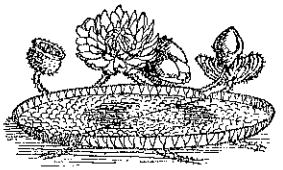
BOTANICAL SOCIETY of the BRITISH ISLES

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YEAR BOOK

1953

EDITED BY

D. H. KENT

SEPTEMBER 1953

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EDITORIAL

I must apologise for the late appearance, due to circumstances beyond my control, of this the last *Year Book* to be published by the Society.

Most of the items at present included in the *Year Book* will in future be incorporated in the proposed *Proceedings** of the Society, and we shall be grateful for criticisms and suggestions for increasing the scope of items which may especially appeal to members.

D. H. K., August 1953.

*For details see p. 69.

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To those published in the *Year Book 1952*, p. 31, should be added the following, approved by the Council, March 14, 1953:—

7. JUNIOR MEMBERSHIP COMMITTEE.

To consider how the Society can make known its activities to, and cater for, botanists of school age.

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(up to and including 31 August 1953)

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SUMMARY OF THE ABOVE MEMBERSHIP LIST.

Honorary Members	16
Life Members	20
Ordinary Members	629
Junior Members	47
Family Members	9
Subscriber Members	97
Total Membership	818

Changes of address and any corrections or additions should be notified to the Hon. Assistant Secretary, Mr. D. H. Kent, 75 Adelaide Road, London, W.13.

ANNUAL GENERAL MEETING, 14th MARCH 1953

The Annual General Meeting was held in the rooms of the Linnean Society, Burlington House, Piccadilly, London, on Saturday, March 14th, 1953, at 2.15 p.m.

The President was in the Chair and 62 members were present.

The Honorary General Secretary read the Minutes of the last Annual General Meeting, which were approved and signed.

COUNCIL'S REPORT:—The Report of Council for the year 1952 had been printed and circulated. The Hon. Treasurer appealed to members to make use of the Deeds of Covenant Scheme. The President made a special appeal for further support over this, saying that the benefit to the Society which would result from a good response would be very great and the cost to members nil.

The Report was adopted and Mr. Lousley was thanked for drawing it up.

ELECTION OF PRESIDENT:—The Hon. General Secretary expressed the Society's very great appreciation to Canon C. E. Raven for all the services he had rendered as President for the last two years. He had given his help and encouragement in unstinted manner to all, and we were most grateful to him. Canon Raven retired under Rule 3 (d) and, being eligible, had been nominated by Council for re-election. The Hon. Secretary then put the motion to the meeting that Canon Raven be elected President for 1953 and 1954 and this was carried with acclamation.

ELECTION OF VICE-PRESIDENTS:—There were three retiring Vice-Presidents; under Rule 3 (d), all were eligible for re-election, but one, Mr. J. F. G. Chapplé, did not wish to stand again. Council had nominated Dr. R. W. Butcher and Mr. J. S. L. Gilmour for re-election and had decided not to make a nomination for the third vacancy. Mr. Graham asked if the reason for not making a third nomination could be explained. Dr. Warburg said that it was desired to put the Vice-Presidents "into phase" in order that two should retire each year; the election of the third Vice-President would, therefore, be postponed until next year. The proposal was then put to the meeting and Dr. Butcher and Mr. Gilmour were declared re-elected.

ELECTION OF HONORARY GENERAL SECRETARY:—Council had nominated Mr. J. E. Lousley for re-election as Hon. General Secretary. The motion was then put to the meeting and Mr. Lousley was declared elected.

ELECTION OF HONORARY TREASURER:—Council had nominated Mr. E. L. Swann for re-election as Hon. Treasurer. The proposal was then put to the meeting and Mr. Swann was declared elected.

ELECTION OF HONORARY EDITOR:—Council had nominated Dr. E. F. Warburg for re-election as Hon. Editor. The motion was then put to the meeting and Dr. Warburg was declared elected.

ELECTION OF HONORARY FIELD (MEETINGS) SECRETARY:—Council had nominated Dr. J. G. Dony for re-election as Hon. Field (Meetings) Secretary. The proposal was then put to the meeting and Dr. Dony was declared elected.

The President then expressed the gratitude of all to the Executive Officers of the Society. The result of their year's work had been truly remarkable as witnessed by the success of the Conference and Exhibition Meeting, the growing membership and the greatly increased activities of the Society. He hoped they would all continue in their work with equal success, and desired that his words be recorded in the Minutes.

ELECTION OF MEMBERS OF COUNCIL:—There were four vacancies on Council provided by the retirement of Mrs. H. M. Richards, Mr. A. E. Wade, Mr. D. H. Kent, and Miss C. M. Rob in accordance with Rule 3(e). Mr. D. E. Allen and Mr. R. A. Graham had been nominated by members; Dr. J. H. Burnett and Mrs. A. N. Gibby had been nominated by Council. The names of these four members were then put to the meeting and declared elected. Lots drawn by the President for seniority for purposes of Rule 3(e) resulted as follows:—Dr. Burnett, Mr. Graham, Mr. Allen and Mrs. Gibby.

ALTERATION OF RULES:—The following alterations of Rules were recommended by Council:—

Rule 3—Paragraph (a), line 3, for "Field Secretary" read "Meetings Secretary."

Rule 11—Delete the last sentence, and substitute "One or more Honorary Assistant Secretaries may be appointed by the Council to assist the Honorary General Secretary in such ways as the Council may determine."

Rule 13—Delete the whole Rule and substitute:—

"13. HONORARY MEETINGS SECRETARY.

"The Honorary Meetings Secretary shall organise the Society's field work, conferences and exhibition meetings in co-operation with the Meetings Committee, which shall be appointed by the Council. In addition, the Council may appoint an assistant to help the Meetings Secretary in such ways as they may determine."

These alterations of Rules were put to the Meeting and declared carried.

ELECTION OF ONE HONORARY MEMBER:—Council recommended the election of Mr. W. R. Price as an Honorary Member in recognition of his services to the Society. The resolution was put to the Meeting and carried. Mr. Price expressed his thanks and great appreciation.

ANY OTHER BUSINESS:—Mr. Ash said that he did not think the new name "Meetings Secretary" was altogether a fortunate one as it might be thought that his duties included business meetings. The Hon. General Secretary said this point had been considered, but it had not been possible to find an alternative title free from objection.

Before the meeting closed, the Hon. General Secretary, Hon. Editor, and Hon. Meetings Secretary made various announcements.

The President thanked members for their attendance and proposed that the thanks of the Meeting be accorded to the Council of the Linnean Society for the use of their rooms and for much help. This was agreed.

REPORT OF THE COUNCIL

This Report and the audited accounts printed below cover the period January 1st to December 31st, 1952.

MEMBERSHIP. During the year 114 new members joined the Society; of these 25 (22%) were introduced through the activities of the Advertising Committee. We lost 17 members through death, resignation and the operation of Rule 6 (d), giving a net increase of 97. This may be compared with net increases of 22, 12, 104 and 79 respectively for the years 1948, 1949, 1950 and 1951. The total membership at the end of the year was 778, showing an increase of 56% in three years.

FINANCE. Receipts from subscriptions amounted to £719, compared with £641, £590 and £492 for the preceding three years which indicates only partially the extent to which the Society's financial position is improving with the increase in membership. The balance of the General Fund is somewhat lower than at the end of 1951 but is considered adequate to meet immediate commitments. For the first time, our accounts include a credit in respect of Income Tax recovered under the Deeds of Covenant scheme. The Council would like to express its gratitude to members who have paid their subscriptions under this arrangement but think there should be many more who could help the Society in this way at no cost to themselves. It trusts that these members will apply to the Treasurer for details.

The balance of the Journal Fund has increased during the year by rather more than the cost of one issue of *Watsonia*, owing to the issue of only two parts instead of three. Expenditure on our journal has been very much less than may be expected in a normal year.

The Publications Fund is charged with heavy liabilities for the cost of the report of the 1952 Conference and for the new *Plant List* in preparation. A new edition of *Comital Flora* is also envisaged. The balance of this Fund has been built up towards meeting these commitments. Sales of publications have been less during the year owing to the fewer parts of *Watsonia* and to the fact that new books have not been issued during the calendar year.

We are most grateful to the Royal Society for an allotment of £200 from the Scientific Publications Grant-in-Aid Fund for 1952 towards the cost of our publications. This has enabled us to proceed with arrangements for the issue of a well illustrated book to include in full the papers read at our Conference on "The Changing Flora of Britain" in addition to our usual periodicals.

DEVELOPMENT AND RULES COMMITTEE. Secretary: Mr. D. E. Allen.

Early in the year, proposals for extending the organisation of the Society and providing improved facilities for members living at a distance from London were received from a group of Cambridge members. The Committee have given these very careful consideration and their report to Council has now been prepared. If adopted, this will entail a few minor alterations in the Rules which will be proposed at the Annual General Meeting. The Committee have also carried out a revision of the lists of Local Secretaries, Recorders, Vice-County and Regional Referees, and Panel of Specialists for the 1952 and 1953 Year Books.

In November, Mr. E. Milne-Redhead tendered his resignation as Secretary owing to pressure of other work. He has acted since May 1947, and the Council would like to record its warm appreciation of the work he has done during a period of great expansion in the activities of the Society. On December 14th, Mr. D. E. Allen was elected as Secretary in his place.

MEETINGS COMMITTEE. Secretary: Dr. J. G. Dony.

A Conference on "The Changing Flora of Britain" was arranged in the Lecture Room at the Royal Horticultural Society's New Hall, London, S.W.1, on April 4th and 5th. It was attended by about 270 members and guests, the programme was carried out as advertised, and the papers and exhibits were of a very high standard. The Conference was followed by a field meeting to the neighbourhood of Ashford, Kent, on April 6th to study some of the plants discussed in the papers. This was attended by 90 members and guests—the largest attendance at a field meeting in the history of the Society.

The published programme of field meetings was carried out as arranged. The meeting at Killarney lasted a week, three meetings each lasted three days and three were arranged for one day. In addition, a meeting lasting a week in the Brecon Beacons was arranged for younger members only. They were attended as follows:—Killarney (40), South Warwickshire (17), Bawtry (11), Thirsk (27), Hayes and Keston Commons (20), Panshanger (30), North Surrey and Middlesex (36)—a total attendance of 181. In addition, 9 members attended the experimental Junior Meeting (for which accommodation was restricted) and they were most enthusiastic in their praise of this new development.

An Exhibition Meeting arranged in the Lecture Hall of the British Museum (Natural History), by kind permission of the Trustees, on November 29th was attended by about 230 members and guests. Greatly improved facilities were arranged for the display of the 50 exhibits.

The field meetings arranged during the year have resulted in a loss of about £15. This was mainly due to a loss of £9 15s on the South Warwickshire excursion where attendance was insufficient to cover the accommodation we had reserved, and the heavy expenses incurred in arranging the Killarney and Junior Meetings which amounted to £7 12s 6d and £5 11s 6d respectively, and were greatly in excess of receipts. The combination of circumstances which lead to the total loss must be regarded as exceptional and unlikely to be repeated.

PUBLICATIONS COMMITTEE. Secretary: Dr. J. Heslop-Harrison.

Watsonia, Volume II, Parts III and IV were published in January and October respectively. The Council consider it most important that at least three parts of our journal should be issued in each calendar year* and very much regret that this did not prove possible in 1952. Every effort is being made to expedite publication so that the parts appear more frequently.

The *Year Book, 1952*, edited by Mr. W. R. Price, was published in September and, with the exception of the Cliveden meeting, the accounts of Field Meetings were brought right up to the end of 1951. It is hoped that it will be possible in future to publish accounts of all meetings not later than the following year.

A report of the 1952 Conference, edited by Mr. J. E. Lousley, will be issued as a separate book under the title of *The Changing Flora of Britain*, and members will be given an opportunity of obtaining it at a reduced price. Unfortunately, the task of collecting papers from the speakers proved much more lengthy than was anticipated but, except for a few illustrations, they are now all in the hands of the editor and it is expected that the book will go to the printers in January 1953.

The sub-committee appointed in May 1951 for the preparation of a revised and shortened edition of the *British Plant List* is continuing its work, and Mr. J. E. Dandy is at present preparing the draft. The production of this *List* is regarded as a matter of great urgency in view of the outstanding need for standard names to be adopted in the Society's publications.

CONSERVATION COMMITTEE. Secretary: Mr. J. E. Lousley.

The number of "threats" reported during the year was about 30 and, fortunately, some of these proved unfounded or relatively unimportant. The more important matters considered included the effect of the use of chemical sprays on roadside verges and elsewhere, the North Wales Hydro-Electric scheme, the Air Ministry's proposals to establish a range on Newborough Warren, Anglesey, and the prevention of planting of daffodils in Dovedale. We are satisfied that our work during the year

*This arrangement has now been altered by the changes in the form of the Society's publications—see p. 69.

has achieved a reasonable measure of success. There have been two informal meetings of the Committee with representatives of the Nature Conservancy with whom we have worked in close collaboration.

MAPS COMMITTEE. Secretary: Prof. A. R. Clapham.

Two meetings of this Committee have been held during the year. A considerable amount of work has been done in the preparation of trial maps with a view to ascertaining the most practical and satisfactory method of presenting the data. It is expected that it will be possible to present a report to the next meeting of Council on proposals for the preparation of a series of distribution maps of British plants.

ADVERTISING COMMITTEE. Secretary: Mr. R. A. Graham.

During 1952, 69 circulars have been sent to individuals likely to be interested in the work of the Society, and 20 new members and 5 institutions are believed to have joined as a sequel to the work of the Committee. The number of circulars sent out has been greatly restricted owing to exhaustion of available lists of suitable botanists and institutions to approach. The Committee would welcome additional names of friends of members who would be glad to have details of the facilities offered by the Society.

EXCHANGE SECTION.

To the 1951-52 Distribution, 11 members contributed 671 sheets of specimens. Miss C. W. Muirhead acted as Distributor, and her report is published in the *Year Book, 1952.* Dr. D. P. Young is acting as Distributor for 1952-53 and is now dealing with the plants contributed.

The Council would like to express its appreciation of the services of members who have represented the Society at meetings of other organisations and at Public Enquiries during the year.

C. E. RAVEN, President.
J. E. LOUSLEY, Hon. General Secretary.

By Order of the Council,
February 6th, 1953.

ACCOUNTS FOR 1952.

GENERAL FUND.

To Balance from 1951		£384	15	3	
,, Subscriptions received during the year		† 719	6	10	
,, Scientific Publications Grant-in-aid Fund—					
Balance of 1951 Grant	150	0	0		
,, do. 1952 Grant	200	0	0		
,, Receipts from Advertisements		9	19	6	
,, Income Tax Recovered ...		32	6	0	
,, Interest for 1951 on Post Office Savings Bank Deposit		19	10	4	
By Transfers to Journal Fund					£550 0 0
,, Transfers to Publications Fund					400 0 0
,, Notional Interest to Publications Fund					13 5 0
,, *Year Book*, 1952 and postages thereon					177 6 2
,, Hire of Rooms for Council and Committee Meetings					4 0 0
,, Cheque book					0 10 0
,, Duplicating Minutes of Meetings					4 6 0
,, Officers' Expenses ...					9 3 11
,, Fire Insurance on publications at Oxford and portrait					1 2 6
,, Telephones					1 8 7
,, Advertising Expenses ...					6 1 0
,, General Printing and Stationery					76 13 6
,, Expenses re Deeds of Covenant and Tax reclaim					5 10 6
,, Postages and Petty Expenses :					
Hon. General Secretary ...	£17	4	11		
Hon. Treasurer	16	0	2		
Hon. Assistant Secretary ...	5	0	0		
Hon. Distributor	1	4	0		
Hon. Secretary, Development Committee ...	0	19	6		
					40 8 7
,, Balance					226 2 2
		£1515	17	11	£1515 17 11

† Subscriptions paid in advance as at December 31, 1952, amounted to £103 19s 6d. (Not audited.)

JOURNAL FUND.

To Balance from 1951 ...		£217	11	9	
,, Transfers from General Fund		550	0	0	
,, Sales of Binding Cases ...		6	16	0	
,, Sales of Reports and Reprints		49	13	8	
By Printing *Watsonia* and postages thereon :					
Vol. II, Part III (to complete payment)	£93	18	1		
Vol. II, Part IV	157	0	10		
					250 18 11
,, Balance					573 2 6
		£824	1	5	£824 1 5

PUBLICATIONS FUND.

To Balance from 1951			£530	9	1	By Postages and Petty Expenses at Oxford	4 3 3
„ Transfers from General Fund:						„ Balance	990 18 2
Towards cost of new Plant List	£150	0 0					
Towards cost of Conference Report ...	250	0 0					
			400	0	0		
„ Interest for year on initial balance at 2½% (per General Fund) ...			13	5	0		
„ Sales of *C.F.* and *B.P.L.*			17	11	9		
„ Sales of *Flora of Northants*			2	1	10		
„ Sales of 1948 Conference Report			13	7	9		
„ Sales of 1950 Conference Report			18	6	0		
			£995	1	5		£995 1 5

MEETINGS COMMITTEE'S FUND.

To Balance from 1951			£13	11	8	By Loss on Field Meetings ...	£15 5 4
„ Profit on Conference ...			2	16	10	„ Exhibition Meeting Expenses	8 9 9
„ Balance			7	9	4	„ Petty Expenses	0 2 9
			£23	17	10		£23 17 10

The Balances on Life Members' and Benevolent Funds remain at £145 12s 0d and £41 3s 6d respectively, and there have been no entries on these accounts during the year.

BALANCE-SHEET as at 31st December 1952.

General Fund			£226	2	2	500 National Savings Certificates at cost	£400 0 0
Journal Fund			573	2	6	Meetings Committee's Account Debit Balance ...	7 9 4
Publications Fund			990	18	2	Cash in Bank	236 10 4
Life Members' Fund			145	12	0	Deposit with Post Office Savings Bank	1334 2 8
Benevolent Fund			41	3	6		
Cheques issued but not presented			1	4	0		
			£1978	2	4		£1978 2 4

Examined and found correct,
12th January 1953.

J. H. G. PETERKEN, Hon. Auditor.
E. L. SWANN, Hon. Treasurer.

ASSISTANT SECRETARY'S REPORT FOR 1952

During 1952, 114 new members joined the Society, this being 8 more than in 1951, and 15 fewer than in 1950. Of the new members 88 were

Ordinary members, 7 Subscriber members, 17 Junior members and 2 Family members . Losses were 17, this being 10 less than in 1951 and 8 less than in 1950. Of these 4 members resigned, 8 ceased to be members under Rule 6 (d), and we regret having to record the deaths of the following 5 members:—Miss A. B. Cobbe, Dr. J. G. Lawn, D. Lumb (Honorary Member), Dr. Ir. A. W. Kloos, Jr. (Honorary Member), and Miss M. Knox. Total Membership at 31st December 1952 was 778*, an increase of 97 over the total at this date last year.

New Ordinary members are:—W. E. Abbott, Dr. H. G. Baker, M. Bendix, Col. W. Bird, Miss N. M. Blaikley, Dr. T. W. Böcher, Mrs. A. Booth, H. J. M. Bowen, J. F. Bradbury, Miss E. Bradshaw, D. W. Brett, Miss H. M. Bristow, H. Britten, Mrs. V. D. Brumby, Prof. A. Burges, D. H. Burnett, Dr. D. Caddy, J. R. Cadman (re-elected), N. Chadwick, M. J. Cole, H. T. Corke, C. E. Coulthard, Sir Christopher Cox, Miss M. H. Cunningham, P. W. Curnow, Miss D. Diemer, Miss J. Dilnot, G. Dolman, C. S. Downer, J. W. Dyce, T. R. Eagles, Rev. E. A. Elliott, G. L. Evans, C. Farmer, R. S. R. Fitter, G. W. Garlick, Rev. P. M. Garnett, Dr. C. H. Gimingham, Miss M. E. Griffiths, D. P. M. Guile, Mrs. E. M. Haines, P. C. Hall, D. J. Hambler, Dr. C. L. Hare, J. H. Hemsley, Miss O. Holbek, Dr. J. F. Hope-Simpson, Miss A. R. Hutchison, L. James, Miss R. G. B. Laidlaw, Miss S. M. Littleboy, J. Macdonald, Miss D. Meynell, D. F. S. Miles, R. Minor, M. R. S. Mitchell, Miss C. W. Muirhead, Miss E. R. Noble, J. E. O'Donovan, Miss P. A. Padmore, R. E. Parker, M. T. T. Phillips, F. Perring, Dr. C. P. Petch, L. M. Reid, J. C. Ritchie, A. Sapper, P. D. Sell, Miss A. J. M. Shirras, A. A. Slack, Miss P. M. Smith, Miss E. Smithson, J. E. S. Souster, D. H. N. Spence, Miss A. D. Stevenson, Dr. J. F. Sutcliffe, G. J. Swales, Miss I. Thornley, Mrs. H. R. H. Vaughan, N. M. Wace, T. J. Wallace, Dr. A. S. Watt, Prof. H. Weimarck, C. A. Whalley, Mrs. L. E. Whitehead, M. H. Williamson, R. D. Wise.

New Junior members are:—Miss S. J. Attenborough, Miss Y. M. Chamberlain, J. R. Davis, Miss A. M. Davison, P. A. Gay, G. G. Hatton, R. H. Herniman, E. G. Hughes, H. J. Killick, J. Moor, Miss W. M. T. O'Connor, P. H. Oswald, N. M. Pritchard, J. S. Ryland, J. A. Sargent, Miss A. H. C. Talbot, B. A. Whitton.

New Subscriber members are:—Arnold Arboretum, Association of School Natural History Societies, Bibliotheca Bogoriensis, Croydon Natural History Society, Crypt School (Gloucester), Liverpool Botanical Society, Michigan University.

New Family members are:—Miss G. M. Haines, Mrs. P. C. Hall.

W. R. PRICE.

January 1953.

*On re-counting membership list as on Dec. 31st, 1952, it is found that total membership is actually two more than stated, and this will be adjusted on the 1953 figures.

FIELD MEETINGS, 1952

APRIL 6th, 1952. ASHFORD (KENT).

Leaders: D. McCLINTOCK and J. E. LOUSLEY.

This Field Meeting was arranged in conjunction with the Conference on The Changing Flora of Britain. One of the buses arrived a half hour late, a delay which had long-reaching effects, but eventually 90 members and friends—the largest gathering for any B.S.B.I. field meeting—left London by the Folkestone road in two coaches and several cars. Beyond Wrotham, the first stop was made at the southern end of Mereworth Woods to inspect *Acaena anserinifolia* (J. R. & G. Forst.) Druce. It was found in this spot in 1946 by Mrs. D. McClintock and has not altered much in quantity since. It has, however, been known since 1937 half a mile further north in these woods where it mingles freely with native vegetation on loose Kentish ragstone.

Dr. E. Scott joined the party at lunch at Hothfield Heath and led the way to fields south of Rippers Cross where in 1951 he had re-found, in quantity, *Thlaspi alliaceum* L. This Southern European annual discovered here in 1923 was shown to have been known to local farmers for many years before (*J. Min. Agric.*, **30**, 535-8, 1923; *B.E.C. 1923 Rep.*, 28-29; *J. Bot.*, **62**, 306-7, 1924). There is apparently no record of it since, but it is now known to have persisted there despite the farmers' attempts to eradicate it and the grassing over at intervals of the fields in which it grows. The party scattered over the fields and proved that the plant was still well-established and quite widespread not only in arable fields but also in hedge banks. Its pale-green leaves and stems and creamy-yellow flowers, which were in full bloom, were very striking. Several plants already had seed-pods developed enough to show their narrower shape than those of *T. arvense* L. The plants when bruised smelled of garlic. *Equisetum telmateja* Ehrh. was collected, and the variations in size and shape of leaves of *Arum maculatum* L. were also noted.

A brief halt was made at Little Chart to see the fine colonies of *Chrysosplenium alternifolium* L. and *C. oppositifolium* L. by the old mill-pond where *Cardamine amara* L. and *Dipsacus pilosus* L. also grow. The party then went on ten miles to scour the ancient yew wood in the hanger of Boxley Warren for *Buxus sempervirens* L. This may well be a native locality for the latter, a few bushes of which were found. *Helleborus foetidus* L. is almost certainly native on the North Downs and was seen here in two places in fine flower. *Euphorbia lathyrus* L. seedlings were also observed among the yews in a possible native station, and *Salvia pratensis* L. was seen on the Downs. Prof. Tutin discovered *Quercus ilex* L. in a seedling state also among the yews.

West of Sandling there was a stop to see, in flower, a roadside colony of *Trachystemon orientalis* (L.) Don, a Mediterranean plant occasionally

cultivated, which is known to be established in five or six localities, notably in Holt Wood two miles to the west. There was no stopping however at Forstal Lock, where in 1895, *Rapistrum rugosum* (L.) All. began its spread down the Medway, and which was the last Kentish station for *Scirpus triqueter* L.—it was finally seen here just before the war.

A good tea was provided at the "Bull" at Wrotham, but so large was the gathering that an overflow was necessary elsewhere. London was reached about 7.30 p.m.

D. McCLINTOCK.
J. E. LOUSLEY.

JUNE 14th to 21st, 1952. KILLARNEY.

Leader: Miss M. P. H. KERTLAND.

Forty members and guests took part in this meeting. The party assembled on the evening of Saturday, 14th June, at the headquarters, the International Hotel, to meet Miss Kertland of Belfast, who had so kindly undertaken the leadership at short notice.

Sunday, June 15th, was spent in most attractive botanising country on the wooded shores of the Killarney Lakes. In the morning we visited Ross Island, which is limestone, where planted trees and shrubs mingled with the native flora. Here we saw *Arbutus*, *Osmunda*, *Euphorbia hyberna*, *Rubia peregrina*, *Orobanche hederae* and *Sisyrinchium angustifolium*. In the Nature Reserve *Vicia sylvatica*, *Sorbus anglica*, *Crepis paludosa* and *Eleocharis acicularis* were seen. In the water were *Lobelia dortmanna*, *Potamogeton alpinus*, *P. lucens* and *P.* × *nitens*. *Galium boreale* was seen on the shore near the old copper mines and in dry places were *Silene maritima* and *Armeria maritima* in abundance, though the island is far inland, and not much above sea level.

In the afternoon a pleasant car drive (in the company of hundreds of jaunting-cars) along the Lake side, took us through native woodland with many trees of *Arbutus*, past rocks with *Saxifraga spathularis* on every ledge, to the track to Derrycunihy Cascade. This area is Old Red Sandstone, and here we found *Juncus tenuis* on the track, *Euphorbia hyberna* beside it, *Wahlenbergia hederacea* by the stream, *Hymenophyllum* coating the great boulders, and abundance of *Dryopteris aemula* and *D. dilatata*. *Platanthera chlorantha* occurred and one plant of *Listera cordata* was found. A bog near the Upper Lake was rich in sedges including *C. lasiocarpa* and *C. elata*, and *Rhynchospora fusca* was luxuriant. *Pinguicula lusitanica* and *P. grandiflora*, *Utricularia intermedia* and *Ceratophyllum demersum* were found.

On Monday morning, June 16th, we set off at 10.15 in a coach, northward past meadows full of Iris and dog daisies through Tralee, where the *Fuchsia* hedges begin, then westward past the mountains of Slieve Mish, with Brandon Mountain ahead in the distance, and the sea on our right, towards Castlegregory on the north side of the Dingle Peninsula. A stop was made at Aughacashla Bridge and the party divided, some to go seaward and along the dunes, some to climb Strad-

bally Mountain and others to explore the lower slopes of Cummeen. On Stradbally, *Saxifraga stellaris*, *Salix herbacea* and *Carex bigelowii* were seen. By the track below Cummeen, *Sibthorpia* was found in a dried-up pool, accompanied by *Epilobium pedunculare*. *Umbilicus rupestris* was abundant on the walls. In the afternoon the main party went on in the coach to Castlegregory, where a large area of blown sand forms high dunes. North of the village, *Rosa spinosissima* with brilliant cerise-coloured petals adorned the roadside dune and *Viola tricolor* ssp. *curtisii* with blue and yellow and parti-coloured flowers was abundant, but the plant particularly to be searched for was *Arabis brownii*, which was found with its putative hybrids with *A. hirsuta*. *Erodium moschatum* was noticed by the roadside. Those who explored the dunes found *Orchis kerryensis* and *O. occidentalis*; and *Ophrys apifera* and *Gymnadenia conopsea*, *Asperula cynanchica* and *Phleum arenarium*, the last two very local plants in Kerry. Others walked to the shore of the shallow Lough Gill, its somewhat brackish nature suggested by the presence of *Scirpus maritimus*, *Schoenoplectus tabernaemontani* and *Juncus gerardi*, but at its edge was also a fine stand of *Carex disticha* with *Littorella* and *Baldellia ranunculoides*; *Potamogeton filiformis* was collected. Lush meadows had their ditches full of *Hippuris* with patches of *Comarum* and *Pedicularis palustris*. In the evening a meeting was held at the International Hotel to identify specimens and discuss future plans. We were amused to read in the *Irish Times* and in the *Cork Examiner* a paragraph stating that the B.S.B.I. party were 'searching for the elusive Killarney fern'.

On Tuesday, June 17th, we took the road south by the Lakes and through Kenmare, across the Suspension Bridge over the tidal Kenmare River to the Cloonee Loughs, and in small groups searched the swamps, bogs, woods and salt marshes. Here *Sisyrinchium angustifolium*, *Eriocaulon*, *Euphorbia hyberna*, *Cicendia* and ferns were seen in abundance. One party visited Uragh Wood, a remnant of indigenous forest on a rocky hillside, in which *Quercus petraea* and *Betula pubescens* are dominant with holly, rowan, hazel and sallow, ivy and honeysuckle, foxgloves and saxifrages among *Dryopteris dilatata* and *D. aemula*, with either *Hymenophyllum* species on the boulders among liverworts and mosses. In the Lakes were *Nymphaea* and *Cladium*, *Elatine hexandra* and a species of *Nitella*; in the bog, *Carex limosa* and *C. lasiocarpa*, *Rhynchospora alba* and *R. fusca*. Well trodden heathy tracks were carpeted with *Anthemis nobilis*. A curious discovery was a plant of *Blechnum capense* which is naturalised at Glengariff about eight miles away, but many also occur in a garden much nearer. On the estuary, *Carex punctata* and *C. extensa*, *Cochlearia anglica* and *Limonium humile* were found.

On Wednesday, June 18th, we had our longest and perhaps pleasantest drive, starting out on the, by now, familiar road beside the Lakes, past the much photographed view of the islanded Upper Lake, past the Butterfly orchids in the roadside bog, up into the cloud on the pass over the mountain and down to Kenmare; then along the north

side of the Kenmare River past the *Fuchsia* hedges, past cottage gardens overflowing with white arums which are becoming naturalised on stony banks nearby. A short stop at Castle Cove did not enable any of the party to find *Polygonum sagittatum*, but *Juncus tenuis* was collected on a farm track. Then on to the coast at Darrynane, that name inseparably linked in the mind of any British botanist with *Simethis*. This was found in several spots just coming into bloom, the flowers white inside and purplish outside. Here the sea and sky were incredibly blue and the sand amazingly white, and a soft breeze made it very pleasant to sit on the thymy turf and consider *Arabis brownii*, until we discovered the abundance of ticks. *Carex punctata* was observed both in a marsh and on cliff ledges, and, flattened against the rocks, were many ancient bushes of *Juniperus nana*, *Cotoneaster microphylla* and *Ulex gallii*. In the wood the naturalised *Allium scorodoprasum* was seen, and *Zostera marina* was collected on the beach.

On Thursday, 19th June, we went west through Killorglin to Caragh Lough, which lies in an area of peat bog not much above sea level. Near the bridge over the river below the lake, in a somewhat dangerous-feeling piece of "floating bog", were found *Drosera anglica*, *Rhynchospora alba* and *Utricularia minor*. *Carex limosa* was in another bog not far off. In the water of the Lough *Nymphaea* and *Nuphar*, *Lobelia*, *Cladium* and *Eriocaulon* were seen, and *Isoetes lacustris*, *Subularia* and *Elatine hexandra* (flowering under the water) were gathered from the slaty bottom. On the stony shore *Equisetum hyemale* occurred. A piece of sessile-oak wood was full of beautiful *Melampyrum pratense* var. *hians*, *Luzula sylvatica*, *Milium effusum* and *Euphorbia hyberna*. In a hillside meadow were *Parentucellia viscosa* and *Euphrasia brevipila*. Lower down, among the *Myrica*, *Carum verticillatum* was found, and in a meadow *Sisyrinchium angustifolium*. In the sluggish river feeding the lake, *Carex lasiocarpa* occurred and along the roadside, *Pinguicula grandiflora* and *P. lusitanica*, *Cicendia*, *Linum bienne* and *Epilobium pedunculare* with white flowers, were seen.

On Friday, 20th June, we went to the coast again, going through Tralee and north-westward to Banna Strand, another area of sandhills on Tralee Bay. Here the weather was unkind and a strong wind drove the sand and rain into our eyes. After working the dune slacks near Banna, seeing *Anacamptis pyramidalis*, *Parentucellia viscosa*, *Samolus*, *Primula veris* (still in bloom) and *Phleum arenarium*, one party went north to Akeragh Lough, seeing *Cakile*, *Orobanche minor*, *Limonium binervosum* and *Cochlearia danica*, while others visited the arable plots, meadows and a stream. Fine specimens of *Silybum marianum* (recorded here in 1877) were seen from the coach, growing on an earth wall in the village, where *Lavatera arborea*, *Tanacetum vulgare* and *Papaver dubium* also grew. We were interested to observe broad ribbons of seaweed (*Laminaria*) 10 to 12 feet long, hanging on clothes lines. On the return journey a stop was made on the Lixnaw Road north of Ballysheen, for a glance at the flora of a base-rich marsh. By the stream the

two watercresses and their hybrid were collected and an abundance of *Equisetum fluviatile* var. *polystachion* was seen. A visit to the Cashen River was omitted as a dredger had been at work there and seems to have eliminated *Eleocharis parvula*. That evening we had final discussions of our finds and a presentation was made to Miss Kertland in token of our great gratitude for her excellent and cheerful leadership during a memorable week. Mr. N. D. Simpson also expressed our thanks to Mr. Peter Newey for his good management of the finances of the coach hire and car petrol pool. The coach driver and conductor had been most helpful and co-operative and the rainfall during the five days must have been well below the average.

As most of our time had been spent in botanically well-known localities, it was not to be expected that we could add many new records, and it was hard to be always remembering that the commonplaces of southern England may be rarities in Kerry, so perhaps we passed without noticing such plants as *Hypericum perforatum*, *H. hirsutum*, *Frangula alnus* or *Rumex hydrolapathum*. It was exceptional to see a "cottage garden" in the English sense and vegetables, other than potatoes, seem not to be grown; weeds of cultivation are therefore scarce. The only limestone area visited was Ross Island, but calcicoles were seen on the coastal dunes.

An account of the additions to R. W. Scully's *Flora of Kerry* is being prepared, and it is hoped to publish this in *Watsonia*.

B. Welch.

JUNE 27th to 29th, 1952. SOUTH WARWICKSHIRE

Leader: R. C. Readett.

Arranged primarily to assist in the work on the revision of the Warwickshire County Flora, this meeting had as its headquarters Westham House, Barford: and visits were made to botanically interesting areas within easy reach. Seventeen members and guests attended, and, as they said "goodbye," they all agreed that they were taking with them pleasant memories of the sunny week-end in the beautiful old Warwickshire house.

The meeting opened on Friday evening, 27th June. After dinner the visitors were welcomed by Dr. Dony and Mr. J. F. Woolman (President of the Botanical Section of the Birmingham Natural History Society). Mr. Readett then outlined the methods being used and the work which had already been done on the revision of the County Flora. Recorder's Sheets had been prepared for the use of visitors. He explained the abbreviations and symbols used to denote "habitat", "state" (of growth) and "frequency". Six-figure map references were asked for with all records, and, where the record was of a plant in one of the "critical groups" (of which a list is supplied to each recorder) it should be accompanied by a specimen. All records were card-indexed, and a transparent outline map of the county was used to record the distribution of each species. These outline maps could be used in con-

junction with maps to the same scale showing natural features (rivers, highlands, woodlands, soils, etc.), to throw light on the distribution patterns.

On Saturday, the party visited Newbold-on-Stour, an area on calcareous lias and including arable, scrub-land and marsh, with several pools. A good day's recording was done. Packed lunches were eaten and washed down with draughts of well-water from "Journey's End", a little cottage in no-man's-land belonging to Mrs. Lamb, a nature-lover, whose father-in-law, Joshua Lamb, was a well-known local botanist. Her garden was a wild profusion of herbs and simples.

The rendezvous at the end of the walk was the village green, and there *Rumex pulcher* was found growing abundantly.

The more interesting plants recorded during the day were: *Ranunculus arvensis* L., *Lotus tenuis* Waldst. & Kit. ex Willd., *Bupleurum rotundifolium* L., *Falcaria vulgaris* Bernh., *Scandix pecten-veneris* L., *Galium tricorne* Stokes, *Legousia hybrida* (L.) Delarb., *Anagallis foemina* Mill., *Lithospermum officinale* L., *L. arvense* L., *Kickxia spuria* (L.) Dumort., *K. elatine* (L.) Dumort., *Nepeta cataria* L., *Rumex pulcher* L., *Baldellia ranunculoides* (L.) Parl., *Poa compressa* L., *Ophioglossum vulgatum* L.

On Sunday morning a visit was made to Sherbourne, where a few plants of *Trifolium subterraneum* L. in fruit was seen; and a large colony, earlier estimated at about 10,000 plants, of *Myosurus minimus* L., also in fruit. *Astralagus glycyphyllos* L. was seen, and in the adjoining woodland, a fine mixed colony of willow-herbs, including *Epilobium parviflorum* Schreb., *E. tetragonum* L., *E. montanum* L., *E. adenocaulon* Hausskn. and *E. montanum* × *parviflorum*, all determined by Mr. G. M. Ash.

After lunch, at Westham House, recording was continued along the canal at Wilmcote and on the adjacent railway.

For its help to the Warwickshire Flora Revision, and in many other ways, the meeting was very successful.

R. C. Readett.

It is to be regretted that more members were not able to join this enjoyable meeting, as it was especially good for those of us who did, to see at first hand a new way of working on the revision of a local flora.

J. G. D.

JULY 5th, 1952. HAYES AND KESTON COMMONS (WEST KENT)

Leader: W. C. R. Watson, assisted by C. Avery.

The meeting was designed to afford an introduction to the study of brambles (*Rubus*) in the field. It was attended by 20 members and friends. The readiest way of recognizing the species that were met was pointed out, and their place in the system of classification was dealt with as they were found.

Thirty-five species were chosen for demonstration, most of which occur plentifully and widely in South Britain and are consequently likely to

be encountered by the visitors in their home localities. Many of the species were seen repeatedly in the course of the day, and this afforded practice in learning to recognize them.

Ten out of the twelve sections in which the blackberries are arranged, and most of the series within the two large sections *Sylvatici* and *Apiculati*, were represented in the species studied. The day's work was therefore fairly comprehensive and those members who supplied themselves with specimens took away a substantial aid to their future personal study of the group.

The following list of the species seen is arranged in systematic order:

SUBERECTI—*R. nessensis*, *R. fissus*.

TRIVIALES—*R. Balfourianus*, *R. conjungens*, *R. raduliformis*.

SYLVATICI—
Eugrati—*R. carpinifolius*, *R. nitidoides*.
Calvescentes—*R. Lindleianus*, *R. mercicus*, *R. nemoralis*.
Piletosi—
Macrophylli—*R. subinermoides*.
Pyramidales—*R. pyramidalis*.
Discoloroides—
Subdiscolores—*R. separinus*.
Imbricati—*R. cardiophyllus*.

DISCOLORES—
Gypsocaulones—*R. ulmifolius*, *R. pseudobifrons*.
Candicantes—*R. thyrsanthus*.

SPRENGELIANI—*R. Sprengelii*.

VESTITI—*R. lasiostachys*, *R. vestitus*, *R. macrothyrsus*.

RADULAE—*R. rudis*, *R. sectiramus*, *R. prionodontus*.

APICULATI—
Foliosi—*R. flexuosus*, *R. largificus*.
Pallidi—*R. euryanthemus*.
Scabri—*R. frondicomus*.
Obscuri—*R. rufescens*.
Incompositi—*R. tardus*, *R. phaeocarpus*.

GRANDIFOLII—*R. rosaceus*.

HYSTRICES—*R. infestus*, *R. Murrayi*, *R. adenolobus*.

A full list of the brambles of Hayes and Keston Commons is given in KENT, D. H. & J. E. LOUSLEY, 1952, *A Handlist of the Plants of the London Area*, Part II, supplement to *London Naturalist*, **31**.

W. C. R. WATSON.

JULY 11th to 13th, 1952. BAWTRY (NOTTS.)

Leaders: Dr. R. W. BUTCHER and Mr. and Mrs. R. C. L. HOWITT.

Eleven members and friends attended this excursion, the main object of which was to explore the isolated fenland district of Nottinghamshire, from where Carr and Sandwith have recorded a great many plants of interest. In general no new records were made, but many of the older records were confirmed. Of particular interest was the abundance of *Apera spica-venti* (L.) Beauv. in the district, and the fen plants of an uncultivated field near Misson. Whilst all its neighbours were cultivated or mown this field was untended owing to some difference of opinion about rates. Doubtless it will shortly be ploughed up like its neighbours and a large number of interesting plants will be exterminated.

The area covered was: two miles of the Chesterfield Canal; the river meadows and carrs along each side of the river Idle from Bawtry to Misson and Misterton; the sandy eminence of Barrow Hills and odd places in the neighbourhood of Bawtry.

The following is a list of the more interesting plants seen:—

(1) Chesterfield Canal, Wiseton:—*Ranunculus circinatus* Sibth., *R. baudotii* Godr. (a form without floating leaves), *Malva moschata* L., *Callitriche truncata* Guss., *Sison amomum* L., *Stachys palustris* L., *Triglochin palustre* L., *Potamogeton gramineus* L., *P. friesii* Rupr., *P. pectinatus* L., *Catabrosa aquatica* (L.) Beauv. and *Brachypodium pinnatum* (L.) Beauv.

(2) Marshy field near Misson:—*Ranunculus trichophyllus* Chaix, *Viola stagnina* Kit., *Stellaria palustris* Retz., *Lathyrus palustris* L., *Hippuris vulgaris* L., *Hydrocotyle vulgaris* L., *Sium latifolium* L., *Valeriana dioica* L., *Cirsium dissectum* (L.) Hill, *Lysimachia vulgaris* L., *Samolus valerandi* L., *Salix* × *geminata* Forbes, *Juncus subnodulosus* Schrank, *J. bulbosus* L., *Alisma lanceolatum* With., *Baldellia ranunculoides* (L.) Parl., *Sparganium neglectum* Beeby, *Potamogeton densus* L., *Zannichellia palustris* L., *Eleogiton fluitans* (L.) Link, *Carex disticha* Huds., *C. vesicaria* L., *C. rostrata* Stokes, *C. demissa* Hornem., *C. nigra* (L.) Reichard, *Calamagrostis canescens* (Web.) Gmel.

(3) Around Misson:—*Erysimum cheiranthoides* L., *Lepidium campestre* (L.) R. Br., *Sagina apetala* Ard., *S. ciliata* Fries, *Sanguisorba officinalis* L., *Apium inundatum* (L.) Lag., *Centaurea scabiosa* L., *Chaenorrhinum minus* (L.) Lange, *Valerianella dentata* (L.) Poll., *Lamium hybridum* Vill., *Chenopodium bonus-henricus* L., *Apera spica-venti* (L.) Beauv., and *Sieglingia decumbens* (L.) Beauv.

(4) Barrow Hills, Everton:—*Viola lepida* Jord., *V. agrestis* Jord., *Sagina apetala* Ard., *Trifolium medium* L., *T. striatum* L., *T. arvense* L., *Ornithopus perpusillus* L., *Potentilla argentea* L., *P. erecta* Hampe, *Rubus lindleianus* Lees, *Carlina vulgaris* L., *Filago germanica* L., *F. minima* L., *Gnaphalium sylvaticum* L., *Centaurea scabiosa* L., *Centaurea cyanus* L., *Arnoseris minima* (L.) Schweigg. & Koert., *Echium vulgare*

L., *Verbascum thapsus* L., *Acinos arvensis* (Lam.) Dandy, *Plantago coronopus* L., *Rumex tenuifolius* (Wallr.) Löve, *Carex pilulifera* L. and *Apera spica-venti* (L.) Beauv.

(5) Scawforth Bog:—*Stellaria palustris* Retz., *Hydrocotyle vulgaris* L., *Hottonia palustris* L., *Lysimachia vulgaris* L., *Lemna trisulca* L.

(6) Everton Carr:—*Ranunculus heterophyllus* Weber, *Stellaria palustris* Retz., *Frangula alnus* Mill., *Sium latifolium* L., *Lysimachia vulgaris* L., *Galeopsis speciosa* Mill., *Hydrocharis morsus-ranae* L., and *Carex pseudo-cyperus* L.

(7) Tickhill Road, Haworth:—*Calystegia sylvestris* (Willd.) Roem. & Schult., *Nepeta cataria* L., and *Allium scorodoprasum* L.

(8) Austerfield Gravel Pits, Yorkshire:—*Ornithopus perpusillus* L., *Trifolium arvense* L., *Poterium polygamum* Waldst. & Kit. (railway bank), *Senecio squalidus* L., *Hieracium bladonii* Pugsl., *H. umbellatum* L., and in drain-holes *Phyllitis scolopendrium* (L.) Newm. and *Blechnum spicant* (L.) Roth.

R. W. BUTCHER.

JULY 19th, 1952. PANSHANGER (HERTS.)

Leaders: Dr. J. G. DONY and R. M. PAYNE.

Thirty members attended this meeting. It was an oppressively hot day, and while few felt in the mood to do serious work, a large part of the estate was covered during the day by small parties of members. The higher land on a gravelly soil was known to have some interesting species, but the ground was already scorched and past its best, though *Potentilla argentea* L. was still to be seen. In the afternoon the main party examined the lower land near the lake but this was largely overgrown with trees and little of the aquatic vegetation was to be seen. Tea at Hertingfordbury was very welcome, and afterwards most of the party walked back to Hertford to catch the train to London.

The meeting was intended to be of an exploratory nature, but few of the species recorded from Panshanger by Hertfordshire botanists a century ago were re-found. If a revision of the Hertfordshire flora is to be made it seems that previously unexplored country may prove more productive than some of the old and well-known stations.

J. G. DONY and R. M. PAYNE.

JULY 19th to 26th, 1952. CRICKHOWELL (BRECON BEACONS).

Leader: Dr. D. P. M. GUILE.

This, the first Field Meeting for young members of the Society, was a success in every way. Possibly the perfect weather—persistently brilliant yet not unbearably hot for the time of year—ensured a soaring morale.

The members were extremely keen, and it was good to note their willing co-operation. Each one entertained his or her own particular

specialization, and there were opportunities galore for independent work, but each member was prepared to subordinate private interests for the general success of the daily excursions.

As leader, I cannot praise too highly the splendid support that was extended to me throughout the week by Dr. E. W. Jones, the well-known Oxford bryologist. For two days, it was our privilege to share excursions with no less an authority than Dr. Warburg. Indeed, the first Junior Field Meeting did not lack eminent direction.

Our first official meeting took place on the Saturday evening in the gardens of the Bear Hotel. A welcome to South Wales and particularly to the National Park was extended to members. The salient features of the area were described; its topography, climate, geology, pedology, agriculture and so forth. A brief survey of the vegetation and ecology of the area was given, with an account of the principal floristic features of South Wales.

Owing to the doubtful nature of the weather, no fixed schedule was arranged. Instead, it was assumed generally, that, following a good weather forecast, the party could travel far afield, thus leaving the nearer areas for days of inclement weather, or if the good weather persisted, to the end of the week.

Sunday, 20th July.

The day was spent at Craig-y-Cilau, an imposing limestone escarpment three miles west of Crickhowell. It is the culmination in grandeur of the limestone "rim" of the South Wales coalfield. Three separate escarpments, each 20-100 feet in height, rise in tiers up the steep slopes separated by scree and grassy slopes. At the base of the cliffs, the Red marls of the Usk valley dip beneath the limestone while at the summit of the escarpment commences the wild moorland along the dip slope of Mynydd Llangattwg, established on the coarse sandstone of the Millstone Grit series. The vegetation changes with the rock—the valley marls bear typical lowland pasture with damp oak, ash and some beech, and alder in the damp valley bottoms; the Millstone Grit cap bears, on its lower slopes, bent fescue grassland with much bracken, and higher up a wimberry (*Vaccinium myrtillus*) "edge" with *Nardus* abundant. The flat moorland is on deep peat and is primarily a cotton-grass moor. Peat erosion is everywhere evident and peat marginal associations (mostly grasslands of *Nardus* and *Molinia*) are encroaching. The steep limestone slopes were once tree-covered and *Brachypodium sylvaticum* dominating much of the stable slopes is a relict of this former woodland. The general vegetation of the steep limestone slopes is a *Festucetum* with a rich and varied flora. Scree, mostly mobile, is extensively colonized by *Gymnocarpium obtusifolium* (*Thelypteris robertiana*), *Geranium robertianum*, etc. The cliff faces, inaccessible to sheep, exhibit an exceedingly rich flora including six species of *Sorbus*, two of them narrowly endemic. The presence of beech on the cliffs at a considerable altitude is an important feature on account of the questionable

status of the tree in South Wales. The flora of the cliffs is too well-known for detailed comment here.

Monday, 21st July.

The brilliant weather induced the party to proceed straightaway with a projected visit to the highest eminence in southern Britain, Pen-y-fan (2906 ft.). The journey to Storey Arms via Brecon was accomplished by mid-day.

The rocks, of Old Red Sandstone, dip south, giving rise to sharply edged north-facing cliffs, and gently sloping southern "dip-slopes". The evidence of former glaciation is extensive—typical U-valleys, truncated spurs, moraines and moraine lakes and hanging valleys. The north-east face of Pen-y-fan is some 500 feet high and difficult and dangerous to negotiate. No wonder, then, that only two of the party ventured with Dr. Jones and myself on to a few of the more accessible ledges, though I had secretly entertained fears of having to control a rush of reckless juveniles to the cliff face! The glacial valley bottoms exhibit a poor grassland with occasional peaty patches. The moraines (dry and well-drained) are dominated by *Nardus*. The southern slopes of Pen-y-fan form a general *Nardetum*, but so many streams emerge that the flushed grassland contains much *Agrostis* and are consequently curiously green in appearance. Peat evidently blanketed the flat summit of Pen-y-fan and patches of *Eriophorum* and *Nardus* occur on the little peat that remains, but erosion to rock bottom has led to recolonization by true Alpine grassland, dominated by *Festuca ovina* and *F. vivipara*. The fixed parts of the fine red scree are fully occupied by *Festuca* with much *Polytrichum*, *Deschampsia flexuosa*, *Agrostis* and *Nardus*. The rather rich flora of the grassland is evidently due to dry flushing from the rock above. The damp inaccessible cliffs and steep upper gullies form a veritable garden with their lush vegetation including many montane species. Remarkable is the profusion of some lowland plants like *Primula veris*, *Silene maritima*, *Solidago virgaurea*, *Chrysanthemum leucanthemum*, etc., amongst the general moss and fern cushions. On the driest and most exposed rocks near the summit are patches of *Salix herbacea*.

Tuesday, 22nd July.

A visit to the largest natural lake, Llyn Safaddan, in South Wales was of course indispensable. This fine lowland sheet of water, hemmed in on three sides by towering hills, is one of the best areas in Wales for the study of water ecology. Bwlch was the centre chosen for the day's excursion. The route, actually a pleasant alternative to the conventional hard-surface road to Llangorse village, followed the track of the old Roman road which ascends along a prominent ridge—Allt yr Esgair (1267 ft.)—for some three miles of its stretch from ancient Gobannium to ancient Loventium. From the summit Llyn Safaddan receded into its glorious setting amid the vivid green of rich agriculture vale, surrounded by the sombre brown foothills of the Black Mountains.

The lake is reputed to be quite shallow, and the land rises so very gradually from the lake edge that it is virtually impossible to approach the open water except at one or two places. Along practically the whole of the shore, an extensive marsh and swamp stretches in places as much as 100 yards from firm ground to open water. The changes in vegetation as one proceeds lakewards are gradual. The typical rich rye-grass meadows and pastures pass into water meadows where *Glyceria* and *Juncus* increase, and share the damper ground with a host of well-known marsh species. *Thalictrum flavum* is particularly prominent. Where the ground is perpetually water-logged, sedges become dominant and form a belt of vegetation in which the giant buttercup (*Ranunculus lingua*) is abundant. Here and there in the open spaces of muddy water are communities of *Equisetum*, *Menyanthes*, *Iris* and *Sparganium*. In deeper water, the reed swamp comes into its own. *Phragmites* is the general dominant, but in places *Scirpus tabernaemontani* and *Equisetum limosum* form limited associations. At the few places where the lake edges are sloping steeply enough to reduce the extent of marsh and swamp, the open-water communities could be viewed to advantage. *Polygonum amphibium* and *Nymphoides peltatum* form the principal associations. The latter has only recently been introduced into Llyn Safaddan but has established itself to such an extent that the dominance of *Polygonum amphibium* is threatened. Submerged plants include *Elodea* in great quantity, and pondweeds are abundant. Duckweeds, including *Lemna polyrrhiza* and *L. trisulca*, are frequent on the water near the banks. In places a marsh carr vegetation dominated by *Alnus* and *Salix viminalis* occupies rather steeper lake margins. Within the wood is an extraordinary mixture of herbs typical of deciduous lowland woods on the one hand and of marshes and even reed swamp on the other.

The extremely rich and varied flora of Llyn Safaddan is associated with base rich water, fed from the fertile marl country, and how the vegetation contrasts with the sterile oligotrophic tarns high up in the mountains and on the peat lands!

The deep canal-like Afon Llynfi flowing from the lake on its way to the Wye is fringed for many hundreds of yards by reed swamp while the water-surface is often completely hidden by the leaves and blossoms of water-lilies.

Wednesday, 23rd July.

On Tuesday evening the party met at the Bear Hotel to welcome Dr. Warburg on his arrival from Oxford. Unanimity was expressed on the suggestion that a second visit be made to Craig-y-Cilau on the following day. The party were keenly interested in elucidating the relationships of the *Sorbus* spp. so well represented there. Dr. Warburg determined the species as *Sorbus aucuparia*, *S. minima*, *S. leptophylla*, *S. porrigentiformis*, *S. anglica* and *S. rupicola*. Other interesting plants seen here were *Polygonatum odoratum* and *Circaea alpina*, the former on the cliffs and the latter in the scree. After a thorough search of the cliffs, the party descended to the base where a small stream

emerges from a peat bog. The bryologists spent a profitable hour examining the vegetation of calcareous inflowing springs from the limestone above and the acid-loving associations on the peat itself.

Thursday, 24th July.

Pen Cerig Calch (2302 ft.) is a prominent hill in the southern part of the Black Mountains, two miles due north of Crickhowell. Its name, meaning "Limestone Summit", is appropriate, since the capping of the mountain consists of an outlier of the Carboniferous limestone as an island in the Old Red Sandstone, separated from the nearest rocks of the same period by 4 miles. The limestone band on Pen Cerig Calch represents the highest point at which Carboniferous deposits occur in South Wales (c. 2200 ft.).

The Black Mountains, having undergone extensive submarine peneplanation during Mesozoic times, are really one plateau of concordant heights (c. 2000 ft.) from which deep valleys have been gouged out by the action of water and ice. Accordingly, the ascent of Pen Cerig Calch is at first extremely steep, but at about 1800 ft. the slope diminishes quite suddenly. Up to the 1000 ft. contour, the land is cultivated. The next 300 ft. or so of steep hillside is occupied by *Pteridium*, which has wrested complete dominance from the former bent-fescue grassland, which, however, still persists in less vigorous condition beneath the fern. At about 1600 ft. the bracken ceases and bent-fescue extends uninterruptedly to the brow of the slope. True moorland dominates the dome of Pen Cerig Calch. The transition is fairly sharp from bent-fescue through admixture with *Vaccinium myrtillus* and *Nardus* to a dry moorland dominated by *Vaccinium myrtillus*, *V. vitis-idaea*, *Empetrum*, *Calluna* and locally, on deeper peat, by *Eriophorum vaginatum*. The summit is rocky and barren except for sparse wimberry. The limestone outcrop on the south and east sides is indicated only by the absence of moorland species along the band and its replacement by fescue-dominated grassland, and, where springs occur, by rushes and moss-patches containing many typical calcicoles. On the north and west side the limestone forms a shallow escarpment (c. 20 ft. high) in the shelter of which a number of alpine calcicoles are preserved. The bright-green, well-grazed turf of fescue with *Trifolium* spp., *Plantago* spp. and *Bellis perennis* contrasts sharply with the dull brown hues of the moorland on the grits and conglomerates of the Old Red Sandstone and Millstone Grit.

From Pen Cerig Calch, the party continued northwards along the peaty ridge to Pen Allt Mawr (2360 ft.). The vegetation on the ridge there is most interesting, indicating the probable sequence of events leading to the replacement of original *Eriophorum* moor on deep peat by heather and wimberry on shallow sandy peat. The dominance of *Eriophorum* is undisputed on deep undisturbed peat. Erosion of peat and consequent drying of the surface is accompanied by invasion of the tussocks by *Vaccinium* and of the eroded channels by *Calluna*.

The party descended on the east side into Cwm Banw, a short narrow valley separated by a spur of the Pen Allt Mawr ridge from the main

Grwyne Fechan valley. An intensive search of the stream-bed ensued, in a valiant, but unfortunately unavailing, effort to rediscover a rare moss, *Bryum gemmiparum*, which was first observed many years ago by Augustin Ley in two places in the neighbourhood.

In the evening, the party met once more at the Bear Hotel to discuss the work of the last few days and to bid farewell to Dr. Warburg with many thanks for his keen co-operation.

Friday, 25th July.

A small stream, the Clydach, rises on the dip slopes of Mynydd Llangattwg, flows through the busy colliery town of Brynmawr and instead of pursuing the usual course south through the coalfield, turns sharply east and tumbles down 1000 ft. or so in less than four miles in a series of fine waterfalls, rapids and deep inaccessible gorges. Considering the proximity of the industrial area, Cwm Clydach is remarkably unspoilt.

Ecologically, Cwm Clydach is supremely important in South Wales, for, centred on the limestone, extending almost unaltered on to the grits above and the marls below is as fine and natural a beechwood as exists anywhere in Britain. On the cliffs rare *Sorbus* spp. flourish. In the deep shady wood *Monotropa* was seen. Beech is absent (except where obviously planted) west of Craig-y-Cilau where the species grows high on the cliffs near the tree-line. Traces of beechwood extend along a number of valleys into the southern part of the Black Mountains.

Progress up the Clydach stream from Gilwern was slow and arduous, especially in the gorges where numerous diversions were necessary in order to progress at all. Even the less steep slopes had to be negotiated with caution. The many deep chasms along the gorge were especially noted for the luxuriance of the ferns and mosses. A railway line, which runs below the cliffs on the south side of the valley promised to supply a welcome route back to Gilwern. Though extensively quarried, the limestone precipices are still thickly clothed in beech and exhibit a profusion of *Sorbus* amongst which at least three different species were noted—*S. anglica*, *S. porrigentiformis* and *S. leptophylla*. Along the railway, *Geranium sanguineum* is locally abundant, actually the only locality for the plant on the northern outcrop of the Carboniferous Limestone.

The evening was occupied by a symposium on the observations of the week, during which a very complete and balanced picture of the vegetation and flora of the south-east portion of the National Park area was obtained. The next morning the meeting slowly broke up as, one after the other, the members dispersed after general applause of the success of the first Junior Field Meeting.

Some Notes on the Flora.

It is difficult to adequately summarise the floristic observations made by the party. Here are the salient features:

1. *Salix herbacea*—the most southerly haunt of the species in Britain. Its re-discovery in South Wales was my own; the last record for the plant, at the National Museum of Wales, is dated 1894.

2. *Sorbus minima*—a narrow Welsh endemic, is extremely abundant on the cliffs of Craig-y-Cilau, extending westwards to Craig-y-Castell. Last year a second locality was discovered by me three miles further west along the Carboniferous limestone outcrop—in Cwm Claisfer. There are about a score of fine shrubs in this new locality.

3. *Sorbus leptophylla*—another Welsh endemic, but having a greater range than *S. minima*; is known from Craig-y-Cilau, Craig-y-Nos (Swansea valley), and now from Cwm Clydach also. All three localities are on the limestone "rim".

4. *Sorbus anglica* and *S. porrigentiformis*—newly recorded from Cwm Clydach.

5. *Circaea alpina*—newly recorded from Craig-y-Cilau, although I have recently found the species in fair quantity in Cwm Llanelen, south of Abergavenny, also on the Carboniferous limestone.

6. *Monotropa hypopitys* in the beechwood at Cwm Clydach constitute a new record for Breconshire. Unfortunately, at the time of discovery, it was not realized that two species of *Monotropa* are now recognised and the single specimen was not critically examined.

7. *Lemna polyrrhiza* and *L. trisulca* from Llyn Safaddan are new records for Breconshire.

Dr. Jones has communicated to me the following information concerning the bryophytes met with in the course of the meeting:

"We did not manage to find *Bryum gemmiparum* in the Grwyne: I find that all Ley's specimens which are in the herbarium here (at Oxford) come from the Usk 'near Brecon', so perhaps it is not abundant in the Grwyne. What we did both gather in the Grwyne and at Llanbedr however was *Fissidens rivularis*. This was not unexpected, since I had already found this very rare plant to be frequent on Old Red Sandstone in the Wye valley between Tintern and Monmouth; prior to my finding it in that region, it was known from only two solitary stations in Great Britain, and a few scattered localities in Europe. A *Fissidens* which is apparently extremely abundant in the Grwynes and fruiting beautifully at present is *F. rufulus*. This is likewise an exceedingly local species, known from only a few stations in Europe; it has been recorded from the Usk valley and several other places in the district, but there has always been a certain amount of doubt attached to the identity of the South Wales plants. As far as I can see, there is no reason for doubt.

"The *Cololejeunea* from Cwm Clydach is *C. calcarea*—new to the county. The *Seligeria* from Pen Cerig Calch is *S. acutifolia*, and the *Amblystegium* is *A. sprucei*—not new county records. In many ways the most exciting find was *Seligeria tristicha* from Craig-y-Cilau—hitherto known in Britain only in one or two localities in Derbyshire, Yorkshire, and Perth; thus Brecon is a considerable extension of range. *Barbula recurvifolia* from Craig-y-Cilau is another new county record.

The *Ephemerum* from Bwlch was *E. serratum* var. *angustifolium*, always considered rare, but in point of fact much more abundant than the type—people rarely trouble to look at *Ephemera*".

[" It may perhaps be addded that a small *Fissidens* from Cwm Banw proved to be *F. exiguus* Sull. first identified for Britain from material collected in Kent in the previous month."—E.F.W.].

Members of the Party.

David P. M. Guile (Leader), James Cadbury, Hugh Grigg, Dr. E. W. Jones, John Lovis, Peter Norman, Paul Vernon, Dr. E. F. Warburg, Miss Tessa Willan.

DAVID P. M. GUILE,
Nature Conservancy Research Asst.,
Department of Botany,
University College,
Newport Road, Cardiff.

This report, much longer than those usually printed of our Field Meetings, is only part of the leader's full report. It has been kept long and as detailed as it is in the hope that more younger members will join this kind of meeting and that botanists engaged in serious field work elsewhere in the country will be encouraged to lead similar meetings. J. G. D.

AUGUST 1st to 4th, 1952. THIRSK (YORKS.)

Leader: Miss C. M. ROB.

Thirsk is the centre of a well-known and well-worked district. This small market town has a long botanical tradition, for J. G. Baker lived here for the early part of his life, as did three generations of Foggitts. The absence of any new discoveries made at this meeting is therefore in no way surprising.

The meeting was attended by 27 members and one guest. After the the usual opening meeting, the rest of Friday evening was spent exploring the Codbeck banks within the town boundary, the only interesting plant noted being *Cicerbita macrophylla* (Willd.) Wallr., which is well established by a small tributary beck.

On Saturday the party left by bus for Byland where a short stop was made to collect a mint which is still under discussion. The next stop was at Helmsley, where the party was joined by Mr. Adam Gordon, Head-keeper for the Feversham Estates, who took over the leadership. At Helmsley some interesting plants seen were *Cirsium arvense* var. *setosum* C. A. Mey., *Hypericum montanum* L., and another colony of the *Cicerbita*, but the main objective was a small valley near Rievaulx, which is well known as the locality for a number of interesting plants; the lateness of the season was a drawback, as many species were in fruit.

It was at this point that the only rain of the meeting was encountered, in a short but heavy thunderstorm. The wooded ground on the escarpment and an open area with a down-like flora were next visited. The most interesting plants of the Ashberry valley and surrounding woods were *Primula farinosa* L., *Trollius europaeus* L., both in good fruit, *Arabis hirsuta* (L.) Scop., *Rorippa microphylla* × *nasturtium-aquaticum*, *Geranium sanguineum* L., *Actaea spicata* L., *Ribes alpinum* L., *Parnassia palustris* L., *Cirsium acaulon* (L.) Scop., *Verbascum nigrum* L., *Paris quadrifolia* L. and *Hordelymus europaeus* (L.) Harz. The terrace overlooking Rievaulx Abbey was next visited and here *Hordelymus europaeus* was more abundant. *Lilium martagon* L., *Pentaglottis sempervirens* (L.) Tausch and *Lonicera xylosteum* L. were well established, and after a prolonged search *Cuscuta epithymum* (L.) L. was found. This is extremely rare in v.-c. 62, only one other locality being known.

Sunday was spent in a very different type of country. The first stop was by the Ure near Ripon where *Orobanche reticulata* Wallr. has been known for some years. It has decreased considerably here in the last ten years but the party saw a number of fine plants. Here, too, were noted *Allium scorodoprasum* L., *Campanula rapunculoides* L., *Melandrium noctiflorum* (L.) Fr., and *Heracleum mantegazzianum* Somm. Levier. *Potamogeton pectinatus* L. occurred in the river near the junction with the canal. This is one of the few places in the Ure where *P. pectinatus* grows; most of the "Fennel-leaved" pondweed in this river is *P.* × *suecicus* Richt. (*P. filiformis* × *pectinatus*), which was seen later in the day at Tanfield Bridge.

In the canal *Potamogeton natans* L., *P. perfoliatus* L., *P. alpinus* Balb. and *P. friesii* Rupr. were collected. Other plants of the canal bank include *Alisma lanceolatum* With., *Mentha* × *gentilis* L., also seen at Tanfield, and *Eleocharis acicularis* (L.) Roem. & Schult. From Ripon the party went on to Tanfield where, in addition to the plants already mentioned, *Stachys* × *ambigua* Sm. (*S. palustris* × *sylvatica*), *Calystegia sylvestris* (Willd.) Roem. & Schult. and *Stellaria nemorum* L. were noted. The last call was at a quarry in the Magnesian Limestone at Well, where *Acaena anserinifolia* (J. R. & G. Forst.) Druce is established and increasing. Other plants found in this area were *Erigeron acris* L., *Malva neglecta* Wallr., *Sagina nodosa* (L.) Fenzl, *Gentianella amarella* (L.) H. Sm., *Nepeta cataria* L., *Campanula glomerata* L. and *Bromus erectus* Huds.

Monday's excursion again took the party to yet another type of country. First to Sutton-on-the-Forest, to visit a small patch of wet moory ground, with a big pond which was for the most part dry. *Lemna polyrrhiza* L. and *L. gibba* L. (the latter abundant), *Epilobium palustre* L., *Rumex maritimus* L. and *R. conglomeratus* × *maritimus* were some of the interesting plants seen here. From Sutton the party moved to the extensive area of lowland heath, Strensall Common, where *Gentiana pneumonanthe* L. was in fine condition. *Radiola linoides* Roth was also seen, but in small quantity.

The remaining flora was that typical of this type of habitat.

The excursion ended with a visit to the Yorkshire Naturalists Trust's Nature Reserve at Askham Bog. The flora of this area is too well known to need any comment. The party saw *Osmunda regalis* L., and most of the other plants for which the bog is noted. Before the party broke up, Dr. Dony thanked the leader and expressed his appreciation of the assistance of the bus driver who had done much in helping towards the enjoyment of all.

C. M. Rob.

The meeting will be remembered by all who joined it for Miss Rob's thoughtfulness, not only in taking them to such varied country, but in managing to arrange for so many sites of historic interest to be seen.

J. G. D.

SEPTEMBER 20th, 1952. NORTH SURREY AND MIDDLESEX.
Leaders: J. P. M. Brenan and D. H. Kent.

This field meeting was arranged for the purpose of studying the adventive vegetation of some of the London area rubbish-tips, with special reference to *Chenopodium*.

Thirty-six members and friends assembled at Kew Green, from whence they were transported by coach to Mortlake Tip. *C.* × *variabile* Aellen and *C. opulifolium* Schrad. ex DC. were noted here, and the salient characters for their identification were pointed out. Hanwell Tip was next visited, and here were seen *C. rubrum* L., *C. hybridum* L., *C. album* var. *borbasii* (J. Murr.) Ludw., *Artemisia verlotorum* Lamotte, *Tagetes minuta* L. and *Psoralea americana* L., the latter species being probably new to Britain. The party then proceeded to Greenford Tip where *Chenopodium ficifolium* Sm., *Camelina sativa* (L.) Crantz, *Erigeron bonariensis* L. (det. A. Melderis), and *Amaranthus blitoides* S. Wats. (det. J. P. M. Brenan) were seen.

The party next travelled to Northolt Tip, where an abundance of *Polygonum baldschuanicum* Regel was viewed. The final area examined was the Brent Reservoir, Hendon, where a few depauperate plants of *Chenopodium glaucum* L., and some fine specimens of *Rumex palustris* Sm. were seen.

Tea was taken at the "Silver Horse-shoe Restaurant" at Neasden, and the party dispersed at 6.30 p.m.

J. P. M. Brenan,
D. H. Kent.

EXHIBITION MEETING, 1952

An Exhibition Meeting was held in the Lecture Hall of the British Museum (Natural History), South Kensington, by kind permission of the Trustees, on Saturday, November 29th, 1952, from 2.30 to 5.45 p.m. The attendance created a new record, comprising 230 members and guests. Exhibits were arranged by 50 individuals and institutions and an account of these is given below. A feature of the exhibition was the more intensive study of the smaller critical groups, particularly by some of the younger members of the Society.

The following is a list of the exhibits with notes supplied by the exhibitors.

DISTRIBUTION PATTERNS OF MANX PLANTS

A series of maps was exhibited showing different, contrasting patterns revealed in plotting the distribution of various species in the Isle of Man. Comparison with the rainfall map explained some of these patterns, but not others.

D. E. ALLEN.

CARDAMINE HAYNEANA IN BRITAIN

A sheet of *C. hayneana* (Reichb.) Jüngst, a Central European species, was exhibited from the Druce Herbarium, Oxford. It was collected in Herefordshire in 1929 by R. F. Towndrow and constitutes the first certain record for Britain. Two sheets, from Hertfordshire and Sussex respectively, of plants very close to this species, but with evident hybrid influence, were also exhibited. Previous records of *C. hayneana* in Britain have been based on misidentifications of *C. fragilis* (Lloyd) Bor., or the sterile hybrid between *C. pratensis* L. and *C. flexuosa* With.

D. E. ALLEN.

THE DISTINGUISHING CHARACTERS OF *CAKILE EDENTULA*

Herbarium material of *C. edentula* (Bigel.) Hook., a species recently detected in Scotland, was exhibited, together with drawings of the fruit and leaves, to illustrate the differences from the more widespread *C. maritima* Scop.

D. E. ALLEN.

BRITISH CHAROPHYTA

Slides (fluid mounts without pressure) of fruiting whorls of various species, with low-power binocular microscope.

G. O. ALLEN.

AN *ASPLENIUM* HYBRID A. H. G. ALSTON.

LIMONIUM HUMILE AND THE AMERICAN ELEMENT IN THE BRITISH FLORA

The close relationship of *L. humile* Mill. with the north-east North American species (especially *L. nashii* var. *trichogonum* Blake) rather than with the European *L. vulgare* Mill. was illustrated by herbarium specimens. Maps showed that *L. humile* culminates a morphological and cytological series from Europe to the Americas and back. Unlike all other Eurasian species of the subsection *Genuinae*, but like the North American species, *L. humile* is monomorphic (A/papillate) and self-compatible. Self-compatibility is of advantage to a species in establishment after an isolated disseminule has overcome the hazards of long-distance dispersal.

Thus the evidence is that *L. humile* arrived in Europe relatively late in the history of this subsection. It is most common around Irish shores but is also found in England, south-western Scotland and Wales, occurring otherwise only around the mouth of the Baltic and in the north-western tip of France. The means of immigration is unknown, but fruiting calyces of these salt-marsh species can stand prolonged immersion in sea-water and they could be carried by the Gulf Stream across the Atlantic Ocean. Alternatively, the hairs on the ribs of the calyces make it likely that fruiting-calyces will adhere to the feathers of birds frequenting salt-marshes, one possible carrier being the Greenland White-fronted Goose.

L. humile occupies a pioneer position in the salt-marsh succession; an ecological niche in which competition would not be severe for a suitable immigrant.

H. G. BAKER.

ORCHIDS FROM GUATEMALA AND SOME INTERESTING PLANTS FROM ARIZONA.

Miss F. M. BARTON.

ONONIS RECLINATA

Specimens of *O. reclinata* L. were exhibited from the Gower Peninsula, Glamorgan. The plant was discovered in June 1952 near its old haunt, where according to information supplied by Mr. J. E. Lousley, it has apparently not been recorded since 1828. Only a small patch was located, and time unfortunately did not allow a more intensive search to be made.

Miss M. H. BIGWOOD.

DISTRIBUTION OF *ALCHEMILLA* MICRO-SPECIES IN THE TEESDALE AREA

The exhibit showed detailed dot-distribution maps, based on the 1″ O.S. (with National Grid), for five rare or local *Alchemilla* micro-species in the Teesdale area. The work, though naturally incomplete, is revealing interesting differences in detailed distribution, and should provide a sound basis for any speculation on the significance of the Teesdale *Alchemilla* concentration.

It is hoped eventually to publish the maps in suitable form.

Miss M. E. BRADSHAW & S. M. WALTERS.

SOME INTERESTING PLANTS FROM THE EUROPEAN HERBARIUM OF THE BRITISH MUSEUM

1. SOME ALIENS FROM IN OR NEAR LONDON:

Psoralea americana L. and *Tetragonia tetragonoides* (Pall.) Kuntze (*T. expansa* Murr.) collected on B.S.B.I. Excursion to London rubbish-tips, Sept., 1952.

Lysichiton americanum Hultén & St. John:—see Plant Notes in *Watsonia*, **2**, 2 (1951).

Centaurea aspera L. from Kidbrooke and *Salvia amplexicaulis* Lam. from Abbey Wood, both v.-c. 16. W. Kent.

2. SPECIMENS CONNECTED WITH PAPERS IN *Watsonia*:

Type specimens of many of F. Rilstone's species mentioned in his paper "*Rubi* from Dartmoor to the Land's End" in *Watsonia*, **2**, 3 (1952).

Type specimen of *Silene nutans* var. *salmoniana* Hepper, described by F. N. Hepper in "The Variations of *Silene nutans* L. in Great Britain" in *Watsonia*, **2**, 2 (1951).

Specimen of *Epipactis phyllanthes* G. E. Sm. from Smith's Herbarium; see D. P. Young's paper "*Epipactis phyllanthes* G. E. Sm., an overlooked species" in *Watsonia*, **2**, 4 (1952). (The specimen was not found until after the publication of the paper).

3. SPECIMENS OF *LIMONIUM* SPP. OF INTEREST IN CONNEXION WITH THE EXCURSION TO IRELAND, 1952:

Type specimens of *Limonium recurvum* C. E. Salmon, *L. transvallianum* (Pugsl.) Pugsl. and *L. binervosum* (G. E. Sm.) C. E. Salmon.

Specimen of *L. recurvum* coll. Miss B. M. C. Morgan from v.-c. H.9 (Clare), 1952.

4. SPECIMEN OF *ARTEMISIA NORVEGICA* FR. FROM NORWAY TO ILLUSTRATE THIS SPECIES RECENTLY DISCOVERED IN SCOTLAND; see *Gard. Chron.*, **132**, 112 (1952).

5. SPECIMEN OF *POA FLABELLATA* (LAM.) HOOK. F. FROM SHETLAND. This alien grass is a rare native of the Falkland Islands.

BRITISH MUSEUM (NATURAL HISTORY).

SOME UNPUBLISHED ILLUSTRATIONS OF THE BRITISH FLORA

The drawings exhibited were from collections of the following artists:—Miss Ellen Hawkins. (This artist wrote "The Catalogue of Plants of the Neighbourhood of Buxton", which forms the appendix to W. H. Robertson's *Handbook to the Peak of Derbyshire*, 1854). Miss Margaret Knox (a late member of the Botanical Society of the British Isles). Miss B. O. Corfe. (This artist made the drawings for the British Museum (Natural History), postcard series, *British Flowering Plants* (except Orchids), *British Trees*, etc.). E. J. Bedford. (Studies of British Orchids). Frank Harold Round. (Studies of Iris.—This artist made the drawings which illustrate W. R. Dyke's *The Genus Iris*, 1913).

BRITISH MUSEUM (NATURAL HISTORY) LIBRARY.

BOLIVIAN FERNS AND FERN ALLIES

Herbarium specimens of Ferns and species of *Selaginella* and *Lycopodium*, as well as Mosses from the Bolivian Andes.

Miss W. M. A. BROOKE.

ARUM NEGLECTUM IN SUSSEX

This exhibit consisted of a map showing the distribution of *A. neglectum* (Townsend) Ridl. in southern England, three maps of the local distribution in Sussex and some living specimens.

The main map depicted all known records of the plant from literature and from herbarium material. Details were given of:—

(a) Sites checked during the last 3 years.
(b) Sites not yet checked.
(c) Extinct sites.
(d) Sites for *A. italicum*.
(e) Probably incorrect identifications.

The smaller local maps show the distribution of the plant in West Sussex and the importance of altitude and geology.

Fresh material of *A. neglectum* was shown from Jersey, Guernsey, Devon and Sussex; of *A. italicum* from Sussex and Jersey; and of possible hybrids from Jersey and Sussex.

O. BUCKLE & C. T. PRIME.

"JACOB BOBART" Mrs. H. N. CLOKIE.

CALAMAGROSTIS STRICTA IN S.E. YORKSHIRE

Specimens of *C. stricta* (Timm) Koel. (*C. neglecta* auct.) from the recently discovered station in v.-c. 61, were exhibited, together with a map showing the known distribution of the species in the British Isles.

The exhibit also included material believed to be that of the hybrid *C. canescens* × *C. stricta*. Herbarium specimens to show inflorescences of different ages were displayed, alongside corresponding stages of *C. stricta* and *C. canescens* from the same locality; together with drawings to show how floral and vegetative structures of the intermediate material differ from those of the supposed parents. It is intended to publish a fuller account of this material after further study.

Miss F. E. CRACKLES.

WATER-COLOUR DRAWINGS OF BRITISH MOSSES

Water-colour drawings of species of *Sphagnum*, *Atrichum* and *Bryum*, with enlarged illustrations of capsules, stems, branch leaves and cells.

Miss H. D. GARSIDE.

"FLORA OF ISRAEL"

The exhibit consisted of volume 1 of the *Flora of Israel*, consisting of 50 illustrations, with accompanying text.

Mrs. A. N. GIBBY.

LIMOSELLA SUBULATA IN WALES

A new locality for *L. subulata* Ives in Wales, on the River Dysynni, near Towyn, in v.-c. 48 (Merioneth), was discovered in May 1952.

The plant had previously been recorded from v.-c 41 (Glamorgan) (3 stations), and from the west and east banks of the River Glaslyn in v.-c. 49 (Caernarvon) and v.-c. 48 (Merioneth). The Dysynni plants were in flower and fruit from May to October 1952, and submerged plants were gathered in fruit in November.

The exhibit included live fruiting specimens of *L. subulata*, a map showing the distribution of the plant along the lower reaches of the River Dysynni at Rhyd-y-Garnedd, and herbarium specimens of *L. aquatica* L., *L. subulata* and *L. aquatica* × *subulata*.

Miss C. M. GOODMAN.

GALIUM PUMILUM IN BRITAIN

Sterner's recent work on the segregates of *G. pumilum* Murr. in north-west Europe was summarized, and herbarium sheets of the two forms found in this country, ssp. *vulgatum* (Gaudin) Schinz & Thell. and ssp. *septentrionale* Sterner, were exhibited. A map of their known distribution in this country was also shown.

A sheet of *G. pumilum* ssp. *vulgatum* which had been distributed through the B.E.C. as *G. erectum* Huds. was exhibited and the differences between the two species were demonstrated.

K. M. GOODWAY.

SALIX CINEREA AND *S. ATRO-CINEREA* IN THE CAMBRIDGE DISTRICT

A brief study of the characters supposed to distinguish between the species *S. atro-cinerea* Brot. and *S. cinerea* L.

The exhibit consisted of a short discussion of the problem illustrated by the following:—

A table listing the characters concerned for 21 fresh specimens and 17 herbarium specimens, comparable parts of the plant being taken in each case. This showed no apparent correlation between the definite rust-coloured leaf-hair character and any of the others.

A statistical analysis of length-breadth ratios of comparable leaves for each specimen. This indicated that the specimens fell broadly into two populations with regard to this character, one of specimens without rust-coloured leaf-hairs and a mean leaf length-breadth ratio of 2.2, the other of specimens with a few to many rust-coloured leaf-hairs and a mean leaf length-breadth ratio of 2.7.

A map showing the places from which the specimens were collected. This gave no evidence for a zonal distribution of the two "species".

Suggestions were made for the amplification of the study on various lines.

D. E. GREENWOOD.

SPECIES OF *HELIANTHEMUM* WITH SPECIAL REFERENCE TO *H. CANUM*

A map showed the distribution of the four species of *Helianthemum* in Britain. The actual localities of *H. guttatum* (L.) Mill., *H. apenninum* (L.) Mill. (*H. polifolium* (Huds.) Mill.) and *H. canum* (L.) Baumg. were shown by different-coloured crosses, while for *H. chamaecistus* Mill. the vice-counties in which this species is found were shaded in pencil, thus showing its abundance in comparison with the rareness of the other three species. The different localities of the three former species were also listed on a separate sheet, while *H. chamaecistus* was mentioned only as being the most widely distributed species, occurring on the chalk downs and carboniferous limestone outcrops in various parts of Britain, the sites being too numerous to list for the exhibit.

An accompanying table showed the difference in the habit, leaf, stipule, pedicel, sepal, petal, and style of the four species.

Herbarium sheets of *H. canum* were shown, and material from the Gower Peninsula illustrated the great range of variation in leaf shape

	HABIT	LEAF	STIPULE
H. GUTTATUM	Erect annual. Basal leaves forming a rosette. Stem with long white hairs.	Nearly sessile, lanceolate, hairy.	Linear-oblong, hairy. Absent from lower leaves.
H. APENNINUM (*H. POLIIFOLIUM*)	Diffuse much-branched undershrub with a central rootstock from which the branches arise. Stem densely tomentose (grey-white felt).	Petiolate, lanceolate, white-tomentose below, less so above. Margin strongly revolute.	Linear-oblong, narrower than in *H. guttatum*. Hoary.
H. CHAMAECISTUS	Ditto. Stem brown, slightly pubescent, upper parts of flowering axes hoary, the pedicels more so.	Petiolate, lanceolate to ovate, white-tomentose below, nearly glabrous above, hairy along the margin.	Linear-oblong, pubescent.
H. CANUM	Smaller and more compact undershrub (cushion habit). Stem brown below, hoary above.	Petiolate, to nearly sessile, leaf shape very variable; usually lanceolate to ovate.	Absent.
(*H. BREWERI*)	Stunted form of *H. guttatum*, leaves rather more obtuse and broader and usually bracteate pedicels (*H. guttatum* usually ebracteate).		

and size over a very small area (in this case about 10 yards). Typical material of the three varieties was exhibited:—var. *canum* from Scout Scar, Westmorland, var. *vineale* from Cronkley Fell, Teesdale, and var. *intermedium* from the Gower Peninsula, Glamorgan. The differences between the varieties was mentioned (they are distinguished mainly by the differences in the hairiness of the leaves) and the sites at which they are found were pointed out.

Several photographs of *H. canum* (which is restricted to carboniferous limestone) showed the inland and coastal habitat of the plant.

Special attention was drawn to the history of *H. canum;* it has regularly been found in Late Glacial deposits (particularly in Denmark). *Artemisia campestris* L. and *Hippophae rhamnoides* L. are the other two characteristic species. All are intolerant of shade and disappeared entirely with the coming of the birch in the Allerød Period.

Evidence suggests that *H. canum* could have survived the Glacial Period on nunataks in such regions as Teesdale (drift absent here) and

PEDICEL	SEPAL	PETAL	STYLE
	Long whitish hairs at the base, glabrous towards apex.	Yellow, varying in size, and with a red spot at the base. Entire or jagged.	Absent or very short.
	Densely grey-tomentose.	White, ovate.	Filiform, straight or curved at the base then ascending. Shorter than or equalling the stamens.
n *H. chamaeistus* and *H. anum* the pedicel s deflected when n bud, straightning as the lowers open	Pubescent, three prominent veins on the three inner sepals.	Yellow, varying in size. More or less entire.	Ditto.
these last for ne day, opening when the sun hines, the petals alling at night). The young capule points upwards, but when he seeds are about to be shed he pedicel becomes deflected nce more.	Ditto.	Yellow, much smaller than in the other species, ovate. Entire or waved at the margins.	Filiform, with a strong sigmoid curve in the middle, longer than the stamens.

at the Westmorland sites and possibly in other areas, for it appears that its occurrence in close proximity to the rock surface is indicative of survival *in situ*. It may have been more widely distributed, and if this be so, then leaching and the spreading of the dominant tree species in the Post-Glacial Period were probably the cause of the restriction to the sites that it occupies to-day.

Miss M. E. Griffiths.

Sub-specific Variation in *Lathyrus nissolia*

The exhibit demonstrated the results of recent experimental and other critical work on the sub-specific taxonomy of *L. nissolia* L.

Two varieties were recognised, the delimitations of which were derived, after considerable amendments, from very inadequate and partially erroneous descriptions by early continental authors.

It was shown that by the use of several biometrically assessed "micro" characters, two clearly defined varieties could be recognised. These preliminary conclusions were confirmed by the demonstration of correlated ecological attributes for each variety.

The continental authors were in error when they nominated var. *pubescens* of G. Beck as the type variety. The Linnean type in fact falls within var. *glabrescens* Freyn., the other variety recognised on the continent.

All the British material examined, with the exception of one specimen, was referable to the type variety (var. *nissolia*); it is likely that this odd specimen was of adventive origin.

A fuller account will be published in due course.

Miss M. J. Herbert & J. F. M. Cannon.

Variation in *Nymphaea alba* in the British Isles

The common white water lily (*N. alba* L.) shows great variation in size of organs and numbers of floral parts, and in attempts to give taxonomic recognition to this variability various taxa, e.g. *N. occidentalis* (Ostenf.) Moss, have been erected. During the last three flowering seasons the structure of populations of *N. alba* in various parts of the British Isles has been studied by mass sampling technique, and the exhibit showed parts of population samples from English, Scottish and Irish localities and some of the biometrical data derived from them. The general conclusions reached in the study so far are (1) that colonies differ greatly in their amount of genetical variability and in their average composition; (2) that part of the variability in size and number of parts can be correlated with habitat conditions, the colonies containing larger plants often tending to occur in the richer habitats; (3) that much of the variability is random, showing no significant geographical or ecological regularities, and (4) that "*N. occidentalis*" and other taxa based mainly upon sizes and numbers of parts are of little value, since they refer to plants at the tail of the variation range of *N. alba* which may be found in almost any large colony.

In the type area of "*N. occidentalis*" almost the full range of variation of *N. alba* is to be found, and it is probable that the "species" was based in the first instance upon a few selected small specimens.

MRS. Y. HESLOP-HARRISON.

RESULTS OF RECENT WORK ON SOME BRITISH PLANTS AT THE DEPARTMENT OF BOTANY, UNIVERSITY COLLEGE OF LEICESTER

(1) THE AFFINITIES OF *CATABROSA AQUATICA*

The genus *Catabrosa* is somewhat isolated, and though generally placed in the tribe *Festuceae*, possesses some morphological features, which, taken in conjunction with the basic chromosome number n=10 might indicate affinities with the *Glycericae*. The exhibit illustrated some of these characters.

On the whole it would seem that the morphological affinities of *Catabrosa* are with the *Festuceae*, and also the ten chromosomes of *Catabrosa* are large, resembling those of the *Festuceae*, whereas *Glyceria* chromosomes are small.

M. BORRILL.

(2) (a) A SEDGE NEW TO BRITAIN

An account of this exhibit is being prepared for *Watsonia*.

(b) SOME HYBRID SEDGES

Specimens of *Carex hostiana* × *lepidocarpa*, *C. distans* × *lepidocarpa* and *C. distans* × *extensa* were exhibited. The first two hybrids are similar, and rather difficult to distinguish in the field. The main characters which distinguish *C. hostiana* and *C. distans* are given below, and these differences are useful in identifying the hybrids.

C. hostiana DC.	*C. distans* L.
Plant shortly creeping.	Plant tufted.
Female glumes 3-4 mm., broadly ovate, acute, dark brown with a broad hyaline margin and pale midrib.	Female glumes 3 mm., ovate, mucronate, reddish-brown or green with a pale midrib.
Perigynia 5 mm., ovoid, many-ribbed, rather inflated; beak 1 mm., slender, flattened, margin serrulate.	Perigynia 4 mm., ellipsoid trigonous, equally many-ribbed, often faintly punctate; beak 0.75 mm., bifid and rough.
Haploid chromosome number = 28.	Haploid chromosome number = 37.

Miss E. W. DAVIES.

(3) VARIATION IN *RANUNCULUS FLAMMULA*

A range of forms of *R. flammula* L., from the large coarse *R. flammula* var. *ovatus* Pers., closely resembling *R. lingua* L., through the normal type to the small, creeping *R. flammula* var. *pseudo-reptans* Syme, which is difficult to distinguish from *R. reptans* L., were shown. Typical deep shade and submerged forms were also shown and the latter contrasted with *R. scoticus* E. S. Marshall, a rare northern species or

subspecies. Silhouettes of radical and stem leaves showed the variation in leaf shape, size and degree of serration.

The probability of the basis of *R. flammula* var. *ovatus* being genetical, and that of the small creeping form being ecological, was discussed.

Miss P. A. PADMORE.

(4) *POA ANNUA* AND ITS PARENTS

P. annua L., like most common species, is very variable and consists of a number of genetically distinct ecotypes. Three of these were exhibited, one from light garden soil, one from a heavy wet clay and one from a stabilized dune. These differ strikingly in growth rate, size, habit and length of life.

Artificial hybrids between *P. annua* and the related diploids, *P. infirma* Kunth and *P. supina* Schrad., were shown. These hybrids are sterile but each shows 7 bivalents and 7 univalents at meiosis, indicating a high degree of homology between the chromosome set of *P. annua* and those of the diploids.

Crossing the diploids yielded two plants with 2n=28; these have morphological characters of the same kind as found in the wild *P. annua* but do not exactly match any specimens that have been seen. Meiosis in the pollen mother-cells of these plants is regular, apart from the occasional formation of quadrivalents, but the germination of the seed in preliminary trials was less than 10%.

T. G. TUTIN.

(5) *EUPHRASIA VIGURSII* AND *E. MICRANTHA* × *ANGLICA*

E. vigursii Davey was considered by Pugsley to be a hybrid between *E. micrantha* Reichb. and *E. anglica* Pugsl. At Roborough Down, near Plymouth, it occurs with *E. anglica* and a form of *E. nemorosa* (Pers.) H. Mart. Specimens of these plants were exhibited, with notes on their ecology and distribution. *E. vigursii* has a distinct habitat and rarely mixes with the other forms. In the locality where the other two forms mix, no apparent hybrid could be found at this locality in 1952.

E. vigursii has a chromosome number of 2n = 22; *E. anglica* (New Forest and Charnwood Forest) 2n = 22, and *E. nemorosa* (Northants) 2n = 44.

P. F. YEO.

GALEOPSIS TETRAHIT AND *G. BIFIDA*

A number of specimens of *G. tetrahit* L. and *G. bifida* Boenn. from the Druce Herbarium were scored for a number of characters, particularly those used by various floras to separate the two species. Drawings of the flowers were also shown, and some 'typical' *G. tetrahit* and *G. bifida* were exhibited, together with a selection of intermediate types. In an attempt to separate the two species some of the characters for which they had been scored were plotted as graphs, two of which (leaf

length/number of teeth on the leaf, and corolla length/calyx length) were shown. Only those specimens with 'typical' *tetrahit* or *bifida* flowers were plotted, in an attempt to exclude possible hybrids, but even so no clear separation has so far been found.

It is hoped to continue this study, and to include an examination of continental material of the two species.

Miss S. LITTLEBOY.

A HYBRID *RUMEX* NEW TO EUROPE

Specimens of *R. conglomeratus* × *cuneifolius* collected by Dr. F. R. Elliston Wright at Braunton Burrows, N. Devon, v.-c. 4, on August 4 and 25 1952, were exhibited. Living material grown from a scrap of the rhizome of the same gathering was also shown.

Maps showing the distribution of *R. cuneifolius* Campd. as a native in S. America, and as an alien in N. America, Europe and the British Isles, were also displayed. The hybrid is probably also new to science and an account is being prepared for *Watsonia*.

J. E. LOUSLEY.

HYBRIDS OF THE BRITISH *ELYTRIGIA*

The British species of *Elytrigia* (*Agropyron repens* group) are *E. junceiformis* A. & D. Löve, *E. pungens* (Pers.) Tutin and *E. repens* (L.) Nevski (*cf.* Tutin, *Watsonia*, **2**, 186-187). Specimens of hybrids between these species, as well as tables and illustrations showing the most important characters for their identification, were exhibited.

Such hybrids arise frequently when the parent species grow in close proximity. They are characterized by high sterility, having narrow, indehiscent anthers with angular, shrivelled pollen-grains, which are transparent, lacking plasma. These hybrids are usually intermediate in their characters between the parents.

E. junceiformis × *pungens* and *E. junceiformis* × *repens* differ from *E. pungens* × *repens* in having a somewhat fragile rhachis with smooth or nearly smooth margins, and obtuse or apiculate glumes. In *E. pungens* × *repens* the rhachis is tough, having ciliate margins, and the glumes are acute.

The characteristic features of *E. junceiformis* × *pungens* are the following: the margins of the sheaths often ciliate, prominently nerved leaves with very short hairs on the nerves, and the rhachis always glabrous. This hybrid occurs more frequently on sea-shores of the southern part of Britain. *E. junceiformis* × *repens* differs from *E. junceiformis* × *pungens* in having the margins of the sheaths always glabrous, less prominently nerved leaves with longer hairs on the nerves, and the rhachis sometimes hairy. The records known at present indicate that this hybrid is much commoner in the northern part of the British Isles.

A. MELDERIS.

SOME INTERESTING NORTHERN *EUPHRASIAE*

Pressed specimens of 24 *Euphrasia* taxa were shown representing collections of rare and atypical material from Scotland and northern England.

From the exceedingly rich Eyebright flora of the Isle of Rhum the three endemics *E. rhumica* Pugsl., and its variety *fionchrensis* Pugsl., and *E. euryearpa* Pugsl. were exhibited, along with the rare varieties of *E. curta* (Fr.) Wettst. (vars. *ostenfeldii* Pugsl. and *piccola* (Townsend) Pugsl.) and *E. confusa* Pugsl. (vars. *maciana* Callen and *grandiflora* Pugsl.). From the same island *E. heslop-harrisonii* Pugsl. and *E. foulaensis* Townsend ex Wettst. were also shown, together with atypical specimens of *E. micrantha* Reichb., *E. scotica* Wettst., *E. borealis* Townsend, *E. brevipila* Burnat & Gremli and *E. occidentalis* Wettst.

Species collected in northern England included *E. montana* Jord. from Teesdale and from Borrowdale, and *E. rivularis* Pugsl. from Cumberland.

K. J. F. PARK.

A CARD INDEX SYSTEM FOR ECOLOGISTS

A "Punch Card" of a commercial type which has been adapted to the use of ecologists was exhibited. It is thought that the system might simplify the sorting of large amounts of ecological data.

The system could be used in two ways:

(1) By individuals working on isolated problems.

(2) As a national repository for ecological facts which might be drawn on by workers on new aspects.

To facilitate (2) workers under (1) could prepare duplicate cards. In the hope that a national library of cards might be thought useful, the cards were designed for use anywhere in the British Isles.

F. H. PERRING.

SOME ASPECTS OF ARBUTOLOGY

The Strawberry-tree, *Arbutus unedo* L., has a long history of association with man. Its fruits and wood have been of a minor economic importance since Greek and Roman times and the uses are mentioned by Theophrastus and Vergil. The exhibit displayed the many facets of the use of the Strawberry-tree: the wood used for its hard timber for making charcoal; the leaves until recently associated with religious festivals in Brittany; the fruits used to-day in Portugal in jam making, and for making Agua Ardent de Medronciro (Fire-water of the Arbutus Tree). The fruit is also used as an emblem on the labels of the Killarney Mineral Water Company. The exhibit included a copy of Stanford's setting of the song by A. P. Graves "My love's an Arbutus". Photographs showing the tree at its stations in Portugal, Brittany and Ireland were exhibited.

F. H. PERRING & R. G. WEST.

POA PALUSTRIS IN THE BRITISH ISLES

The exhibit contained a sketch of the history of the discovery of *P. palustris* L. in Britain, and the differing views on its status; also a distribution map, notes on its habitat at Wood Walton Fen, Hunts, and specimens, including one from this recently-discovered Hunts locality and from Wicken Fen, Cambs.

A full account is being prepared for *Watsonia*.

M. E. D. POORE & S. M. WALTERS.

ALISMA PLANTAGO-AQUATICA AND *A. LANCEOLATUM* IN THE CAMBRIDGE DISTRICT

J. D. Hooker in the *Student's Flora* of 1884 described only one of the present British species of *Alisma*, *A. lanceolatum* being mentioned only as a variety of *A. plantago* (*-aquatica*). In the new *Flora of the British Isles* we now find two separate species—*A. plantago-aquatica* L. and *A. lanceolatum* With. Observations were made to determine the strength of this classification.

The observations lead to the belief that *A. plantago-aquatica* and *A. lanceolatum* are indeed distinct species. Also, that hybrids and intermediates between them are not found in nature. This is in accordance with:—

(i) the difference in time of flowering.

(ii) the genetic constitution.

It is supported by evidence from:

(i) habitat differences.

(ii) floral morphology.

(iii) leaf shape and dimensions—of which the latter is the more easily demonstrated. In this case, use was made of the formula of allometric growth.

Chromosome studies confirmed that *A. plantago-aquatica* was diploid ($2n=14$) and that *A. lanceolatum* was tetraploid ($2n=28$). The latter shows none of the characters associated with a newly formed autotetraploid. The similarity in the distribution of the two species suggests that they have been distinct for a considerable time.

C. A. PRIESTLEY.

PHOTOGRAPHS OF SOME RARE OR LOCAL BRITISH PLANTS

19 species were illustrated by photographs taken *in situ*, mainly during the summers of 1951 and 1952. The species illustrated were:—*Draba aizoides* L., *Dianthus gratianopolitanus* Vill., *Linum anglicum* Mill., *Trifolium squamosum* L., *T. molinerii* Balb., *Sedum rosea* (L.) Scop., *Asarum europaeum* L., *Bartsia alpina* L., *Teucrium scordium* L., *Galium debile* Desv., *Cirsium tuberosum* (L.) All., *Hammarbya paludosa* (L.) Kuntze, *Liparis loeselii* var. *ovata* Riddelsd., *Ophrys sphegodes*

Mill., *Cyperus longus* L., *Carex flava* L., *C. ericetorum* Poll., *Koeleria vallesiana* (Honck.) Bertol. and *Gastridium ventricosum* (Gouan) Schinz & Thell.

M. C. F. PROCTOR.

SOME LITTLE KNOWN BRITISH *HIERACIA*

This exhibit of British *Hieracia* consisted in part of herbarium sheets from the Cambridge University Herbarium and in part of water-colour drawings by C. E. and J. E. Raven. It was in three sections:—

1. Pairs of British species which, even though not always in the same group, are easily confused one with the other.
2. Three common British species which show a great range of variation.
3. Certain species which for historical, distributional or morphological reasons are especially notable.

J. E. RAVEN, P. D. SELL and C. WEST.

RECENT BOTANICAL DISCOVERIES IN KENT

Specimens were exhibited of 25 species, 12 of which were new records for one or the other Kentish vice-counties. *Lotus angustissimus* L. Littlebourne, v.-c. 15, 1949, F. Rose. *Ulex gallii* Planch. Aldington Frith, Stelling Minnis, and Paddlesworth, v.-c. 15, 1950, F. Rose. *Alchemilla glabra* Neygenf. Birling Marshes, v.-c. 16, 1951, F. Rose. *Oenanthe pimpinelloides* L. Stubbs Cross, Kingsnorth, v.-c. 15, 1952, E. Scott. *Galium pumilum* Murr. On loamy soil in grassy scrubland, Romney Street, Eynsford, v.-c. 16, 1952, F. Rose. *Wahlenbergia hederacea* (L.) Reichb. Sissinghurst Park Wood, v.-c. 15, 1948, F. Rose. *Rhinanthus calcareus* Wilmott. Halling Downs, v.-c. 16, 1950, F. Rose. *Parentucellia viscosa* (L.) Caruel. Duneslack, Sandwich Bay, v.-c. 15, 1952, Miss Gore & Miss D. Long. *Lilium martagon* L. Hoath Wood, Ospringe, v.-c. 15, 1948, Mrs. W. Verschoyle. *Carex elongata* L. Pond at Stubbs Cross, Kingsnorth, v.-c. 15, 1952, E. Scott. *Dryopteris aemula* (Ait.) Kuntze. Scullsgate, Benenden, v.-c. 15, 1949, F. Rose. *D. cristata* (L.) A. Gray. Fen at Dungeness Open Pits, v.-c. 15, 1952, F. Rose. The remaining 13 specimens shown consisted of interesting plants recently found, or refound, in Kent.

F. ROSE.

"BRITISH SPECIES" COLLECTED IN GERMANY

Herbarium specimens were shown of 17 species collected in Württemberg, South West Germany, in September 1952. The specimens, chosen because they were either rare or apparently absent in Britain to-day, but common in Württemberg in similar ecological associations to those found widely in Britain, were *Aconitum napellus* L., *Polygala amara* L., *Cotoneaster integerrimus* Medic., *Bupleurum falcatum* L., *Cicuta virosa* L., *Selinum carvifolia* (L.) L., *Bidens cernua* var. *radiata* Gray, *Vaccinium uliginosum* L., *Oxycoccus palustris* Pers., *Andromeda poli-*

folia L., *Gentiana asclepiadea* L., *Polygonatum verticillatum* (L.) All., *Scheuchzeria palustris* L., *Schoenus ferrugineus* L., *Molinia litoralis* Host and *Lycopodium annotinum* L.

F. ROSE.

A MYSTERIOUS *CAREX* ON BEN LAWERS

An exhibit of herbarium specimens illustrated the article already published under the same title in *Watsonia*, vol. 2, pt. 4, 279-281 (1952). Side by side with the first gathering (viz. Sandwith no. 3305) of this Ben Lawers sedge were placed sheets of typical *Carex dioica* L., from Britain, and others of Scandinavian specimens of the closely related *C. pralleka* (Laest.) Sommerf. and *C. dioica* var. *pralleloides* Lund ex Anderss.

N. Y. SANDWITH.

THE IMPORTANCE OF RHIZOME SCALE CHARACTERS IN FERN TAXONOMY

E. A. C. L. E. SCHELPE.

EPPING FOREST FUNGI Miss M. SCHOLEY.

THE CREATION OF NEW SPECIES THROUGH HYBRIDIZATION RESULTING FROM MAN'S ACTIVITY

Specific rank cannot be logically denied to a fairly uniform true breeding population having a number of constantly associated morphological features which distinguish it from related populations of unquestioned specific rank, even though such a population may have arisen through hybridization. Probably many more species of plants have arisen in this way than is at present suspected. To establish itself as a species, a hybrid must be born into conditions where it can compete successfully with other plants and it must develop efficient means of reproduction. In a closed natural community hybridization is likely to be rare, the number of hybrid individuals few; hence the probability of a doubling of chromosomes or the development of agamospermy to offset the sterility or reduced fertility often found in hybrids will likewise be low. Man, however, during the 8000 years or so that he has cultivated plants, has continually destroyed, reduced or disturbed such closed vegetational communities; by providing more and more open habitats and permitting hitherto isolated but interfertile species to come together, man has probably been a potent factor in the creation of new species by hybridization.

Of such species, the classic example is *Spartina townsendii* H. & J. Groves. The first specimen of this was collected at Hythe on the western side of Southampton Water in 1870. It was described as a new species in 1881. Since then it has spread quickly over thousands of acres of mud flats and established itself on the Continent. This new species is now known to have arisen from hybridization between the native British *Spartina maritima* (Curtis) Fern. (chromosome number 2n=70) and the

introduced American species *S. alterniflora* Lois. (2n=56). The expected chromosome number (2n) of a hybrid between them would be 35 +28, i.e., 63; this is probably the number of the French hybrid *S.* × *neyraudii* (*S. alterniflora* × *S. maritima*). *S. townsendii* has, however, 2n=126, i.e., 70 + 56; this duplication of chromosomes has made it possible for the hybrid to be fertile and true breeding.

Tragopogon dubius Scop., *T. porrifolius* L. and *T. pratensis* L. (all with 2n=12), the diploid parent species of the two tetraploid species shown (*Tragopogon mirus* Ownbey and *T. miscellus* Ownbey, both with 2n=24), are European, but in Europe they do not grow intermixed in conditions permitting mass hybridization. They have become naturalized, however, in North America and hybridize on a large scale in certain places. The fertility of the hybrids is low, but the large number of individuals increases the likelihood of chromosome duplication, and this has taken place, leading to the creation of these new species, which surpass the parent species in size and are constantly distinct from them. Plants of *T. mirus* raised at Kew from seed sent by M. Ownbey are very uniform in character, reaching a height of about 6 ft.; the ligules are dull lilac purple with a yellow base. Plants of *T. miscellus*, from the same source, differ chiefly in having canary yellow ligules. The fruiting heads are as much as 12 cm. across. For fuller information reference should be made to Ownbey, M., "Natural hybridization and amphidiploidy in the genus Tragopogon" in *Amer. J. Bot.* **37**: 487-499 (1950).

These new species have arisen recently. In the far distant past *Galeopsis tetrahit* L. (2n=32), a species spread over most of Europe and northern Asia, probably arose from *G. pubescens* L. × *G. speciosa* Miller (both with 2n=16). It has been synthesized by Muntzing.

Species which have arisen in cultivation by hybridization and chromosome doubling are known in *Aesculus*, *Brassica*, *Dahlia*, *Delphinium*, *Digitalis*, *Fragaria*, *Quamoclit*, *Nicotiana* and *Saxifraga*.

W. T. Stearn.

The British Rose Survey

This exhibit was intended to explain the methods used and the results obtained in a trial season of a survey which it is hoped later to extend to the whole country. Volunteers are to be asked to choose small sample communities containing some 10-50 rose bushes, and to plot their characters on a special form. It is hoped in this way to obtain sufficient data about British roses to lead to conclusions which will elucidate the nature of their "species", and the degree of reticulation present.

P. C. Sylvester Bradley.

Some New Ross-shire Plants

The exhibit included herbarium sheets showing some seven new vice-county records for West and East Ross (v.-cc. 105, 106), and certain other plants of special interest from the Braemore area. The following species were found by R. Mackechnie and E. C. Wallace on and about

Ben Dearg in 1952, which hill was visited more than once by Dr. G. C. Druce (see *Flora of West Ross*, 1928):—*Draba rupestris* R. Br., *Cerastium edmondstonii* (Edmondst.) Murb. & Ostenf. and hybrids with *C. vulgatum* L., *Saxifraga rivularis* L., *S. nivalis* L. (not collected), *Juncus biglumis* L. and *Poa alpina* L.

Other plants shown from this area included *Circaea intermedia* Ehrh., *Betula nana* L., *Empetrum hermaphroditum* (Lange) Hagerup, *Salix lapponum* L., *Deschampsia alpina* (L.) Roem. & Schult., *Milium effusum* L. and *Festuca altissima* All. The two last mentioned grasses occurred in the ravine of the Falls of Measach at Braemore. *Gentianella septentrionalis* (Druce) E. F. Warb. occurred on two limestone outcrops near Ullapool, and *Carex atrata* L., *C. vaginata* Tausch and *Juncus castaneus* Sm. were shown from the Fannich hills.

In addition two small specimens of *Arenaria norvegica* Gunn. from Morvern, Argyll, Westerness, together with a map showing the four known stations in Britain for this species. Two of these are on islands, Unst and Rhum, and two on the mainland of Scotland; near Inchnadamph in West Sutherland, and the new locality at Morvern, discovered in 1952 in company with Dr. K. N. G. MacLeay.

E. C. WALLACE.

THE DISTRIBUTION OF *ALCHEMILLA MINOR* IN IRELAND

Specimens were shown of *A. minor* Huds. sec. Wilmott from its locality in Co. Leitrim, collected in August, 1952, and a photograph of the habitat, together with a short account of the autecology of the plant in its Irish and Yorkshire localities.

A note is being prepared for publication.

S. M. WALTERS.

SOME LITTLE KNOWN SEGREGATES IN THE BRITISH FLORA

The purpose of this exhibit was to call attention to a number of pairs of species which, though recognised for varying periods abroad, have until recently been overlooked or misunderstood in Britain. Descriptions of them will be found in *The Flora of the British Isles* (Clapham, Tutin and Warburg, 1952). The plants shown were:—*Oxycoccus palustris* Pers. and *O. microcarpus* Turcz., *Monotropa hypopithys* L. and *M. hypophegea* Wallr., *Mimulus luteus* L. and *M. guttatus* DC., *Salix cinerea* L. and *S. atrocinerea* Brot., *Salix caprea* L. subsp. *caprea* and subsp. *sericea* (Anders.) Flod.

E. F. WARBURG.

AN INTERESTING *EUPHRASIA* FROM CAITHNESS

The specimens shown were collected in heathy ground on top of sea-cliffs at Mid Clyth, Caithness, this summer. They were growing with *E. micrantha* Reichb., though the latter occurred in much smaller numbers, and was, in this locality, constantly purple-flowered. Other species found nearby were *E. foulaensis* Wettst., *E. occidentalis* Wettst. and

E. brevipila Burnat & Gremli. I do not recall having seen specimens like it before, though I have not made any extensive search since I collected it, nor does it seem to be a described British plant. It seems clearly to belong to Pugsley's Series *Latifoliae* of which the only markedly hairy members are *E. campbellae* Pugsl., *E. eurycarpa* Pugsl. and *E. rhumica* Pugsl., with none of which does it agree though it is perhaps nearest to the last which has only been found on Rhum.

There are three possibilities:—

1. That the plant is an undescribed species.
2. That it is best regarded as a hairy variety of *E. micrantha* Reichb.
3. That it is a hybrid between *E. micrantha* and some other species.

If the last hypothesis is correct, the hairs suggest that the second parent is *E. curta* Fries, which I did not find in the area; my time there was, however, limited. Also against this view is the fact that the *E. micrantha*, which grew with it, was all purple-flowered. A hybrid between these two species is reported from Sweden.

The choice between the first two suggestions is largely a matter of opinion and further investigation is needed before deciding between them.

I should be grateful if anyone who may have collected similar plants would let me see them.

E. F. WARBURG.

AUTOGAMOUS *EPIPACTIS* IN BRITAIN AND SCANDINAVIA

The autogamous (self-fertilized) *Epipactis* have not been studied on the Continent as thoroughly as they have in Britain. Consequently their geographical ranges are not very clearly known. The recognition of *E. leptochila* (Godf.) Godf. and *E. phyllanthes* G. E. Sm. in Denmark this year has extended the known ranges of these two species considerably. (*E. leptochila* has been recorded from Denmark by Nannfeldt (**1946**, *Bot. Not.*, 1-28), but the specimen concerned proved to be *E. phyllanthes*.) In addition, a third species, the correct name for which is still in doubt, occurs in Scandinavia and probably southwards. *E. dunensis* (T. & T. A. Steph.) Godf., on the other hand, is recorded from the coasts of the Irish Sea, the Channel, and the Baltic, but has not so far been found in Holland or Denmark where it might be expected.

The exhibit showed specimens of the four species mentioned from Britain and Denmark as far as they occur in those countries, and also distribution maps.

D. P. YOUNG.

A further account of the various exhibits displayed may be found in *Nature*, **171**, 335-337 (1953).

NOTICES TO MEMBERS

ENQUIRIES ABOUT MEMBERSHIP

Enquiries concerning membership should be sent to the Honorary Assistant Secretary, Mr. D. H. Kent, 75 Adelaide Road, London, W.13, who will supply full information and the necessary Form of Application for Membership.

SUBSCRIPTIONS

The present rate of subscription is One Guinea per annum for Ordinary Members, 10s 6d for Junior Members and 10s 6d for Family Members, and the Society's year runs from January 1st to December 31st.

Subscriptions fall due on January 1st each year and should be paid to the Hon. Treasurer, Mr. E. L. Swann, 282 Wootton Road, King's Lynn, Norfolk.

Members are reminded that by paying their subscriptions under a Deed of Covenant they can augment the Society's income without additional cost to themselves. While the standard rate of income tax remains at 9s in the £, the total value of a subscription of one guinea paid to the Society under this arrangement is about £1 18s 3d, since the Society is in a position to recover tax amounting to 17s 3d. The Council hope that as many members as possible will assist us in this way, and the Hon. Treasurer will be pleased to supply full information and the necessary form.

CHANGES IN THE FORM OF THE SOCIETY'S PUBLICATIONS

The Society's periodical publications in future will consist of

(1) *Watsonia, The Journal of the Botanical Society of the British Isles*, with a page size of 10″ × 6½″ in the format of most important scientific journals. It will be the main medium for the publication of original papers concerning the taxonomy and distribution of the flowering plants, vascular cryptogams and charophytes in these islands. Parts will appear at first twice yearly.

(2) *The Proceedings of the Botanical Society of the British Isles*, which will replace the *Year Book*. This will appear in the same page size as the present *Year Book*, and will include most of the matter at present appearing in that periodical. To it will be transferred certain familiar items now appearing in *Watsonia*, such as Abstracts and Plant Records. In addition, it will prove a medium for the publication of papers, articles, notes and correspondence of general interest concerning the British flora. *The Proceedings* will appear twice yearly.

THREATS TO BRITISH FLORA

Members are urged to report to the Hon. General Secretary any threats to the British flora. The Council has appointed a Conservation Committee to deal with such matters and every effort will be made "to promote in every way possible the conservation of the British flora".

PUBLICATIONS

A list of the Society's publications available for sale will be found at the end of the Year Book. They may be ordered from Dr. J. H. Burnett, University Dept. of Botany, South Parks Road, Oxford.

WATSONIA

Price to non-members 7s 6d per part. To be obtained from Dr. J. H. Burnett, University Dept. of Botany, South Parks Road, Oxford.

Arrangements have been made with our printers for the provision of a standard binding case for *Watsonia*, Volumes I and II, and for binding members' own parts. The case is in blue buckram with gold lettering on the spine and blind tooling on spine and both boards.

The binding case is available for 4s post-free. Alternatively, members may send their own six parts of *Watsonia*, Volumes I or/and II, together with title-page and contents list issued with Part VI, which will be bound in the standard case, at a cost of 12s per volume post free, and returned to them. **All Orders and Parts should be sent to Messrs. T. Buncle & Co. Ltd., Market Place, Arbroath, Angus,** and cash should be enclosed. Reasonable time must be allowed for binding.

YEAR BOOK

Price to non-members 7s 6d. To be obtained from Dr. J. H. Burnett, as above.

INSTRUCTIONS TO CONTRIBUTORS TO *WATSONIA*

Papers

Papers are invited both from members of the Society and others. They should have a bearing on the taxonomy, distribution or biology of British Vascular Plants or Charophytes. Papers should be typed. They should be double-spaced and typed on one side of the paper only. The form adopted in *Watsonia* should be used for citations and references, e.g. Sprague, T. A., 1952, The British forms of Valeriana officinalis, *Watsonia*, **2**, 145-147. Full references should be put at the end, except where special reasons exist (e.g. the citation of place of publication of a plant name) or in very short papers. Illustrations, which may take the form of line drawings or photographs, will be considered for publication. Twenty-five separates of each paper are given free to the author, and further copies may be obtained on payment; requests for extra copies

should be made when proofs are returned. Papers should be sent to the Editor, Dr. E. F. Warburg, University Department of Botany, South Parks Road, Oxford.

Plant Records

Records* should be sent, if possible, not later than the end of the year to which they belong, either to the Editor, Dr. E. F. Warburg, or to Mr. E. C. Wallace, 2 Strathearn Road, Sutton, Surrey.

Records which are known to be of purely local interest should not be sent. In cases of doubt on this point it is better to send the record, but the appropriate County Flora may be consulted. Special attention should be given to the recording of critical plants as in some County Floras they are not adequately recorded. If the plant belongs to a critical group the name of the specialist by whom it was determined must be given: if the plant has not been named by a specialist, a specimen must be sent for determination. Records in critical groups will not be published unless this procedure has been followed. The importance of either stating where the herbarium specimen is to be seen, or of sending the specimen with the record, cannot be over-emphasised. Records without vouchers may not be accepted.

The following instructions as to the method of drawing up records should be carefully noted.

Use 5″ × 3″ cards and type when possible. Room should be left at the top and left hand side of the card, and between the lines, for any editorial correction that may be necessary: some cards have been received with the writing so closely compressed at the top of the otherwise blank card that editing involved re-writing. Do not use capitals *unless you make absolutely sure from the printed Report* that you use them correctly:—i.e., for the *plant* name but not for the authority, and for the names of the finder, recorder and determiner when the record is an original one, but *not* when it is taken from some publication.

In dealing with records from parts of vice-counties which have been transferred from one county to another since H. C. Watson's time, the form 20 [Beds.] will be used, which indicates that the locality, though now in Bedfordshire belongs to v.-c. 20, as it was in Hertfordshire *when the vice-county boundaries were fixed* by Watson.

When the record concerns an area dealt with by one of the standard County Floras, contributors, when they can, should indicate in ( ) the number or letter of the subdivision of the county used in the Flora: this not only is of help to the Editors but will be of assistance to future revisers of such Local Floras.

When, for some reason, the name following the vice-county number is not the name of the vice-county, as "55, (Rutland",) the name is placed in ( ).

*It will be useful if National Grid Co-ordinates, made as accurate as is thought advisable, are added to all records.

When a record is extracted from some other publication the recorder's name should be followed by (in brackets) the year of publication of the Journal concerned together with the complete reference.

The following signs are used: —

§ before the *B.P.L.* number: to indicate that the paragraph contains information necessitating a correction in an annotated copy of the *Comital Flora.*

† before the *B.P.L.* number: to indicate that the plant is not a native species in the British Isles.

† before the record: to indicate a species which, though native in some parts of the British Isles, is not so in the locality recorded.

* before the record: to indicate a new vice-county record, not published previously to the issue of *Watsonia.*

‡ before the record: to indicate a record additional to an annotated copy of *Comital Flora,* but published elsewhere prior to the issue of *Watsonia* in which it appears.

[ ] enclosing a record: to indicate doubt as to the validity of the record, either of identification or locality.

Examples of completed cards are shown below.

194/10m. ROSA DUMETORUM Thuill.

Var. HEMITRICHA (Rip.) W.-Dod.

35, Monm.; banks of R. Wye, between Hadnock Quarries and Symond's Yat, 1948, R. LEWIS, det. R. MELVILLE.

3.9.1948.	*Herb. R. Lewis, No. 564.*	*Passed by*
13.6.1948.	*Herb. Brit. Mus.*	*Mr. Wade.*

655/1. STRATIOTES ALOIDES L.

7, N. Wilts.; pond near Gastard, 1948, A. G. Spencer (1949, Wilts. Arch. & N.H. Mag., 53, 92).

Irish Plant Records and Recorders

The Council is anxious to make the registration of new or interesting Irish records more systematic than it has been in the past, and at the same time to co-ordinate the work of this Society with the recording done by Irish botanists in Irish journals. It has been arranged, therefore, that Professor D. A. Webb will provisionally act as Recorder for the whole of Ireland, but that he will endeavour to "farm out" certain groups of counties to members who are willing to take charge of them, while retaining responsibility himself for general co-ordination. It has been the practice for many years for new Irish records to be published in the *Irish Naturalists' Journal* in the first instance, with occasional summings-up in the *Proceedings of the Royal Irish Academy*. This is to be continued, and Professor Webb will forward all records published in these journals, or which reach him privately, to the editor of *Watsonia*.

Members who visit Ireland are asked, in return, to record as fully as possible the distribution of all plants which are not ubiquitous *in the area in question* (and here it may be recalled that in S.W. Ireland even *Anthriscus sylvestris* becomes extremely rare!), and to pass on these notes to Professor Webb, who will prepare for publication in *Watsonia* such of them as represent an extension of range or a filling of gaps. It should be remembered that our knowledge of the distribution of plants in Ireland, though it has been, thanks to Dr. Praeger, extremely well codified, rests on a very slender basis. Only seven of the thirty-two counties have county floras, and for many of the widely distributed but not really common plants, say *Bidens tripartita* or *Epipactis palustris*, there is no information beyond the entries, averaging less than two per county, in *Irish Topographical Botany*.

It is obvious that if our knowledge of the distribution patterns of plants in the British Isles is ever to approach in completeness that which now exists for Holland or Scandinavia a large number of records for the less-known Irish counties must first be accumulated.

Plant Notes

Notes should be sent to the Editor. Contributors are requested to keep to the form adopted in *Watsonia*. The Note should start with the *B.P.L.* number and name of the genus or species concerned. If the Note concerns one vice-county only, start with this information, as is done with Plant Records. The name of the author of the Note is printed at the end in small capitals.

Abstracts

Offers of assistance both from members willing to prepare abstracts, and from those willing to translate short summaries of papers written in the various European languages, would be much appreciated. They may be made either to the Editor of *Watsonia* or to Mr. D. H. Kent, 75 Adelaide Road, West Ealing, London, W.13. It would be a great

convenience if contributors would send in their Abstracts on slips of uniform size, the size desired being eight inches by five inches, the long edge to be treated as the top of the page. A separate slip for each item permits the easy sorting of the MS. without the transcription which is otherwise too often necessary in the preparation of copy for the printer. The uniform slips can be easily filed and will be available for future reference, thus enabling the Editor to avoid repetition and to make helpful references to previous notes.

The author's name should be followed by the reference in full.

The abstractor is indicated by initials in square brackets at end of note.

INDEX OF BRITISH HERBARIA

The Society is preparing for publication an index to the location of herbaria of British flowering plants and ferns. It is proposed to include details of private collections and members are invited to send details of their own herbaria to Mr. D. H. KENT, 75 Adelaide Road, London, W.13. The information should include their full Christian names, approximate number of sheets, and a note of any groups or areas especially well represented.

Members who have information relating to obscure British collections are also requested to send details to Mr. Kent.

PHOTOGRAPHS OF FIELD MEETINGS

It is hoped in future to have one photograph of a Field Meeting in each issue of the *Year Book*. These may illustrate interesting habitats or plants, or perhaps representative groups of members. Those joining Field Meetings are invited to send in pictures to the Hon. Assistant Secretary. Any photograph which it is not possible to reproduce will be welcome additions to the Society's files.

ADVERTISEMENTS

A limited number of relevant advertisements will be accepted for the Society's publications as space permits. Enquiries should be addressed to Mr. R. A. Graham, Mint House, Woodside Road, Northwood, Middlesex.

EXCHANGE SECTION

Professor T. G. Tutin, Department of Botany, University College, Leicester, has kindly consented to act as Distributor for the 1953 season. Parcels should be sent to him not later than December 1st.

Offers are sometimes received by the Officers from botanists living abroad for the exchange of herbarium material from their own countries for specimens gathered in Britain. Members able to supply well prepared and accurately named material of species which are not scarce, and anxious to receive foreign specimens, are invited to advise the Hon. General Secretary. They should indicate the countries in which they are interested.

Contributors are reminded that the terms of the Exchange Regulations (of which copies may be obtained from the Hon. General Secretary) must be adhered to.

LIBRARY FACILITIES.

Members are reminded that through the kindness of the Council of the Linnean Society of London, they have the privilege of consulting the Library of the Linnean Society at Burlington House, Piccadilly, London, W.1.

NEWBOROUGH WARREN, ANGLESEY.

The Air Ministry propose to establish a range at Newborough Warren, but following representations made at a Public Local Inquiry by this Society and others, have agreed to make advance notices of firing practices available to research workers and students. These notices will be sent to our Local Secretary, Prof. P. W. Richards, Coed Menai, Upper Bangor, Caernarvonshire, and members wishing to visit the Warren are advised to make arrangements with him well in advance of the time of their visits.

HONORARY ASSISTANT SECRETARY.

The Council has appointed as Honorary Assistant Secretary, Mr. D. H. Kent, 75 Adelaide Road, London, W.13, in the place of Mr. W. R. Price, who is retiring as from March 14th. Mr. Kent has also been appointed Editor of the *Year Book*.

Enquiries about membership, alterations in addresses, notices for insertion in the *Year Book*, etc., should in future be sent to Mr. Kent.

LIST OF REGIONAL AND COUNTY FLORAS IN PREPARATION

This is an extended version of the list which appeared in the 1951 *Year Book*. Many of these projected Floras are being compiled under the auspices of Natural History Societies; in such cases the list merely gives the name of the editor(s) or person to whom the records should be sent. The names in brackets indicate authors who have predeceased publication of their work. Some Floras deal only with flowering plants and Vascular Cryptogams (indicated by P., for Phanerogamic), while others cover various groups of Cryptogams (C.) as well. The date indicates the approximate year in which the work was commenced. Addresses are given of those who are not members of the Society.

D. E. Allen.

County Floras

V.-c.		
1a.	Scilly Isles.	J. E. Lousley. P. 1935 (ready for publication).
7, 8.	Wiltshire.	J. D. Grose. P. 1940 (in the press).
15, 16.	Kent.	F. Rose. P., C. 1942.
18, 19.	Essex.	B. T. Ward. P. 1948.
20.	Hertfordshire.	G. L. Evans. P. 1951.
21.	Middlesex.	D. H. Kent. P. 1939.
25, 26.	Suffolk.	F. W. Simpson. P. 1951.
30.	Bedfordshire.	Dr. J. G. Dony. P., C. 1935 (in the press).
35.	Monmouthshire.	A. E. Wade. P., C. 1925.
38.	Warwickshire.	P. S. Green & R. C. Readett. P. 1950.
39.	Staffordshire.	E. S. Edees. P. 1941.
40.	Shropshire.	L. C. Lloyd, Lydbury, Wenlock Road, Shrewsbury (custodian of MS.) (edited by the late W. P. Hamilton). P., C. 1897.
49.	Caernarvonshire.	N. Woodhead, Dept. of Botany, University College, Bangor. P., C. 1933.
50, 51.	Denbighshire and Flint.	A. A. Dallman, 12 Tickhill Road, Doncaster. P. 1906.
53, 54.	Lincolnshire.	Miss E. J. Gibbons. P. 1951.
56.	Nottinghamshire.	Dr. R. W. Butcher (editing MS. of the late Prof. J. W. Carr). P. 1936.
57.	Derbyshire.	Prof. A. R. Clapham. P., C. 1949.
59.	South Lancashire.	W. G. Travis. P., C. 1906.
66-68.	Northumberland and Durham.	Prof. J. W. Heslop-Harrison. P. 1919.
69B.	Lake Lancashire.	G. Wilson & B. Hopkins. P., C. 1950.
70.	Cumberland.	Miss C. W. Muirhead. P., C. 1946.
71.	Isle of Man.	D. E. Allen. P., C. 1949.
90.	Angus.	(The late R. H. & M. Corstorphine and) Dr. G. Taylor. P., C. 1910.
97, 98.	Argyllshire.	Dr. K. N. G. MacLeay. P. 1951.
110.	Outer Hebrides.	Miss M. S. Campbell. P., C. 1936.
H.33.	Fermanagh.	R. D. Meikle. P. 1947.

Regional Floras

48-52, 58.	Cheshire and North Wales.	J. P. Savidge. P. 1952.
102-104, 110.	Inner and Outer Hebrides.	King's College, Newcastle-upon-Tyne. P., C. 1934.

LOCAL SECRETARIES, RECORDERS AND REFEREES

The regional organisation, of which details are given below, has been arranged for the assistance of members. It is hoped that they will take full advantage of the facilities offered which now include the identification of non-critical specimens. It is not intended that the Local Secretaries, Recorders, and Referees should become the only, or even the usual, channels of communication between members on the one hand and the Officers, Specialists or Panel Members of the Society on the other. Nevertheless, those who have agreed to provide local services are generally in a position to provide more personal assistance to members and it is hoped that they will relieve the Officers of as much work involving local information as possible.

The functions of Local Secretaries, Recorders and Referees are as set out below. The boundaries of the areas for which they are severally responsible are those of the Watsonian vice-county system units indicated.

FUNCTIONS OF LOCAL SECRETARIES

1. To keep in touch with other local members and where possible and desirable to arrange meetings for their benefit.
2. To encourage the enrolment of new members.
3. To act as a centre for some botanical work of local bearing where they are qualified to do so.
4. To provide information to members of the Society from outside their areas, either by correspondence or otherwise, on travel facilities, accommodation, and botany. (This does not include supplying information about localities for rare plants, although statements as to their continued existence or frequency may be given for the purpose of scientific work.)
5. To keep in touch with local libraries, museums, and, especially, local herbaria and natural history societies, supplying information about them to other members, and particularly to the Panel, and also keeping the name of the Society before officials, officers, and members of local Societies.
6. To assist the Hon. Meetings Secretary and Leaders of field meetings prior to and at the time of visits of the Society to their area.
7. To report without delay to the Hon. General Secretary or Treasurer the death of any member within their area.
8. To make regular visits to habitats of special interest within their areas as far as possible, and to report without delay to the Hon. General Secretary any threat which may call for conservation measures.

FUNCTIONS OF RECORDERS

To assist the Editor by collecting records of more than local interest, checking records contributed for publication, and forwarding information about important changes in the flora.

FUNCTIONS OF REFEREES

VICE-COUNTY REFEREES are responsible only for the naming of NON-CRITICAL BRITISH FLOWERING PLANTS. Material of *critical groups* (including all *Pteridophyta* and *Charophyta*) covered in the list of Specialists given on pages 82-83 should be sent to them and not to the local referees. It may not be possible to name plants of critical groups not covered by the Panel of Specialists, nor all plants alien to the British flora.

Non-critical plants should be sent to the Vice-county Referee for the vice-county *in which the plants were found* and not necessarily to the Referee for the member's home vice-county. A stamped addressed envelope for reply should be enclosed in all cases and the other directions set out for sending material for identification on p. 83 also followed. Specimens must not be sent to the Honorary General Secretary except for vice-counties or groups for which his name is given in the lists.

The REGIONAL REFEREES have agreed to give assistance, when required, to the Vice-county Referees within the Watsonian Provinces indicated. Their names are printed in small capitals and members should, in the first instance, send material to the Vice-county Referees, and not to them.

LIST OF LOCAL SECRETARIES, RECORDERS AND REFEREES

(Revised December 1952)

The following table indicates those members who have agreed to act as Local Secretaries, Recorders and Referees for the Vice-Counties indicated. It is hoped to extend this list so as, if possible, to include all Vice-Counties in each case. Any member who is willing and able to carry out any of these duties in any Vice-Counties not already covered, or who knows any person, whether a member of the Society or not, who might be suitable, is invited to communicate with Mr. D. E. Allen, Secretary of the Development and Rules Committee. All addresses (except where given) can be obtained from the List of Members on pp. 7 to 23.

ENGLAND AND WALES

V.-c.		LOCAL SECRETARIES	RECORDERS	REFEREES
	PENINSULA			E. MILNE-REDHEAD
1.	W. Cornwall	—	—	C. C. Townsend
1a.	Scilly	—	J. E. Lousley	J. E. Lousley
2.	E. Cornwall	—	—	C. C. Townsend
3.	S. Devon	E. M. Phillips	Rev. W. Keble Martin	Rev. W. Keble Martin
4.	N. Devon	F. A. Brokenshire	Rev. W. Keble Martin	Rev. W. Keble Martin
5.	S. Somerset	A. D. Hallam (Taunton Castle, Taunton)	A. D. Hallam (Taunton Castle, Taunton)	C. C. Townsend
6.	N. Somerset	Mrs. C. I. Sandwith	Mrs. C. I. Sandwith	Mrs. C. I. Sandwith
	CHANNEL			R. D. MEIKLE
7.	N. Wilts.	J. D. Grose	J. D. Grose	J. D. Grose
8.	S. Wilts.	J. D. Grose	J. D. Grose	J. D. Grose
9.	Dorset	—	Prof. R. d'O. Good (Univ. College, Hull)	Prof. R. d'O. Good (Univ. College, Hull)
10.	Isle of Wight	—	J. E. Lousley	Prof. R. d'O. Good (Univ. College, Hull)
11.	S. Hants.	—	—	Prof. R. d'O. Good (Univ. College, Hull)
12.	N. Hants.	J. Ounsted	E. C. Wallace	E. C. Wallace
13.	W. Sussex	Mrs. P. German	Mrs. P. German	Mrs. P. German
14.	E. Sussex	P. J. Wanstall	E. C. Wallace	E. C. Wallace

	THAMES	LOCAL SECRETARIES	RECORDERS	REFEREES
V.-c.				D. H. KENT
15.	E. Kent	—	F. Rose	F. Rose
16.	W. Kent	D. McClintock	F. Rose	F. Rose
17.	Surrey	J. E. Lousley	J. E. Lousley	D. H. Kent
18.	S. Essex	S. T. Jermyn	B. T. Ward	B. T. Ward
19.	N. Essex	—	B. T. Ward	B. T. Ward
20.	Herts.	—	—	Dr. J. G. Dony
21.	Middlesex	D. H. Kent	D. H. Kent	D. H. Kent
22.	Berks.	J. Ounsted	Dr. E. F. Warburg	Dr. E. F. Warburg
23.	Oxford	Mrs. P. Warburg	Dr. J. H. Burnett	Dr. J. H. Burnett
24.	Bucks.	—	Dr. J. G. Dony	Dr. J. G. Dony
	ANGLIA			Dr. S. M. WALTERS
V.-c.				
25.	E. Suffolk	Miss M. M. Whiting	F. W. Simpson	F. W. Simpson
26.	W. Suffolk	F. J. Bingley	F. J. Bingley	F. J. Bingley
27.	E. Norfolk	R. P. Libbey	E. A. Ellis	F. W. Simpson
28.	W. Norfolk	R. P. Libbey	E. L. Swann	E. L. Swann
29.	Cambridge	Dr. S. M. Walters	Dr S. M. Walters	Dr. S. M. Walters
30.	Bedford	Dr. J. G. Dony	Dr J. G. Dony	Dr. J. G. Dony
31.	Hunts.	J. L. Gilbert	J. L. Gilbert	Dr. J. G. Dony
32.	Northampton	I. Hepburn	I. Hepburn	I. Hepburn
	SEVERN			P. S. GREEN
V.-c.				
33.	E. Gloucester	Dr. M. G. Hughes	Dr. M. G. Hughes	C. C. Townsend
34N.	W. Gloucester (N.)	Dr. M. G. Hughes	Dr. M. G. Hughes	C. C. Townsend
34S.	W. Gloucester (S.)	Dr. J. H. Davie	Dr. M. G. Hughes	Mrs. C. I. Sandwith
35.	Monmouth	A. E. Wade	A. E. Wade	A. E. Wade
36.	Hereford	—	F. M. Day	F. M. Day
37.	Worcester	Dr. R. C. L. Burges	F. M. Day	Dr. R. C. L. Burges
38.	Warwick	Dr. R. C. L. Burges	P. S. Green	P. S. Green
39.	Stafford	E. S. Edees	E. S. Edees	E. S. Edees
40.	Salop	Dr. R. C. L. Burges	—	Dr. R. C. L. Burges
	SOUTH AND NORTH WALES			A. E. WADE
V.-c.				
41.	Glamorgan	A. E. Wade	A. E. Wade	A. E. Wade
42.	Brecon	—	A. E. Wade	A. E. Wade
43.	Radnor	—	A. E. Wade	A. E. Wade
44.	Carmarthen	—	A. E. Wade	A. E. Wade
45.	Pembroke	—	A. E. Wade	A. E. Wade
46.	Cardigan	—	A. E. Wade	A. E. Wade
47.	Montgomery	—	A. E. Wade	A. E. Wade
48.	Merioneth	Mrs. H. M. Richards	A. E. Wade	A. E. Wade
49.	Caernarvon	Mrs. H. M. Richards	A. E. Wade	A. E. Wade
50.	Denbigh	—	A. E. Wade	A. E. Wade
51.	Flint	—	A. E. Wade	A. E. Wade
52.	Anglesey	Prof. P. W. Richards	A. E. Wade	A. E. Wade

	LOCAL SECRETARIES	RECORDERS	REFEREES
TRENT			Prof. T. G. TUTIN
V.-c.			
53. S. Lincoln	Miss E. J. Gibbons	Miss E. J. Gibbons	Miss E. J. Gibbons
54. N. Lincoln	Miss E. J. Gibbons	Miss E. J. Gibbons	Miss E. J. Gibbons
55. Leicester	F. A. Sowter	Prof. T. G. Tutin	Prof. T. G. Tutin
56. Nottingham	Dr. R. W. Butcher	Dr. R. W. Butcher	Dr. R. W. Butcher
57. Derby	R. H. Hall	Miss K. M. Hollick	Miss K. M. Hollick
MERSEY			Prof. T. G. TUTIN
V.-c.			
58. Chester	W. D. Graddon	W. D. Graddon	W. D. Graddon
59. S. Lancs.	Miss E. M. Rosser	W. G. Travis	D. E. Allen
60. W. Lancs.	H. E. Bunker	—	D. E. Allen
HUMBER			Miss C. M. ROB
V.-c.			
61. SE. York.	Dr. W. A. Sledge	Dr. W. A. Sledge	Dr. W. A. Sledge
62. NE. York.	Miss C. M. Rob	Miss C. M. Rob	Miss C. M. Rob
63. SW. York.	Dr. W. A. Sledge	Dr. W. A. Sledge	Dr. W. A. Sledge
64. Mid-W. York.	Dr. W. A. Sledge	Dr. W. A. Sledge	Dr. W. A. Sledge
65. NW. York.	Miss C. M. Rob	Miss C. M. Rob	Miss C. M. Rob
TYNE			G. W. TEMPERLEY
V.-c.			
66. Durham	Prof. D. H. Valentine	G. W. Temperley	Prof. D. H. Valentine
67. Northumberland, S.	G. W. Temperley	G. W. Temperley	G. W. Temperley
68. Cheviotland	G. W. Temperley	G. W. Temperley	G. W. Temperley
LAKES			P. TAYLOR
V.-c.			
69. Westmorland	G. Wilson	B. Hopkins	B. Hopkins
70. Cumberland	J. D. Hinde	Miss C. W. Muirhead	Miss C. W. Muirhead
71. Isle of Man	R. Howarth	D. E. Allen	R. Howarth

SCOTLAND

	LOCAL SECRETARIES	RECORDERS	REFEREES
ALL REGIONS			Dr. G. TAYLOR
V.-c.			
72. Dumfries	Dr. H. Milne-Redhead	Dr. H. Milne-Redhead	Miss C. W. Muirhead
73. Kirkcudbright	Dr. H. Milne-Redhead	Dr. H. Milne-Redhead	D. E. Allen
74. Wigtown	Dr. H. Milne-Redhead	Dr. H. Milne-Redhead	D. E. Allen
75. Ayr	R. Mackechnie	R. Mackechnie	R. Mackechnie
76. Renfrew	R. Mackechnie	R. Mackechnie	R. Mackechnie
77. Lanark	R. Mackechnie	R. Mackechnie	R. Mackechnie
78. Peebles	—	Dr. G. Taylor	J. G. Roger
79. Selkirk	—	Dr. G. Taylor	J. G. Roger
80. Roxburgh	—	Dr. G. Taylor	J. G. Roger
81. Berwick	—	Dr. G. Taylor	J. G. Roger
82. Haddington	—	Dr. G. Taylor	Dr. G. Taylor
83. Edinburgh	—	Dr. G. Taylor	Dr. G. Taylor
84. Linlithgow	—	Dr. G. Taylor	Dr. G. Taylor
85. Fife with Kinross	Mrs. E. J. Balfour	Dr. G. Taylor	Dr. G. Taylor

V.-c.	LOCAL SECRETARIES	RECORDERS	REFEREES
86. Stirling	B. W. Ribbons	B. W. Ribbons	R. A. Graham
87. W. Perth	Miss M. S. Campbell	Miss M. S. Campbell	Miss M. S. Campbell
88. Mid Perth	Miss M. S. Campbell	Miss M. S. Campbell	Miss M. S. Campbell
89. E. Perth	Miss M. S. Campbell	Miss M. S. Campbell	Miss M. S. Campbell
90. Forfar	Miss U. K. Duncan	Dr. G. Taylor	Dr. G. Taylor
91. Kincardine	—	—	Dr. G. Taylor
92. S. Aberdeen	—	—	Miss M. McCallum Webster
93. N. Aberdeen	—	—	Miss M. McCallum Webster
94. Banff	Miss M. McCallum Webster	Miss M. McCallum Webster	Miss M. McCallum Webster
95. Elgin	Miss M. McCallum Webster	Miss M. McCallum Webster	Miss M. McCallum Webster
96. Easterness	—	—	J. E. Raven
97. Westerness	J. E. Raven	E. C. Wallace	E. C. Wallace
98. (Main) Argyll	—	E. C. Wallace	E. C. Wallace
99. Dunbarton	—	Prof. K. W. Braid	Prof. K. W. Braid
100. Clyde Isles	—	Dr. D. Patton	Dr. D. Patton
101. Cantire	—	Prof. K. W. Braid	Prof. K. W. Braid
102. S. Ebudes	Miss C. W. Muirhead	Miss C. W. Muirhead	Miss C. W. Muirhead
103. Mid Ebudes	Miss C. W. Muirhead	Miss C. W. Muirhead	Miss C. W. Muirhead
104. N. Ebudes	J. E. Raven	—	J. E. Raven
105. W. Ross	—	E. C. Wallace	E. C. Wallace
106. E. Ross	—	E. C. Wallace	E. C. Wallace
107. E. Sutherland	—	E. C. Wallace	E. C. Wallace
108. W. Sutherland	—	E. C. Wallace	E. C. Wallace
109. Caithness	—	Miss M. S. Campbell	Miss M. S. Campbell
110. Outer Hebrides	Miss M. S. Campbell	Miss M. S. Campbell	Miss M. S. Campbell
111. Orkney	—	—	J. E. Lousley
112. Zetland	D. Spence	D. Spence	J. E. Lousley

IRELAND

	LOCAL SECRETARIES	RECORDER	REFEREE
ALL REGIONS	—	Prof. D. A. WEBB	Prof. D. A. WEBB

PANEL OF SPECIALISTS

(Revised December 1952)

CRITICAL SYSTEMATIC GROUPS

B.P.L. no.		
2.	*Thalictrum* L.	Dr. R. W. Butcher
6.	*Ranunculus* L. § *Batrachium*.	Dr. R. W. Butcher
7.	*Caltha* L.	Prof. A. R. Clapham
32.	*Fumaria* L.	N. Y. Sandwith
35/1.	*Nasturtium* R. Br. (excluding *Rorippa*).	H. K. Airy Shaw
39/1.	*Cardamine pratensis* L. agg.	D. E. Allen
45.	*Cochlearia* L.	Prof. A. R. Clapham
64/3.	*Thlaspi alpestre* L.	Prof. A. R. Clapham
88.	*Viola* § *Nomimium*.	Prof. D. H. Valentine
88.	*Viola* § *Melanium*.	R. D. Meikle.
100.	*Cerastium* L. (annual species).	E. Milne-Redhead
109.	*Montia* L.	Dr. S. M. Walters
117.	*Malva* L.	N. Y. Sandwith
123.	*Tilia* L.	H. A. Hyde
128.	*Erodium* L'Hérit.	Dr. E. F. Warburg.
132.	*Oxalis* L.	Dr. D. P. Young
183.	*Prunus* L.	Dr. R. Melville, Dr. E. F. Warburg
185.	*Rubus* L.	W. C. R. Watson
190.	*Alchemilla* L.	Dr. S. M. Walters
190(2).	*Aphanes* L.	Dr. S. M. Walters
194.	*Rosa* L.	Dr. R. Melville
195.	*Sorbus* L.	Dr. E. F. Warburg
196.	*Crataegus* L.	A. D. Bradshaw
199.	*Saxifraga* L.	Prof. D. A. Webb
220.	*Epilobium* L.	G. M. Ash
247.	*Apium* L.	R. D. Meikle
296.	*Galium* L. (*palustre* L. and allies).	Prof. A. R. Clapham
312.	*Solidago* L.	D. H. Kent
383.	*Senecio* L.	J. E. Lousley
393.	*Arctium* L.	Dr. W. A. Sledge
395.	*Carduus* L.	Dr. W. A. Sledge
396.	*Cirsium* Mill.	Dr. W. A. Sledge
405.	*Centaurea* L.	E. Marsden-Jones
478.	*Centaurium* Hill.	J. S. L. Gilmour
480.	*Gentiana* L.	J. E. Lousley
497.	*Symphytum* L.	A. E. Wade
506.	*Myosotis* L.	A. E. Wade
527.	*Verbascum* L.	J. E. Lousley
543.	*Veronica* L. (aquatic species).	Dr. J. H. Burnett

B.P.L. no.

545. *Euphrasia* L. Dr. E. F. Warburg
548. *Rhinanthus* L. Dr. E. F. Warburg
558. *Mentha* L. R. A. Graham
561. *Thymus* L. C. D. Pigott
596. *Amaranthus* L. J. P. M. Brenan
600. *Chenopodium* L. J. P. M. Brenan
611. *Salicornia* L. Miss M. S. Campbell
618. *Rumex* L. J. E. Lousley
633. *Ulmus* L. Dr. R. Melville
642. *Betula* L. Dr. E. F. Warburg
650. *Salix* L. R. D. Meikle, Dr. R. Melville, Dr. E. F. Warburg
651. *Populus* L. P. G. Beak, Dr. R. Melville
659→ *Orchidaceae*. V. S. Summerhayes
668. *Epipactis* Adans. C. P. Thomas, Dr. D. P. Young.
669. *Orchis* L. §*Dactylorchis*. Dr. J. Heslop-Harrison, Dr. P. Vermeulen
718. *Juncus* L. Dr. P. W. Richards.
729. *Alisma* L. J. E. Lousley
737. *Potamogeton* L. J. E. Dandy, Dr. G. Taylor
740. *Zostera* L. Prof. T. G. Tutin
745. *Eleocharis* R.Br. Dr. S. M. Walters
753. *Carex* L. E. Nelmes, E. C. Wallace
754→ *Gramineae*. C. E. Hubbard
824. *Poa* L. Dr. A. Melderis
826. *Festuca* L. Dr. W. O. Howarth
826 (2). *Vulpia* C. C. Gmel. Dr. A. Melderis
830. *Agropyron* Gaertn. Dr. A. Melderis, Prof. T. G. Tutin
835. *Hordeum* L. Dr. A. Melderis
844→ *Pteridophyta*. A. H. G. Alston
872→ *Charophyta*. G. O. Allen

NOTE.—The specialists' names in the above list are given in *alphabetical* order when two or more are available for consultation.

Members may send their specimens of British plants belonging to these groups direct to the specialist indicated, together with a stamped addressed envelope for reply. If the specimens are required to be returned, the necessary postage should be forwarded. The addresses of the specialists will be found in the List of Members, see pp. 7 to 23.

It should be understood that the specialist is not necessarily prepared to name all specimens submitted. In some cases the specialist indicated may not yet have attained sufficient knowledge of the group he is studying. In other cases the material submitted may be incomplete, lacking adequate data or badly prepared. All the specialists will, however, do the best they can to identify plants submitted by members.

Unless it is reasonably certain that specimens will arrive in good fresh condition, they should be sent flat in paper between stiff millboards to prevent shrivelling. Dried pressed specimens may be sent similarly. Specimens should be carefully labelled with locality, habitat, date and any other notes likely to be of use. Whenever possible specimens should be submitted in duplicate, so that the specialist may retain one specimen if he so desires. If only one specimen of a gathering is submitted it should be clearly stated whether its return is desired.

Any member who is studying a critical group and would like his name added to the Panel should forward particulars to the Hon. General Secretary for consideration by the Council.

MISCELLANEOUS SUBJECTS

Botanical Apparatus and Material: E. Milne-Redhead
Botanical Specimens, Preparation of: E. Milne-Redhead
Cytology in Relation to Systematics: Dr. E. F. Warburg
Ecology: Prof. A. R. Clapham
Folk Lore and Popular Names: Miss M. S. Campbell.
Foreign Floras and Foreign Field Work: A. H. G. Alston
Genetics in Relation to Systematics: Prof. D. H. Valentine
Herbals: Dr. G. W. T. H. Fleming
History of British Botany, before Linnaeus: Rev. Canon C. E. Raven.
History of British Botany, Linnaeus and after: J. S. L. Gilmour
Local Floras: N. Douglas Simpson
Maps: E. Milne-Redhead
Mapping, Methods of: W. T. Stearn, Dept. of Botany, British Museum (Nat. Hist.), London, S.W.7
Nomenclature: J. E. Dandy
Phenology and Meteorology: F. N. Hepper
Private Herbaria, Location of: D. H. Kent, J. E. Lousley
Systematic Works and Monographs: N. Y. Sandwith
Vice-County Boundaries: J. E. Dandy

Members wishing to avail themselves of the privilege of consulting the specialists in the list, should write to them direct and enclose a stamped addressed envelope for reply (addresses in Members' List, pp. 7 to 23).

PERSONALIA

GENUS *POLYGALA*

Mr. M. J. Cole, Dept. of Botany, University of Southampton, is studying the genus *Polygala*, and would be grateful for fresh or herbarium material and seeds.

LATHYRUS HIRSUTUS L. AND *FRAGARIA MOSCHATA* DUCHESNE

Professor S. C. Harland, Dept. of Botany, The University, Manchester, 13, would be glad to receive samples of seed of *Lathyrus hirsutus* L. and *Fragaria moschata* Duchesne for experimental purposes. Postage will be refunded.

LATHYRUS NISSOLIA L.

Miss M. J. Herbert and Mr. J. F. M. Cannon are making a detailed investigation of the sub-specific systematics and distribution of *Lathyrus nissolia* L. They would be very grateful for any information relating to the species, and in particular for:—

1. Large plants with leaf width greater than 6 mm. Seeds of this form are urgently needed.
2. Specimens of any British forms with hairy pods (best seen in very young pods).
3. Records from the West Country, Wales, and northern England.
4. Any seeds of Continental gatherings.

Please send all communications to Mr. Cannon, c/o Dept. of Botany, British Museum (Natural History), Cromwell Road, London, S.W.7.

GALIUM PUMILUM Agg.

Mr. K. M. Goodway is studying *Galium pumilum* Agg. in Britain and would be grateful for records, herbarium specimens and living plants (including seed) of this aggregate, and especially of plants apparently intermediate between it and *G. montanum* Huds. (*G. hercynicum* auct.). Communications should be sent to the Botany School, Cambridge.

ARTEMISIA MARITIMA L.

Dr. H. Stubbe writes:—"For systematic and biochemical purposes we need seeds of the polymorphous *Artemisia maritima*. I should thank you very much if you would kindly help me in obtaining these seeds from many habitats in your country. Please send parcels to me at Holderlinstrasse 11, Berlin-Charlottenburg 9".

SENECIO SQUALIDUS L.

Mr. D. H. Kent is mapping the distribution of *Senecio squalidus* L. in Britain and would be grateful for records of the species. Information of the occurrence of the plant on the European mainland would also be welcome.

GENUS *LEDUM* IN BRITAIN

Mr. B. W. Ribbons will be grateful for any information relating to the genus *Ledum* in Britain. Since the plants are so rare, specimens should not be collected in the first instance. He will be glad especially to hear of the existence of any herbarium specimens.

GENUS *RHINANTHUS*

Mr. D. J. Hambler is working on the Genus *Rhinanthus* and would be glad to receive seeds and specimens with details of localities.

GALEOPSIS SUBGENUS *LADANUM*

Mr. C. C. Townsend is commencing the study of *Galeopsis* subgen. *Ladanum*, and would be grateful for fresh, or herbarium material of *G. ladanum*, *G. angustifolia* and *G. dubia* forms. He would also be pleased to receive details, which will be treated as confidential, of any colonies of *G. dubia* known to members.

POLYGONUM SECT. *CENTINODE* DC.

Mr. D. W. Jowett is working on the above section of *Polygonum* in Britain. He would be very grateful for both material of, and information on *P. maritimum* L., *P. raii* Bab., *P. aviculare* L. (*P. heterophyllum* Lindm.), *P. aequale* Lindm., *P. rurivagum* Jord., *P. calcatum* Lindm., and *P. litorale* Link. The material may be living (including seed), herbarium and/or pickled for anatomical and for cytological study.

NARTHECIUM OSSIFRAGUM (L.) Huds.

Mr. W. T. Stearn, Dept. of Botany, British Museum (Nat. Hist.), Cromwell Road, London, S.W.7, is studying the British distribution of *Narthecium ossifragum* (L.) Huds., and is anxious to receive records from Cornwall. If possible Grid-references should be given.

PUCCINELLIA

Mr. J. D. Lovis, of the Department of Botany, University of Leeds, would be grateful for seeds or plants of all species for cytological and experimental studies.

ASPLENIUM

Mr. J. D. Lovis of the Department of Botany, University of Leeds, is working on this genus, and would be grateful for spores of living plants of *A. trichomanes* from all parts of the country. He wishes also to determine the present distribution of *A. septentrionale* and *A.* × *breynii*, and would be glad to hear of recent records.

FLORA OF THE ISLES OF SCILLY

Mr. J. E. Lousley is now revising the manuscript of his *Flora of the Isles of Scilly* with a view to publication next year. He would be grateful if any records or notes which have not already been made available could be sent to him as soon as possible. References to obscure publications which may have been overlooked would also be welcome.

FLORA OF HERTFORDSHIRE

Mr. G. L. Evans is preparing a new *Flora of Hertfordshire*, and would welcome any assistance (records, notes, etc.) in this task. Please write to him at:—The Museum, Paynes Park, Hitchin, Herts.

REVISED AND NEW FLORAS OF SUFFOLK

Mr. F. W. Simpson, 40 Ruskin Road, Ipswich, Suffolk, has been collecting records for several years with a view to bringing the *Flora of Suffolk* up-to-date. It is intended first to publish in the *Transactions and Proceedings of the Suffolk Naturalists' Society* corrections and additions to the flora and, as space permits, a census list. Later, it will be possible to give the distribution of species, etc. Finally, it is hoped to publish all the records in a new *Flora*. Details of the distribution of some of the more critical genera, species, etc., are especially required; also particulars respecting private herbaria of Suffolk plants. The exact habitats of special rarities will not be published unless these have been destroyed and the plant is known to be extinct in the area. Records and lists may be sent either to his private address or to The Museum, High Street, Ipswich.

FLORA OF WARWICKSHIRE

The Birmingham Natural History Society is collecting records for a new *Flora of Warwickshire*, and would like help from as many people as possible. Anyone living in Warwickshire, or likely to botanize in the county, who is willing to assist, is asked to communicate with the Hon. Secretary of the Botanical Section:—Mr. R. C. Readett, 1 Tetley Road, Hall Green, Birmingham, 11, who will give details of the information required with each record.

FLORA OF DERBYSHIRE

Work on the revision of W. R. Linton's *Flora of Derbyshire* is actively proceeding. Records, notes or other data relating to the Derbyshire flora may be sent to the B.S.B.I. Local Secretary, Mr. R. H. Hall, 2 Hartington Terrace, West Road, Buxton, Derbyshire.

FLORA OF CHESHIRE AND NORTH WALES

Mr. J. P. Savidge is collecting records for the *Flora of Cheshire and North Wales* and would be grateful for records and notes on the families *Lycopodiaceae*, *Ranunculaceae*, *Cruciferae*, *Caryophyllaceae* and intermediate families (the order used in the *Check List of British Vascular*

Plants, 1946, or that of the *Flora of the British Isles*, 1952). Detailed localities of rare plants will be treated as confidential, and for these dates of observation and number of plants present are asked for. Records should be sent to him at:—Millwood, Spital, Wirral, Cheshire.

FLORA OF CUMBERLAND

Miss C. W. Muirhead, Kelsick Moss House, Abbey Town, Carlisle, is continuing work on the preparation of a new Flora of Cumberland, and would be very grateful for any information, records, lists, etc., particularly in connection with critical genera and the location of herbarium material, etc. The whereabouts of Wm. Hodgson's herbarium is not known, and as there is reason to believe it was of some extent, and there is no positive evidence of its destruction any information about it would be most welcome.

FLORA OF THE ISLE OF MAN

Mr. D. E. Allen is preparing a *Flora of the Isle of Man* and would be grateful for any records, notes of herbarium specimens, or details of botanical visits. These may be sent to him at:—1 Greenwood Gardens, Aughton Road, Southport, Lancs.

TEESDALE PHOTOGRAPHS

Mr. K. J. F. Park, Department of Botany, King's College, Newcastle-upon-Tyne, is studying the vegetation of Sugar Limestone outcrops in Upper Teesdale, and would be grateful for the loan of photographs or negatives showing close-ups or general views of any of these outcrops. These are required so that an assessment can be made of erosion and vegetational changes which may have taken place in recent years.

SYSTEMATICS ASSOCIATION

A card index of autecological and/or cytogenetic-taxonomic researches that are being carried out on British flowering plants is maintained by the Association. Copies of the index may be consulted at the Royal Botanic Gardens, Kew, or at the Royal Botanic Garden, Edinburgh. Its purpose is to obviate overlapping between different workers. Members taking up research of this nature are asked to send particulars either to Mr. R. D. Meikle, Royal Botanic Gardens, Kew, or to Mr. B. L. Burtt, Royal Botanic Garden, Edinburgh, 4.

NEWS OF OTHER SOCIETIES

Under this heading we include, as space permits, information regarding other Societies which have botanical activities. We extend a cordial invitation to such Societies to contribute short notes to be considered for inclusion. It should be understood that under this heading nothing pertaining to advertising matter will be accepted. (Such matter should be included among advertisements.)

8TH INTERNATIONAL CONGRESS OF BOTANY

The 8th International Congress of Botany will be held in Paris from Friday, 2nd, to Wednesday, the 14th July 1954. Lodging will be guaranteed according to wishes, in the most comfortable conditions (big hotels) to the most modest (school dormitories).

General and special excursions will take place before and after the Congress. Before the Congress (from 15th to 20th June): North Africa, Languedoc, Alsace, Lorraine, Nord, Britanny, Normandy, Vendée, Guyenne, Landes, Basque country and Paris area. During the Congress (2nd to 14th July): Paris and around Paris (Versailles, Fontainebleau, Chantilly, etc.). After the Congress (15th to 22nd July): from Paris to Nice via Burgundy, Jura, the Alps, Provence, Massif Central and the Pyrenees. A Post Congress of 4 or 5 days will take place at Nice (22nd to 25th-26th July); it will be followed by excursions to the Hyères Islands, Corsica, Tropical Africa (Sénégal and Mauritania) and to equatorial Africa (Ivory Coast and Guinea). The probable amount of the subscription to the Congress will be £5. Interested members may obtain full details from:—Secretariat Général du 8e Congrès International de Botanique, 292 Rue Saint-Martin, Paris (3e), France.

LONDON NATURAL HISTORY SOCIETY

We have received a list of the Field Meetings of this Society for 1953. Applicants for membership or for permission to attend a meeting as a guest should apply to Mr. H. A. Toombs, the General Secretary, British Museum (Nat. Hist.) Cromwell Road, S.W.7. Both Botanical and Ecological Sections arrange numerous lecture and field meetings throughout the year.

COUNCIL FOR THE PROMOTION OF FIELD STUDIES

The Council now owns four Field Centres:—

Flatford Mill, East Bergholt, near Colchester, Essex
Juniper Hall, near Dorking, Surrey
Dale Fort, near Haverfordwest, Pembrokeshire
Malham Tarn, near Settle, Yorkshire

Full descriptive leaflets about each of the Centres and about courses planned for the coming year are available and will be sent on request. The Centres are intended just as much for amateur naturalists as for parties from universities, training colleges and schools.

The normal period of residence is one week or more, and the charge is £5 15s 6d per week. Enquiries about accommodation or other information relating specifically to one of the Centres should be addressed to the Warden. Otherwise, and for general information, correspondence should be addressed to the Director, Council for the Promotion of Field Studies, Ravensmead, Keston, Kent.

CHELTENHAM AND DISTRICT NATURALISTS' SOCIETY

This Society is one of the most recently formed in the country and is growing rapidly—in keenness more than in numbers. The botanical

section is very active and during 1951 many county and flora district records were made for Gloucestershire, and distribution gaps are gradually being filled in. Even greater activity by all sections is planned for the coming season, and to this end a Field Meeting Committee has been formed. B.S.B.I. members will always be welcome on excursions, particulars of which may be had from the F.M.C. Secretary, Mr. R. J. M. Skarratt, 265 Prestbury Road, Cheltenham. Both sectional and general meetings are held.

SOUTH ESSEX NATURAL HISTORY SOCIETY

The South Essex Natural History Society holds field meetings during the summer in south Essex. Any B.S.B.I. member wishing to visit the district, which has a good general and maritime flora, can obtain particulars from the Secretary, Mr. S. T. Jermyn, 98 Western Road, Leigh-on-Sea, Essex. Visitors are welcome.

SOUTH LONDON BOTANICAL INSTITUTE

The Institute maintains an important herbarium (including the collections of Joseph Woods, Frederick Townsend, W. H. Beeby, and A. O. Hume), an excellent library, and garden. Rambles and visits are arranged on Saturdays during the summer months to places within easy reach of London, and lectures given on about ten Friday evenings in the winter. Members of the B.S.B.I. are invited to visit the Institute and attend the lectures and rambles. Application may be made to the Curator at 323 Norwood Road, London, S.E.24, for a copy of the current programme.

INTERNATIONAL ASSOCIATION FOR PLANT TAXONOMY

Full particulars of the Association were given in *Year Book*, 1951, pages 115-116, where aims and terms of membership were stated. Fifteen numbers of the bi-monthly publication *Taxon* have now been received by members. The financial agent for Great Britain and British Overseas Territories, through whom subscriptions can now be paid, is Mr. A. A. Bullock, The Herbarium, Royal Botanic Gardens, Kew, Richmond, Surrey.

THE SCOTTISH FIELD STUDIES ASSOCIATION

The Association has a Field Studies Centre at Garth Memorial Youth Hostel, Fortingall, near Aberfeldy, Perthshire. The charge for accommodation is about £3 per week, and parties from Natural History Societies and amateur naturalists coming individually are just as welcome as school, training college, and university groups.

Leaflets giving full information (including details of courses run by visiting tutors) may be obtained from the Honorary Secretary, The Scottish Field Studies Association, The Glasgow Museum, Kelvingrove, Glasgow, C.3, to whom all enquiries should be addressed.

BEN LAWERS

The National Trust for Scotland, whilst requesting that there be no collecting of plants on their property, are prepared to consider applications to collect specimens for research purposes if precise information is given as to the nature of the research to be carried out: such applications are to be sent to the Hon. Secretary, The Ben Lawers Committee, c/o The National Trust for Scotland, 5 Charlotte Square, Edinburgh, 2.

OBITUARIES

R. R. Hutchinson (1870-1951).—Robert Russell Hutchinson was born on August 28, 1870, and died on June 12, 1951. He spent a lifetime in the service of the Westminster Bank, mainly at Tunbridge Wells and Wallingford. From his earliest days he showed a great interest in natural history of all kinds, particularly botany. He was a member of the B.S.B.I. from 1923 until his death. He was Secretary of the Tunbridge Wells Natural History and Philosophical Society from 1899 to 1909, and while at Wallingford he founded a small museum of which he acted as curator. On his retirement in 1933 he moved to Croydon where he founded another museum in connexion with a local church, and acted as Curator to the Croydon Natural History and Scientific Society. On his death he bequeathed his personal collections to that Society.

Included in this was an extensive herbarium, which besides his own specimens comprised a collection of about 500 plants, in two bound volumes, by J. Breach, mainly from around Winchester about 1835; also the herbarium of an unidentified collector, "I. J. B.", who was contemporary with Breach but apparently unconnected with him. "I. J. B." collected around London, but received a number of northern specimens from a Mr. Leyland, mainly from around Halifax. A few sheets collected by J. Smith and E. T. Bennett, also in the herbarium, probably came in as part of I. J. B.'s collection. Unfortunately, nearly half the specimens in the herbarium as a whole bore no collection data, and owing to lack of storage space at Croydon these have been given to King's College, Newcastle, for teaching purposes. The remainder—some 750 sheets as well as the Breach collection—have been incorporated in the Croydon Natural History and Scientific Society's herbarium (see *Watsonia* **2**, 100 (1951)).

Personally, Hutchinson was the kindliest and most charming of men. All his life he was a keen supporter of the Church, and apart from his scientific interests he had an encyclopaedic knowledge of church history, ecclesiology, and liturgiology.

C. T. Prime, D. P. Young.

James Gunson Lawn (1868-1952).—Professor J. G. Lawn, C.B.E., better known to members of this Society as Dr. Lawn, was for a time a familiar figure at our meetings. He was born at Dalton-in-Furness on June 4, 1868, and became an eminent Mining Engineer. He initiated the School of Mines on the Rand, the nucleus of what became the University of the Witwatersrand. He died at Eshowe, Zululand, on October 21, 1952, in his 84th year. Dr Lawn contributed a number of records to our Reports for 1933, 1934 and 1935 which include such claims as *Filago gallica* from Shalford Common, Surrey, and *Ophrys aranifera* from Denbies, Dorking, Surrey. These have not been confirmed.

J. E. Lousley.

RULES

(AS PASSED AT A SPECIAL GENERAL MEETING HELD ON OCTOBER 25th, 1947, AND AMENDED AT THE ANNUAL GENERAL MEETINGS HELD ON APRIL 1st, 1949, APRIL 14th, 1951, AND MARCH 14th, 1953)

1. NAME

The name of the Society shall be The Botanical Society of the British Isles.

2. OBJECTS

The objects of the Society are:—

i. To encourage the study of the Flowering Plants, Vascular Cryptogams and Charophyta of the British Isles; to promote the investigation of their detailed distribution; and to issue such periodical and other publications as the interests of the Society require.

ii. To facilitate intercourse among British botanists for the exchange of information and ideas, and also of dried material of critical species.

iii. To aid in the maintenance of adequate representative collections of British plants in the national and other public herbaria.

iv. To promote in every way possible the conservation of the British flora.

v. To organise botanical excursions, conferences, lectures, exhibitions, and other meetings.

3. MANAGEMENT OF THE SOCIETY

(a) The Officers of the Society shall consist of a President, not more than four Vice-Presidents, Honorary General Secretary, Honorary Treasurer, Honorary Meetings Secretary, and Honorary Editor or Joint Editors.

(b) The management of the affairs and property of the Society shall be in the hands of a Council, to which the Officers shall be responsible, and which shall have power to appoint Committees for specific purposes.

(c) The Council shall consist of the Officers and sixteen elected members.

(d) The President and Vice-Presidents shall be elected to serve for a term of two years and shall not be eligible to serve for a period of more than four consecutive years in each office; the other Officers shall be re-elected annually and shall be eligible for re-election each year. Nominations for Officers shall be made by the Council for election at the Annual General Meeting.

(e) The elected members of the Council shall be elected at the Annual General Meeting; four of the elected members shall retire every year by rotation in order of seniority; the seniority of members to be determined by drawing lots at the time of their election. Retiring members shall not be eligible for re-election until the next Annual General Meeting.

(f) All nominations for vacancies on the Council shall be in writing, signed by two members of the Society, shall be accompanied by the written consent of the candidate to serve if elected, and shall be sent to the Honorary General Secretary before February 1st in each year. In the event of an insufficient number of nominations being received by February 1st to fill the vacancies, the Council shall have power to make the necessary nominations.

(g) In cases of emergency the Council shall have power to make urgent temporary appointments at their own discretion.

4. MEMBERSHIP

(a) ORDINARY MEMBERSHIP of the Society is open to all persons interested in botany who comply with Rule 4(d) and pay the current subscription, which shall entitle them to the privileges of membership until the 31st day of December of the current year. [But see also Rule 6(c).]

(b) JUNIOR MEMBERSHIP. Persons under the age of 21 years may join the Society as Junior Members on payment of half the annual subscription payable by Ordinary Members. Payment of this sum shall entitle a Junior Member to the privileges of membership until the 31st day of December of the current year. A Junior Member will cease to be a Junior Member on the 31st day of December of the year in which he reaches the age of 21 years, and may then become an Ordinary Member without being again proposed and seconded.

(c) FAMILY MEMBERSHIP. Members of the family of an Ordinary Member who do not wish to receive copies of the Society's periodical publications may, at the discretion of the Council, be elected members of the Society on payment of such reduced subscription as the Council shall from time to time decide; such members shall have all the other privileges of Ordinary Members. Enquiries concerning Family Membership should be addressed to the Honorary General Secretary.

(d) CANDIDATES FOR MEMBERSHIP shall obtain from the Honorary General Secretary a copy of the Rules of the Society and sign a Form of Declaration of their willingness to support the objects of the Society and accept the responsibilities of membership. Candidates shall be proposed and seconded by members of the Society, and should indicate the nature of their botanical interests. [In case of difficulty in complying with this provision the Honorary General Secretary should be consulted.]

(e) HONORARY MEMBERSHIP. Botanists, whether British or Foreign, who have rendered special service to the Society or its objects may, on the recommendation of the Council at a General Meeting, be elected Honorary Members, who shall enjoy all the privileges of membership. Nominees for Honorary Membership shall, before their names are submitted by the Council to a General Meeting, obtain the votes of not less than three-quarters of those present in Council. The numbers of Honorary Members shall not be added to when the sum total of such members exceeds eight per cent. of the total paying members of the Society as on the last day of the preceding year.

5. SUBSCRIBERS

Botanical or Natural History Societies, Libraries, Museums, Botanical Gardens, and similar Institutions, which are unable to conform with the conditions of Rule 4(d), shall be entitled to become Subscribers at the rate of subscription applicable to Ordinary Members. They shall be entitled to the privileges of ordinary membership except that they shall be entitled to send not more than one representative to any meeting of the Society, and only accredited representatives of Societies shall be entitled to vote. They shall consult the Panel only through their secretariat. They are expected to support the objects of the Society and to accept the responsibilities of Ordinary Membership as far as possible, and their acceptance and retention as Subscribers is subject to the absolute discretion of the Council.

6. ANNUAL SUBSCRIPTIONS

(a) The annual subscription shall be one guinea for Ordinary Members.
(b) Annual subscriptions are payable upon the first day of January in each year.
(c) The annual subscription of members who join the Society on or after the first day of October shall cover the period ending on the thirty-first day of December of the following year.
(d) Notice shall be given to every member of his subscription being due.
(e) Any member whose subscription shall be in arrear for two years on the first day of January in any year shall cease to be a member.

7. LIFE MEMBERSHIP

Members who have already compounded for Life Membership shall continue to enjoy all the privileges of Ordinary Members. No further Life Members shall be accepted for the present.

8. PRIVILEGES OF MEMBERSHIP

Each member of the Society shall be entitled:—

(a) To receive one copy of the Society's periodical publications as issued (except as provided under Rule 4 (c)).

(b) To submit plants for naming to the Honorary General Secretary or to the specialists on the Panel (see Rule 19). Return postages shall be prepaid by the sender.

(c) To consult the Officers, Local Secretaries, Recorders, and Panel upon botanical matters.

(d) To submit papers and notes for publication by the Society.

(e) To attend, and vote at, all meetings and, so far as accommodation and transport are available, to attend all field meetings of the Society.

(f) To invite guests to attend field meetings and certain other meetings, subject to the discretion of the Council.

(g) To contribute parcels of dried plants and participate in the annual Exchange Distribution, which shall be conducted in accordance with such regulations as the Council may from time to time direct. [Copies of the Regulations of the Exchange Distribution may be obtained free of charge from the Honorary General Secretary.]

(h) If contributing and/or receiving specimens in connection with the Annual Exchange, to purchase two additional copies of the Distributor's Report at a discount of 25 per cent. off the published price, on giving notice to the Honorary General Secretary not later than the 28th of February of the winter of distribution.

9. RESIGNATION

Any member wishing to resign from his membership shall give written notice to the Honorary General Secretary or Honorary Treasurer before the first day of December in any year of his intention to resign, failing which he shall be liable for the payment of his subscription for the ensuing year.

10. EXPULSION FROM MEMBERSHIP

If it be proved at any time to the satisfaction of the Council that any member has acted in any way contrary to the objects or derogatory to the interests of the Society, the Council shall make a report on the matter to the next General Meeting; on a vote of not less than two-thirds of the members present at such meeting in favour of expulsion, the member concerned shall cease to be a member of the Society and shall forfeit all claim upon the Society: he may subsequently, however, be reinstated, but only by ballot of the members present at an Annual General Meeting.

11. HONORARY GENERAL SECRETARY

The Honorary General Secretary shall carry out all ordinary secretarial duties of the Society as directed by the Council. One or more Honorary Assistant Secretaries may be appointed by the Council to assist the Honorary General Secretary in such ways as the Council may determine.

12. HONORARY TREASURER

The Honorary Treasurer shall keep the Society's accounts. An Honorary Assistant Treasurer may be appointed by the Council to assist the Honorary Treasurer in such ways as they may determine.

13. HONORARY MEETINGS SECRETARY

The Honorary Meetings Secretary shall organise the Society's field work, conferences and exhibition meetings in co-operation with the Meetings Committee, which shall be appointed by the Council. In addition, the Council may appoint an assistant to help the Meetings Secretary in such ways as it may determine.

14. HONORARY EDITORS

The Honorary Editor or Joint Editors shall edit the Society's publications in co-operation with the Publications Committee, which shall be appointed by the Council. The arrangements for Abstracts, Reviews, and disposal of publications received shall be made by the Honorary Editor or Joint Editors, with the advice of the Publications Committee, report being made thereon annually to the Council at their first meeting each year.

15. FINANCES OF THE SOCIETY

(a) The Society's invested funds shall be held in the names of the Chairman and Honorary Treasurer for the time being. The Society's Banking Account shall be in the name of the Society and shall be operated by the Honorary Treasurer.

(b) The Council shall have power to adopt such financial measures as may seem to them to be expedient in the interests of the Society.

(c) A member of the Society, to be appointed by the Council, shall act as Honorary Auditor, and the annual accounts, having been audited by him, shall be approved by the Council before presentation to the Annual General Meeting.

(d) The Officers of the Society and others to whom the Society is indebted may receive such Honoraria for their services as may, upon the recommendation of the Council, be voted at a General Meeting.

16. EXCHANGE DISTRIBUTOR

An Exchange Distributor shall be appointed annually by the Council to conduct the Society's Exchange Distribution. He shall conduct the annual distribution according to such regulations as may from time to time be determined by the Council. He shall make a report on the distribution to the Council, for publication by the Society.

17. LOCAL SECRETARIES

The Council are authorised to appoint Local Secretaries, especially to keep in touch with other members in their areas, to encourage local activities such as meetings and field meetings, to assist with Official Excursions of the Society arranged in their areas, to recruit new members, to supply information concerning their areas, and to carry out such other duties as the Council may determine.

18. RECORDERS

The Council shall, where desirable, appoint Recorders for specified areas, especially to assist the Honorary Editor or Joint Editors by collecting records in their areas and advising on the value of records submitted for publication; and also by forwarding information about important changes (actual or threatened) in the flora of their areas.

19. PANEL OF SPECIALISTS

The Council shall appoint a Panel consisting of members of the Society each of whom is prepared to deal with enquiries on specified groups of plants or on subjects connected with the objects of the Society. The Panel shall from time to time be reviewed by the Council, and any alterations shall be notified to Members.

20. CHAIRMANSHIP

At all General and Council meetings the Chair shall be taken by the President or, in his absence, by a Vice-President. In the absence of both, the Chair shall be taken by a member of Council elected at the meeting.

21. ANNUAL GENERAL MEETINGS

(a) The Annual General Meeting shall be held in March or April in each year at such time and place as the Council shall direct.

(b) A quorum shall consist of seven members.

(c) Voting shall be conducted by show of hands, but, on the ruling of the Chairman, or on the demand of not fewer than five members present, voting shall be by ballot (and see Rule 10). All elections to the Council under Rule 3(e) shall be by ballot. All ballot papers must be tendered personally.

22. SPECIAL GENERAL MEETINGS

(a) The Honorary General Secretary shall, by direction of the Council, or at the written request of not fewer than seven members, call a Special General Meeting for the consideration of any business of interest to the Society.

(b) A quorum shall consist of seven members.

(c) Voting shall be by show of hands, but on the ruling of the Chairman, or on the demand of five members present, voting shall be by ballot (and see Rule 10). All elections to the Council shall be by ballot. All ballot papers must be tendered personally.

23. MEETINGS OF THE COUNCIL

(a) The Honorary General Secretary shall be authorised to call a meeting of the Council upon the written request of the President or of not fewer than three members of the Council. Each member shall receive not less than seven days' notice of a proposed meeting. The

Honorary General Secretary in consultation with the President may, if necessary, call a meeting of the Council without notice immediately after the Annual General Meeting.

(b) A quorum at a meeting of the Council shall consist of five members.

(c) The Council may each year appoint from their own body with or without the addition of other members such Committees as they may determine and shall define all duties and powers of such Committees and the number of members to form a quorum thereof, and may delegate any of their powers and duties to such Committees. The President, Honorary General Secretary, and Honorary Treasurer of the Society are *ex officio* members of all such Committees, but their attendance is optional unless they hold office in the Committee.

(d) Any member of the Council or of a Committee who fails to attend three consecutive meetings shall cease to be a member thereof unless adequate reason for non-attendance is given. After non-attendance without adequate reason being given at two successive meetings the Secretary concerned shall inform that member that non-attendance at the next meeting may lead to his removal from the Council or Committee. Decision on such removal shall be made by the Council. Vacancies on the Council caused in this way or by death or resignation may, when urgently necessary, be filled by the Council in advance of a General Meeting. Temporary appointments to fill vacancies on Committees may, when urgently necessary before the next meeting of the Council, be made by the Officers in consultation with the Committee.

24. NOTICES OF MEETINGS AND EXCURSIONS

Notice of a General Meeting, and the agenda of such meeting, shall be sent to every member by post at least fourteen days before the date of the meeting. The programme of field meetings shall be sent to all members at latest on the first day of January each year.

25. CASTING VOTE OF CHAIRMAN

When there is an equality of votes at any Council or General Meeting, the Chairman shall have a second, or casting, vote.

26. ALTERATION OF RULES

No Rule shall be made or altered except at a General Meeting, and then only after twenty-eight days' notice has previously been given in writing to the Honorary General Secretary, who shall give fourteen days' notice to all members of the Society of the proposed addition or alteration to the Rules. Not less than two-thirds of the votes of those present must be in favour of change before any alteration of Rule is made.

27. PROCEEDINGS OF MEETINGS

The proceedings of all General Meetings, Field Meetings and Conferences shall be recorded in the Society's periodical publications.

DISTRIBUTOR'S REPORT FOR 1952

After a period of decline followed by a time when the annual number of contributions remained stationary, this season's contributions have shown a sharp increase in numbers. The quality of gatherings, too, has been steadily rising for the last two or three years. We can therefore feel confident that the Section is no longer fading out, but have grounds for thinking that it has begun to expand again. This turn in its fortunes prompts the Distributor to write a longer Report than usual, and to review the Section's position in the botanical world of to-day.

The Exchange Section exists for the distribution of, and discussion upon, specimens of critical or otherwise little-known British plants, and of other suitable specimens bearing on the study of the British flora. This does *not* include rarities, which are in any case usually only too well-known, and the rules provide that rare plants, critical or not, shall not be accepted. The discussion upon the specimens, which is basically a most important aspect of the Section's work, forms the main part of the printed Distributor's Report, and contributors receive extra copies for attachment to their specimens. In recent years, however, this discussion has been very restricted. In part this is due to greater specialisation, whereby only one or two people at most may feel qualified to comment upon a particular genus. There is, however, a regrettable tendency for contributors to be afraid of criticism, with the result that plants are withheld unless their identification is already certain. This is a pity; a measure of the interest of a specimen is the amount of discussion it provokes, and plants which have defied determination or are "off type" can be entered under a provisional name.

Both specialists and non-specialising botanists can mutually benefit from the exchange. The specialist is in a unique position to contribute, as he has access to supplies of critical plants which he can distribute as authentic. They may be in his favourite collecting-ground, which he knows from experience to be a reliable source of the plants he is studying, or they may be in his garden where he grows specimens for observation. When a specialist has in cultivation plenty of an otherwise rare or inaccessible plant, he not only can but *should* distribute material from it, and the Exchange Section is an excellent medium for doing so. He should also wherever possible send out material to illustrate his botanical publications or current work, and anyone writing a paper for *Watsonia* should consider whether they can send any relevant material for distribution.

In return the specialist may ask the Distributor for specimens of the group in which he is interested. This may give him a somewhat unequal return, although the element of luck is considerable. But, if he prefers, he may nominate a public herbarium with which he is connected to

receive the return parcel; or, what comes to the same thing, he may send his contribution through a public herbarium. Many university and museum herbaria are sadly lacking in modern material of our changing flora, and their content of newly-described species is largely a matter of chance. To them the Exchange Section offers an opportunity to expand and keep up-to-date. It is noteworthy that three or four public herbaria are regular contributors now, and others are invited to consider whether they could not mutually benefit through the Exchange.

What can the collector who wants authentic material but is not himself an expert, offer in return? For many years now, interest in and knowledge of critical groups on the part of amateur botanists, and especially those in the provinces, has been waning. This was not surprising, for information on these groups was scattered through an ever-growing volume of original literature, often difficult to correlate and only available in a few big libraries. The publication of Clapham, Tutin and Warburg's new *Flora of the British Isles* has changed all this, and puts into everybody's hands the means to identify plants which for too long have been the purview of a few experts. A specialist's time is often preoccupied, and he relies to an extent not always realised upon the amateur to supply material from areas where he has no opportunity to explore himself. Interesting aliens and hybrids, too, are acceptable material, and turn up at unexpected times and places. Hybrids should if possible be accompanied by specimens of the putative parents. The *Flora* will also suggest many other items which are unknown to or misunderstood by the majority of botanists. However, indiscriminate submission of the commonest species of a genus, merely because that genus happens to be critical, is not helpful. An apparently common plant may be of particular interest in a particular spot (*e.g.*, for peculiarities of habitat or distribution), but if so it should be accompanied by a note giving details.

Material from abroad is also eligible, if it has a definite bearing upon the study of the British flora. Foreign examples of critical British forms, related plants, and authentic examples of plants doubtfully reported as British, are especially welcome. The opportunity is thus open for herbaria abroad to acquire British specimens by exchange.

To sum up, acceptable material may be classified as: critical species or subspecies, (*a*) from experts, illustrating new, little-known, or misunderstood forms, (*b*) from general collectors, illustrating distribution and providing material for discussion and reference; unusual varieties; geographical and ecological variants; other material illustrating current taxonomic or phytogeographical work; new, unusual, or little-known aliens; foreign material for comparison with British. About 10-15 sheets is at the moment the most suitable number per gathering.

To turn now to affairs of the present season, as already said there has been a great improvement both in quantity and quality this year, but the number of individuals contributing is still too small. One note of tragedy has been the passing of Mr. F. Rilstone shortly after he had

sent in his splendid contribution, including a further set of Cornish *Rubi*. Mr. R. A. Graham generously presented a set of *Mentha*, which is the type of specialist's material so much needed. As a consequence of these two circumstances, the one so sad and the other so pleasant, contributors will on the average have received more specimens than they submitted. Mention should also be made of the fine set of *Alchemilla* sent by Dr. Walters on behalf of the Cambridge University herbarium. Some good sets of *Polygonum*, *Salix*, and grasses have also been contributed, but only two *Carices* were sent in, and no *Hieracia* at all. Other neglected genera such as *Potamogeton*, *Chenopodium*, *Ranunculus*, *Rosa*, *Medicago*, *Callitriche*, *Epilobium*, to name only a few, were absent or poorly represented. The standard of preparation of specimens was as usual good. The Distributor appeals to members, however, to observe the rules a little more strictly so as to make the distribution easier and quicker. At present rules B.2, B.5, B.7, and the advertised last date for sending parcels, are honoured more in the breach than in the observance. Our thanks are due to the referees, Messrs. Ash, Hubbard, Jowett, Lousley, Meikle, Nelmes, Sandwith, Airy Shaw, Wade, and Wallace, and Drs. Melderis, Walters, and Warburg, who have gone to much trouble in examining and commenting on the specimens, and to all those contributing for their share in a most successful exchange. The next season will show whether the Section has really turned the corner, and members are urged to give it all the support and help they can.

D. P. YOUNG.

Sanderstead, April 1953.

LIST OF PARCELS RECEIVED

	Gatherings.	Sheets.	Duplicates.
F. W. Adams	1	20	
Botany School, Cambridge ...	7	74	
U. K. Duncan	2	19	
E. S. Edees	4	50	
R. A. Graham	7	59	
J. D. Grose	12	114	
J. E. Lousley	4	54	1
C. W. Muirhead	5	48	8
Dept. of Agriculture, Ottawa ...	4	60	
F. Rilstone	12	112	
E. L. Swann	11	111	
National Museum of Wales ...	1	9	
E. C. Wallace	6	51	13
D. P. Young	7	83	29
Surplus from 1951 distribution			70
	83	864	121

(Records of non-British material are enclosed in square brackets. Plants not on the current British list are not included.)

Fumaria muralis Sonder ssp. *Boraei* (Jord.) Pugsl. 57, [S.W. York]; abundant on cultivated land near Dore, Sheffield (Grid Ref. 43/3282), September 30th 1952.—F. W. ADAMS. "All correctly named."—N. Y. SANDWITH.

Nasturtium officinale R. Br. × *microphyllum* (Boenn.) Rchb. 39, Stafford; Springpool Wood, Whitmore, July 4th 1952 (Ref. No. 8815).—E. S. EDEES. "Characteristic material of the hybrid."—H. K. AIRY SHAW.

Rorippa austriaca (Cr.) Besser. 17, Surrey; railway embankment, South Croydon (Grid Ref. 51/3263), June 5th 1952 (Ref. No. 4378). Has persisted here for at least 15 years, although mown down annually. —D. P. YOUNG. "Correct."—R. D. MEIKLE.

Cardamine polemonioides Rouy. 59, S. Lancashire; wet peaty dune slack near Ainsdale, June 18th 1952.—D. E. ALLEN, comm. BOTANY SCHOOL, CAMBRIDGE. "This is the northern, subarctic species of mountain rills and lowland bogs. The specimens distributed grew in peat of strongly alkaline reaction. Unfortunately, lowland populations of this species are usually involved in extensive hybridisation with *C. pratensis* L., and pure specimens are rarely to be found. In consequence, the present gathering is somewhat mixed. To avoid endangering its survival, only about ten specimens of reasonably pure *C. polemonioides* could be included; the rest are introgressive types showing various tendencies in the direction of a local form of *C. pratensis* which also grows on these dunes. The population was studied biometrically and stem height proved to be genetically determined. Pure *C. polemonioides* has a stem which is only 9-11 cm. high, and the flowers are white and rather large."—D. E. ALLEN.

Thlaspi alliaceum L. 15, E. Kent; abundant in an arable field, Ripper's Cross, Hothfield, May 4th 1952 (Ref. No. 5205041). This alien was recorded from here in May 1923 (*J. Min. Agric.*, **30**, 535-8) and refound by Dr. E. Scott. On the B.S.B.I. Field Meeting on April 6th 1952 it was seen in abundance in flower and early fruit, and members may be glad to have ripe material to go with gatherings made that day. Further details will be found in the Report of the Conference.—J. E. LOUSLEY.

Sagina ciliata Fr. 17, Surrey; bare spots amongst thin turf on sandy heathland, Wisley Common (Grid Ref. 51/0758), June 15th 1952 (Ref. No. 4396). This species seems to be characteristic of natural habitats such as heathy or rocky thin turf.—D. P. YOUNG.

Sagina filicaulis Jord. 17, Surrey; gravel paths, Great Burgh, Epsom Downs (Grid Ref. 51/2358), September 16th 1951 (Ref. No.

4269). This species is much confused with *S. apetala* L. and *ciliata* Fr., and is very much more common than records indicate. It seems to be characteristic of artificial habitats such as footpaths and gravel pits.—D. P. YOUNG.

Geranium endressii J. Gay. 90, Angus; naturalised by roadside for over 30 years, near Letham Grange, Arbroath, July 13th 1952.—U. K. DUNCAN. "Yes, this is true *G. endressii* and not the hybrid with *G. versicolor* L. which is often confused with it in this country."—E. F. WARBURG.

Oxalis stricta L. 44, Carmarthen; garden weed, Nantymwyn, Rhandirmwyn, August 13th 1952.—I. M. VAUGHAN, comm. DEPT. OF BOTANY, NATIONAL MUSEUM OF WALES. "This is *O. stricta* of British floras and the B.P.I., but most authorities agree that it is not Linnaeus' plant. It is better called *O. europaea* Jord. The present gathering has almost glabrous stems and adpressed pubescence on the pedicels, hence it comes under what Wiegand regards as the typical form."—D. P. YOUNG.

Trifolium hybridum L., approaching *T. elegans* Savi. 17, Surrey; Ham pits (Grid Ref. 51/1672), June 14th 1952 (Ref. No. 4388). This plant has the prostrate habit and small pink flowers of *T. elegans*, but has not the requisite solid stems nor the higher number of veins in the leaflet for that species, and must, I think, come under *T. hybridum*.—D. P. YOUNG. "I agree with Dr. Young that these plants are intermediate between *T. hybridum* L. and *T. elegans* Savi, and on balance perhaps better under the former than the latter."—J. E. LOUSLEY.

Trifolium angustifolium L. 28, W. Norfolk; garden-grown from a fruiting head found in a chicken-run at Westacre, June 1952 (Ref. No. 2336).—E. L. SWANN, conf. J. E. LOUSLEY.

Rubus stanneus Bart. & Ridd. 1, W. Cornwall; Lambourne, Perranzabuloe, July 23rd 1952.—F. RILSTONE.

Rubus egregius Focke. 70, Cumberland; roadside between the bridge and the ferry, Wetheral, July 18th 1952 (Ref. No. 226.52). Inflorescence glandular; flowers white to pale lavender; filaments white; non-flowering stems erect.—C. W. MUIRHEAD, det. W. C. R. WATSON.

Rubus cryptadenes Sudre. 1, W. Cornwall; Lambriggan, Perranzabuloe, July 24th (panicles), August 19th 1952 (stem pieces).—F. RILSTONE.

Rubus griseoviridis Bart. & Ridd. 1, W. Cornwall; Lambourne, Perranzabuloe, July 23rd 1952.—F. RILSTONE. See *Watsonia*, **2**, 156 (1952).

Rubus pydarensis Rilst. 1, W. Cornwall; Ventonvase, Perranzabuloe, July 23rd 1952.—F. RILSTONE. See *Watsonia*, **2**, 155 (1952).

Rubus rilstonei Bart. & Ridd. 1, W. Cornwall; Lambriggan, Perranzabuloe, July 21st 1952.—F. RILSTONE.

Rubus rosaceus Wh. & N. 1, W. Cornwall; Lambourne Hill, Perranzabuloe, July 12th 1952.—F. RILSTONE.

Fragaria × *ananassa* Duchesne. 8, S. Wiltshire; railway bank near Beechingstoke, May 28th 1952 (Ref. No. 6217).—J. D. GROSE, det. R. D. MEIKLE.

Alchemilla minor Huds. H29, Leitrim; rocky knoll (limestone grassland) and grazed limestone pasture below cliff, O'Rourke's Table, near Dromahair, August 28th 1952 (Ref. Nos. 52/280, 281).—S. M. WALTERS, comm. BOTANY SCHOOL, CAMBRIDGE.

Alchemilla acutiloba Opiz. 66, Durham; roadside near Folly House, near Middleton-in-Teesdale (Grid Ref. 45/025236), May 24th 1952.—S. M. WALTERS, comm. BOTANY SCHOOL, CAMBRIDGE.

Alchemilla monticola Opiz. 66, Durham; roadside near Woodlands, west of Bishop Auckland (Grid. Ref. 45/061266), May 25th 1952.—S. M. WALTERS, comm. BOTANY SCHOOL, CAMBRIDGE.

Alchemilla subcrenata Buser. 66, Durham; hay meadow, Upper Teesdale, May 24th 1952.—S. M. WALTERS, comm. BOTANY SCHOOL, CAMBRIDGE. See *Watsonia*, **2**, 277 (1952).

Alchemilla glomerulans Buser. 66, Durham; laneside above Middleton-Newbiggin road (Grid Ref. 35/929270), May 24th 1952.—S. M. WALTERS, comm. BOTANY SCHOOL, CAMBRIDGE.

Epilobium adenocaulon Hausskn. × *parviflorum* Schreb. ("*E. adenocaulon* Hausskn. × *hirsutum* L."). 28, W. Norfolk; gravel pit, Runcton Holme, July 30th 1952 (Ref. No. 2335). The first-named parent has been recorded for the first time in W. Norfolk this year although it appears to be exceedingly common, especially in damp woods, gardens, and gravel pits if water is present. It frequently grows with *E. montanum* and hybrids are common. The present hybrid does not appear to be so widespread.—E. L. SWANN. "In my opinion all these plants are undoubtedly good specimens of *Epilobium adenocaulon* × *parviflorum*. It is common where the parents are present and may be readily recognised by its intermediate stigma, mostly abortive seeds, and a pubescence in the inflorescence of mainly patent hairs; not with ascending hairs as with *Epilobium adenocaulon* × *obscurum*."—G. M. ASH.

Circaea intermedia Ehrh. 39, Stafford; Star Wood, Oakamoor, July 6th 1952 (Ref. No. 8812).—E. S. EDEES. "Correctly named. Most of these plants are more robust and with larger flowers than I commonly find in the field, in Scotland especially. There is some variability in

this gathering shown in the amount of branching. A few stems are simple, now leafless below; whilst others are copiously branched, with some lateral inflorescences well developed."—E. C. WALLACE.

Senecio inaequidens DC.? 30, Bedford; grown at Streatham from material collected at Biggleswade Railway Sidings in October 1951, and pressed July 13th 1952 (Ref. No. 5110211). In the autumn of 1951 Dr. J. G. Dony found alien *Senecios* in several places in Bedfordshire and especially at Ampthill and Biggleswade Railway Sidings. From the latter place I collected two small roots which were planted in my garden, and a third plant was grown from material shown at the 1951 Exhibition Meeting from the same locality and which rooted in water. It was soon evident that the three plants differed considerably. The present plant (5110211) was extremely vigorous, and rapidly grew into a bush about a metre across. The habit was sprawling and the leaves glaucous and intermediate in width between the other two. It commenced to flower in June and bloomed freely until November. Abundant seed was produced and germinated at once, so that by the autumn there were many hundreds of seedlings scattered over the garden and about 10-15 cm. in height. The second (5110162; see below) was far less vigorous. The leaves were bright green, very narrow, and the stems erect, and reddish at the base. It commenced to flower in July, but flowers were produced very sparingly and frequently there were only two or three on a stem—they were about 20 mm. in diameter. I am not aware that any seedlings arose from this plant. The third (5110161; not distributed) formed a large sprawling bush. The leaves were a dull green and often amplexicaul, the base being sometimes as much as 15 mm. wide. The flowers were larger (c. 27 mm. diameter) and opened late and very sparingly. It was only possible to collect a few sheets of this before frost prevented further buds from opening. In spite of the considerable differences between the three plants they may well all be forms of the same polymorphic species, and from the associated wool aliens this is most likely to come from Australia or South Africa. 5110211 agrees well with the plant illustrated as *Senecio lautus* (Sol. ex Forster) A. Richard in Hayward & Druce, 1919, *Adventive Flora of Tweedside*, 139-142, and with material distributed from Tweedside (*e.g.*, in Herb. Mus. Brit.). But it seems clear that it is not this Australian species, and is probably the South African *S. inaequidens* DC. My plants survived the winter with very little protection, and experience in the garden suggests that it might well become naturalised. It appeared again in arable fields in Bedfordshire in 1952.—J. E. LOUSLEY.

Senecio inaequidens DC.? 30, Bedford; grown at Streatham, Surrey, from a plant found at Biggleswade railway sidings, October 10th 1952 (Ref. No. 5110162). See notes to last gathering.—J. E. LOUSLEY.

Anagallis arvensis L. ssp. *foemina* (Mill.) Schinz & Thell. 8, S. Wiltshire; stubble field, Oak Hill, September 3rd 1952 (Ref. No. 6238).—J. D. GROSE, det. E. M. MARSDEN-JONES.

Ligustrum ovalifolium Hassk. 1, W. Cornwall; Lambourne Hill, Perranzabuloe, July 17th 1952. See *Watsonia*, **2**, 286-287 (1952).—F. RILSTONE, conf. E. F. WARBURG.

Symphytum orientale L. 16, W. Kent; roadside verge, adjoining a shrubbery but actual origin not known, Ightham (Grid Ref. 51/5868), May 18th 1952 (Ref. No. 4366).—D. P. YOUNG. "Correct."—A. E. WADE.

Symphytum peregrinum Ledeb. 14, E. Sussex; amongst ruins of cottages, Bishopstone, May 31st 1952 (Ref. No. 4369).—D. P. YOUNG. "Correct."—A. E. WADE.

Solanum pseudo-capsicum L. 21, Middlesex; extending for about 4 yards under the wall of St. Bernard's Hospital, canal bank, near Windmill Bridge, Hanwell, August 18th 1945 (Ref. No. 4508183). When found by Mrs. J. M. B. King in 1945 this plant was already well established and may have been there for several years. It still persists. The material is not typical of *S. pseudo-capsicum* but this may possibly be due to the effect of growing out of doors in our English climate.—J. E. LOUSLEY.

(*Euphrasia nemorosa* (Pers.) H. Mart. emend. Löhr.) 1, W. Cornwall; waste heath ground by Perranzabuloe church, August 21st 1952. Corolla lip white.—F. RILSTONE. "This gathering does not appear to me to be homogeneous. Some plants without a main stem, with alternate bracts, and an emarginate capsule appear to be *E. confusa* Pugsl., others, with a main stem, stiffly erect habit, opposite bracts and the capsule less emarginate, *E. nemorosa*, and others hybrids between the two species."—E. F. WARBURG.

Euphrasia nemorosa (Pers.) H. Mart. emend. Löhr var. *transiens* Pugsl. 1, W. Cornwall; Carnkief, Perranzabuloe, August 20th 1952. Corolla lip purple. A widespread plant in Perranzabuloe, always on damp or wet peaty ground. In a wet season it is much more robust with larger bracts. I first distributed it through the Botanical Exchange Club in 1918 as eglandular *E. brevipila*, when Pearsall and Lumb inclined to agree but Bucknall, Wheldon, Pugsley, Barton, and Drabble thought it was *E. kerneri*. In 1925 I distributed it through the Watson Botanical Exchange Club as *E. Kerneri*, when Pearsall accepted the name but Pugsley said, "*E. nemorosa*, the foliage of the smaller specimens resembling that of *E. confusa*."—F. RILSTONE. "Yes, undoubtedly *E. nemorosa* (Pers.) H. Mart. emend. Löhr. It may, perhaps, as Mr. Riltone suggests, be put under var. *transiens Pugsl.*"—E. F. WARBURG.

Rhinanthus spadiceus Wilmott. 92, Aberdeen; among heather, Lochnagar, July 21st 1952.—U. K. DUNCAN. "Yes, good characteristic material. The flower colour should, however, be noted on the labels."—E. F. WARBURG.

Mentha × *niliaca* Jacq. var. *supida* (Tausch) Briq. (*M. rotundifolia* (L.) Huds. × *longifolia* (L.) Huds.). 90, Forfar; grown for three years in my garden at Northwood, Middlesex, originally from Glamis Bridge, August 15th 1952. I have some doubts whether the name applies correctly to this mint.—R. A. GRAHAM.

Mentha × *niliaca* Jacq. var. *villosa* (Huds.) Dr. 91, Kincardine; grown at Northwood, Middlesex, originally from a ditch near the Sheriff's Kettle, near Garvock, August 15th 1952. This mint resembles *M. longifolia* (L.) Huds., but the leaves are much broader and more rugose with sunken veins.—R. A. GRAHAM.

Mentha longifolia (L.) Huds. 15, E. Kent; grown at Northwood, Middlesex, originally from a ditch at Willesborough Lees near Ashford, August 15th 1952. This is probably the true wild horse-mint, and the *Mentha villosa prima* of Sole.—R. A. GRAHAM.

Mentha × *palustris* Sole. 37, Worcester; cultivated in my garden at Northwood, Middlesex, originally from Alfrick, August 16th 1952. These examples show an inflorescence more capitate than spicate. The two different forms of the inflorescence are found in this Worcs. locality, and the material in my garden has not changed in any way during two years.—R. A. GRAHAM.

Mentha spicata L. emend. Huds. 17, Surrey; cultivated at Northwood, Middlesex, originally from a garden at Morden, August 16th 1952. This form is unusual in that the leaves are clearly, though shortly, stalked. Normally they are sessile or almost so. In this form the spicate inflorescence is well shown.—R. A. GRAHAM.

Mentha spicata L. emend. Huds. 91, Kincardine; from a garden, where it was grown for mint sauce, at St Cyrus (near Montrose), September 15th 1952. This form is somewhat unusual in that the inflorescence is rather short and broad, so that the appearance is more elongate-capitate rather than the more usual spicate.—R. A. GRAHAM.

Mentha × *verticillata* L. var. *paludosa* (Sole) Dr. 91, Kincardine; in a roadside swamp about a half-mile east of the Feughside Hotel (near Banchory), September 10th 1952. In this station this variety is very constant over the last two years, all examples having the subspicate inflorescence—the chief character for the variety.—R. A. GRAHAM.

Polygonum aviculare L. 7, N. Wiltshire; cultivated field, Little Hinton, September 14th 1952 (Ref. No. 6250).—J. D. GROSE. "Typical specimens of *P. aviculare*. Some of the specimens show a slight infection of *Uromyces polygoni* Fckl."—D. W. JOWETT.

Polygonum aviculare L. ("*P.* ———"). 8, S. Wiltshire; stubble, Oak Hill, September 3rd 1952 (Ref. No. 6237). Perhaps a narrow-leaved

form of *P. aviculare*.—J. D. GROSE. "I consider this to be *P. aviculare* L., although some specimens look very like *P. rurivagum*."—D. W. JOWETT.

Polygonum rurivagum Jord. 7, N. Wiltshire; stubble, Bishopstone Downs, September 5th 1952 (Ref. No. 6239). This species is not always easily distinguished from narrow-leaved forms of *P. aviculare*. The habit, however, is characteristic. Rouy (*Flore de France*, 12, 114) states of *P. rurivagum* "tiges . . . flexueuses en zigzag"—a description which aptly applies to the present gathering.—J. D. GROSE. "Certainly *P. rurivagum*, showing the characteristic long ochreae and conspicuous veins on the underside of the leaf."—D. W. JOWETT.

Polygonum aequale Lindm. 8, S. Wiltshire; timber yard, Nursteed, August 27th 1952 (Ref. No. 6235). Narrow-leaved form.—J. D. GROSE. "Yes, *P. aequale*. I wonder if this is the sort of material C. E. Moss would have described as subvar. *parvulum*. The specimens are strongly infected with *Uromyces polygoni* Fckl. Some diseased leaves appear to be completely killed. Smith (1945, *J. Ecol.*, **33**, 120) states that the fungus has no ecological significance."—D. W. JOWETT.

Polygonum aequale Lindm. 8, S. Wiltshire; track near Bryth Copse, September 3rd 1952 (Ref. No. 6236). A form induced by partial burial in trampling; cf. No. 6262.—J. D. GROSE. "*P. aequale*. I have found a lot of material of this type and do not consider it at all atypical. The nuts have two convex sides and one concave. It is commoner to find *P. aequale* with nuts having one convex and two concave sides and most floras describe the nut in this way. It is interesting to note that Lindman, in his own key (1918, *Svensk Fanerogamflora*, 1st ed., pp. 212-219, Stockholm), describes them as having two convex sides, the third concave."—D. W. JOWETT.

Polygonum aequale Lindm. 7, N. Wiltshire; Bishopstone Downs, September 5th 1952 (Ref. No. 6240). An elongated form of a steep slope induced by complete burial after a heavy storm. The habit of *P. aviculare* growing with it was identical.—J. D. GROSE. "The nuts are immature but I should say it is *P. aequale*."—D. W. JOWETT.

Polygonum aequale Lindm. 7, N. Wiltshire; damp ground, Bishopstone Downs, September 5th 1952 (Ref. No. 6241). A luxuriant form induced by moist conditions.—J. D. GROSE. "Very luxuriant but shows most of the characters of *P. aequale*. The undersides of a number of leaves bear a small growth of *Erysiphe polygoni* DC."—D. W. JOWETT.

Polygonum aequale Lindm. 8, S. Wiltshire; track, Casterley Camp, September 29th 1952 (Ref. No. 6262). A form induced by severe overcrowding.—J. D. GROSE. "Yes, very nice specimens of *P. aequale*."—D. W. JOWETT.

Polygonum aequale Lindm.? ("*P.* ———"). 8, S. Wiltshire; damp ground near Poulshot, September 7th 1952 (Ref. No. 6242). As with No. 6243, some fruits are shining. It appears to be an intermediate between *P. aequale* and *calcatum*.—J. D. GROSE. "The nuts, with two concave and one convex face, are characteristic of *P. aequale*, but otherwise it is very like *P. calcatum*. It is possible that these specimens are of the undescribed hybrid *P. aequale*×*calcatum* which Moss (1914, *Camb. Brit. Fl.*, **2**, 122-127) says occurs in three or four British counties."—D. W. JOWETT.

Polygonum calcatum Lindm. 8, S. Wiltshire; Poulshot, September 7th 1952 (Ref. No. 6243). Fruit 2 mm., dull or shining, often exserted, sometimes with one face reduced to a groove.—J. D. GROSE. "It is *P. calcatum*. The material is very similar to some I obtained from Arthur's Seat in 1951. I do not know why it is usual for most floras to quote Arthur's Seat as the only locality for this species. I have seen material from vice-counties 12, 17 and 16 which I am satisfied is *P. calcatum*. Including the present gathering I thus have a record of *P. calcatum* in four, adjacent, southern vice-counties."—D. W. JOWETT.

Quercus petraea (Mattuschka) Liebl. 1, W. Cornwall; Lambriggan, Perranzabuloe, August 13th 1952. With sessile acorns.—F. RILSTONE.

Quercus petraea (Mattuschka) Liebl. 1, W. Cornwall; Lambriggan, Perranzabuloe, August 13th 1952. With acorns slightly stalked.—F. RILSTONE. "Quite common."—E. F. WARBURG.

Salix ? *alba* L. var. *vitellina* (L.) Stokes × *fragilis* L. sec. Smith (*Eng. Bot.*), ♂. 28, W. Norfolk; disused willow-carr, Reffley Marshes, King's Lynn, April 21st and September 27th 1950 (Ref. No. 2156). Twigs very brittle, yellowish or salmon-coloured with a shining, polished surface—darker coloured in the female. These dry black, especially the year-old fertile twigs. Leaves very long and narrow. Catkins very long (to 7 cm.), curved, narrow and tapering, whereas the catkins of *S. fragilis* average about 5 cm. The catkin-scales of *S. fragilis* show three veins prominent under the hand-lens and these are absent in this plant. Stamens variable in number, (2-) 3-4, hairy and connate at the base. Pollen-grains somewhat irregular in size. This carr also contains the following *Salix* species and hybrids:—*S. viminalis* L., *S. triandra* L., *S. Russelliana* Sm., *S. fragilis* L. sec. Sm., and *S. triandra* × *S. viminalis*.—E. L. SWANN. "The parentage suggested is probably correct; the whole *fragilis* complex is in urgent need of revision."—R. D. MEIKLE.

Salix ? *alba* L. var. *vitellina* (L.) Stokes × *fragilis* L. sec. Smith (*Eng. Bot.*), ♀. 28, W. Norfolk; in old disused willow-carr, Reffley Marshes, King's Lynn, April 21st and September 27th 1950 (Ref. No. 1743).—E. L. SWANN. "See remarks under male specimens. These

fragilis forms and hybrids are planted, and have been propagated vegetatively, so that they represent ramets of a single clone."—R. D. MEIKLE.

Salix purpurea L. × *viminalis* L., ♂. 70, Cumberland; R. Eden below Etterby Scaur, Carlisle, April 17th (Ref. No. 22a.52) and June 5th 1952 (22b.52).—C. W. MUIRHEAD, conf. R. D. MEIKLE.

Salix cinerea L. (*S. aquatica* Sm.). 28, W. Norfolk; fen carr, by the Ketlam Brook and River Nar at Pentney, April 4th and September 9th 1952 (Ref. No. 2337). Sir J. E. Smith was familiar with the Norfolk willows. In his *English Flora*, iv, 164 (1828), he is writing on their specific definitions and states: "Full thirty years have I laboured at this task, ten of them under the instructive auspices of my late friend Mr. Crowe." Crowe had estates in Norfolk. Smith described his *Salix aquatica* as extremely common in wet habitats, with "leaves about two inches in length . . . serrated about the middle and towards the extremity; narrowed at the base . . . . of a dull greyish-green . . . glaucous and minutely downy underneath". These characters are typical of a West Norfolk willow abundant in fens, carrs, and by river-sides. It appears to differ from *S. atrocinerea* Brot., in that the reddish-brown hairs of Brotero's Portuguese plant are absent. Although we have some sallows with this characteristic indumentum most of our West Norfolk plants appear to approach the descriptions of the continental *S. cinerea* but differing mainly in the quantity of the greyish-green indumentum. F. Buchanan White in his *Revision of the British Willows* (1889) suggested that there might well be in Britain an insular form of *S. cinerea* and the differences between it and the continental plant would become greater by separation. He was not familiar with *S. atrocinerea*, as he had seen but one plant, although he noticed a difference in the male catkin of that plant compared with the British plants of *S. cinerea*. In their *Mon. des Saules de France*, A. and E.-G. Camus describe *S. atrocinerea* Brot. as possessing "étamines assez longuement soudées dans tous les échantillons que nous avons vus". Manifestly our plant does not have connate stamens. E. F. Linton in *The British Willows* (1913) treated *S. atrocinerea* as conspecific with *S. cinerea* L. About 1932 J. Fraser considered the British plant to be *S. atrocinerea* Brot., and stated: "*S. cinerea* L. is not British". In the new *Flora of the British Isles* these two species are segregated, but the differences as observed in the field in this vice-county appear to be largely relative differences and are rarely satisfactory.—E. L. SWANN. "I am in complete agreement with Mr. Swann's comments. The specimens do represent *S. cinerea* L., but *S. atrocinerea* Brot. is scarcely more than a variety of this. Both 'species' are variable and the British *cinerea* is seldom so well-marked as Continental material, while *S. atrocinerea* produces variants which approach *cinerea*. No doubt the two plants are distinct, but not necessarily as species."—R. D. MEIKLE.

Salix nigricans Sm., ♂. 70, Cumberland; marshy ground on railway-line between Kirkandrews station and Burgh-by-Sands, May 5th (Ref. No. 28.52) and October 10th 1952 (292.52).—C. W. MUIRHEAD. "A mixture here: the bulk of the material is *S. nigricans* Sm., but some male flowering shoots of *S. atrocinerea* Brot. are included. I have labelled these latter."—R. D. MEIKLE. The pieces so labelled by Mr. Meikle were not distributed.—DISTRIBUTOR.

Salix nigricans Sm., ♀. 70, Cumberland; banks of R. Ellen below Ellen Villa, Aspatria, May 23rd 1952 (Ref. No. 56.52).—C. W. MUIRHEAD. "Pubescent capsules and shortly divided stigma-lobes suggest that this is "impure" *nigricans*, probably tainted with *S. Caprea* L. or *S. atrocinerea* Brot. Pure *nigricans* is rarely collected."—R. D. MEIKLE.

Salix phylicifolia L. 70, Cumberland; banks of R. South Tyne, below Garrigill, Alston, May 27th 1951 (Ref. No. 18.51) and September 27th 1952 (277.52).—C. W. MUIRHEAD. "Correct."—R. D. MEIKLE.

Luzula × *Borreri* Bromf. (*pilosa* (L.) Willd. × *forsteri* (Sm.) DC.). 17, Surrey; lane bank, Vann Woods, Ockley, May 4th 1952 (Ref. No. 7054).—A. MELDERIS and E. C. WALLACE.

Ruppia maritima L. 105, W. Ross; pools on the salt marsh at Inverlael, August 8th 1952 (Ref. No. 7051).—R. MACKECHNIE and E. C. WALLACE.

Eleocharis uniglumis (Link) Schult. 105, W. Ross; by brackish pools at head of Loch Broom, Inverlael, August 8th 1952 (Ref. No. 7026).—R. MACKECHNIE and E. C. WALLACE. "Yes."—S. M. WALTERS.

Carex pendula L. 39, Stafford; Springpool Wood, Whitmore, July 4th 1952 (Ref. No. 8814).—E. S. EDEES. "Correct."—E. NELMES.

Carex strigosa Huds. 39, Stafford; Springpool Wood, Whitmore, July 4th 1952 (Ref. No. 8813).—E. S. EDEES. "Correct."—E. NELMES.

Setaria viridis (L.) Beauv. 17, Surrey; allotment plot on sandy soil, with a little *S. verticillata* (L.) Beauv., Milford (Grid Ref. 41/9442), August 23rd 1952 (Ref. No. 4575).—D. P. YOUNG, conf. C. E. HUBBARD.

Phleum phleoides (L.) Karst. 28, W. Norfolk; chalk heath, Devil's Dyke, Cranwich, June 22nd 1952 (Ref. No. 2341).—E. L. SWANN. "*P. phleoides* L."—C. E. HUBBARD.

Phleum phleoides (L.) Karst. subvar. *blepharodes* (A. & G.) A. & G. ex Suess. 28, W. Norfolk; chalk heath, Devil's Dyke, Cranwich, June 22nd 1952 (Ref. No. 2342). This uncommon perennial grass, native of East Anglia, was so abundant in this station that it was not possible to avoid treading it down in passing through the small isolated heath.

The form with ciliate-keeled glumes ("subvar. *blepharodes*") appears to be the usual form in this vice-county whereas the scabrous-keeled plant is relatively scarce; as intermediates were met with the one scarcely deserves varietal rank.—E. L. SWANN. "The variant of *P. phleoides* with ciliate glumes, known as *P. boehmeri* subvar. *blepharodes* A. & G., *P. boehmeri* var. *blepharodes* (A. & G.) A. & G. ex Hegi, *P. phleoides* var. *blepharodes* (A. & G.) A. & G. ex Suess."—C. E. HUBBARD.

[*Agrostis scabra* Willd. Canada; N.W. Territories; disturbed sand by airstrip, fairly common, Fort Smith airport (60°00′ N., 111°53′ W.), July 12th 1950 (Ref. No. 4361).—W. J. CODY and C. C. LOAN, det. W. G. DORE, comm. DEPT. OF AGRICULTURE, OTTAWA.]

Poa palustris L. 31, Huntingdon; abundant in "Copper Field", Wood Walton Fen, July 16th 1952.—S. M. WALTERS, comm. BOTANY SCHOOL, CAMBRIDGE. "All *P. palustris*."—C. E. HUBBARD.

Puccinellia fasciculata (Torr.) Bicknell. 18, S. Essex; on clay by the river wall, Althorne, June 14th 1952 (Ref. No. 7053).—E. C. WALLACE. "All *P. fasciculata*."—C. E. HUBBARD.

Puccinellia rupestris (With.) Fern. & Weath. 18, S. Essex; bare clay by river wall, Althorne, June 14th 1952 (Ref. No. 7052).—E. C. WALLACE. "All *P. rupestris*."—C. E. HUBBARD.

Festuca altissima All. 105, W. Ross; rock ledges in ravine of Falls of Measach, Braemore, July 31st 1952 (Ref. No. 7018).—R. MACKECHNIE and E. C. WALLACE. "All *F. altissima*."—C. E. HUBBARD.

Festuca rubra L. var. *barbata* (Schrank) Richt. 28, W. Norfolk; shingle beach, Wolferton, July 6th 1952 (Ref. No. 2330).—E. L. SWANN. "I agree."—C. E. HUBBARD.

Festuca rubra L. var. *grandiflora* (Hack.). 28, W. Norfolk; shingle beach, Wolferton, July 6th 1952 (Ref. No. 2331).—E. L. SWANN. "*F. rubra* L. var. *grandiflora* (Hack.)."—C. E. HUBBARD.

Lolium perenne L. var. *longiglume* Grantzow (*Fl. Uckerm.*). 28, W. Norfolk; disused shingle-pit margins, Wolferton beach, July 6th 1952 (Ref. No. 2334).—E. L. SWANN. "The variant known as *L. perenne* L. var. *longiglume* Grantz. or *L. perenne* L. f. *longiglume* (Grantz.) Junge."—C. E. HUBBARD.

Agropyron junceiforme (A. & D. Löve) A. & D. Löve × *pungens* (Pers.) Roem. & Schult. ("*A. junceum* (L.) Beauv. × *pungens* (Pers.) Roem. & Schult."). 28, W. Norfolk; storm-shelf of shingle-bank, Wolferton beach, July 6th 1952 (Ref. No. 2337).—E. L. SWANN. "Yes; but the first parent is better referred to *A. junceiforme* (A. & D. Löve) A. & D. Löve, true *A. junceum* being the southern European race."—A MELDERIS.

Thuja plicata Lamb. (=*T. lobbii*). 1, W. Cornwall; a planted tree, Lambourne Hill, Perranzabuloe, August 30th 1952. *T. plicata* is included in the new *Flora of the British Isles* (p. 65). My trees are so well in fruit this year that I am venturing to include a set of gatherings from them.—F. RILSTONE. "Yes."—E. F. WARBURG.

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Orchis latifolia. Vermeulen, Pugsley, Wilmott (1945)	1	6
TOPOGRAPHICAL		
Vice-counties. Wilmott (1941-42)	1	0
Notes on Flora of Scilly Isles & Lizard. Raven (1950)	0	6
Adaptation in Braunton Burrows. Wright (1932)	2	6
A List of Plants from the Isle of Wight. Drabble & Long (1931)	1	6
Flora of Surrey (Notes on). Druce (1931)	1	6
Additions and Corrections to the Comital Flora for Middlesex. Kent (1949)	2	0
Notes on the Flora of Kensington Gardens & Hyde Park. Kent (1950)	1	6
Berks. and Oxon. Brenan (1943-4)	1	6
Neighbourhood of Oxford. Brenan (1946-47)	1	6
Emendations to C. F. for Beds. Dony (1943-4)	1	6
Contribution to the Flora of Huntingdonshire. Dony (1950) ...	2	0
Plants of the Silurian Limestones on the West of the Malvern Hills. Day (1953)	1	0
Staffs., additions to C. F. Edees (1941-2)	1	0
List of Glamorgan Plants. Vachell (1934)	2	0
Notes on the Flora of Buxton and district. Hall (1939-40) ...	2	0
W. Sutherland (Lochinver). Wilmott and Campbell (1943-4) ...	1	0
Contribution to the Flora of W. Sutherland. McCallum Webster & Marler (1952)	1	6
Three Weeks' Botanising in Outer Hebrides. Campbell (1936)	2	0
Additions to Flora Zetlandica. Druce (1924)	2	0
Notes on the Vegetation of Zetland. Price (1928)	1	0
Flora of Foula. Turrill (1928)	1	6
Irish Plant Records. Webb (1952)	1	6
Botanising in Norway. Druce (1922)	1	0
Norway and Sweden. Druce (1925)	1	0
Le Lautaret. Druce (1926)	0	6
A Visit to the Canaries. Druce (1927)	0	6
Plants of the Cyprus Flora. Druce (1930)	1	0
Egypt and Palestine. Druce (1925)	1	0

REPRINTS FOR SALE (continued)

ALIENS

Adventive Flora of the Port of Cardiff and additions. Wade & Smith (1925 and 1926), each	1 0
Adventive Flora of the Port of Bristol. Sandwith (1932) ...	2 6
Adventive Flora of Burton-on-Trent. Curtis (1930)	1 6
Adventive Flora of Burton-on-Trent. Burges (1943-4)	1 0
Southampton Docks. Brenan (1945)	1 0
Flora of Bombed Sites in Canterbury. Kent (1951)	1 0
Flora of Bombed Sites in the City of London in 1944. Lousley (1943-44)	2 0

SYSTEMATIC

Extinct and Dubious Plants of Britain. Druce (1919)	3 6
Notes on British Batrachia. Pearsall (1921)	2 0
Identification and Distribution of the British Watercress Species. Howard & Lyon (1950)	1 6
Distribution of British Watercress Species. Howard & Lyon (1951)	0 6
Cakile edentula (Bigel.) Hook. in Britain. Allen (1952) ...	0 6
Viola odorata. Walters (1943-4)	1 0
Variations of Silene nutans L. in Great Britain. Hepper (1951)	1 0
Floral Variation in Stellaria Holostea L. Brenan & Lousley (1943-4)	1 0
British Brambles. Trower (1928)	3 6
Welhean Species of Rubus in Britain. Watson (1949)	2 0
Rubus Watsonii sp. nov. Mills (1949)	1 0
Rubus corylifolius var. purpureus Bab. Watson (1950) ...	1 0
Rubi from Dartmoor to the Land's End. Rilstone (1952) ...	1 0
Alchemilla vulgaris L. agg. in Britain. Walters (1949) ...	2 6
Alchemilla subcrenata Buser in Britain. Walters (1952) ...	0 6
Aphanes microcarpa (Boiss. et Reut.) Rothm. in Britain. Walters (1949)	1 0
Mossy Saxifrages of the British Isles. Webb (1951)	1 6
Australian Myriophyllum verrucosum Lindley in Britain. Brenan & Chapple (1949)	1 6
Artemisia Verlotorum Lamotte and its Occurrence in Britain. Brenan (1950)	2 6
Homogyne alpina in Scotland. Ribbons (1952)	0 6
Lapsana intermedia in Britain. Burtt. (1950)	1 0
Habitats & Distribution of Gentiana uliginosa. Lousley (1950)	1 0
Cuscuta europaea var. nefrens. Verdcourt (1945)	0 6
Cuscuta epithymum var. Trifolii Bab. Van Oostroom (1951) ...	1 0
Another British Rhinanthus with Pubescent Calyx. Wilmott (1949)	1 0
Scutellaria hastifolia in Britain. Pigott (1951)	1 0
Menthae Briquetianae. Fraser (1924)	2 6
Menthae Britannicae. Fraser (1926)	2 0
Notes on Mentha. Fraser (1930)	1 0
Mint Notes. Graham, I (1949), II (1950), each	1 0
Mint Notes IV. Graham (1951)	1 0
Koenigia islandica L. in Scotland. Raven (1952)	0 6
Rumex II. Lousley (1941-2)	2 0
Rumex cuneifolius and a new Hybrid. Lousley (1953)	1 0
Lines of Evolution and Geographical Distribution in Rumex Subgen. Lapathum. Rechinger (1949)	1 6
Ficus Carica L. Lousley (1946-7)	1 6
Key to the British Species of Salix. Rechinger (1949)	2 6

REPRINTS FOR SALE (continued)

Observations on some Scottish Willows. Rechinger (1950) ...	1	6
Salix calodendron Wimm. in Britain. Melkie (1952)	1	0
The Kenfig Epipactis. Thomas (1950)	2	0
Studies in the British Epipactis, I and II. Young (1949) ...	2	0
Studies in the British Epipactis, III. Young (1952)	2	6
Orchis maculata and O. Fuchsii. Druce (1923)	2	0
Orchis cruenta Müll. in the British Islands. Heslop-Harrison (1950)	2	0
Orchis Traunsteineri Saut. in the British Isles. Heslop-Harrison (1953)	2	0
Distribution and Ecology of Scheuchzeria palustris L. Sledge (1949)	2	0
Carex flava and C. muricata. Nelmes (1945).	1	0
Another Hybrid Carex from Ireland. Nelmes (1949)	1	0
A Mysterious Carex on Ben Lawers. Sandwith (1952) ...	0	6
Milium scabrum Merlet. Tutin (1950)	1	0
Avena strigosa. Marquand (1921)	1	0
British Fescues. Howarth (1946-47)	2	0
Roegneria Doniana (F. B. White) Meld. in Britain. Raven (1952)	1	0
Note on Species Pairs in the Gramineae. Tutin (1950)	1	0
Equisetum ramosissimum as a British Plant. Alston (1949) ...	1	6

MISCELLANEOUS

Evolution and Classification of Flowering Plants. Parkin (1926)	0	6
"Victoria regia"—the Emblem of the Society. Lousley (1951)	1	0