant. The Club is indebted to the Editor of the 'Journal of Botany' for the

plate prefixed to this Report.

Scirpus fluitans, Linn. "A few examples taken from the bed of a shallow pool on Ditton Marsh, dried up in 1868, where they were growing amid a dense carpet of *Pilularia*. These examples are without flowers, and are sent only to show how little they resemble the true *Scirpus parvulus*, though this latter has been erroneously referred to *S. fluitans* when not floating in water."—H. C. WATSON. As there were not sufficient specimens to send to all the members of the Club, a few remarks are necessary. Mr. Watson's specimens have tufts of distichous leaves with sheathing bases, but the stems are undeveloped. The leaf-tufts are combined into compound tufts, which are connected by the branches of the bare, slender rootstock. It is evident that in *S. fluitans* the leaves are not imperfectly-developed stems, as Andersson supposes ("culmi non rite evoluti," Pl. Scand. Cyper. 8).

Carex ericetorum, Poll. Gogmagog Hills, Cambridge; Mr. F. A. Hanbury. It is strange that this plant has not been detected in any station but the above, as one of the drawings in the plate of *C. præcox* in 'English Botany' has been drawn from *C. ericetorum*. I have looked for it on Box Hill, on the Hog's Back, Surrey, and in the still more likely locality near Streatley, Berks, but without success.

Carex involuta. Hale Moss, Cheshire; Mr. Spencer Bickham, jun. A description appeared from the pen of Mr. J. G. Baker in the Report of the Botanical Exchange Club for 1863. In this Mr. Baker agrees with Mr. G. E. Hunt in thinking that it should be considered a form of *C. ampullacea*, and not of *C. vesicaria* as Mr. Babington considers it. It differs from *C. ampullacea* in its smaller size and more slender habit, and more conspicuously in its spikes tapering towards each end and not at all squarrose, the perigynia being ascending and not spreading; they also taper gradually, and not abruptly, into the beak. From *C. vesicaria* it differs in its more slender habit, obtusely trigonous and smooth-angled stem, channelled and glaucous leaves, and female spikes with more numerous and smaller perigynia; also in its roundish-obovate, trigonous nut, which is precisely similar to that of *C. ampullacea*.

It cannot be considered as a hybrid between these two species, as the nuts are perfectly developed, and Mr. J. Sidebotham, who was kind enough to send me specimens with mature fruit, informs me that neither *C. ampullacea* nor *C. vesicaria* grow in the neighbourhood of the locality of *C. involuta*; indeed, he says, "I do not know of either within a mile or two."

Leersia oryzoides, Sw. "By the canal, near Woking Station, Surrey. It occurs sparingly by the canal side, almost opposite to the railway station; more plentifully about the first brick-bridge (not the wooden foot-bridge) beyond the station in the ascending line of the canal, where it is crossed by the road to Horsell. A new locality, not rccorded in the 'Flora of Surrey.'"—H. C. WATSON.

Alopecurus fulvus, Sm. "About a pond between the church and school-house, in East Moulsey, Surrey; a locality not given in the Flora of the county."—H. C. WATSON.

Phegopteris plumosa, J. Smith. Mr. Baker sends from Kew Gardens a number of specimens from the plant thus named by J. Smith. "It is a very delicate, elegant, finely-cut form of *Athyrium Filix-fæmina*, with the sori much reduced in size and the involucre generally, but not invariably quite abortive. The original plant was found in Yorkshire, and propagated and circulated in gardens by Messrs. A. Stansfield and Son, of Todmorden."—J. G. BAKER.

Pilularia globulifera, Linn. "In a water-splash, on Ditton Marsh, where the main line of the London and South-Western Railway crosses the highway, called the 'Portsmouth Road,' profusely there in 1868, after entire evaporation of the water."--H. C. WATSON.

Equisetum Moorei, Newman. Sandhills, coast of Wexford, Ireland; Mr. A. G. More.

Mr. More sends a few barren specimens of this very remarkable plant, which is said to differ from its allies, by having herbaceous stems; though Mr. More hints that this may be owing to the exposed places in which it grows (Journ. Bot. p. 208), but has or has not this point been tested by cultivation? The teeth are wholly black, not white, as stated by Mr. Newman, and have the tips much more persistent than in *E. hyemale*, closely resembling those of *E. trachyodon*, A. Braun, but the sheaths are loose, and the stems with a comparatively large central hollow, as in *E. hyemale*.

Excluded Species and Casual Introductions.

Mr. H. Bromwich sends *Petasites albus*, Gartn., from an "old sand quarry, Guy's Cliff," Warwick. Professor M. A. Lawson, *Linaria supina*, Desf., from "ballast hills, near Hartlepool, Durham." Miss E. Jones, *Euphorbia dulcis*, L., from "Glascoed Dingle, near Llansitin, Denbighshire. Dr. St. Brody, *Rosa pomifera*, Hern., from a coppicewood, near Painswick, Gloucester. Dr. St. Brody also sends several species from Gloucester Docks, including *Vicia villosa*, *Potentilla norvegica*, Linn., *Caucalis daucoides*, Linn., *Ballota ruderalis*, Fries, *Bromus tectoram*, Linn., *B. velutinus*, Sm., and *B. patulus*, Reich.

Balmuto, March 31st, 1869.

J. BOSWELL-SYME.

New Buckinghamshire Plants, collected by J. Britten. New to the Sub-province of West Thames. Rhamnus Frangula. Comarum palustre.

New to the County.

*Lepidium Draba. Viola Reichenbachiana. *Impatiens fulva. *Fragaria elatior. Orchis incarnata. Alisma ranunculoides. Triglochin palustre. Juncus bufonius. Botrychium Lunaria. Lycopodium Selago.

New Gloucestershire Plants, collected by Dr. St. Brody in 1868.

Ranunculus Pseudo-fluitans, Bab.	R. andegavensis, Bast.
R. Bachii, Wirtgen.	R. Crepiniana, Desg.
Aconitum Napellus, Linn.	R. platyphylla, Ran.
Oxalis stricta, I inn.	Caucalis daucoides, Linn.
Fragaria elatior, Ehrh.	Polemonium cæruleum, Linn.
Rosa verticillacantha. "Merat."	Mentha pubescens, Willd.

Mentha hirsuta, b. subglabra, Baker. M. sativa, b. paludosa, Sol. Ballota ruderalis, Fries (the true plant). Leonurus Cardiaca, *Linn*. Carduus Forsteri, *Linn*. Ruppia rostellata, *Linn*. Chenopodium urbicum, *Linn*.

Excluded Species.

- Erysimum orientalc, Br. Waste ground, near the docks, Gloucester.
- Melilotus parviflora, Lam. Banks of the Severn, opposite the docks, Gloucester.
- Rosa pomifera, Hern. Coppice wood, near Painswick.
- Achillea nobilis, *Linn*. Waste ground, near the docks.
- Centaurea centaurioides, Linn.
 - Banks of the Severn, near the docks.

5

LIST OF DESIDERATA FOR 1869.

N.B. Of any of the Species included in the following List, specimens varying in number from 10 to 50, according to its degree of rarity, will be acceptable.

Thalietrum alpinum. flexuosum. saxatile. Kochii. Anemone apennina. ranunculoides. Adonis autumnalis. Ranunculus confusus. Pseudo-fluitans. tripartitus. reptans. ophioglossifolius. Steveni. Caltha Guerangerii. radicans. Eranthis hyemalis. Delphinium Consolida. Ajacis. Aconitum Napellus. Actæa spicata. Nuphar pumilum. Papaver hortense. officinale. Glaucium violaceum. Corydalis solida. Fumaria pallidiflora. confusa. micrantha. muralis. Vaillantii. Crambe maritima. Isatis tinctoria. Thlaspi perfoliatum. sylvestre. Lepidium latifolium. Draba. Cochlearia alpina. danica. anglica.

Draba aizoides. rupestris. inflata. brachycarpa. Camelina sativa. fœtida. Koniga maritima. Cardamine pratensis. Arabis petræa. stricta. ciliata. hispida. glabrata. Turrita. Barbarea arcuata. stricta. Sisymbrium polyceratium. Matthiola incana. sinuata. Brassica oleracea. Napus. Sinapis incana. Cheiranthus. monensis. Raphanus maritimus. Helianthemum vineale. Breweri. Viola calcarea. permixta. sepincola. stagnina. Curtisii, vars. Drosera anglica. obovata. Polygala grandiflora. oxyptera. ciliata. calcarea. Elatine Hydropiper.

Dianthus prolifer. plumarius. Caryophyllus. glaucus. Saponaria hybrida. Silene quinquevulnera. conica. Lychnis alpina. Viscaria. Sagina debilis. alpina. saxatilis. nivalis. Arenaria ciliata. norvegica. laxa. viscosa. Gerardi. rubella. uliginosa. Holosteum umbellatum. Stellaria Boreana. umbrosa. cerastoides. Cerastium holosteoides. pentandrum. pumilum. alpinum. latifolium. nigrescens. Cherleria scdoides. Althæa hirsuta. Lavatera arborea. Tilia corallina. Hypericum elatum. maculatum. bæticum. linariifolium. calycinum. Geranium innominatum. purpureum. modestum. Impatiens fulva. Noli-me-tangere. Oxalis corniculata. stricta. Sarothamnus prostratus. Ulex strictus. Genista humifusa. pilosa. Ononis reclinata. Anthyllus Dillenii. Medicago falcata. sylvestris. apiculata. minima. Melilotus arvensis.

Trifolium ochroleucum. Molincrii. stellatum. Bocconi. strictum. Lotus diffusus. Astragalus alpinus. Oxytropis uralensis. campestris. Arthrolobium ebracteatum. Vicia bithynica, α and β . gracilis. Lathyrus hirsutus. palustris. tuberosus. maritimus. acutifolius. Orobus tenuifolius. niger. Prunus insititia. domestica. Dryas octopetala. Sibbaldia procumbens. Potentilla fruticosa. rupestris. norvegica. alpostris. mixta. Fragaria elatior. Rubus Lecsii. any of the fruticosi named. Rosa rubella. hibernica and vars. Sabini and vars. Jundzilliana. cryptopoda. Borreri. sepium. caninæ Bakerianæ. systyla. bibracteata. Mespilus germanica. Pyrus communis, a and β . Malus, $\boldsymbol{\alpha}$ and $\boldsymbol{\beta}$. rupicola. torminalis. eu-Aria. scandica. fennica. pinnatifida. Epilobium brachycarpum. rosmarinifolium. alpinum. anagallidifolium. alsinifolium. Isnardia palustris. Myriophyllum spicatum, α and β .

Myriophyllum verticillatum. Callitriche obtusangula. Ceratophyllum, any in fruit. Lythrum hyssopifolium. Tamarix anglica. Illecebrum verticillatum. Corrigiola littoralis. Herniaria glabra. ciliata. Ribes sylvestre. petræum. spicatum. alpinum. Tillæa muscosa. Sedum Rhodiola. Fabaria. villosum. dasyphyllum. teretifolium. micranthum. sexangulare. reflexum. albescens. elegans, α and β . Forsterianum, α and β . Sempervivum tectorum. Cotyledon foliosa. Saxifraga Geum, vars. hirsuta. umbrosa, vars. b, c, and d. nivalis. Hirculus. oppositifolia. cernua. rivularis. decipiens. hirta. affinis. incurvifolia. cæspitosa. Cornus suecica. Astrantia major. Eryngium campestre. Physospermum cornubiense, fruit. Cicuta virosa. Petroselinum sativum. segetum. Trinia vulgaris. Helosciadium repens. Carum Carui. verticillatum. Bulbocastanum. Bupleurum aristatum. falcatum. Œnanthe pimpinelloides. silaifolia. fluviatilis.

Seseli Libanotis. Ligusticum scoticum. Peucedanum officinale. palustre. Ostruthium. Tordilium maximum. Daucus maritimus. Caucalis daucoides. latifolia. Coriandrum sativum. Lonicera Caprifolium. Xylosteum. Galium aristatum. cinereum. scabrum. insubricum. Bakeri. nitidulum. anglicum. Vaillantii. Centranthus ruber. Valeriana pyrenaica. Fedia carinata. Auricula. mixta. Tragopogon grandiflorus. parviflorus. Picris arvalis. Hypochæris glabra. Balbisii. maculata. Lactuca Scariola. saligna. Sonchus palustris. Mulgedium alpinum. Crepis succisæfolia. Hieracium collinum. Species Backhousiana, any except Pilosella. aurantiacum. murorum. vulgatum. tridentatum. umbellatum. borcale. Borkhausia fœtida. taraxacifolia. Arctium majus. intermedium. nemorosum. Saussurea alpina. Serratula monticola. Carduus crispus, b and c. marianus. setosus. tuberosus. Hybridi, all.

Onopordon Acanthium. Centaurca decipiens. aspera. solstitialis. Bidens radiata. Artemisia campestris. Gnaphalium hyperboreum. margaritaceum. luteo-album. norvegicum. supinum. Filago apiculata. Erigeron alpinus. Aster salignus. Senecio paludosus. Cineraria, any. Doronium plantagineum. Inula Helenium. Anthemis anglica. Campanula patula. rapunculoides. persicifolia. Phyteuma spicatum. Lobelia urcns. Erica Watsoni. ciliaris. hibernica. vagans. mediterranea. Menziesia cærulea. Loiseleurea procumbens. Arbutus alpina. Uva-ursi. Uncdo (sponte). Vaccinium uliginosum. Pyrola arenaria. media. secunda. uniflora. Monotropa hirsuta. Fraxinus heterophylla. Gentiana verna. nivalis. germanica. Cicendia filiformis. Candollei. Erythræa latifolia. littoralis.

Villarsia nymphæoides. Cuscuta curopæa. Epilinum. Solanum miniatum. marinum. Verbascum pulverulentum. Blattaria. Hybrida, all.

Veronica spicata.

Veronica triphyllos. verna. humifusa. alpina. saxatilis. hirsuta. grandiflora. Bartsia alpina. Rhinanthus major. Melampyrum cristatum. arvense montanum. sylvaticum. Scrophularia Ehrharti. Scorodonia. Linaria speciosa. Pelisseriana. Sibthorpia europæa. Orobanche caryophyllacea. elatior. amethystea. Picridis. Hederæ. rubra. cærulea. arenaria. ramosa. Salvia clandestina. pratensis. Mentha alopecuroides. sylvestris and vars. vulgaris. pubescens, α and β . citrata (sponte). paludosa. rubra. gracilis. cardiaca. pratensis. gentilis and vars. agrestis. præcox. parietariifolia. Calamintha Briggsii. Melissa officinalis. Melittis Melissophyllum. Teucrium Scordium. Botrys. Ajuga Pseudo-alpina. pyramidalis. Chamæpitys. Leonurus Cardiaca. Lamium intermedium. Galeopsis intermedia. ochroleuca. Stachys germanica. Nepeta parviflora.

Marrubium vulgare. Myosotis strigulosa. Myosotis alpestris. sylvatica. Lithospermum purpureo-cæruleum. Mertensia maritima. Symphytum tuberosum. Borago officinalis. Anchusa officinalis. Asperugo procumbens. Cynoglossum montanum. Pulmonaria angustifolia. Echium violaceum. Pinguicula grandiflora. alpina. lusitanica. Utricularia neglecta. intermedia. Primula elatior. scotica. Cyclamen hcderæfolium. Lysimachia thyrsiflora. Centunculus minimus. Armeria planifolia. Staticc Bahusiensis. intermedia. Dodartii. Plantago Timbali. Amaranthus Blitum. Chenopodium urbicum. Pseudo-botryoides. botryoides. murale. hybridum. ficifolium. Obione pedunculata. Atriplex arenaria. deltoides. prostrata. erecta. marina. Salicornia procumbens. Polygonum viviparum. mitc. minus. avicularc, vars. maritimum. Pseudo-dumetorum. Rumex conspicuus. pratensis. alpinus. maritimus. palustris. Oxyria uniformis. Daphne Mezereum. Asarum europæum. Aristolochia Clematitis.

Euphorbia Peplis. stricta. hiberna. pilosa. coralloidcs. Cyparissias. Esula. portlandica. Lathyrus. Buxus sempervirens. Mcrcurialis ovata. Urtica pilulifera. Dodartii. Ulmus major. glabra. Quercus intermedia. Betula pendula. pubescens. nana. Populus alba. canescens. nigra. Salix cuspidata. undulata. acutifolia. Helix. rubra. Forbyana. intricata. stipularis. Smithiana. rugosa. ferruginea. acuminata. sphacelata. nigricans, vars. laurina (sponte). phylicifolia, vars. ambigua. repens, vars. angustifolia. Doniana. arbuscula. Lapponum. lanata. procumbens. myrsinites. rcticulata. Grahami. Pinus sylvestris. Juniperus nana. Taxus fastigiata. Spiranthes æstivalis. cernua. Listera cordata. Epipactis media. purpurata.

Epipactis ovalis. Cephalanthera grandiflora. ensifolia. Cephalanthera rubra. Epipogium aphyllum. Corallorrhiza innata. Orchis laxiflora. militaris. fusca. Simia. hircina. incarnata. Habenaria albida. Neotinca intacta. Ophrys arachnites. aranifera. fucifera. Malaxis paludosa. Liparis Loeselii. Cypripedium Calceolus. Gladiolus illyricus. Crocus vernus. nudiflorus. Sisyrinchium anceps. Trichonema Columnæ. Narcissus poeticus. biflorus. Leucojum vernum. æstivum. Lilium Martagon. Tulipa sylvestris. Allium Ampeloprasum. Babingtonii. Scorodoprasum. oleraceum. carinatum. vineale. Scheenoprasum. sibiricum. triquetrum. Gazca lutca. Ornithogalum nutans. Muscari racemosum. Lloydia serotina. Simethis bicolor. Asparagus officinalis. Maianthemum bifolium. Polygonatum verticillatum. officinale. Stratiotes aloides. Alisma lanccolatum. repens. natans. Actinocarpus Damasonium. Scheuchzeria palustris. Potamogeton flabellatus. pectinatus.

Potamogeton trichoides. pusillus. compressus. acutifolius. zosteræfolius. acuminatus. decipiens. prælongus. salicifolius. heterophyllus. nitens. lanceolatus. prolixus. fluitans? plantagineus. Ruppia maritima, a. Zostera angustifolia. nana. Naias flexilis. Wolffia arrhiza. Arum italicum. Sparganium natans. minimum. Typha angustifolia. Juncus diffusus. balticus. acutus. nigritellus. compressus, a. castancus. trifidus. capitatus. biglumis. Luzula Borreri. arcuata. Cyperus fuscus. Cladium mariscus. Rhynchospora fusca. Scirpus carinatus. Holoschœnus. Savii. triqueter. pungens. uniglumis. Eriophorum alpinum. latifolium. gracile. Kobresia caricina. Carex pauciflora. rupestris. incurva. lagopina. alpicola. elongata. axillaris. Bönninghauseniana. divisa.

Carex divulsa. terctiuscula. Ehrhartiana. paradoxa. Vahlii. canescens. atrata. rigida. aquatilis. stricta. acuta. saxatilis. rigida. ustulata. lepidocarpa. saxatilis. Grahami. speirostachya. punctata. vaginata. depauperata. eapillaris. limosa. irrigua. rariflora. ericetorum. montana. tomentosa. clandestina. digitata. filiformis. Koehiana. involuta. Spartina stricta. alterniflora. Cynodon Dactylon. Digitaria humifusa. Panicum Crus-galli. Sctaria verticillata. Hierochloe borealis. Phleum alpinum. nodosum. asperum. Boehmeri. Alopccurus alpinus. pronus. bulbosus. Polypogon littoralis. monspeliensis. Apera interrupta. Agrostis setaeea. canina. stolonifera. Arundo Calamagrostis. lapponiea. Aira alpina. uliginosa.

Aira canescens. Avena strigosa. alpina. Glyceria plicata. pedieellata. Sclerochloa Borreri. procumbens. Poa bulbosa. alpina. laxa. minor. Parnellii. cæsia. glauca. Balfourii. Briza minor. Cynosurus echinatus. Festuca uniglumis. ambigua. sylvatica. arundinacea. loliacea. Bromus madritensis. racemosus. Triticum biflorum. littorale. acutum. pungens. Lolium temulentum. arvense. Hordeum sylvaticum. Gymnogramma leptophylla. Woodsia ilvensis. hyperborea. Polypodium eambricum dentata. Cystopteris Diekicana. alpina. montana. Polystichum Lonchitis. lonchitidioides. Lastrea Filix-mas, vars. eristata. uliginosa. glandulosa. collina. nana. remota. Athyrium molle. latifolium. Pseudathyrium alpestre. flexile. Athyrium molle. Asplenium viride. anceps. marinum. laneeolatum.

Asplenium aeutum. germanieum. septentrionalc. Adiantum Capillus-Veneris. Trichomanes radicans. Hymenophyllum Tunbrigense. Wilsoni. Botrychium matriearifolium. Ophioglossum lusitanieum. ambiguum. Isoetes eehinosperma. Hystrix. Equisetum umbrosum. trachyodon. hyemale. Moorei. variegatum. Wilsoni. arenarium. Chara; any.

Specimens of any novelties or excluded species will also be acceptable.

