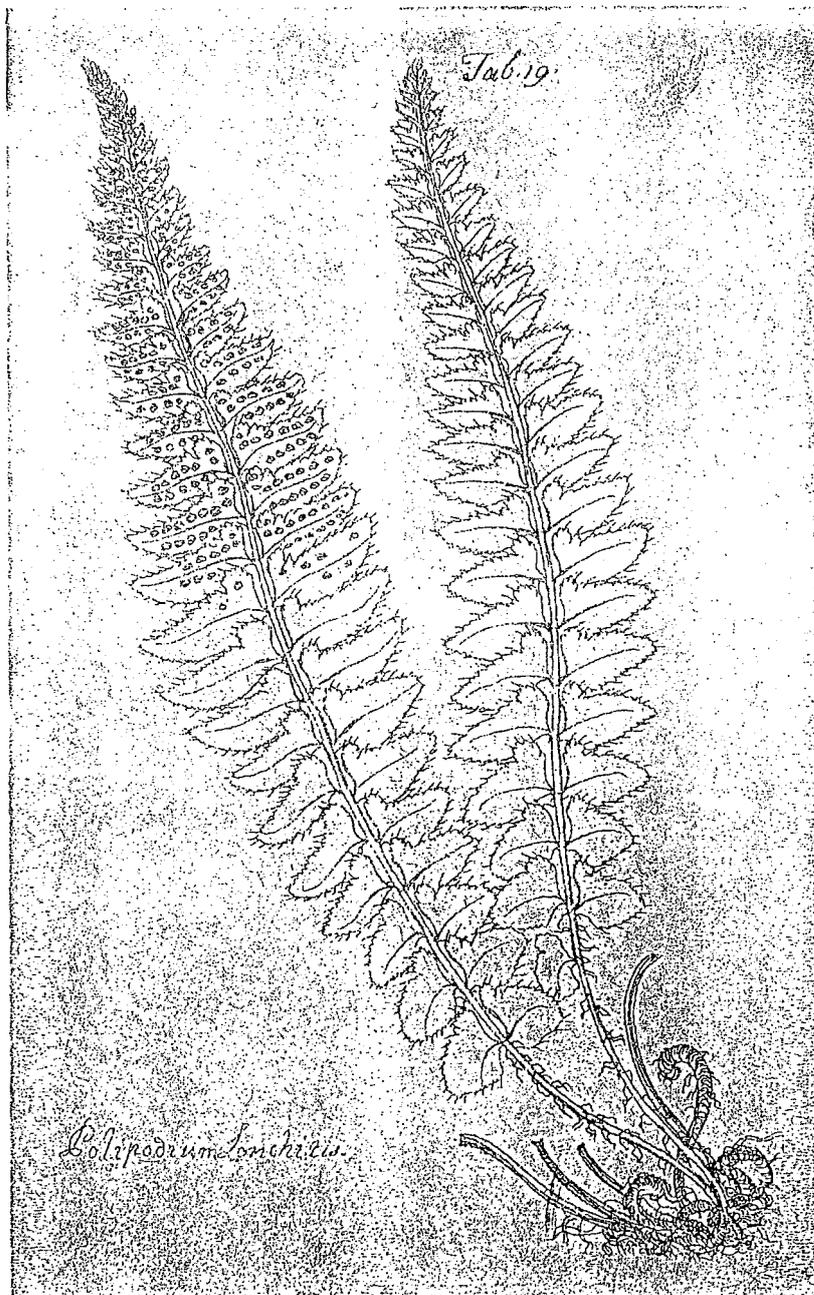


BOTANICAL SOCIETY OF THE BRITISH ISLES
WELSH BULLETIN

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EDITORIAL

Our grateful thanks are due to Mr. Gwynn Ellis and Dr. F.H. Perring for the summaries of the papers they delivered at last year's A.G.M.

ANNUAL GENERAL MEETING 1979. Report by Hon. Secretary

The seventeenth A.G.M. of the B.S.B.I. Wales was held at the National Museum of Wales, Cardiff, on July 7th, 1979.

The Chairman, Mr Goronwy Wynne, introduced Mr. Gwynn Ellis (The Hon. Secretary) who talked about the progress of botanical recording in Wales over the last 500 years.

The election of officers and committee members took place during the formal part of the A.G.M. The Hon. Secretary then gave an account of the previous year's activities. He reported with regret the loss of four Committee Members: Dr. Jeff Duckett, for several years Minutes Secretary, who has resigned from the Committee following his appointment as Professor of Botany at Queen Mary College, London; Prof. W.S. Lacey, who has made a splendid recovery after his recent illness, but who felt unable to undertake the long journey from Bangor to Aberystwyth to attend committee meetings now that Prof. Duckett has left; Mr. T.A.W. Davis who also felt unable to continue the long car journey from South Pembrokeshire to Aberystwyth because of his failing eyesight; and Dr. M.E. Gillham who had served on the Committee for the last four years. These four members were warmly thanked for all they had done for the Society and special thanks were expressed to Mr. Davis who had served continuously as a committee member since the Society's inception in 1962 and Prof. Lacey who had been involved with the Committee, though not necessarily as a member, also since 1962.

Four new committee members were then welcomed: Mrs. J.A. Green who had been elected at the last A.G.M., and Mr. M. Morris, Mr. N.E. Brown and Dr. R.E. Hughes who were invited to join the committee to fill the vacancies. In addition, Mr. R. Pryce was elected at this A.G.M., and Mr. R.G. Woods accepted an invitation to join after the A.G.M. It was sad to see old friends disappearing from the committee but heartening to find such able replacements.

The Secretary next reported on a decision by the Council of the B.S.B.I. to ask various committees if they would appoint an official Nature Conservancy Council observer as a non-voting member, in an attempt to improve relationships between the two bodies. The Committee for Wales thought this a good idea and after an approach to the N.C.C. office at Bangor, Mr. R. Mead of the N.C.C. Field Unit at Bangor was appointed. It is hoped that the co-operation between the B.S.B.I. and the N.C.C. in Wales will prove to be mutually beneficial .

Two field meetings were held last year after the A.G.M. - at Tresaith in Cardiganshire, led by Mr. A.O. Chater and at Cilan headland, Lleyn Peninsula led by Miss A.P. Conolly. The four day Bramble Foray at Lampeter also continued after last year's A.G.M. and this was led by Mr. A. Newton and Mr. E. Edees. One field meeting had been held so far in 1979; to Mwnt Cliffs and Gwbert Dunes, Cardiganshire, again led by Mr. A.O. Chater. The Secretary thanked, on behalf of the committee and members, the leaders for all the work they had obviously put into these meetings to make them so successful. He then drew members attention to those meetings yet to come: at Aberthaw

and Castle Coch wood, led by Dr. M.E. Gillham; at the Senni Valley in Breconshire, led by Mr. M. Porter; and Fann's Moss, Denbighshire led by Mr. J.M. Brummitt.

One of the main activities of the Committee for Wales this year was the preparation of a bilingual leaflet publicising the Society. This was done in an attempt to recruit new members and all existing members were urged to do their utmost to help. The leaflets were to be distributed with 'Nature in Wales', literature for other Welsh Trusts and Societies, etc.

Among other items the Secretary reported that :

1. The constitution had been circulated with the January issue of the Welsh Bulletin.
2. Members' attention was drawn to a short article in the July issue of the Bulletin on Ministry of Defence land in Wales.
3. Lists were prepared of Native or Naturalized plants which were rare in Wales, for the Conservation Committee.
4. The Welsh Language Conservation Poster was regrettably still on the drawing board, but there was a very real chance of its publication in the New Year.
5. Dr. Kay had prepared a recording card for the Flower Colour Polymorphism Survey and it was hoped to have this distributed with the next (January 1980) issue of the Bulletin.
6. The editors of the Bulletin, Mr. R.H. Roberts and Mr. S.G. Harrison were warmly thanked for their efforts and the annual plea was made for contributions for future issues. They need not be long or detailed articles, although these would be welcomed, short letters on anything botanical would be equally acceptable.

The Secretary then offered thanks on behalf of the Society to the Director and Council of the National Museum of Wales for allowing the use of the museum offices for the A.G.M. The ladies of the Department of Botany were also thanked (in anticipation) for giving so freely of their own time to prepare tea and a buffet supper.

After tea and biscuits the Chairman reported briefly on a fund-raising coffee morning which had been held in Flintshire and raised forty-two pounds for the Society, an achievement which was warmly welcomed by all present. He then introduced Dr. F.H. Perring who, of course, needed no introduction, being well known by name and reputation to all members of the B.S.B.I. Dr. Perring gave a very stimulating talk on Botanical recording in Wales in the 1980's which was well received by a very attentive audience.

Following the election of officers and members, the composition of the Committee for Wales for 1979-80 is as follows:

Chairman Mr. G. Wynne
Vice-Chairman Mr. M. Porter
Secretary Mr. R.G. Ellis

Committee Members

Mr. N.H. Brown Mr. M. Morris*
Mr. S.B. Evans* Mrs. M.E.R. Perry*
Mrs. J.A. Green* Mr. R.D. Pryce
Dr. R.E. Hughes Mr. R.G. Woods
Dr. Q.O.N. Kay*

* Retiring member

The field meeting on Sunday was led by Dr. M.E. Gillham. During the morning the lagoon and saltmarsh at Aberthaw were visited, where members were intrigued to see the competition between Phragmites and Spartina. Many other interesting species were also seen.

The party then moved inland to the banks of the River Ely at St. George's where, thanks to the hospitality of Mr. & Mrs. R.M. Baker, they were able to eat their picnic lunches. On the opposite bank was a thriving population of Impatiens capensis, the Orange Balsam. After lunch they visited Cwm Nofydd just N of Cardiff, and saw Eriophorum latifolium, the Broad-leaved Cotton-grass, and many other species, including several orchids. A very enjoyable day was had by all members and the efforts of Dr. Gillham were much appreciated.

ANNUAL GENERAL MEETING, 1980

The 18th Annual General Meeting will be held at Cartrefle College, WREXHAM, Clwyd, on September 13th 1980.

PROGRAMME

Sept. 13th

- 10.00 a.m. Visit to University of Liverpool Botanic Gardens, Ness, led by Mr. H. McAllister and Mr. D.M. Parker.
1.30 p.m. Meeting of Committee for Wales.
2.30 p.m. Arctic-alpine species in Northern Snowdonia; their relationship to the environment - Dr. R.E. Hughes.
3.30 p.m. A.G.M.
4.00 p.m. Tea
4.30 p.m. Conservation of Saxifraga cespitosa L. in North Wales - Mr. D.M. Parker.
7.00 p.m. Dinner
8.00 p.m. Exhibition and Discussion.
Members are invited to bring along a selection of their colour slides or any other interesting botanical exhibits.

Sept. 14th Recording for the 'Flora of Flints' in various parts of Flintshire.

Accommodation is available at Cartrefle College at approx. £7. per night, including meals. All B.S.B.I. members and their guests are welcome and further details can be obtained from the Secretary to the Committee for Wales - Mr. R.G. Ellis, Dept. of Botany, National Museum of Wales, Cardiff, CF1 3NP. Please apply before August 1st 1980.

Nominations for membership of the Committee or for the post of Hon. Secretary should be made in writing, with the signature of the nominee, before the end of June to the Hon. Secretary at the above address.

FIELD MEETINGS, 1980

SATURDAY 7th JUNE, FEN, NEAR CORN GOCH, ANGLESEY (vc. 52)

Leader : R.H. Roberts.

During the meeting a large population of Dactylorhiza traunsteineri will be visited. Applications before May 7th, please.

SATURDAY 28th JUNE, LLYN-Y-FAN FACH, DYFED (vc. 44)

Leader : David Davies.

During the meeting the rich and interesting flora of these Old Red Sandstone cliffs will be studied. Applications before May 26th, please.

SUNDAY 6th JULY, SEVERN ESTUARY, GWENT (vc. 35)

Leader : T.G. Evans.

During the meeting visits will be made to some of the moors, reens and woods bordering the estuary. Applications before June 9th, please.

SATURDAY 12th JULY, GOODWICK, DYFED (vc. 45)

Leaders : T.A.W. Davis and S.B. Evans.

During this meeting an interesting maritime heath will be explored. Applications before June 9th, please.

SATURDAY 18th JULY, CWM IDWAL, GWYNEDD (vc. 49)

Leader : M. Morris

To see some of the arctic-alpine species in this famous locality. (Not necessarily strenuous.) Applications before June 16th, please.

SUNDAY 27th JULY, ELAN VALLEY, POWYS (vc. 42/43)

Leader : R. Woods.

This is a joint meeting with the Brecknock Naturalists' Trust and visits will be made to some of the finest sessile oakwoods in mid Wales and to some species-rich hay meadows. Applications before June 23rd, please.

SUNDAY 14th SEPTEMBER, SOUTH-EAST FLINTSHIRE (vc. 51)

(In conjunction with the B.S.B.I. Wales, Annual General Meeting in Wrexham, Saturday 13th September)

Leader : G. Wynne

This meeting is to help with recording for the Flora of Flintshire.

Applications before August 1st, please.

For further details of all these Field Meetings please apply to :

Mr. R.G. Ellis, Dept. of Botany, National Museum of Wales, Cardiff, CF1 3NP.

BOTANICAL RECORDING IN WALES - the last 500 years :

précis of a paper delivered to the Welsh section of the B.S.B.I., A.G.M. at Cardiff on July 7, 1979, by Gwynn Ellis.

The aim of my talk to the A.G.M. was to discuss some of the better known botanists who have searched for plants in Wales, the places they visited and the plants they found. Most of the details have been published elsewhere (Plant Hunting in Wales, Gwynn Ellis 1974/75) and it would be pointless to repeat them here. However, one aspect of botanical recording I talked about, but have not yet published, deals with the number of species that were recorded from Wales and/or the Welsh counties at different periods. This can best be shown in a chronological sequence as set out in the table below. A key to the botanists involved follows the table.

	Wales	35	41	42	43	44	45	46	47	48	49	50	51	52
1. 1597	10										1	8	3	
2. 1606	21									2	2	21	5	
3. 1641									2	2	22	4	2	9
4. 1696	94	2	3	1			4	1	4	11	57	3		9
5. 1750	145	2	3		1	1			8	15	84	1		40
6. 1804		7	87	20		13	44	16	22	47	159	101	69	105
7. 1835		13	84	16		11	36	17	35	67	176	195	55	220
8. 1883	1059	535	719	170	409	674	664	465	442	522	848	694	647	782
9. 1930	1305	917	1106	744	634	869	833	802	607	883	1057	937	887	894
10 1950	1343	960	1114	768	679	938	896	860	750	932	1057	958	904	904

From this table it can be seen that very few species were recorded from the counties of Mid and South Wales until the end of the 19th century. The plants of the counties of North Wales on the other hand were relatively well recorded, especially the rarer species, before the end of the 17th century.

N.B. The totals for each county are those of the author concerned and need not necessarily include all the plants recorded from that county. e.g. Watson (1835) records only 220 species for vc.52. whereas Davies in "Welsh Botany" (1813) had recorded over 700.

1. c.1570. The first localized Welsh records are found in a manuscript herbal attributed to William Salusbury (1520-1584), who lived at Llewenny Hall nr. Denbigh. An edited version was published in 1916 as "Llysioulyfr Meddyginiaethal".
2. 1606. Sir John Salusbury (1567-1612), a cousin of William Salusbury who also lived at Llewenny Hall. He entered details of some of his botanical discoveries in his copy of the first edition of Gerarde's Herbal published in 1597. This book still survives in the library of Christ Church, Oxford.
3. 1639. Thomas Johnson (c. 1600-1644) visited Wales in 1639 and kept a diary of his journeys which was published as "The Botanic Mercury" part II in 1641.

4. 1696. John Ray (1627-1705) made two journeys in Wales in 1658 & 1662. His records were published in several books and these totals are taken from the 2nd edition of his "Synopsis of British plants", 1696.
5. c. 1726. J.J. Dillenius (1684-1747) and S. Brewer (1670-1742) travelled through Wales in 1726-27 collecting many specimens which are preserved at Oxford and the British Museum (Natural History). These totals are of specimens in the Dillenian Herbarium.
6. 1806. "The Botanical Guide through England and Wales" D. Turner and L.W. Dillwyn. (Only the uncommon and rare species are recorded).
7. 1835. "The New Botanist's Guide" by H.C. Watson. (again lists only the rarer species).
8. 1883. "Topographical Botany" Ed.2. H.C. Watson.
9. 1934. "Welsh Flowering Plants" Ed.1. H.A. Hyde and A.E. Wade.
10. 1957. "Welsh Flowering Plants" Ed.2. H.A. Hyde and A.E. Wade.

BOTANICAL RECORDING IN WALES - the next 10 years :

summary of a paper delivered to the Welsh section of the B.S.B.I., A.G.M. at Cardiff on July 7, 1979, by F.H. Perring.

The centre for botanical recording in the British Isles for the last 15 years has been the Biological Records Centre at Monks Wood. Whilst there must be some uncertainty about its future role until such time as my successor is appointed there is no doubt that much important work remains to be done, in the British Isles, and in Wales.

Work at the National Museum has resulted in the preparation of up-to-date 10 km square distribution maps for all Welsh flowering plants. The publication of the book Welsh Flowering Plants (Ed.3) within the next few years will mark the end of an era and will provide a challenge to do more.

Stace, Valentine and Sell are working on a new "Flora of Great Britain" which will include distribution maps. The existing "Atlas" maps will have to be brought up to date as it is now 20 years since their publication and many thousands of new records have been accumulated since then. There was a request in a recent B.S.B.I. News for new records to revise the maps for this new Flora. The first section will be from the Ranunculaceae to the Fumariaceae inclusive. The records should be sent to the National Museum on pink cards where Gwynn Ellis will forward them to Monks Wood, when there is someone to receive them.

Our knowledge about the commoner species is very good, but many of the critical taxa have not been adequately dealt with. Genera such as Sorbus, Euphrasia, Hieracia, Montia and Potamogeton are well documented, and the efforts of botanists such as Dandy, Sell, Walters and Yeo are much appreciated. But now work is needed on such taxa as Ranunculus ficaria, Nasturtium officinale and

Erophila verna. If the maps in the "Atlas" and the "Critical Supplement" of aggregate and segregate taxa are compared one can see that little has been learned about the distribution of the segregates. County recorders may have information, but this has not, in many cases, been consolidated at a national level.

There are also numerous alien taxa that we know too little about. Clive Stace has prepared a list of aliens to be included in the new British Flora, which includes 400-500 taxa. For many we do not know whether they are established or merely casual. The position of Aconitum anglicum has been well worked out in the Vale of Glamorgan and we know where the native or long naturalized sites are and where the recently introduced ones are.

Cheiranthus cheiri, the Wall flower, is not so well documented. It would be helpful to know where it is growing on old castle walls as distinct from casuals on rubbish dumps or just escapes from cottage gardens.

Ann Conolly's work on a nationwide basis on habitats and localities of Lamium album, alien Polygonum etc, is much appreciated. There is a case to be made for other botanists to adopt individual species or groups of species. For example, the work of Dick David on Carex, where his studies on the rare species give us a greater understanding of their ecology.

We also need someone to look at trees and shrubs: are they regenerating? Much good work in Wales was done by Dr. H.A. Hyde and the status of Fagus sylvatica in Wales, for example, is now clearly understood. But does Juglans regia regenerate? Or any other introduced trees? This is one area for observation which could be of great value. The Black Poplar Survey has shown that there were more in Wales than was first thought. Ulmus is another genus that needs looking at urgently and here we must act quickly if they are to be studied before they disappear. The Willows are also in need of study. Meikle's "Handbook of Salix" should soon be published and much work on the taxa he describes remains to be done at local level. To sum up, much work still has to be done recording distribution and perhaps now is the time to look particularly at critical species, subspecies and hybrids.

A considerable amount of work on "Floras" is being carried out in Wales at the present time: Glamorgan, Brecon, Pembroke, Gwynedd and Flint; while in most of the other counties work is proceeding although not yet for a Flora. Few classical Floras have been produced in Wales mainly because of the small population and high costs of publication. Work on Welsh Counties is mostly proceeding on a 5 x 5 km basis and it may be a good time to start recording the whole of Wales in this way, possibly using a 2 x 2 km sq. for the rarer species. In the Flora of Shropshire project the species are grouped into three classes a) Ubiquitous; b) Interesting distribution but fairly common species; and c) Limited distribution. These latter species could be mapped by 1 km squares or the rarer species could be left unmapped. This class could also be the basis for a "Welsh Red Data Book". Wales is as large as Luxembourg or Belgium and they have their own Red Data Books. Such a book would be invaluable as a conservation document.

The B.S.B.I. is soon to publish a new Code of Conduct which lists the rarer species in tabloid form. About 10% of the species of a country will be included giving about 100-120 species for Wales.

The National Museum of Wales could be responsible for collating Welsh records, sending copies to Monks Wood as is being done now. Collaboration with Lynne Farrell is essential to produce information for a new schedule for the Wild Creatures and Wild Plants Protection Act which will be needed in 1980 and every 5 years thereafter.

Much intensive work is still needed to record the botanical interest on many Sites of Special Importance. The STEP Scheme and the NCC have done valuable work, but the STEP Scheme is being phased out, at least in England, and much remains to be done.

MOD sites often provide some of the finest botanical localities in an area, but most are in an unrecorded state. The opportunity to record them should be taken before it is too late. Government cut-backs may mean selling part of them off, so it should be made a matter of some urgency to survey these sites (see Welsh Bulletin No.31. July 1979).

The Recruitment Drive being conducted by B.S.B.I. Wales is a valuable exercise, but it will not be likely, initially, to provide many good botanical recorders, yet these are in many ways the most important members of the Society.

The system of vice-county recorders works well in Wales. The flow of records should continue after the new edition of "Welsh Flowering Plants" has been published, even if not used for publication they will be stored on a master file.

Vice county recorders have so much to do that perhaps they need more support from local B.S.B.I. members. Shropshire has been very successful with their efforts to involve local members and this may be a pattern that other counties could follow.

In conclusion the 1980's present a real challenge. There is the challenge of a new Government and Government cut-backs. The present regime is far more favourably disposed to support voluntary contributions to conservation than to further fund Central Government. The B.S.B.I. historically has a reputation for doing things itself. For instance it produced the first "Atlas", then pioneered network recording, then a Code of Conduct, and played a vital part in getting the Wild Creatures and Wild Plants Protection Act passed. With this record behind them, members of the B.S.B.I. should have no difficulty in responding to this challenge, and I am confident that our members in Wales will lead the way in tackling the work involved.

This "network research" project is being organised by the B.S.B.I. Committee for Wales. The aim of the survey is to investigate the amount of natural genetic variation in flower colour in wild plant populations in Wales. Although flower colour variation is surprisingly common - Cirsium palustre, Polygala vulgaris and Viola odorata are familiar examples in Wales - we have very little quantitative information about the distribution of different colour forms and their relative abundances. We hope to collect and publish data for Wales.

There appear to be three main types of conspicuous genotypic flower colour variation within species that fall within the scope of this survey :

1. Discontinuous flower colour polymorphisms, in which two or more sharply different flower colour types are found mixed together in the same population, with the less common types at higher frequencies than would result from occasional mutation; for example Cirsium palustre (white, pale purple and purple), Polygala vulgaris (blue, red and white) and Raphanus raphanistrum (white and yellow, veined and unveined).
2. Continuous flower colour variation in which flower colour ranges between two extremes. This type of variation is often clinal, with successive local populations each having a limited range of flower colour, which changes gradually from one extreme to another along geographic and/or ecological gradients within the distribution of the species; for example Viola curtisii and Viola lutea.
3. Discontinuous flower colour variation in which the less common type (often an apparently unpigmented white form) occurs at low frequencies, perhaps as a result of occasional mutations; for example white Calluna vulgaris and Hyacinthoides non-scriptus.

Intermediate or possibly intermediate situations are of course common.

Flower colour variation can also occur as a result of interspecific hybridization, as for example in Silene dioica and Silene alba. Although the survey is intended to cover intraspecific rather than interspecific variation, it is sometimes difficult to distinguish between the two, and doubtful cases should be included in the survey.

Some species, especially members of the Boraginaceae, show changes in the colour of the flowers on one and the same individual during development, for example from yellow to blue in Myosotis discolor, pink to blue in Echium vulgare and crimson to bluish-green in Lathyrus montanus, with corresponding differences between individuals that happen to have flowers at different stages of development. This type of variation does not involve genetic differences between individuals and it is not within the scope of the survey.

We hope that B.S.B.I. members living in other parts of the British Isles will also be able to contribute to the survey during visits to Wales. Supplies of explanatory sheets and recording forms are available from:

Dr. Quentin Kay, Department of Botany, University College, Swansea SA2 8PP.