

BOTANICAL SOCIETY OF THE BRITISH ISLES

WELSH REGION BULLETIN

Editor: Brian Seddon, Ph.D.

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Cardiff, April, 1964

Officers of the Welsh Region

Chairman: Dr. J.P.Savidge, Dept. of Botany, University College of Wales,
Aberystwyth.

Vice-Chairman and Regional Representative on Council: Mrs. H.R.H.Vaughan, M.B.E.,
Nantymwyn, Rhandirmwyn, Llandoverly, Carm. s.

Regional Secretary: Dr. B.Seddon, Dept. of Botany, National Museum of Wales,
Cardiff.

Field Secretary: T.A.W.Davis, South Mallock, Haverfordwest, Pems.

Requests for information

Dr. J.P.Savidge would be grateful for information on the following:

1. Inland localities of Silene maritima (sea campion), other than those given in Welsh Flowering Plants and in Cardiganshire. Details of populations of Silene vulgaris with hairy leaves and stems.
2. Details and a small sample of seed from sand-dune forms of Viola tricolor, except in Anglesey and Cardiganshire.
3. Records and/or specimens of Callitriche spp. for Wales for the compilation of distribution maps. Records of C.platycarpa and C.obtusangula are particularly requested. Keys to the identification of Callitriche spp. can be supplied to those interested.

Bulletin 3

Bulletin 3 will be published at the beginning of September, 1964. Members are asked to send articles and other contributions for inclusion in Bulletin 3 to Dr. Savidge by 31st August.

Editorial

We start off this season with a very big new theme which is the result of recommendations made by your Committee, fully investigated by a special sub-committee and finally approved with the order to proceed. This theme is the projected publication of a book dealing with Plant Distribution in Wales. It is to be compiled on the basis of entirely fresh field-work and will provide an account of the vegetation of Wales. It will not attempt to catalogue plants or to list the places where they have been found but it will endeavour to describe the assemblages of plants which occupy different kinds of situations and conditions (habitats) and to relate their distribution in Wales to the landscape, geology, climate and so on. No such published work deals with Wales in a comprehensive manner and therefore our project should find a ready market as well as being a valuable co-operative endeavour.

A Note for "Squares"

It seems appropriate, with so much reference to "kilometre-squares" and "grid-squares", to offer a word of explanation to members who may not be familiar with their significance. At least it may make some other parts of this Bulletin more intelligible!

Open any current sheet of an Ordnance Survey map on the scale one inch to one mile and you will find it overlaid by a 'grid' of finely printed straight lines at uniform intervals, running across the map from edge to edge, both horizontally and vertically, every line being numbered in the margin. These lines enclose small squares each side of which measures one kilometre. Every tenth line is printed rather thicker and the thicker lines enclose squares whose sides measure ten kilometres in length. These are the "ten-kilometre squares"* which formed the units for mapping the occurrence of plants in the Society's Atlas of the British Flora. For mapping the distribution of selected plants within Wales a unit of one quarter of that area has been chosen: to arrive at this simply divide every 10 kilometre square into its four quadrants, each of which measures 5 km. X 5 km. These may be called 5 kilometre squares.

The mysterious "00" squares (page 3) refer to the small (one-kilometre) squares which occupy the bottom left-hand corner position of every 10 kilometre square. These are designated by numbers terminating in '0' e.g. 60/50, 70/30, etc. These form conveniently sized units for collecting information but are too small for mapping distributions. The records relating to these squares are, however, very suitable for statistical treatment.

* each 10 km. square occupies a separate map sheet in the series of Ordnance Survey maps published at the scale of $2\frac{1}{2}$ inches to one mile.

PLANT DISTRIBUTION IN WALES

by J.P. Savidge, Ph.D.

A proposal that the Welsh Region of the B.S.B.I. should initiate the publication of a book, dealing with various aspects of the distribution of plants in Wales, was made at the Committee Meeting held in October 1963. The book was envisaged as being a companion volume to Welsh Flowering Plants and would be written in a semi-popular style to cater for a wide readership public, but with certain specialised chapters for the benefit of students and the more experienced botanist.

The following account gives a brief summary of the aims and contents of the book with indications of how members of the Welsh Region can help in its compilation and production.

The book will be divided into two equal parts, the first half dealing with the various factors which influence the distribution of plants in Wales, while the second half will briefly describe the main habitats found in the Principality. Individual members of the Welsh Region will be asked to be responsible for the compilation and writing of each chapter (volunteers will be welcome!) and it is hoped that all members will help by supplying information to the authors. The contents of the book will cover many aspects of field botany in Wales and every member can render valuable assistance by collecting data over the next three or four years in whatever aspect interests him most among those listed below. It is thought that it will take at least three years to obtain sufficient data for most of the chapters, and a further year or two in writing up and checking on points of detail, etc. It is hoped that the final manuscript can be completed by the end of 1968. in which case it should be possible to publish the book by 1970. The provisional list of contents is:

Part 1

1. Geology, topography and landscape
2. Soils.
3. Climate and atmospheric pollution.
4. Influence of climate and soils on plant distribution in Wales.
5. Post-glacial history of the Welsh Flora.
6. Composition of the Welsh Flora.
7. Effects of Man and animals.

Part 2.

8. Plants of selected habitats: (including the following)

alpine, bogs, fens and lakes, moorlands, limestone, woodlands, mountain grassland, sand-dunes, salt-marshes, sea cliffs and headlands, islands, streams and rivers, canals, rocks, screes and craggs (non-calcareous), meadows, hedgerows and waysides.

The activities envisaged by the Welsh Region Committee for the next few years will be mainly designed to obtain information for the book. All the surveys will be conducted to enable certain chapters to be written using up-to-date information. Field meetings will be arranged on a similar basis: for instance, in 1964 the meetings are being held in limestone and sand-dune areas in order to help the authors collecting material on these habitats.

A scheme to try and show how the distribution of plants is related to soils, climate, altitude and other factors is being planned and a pilot survey will be carried out this summer. The main basis of this will be to list the plants occurring in one kilometre squares, making notes of the habitats occupied by the plants and the frequency of each species.

It is proposed to make lists for each '00' square on every $2\frac{1}{2}$ " to 1 mile O.S. map covering Wales. There are 216 of these and between them they should give a representative sample of the various plant communities in Wales. Each '00' square has a fairly narrow range of environments in which rainfall, temperature, snow-cover, number of ground frosts, soil, rocks and altitude are reasonably uniform. The data collected will be put onto punch-cards and from these cards it will be possible to find the range of conditions under which a certain species can be found in Wales, and if there are any differences between the distribution of a species in South Wales and North Wales. It is not possible to do this using the information collected for Atlas of the British Flora as the basic area of 100 sq. km. is too large, having within it considerable differences in relation to many of the factors which are important in determining plant distribution. Each '00' square will have to be visited several times, but each visit will only take a few hours as it should be quite easy to make a thorough survey of an area equivalent to about one-third sq. mile in a morning or afternoon. Furthermore, it should be possible to record up to about 95% of the species occurring within a square of this size whereas it is very difficult to record more than 85% of the species occurring in a full 100 sq. km. square. Further details of the survey will be given at a later date, but those members interested in helping with the pilot survey this year can obtain further details from the Chairman.

Distribution maps of selected species will be included. These will be mainly four to a page and on a scale of 40 miles to 1 inch. Distribution will be plotted using the National Grid as a basis, with each 'dot' representing an area of 25 sq. km. i.e. a block of 5 X 5 one-kilometre squares. (In Atlas of the British Flora a 'dot' represents an area of 100 sq. km.).

Help in compiling the data for these maps will be most welcome and details of the species to be mapped will be given in a future "Bulletin".

It is intended to include black and white photographs in the book and the Committee would be pleased to include photographs taken by members providing the photographs are of a high standard. Photographs of plant habitats and the more interesting species found in Wales would be most welcome. It should be mentioned that only the very best 35mm. negatives are suitable and 2 $\frac{1}{4}$ " square negatives are preferable for high quality prints which are to be made into printers blocks.

The book will probably be of about 200 pages, and in order to include distribution maps where appropriate and photographs both of individual plants and of vegetation types it would be desirable to print the book on Crown 8vo (9.75 X 7.25"). A book of this size will cost about 15/- on present-day prices providing a sufficient number of copies can be sold. This should be possible as it is intended that the book should be of considerable value to botany and biology students and it would be hoped that it would be used in University ecology courses, and it would be of value to students coming to Wales for field courses, as well as to all botany students resident in the University of Wales. It should also be attractive to botanists visiting Wales on holiday and it is expected that some of the 'general public' will find the book of interest.

With the publication of the Welsh Region's book, botanists in Wales will be able to obtain for the first time a really informative picture of plant distribution, and the reasons for certain patterns of distribution in Wales. While the present project is to examine plant distribution in the whole of Wales, it is hoped that a considerable amount of the information which is collected will be of use to those intending to write county Floras.

The Committee hopes that all Welsh Region members will give their support to the activities and help, in their own way, to the success of the book. Further details will be given in the Welsh Region "Bulletin" and progress reports will appear from time to time.

The Approach to Field Work

Two main methods will be adopted in collecting up-to-date information for use in the publication on plant distribution in Wales, namely, (i) a programme of planned excursion meetings, (ii) an individual survey of "00" squares (see p. 1 and p. 3) - which should appeal to all those of us with strong territorial instincts!

All the Region's field meetings, commencing with the present programme (page 8), are to be arranged so that they cover the various kinds of vegetation found in Wales. Attention will be concentrated on only two or three types each year but several examples will be visited in different parts of the country so that members and the authors of particular sections of the book will have a wide acquaintance with the habitat and its variations.

For example, this year members who attend all the meetings will be able to see the plants and vegetation of limestone districts in Breconshire, Anglesey, Glamorgan (Gower) and Carmarthenshire, the local situations being different in every case. Sand-dunes will be seen at Pembrey (Carmarthenshire) and Oxwich (Gower) and woodlands in the Wye Valley (Monmouthshire) and at Carmel (Carmarthenshire). Your Committee hopes that a programme which has this clearly planned basis (as opposed to a haphazard one) and with the very worthy objective of this publication in view, will commend itself and obtain your fullest support and co-operation. There is every opportunity here for any member to make some contribution of permanent value. In furthering this plan excursion leaders may issue instructions about the way in which they want plants recorded, e.g. separate lists for plants of sand-dunes and for the "slacks" or damp hollows between dunes. It will obviously be to the advantage of all and also add greatly to the interest of meetings if everyone will accord their full co-operation to leaders' special requirements. You never know, he may be trying to write a book! Only in this way will the precise information needed for a worthwhile publication be gained.

B. Seddon

Survey of the limestone flora of Wales

In connection with the proposed new publication it is intended to produce an account of the ecology of limestone areas of the country. Because of the scattered nature of the various limestone outcrops it will not be possible for me to visit them all, especially those away from North Wales. I should, therefore, be most grateful to receive information from members. This information would be of the greatest value if it could be based upon the following lines:- species lists from 5 km. grid squares from the various limestone habitats such as grassland, flushes, cliffs, screes, limestone pavement etc.; an indication of the frequency of species and the occurrence or otherwise of grazing.

Dr. A.J.E. Smith, Dept. of Botany, U.C.N.W., Bangor.

Welsh District Secretaries and Recorders

by J.P. Savidge

Many Welsh Region members have been in some doubt about the position of district secretaries and recorders in Wales. A brief account of the functions of district secretaries and recorders, together with a list of members who had been appointed as secretaries or recorders, was given in the Proceedings for September 1962. The Welsh Region Committee has carefully examined the need for district secretaries and recorders in Wales and approved, with certain slight modification, a report prepared by the 1962-3 Secretary, Dr. J.P. Savidge, at their October 1963 Committee meeting.

Firstly, the Committee decided that Wales should not be split into two districts, and instead of appointing two district secretaries they have decided to have one secretary (at present Dr. B. Seddon) to deal with the general secretarial work of the Welsh Region and a field secretary (at present Mr. T.A.W. Davis) to organise indoor and outdoor meetings.

The Committee have decided to modify slightly the function of recorders and have drawn up a slightly different list to that published in the Proceedings. The alterations have been made in order to try and improve the organisation of the B.S.B.I. in Wales and to streamline the process of recording data about plant distribution. The revised list of functions, for Welsh recorders, is:

1. To help the Regional Secretary with the organisation of meetings, publicity and surveys within their county.
2. To promote work on, and to answer queries from members about the flora of their area.
3. To keep a card-index (which would normally be the property of the Welsh Region Committee) listing records of flowering plants within their county.
4. To be responsible for collecting plant records for the county and to check their identification. To submit all important records and dubious specimens to the Dept. of Botany, National Museum of Wales.
5. To forward to the Regional Secretary information about important changes in the flora of their area and to report if areas of special botanical interest are threatened with destruction.
6. To collect material for the preparation of floristic publications relating to Wales.

The main purpose of recorders, as defined by the terms of reference, is probably the recording of new occurrences of plant species and sending interesting records to the Editors of the Proceedings. For Wales, however, it is more satisfactory for recorders to send all such records to the Dept. of Botany at the National Museum of Wales where they

can be incorporated in the Museum's definitive comprehensive index of Welsh plant records before being forwarded by the Museum to the Editors of the Proceedings. It would also be advantageous for all dubious specimens, that the recorder cannot identify with certainty, to be sent to the National Museum of Wales.

Each recorder should, ideally, keep a card index of the plant records for his county, adding new records and verifying the continued existence of the rarer specimens. At present each newly appointed recorder usually has to start a new card index. It is hoped that it may be possible for the Welsh Region Committee to supply cards to county recorders, but these would have to be returned to the Committee when the recorder resigned. The main advantage of this system would be that the same card format could be adopted for each county and that valuable information would not be lost when the recorder resigned, as has often happened in the past. It would prevent unnecessary duplication and save new recorders having to build up an index from scratch.

The Committee would like to see the county recorders helping with the local organisation of regional activities. For efficient local publicity and organisation it is obvious that the county recorder is far better placed than the Regional Secretary. The county recorders can also help in arranging the organisation of the surveys within their county.

A Conference has been arranged by the Development and Rules Committee of the Society to take place in Cambridge on 26/27th September expressly for Local Officers and Recorders and it is hoped that the Welsh Region will be well represented. Details of the programme will be available soon from the Regional Secretary.

A list of the county recorders for Wales is given below. It is up to members to make use of their county recorders, sending them lists of interesting plants and helping with the organisation of local activities within the county.

- 35 Mon. 41 Glam. 42 Brecon 43 Radnor. Dr. B Seddon,
Dept. of Botany, National Museum of Wales, Cardiff.
- 44 Carms. (Mrs. H.R.H. Vaughan, Nantymwyn, Rhandirmwyn, Llandovery.
(R.F. May, Gwavas, Ferryside, Carms.)
- 45 Pembs. T.A.W. Davis, South Mullock, Haverfordwest.
- 46 Cards. P.M. Benoit, Pencarreg, Barmouth, Merioneth.
- 47 Mont. C.A. Sinker, Preston Montford Field Centre,
Nr. Shrewsbury.
- 48 Mer. P.M. Benoit, Pencarreg, Barmouth, Merioneth.
- 49 Caerns. Dr. W.S. Lacey, Dept. of Botany, U.C.N.W. Bangor.
- 50 Denb. J.M. Brummitt, 69, Cambrian Drive, Colwyn Bay.
- 51 Flint. Dr. B. Seddon (acting recorder pro.tem.)
- 52 Angl. R.H. Roberts, Quinton, Belmont Rd., Bangor

PROGRAMME OF FIELD MEETINGS IN WALES FOR 1964.

1. Saturday, May 2nd. Wye Valley woodlands. Meet 10.30 a.m. near ST. ARVAN'S Church (ST 518965). Leader: MR. A. E. WADE.
2. Saturday & Sunday, May 30th & 31st. BRECON (Details in B.S.B.I. general field meetings programme).
3. Saturday, June 20th. Fens and orchids in Anglesey. Meet at BANGOR (Caerns.) end of MENAI SUSPENSION BRIDGE at 10.30 a.m. Leader: Mr. R. H. ROBERTS.
4. Saturday & Sunday, July 11th & 12th. The Gower. Meet on Saturday in OXWICH BAY car park at 10.30 a.m. and on Sunday at PORTEYNON through the village in the car park on dunes at the beach at 10.30 a.m. For the afternoon members may join at the RHOSILI car park at 1 p.m. for WORMS HEAD. Leader: Mr. G. T. GOODMAN.
5. Saturday & Sunday, July 25th & 26th. GOLDEN GROVE, CARMARTHEN. (Details in B.S.B.I. general field meetings programme. Early booking is requested so that arrangements can be made at the Farm Institute if accommodation there is required).
6. Saturday, October 3rd. Annual General Meeting of members resident in Wales at BANGOR. An indoor programme will be arranged in conjunction with this.

Sunday, October 4th. A field meeting from BANGOR to study ferns. Leader: DR. A. J. E. SMITH. Meet at entrance to Betws-y-Coed Railway Station (SH 795566) at 11 a.m.

For the meeting in the Gower on 11th and 12th July accommodation should be booked as early as possible as it is likely that hotels will be fully booked long in advance. The following hotels are recommended:

Dolphin, Swansea. B & B from 56/6 D from 17/6
Dragon, Swansea. B & B from 63/6 D from 17/6
Mermaid, Mumbles. B & B from 32/6 D from 11/-
Osborne, Langland. B & B from 35/- D from 15/-
Brynfield, Langland. B & B from 30/- D from 9/-

Members should make their own hotel bookings without delay for meetings (2), (4) and (6) and also inform Mr. Davis that they will definitely attend (so that numbers joining excursions may be known in advance). For meeting (5) please write Mr. Davis immediately if you wish accommodation reserved with the party at Golden Grove Agricultural Institute (daily terms 30/-)

Transport will be by the use of private cars. The Field Secretary of the WELSH REGION is T. A. W. DAVIS. South Mullock, Haverfordwest, Pembs.