

PROCEEDINGS
OF THE
Liverpool Botanical Society.



Seventh—Tenth Sessions.

FOR THE YEARS 1912—1915 (inclusive).

LIVERPOOL :
PRINTED BY C. TINLING & Co., LTD., 53, VICTORIA STREET.

November, 1917.



A. A. DALLMAN, F.C.S.

President, 1914-1915.

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COMMON HALL, HACKINS HEY.



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GENERAL MEETINGS, 1915.

FRIDAY, JANUARY 14th

At the Common Hall, Mr. A. A. Dallman, F.C.S., in the chair.

The Hon. Secretary read the report for the year 1914 and also the report of the South Lancashire Flora Sub-Committee. Both reports were adopted *nem. con.*

The Treasurer made a general statement as to the finances of the Society, which he considered was now in a good position. The Nature Study Scheme, however, owing to lack of financial support, had not developed as it might have done although the debit balance was diminishing.

A vote of thanks to the retiring Council and Officers was carried, on the proposition of Miss F. Hamilton, seconded by Mr. Britten.

The following were elected:—

President:—Mr. A. A. DALLMAN, F.C.S.

Vice-Presidents:—Dr. W. A. LEE, M.A., Mr. W. G. TRAVIS.

Hon. Treasurer:—Mr. G. LOFTUS.

Hon. Secretaries:—Miss M. B. BARR, Mr. W. R. SIBBALD.

Council:—Mrs. Bangham, Mr. W. T. Haydon, F.L.S., Mr. H. S. Marsh, Miss F. Hamilton, Miss S. J. Shoobridge, Miss E. Speakman, Mrs. Wheldon, Miss E. Warhurst, L.L.A., and Mr. J. A. Wheldon, F.L.S.

Dr. LEE read an extract from the "Oban Times," in which the virtues of St. John's Wort were extolled as a vulnerary herb, and as a preventative of tetanus. Mr. J. A. Wheldon thought the claims were exaggerated.

MONDAY, 1st FEBRUARY.

At the Common Hall, Mr. A. A. Dallman in the chair.

Dr. J. W. ELLIS, F.E.S., exhibited two interesting aliens, both believed to be new to Cheshire, *Iva xanthifolia* and *Carthamus tinctoria*. He also showed *Uromyces Fabae* from Little Sutton, and the teleutospores of *Puccinia sonchi* from Ledsham.

Dr. LEE showed twigs of *Salix repens* and *S. fragilis* and remarked on variations in the colour of the bark. Mr. Wheldon confirmed the colour variation in several species of *Salix*, and mentioned that he had observed two trees of the same species of *Salix* showing constant differences. Mr. Dallman suggested that the effect was due to bio-chemical variations caused by differences of habitat.

Miss BRAY forwarded from Hailsham naturally skeletonised stems of *Campanula* and *Brassica*, in which the vascular system was plainly exhibited.

Mr. W. G. TRAVIS read a paper entitled "What is an alien plant?" defining a native plant as one which arises and grows, apart from human agency. Mr. Wheldon held that plants flourishing on stone-work brought from another district must be classed as aliens, and cited as an extreme instance of difficulty, the newly-formed island of Krakatoa. Dr. Ellis demanded a broader acceptance of the connotation of the term "nativity," and would rather find the country of origin of the species, and class only plants obviously foreign as aliens.

Dr. Lee spoke of the difficulty of eliminating human agency from the history of any habitat, mentioning bog-lands that had been formed by human agency, and others which, after being reclaimed, had drifted back into their original condition. He quoted the common *Sempervivum tectorum*, which had always been found on housetops, and was certainly in this and adjacent countries two thousand years ago.

Mr. Sibbald would be willing to accept as a native any plant whose range was extended by natural happenings and which in its new habitat flourished quite normally.

Mr. Dallman protested against any rigid use of the term "alien" especially as it was obvious that different compilers of Floras used the term in different senses. Under Mr. Sibbald's definition seeds arriving in foreign cargoes gave rise to plants which flourished and would therefore be regarded as native.

Mr. TRAVIS, replying, maintained that the question was one of definition, and the writer of a Flora might define his terms as he liked, provided that he adhered to the same meaning.

Mr. J. A. WHELDON, F.L.S., read a paper entitled "Why Botany is unpopular, and a remedy." The author enumerated some of the causes which led to a diminished appreciation of Botany as a popular study; the long period in which systematic botany had been neglected by our universities had not been without effect. The chief deterrent was extreme specialisation, with its resulting multiplication of terms and complication of nomenclature. He suggested that, until specialists had completed their work, there should be as little tampering as possible with existing names. He thought that if a species were only divided into type and variety, each should have a distinctive name which differed from the aggregate name which included both.

Mr. DALLMAN spoke in favour of the judicious use of competitions and rewards.

Mr. TRAVIS suggested that the use of trinomials might meet the needs of specialists.

Dr. ELLIS supported the use of trinomials, but considered the slackness in botanical study was due to mental lethargy in the rising generation.

Dr. LEE referred to the large output of nature books as evidence of the increased interest in botany, and referred to the extent in which individual work was done by persons who did not connect themselves with societies.

The CHAIRMAN then introduced a proposal to organise research work, but the discussion assumed such proportions that it was adjourned.

FRIDAY, FEBRUARY 12th.

The ninth annual Soirée was held in the Arcade, and there was an excellent attendance. The guests were received by Mr. A. A. Dallman, F.C.S., and the Hon. Secretaries, Miss M. B. Barr and Mr. W. R. Sibbald. The President gave a short address and introduced the artistes, who included Miss Olive Bangham, Miss Olive Parsonage, Miss Connie Ogley, Miss Muriel Slade, Miss Gwladys Parsonage and Mr. Eastland Staveley.

The walls were hung with dried plants and photographs. Amongst the former was a collection of specimens from Wales and Cheshire, mounted by Mr. C. Waterfall, F.L.S. The Hon. Treasurer exhibited photographic views taken and enlarged by himself, of Thirlmere, Erbistock, and the Wynnstay Oak. There were also life-sized nature studies of Toothworth and Convolvulus, and several photographs of groups of members taken on past excursions. Much appreciation was expressed of this exhibit and of the display of open-air flowers.

Mr. J. THOMPSON showed luxuriant specimens of *Auricularia lobata*, and Miss Bray contributed specimens showing, in series, variations in the phyllaries and petals of *Centaurea nigra*.

Mr. W. WHELDON sent some interesting ethnographical curios from the Mendi country, including native bracelets made from elephants' toes, girdles, Koran writing as charms on necklaces, combs and knives.

The gathering was a pronounced success, and afforded members an opportunity for social intercourse too seldom obtained.

FRIDAY, 19th MARCH.

At the Common Hall, Mr. A. A. Dallman in the chair.

The CHAIRMAN showed growing specimens of *Crassula lycopodioides*.

Dr. J. W. ELLIS brought coloured drawings of *Camarosporium ilicis*, a new British fungus which he had found on holly twigs in Eastham Wood.

Mr. W. G. TRAVIS showed *Iva Xanthifolia* and *Carthamus tinctorius*.

Mr. J. A. WHELDON showed a series of recent additions to the local flora, including *Ranunculus bulbosus*, var. *valdepubens*, Jord. (Formby); *Arctium nemorosum*, Lej. and Court; *Erigeron annuus* Pers.; *Agropyron repens*, var. *arvense*, Schrank, *Poa palustris*, var. *effusa*, A. and G. *Agrostis alba*, var. *majus*, Gaud.; *Equisetum arvense*, var. *erectum*, Mey. (Walton), *Leontodon nudicaulis*, vars. *lasioloena* and *leioloena* (Birkdale). He also called

attention to divergence presented within the form-circle of a single species of *Plagiothecium*, as shown by examples of *P. elegans*, var. *collinum* Wils, from Clougha, and var. *Sullivanti*, Limpr., from an altitude of 2,700 feet on Ben Challum.

Miss BRAY sent from Sussex two specimens of variations of *Centaurea nigra*. Mr. Wheldon remarked that the plant was very subject to variation, and a French botanist recorded about a hundred forms of the species.

Miss E. WARHURST, L.L.A., delivered a lecture entitled "An American visit, with references to the Flora." She drew a vivid picture of the vegetation near New York, Concord, Niagara, and the Catskills, bringing to the minds of the audience by means of capital illustrations the grandeur and beauty of the remarkable natural phenomena.

On the motion of Dr. Ellis, seconded by Dr. Lee, a cordial vote of thanks was passed.

FRIDAY, 16th APRIL.

In the Common Hall, Mr. A. A. Dallman in the chair.

Dr. ELLIS exhibited *Cytospora sarothamni*, Sacc.; a fungus believed to be new to Britain, discovered on twigs of Broom near West Kirby.

Miss BRAY sent from Hailsham specimens of *Carpinus Betulus*.

Mr. W. G. TRAVIS showed *Gyrophora cylindrica*, *Rhizocarpon geographicum*, *Lecanora atra*, and *L. badia*, lichens from Coniston Old Man.

Mr. WHELDON distributed growing plants of *Cochlearia danica* and *Funaria hygrometrica*, from Walton.

Mr. DALLMAN commented on the frequency of fasciation in Lesser Celandine in the Wirral, and the apparent immunity of North Wales' plants.

Dr. LEE read an extremely interesting paper entitled "Purpose in the Plant World." He dwelt on the facility with which field botanists assumed reasons for various botanical structures, and put them forward as examples of design without careful and adequate tests, which would, in many cases prove them to be fanciful.

Messrs. Dallman, Travis, and Dr. Ellis took part in the discussion and, on the motion of Mr. Wheldon, seconded by Mr. Sibbald, a hearty vote of thanks was passed.

WEDNESDAY, MAY 19th.

At Chapman's Restaurant, Mr. A. A. Dallman in the chair.

The CHAIRMAN exhibited fresh specimens of *Saxifraga granulata*, and *Arenaria balearica*, collected on the recent Mollington excursion, and Mr. H. J. Wheldon showed a large example of *Peziza reticulata*, obtained on the same occasion.

Mr. J. A. WHELDON showed *Usnea Florida* and *U. longissima* from West Africa and Bolivia respectively, remarking on the similarity of lichens from widely differing climates.

Mr. W. G. TRAVIS brought dwarf specimens of *Umbilicaria pustulata* and *Gyrophora polyphylla* from Bidston Hill. This recent confirmation of records dating back many years was exceedingly interesting. The first-named is recorded by Mr. Bradbury in the first edition of Leighton's Lichen Flora, and the second is given for Cheshire by Turner and Borrer in 1813.

Mr. SIBBALD showed two peculiar moulds growing on vegetable fat.

Miss BRAY sent examples of *Populus alba* with male and female catkins, from Hailsham. Some of the latter showed the perigynia enlarged and coloured bright yellow by a fungus identified by Mr. H. J. Wheldon as *Taphrina aurea*, Fr.

Mr. Travis asked Dr. Lee for details of a record in the "Lancashire Naturalist" of *Veronica longifolia*—Sandhills near Liverpool, Dr. W. A. Lee—ex. Kew.

Dr. LEE replied that the record doubtless referred to a specimen found on the Wallasey Sandhills on the site of what had been ascertained to be the derelict garden of a settler of fifty years before.

Mr. W. R. SIBBALD gave an address on "First attempts at Photomicrography." He stated that good results were obtainable by simple home-made apparatus, and several photographs prepared in this way were exhibited. The paper was of practical value, and was acknowledged by a cordial vote of thanks.

TUESDAY, 29th JUNE.

At the Common Hall, Mr. A. A. Dallman, F.C.S., in the chair.

As a grateful recognition of services rendered to the Society and to the science of Botany, the following members were elected unanimously to be Honorary Members:—Miss E. Bray, Hailsham, Sussex, Mr. W. Harrison, A.R.C.S., Preston, and Mr. W. H. Western, Darwen, editor of the "Lancashire and Cheshire Naturalist." Two new junior members were elected.

Mr. W. CHESHER, M.A., showed *Oenanthe Phellandrium* from Allerton.

Dr. ELLIS exhibited the following rare plants:—*Trigonella foenum-graecum*, (canal side near Netherton), *Sisyrinchium californicum* (Wallasey), *Senecio spathulaefolius* (Holyhead) and *Ustilago segetum* (Kirkby).

Mr. W. G. TRAVIS showed tricarpeal samaras of sycamore, and other members testified to the frequent occurrence of such forms in species of *Acer*.

Mr. J. A. WHELDON, F.L.S., showed a series of forms and varieties of *Equisetum palustre*, including the following:—var. *ramulosum*, Milde (near Mostyn) f. *longiramosa*, Klingr (Walton). var. *polystachyon*, Weigel, s. var. *racemosum*, R. & F. (Freshfield). var. *tenue*, Doll. (Walton and Freshfield). var. *nudum*, Newm. (Birkdale and Ainsdale). *E. litorale*, Kuhl., was still a doubtful plant of our dunes. It was believed to be a hybrid and should be sought where *E. limosum* and *E. arvense* grew near together.

A paper was read by Mr. A. A. DALLMAN, F.C.S., on "The Lesser Celandine." This was illustrated by micro-sections and numerous statistical tables. After alluding to the literary associations and folklore of the plant, the lecturer dealt with the variability in the number of sepals and petals, and the possible causes. Other points of interest were the methods of reproduction, and the reputed partial sterility of the plant. This was considered to be due to the adoption of vegetative reproduction, as it multiplied freely by means of root tubers, and axillary bulbils.

In proposing a cordial vote of thanks, Mr. W. G. Travis stated that bulbils undoubtedly existed on the leaf axils, and he had brought examples from East Lancashire. In the series of specimens

from Mr. Wheldon there was an example of the var. *divergens*, F. Schultz, showing clusters of bulbils in the leaf axils.

Mr. WHELDON, in seconding, stated that Rouy and Foucoud noted the plant as occurring in all parts of Europe except boreal Scandinavia. A form *parviflora*, Lamotte, had a corresponding form *grandiflora*, Lamotte.

Dr. ELLIS said that axillary bulbils were frequent in Flint and South Cheshire.

Dr. LEE contended that the assertion as to the disuse of sexual reproduction because of propagation by vegetative methods might possibly be a reversal of the true cause and effect. The latter method might be a make-shift.

Mr. DALLMAN, acknowledging the vote, replied to criticism and urged the members to take up the intensive study of common species.

TUESDAY, 17th AUGUST.

In the Common Hall, Mr. W. G. Travis in the chair.

Dr. ELLIS exhibited alien plants from Seacombe Docks and Wallasey, including:—*Lepidium neglectum*, *Dracocephalum parviflorum*, and a species of *Lychnis* not identified.

Mr. J. A. WHELDON, F.L.S., showed Manx lichens:—*Aspicilia lacustris* (Glen Maye), *Arthropyrenia foveolata* (Castletown Bay) and *Lecidea mullensis*, Stirt, in fruit, (Laxey Glen), and a new British *Acrocordia*, in Glen Maye. He also brought specimens and gave an account of *Bidens minima*, Huds., recently found by him and Mr. W. G. Travis with *B. cernua*, var. *radiata*, near Moss-bridge.

Dr. W. A. LEE, M.A., read a paper entitled "Notes on the study of Oikogetons." The paper dealt with the special class of plants found near the abodes of man, and which, without apparent reason, did not extend their range or occur in truly wild habitats.

In the discussion, Mr. W. Cheshier, M.A., reported experiments conducted on the seeds of wild plants, from which the following results had been tabulated:—*Mercurialis annua*, 5 plants, *Cirsium acaule*, 10, *Spiraea Filipendula*, 5, *Silene nutans*, all, *Campanula glomerata*, none, *Phyteuma orbiculare*, none. The experiment indicated a great disparity between the numbers of fertile to infertile seeds in the various species as in each case $3\frac{1}{2}$ inch pots were used and the seeds distributed freely. The tests were not absolutely conclusive, but afforded material for further more rigid experiments.

A vote of thanks, proposed by Mr. Wheldon and seconded by Dr. Ellis, was carried unanimously.

THURSDAY, 16th SEPTEMBER.

At the Common Hall, Mr. A. A. Dallman, President, in the chair.

Two new members were elected.

Miss OLIVE BANGHAM distributed fresh specimens of *Colchicum autumnale*.

Dr. LEE showed the Resurrection Plant, and growing examples of *Oxalis corniculata*, found in a semi-wild condition at the Clegg Arms, Wirral.

Mr. J. A. Wheldon exhibited flowering specimens of *Polygonum cuspidatum*, a Japanese plant, which from the original root produced 20 stems, bearing about 250,000 flowers.

Miss A. LEE, L.L.A., gave a lantern lecture on "Plant Collecting in the Land of the Blue Poppy," based on observations and experiences of F. Kingdon Ward in Western China and South Eastern Tibet. Some of the views displayed brought out very effectively the snow-clad summits in the alpine districts, and many illustrations of plants in natural colours were shown, produced by the Lumiere process. The lecture was extremely instructive and was listened to with much appreciation.

A vote of thanks, proposed by Dr. Ellis, and seconded by Mr. Thompson, who supplemented the lecture by a few reminiscences of his own travels in the East, was accorded with acclamation. The audience had the opportunity of examining a special exhibit of Chinese plants, and cut flowers mentioned by the lecturer. These were kindly provided by Bees Ltd., and enabled the members to realise the luxuriance and beauty of the Flora described.

FRIDAY, 22nd OCTOBER.

At the Common Hall, Mr. A. A. Dallman, President, in the chair.

The PRESIDENT made a sympathetic reference to the loss sustained by the Society in the death of Mrs. Wheldon, a foundation member of the Society, who had served on the Council for many years, and had assisted in developing the activities of the organization.

Miss A. LEE, L.L.A., showed fruiting examples of *Vinca major*, from Åbersoch.

Mr. W. R. SIBBALD, besides exhibiting African seeds and fruits, brought seeds of *Iris Pseudacorus*, and referred to the powers of flotation which they possessed. The loose-fitting testa was the cause of this character, and assisted in dispersal.

Dr. LEE described experiments in growing Henbane from seed, referring to the variations in results obtained by different experimenters. The seedlings did not possess in a marked degree the foetid odour noticeable in the mature plant, and the leaves were observed to be markedly nyctitropic.

Mr. W. G. TRAVIS showed *Setaria verticillata*, from Bootle, an alien grass in South Lancashire.

Miss OLIVE BANGHAM read a paper on "Some Impressions of Summer Holidays in Shropshire and Worcestershire," giving a most attractive and detailed description of the flora and physical beauties of the districts.

Mrs. S. S. ALSTON, whose paper was read in her absence by one of the Secretaries, contributed a highly interesting and original study on "Mistletoe." The essayist dealt with the parasite as it is met with in literature, folklore, legend, and in actual Nature.

The thanks of the audience were warmly accorded to both contributors.

MONDAY, 22nd NOVEMBER.

At the Common Hall, Mr. W. G. Travis in the chair.

Miss BRAY sent from Hailsham a series of examples of the leaves of *Crepis taraxacifolia*, illustrating the diversity in the leaf lobes.

The President (Mr. DALLMAN) showed fruits of the Oak collected at Pulford by Dr. Thomas, which were smaller than usual and of a more deltoid outline, and were remarkable for showing from one to three annular constrictions at the apex.

Mr. J. A. WHELDON exhibited *Viola Déséglisei*, from Hightown, and some doubtful forms, gathered at Simonswood by Mr. Travis and himself, which were probably *V. Lloydii*, *V. segetalis*, and the hybrid *V. Lloydii* x. *segetalis*.

Dr. LEE commented on an old edict promulgated by Sir Ralph Assheton against farmers allowing the Corn Marigold to appear in their fields, and suggested that the rarity of the species in that district was due to the coercive measures adopted. Mr. Dallman agreed that the rarity of the plant in Lancashire was due to the closer attention to cleaning fields.

Mr. A. A. DALLMAN gave a lantern lecture on "Wild Flowers and their ways," profusely illustrated by admirable slides of his own preparation. Many curious contrivances by which flowers find ways and means of living, continuing their species, and spreading their area of colonisation were skilfully touched upon.

On the motion of Mr. Wheldon, seconded by Dr. Lee, a hearty vote of thanks was agreed to.

FRIDAY, 17th DECEMBER.

At the Common Hall, Dr. W. A. Lee in the chair.

The meeting was mainly occupied with the distribution of prizes and certificates gained by the children competing in the Nature Study Scheme.

The CHAIRMAN commented upon the great possibilities before them in the work they had undertaken and considered the Society would be amply repaid for the trouble involved by the increased interest which would result from the operations of the Scheme. There was also the encouraging fact that they were creating in the minds of the children a power and habit of studying which would be of great moral value. He remarked that Upper Park Street Council School had consistently supported their efforts and stood pre-eminent for the quantity of work submitted.

Miss A. LEE, L.L.A., distributed the prizes, which consisted chiefly of books on various aspects of Nature study.

Mr. C. WATERFALL, F.L.S., announced that he had found near Helsby station *Epilobium hirsutum* x. *palustre*, a new record for Britain. He also read a short paper on "The Pollination of Orchids by Insects," in which he related the curious adaptations possessed by special insects to enable them to perform their functions in pollinating the flowers.

A hearty vote of thanks was accorded the lecturer.

The Hon. Secretary, Mr. W. R. Sibbald, referred to the indebtedness of the Society to Miss A. B. Gleave, B.Sc., who had most perseveringly and steadfastly worked to make the Nature Study scheme a success.

FIELD MEETINGS, 1915.

SATURDAY, 15th MAY.

Under the leadership of Miss K. White, a visit was paid to the district between Ledsham and Mollington, and the finds included *Orchis morio*, *O. maculata*, *Primula veris*, *Ranunculus auricomus*, and *Arum maculatum*. In the ponds were visible the blossoms of *R. heterophyllus*. The only species of mosses noted were *Pottia*

truncata, *Catharina undulata*, *Weisia viridula*, *Zygodon viridissimus* (saxicole), *Webera annotina*, var. *bulbifera*, *Eurynchium praelongum*, *Brachythecium rutabulum*, *B. velutinum*, *Amblystegium serpens*, and *Conocephalus conicus*. The lichens were *Cladonia pyxidata*, *C. fimbriata*, var. *exigua*, *Parmelia saxatilis*, *Lecanora varia*, *L. conizaeoides*, *L. atra*, *Xanthoria vitellina*, *X. citrina*, and *Lecidea canescens*. The fungi observed were *Tricholoma gambosa*, *Hypholoma fasciculare*, and *Peziza reticulata*.

SATURDAY, 5th JUNE.

The Society journeyed to Leasowe and Meols under the guidance of Mr. W. R. Sibbald. *Cotula coronopifolia* was apparently spreading, and a sedge, probably *Carex acutiformis*, was abundant. Numerous examples of *Ophioglossum vulgatum* were noted, and *Lemna gibba* with *L. minor*. The following were also recorded:—*Rumex Hydrolapathum*, *Mentha rotundifolia*, *Ornithogalum umbellatum*, and *Lepidium latifolium*, the Dittander or Broad-leaved Pepperwort, a new station in the Liverpool area.

SATURDAY, 26th JUNE.

Mr. W. G. TRAVIS led a small party to Kirkby and Simonswood. *Festuca sciuroides* was noted on stone walls, and *Matricaria Chamomilla* in the cornfields. The Comfrey was seen in waste corners. Other species observed were:—*Lamium amplexicaule*, *Hordeum murinum*, *Betula alba*, *Galium saxatile*, *Luzula multiflora*, *Calluna* and *Molinia*. The moss was mainly covered with *Eriophorum angustifolium*, *Betula verrucosa* and *B. tomentosa*. On the southern portion occur birch, Scotch fir, mountain ash, with huge masses of Rhododendrons. *Rhamnus Frangula*, *Populus tremula*, *Rubus Idaeus*, and *Rubus plicatus* were found on the peaty ditch-banks, and *Jasione montana*, *Leontodon hispidus*, and *Aira praecox* on the sandy peat. By the side of Simonswood Brook, *Myrrhis odorata* was gathered. Dr. Ellis identified the following micro-fungi:—*Puccinia suaveolens*, *P. arrhenatheri*, *Ustilago tritici*, *Melanconis thelebola* (on alder), *Melanconium bicolor* (on birch), *Diplodina salicis*, and also a *Cytospora*, on the Virginia Creeper.

SATURDAY, JULY 10th.

Mr. J. A. WHELDON acted as leader to an excursion in which representatives of Blackburn and Southport Societies participated. Owing to the backward season only occasional blooms of *Parnassia palustris*, var. *condensata*, and *Pyrola rotundifolia*, var. *maritima* were visible. Other species noted were:—*Epipactis palustris*, *E. viridiflora*, *Listera ovata*, *Orchis incarnata*, *O. latifolia*, *Erythræa centaurium*, *E. littoralis*, *Chlora perfoliata*, *Hypopitys glabra*, *Alisma ranunculoides*, *Arctium minor*, *Inula Conyza*, and *Populus balsamifera*. The latter is an excellent sand-binder, its numerous shoots enabling it to cover a wide area.

SATURDAY, 14th AUGUST.

Messrs. J. A. WHELDON and W. G. TRAVIS acted as leaders to a large party who followed the inland route to Woodvale, returning by field tracks through Ainsdale to Freshfield. Mingling with the

ordinary meadow plants were *Festuca rubra*, *Carex arenaria*, *Euphrasia curta*, *Leontodon nudicaule*, *Salix repens*, and *Hieracium umbellatum*, var. *dunense*. In a lane near Freshfield *Campanula rapunculoides* was noticed as a garden escape, and *Lycium chinense* was seen in the hedges. Other aliens were *Silybium marianum* near Ainsdale, and *Symphytum asperrimum* near Woodvale. The sandy fields first traversed yielded *Viola obtusifolia*, *V. agrestis*, and *V. segetalis*. Other agrestal weeds found in these sandy tracts were *Sonchus arvensis*, var. *glabrescens*, *Spergula arvensis*, *Ononis repens*, *Erodium cicutarium*, *Crepis capillaris*, *Galeopsis bifida*, *G. speciosa*, and *Polygonum lapathifolium*. By the lanes were seen *Ranunculus Boreanus*, *Prunus Padus* (probably planted), *Rubus Lindleyanus*, *R. Selmeri*, *R. dumetorum*, *R. pulcherrimus*, *Pastinaca sativa*, *Daucus carota*, *Senecio sylvaticus*, *Cnicus arvensis* (flore albo), *Hieracium umbellatum*, var. ; *linariifolium*, *Calystegia sepium*, *Salix pentandra*, *S. fragilis*, *S. viminalis*, *S. alba*, *S. purpurea*, *S. cinerea*, and the hybrid *S. Smithiana*. On dry cops were *Carex arenaria*, var. *remota*, Marss. By a ditch near Ainsdale *Glyceria declinata* was noticed.

On the heath-land were recorded:—*Rubus plicatus*, *R. Selmeri*, *R. leucostachys*, *Epilobium angustifolium*, *Scabiosa succisa*, *Achillea ptarmica*, with both pink and white flowers, *Erythroea centaurium* (flore albo), *Campanula rotundifolia*, *Scutellaria minor*, and *Lastrea aristata*. It was interesting to observe that large areas of this peaty ground were dominated sometimes by *Calluna*, and in other places by *Erica tetralix* or *Juncus effusus*. One patch formed a blue-grey streak of colour from the abundance of *Molinia cærulea*. In the deep ditches were *Ranunculus sceleratus*, *Stellaria uliginosa*, *Lotus uliginosus*, *Comarum palustre* (fruit), *Myriophyllum spicatum*, *Callitriche stagnalis*, *Lythrum salicaria*, *Epilobium hirsutum*, *E. obscurum*, *E. palustre*, *Hydrocotyle vulgaris*, *Apium nodiflorum*, *Oenanthe Phellandrium*, Oe.; *crocata*, *Galium palustre*, *Valeriana sambucifolia*, *Eupatorium cannabinum*, *Pulicaria dysenterica*, *Bidens cernua*, vars; *radiata* and *minima*, *Tanacetum* (rare), *Hottonia palustris*, *Myosotis cæspitosa*, *Veronica Anagallis* (the true plant with pale flowers), *Mentha hirsuta*, *Lycopus europæus*, *Rumex maritima*, *R. conglomeratus*, *R. sanguineus*, var. *viridis*, *R. Hydro-lapathum*, *Hydrocharis morsus-ranae*, *Typha latifolia*, *Sparganium simplex*, *S. erectum*, var.; *micro-carpum*, *S. neglectum*, *Lemna minor*, *L. gibba*, *L. trisulca*, *Alisma Plantago*, *A. lanceolata*, With.; *Potamogeton natans*, *Scirpus Tabernaemontana*, *Carex inflata*, *C. Pseudo-cyperus*, *Glyceria fluitans*, *Equisetum limosum*, and *E. palustre*.

Between Ainsdale and Freshfield were *Hypericum perforatum*, *Rubus bracteatus*, *Arctium minus*, and *Asparagus officinalis*.

On the stonework of a culvert near Freshfield, *Squamaria saxicola* was seen fruiting freely, and on a bridge near Woodvale were noticed *Physcia parietina*, *Placodium dissidens* (the only known South Lancashire station), and *Calloporisma pyracea*. Other lichens seen were *Lecanora varia*, and *Lecidea uliginosa*.

SATURDAY SEPTEMBER 11th.

Mr. JOSEPH THOMPSON, F.L.S., of Chester, led a large party through the Delamere Forest, passing Eddisbury Hill, the once impregnable enclosure of Ethelfleda, "the wisest lady in England, an heroic princess." Amongst *Calluna* were several examples of

var. *pubescens*, Koch, distinguishable by its hoary appearance. The Fungi recorded were less numerous than was expected owing to the continued dry weather, but the list was a creditable one, including:—*Stereum hirsutum*, *S. vorticosum*, *S. spadicium*, *S. sanguinolentum*, *Conophora incrustans*, *Radulum fragineum*, *Polystictus abietinus*, *P. versicolor*, *Calocera viscosa*, *Scleroderma vulgare*, *Polyporus betulinus*, *P. fibula*, *Hydnum repandum*, *Phlebia vaga*, *Amanita rubescens*, *A. vaginata*, *A. solitaria*, *A. phalloides*, *Lactarius* (Russ.) *tomentosus*, *L.* (Russ.) *rufus*, *L.* (Piper) *turpis*, *L.* (Piper) *trivialis*, *Russula nigricans*, *R. sanguinea*, *R. rosacea*, *R. sardonis*, *R. rubra*, *R. fragilis*, *R. chamæleontina*, *R. lutea*, *Lepiota procera*, *L. gracilentia*, *Boletus flavus*, *B. bovinus*, *B. badius*, *B. scaber*, *B. castaneus*, and *Collybia maculata*.

On the way to Mouldsworth station *Uromyces Polygoni* was seen on Knot-grass, where the teleutospores formed chocolate-coloured masses.

Obituary.

One of the most beloved members of the Liverpool Botanical Society, the wife of a former president, and an enthusiastic worker, Mrs. J. A. Wheldon, died very suddenly on the morning of Sunday, 26th September. She had been in her usual apparent health, and her end was quite unforeseen. Her tragic passing was the occasion of a manifestation of widespread and genuine regret among the membership as a whole, who had found in her the spirit of sociability to a marked degree. The early days, and, in fact, the inception of the Society, evoked her warmest sympathy, and, although she never aspired to be a technical expert, she took a keen interest in natural science. The deep sympathy of the members was evidenced by the large attendance at the memorial service which was conducted in Brook Road Wesleyan Church, and by the unique floral tribute, consisting of a harp-shaped token, in which heather and other appropriate wild plants found a prominent place.

Additions to the Library.

- The Flora of Liverpool (1872), presented by Mr. Chas. Bailey.
 Wirral Fungi (Parts I, II), by Dr. Ellis, presented by the Author.
 Bedrock.
 Synopsis of British Basidiomycetes, 1908.
 Drawings of Field and Cultivated Mushrooms, by G. Smith.
 Animals and plants of the Bible.
 American Midland Naturalist.
 Reports of the British Association for the advancement of Science, 1911-1912.
 The New Phytologist, 1911, presented by Mr. A. A. Dallman.
 Text Book of Botany, 1898 (Strasburger).
 Practical Botany, 1900 (Strasburger and Hillhouse).
 Elementary Text Book of Botany (Vines).
 Introduction to Cryptogamic Botany (Berkeley).
 Comparative Morphology and Biology Fungi.
 Organography of Plants (Goebel).
 Text Book of Plant Diseases (Massee).
 Heredity of Acquired Characters in Plants (Henslow).
 Protoplasmic Streams in Plants (Ewart).
 Plant Physiology (Ganong).
 Flora of Suffolk (Hind).
 Flora of Warwickshire (Bagnall).
 Lancashire Ascomycetes (Journal of Botany, 1912). (H. J. Wheldon).
 New Variety of *Parnassia Palustris* (Journal of Botany, 1912). (W. G. Travis and J. A. Wheldon, F.L.S.).
 Chester Society of Natural Science, 41st Annual Report, 1912.
 United States National Herbarium, v. 13, part 12; v. 14, part 3; v. 16, part 1.
 Transactions of Canadian Institute, 1912.
 Bulletins of Société Imperiale des Naturalists de Moscou, 1912-1913.
 La Naturaleza Tomo I., No. 3, 1912.
 Botanical Exchange Club Report, 1911.
 New Jersey Agricultural Experiment Stations.
 Burton-on-Trent Natural History Society Transactions, 1911.
 Liverpool Naturalists' Field Club Report, 1911.
 Bulletin of New York Botanical Garden, 1911.
 North Staffordshire Field Club Report, 1911.
 Perthshire Society of Natural Science Transactions, 1911-1912.
 Atti della Società Toscana di Scienze Naturali, vol. XX., Nos. 2 and 3.
 Vierteljahresschrift der Naturforschenden der Gesellschaft in Zurich.
 Missouri Botanical Garden Reports, 1911-1912.
 Annals of Botany, 1911.
 Handlist of Lichens of Great Britain, Ireland, and the Channel Islands (A. H. Horwood).
 United States National Herbarium (Vol. 16, part 2). Studies of American Ferns.
 United States National Herbarium (Vol. 16, part 3), North American Species of Nymphaea.
 United States National Herbarium, Mexican Grasses.
 Edinburgh Botanical Society, Transactions and Proceedings, 1910-1911.
 Belfast Natural History and Philosophical Society. Report and Proceedings, 1911-1912.
 Bryotheca Europaea (Rabenhorst), presented by Miss Peacock.
 Edinburgh Field Natural and Microscopical Society, Transactions, 1912.
 Eastbourne Natural History Scientific and Literary Society, 1912.
 Sitzungsberichte Naturhistorischen Vereinder Rheinlande und Westfalons Bonn, 1912.
 Verhandlungen Naturhistorischen Vereinder Rheinlande und Westfalons Bonn, 1912.
 Flora Belfastiensis (R. Tate).

Presidents of the Liverpool Botanical Society.

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 1909-10. JAMES A. WHELDON, Esq., F.L.S.
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