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Congratulations are in order now that the Welsh Bulletin has reached its fiftieth number.

The cover depicts a montage of plants with a "golden" theme: Golden-Saxifrage, Golden-Rod, Golden-Samphire and Gold-Of-Pleasure. The first Bulletin appeared in January 1964 under the editorship of John Savidge and contained articles on the Welsh Lake Flora Survey (Operation Wellington) (Brian Seddon) and Carmarthenshire Roses (Mrs Irene Vaughan) as well as notices and meetings reports. Since that time the composition of the Committee for Wales has undergone complete change. In addition, most Welsh vice-counties have had new Recorders appointed but there are two exceptions: Peter Benoit (v.c. 48 Merioneth) and Dick Roberts (v.c. 52 Anglesey) who represent the "elder statesmen" of Welsh botany. The "young pretenders" installed in the other vice-counties (some of whom may not necessarily be quite so young!) are all very involved in the study of their local floras, often now employing the latest technology for data collection and storage.

As this issue is a milestone of the Society in Wales, it was thought appropriate that every v.c. recorder should contribute a short report outlining the state of local botanical knowledge. I am very grateful to them all for finding the time to write their copy at what amounted to very short notice.

The remainder of Bulletin No.50 is made up of the 1987 Welsh Plant Records, again contributed by the v.c. recorders but compiled by Gwynn Ellis. The BSBI both in Wales as well as nationally, owes Gwynn a very large debt of gratitude for all the long hours he devotes to society affairs. It is he who is largely responsible for keeping the cogs of the society running so smoothly (you might even say well oiled!).

I have received two other articles for this issue but as it is already rather fat, one has been poached, with the author's and editor's consent, by BSBI News as it is of interest to a wider readership and the latter publication was currently short of "meat". The other will be held over to the next issue.

Finally may I wish you hearty Season's Greetings. A full and varied programme of BSBI meetings for 1991 is printed below and I look forward to a rewarding field season and hope to see you during the year.

R.D. Pryce
30 November 1990
All back issues of the BSBI Welsh Bulletin are still available on request (originals or photocopies). Please send cheque made payable to BSBI Committee for Wales at £1 per issue, which includes p & p, to G. Hutchinson, Department of Botany, National Museum of Wales, Cathays Park, Cardiff, CF1 3NP, specifying the issue number or year which would have to include the season or month. Large runs - price negotiable.
The v.c. is composed of 25 part or whole ten kilometre squares. Co-ordinators were obtained where possible, to collect the records for their ten kilometre squares at the end of the season and enter them on a minimap before sending it to me. I entered these onto 'master' minimaps and then transferred them to county maps. The co-ordinators have been Dr Paul Glading (1), Mrs Alison Jones (3), Mr Gordon Bristowe (2), Mr and Mrs E.D. Pollard (6), Mr Peter Jones (2), Mr R. Fraser (5), Mr David Price (2), Mrs Elsa Wood (6), Mr Colin Titcombe (6), Mr and Mrs P.C. Hall (6), Mr Nigel Smith (2), Mr Brian Gregory (4), Mr and Mrs Mark Kitchen (6), Mr T.G. Evans (6). The figures in brackets indicate the number of years served. Most of the recording of their ten kilometre squares were done by Mr and Mrs Pollard, Mrs Elsa Wood, Mr and Mrs Hall, Mr Brian Gregory, Mr T.G. Evans and Mr Bob Fraser, respectively. Over 120 people have contributed records though only 26 have continued through the six years. Apart from the co-ordinators Miss Joan Searle (80+ years) covered her four tetrads very thoroughly, Miss Heather Coils was an enthusiastic coverer of her tetrads, Mrs V.A Williams returns regularly from Salisbury to cover tetrads, Mrs Rippon walks some of the difficult upland tetrads. Mr Bob Hewitt drew our attention to 'The British' a superb wet heath in one of his four tetrads and Dr A. Jacks covered his tetrads well inspite of a busy medical practice. To these my special thanks but I'm grateful to every recorder. Some promising new volunteers have joined the scheme and I look forward to their results.

99,000 plus records have been processed and c.1270 species, microspecies etc. have resulted.

188 species are widespread and occur in many tetrads in all types of habitats. Of these 40 occur in nearly all tetrads (c.410).

Excluding the occasional casual, 37 species are uncommon. 40 are rare, consisting of few plants or occurring in very few tetrads.

Some plants are limited by habitat thus 31 species are coastal, 9m reëns, 11 are upland, 7 are of western distribution though as the upland is western there is some overlap, 8 are eastern and 5 occur with their feet in water.

The target, I thought was attainable, was 250 species per tetrad. This has been achieved in 214 tetrads though 120 more have over 200 species. Ten ten-kilometre square results are still awaited for 1990. The other tetrads need more visits though some of the 42 of over 150 species seem to be reaching their limit. Surprisingly, some 1st VCR native species for 1990 occurring in quantity ought to have been picked up before as they have most probably existed there since the last Ice
Age. Bob Fraser found hundreds of plants of *Crepis paludosa* in a shady stream side north of Abergavenny in only the third post 1930 S. Wales ten kilometre square. He also found c.22cm² patch of *Sibthorpiopsis europaea* in moss on a stream bank north of Cwmfelinfach. His hybrid? sedge from Cwm Merddog is being checked. John Wohlgemuth came across 30-40 plants of *Carum verticillatum* with masses of *Scutellaria minor* and *Wahlenbergia hederacea* in an open woodland flush near Blaena.

The hybrid sedge was confirmed as *Carex x boennighausiana* by A.O. Chater. So far 18 *Hieracium* species have been determined with a number yet to be decided. 69 micro-species of dandelion are known to occur and a study of roses is revealing *Rosa mollis*, *R. rubiginosa*, *R. sherardii*, *R. micrantha*, *R. glauca*, *Rosa x rufescens* and many other hybrids determined by Rev. C.G. Graham. There is hope among the more common despair.

v.c. 41 GLAMORGAN

In many ways the distribution of the Flora of Mid and South Glamorgan is well documented. Records received since 1960 have been recorded and mapped, forming part of a new Flora of Glamorgan that has been written and it is anticipated will be published in 1991. The preparation of this Flora entailed much practical field work and all areas of the two counties were visited. Many exciting discoveries were made - *Atropa belladonna* refound after a gap of 80 years, many new sites for *Neottia nidus-avis* and a first record for *Frankenia laevis* to name but a handful.

However the rapid expansion of urban areas, coupled with other forms of development has meant that many records are now of only historical interest. Another problem is that most records are only localised to a 5km square and this makes finding an exact site for a particular plant difficult when confronted by, say, a planning enquiry. New records do now have to have a 6 figure reference and this is to be applauded. For a heavily populated area there is a paucity of new records - the faithful few can always be relied on to produce new field records or as in the case of Dr G. Hutchinson also identification of Herbarium material collected in the past such as *Rosa tomentosa* Sm. x *R. canina* L. collected by Mr A.E. Wade in 1975 and identified as a first county record in 1990, when it was determined by A.L. Primavesi.

New records are there to be found as the recent BSBI selected 10km survey proved. But future recording, to be of value and to make the best use of slender resources, will need to be either site or specific species targetted, if it is to be of use to urgent needs of conservation.
Although Glamorgan (v.c. 41) is the most densely populated vice-county in Wales, it is ecologically and topographically among the most varied, with a long coastline and a wide range of both natural and man-made habitats. NNRs protect plant communities of national and European importance at several sites in the west (Whiteford Burrows, South Gower Cliffs, Oxwich and Crymlyn Bog); the limestone and sand-dune flora of Gower is particularly rich. Man-made habitats in the vice-county are also unusually rich in plant species; in the industrial towns and cities of Glamorgan, the urban flora now includes many established aliens of diverse origin.

In terms of the total numbers of species listed in Flowering Plants of Wales (Ellis 1983), Glamorgan leads all other vice-counties, narrowly if only native, denizen and colonist species are included (924, compared with 909 in Caernarvon and 859 in Denbigh) but overwhelmingly if naturalized, alien and casual species are added to the total (1836, compared with 1277 in Caernarvon and 1255 in Monmouth). Plant recording in Glamorgan has tended to follow a cyclical pattern, with three main periods of activity. The first of these, almost entirely limited to the west of the county and associated with L.W. Dillwyn's influence, peaked from about 1830 to 1850 when several botanists worked in or near Swansea. A second cycle, centred on Cardiff and associated with the Cardiff Naturalists' Society, culminated after 1900 in the publication of A.H. Trow's Flora of Glamorgan (1906-1911); at the same time, H.J. Riddelsdell, a young curate in Aberdare, independently produced another good flora of the county (A Flora of Glamorgan, 1907). In retrospect both floras can be seen to rest on a rather limited basis of field records, perhaps reflecting the difficulties of travel and access to some sites, and the small number of botanists active in the county. During the 1920's and 1930's many new records of alien and casual species were made in the Cardiff and Barry areas, but there was less attention to native species. In the west of the county E.M. Thomas and J.A. Webb contributed new records, and Eleanor Vachell continued to work on the native flora. A third period of activity was stimulated by recording for the Atlas of the British Flora in the 1950's, and has continued with a systematic survey of the whole county on a 5km square basis during the Flora of Glamorgan project from 1969 onwards. In addition, several detailed surveys of particular habitats or groups of species have been conducted or supported by the NCC. The Flora of Glamorgan work and the NCC surveys have greatly increased our knowledge of the distribution and abundance of native plants in Glamorgan, emphasizing the richness and importance for conservation of many sites and habitats in the county, including several which were previously overlooked or underestimated. Amongst the most notable of these are Crymlyn Bog (now a National Nature Reserve) and the
Neath Estuary complex, threatened lowland heath sites like Portmead Heath and the Gower commons, and species-rich permanent grassland in the uplands. Discoveries of new native species (excluding apomictic microspecies or critical segregates) in the vice-county since 1960 include Dryopteris oreades (above Llyn Fach, 1974), Eriophorum gracile (Crymlyn Bog, 1977), Frankenia laevis (Merthyr Mawr, 1981), Potamogeton trichoides (Kenfig Pool, 1982) and Trifolium occidentale (Mewslade, 1988). Rediscoveries during the same period of native species not seen for over a hundred years and thought extinct, either in the whole vice-county or in its eastern or western halves, include Carex dioica and C. limosa (Crymlyn Bog, 1977; last recorded c.1840); Dianthus armeria (Gorseinon, 1980; last record in W. Glamorgan 1843); Equisetum hyemale (Jersey Marine, 1974; last seen in W. Glamorgan c.1840); Matthiola sinuata (Neath Estuary sand­dunes, 1964; last seen c.1840); and Vicia orobus (Portmead Heath near Penllegaer, 1990; last recorded in the area c.1840). Aliens that have shown marked increases include Epilobium ciliatum, Hirschfeldia incana, and Senecio squalidus, but several attractive alien species associated with urban waste land have decreased because their habitat has been redeveloped or replaced by mown turf; examples include Buddleja davidii, Huteria cheiranthos, Linaria repens and Melilotus alba. The introduced aquatic Crassula helmsii, strongly invasive in southern England, appeared in Broad Pool, Gower, in 1988 but has apparently not increased or spread as yet. More introduced species, especially those that grow in artificially disturbed habitats, can be expected to appear in the future. On the other side of the coin, probable or possible extinctions during the period include Pilularia globulifera (last recorded 1971) and Thelypteris thelypteroides, several species of permanent grassland have drastically declined, and many cornfield weeds are now extremely scarce or grow only as casualties. Several rare native species now grow in precariously small populations, some of them in habitats that are increasingly stressed by human pressures and are also vulnerable to the effects of climatic change. Examples include Asparagus officinalis ssp. prostratus, Asplenium billotii, Aster linosyris, Cirsium tuberosum, Gentianella uliginosa, Mibora minima, Ononis reclinata and Ranunculus tripartitus. Active conservation measures may eventually become necessary; meanwhile, in Glamorgan as elsewhere, their surviving populations must be not only protected but also monitored and recorded.

v.c. 42 BRECON

M. Porter

With the production of a Flora of Breconshire its main target, a project was started in 1967 to collate the old records and map the distribution of vascular plants. For historical and organisational reasons the Watsonian vice-county was chosen as the study area and, at that time, its boundary
closely coincided with that of the administrative county and the Brecknock Wildlife Trust. This territory (v.c. 42) was subdivided into ninety nine 5 x 5 km recording units. During the following seven years a small band of Brecknock Trust members, concentrating mainly on their home 'squares', made steady progress in mapping the flora. Field meetings were organised to tackle the remote parts of the county. By 1975 the first phase of the recording scheme was nearing completion, except for the less accessible upland and border regions. The average number of species recorded per 'square' is now (1990) about 350.

New county records from this phase included a high proportion of 'native' species such as Alopecurus aequalis (Orange Foxtail), Carex strigosa (Thin-spiked wood-sedge), Cladium mariscus (Great Fen-Sedge), Mentha pulegium (Pennyroyal) and Sparganium minimum (Least Bur-Reed). Many plants not recorded since the nineteenth Century were re-discovered, for example Andromeda polifolia (Bog Rosemary), Botrychium lunaria (Moonwort), Carex dioica (Dioecious Sedge), Carex montana (Soft-leaved Sedge) and Vicia sylvatica (Wood Vetch). A few of these, such as Botrychium lunaria and Carex dioica turned out to be widespread. The distribution of some plants, like Campanula trachelium (Nettle-leaved Bellflower), Thymus pulegioides (Large Thyme) and Silaum silaus (Pepper Saxifrage), reflects the borderline situation of Breconshire between the lowlands of Gwent and Herefordshire to the south-east and the uplands of central Wales to the north-west. The ecological factors moulding the distribution of others proved puzzling. Carex montana, for example, is most often found, sometimes in abundance, in rough grassland on exposed limestone hillsides. But it has also been recorded in beech and ash woods, in damp heathy fields associated with Narthecium ossifragum (Bog Asphodel) and Trichophorum cespitosum (Deergrass), and on mountain cliffs. In one cliff site it grows on ledges at an altitude of 750 metres in association with arctic-alpines like Sedum rosea (Roserooot) and Vaccinium vitis-idaea (Cowberry). Habitat studies in progress may perhaps throw more light on this and similar enigmas.

It was apparent by 1975 that several 'critical' genera were strongly represented in Breconshire. Probably at this stage the recorder should have taken the advice of his dwindling band of helpers and ignored such troublesome groups, or relegated them to an appendix in small type! Instead, for the past fifteen years, attention has focused on the microspecies of blackberries and dandelions and the bewildering roses and eyebrights where hybridisation is rife. Inevitably, mapping their distribution has been slow. In some old lanes undescribed or recently named taxa make up 30-40% of the dandelion population; some hedges bristle with hybrid roses. The scale of the problem can be gauged from the numbers of microspecies involved: 88 blackberries (40 in 1975) and 140 dandelions (18 in 1972) have now been recorded. However their
distribution patterns are providing further insights into the relationship of the local flora to that of other parts of Britain. This part of the project would have been impossible without the generous and invaluable assistance of many BSBI referees. Gratitude and thanks are due to all who have helped and in particular to Alan Newton, Chris Haworth and John Richards who have been a source of inspiration throughout.

The meandering approach to the preparation of a local Flora outlined here, together with the constraints of a very small band of fieldworkers and absence of most research facilities have conspired to reveal, or produce, plenty of problems. Much data analysis remains and further research on ecological factors will be needed to try to explain some of the puzzling distribution patterns which have emerged. A summary of the new taxa recorded from v.c. 42 during the mapping scheme is tabulated below. The categories are those used in Flowering Plants of Wales.

<table>
<thead>
<tr>
<th>Natives</th>
<th>Naturalised</th>
<th>Casuals</th>
<th>Microspecies</th>
<th>Subspecies</th>
<th>Hybrids</th>
<th>aliens</th>
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<td>30</td>
<td>173</td>
<td></td>
<td>20</td>
<td>70</td>
</tr>
</tbody>
</table>

RECORDING IN RADNORSHIRE v.c. 43

D.R. Humphreys

There has never been a 'Flora of Radnorshire', and Carter, writing in 1950, says that Radnorshire may be considered to have been the Cinderella among the Welsh counties from the point of view of botanical exploration. Wade and Webb (1945) point out that Radnorshire has fewer species of plants than any other Welsh county, and attribute this to three factors. (a) The elevation of the inland areas, the average height being 650 feet, with the largest proportion of upland ground of any Welsh county. (b) The considerable area of the moorland and boggy areas. (c) The absence of any large masses of limestone. Even Edward Lhwyd, who did so much of the early exploration of the botany of Wales, had been to Radnorshire and had visited the waterfall at Rhayader but did not record any plants from the county. The first botanical record from the county was by Rev. Littleton Brown in the 1720's, who mentioned a lichen from Cefn-Ilys castle. Subsequent records during the 18th and 19th centuries were mainly by visitors from outside the county, and many were by visiting churchmen, among them Rev. Jonathan Williams, Rev. John Evans and Rev. William Lugden. Prominent among these was Rev. Augustin Ley from Herefordshire, the co-author with Rev. William Purchas in 1889 of the 'Flora of Herefordshire'. Ley, a botanist of the highest repute, recorded 303 species in 1874, and helped to put Radnorshire on the map in a botanical way. All the early botanists refer, of
course, to Stanner Rocks "on whose summit grows a profusion of wild flowers, hence called 'The Devil's Garden' " and Ley and others contributed further notes on this particularly rich area.

Since that time the emphasis had been on the particularly interesting sites rather than overall recording coverage, but Ann Powell as BSBI Recorder from 1965 to 1988 had maintained a valuable card-index of the less usual plants. Manuscript notes for a Flora were made by Webb in the 1950's but not published.

Systematic mapping has been undertaken in the last few years by Ray Woods, whose home, like that of so many of the previous botanists, is just over the county border. He has, almost single-handed, surveyed the county flora, but has had perforce to do this on a 5-km format instead of the now more customary tetrad basis. His survey has, however, included bryophytes, lichens and rusts as well as the higher plants.

Recording in v.c. 43 this year (1990) has been largely a matter of organising material for Ray Woods' contemplated Flora. Now the emphasis is more on getting these records on to a computer program, using Alan Morton's DMAP, and progressing to a form in which desk-top publication is possible. David Hargreaves at the Radnorshire Wildlife Trust has been actively and helpfully pursuing these DTP aspects.

One or two oddities of distribution have come to light. Parietaria judaica, common on the town walls in Leominster and Hereford, seems to meet a barrier at Offa's Dyke and cannot now be found in Presteigne, Knighton or Llandrindod. Euphorbia amygdaloides too, common in much of Herefordshire, jumps suddenly to occupy most of a small hill near Stanner, then fails to appear in the rest of the county. New findings included Hammarbya paludosa in the Elan Valley in 1989.

v.c. 44 RECORDING THE FLORA OF CARMARTHENSHIRE R.D. Pryce

If the thirteenth century writings of the Meddygon Myddfai are discounted, recording of the Carmarthenshire flora began in 1662 when John Ray on his second itinerary through Wales noted "at Kidwelly, on the sandy meadows near the town, I observed six sorts of rushes" and he went on to mention Juncus acutus and J. maritimus. About fifty years later Lhuyd passed through the county and, very significantly, recorded Sison verticillatum (Carum verticillatum), one of the species for which Carmarthenshire is still most noted. Several other visiting botanists subsequently contributed but no systematic floral list of the whole county was attempted until Barker's of 1905. Several contemporaries of Barker, notably Knight and Hamer published plant records but it was not until the BSBI Atlas project of the late 1950's that an ordered approach was made, the two principal contributors being Mrs I.M. Vaughan and
R.F. May. Shortly before his retirement from Carmarthenshire botany, May published "A List of Flowering Plants and Ferns of Carmarthenshire" in 1967. This remains the only comprehensive published work on the county's flora. Mrs Vaughan succeeded May as BSBI Recorder and made further major contributions, principally on a site basis.

The present recording scheme was started in 1982. Of the 698 tetrads which comprise the vice-county, 292 had one or more post 1970 records at the inception of the scheme: mostly Mrs Vaughan's site-based data. By the end of 1988 all tetrads had been visited with the exception of one peripheral, remote, part-square and three wholly in the sea! The total number of individual records collected so far is in excess of 130000 and the greatest number of species recorded in one tetrad is 521. However, only 280 have more than 200 species and these are concentrated in the populated south-eastern third of the county. It is hoped to reach a target of 200 to 250 species for every tetrad in order that a reasonably comprehensive and even coverage is achieved, before contemplating publication. Whilst mapping the species distribution on a grid basis, encouragement has always been given to recording by sites with additional notes on, for example, habitat and species populations and associations. These data are invaluable when making an ecological assessment of the flora as well as essential for conservation purposes.

Several new taxa have been recorded since 1982 but also of significance is the number of rediscoveries of species thought to have become extinct. Critical taxa have not been neglected, for instance both Rubus and Hieracium referees have actively been involved in field work and have identified a significant number of first county records. There is a general decline in species confined to easily destroyed or altered habitats but one of the most pleasing aspects of the project has been the continuing frequency with which previously unknown, semi-natural, ecologically-rich sites have come to light.

Several years of field-work still remain before publication can be attempted. However, despite only very few recorders taking part, the achievement to date has been very encouraging in this, the largest Welsh vice-county. I look forward to continued progress and the appearance of the final work in the not too distant future.
I have now been BSBI recorder for the small but very diverse old county of Pembrokeshire for a decade so a brief review of what has and has not been achieved is timely. During the early 1980's much time was spent gaining familiarity with the voluminous and excellent records cards, diaries and correspondence inherited from my predecessor, the eminent local naturalist the late Tommie Warren Davis. His work on a 5 x 5km. square flora although advanced had unfortunately not reached the manuscript stage. He had, however, published a "Plant List" in 1970.

Highlights of the early 1980's were discoveries of new vice county records of species such as Aster linosyris on the limestone of the Castlemartin peninsula and Lathyrus palustris in upper saltmarsh of the Eastern Cleddau. Many of the rare species found at that time arose from pioneer habitat survey work promoted by the Nature Conservancy Council.

By the mid-1980's I was converted to the idea of a home computer storage and retrieval system as a successor to the manual card index system. The last four years have been dominated by hours spent entering earlier records as well as inputting new records. The "Biorecs" programme developed by Stephen Coker is exceptionally comprehensive and although aimed at detailed site recording presents and analyses data at a 1 km square level. It also operates at coarser levels so that the 5 x 5 km data set inherited will not be wasted.

Botanical recording in Pembs. in the 1980's was largely undertaken by myself with support from a few stalwarts and occasional visiting botanists. Bryophytes, lichens and similar lower plant groups have never been covered by resident botanists and are not being systematically dealt with today although Pat Wolseley, Peter James and Francis Rose have recorded lichens at many key habitats. I have concentrated on higher plants and ferns by defined site and habitats within 1 km squares. Others have adopted a variety of approaches often collecting mappable records more efficiently but omitting habitat details. Apart from the BSBI Monitoring Scheme special efforts have been made to complete rare species population forms (some 700 have been completed), to survey churchyards and chapelyards (all churchyards have been visited) and the Castlemartin peninsula is being mapped at 1 km square level by Peter Rhind and Steve May.

Roadside verges and the Pembrokeshire hedgebank deserve more attention and much is planned for 1991. Arable weeds and the plants of the many small offshore stacks and islands need particular efforts especially as Pembs. is rich in both. In addition I have to admit that the difficult groups have been neglected although historical aspects have not. A visit to
Cawdor Castle led to the donation of the 1st Countess Cawdor's Stackpole herbarium to the National Museum of Wales. The plant list and papers of the late Miss Cicely Howells covering the period before and after the 2nd World War were secured whilst Juliet Brodie provided for safe keeping a revised card index to the Dale flora.

It is now very easy to supply maps, site lists, sites for a species, etc. in a great variety of combinations. Over 120,000 species records are available from 930 visited 1 km squares although many others are awaiting their first botanist. A frightening quantity of old records have still to be incorporated during the winter months. Once this has been done and extra coverage of certain habitats and locations achieved it will be time to start drafting the text for a flora perhaps even leading to the offer of some of the information on floppy disk for the reader's own analyses! To end on a more traditional note my botanical highlight of 1990 was undoubtedly a Sunday in June with David Lang and Jack Donovan. David confidently identified Dactylorhiza majalis subsp. traunsteinerioides in an Epipactis palustris/Carex lasiocarpa flush at one of our best tens - Castlemartin Corse, during a day spent puzzling over those marsh orchids. Perhaps this compensates for the equally memorable day with R.W. David in June 1989 on the wet heaths and fens of St. Davids when Carex appropinquata was regretably reduced to C. diandra and Pembrokeshire "lost" its most elusive plant.

v.c. 46 CARDIGANSHIRE

Plans are being made this winter for a county Flora which it is hoped to complete in about 10 years time. My present inclination is to aim for as thorough a coverage as possible of infraspecific variation, critical groups and hybrids, and to include a considerable element of ecological and phytosociological information, perhaps at the expense of completeness of tetrad mapping, although tetrad recording will be a major part of the project.

Most of the recording in the last 10 years or so by myself as v.c. recorder and by other botanists in the v.c., notably contract workers for N.C.C. and for the Common Land Survey, has been site-based for conservation purposes, and this situation is likely to continue. There have not been, and, on present showing, are perhaps unlikely to be, more than a very few other recorders in the v.c. in a position to do tetrad recording on a large scale, but the proportion of "good" sites already surveyed and listed is very high. It would seem sensible to continue with this style of recording and to capitalise on the site accounts that are available. It would perhaps be more useful, for example, to indicate the partial tetrad distribution and general ecology of the subspecies of Sparganium erectum, or the main occurrences of Festuca...
ovina/Agrostis capillaris/Thymus praecox grassland as a recognised National Vegetation Classification community than to give ostensibly complete tetrad maps of Sparganiurn erectum s.l. and Thymus praecox. It would of course be best to do both, but that is unlikely to be possible. If corners have to be cut, I would prefer to fail to cover a number of probably dull tetrads than to fail to give information on these other topics. The Flora will probably aim to show the situation in the v.c. during the period 1980-2000, with 1950 and perhaps 1930 as other cut-off dates.

Because of the general thoroughness with which "good" sites such as wetlands, ancient woodland, rhos pastures or rich meadows have been hunted out and surveyed, the distribution of many of the indicator species of these sites, such as Carum verticillatum, Cirsium dissectum, Lamiastrum galeobdolon, Tilia cordata or Briza media, is probably fairly accurately known already. But the distribution of many species of less fashionable habitats, such as Cytisus scoparius or Hypericum humifusum, can only be guessed at present. A Ceredigion Rare Plant Register is currently produced every two years in collaboration with N.C.C., covering all species in less than 100 10 km squares nationally and all species in only three or fewer sites in the v.c., as well as many additional species of ecological or other interest. This has proved quite useful in a local conservation context and is a good way of keeping track of the cream of the local flora.

v.c. 47 BOTANICAL RECORDING IN MONTGOMERYSHIRE M. Wainwright

In the early 1980's, as recording for the Shropshire Flora was coming to an end, thoughts turned to Montgomeryshire, where botanical information had always been sparse. There were known sites like Breidden, but traditionally, botanists had passed through on the way to somewhere else. A few local surveys had been made based on parish boundaries, and Webb's unpublished Flora gave useful information around 1940. Plants of Montgomeryshire in 1977, based on the field records of Janet Macnair was a first, for a county "unjustly overlooked because no adequate account of its plant life existed" as the foreword said. Our aim was to build on this modest foundation so that present distribution could be assessed accurately on a grid-square system and future change monitored.

Since recording in Shropshire had "squared-off" that county, thereby including parts of its neighbours, we already had post 1970 records for the eastern perimeter of Mont. In our case the county boundary was the limit, but Shropshire's lead was followed in making a judgement on which species were common, uncommon or rare and devising lists for the county accordingly. It had become clear that this method was more "user friendly" than BSBI record-cards and enabled less experienced people to make a useful contribution. Names were
in English as well as Latin and since the commonest plants were only recorded on a 10 km basis, work was faster and less repetative, while more information was gathered where needed, on less common species. These were to be published on a tetrad basis, but recording was actually done to a quarter tetrad or 1 km square, just as easy in the field, and giving us a valuable archive of information on plants which might be the rarities of the future. Very uncommon plants had a separate record sheet apiece with 6 figure grid references and all relevant information.

The Flora Project was sponsored by the Montgomeryshire Field Society and launched early in 1984, after several years of preparation by BSBI recorder Doris Pugh and others. Since then we have maintained a list of 60+ helpers, of whom over half recorded on a regular basis. There was a co-ordinator for each 10 km square (or part square), field meetings were organised and results computed annually. The status of some plants was changed as they were found to be more or less common than expected. Over 40 people attended each annual Recorders' Meeting. It has been a happy and successful project and at our final meeting recently, we were able to announce 42,000+ records so far for less common plants and 400+ for those uncommon or rare in Montgomeryshire.

Botanical recording has its particular difficulties in mid-Wales. Access is not always easy and in remoter areas, the recorder is very visible in the landscape. His purpose is sometimes misunderstood and occasionally he is viewed with deep suspicion. Lack of expert help is another difficulty. Obvious sources of academic expertise in north, south and west Wales are too far away, while botanists are notably thin on the ground in Mont. The BSBI Atlas scheme came in the midst and often involved re-recording places already done, but not in the two years specified. However, this had a bonus, with the welcome input of help from BSBI members on joint outings. Some gallant souls returned to assist us again, despite unfamiliar record cards and unpredictable weather. On one memorable June outing, a compass was needed to return to base in thick mist and pouring rain!

So far, we have few Welsh recorders, but we hope that publication, probably in 1992, will stimulate interest in Montgomeryshire's botanical heritage. Meanwhile work will continue. We are already planning for the next 10 years!
Since the publication of A Contribution to a Flora (Benoit & Richards, 1963) a vast amount of recording has been done in vice-county 48, Merioneth. Mary Richards died at the age of 92 in 1977 (Milne-Redhead, 1978) but the botanical exploration of Merioneth has continued. New discoveries and rediscoveries amount to about 89 species, 9 subspecies and 24 hybrids, plus numerous microspecies of Rubus, Hieracium and Taraxacum. There were probably a few losses over this period too, but it is impossible to be sure.

Detailed recording of about 386 of the rarer and the maritime species is almost complete. About 258 of the species in the middle range of frequency are being mapped on the 1km grid. This is the group that is getting most attention at present. About 275 of the commonest species are mapped on the 10km grid. Most of the records of them were included in Flowering Plants of Wales (Ellis, 1983). The main activity with the commonest species is in updating existing records since many of these date back to the period 1954-61 when recording was being done for the Atlas (Perring & Walters, 1962).

Several native-type species that were probably correctly recorded by the early botanists have still not been seen in this century and must be presumed extinct. They are Lyco~odiella inundata, Matthiola sinuata, Mertensia maritima, Ononis spinosa, Oenanthis maritimus, Pilularia globulifera and Woodsia ilvensis. It is still hoped that the Woodsia may survive on one of the remote cliffs of Cadair Idris.

On the negative side the botanical interest of Merioneth has been greatly diminished by the ploughing and seeding of ancient grasslands, the draining of wetlands, the planting of conifer forests, the dedication of more and more of the coastal strip to caravan and tent sites with their access roads, ancillary buildings and the inevitable public pressure, and the removal of roadside walls. Alas, A Contribution to a Flora is all too quickly becoming an historical record rather than a current guide.

REFERENCES


1990 saw the organised start of a new Flora Project for Caernarvonshire - not before time - it is almost 100 years since J.E. Griffith published the Flora of Anglesey and Caernarvonshire and no comprehensive update has been attempted since then.

The new Flora aims to list all the flowering plants and ferns currently growing in Caernarvonshire and to illustrate their distribution within the vice-county at the tetrad level. The present day status of each species will be compared with the 19th century distribution indicated by Griffith's Flora and with two more date categories in the 20th century.

Ecological information about each species will be brought together in the flora which will also show habitat distribution in the county based upon the National Vegetation Classification. A site register will list and describe the finest botanical habitats and in conclusion there will be a review of the conservation of the county's flora.

This project will run for 10 years during which time both resident and visiting botanists are urged to help with field work. Supplies of record cards are available from the vice county recorder, N.H. Brown, Treborth Botanic Garden, University College of North Wales, Bangor, Gwynedd, LL57 2RQ. Plant records will be handled at the botanic garden using the BIORECS system already employed successfully in several other Welsh vice-counties.

There has been no published Flora of Denbighshire. In 1911 A.A. Dallman published "Notes on the Flora of Denbighshire" in the Journal of Botany. He states in his introduction "book records and the commoner species are purposely excluded". It was not until the Atlas of the British Flora was produced by the BSBI between 1950-60 that any systematic recording of all plants on a square basis was attempted. With the death of local field botanists however, v.c. 50 remained under-recorded.

In 1964 John Brummitt became Recorder for the county, and started systematic recording on a 10km square basis. Each 10km square had a record card, in addition there was a record card for each species, with date and map reference for uncommon species. It became possible to see at a glance how commonly a plant was found in the county.
In 1986-87 the BSBI Monitoring Scheme gave fresh impetus to recording, and five squares (77.07.74.04.34) were explored in detail. With the possibility of a new BSBI Atlas under discussion, the decision was made to start new record cards for all squares in 1987.

Using A4 size cards, each 10km square was given a Master card and a series of habitat cards. These record species in a limited area such as a nature reserve, an SSSI, a stretch of river bank. It is not practicable in v.c. 50 to record on a tetrad basis. It is a large county with relatively few field botanists. The keeping of separate site cards together with individual species record cards should be sufficient to relocate uncommon species.

The number of species in each 10km square is updated after each visit, and recording meetings are targeted on under-recorded squares.

Several squares have been adopted by an individual, and in these recording is progressing well. Records are sent in to me in November each year, and lists of uncommon species finds are sent in to the National Museum of Wales. I have a mailing list of about 25 people, and I circulate details of recording meetings which are held about once a month during the season. We visit under recorded squares and between 0-10 people attend, depending on weather and site. Help is needed. Any botanist passing through the county can send me a plant list - please keep within a 10km square, and make a note of unusual species with 6-figure map reference, and date of finding. Anyone wishing to adopt a square is welcome - please send in records in November of each year.

The map shows the present numbers in each square and it is noticed that the Monitoring Scheme squares have the highest number of species.

The target recording figure is 500 species in each 10km square. When this target is approached then the writing of a Flora becomes a possibility.

V.C. 50 DENBIGHSHIRE at end of 1990.

NEW RECORD CARDS WERE STARTED FOR ALL SQUARES IN 1987 with the MONITORING SCHEME

(MONITORING SCHEME SQUARES

77.07.74.04.34)
During the early years of this century, A.A. Dallman carried out a great deal of work in recording the plants of Flintshire. His results were summarised in a series of papers in the Journal of Botany, 1907-11, but his proposed Flora was never published.

In 1972 it was decided to begin work on mapping the distribution of flowering plants and ferns in the county, based on the tetrad (2km x 2km) as a recording unit. With the help of a small group of enthusiastic volunteers, work began in 1973 and continued for 15 years, by which time a reasonably complete survey had been achieved. Over 1,400 taxa have been recorded with an average of over 225 records per tetrad.

A considerable herbarium of several thousand specimens, many of which have been named by specialist referees, has been built up over the years as a voucher collection and as an aid to identification of new specimens. Dot maps showing the distribution of all the species have also been prepared.

In addition to the plant recording, work has been done on recording the environmental factors which are potentially relevant to plant distribution. These have been obtained from maps, also on a tetrad basis. In addition to the O.S. 1:25,000 series, data have been obtained from soil, geological and climatological maps. In all, 209 environmental attributes have been identified and plotted for each tetrad.

Thus two parallel sets of data have been obtained, floristic distribution based on field-work and environmental factors from maps. Both these sets have been subjected to computer analysis, using the TWINSPAN and DECORANA ordination programs supplied by the University of Lancaster. The work was carried out at the University of Salford, and I am extremely grateful to the members of the Biology Department for their unfailing help.

Arising out of this work, the Flintshire tetrads have been arranged into a series of Land Classes and Floristic Classes, along the lines of the work of the Institute of Terrestrial Ecology in Cumbria. These two ordinations show a very high correlation ($r = 0.92$), and an interesting similarity of pattern when mapped over the county. Altitude emerges as being much the most important environmental factor in the plant distribution patterns.

In addition, some 50 Habitat Studies have been carried out, giving details of the plants and the environmental factors in representative samples of all the Land Classes. Also, the flora of the county has been analysed on the basis of the Geographical Elements proposed by J.R. Matthews in 1955 in his Origin and Distribution of the British Flora.
Following nearly two years of frustration and disappointment, a publisher for this work has finally been found, and the MS is now being prepared.

v.c. BOTANICAL RECORDING IN ANGLESEY 1982-1990 R.H. Roberts

Since the publication of the check-list of Anglesey plants in 1982, records for the island have accrued on a considerable scale. The North Wales Naturalists Trust's Biological Survey Team (Ynys Mon), 1983-1984, produced a valuable mass of records, many of them from parts of the island which previously had not been readily accessible, especially on some of the larger estates.

The publication of 'The flowering plants and ferns of Anglesey' in itself provided an incentive for both local botanists and visitors to send in records. This was particularly noticeable during the first three or four years after its publication. Subsequently the BSBI Monitoring Scheme (1987-1988) supplied a further impetus by concentrating attention on a single 10km square and by once again emphasising the value of collecting data on a tetrad basis (a 2 x 2 km square of the National Grid). During the course of the scheme two recording meetings were held, both led by Nigel Brown: the first at Henblas, Llangristiolus, and the second at Talwrn. While these produced a number of interesting local records, it is not surprising that in such a well-botanised area, the only noteworthy records were of Selaginella kraussiana (Mossy Clubmoss), Oxalis europaea (Upright Oxalis) and Verbascum virgatum (Twiggy Mullein), all of them introductions and found in the gardens and grounds of the old mansion of Henblas, long noted for its extensive greenhouses and well-tended gardens (see Helen Ramage: 'Portraits of an Island', 1987).

However, a number of new v.c. records have been made since 1982: Lycopodium clavatum (Stag's-horn Clubmoss) on Parys Mountain, Equisetum sylvaticum (Wood Horsetail) on the recent extension to Cors Erddreiniog NNR, Ruppia cirrhosa (Spiral Tasselweed) on the Cefn estuary, Listera cordata (Lesser Twayblade) in the Forestry Commission plantations at Newborough, and Allium ampeloprasum (Wild Leek) near South Stack. Other finds such as Salvia verbenaca (Wild Clary) from Penmon Priory and Vicia sylvatica (Wood Vetch) at Porth-y-gwichiaid, confirm the continued survival of Anglesey's scarcer species.

Perhaps the most surprising source of new records is the collection of paintings of Anglesey wild flowers by the Massey sisters, who in the early years of this century lived in Cornelyn Manor near Llangaedd. This collection has been acquired by Anglesey Borough Council and is kept at Plas Arthur, Llangefni. Some of these paintings attest the occurrence of unusual casuals such as Centaurea calcitrapa (Red Star-thistle) and Lepidium ruderale (Narrow-Leaved Pepperwort),
records of which are not found elsewhere as far as I am aware. Another is of a specimen of Mertensia maritima (Oyster Plant) gathered from Red Wharf by "Frank Massey, 1903", which supports the annotation in J.E. Griffith's personal copy of his Flora of Anglesey and Carnarvonshire (1895), now in Bangor City Library (see note in Welsh Bulletin No. 39, Feb. 1984, p.13). Griffith, however, does not give the name of the recorder, but it is clear that he was in touch with the Massey family and must have learnt of the Mertensia from them.

All records from the various sources have been entered on cards and assigned to the appropriate tetrads. This is greatly facilitated nowadays because most recorders give the six figure grid reference for their finds. Dot maps for all except the commonest species have already been prepared and it would need very little further work to have them ready for publication.

I wish to thank all those who have sent in records over the last eight years. They are all appreciated and I hope this trend will continue.
WELSH PLANT RECORDS - 1987

Welsh Plant Records are compiled by R. Gwynn Ellis, Dept. of Botany, National Museum of Wales, CARDIFF CF1 3NP, from reports of BSBI vice-county Recorders to whom records should preferably be sent. Plants are listed for each county in the order of Dandy's List of British Vascular Plants (1958), the number in that list preceding the name, so that names recently changed can be used without giving the former name. However, for the critical genera Rubus, Hieracium and Taraxacum, the species numbers follow more recent works viz: Rubus - Brambles of the British Isles, Eedes & Newton, 1988, Hieracium - Sell & West in Critical Supplement to the Atlas of the British Flora, F.H. Perring, 1968, and Taraxacum - C.C. Haworth's typescript, An Annotated List of British and Irish Dandelions, 1988. English names are those in English Names of Wild Flowers ed. 2 (1986) by Dony et. al.

The following symbols are used:
* to indicate a new v.c. record.
+ to indicate a new 10km square record.
! to indicate that the species is not native to Wales.
$ to indicate a species which, though native in some parts of Wales, is not so in the locality recorded.
[] to indicate that the record, previously published in error, should be deleted.

Where entries consist of one record only, the symbols appear before the species number: where entries consist of more than one record, the symbols appear before each record, except for the ! sign which, if required, is always placed before the species number.

In general only those records which are additional to those given in Flowering Plants of Wales by R.G. Ellis (1983) are included. Other records are included at the discretion of the vice-county Recorder.

The Vice-County Recorders from 1/1/1990 are:

MONMOUTH, v.c. 35; T.G. Evans, La Cuesta, Mounton Road, Chepstow, Gwent NP6 5BS.
GLAMORGAN (West), v.c. 41; Dr Q.O.N. Kay, Dept. of Botany, University College, Singleton Park, Swansea, West Glamorgan SA2 8PP.
GLAMORGAN (East), v.c. 41; J.P. Curtis, 12 St Lythan Close, Dinas Powys, South Glamorgan CF6 4UB.
BRECON, v.c. 42; M. Porter, Aberhoowy Farm, Cyffredyn Lane, Llangynidr, nr Crickhowell, Powys NP8 1LR.
RADWOR, v.c. 43; Dr D.R. Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR.
CARMARTHEN, v.c. 44; R.D. Pryce, Trevethin, School Road, Pwll, Llanelli, Dyfed SA15 4AL.
PENMBROKE, v.c. 45; S.B. Evans, Glan-y-Mor, Dinas Cross, Newport, Dyfed SA42 0UQ.
CARDIGAN, v.c. 46; A.O. Chater, Windover, Penyrangor, Aberystwyth, Dyfed SY23 1BJ.
MONTGOMERY, v.c. 47; Mrs M. Wainwright, 'Troy', 1 Green End, Oswestry, Shropshire SY11 1BT.
HERIONETH, v.c. 48; P.M. Benoit, Pencarreg, Barmouth, Gwynedd LL42 1BL.
CAERNARFON, v.c. 49; N.H. Brown, Treborth Botanic Garden, University College of North Wales, Bangor, Gwynedd.
DENBIGH, v.c. 50; Mrs J.A. Green, Coed Duon, Tremerchion, St Asaph, Clwyd LL17 0UH.
FLINT, v.c. 51; G. Wynne, Gwylfa, Lixwm, Holywell, Clwyd.
ANGLESEY, v.c. 52; R.H. Roberts, Quinton, 51 Belmont Road, Bangor, Gwynedd LL57 2HY.
MONMOUTH, v.c. S5 (comm. T.G. Evans)

+46/7. Ranunculus sardous Crantz (Hairy Buttercup). Single plant in waste ground near Raglan Service Station, SO4208, A.Wood, 1987. First recent record. Raglan appears to be stronghold for the Hairy Buttercup, it occurs on verges and farm entrances in several sites.


Monmouth


311/2. *Heracleum mantegazzianum* Sommier & Levier (Giant Hogweed). Spreading along rivers, streams and roadsides, and recorded from five new 10km squares - ST28, 38, 39, SO20, 41 - by various recorders for the Gwent Flora project, 1985-87.

331/1. Ficus carica L. (Fig). One large tree growing out of wall over the River Ebbw, Aberbeeg, SO2705, R.Fraser, 1987.


425/3. Mimulus moschatus Dougl. ex Lindl. (Musk) A large colony in wet area, The British, Abersychan, SO2504, R.Hewitt, 1985. This was the first sighting of this species and introduced the Gwent Flora Recording Group to it, leading to many discoveries in following years.


**Lonicera nitida** E.H.Wilson (Chinese Honeysuckle). Recorded from ten new 10km squares, most records due to infilling of hedge gaps in farm fields bordering roads or lanes - ST28, 29, 39, 49, 58, S020, 22, 20, 31, 50 - by various recorders for the Gwent Flora project, 1985-87.


**Erigeron canadensis** L. (Canadian Fleabane). Waste ground, Ridgeway, Newport, ST28Z, Joan Searle, 1985 (now recorded from 6 tetrads in the square).


**Hieracium umbellatum** subsp. bichlorophyl1um (Druce & Zahn) P.D.Sell & C.West (a hawkweed). Lane bank N of Parc Seymour, ST4092, 1984-87; roadside bank, Newchurch West ST4597, 1984, both T.G.Evans, det. J.Bevan.

Monmouth


+640/1. Ophrys apifera L. (Bee Orchid). Cliff top, Sudbrook east end, ST58D; and grassy bank near bus stop, east end Portskewett, ST58E, both T.G. Evans, 1986.

+642/5. Orchis morio L. (Green-winged Orchid). Meadow near The Narth, SO50I, Mrs E. Wood; and north of Raglan, SO50J, S. Kerry, both 1987.


GLAMORGAN, v.c. 41 (comm. Q.O.N.Kay & J.P. Curtis)


Glamorgan


+410/1. *Atropa bella-donna* L. (Deadly Nightshade). Seaward edge of very low clay/stone cliff at back of storm beach, Summerhouse Point, ST9966, J.P. Curtis, 1987. Another plant reported as growing close to this site by Dr M.E. Gillham in 1985 was not seen. First records since c.1907.


Glamorgan


31
BRECON, v.c. 42 (comm. M. Porter)


+$179/1. Rhamnus catharticus L. (Buckthorn). Edge of wet wood near Brecon, S003, M.Porter. All previous records have been from limestone cliffs.


Brecon


+432/1. *Pedicularis palustris* L. (Marsh Lousewort). Wet pasture near Brecon, SO03, growing with large populations of *Dactylorhiza incarnata* (Early Marsh-orchid) and *Trollius europaeus* (Globe-flower), M.Porter, 1987.


*643/2x636/1. x *Dactylogymnadenia legrandiana* (Camus) Soo (Dactylorhiza maculata x Gymnadenia conopsea) (a hybrid orchid). Haymeadow, Abergwesyn, SN8452, M.Porter, 1987.

+654/3. *Eriophorum latifolium* Hoppe (Broad-leaved Cottongrass). Springhead flush, Mynydd Eppynt, SN93, growing with *Carex dioica* L. (Dioecious Sedge) and *Eleocharis quinqueflora* (F.X.Hartmann) Schwarz (Few-flowered Spike-rush), R.G.Woods & M.Porter, 1987. All three are new records for this 10km square.


Brecon / Radnor


RADNOR, v.c. 43 (comm. Miss A.C.Powell & D.R.Humphreys)


34


Radnor / Carmarthen


**CARMARTHEN, v.c. 44 (comm. R.D.Pryce)**


Carmarthen


Carmarthen


+282/1. Conium maculatum L. (Hemlock). Wayside, Trefechan Farm, SN3920, Rubus Recording Meeting, 1987

+300/1. Oenanthe fistulosa L. (Tubular Water-dropwort). River meadow dammed by disused railway, near River Towy, Carmarthen, SN4120, G.Hutchinson; several substantial stands in valley fen, Moat Farm, Trimsaran, SN4305, R.D.Pryce, both 1987.


459/3. *Stachys arvensis* (L.) L. (Field Woundwort). One plant with other casuals in disturbed Forestry ground, near Lan Farm, SN1926, J.A.Green, 1987.


*669/1x2. Glyceria x pedicellata Townsend (G. fluitans x G. plicata) (Hybrid Sweet-grass). Marshy ground adjoining Eastern Cleddau River, 3.5km W of Clynderwen, SN01Z, G.Hutchinson, 1986.
Carmarthen / Pembroke


+670/1x671/1. x Festulolium loliaceum (Huds.) P.Fourn (Festuca pratensis x Lolium perenne) (Hybrid Fescue). Quite abundant on roadside verges between Rhyd-deg and Clos-glas, Maesybont, SN5417, R.D.Pryce, 1987, conf. G.Hutchinson. Third record, second since 1905.


PEMBROKE, v.c. 45 (comm. S.B. Evans)


CARDIGAN, v.c. 46 (comm. A.O.Chater)


Cardigan


+115/12. Hypericum hirsutum L. (Hairy St John's-wort). Grassy scrub on river bank, Ponterwyd, SN78, A.O.Chater & BSBI Field Meeting, 1987. Presumably originated as a garden throw-out, but well established; it seems to have been recorded only once previously, from roadsides near Aberystwyth in 1961, and is nowhere native.


Cardigan


Cardigan


481/1. Sherardia arvensis* L. (Field Madder). + Garden weed, Pontrhydfendigaid, SN76, J.Harvey; + and margin of barley field 2km W of Mwnt, SN15, A.O.Chater & A.P.Fowles, both 1987.


514/1. *Filago vulgaris* Lam. (Common Cudweed). About 50 plants on eroded grassy slope, Foel y Mwnt, SN15, J.R.Akeroyd et al. This is the only locality from which this decreasing species has been seen in recent decades.

+532/1. *Matricaria recutita* L. (Scented Mayweed). National Trust car park, Mwnt, SN15, C.D.Preston et al. The only recent record, but whether genuinely rare, decreasing or under-recorded is uncertain.


Cardigan


643/3cx5. Dactylorhiza incarnata subsp. coccinea (Pugsley) Soo x D. purpurella (T. & T.A.Stephenson) Soo (a hybrid marsh-orchid). Dune slack, Ynys-las, SN69, F.Horsman, 1987. The only previous records for this hybrid are from "near Borth" in 1935 (P.M.Hall and W.A.Sledge) and 1943 (T.Stephenson). The 1919 record (T. & T.A.Stephenson) cited in Fl. Pl. Wales p.191 is not of this hybrid (fide F.Horsman).


+663/28. Carex limosa L. (Bog-sedge). Open mire, Bwlchyrhandir, 3km SSW of Aber-mad, SN57, A.P.Fowles, 1987. Not seen here when mire was surveyed on several occasions 1957-1977 and perhaps a recent arrival, although abundant in an area 2x10m.


Montgomery

MONTGOMERY, v.c. 47 (comm. Mrs M. Wainwright)


459/6x7. Stachys x ambigua Sm. (S. palustris x S. sylvatica) (Hybrid
Woundwort). Beside newly-dug pools at Wern Reserve on the Montgomery
Canal, SJ21, F.H.Perring et al.; + and with both parents on banks of
River Severn at Llandinam, SJ08, J.A.& R.I.Green, both 1987.

*472/5. Plantago coronopus L. (Buck's-horn Plantain). Gravely bank
of tidal river, mouth of Afon Llyfnant, SN6997, P.M.Benoit, 1987.

*506/2x1. Senecio x ostenfeldii Druce (S. aquaticus x S. jacobaea)
(a hybrid ragwort). Marsh by River Dyfi, 1km SSE of Pennal, SN7099,

*540/4x3. Cirsium x celakovskianum Knaf (C. arvense x C. palustre)
(a hybrid thistle). Meadow, Cwm Einion, 1km WNW of Pontrobert,
SJ0913, P.M.Benoit, 1987. One plant with both parents.

+558/1/245. Hieracium perpropinquum (Zahn) Druce (a hawkweed).
Woodland edge near Llandinam, SO08, V.Evans & M.Wainwright, 1987,
det. P.M.Benoit.

+1558/2/6b. Pilosella aurantiaca subsp. carpathicola (Naegli &
Peter) Sojak (Fox-and-cubs). Twelve plants in Methodist graveyard at
earth in burial grounds.

+577/9. Potamogeton perfoliatus L. (Perfoliate Pondweed). In River

577/14. Potamogeton obtusifolius Mert. & Koch (Blunt-leaved
Pondweed). Near edge of pool in Montgomery Wildlife Trust Reserve,

+605/7fol. Juncus foliosus Desf. (a toad rush). Basic flush near

!648/1. Lysichiton americanus Hulten & St John (Yellow
Skunk-cabbage). First reported W of River Severn at Llandinam, SO08
(K.Jones, 1972), and now well-established on both sides, V.Evans &

+670/4. Festuca altissima All. (Wood Fescue). Rocky streamsides, N

*701/2b. Agrostis vinealis Schreber (Brown Bent). Acid stony
forestry track, Coedleos, 2km NE of Dolanog, SJ0814, P.M.Benoit,
1987.

MERIONETH, v.c. 48 (comm. P.M. Benoit)

*320/12x9. Polygonum x intercedens G. Beck (P. hydropiper x
P. persicaria) (a hybrid knotgrass). One plant with an abundance of
both parent species at marshy edge of pool, Cynwyd, SJ04,
CAERNARFON, v.c. 49 (N.H. Brown)


21/6. Dryopteris carthusiana (Vill.) H.P.Fuchs (Narrow Buckler-fern). Very sparingly in boggy area SW of Eirianwys Farm, c.1.5km N of Ty'n-y-groes, SH7773; and very sparingly with Dryopteris dilatata in boggy ground at side of track leading from Sychnant Pass to Conway Mountain, SH7577, both R.Lewis, 1987.


+53/dar. Berberis darwinii Hooker fil. (a barberry). Hedgerow at side of lane near Conway, SH7875; and in woodland on steep hillside E of road between Roewen and Pontwgan, SH7671, both R.Lewis, 1987

+111Lun/ann. Lunaria annua L. (Honesty). In hedgerow roadside, W side of B5106 road at Henefail, c.1.5km N of Ty'n-y-groes, SH7773, R.Lewis, 1987.


Caernarfon

+!171/4. Impatiens glandulifera Royle (Indian Balsam). On waste ground near Talycafn, SH7871; and side of lane leading to Coed Parc Mawr, c.1.5km N of Roewen, SH7673, both R.Lewis, 1987.


*!342/4. Populus nigra L. s.s. (Black Poplar). + Hedgerow, six trees near Ty'n-y-groes, SH7771; + three trees in hedgerow (1 pollarded) W of lane between Pontygyn and Llanbedr-y-Cennin, SH7670; + and one tree in hedgerow in field W of B5106, near Ty'n-y-groes, SH7669, all R.Lewis, 1987. First records. All ten trees have the massive down curved branches and large swellings on the main trunk as described by Meikle in "Willows and Poplars". The trees appear very old and some have been badly wind-damaged and from their location it appears that they were all originally planted.


Symphytum tuberosum L. (Tuberous Comfrey). In hedgebank at side of lane leading to Coed Parc Mawr, c.1.5km N of Roewen, SH7573, R.Lewis, 1987.


Denbigh


+28/1. *Botrychium lunaria* (L.) Swartz (Moonwort). On a building tip below Alwen dam, SJ3942, J.A.Green, 20 plants in 1986, one in 1987.


*!475/5. Campanula persicifolia* L. (Peach-leaved Bellflower). Established on railway bank, 0.5km from nearest house, c.13km NNW of Bodnant Gardens, SH7973, J.A.Green, 1987.


*670/1x671/1. *Festulolium loliaceum* (Hudson) P.Fourn (*Festuca pratensis* x *Lolium perenne*) (Hybrid Fescue). Wet meadows, Overton, SJ3942, D.Tinston, 1987, det. P.M.Benoit.


ANGLESEY, v.c. 52 (comm. R.H.Roberts)


Anglesey


Anglesey


WELSH FIELD MEETING PROGRAMME - 1991

SUNDAY 28th APRIL
CRICCIETH, GWYNEDD (v.c. 49)
Leader: Mr N.H. Brown

A meeting to explore the lower Dwyfach - riverside meadows, woodland and disused railway track.
Meet at 11.00am in car park opposite the Goat Inn, Glan Dwyfach, 10km NW of Porthmadog on A487, SH/483438. Wellingtons or other waterproof footwear recommended, bring packed lunch. Please send bookings to Mr R.G. Ellis, address on page 23, and not to the leader, before 1st April.

SUNDAY 5th MAY
BODNANT GARDENS & GREAT ORME, GWYNEDD/CLWYD (v.cc. 49 & 50)
(in conjunction with the A.G.M., Liverpool)

See A.G.M. leaflet for details of this meeting.

SATURDAY 22nd JUNE
LAUGHARNE AREA, DYFED (v.c. 44)
Leader: Mr R.D. Pryce

A meeting incorporating a number of rich botanical habitats in the area including damp mesotrophic grassland, woodland and saltmarsh.
Meet in car park below castle in Laugharne village, Grid ref. SN301107, at 11am. Bring packed lunch, wellingtons advised. Please send bookings to Mr R.G. Ellis, address on page 23, and not to the leader, before 1st June.

FRIDAY 5th to SUNDAY 7th JULY
CAER-LLAN, GWENT (v.c. 35)
(in conjunction with the Welsh A.G.M. and Exhibition Meeting)
Leader: Mr T.G. Evans

This meeting will be based at Caer-llan Field Centre, near Trelleck. Friday evening will include a visit to some orchid sites. Saturday morning and early afternoon will be spent looking at several rich habitats in the area. At 4.00pm, the meeting will reconvene at Caer-llan Field Centre for tea followed by the Welsh A.G.M. and a talk on the 'Flora of Gwent' by T.G.Evans. The evening will be spent looking at exhibits and slides.
Sunday's field meeting will be to several sites somewhat further afield.
All meetings will start from Caer-llan Field Centre at SO/491060 at 10.00am.
Accommodation is available at the Field Centre, at approx. £20 per day, but the meeting is also open to non-residents.
Please apply for accommodation booking forms, maps of meeting places and full details of the weekend's itinerary, to Mr R.G. Ellis, address on page 23, and not to the leader, before 15th May.

FRIDAY 19th to MONDAY 22nd JULY
LAMPETER, DYFED, (v.c. 44)
Leader: Mr R.D. Pryce

A weekend to assist with recording for the Carmarthenshire Flora project. The principal aim is to concentrate on poorly worked tetrads
Welsh Field Meeting Programme-1991

in the north-east of the vice-county by splitting the party into small
groups. Single room accommodation will be available at University College
Lampeter, at approx. £20 per day (full board), but the meeting is also open to non-residents.
Please apply for accommodation booking forms or for further details
to R.G. Ellis, address on page 23, and not to the leader, before June 1st.

SATURDAY 3rd AUGUST
PENLEY, DENBIGHSHIRE (v.c. 50)
Leader: Mrs J.A. Green

A meeting on the Denbighshire/Shropshire border to look at farm ponds
and woodland.
Meet at Little Green Farm, Penley near Overton by kind permission
of Mr Ian Owen. From Overton, 3km ESE on A539, turn north on minor
road to Worthenbury (G.R. 33/413.405). Bring wellingtons, packed lunch
and grapnels.
Please send bookings to Mr R.G. Ellis, address on page 23, and not
to the leader, before July 1st.

SUNDAY 4th AUGUST
LOWER CONWAY VALLEY, GWYNEDD (v.c. 49)
Leader: Mr N.H. Brown

A meeting to visit upland meadows and woodland on the
Caerns/Denbs/Merioneth border.
Please meet at 11.00am in the car park at Pentrefoelas, 12km SE of
Betws-y-coed on the A5, SH/873514. Bring packed lunch and wellingtons
or other waterproof footwear.
Please send bookings to Mr R.G. Ellis, address on page 23, and not
to the leader, before 1st July.

SUNDAY 11th AUGUST
HIRWAUN, GLAMORGAN (v.c. 41)
Leader: Mr I.B. Hart

A meeting to compare natural upland vegetation, reclaimed coal tips
and naturally recolonised coal tips on the borders of Glamorgan and
Brecknock.
Meet at 11.00am in car park adjacent to entrance of Tower Colliery
Washery on A4061 (not Heads of Valleys dual-carriageway (A465)), Grid
ref. SN943057. Bring packed lunch, wellingtons advised.
Please send bookings to Mr R.G. Ellis, address on page 23, and not
to the leader, before July 12th.

SATURDAY, 12th OCTOBER
NATIONAL MUSEUM OF WALES, CARDIFF (v.c. 41)
Leader: Mr R.G. Ellis

An indoor meeting to see how a national herbarium goes about
collecting, pressing, storing and preserving specimens. There will
also be opportunities to consult the collections and library, and
demonstrations of computer databases for nomenclature, herbarium
collections and county floras.
Meet at 11.00am in the main hall of the National Museum of Wales,
Cardiff.
Please send bookings to Mr R.G. Ellis, address on page 23, before
October 1st.