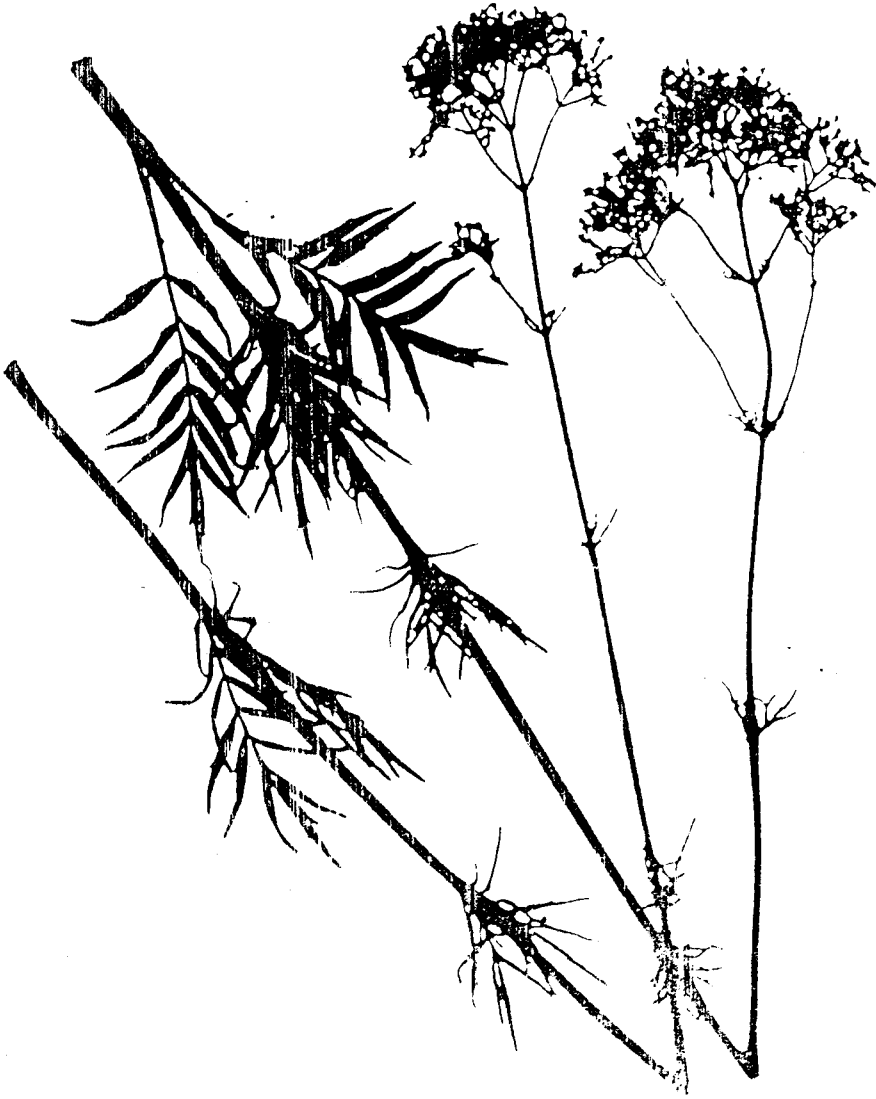


BOTANICAL SOCIETY OF THE BRITISH ISLES

WELSH BULLETIN

Editor: I.K. Morgan

No. 44, WINTER 1986



Photocopy of specimen of *Valeriana officinalis* in *MSB*, ex herb. P. A. Bonifant

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EDITORIAL

Many BSBI members who are interested in other biological groups must at times, compare the work done in those fields with botanical recording and this comparison of the various disciplines often highlights the pioneering work and great achievements made by botanists in Wales.

In contrast to the present-day sophistication of botanical recording, the study of some other spheres of natural history is almost primitive in its organization: for example, for many invertebrate groups, county lists have yet to be compiled - if investigated at all - whilst nowadays even some new 10 km square plant records merit publication in the Welsh Bulletin. As we all know it was the botanical community who initiated studies of plant distributions on a 10 km square basis and produced the first Atlas of such distributions, an eminently successful undertaking later adopted by researchers of other biological groups. Likewise, some of the earlier papers on ecology were often botany-dominated such as E. Price-Evans' 1932 paper on Cader Idris in the Journal of Ecology.

We are fortunate too, in having a strong and dedicated team of vice-county recorders some of whom are helping to pioneer methods of data storage, retrieval and analysis. The sound foundations laid by the earlier botanists and the efforts of present day members augurs well for the future.

I.K. Morgan 23 October 1986

REQUEST FOR ARTICLES and NOTES

There is currently no material for the next (Spring) issue of the Welsh Bulletin. May I appeal to the membership to set pen to paper please - we need your support for the success of the Bulletin. Thank you.

Ed.

The long delay in the publication of this issue is due to production difficulties and is not the responsibility of the editor.

Gwynn Ellis

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IMPORTANT NOTICE

Nominations for membership to the Committee for Wales or for the posts of Hon. Secretary or Hon. Treasurer should be made in writing, with the signature of the nominee, before May 31st to Mr R.G. Ellis, Hon. Secretary, BSBI Committee for Wales, National Museum of Wales, Cardiff.

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HON. SECRETARY'S REPORT

Annual General Meeting, 1986

The twenty-fourth Annual General Meeting, 6th Quadrennial Meeting and 4th Exhibition Meeting of the B.S.B.I. Wales, was held at Coleg y Bala, Bala, Gwynedd on July 12th 1986.

On the Friday evening and early Saturday morning, members were shown *Carex magellanica* and other interesting sedges at Ffridd Fawnog Bog by P.M. Benoit, but the main excursion on the Saturday morning was not to Ffridd Fawnog as given on the programme but, by common assent, to an area of the Berwyn Mountain SE of Bala to see *Listera cordata*, *Rubus chamaemorus*, and other plants. Detailed instructions were left at Coleg y Bala and, happily, most members arriving that morning managed to find their way to the new meeting place without difficulty.

After lunch, about forty members and guests gathered for the afternoon session. In the absence of the Chairman, the Vice-chairman, Mrs J.A. Green welcomed those present and introduced the guest speaker, Mr D. Elias, NCC Warden for the Bala area. He gave a very comprehensive and excellently illustrated talk on "Conservation and Plants in the Bala area" which was much appreciated by all present.

The Vice-chairman then opened the Annual General and Quadrennial Meetings. Apologies for absence were received from Mrs M. Briggs (Hon. General Secretary), Mr M. Porter (Chairman, Committee for Wales), T. Blackstock, Q. Kay, I.K. Morgan, R.G. Woods and G. Wynne (all members of Committee for Wales).

After a few opening remarks the Vice-chairman invited the Secretary to give his report on the years activities. He began by reporting that the Committee for Wales had remained at full strength during the year and remarked that the Society in Wales was fortunate to have such an active and able body of people prepared to give up an appreciable amount of their spare time to look after its activities. He next mentioned that at this meeting we said farewell to the present Chairman, Mr M. Porter, who had over the years been one of the staunchest supporters of the Committee for Wales. He was Secretary for many years before becoming an 'ordinary' member of the Committee in 1978. In 1982 he was elected Chairman and happily has agreed to stand again for election to the Committee. The Secretary then commented on the continued absence of nominations received from ordinary members of the Society; it might look to outsiders as if some sort of 'closed shop' was in operation. Nothing could be further from the truth; the Committee would welcome the chance of an injection of fresh blood but it was up to members to put forward nominations.

At the last AGM it was announced that the recordership for v.c. 47 was vacant following the sad death of Miss Doris Pugh. The Secretary was happy to announce that a new recorder had now been appointed, Mrs Marjorie Wainwright, and she was introduced to the meeting.

He then thanked the leaders of those field meetings that took place after the previous AGM and the two held so far in 1986 and reminded members of the forthcoming meetings that had been arranged. He drew attention to the fact that members who attended field meetings but had never led or organized one themselves, often found it difficult to appreciate all the hard work and effort that goes into making a successful meeting. He then mentioned that the Committee for Wales was aware that at many field meetings the number of participants had to be limited. This was not something which it liked to happen but it was clearly not possible to take a large party around sensitive areas, nor for one person to lead a party of over 25 participants so that all members could hear and see all that the leader would like them to. One of the strongest arguments against limiting numbers was that if the Society was trying to increase its membership, then it should not, at the same time, limit numbers at field meetings. Attending such meetings provided one of the best ways for members to meet each other and to become involved with the work of the Society.

The Committee had discussed several ways of improving the situation. One suggestion was to split the party into two, with the main group going one way and the second, consisting mainly of beginners and guests, being instructed in some of the basics of plant identification, or being led around a different area. If adopted this suggestion would enable us to keep meetings open to a larger number of participants but would also involve having more than one leader.

Finally the Secretary thanked the Officers of Coleg y Bala for looking after them so well, and Mrs J.A. Green who had helped to organize the meeting.

FINANCIAL REPORT

The Treasurer delivered his Financial Report details of which are summarized in the Balance Sheet produced below. He was at pains to point out that the very healthy looking balance was due almost entirely to the fact that several large bills had not yet been presented for payment. Once these had been deducted the balance would assume more normal proportions.

BALANCE SHEET

SUMMARY OF FINANCIAL ACCOUNTS FOR THE PERIOD JANUARY - JUNE 1986

GENERAL ACCOUNT

INCOME		EXPENDITURE	
Brought forward from 1985	-38.84	Paper for Bulletins	12.77
From BSBI Treasurer (4/2/86)	300.00	Deposit for Bala Accom.	100.00
Bulletin (Subs & Back Nos.)	42.50		
Bala Meeting	330.00		
Hieracium meeting (Carms.)	91.50		
Lampeter meeting	61.78		
	£786.94		£112.77
Excess Income over Expenditure	£674.17		
			£749.93

SPECIAL ACCOUNT

Carried forward from 1985	£75.76	
Current Account Balance	£5.96	
Deposit Account Balance	£743.97	£749.93

Bills were expected shortly for the Hieracium meeting, the Lampeter meeting, the Bala meeting and for the production and postage of Welsh Bulletins 42 & 43 which would reduce the Deposit Account Balance to a more normal level.

The Vice-chairman warmly thanked the Secretary and Treasurer for their reports.

ELECTION OF CHAIRMAN AND WELSH REPRESENTATIVE ON COUNCIL

The Committee for Wales had nominated Mrs J.A. Green for the post of Chairman and Welsh Representative on Council and in the absence of any other nominations this was carried by acclamation.

ELECTION OF OFFICERS

The Hon. Secretary R.G. Ellis and the Hon. Treasurer R.D. Pryce were both nominated for re-election to their respective posts and in the absence of any nominations from the floor were duly elected.

Committee Members

Dr Q.O.N. Kay and Messers S.B. Evans, I.K. Morgan and G. Wynne were all due to retire under Rule 5 of the constitution and were eligible for immediate re-election. All four had indicated their willingness to stand again and in the absence of any nominations from the floor were duly elected to serve for a further period of two years. The retiring Chairman, Mr M. Porter was nominated to fill the remaining post on the Committee and was duly elected to serve a period of one year.

In reply to a question from Mr P. Hall about the post of Vice-chairman, the Secretary explained that this was for the Committee to decide and announced that Mr T.G. Evans had agreed to serve in that capacity.

An amusing interlude followed when the Secretary presented the Treasurer with a Tee-shirt with the BSBI emblem and the words BSBI WALES emblazoned on the front. A similar Tee-shirt would be presented to the retiring Chairman. In reply to a question from the floor, the Secretary stripped off his shirt to reveal that he too was wearing a BSBI Tee-shirt. The Tee-shirts had been hand painted by the Secretary's son Carl Ellis.

There being no further business, the Chairman declared the AGM closed and invited members and guests to look at the various exhibits on show.

EXHIBITS

T.G. Evans: 'What Plant is This' quiz
Monmouthshire Plants

R.D. Pryce: A new record for Ireland?
Carmarthenshire Flora Maps

R.G. Ellis: Eleanor Vachell's botanical diaries and notebooks
Welsh Bulletin Cartoons - an explanation

Slides were shown by Mr & Mrs Case, Miss A.P. Conolly, Mr T.G. Evans, Mrs J.A. Green and Mr R.D. Pryce.

R.G. Ellis showed a video recording of that morning's visit to the Berwyns.

COMMITTEE FOR WALES, 1986-87

Following the election of Officers and Members at the Quadrennial and Annual General Meetings, the composition of the Committee for Wales for 1986-87 is as follows:

Chairman	Mrs J.A. Green
Vice-chairman	Mr T.G. Evans
Secretary	Mr R.G. Ellis
Treasurer	Mr R.D. Pryce

Committee members:

Mr T. Blackstock*	Mr S.B. Evans
Mr N. Brown*	Dr Q.O.N. Key
Mr R.G. Woods*	Mr G. Wynne
Mr M. Porter*	Mr I.K. Morgan

*Members due to retire in 1987.

ANNUAL GENERAL MEETING

AND

WELSH EXHIBITION MEETING, 1987

The 25th AGM and 5th Welsh Exhibition Meeting will be held at Usk Agricultural College, Usk, Gwent on July 11th, 1987.

Programme:

10.00am	Tetrad Recording for the Flora of Gwent and the BSBI Monitoring Scheme
1.00pm	Lunch
1.30pm	Meeting of Committee for Wales
2.30pm	"The Flora of Gwent" by T.G. Evans
3.30pm	Tea
4.00pm	AGM
4.30pm	Welsh Exhibition Meeting - Exhibits, short talks with slides etc.
6.00pm	Dinner
7.30pm	Exhibition Meeting (continued)

Advance notice would be appreciated of any exhibits or slides but they will be accepted on the day.

Single room accommodation is available at Usk Agricultural College at c. £10 per night B & B from 10-13 July. Lunch and Dinner at the College are also available for non-residents. All BSBI members and their guests are welcome.

Further details and booking forms can be obtained from the Secretary to the Committee for Wales: Mr R.G. Ellis, Department of Botany, National Museum of Wales, Cathays Park, Cardiff, South Glamorgan CF1 3NP. Please apply before June 1st.

If any member wishes to help with the Flora of Gwent recording scheme on the Friday or Monday would they please contact Mr T.G. Evans, La Cuesta, Mounton Road, Chepstow, Gwent NP6 5BU, who will provide them with recording cards and sites of interest.

BSBI WALES FIELD MEETINGS 1987

Please note that unlike previous years, full details of meeting place etc. are given for most meetings in the programme below. If you wish to book for these meetings (except for the residential meetings in Carmarthenshire), please write to: R.G. Ellis, Dept. of Botany, National Museum of Wales, CARDIFF CF1 3NP, and not to the leaders.

SATURDAY 16th MAY

ST ASAPH (v.c. 50/51), CLWYD

Leader: Mr G. Wynne

A meeting to record in 10km square SJ(33)/07 for the BSBI Monitoring Scheme. This is a rich square with a tidal estuary, wooded river valleys and extensive limestone escarpments. Meet at lay-by on the east side of the A525 St Asaph - Rhuddlan road (map ref. approx. SJ/030760; O.S. 1:50,000 Sheet No. 116), at 10.30a.m.; bring packed lunch.

SUNDAY 17th MAY

TAL-Y-CAFN (v.c. 49/50), GWYNEDD/CLWYD

Leader: Mrs J.A. Green

A meeting to record in 10km square SH(23)/77 for the BSBI Monitoring Scheme. Many varied habitats present including mountain to 641 metres, woodland, tidal river banks and sand dunes. Meet at Tal-y-cafn bridge, east side (map ref. SH/787717; O.S. 1:50,000 Sheet No. 116), at 10.30a.m.; bring packed lunch.

SUNDAY 24th MAY

LLANGFNÍ DINGLE (v.c. 52), ANGLESEY

Leaders: Mr N.H. Brown & Mr R.H. Roberts

A meeting to record in 10km square SH(23)/47 for the BSBI Monitoring Scheme. The morning will be spent recording in the Dingle and some of the environs of Llangfní. After lunch the party will move to Llyn Frogwy to record the aquatic flora of this small lake. Meet at the Dingle Car Park, Llangfní (map ref. SH/458759; O.S. 1:50,000 Sheet No. 114), at 10.30a.m.; bring packed lunch.

SATURDAY 30th MAY

FONT-Y-GARY (v.c. 41), GLAMORGAN

Leaders: Mr R.G. Ellis & Dr C. Hutchinson

A meeting to record in 10km square ST(31)/06 for the BSBI Monitoring Scheme. A coastal square with sea cliffs, shingle beaches and a small area of saltmarsh together with disused limestone quarries with a very rich flora. Meet at lay-by on unclassified coast road just west of Rhose village (map ref. ST/050662; O.S. 1:50,000 Sheet No. 170), at 10.30a.m.; bring packed lunch.

SATURDAY 20th JUNE

EFAILWEN (v.c. 44/45), DYFED

Leaders: Mr S.B. Evans & Mr R.D. Pryce

A meeting to record in 10km square SN(22)/12 for the BSBI Monitoring Scheme. A variety of habitats will be encountered, ranging from upland moorland flushes of the Presell Mountains to lowland woodlands of the Taf and Cleddau Valleys. Meet in

Efallwen village (map ref. SN/134253; O.S. 1:50,000 Sheet No. 145), at 10.30a.m.; bring packed lunch.

SATURDAY 4th JULY

NEWBRIDGE-ON-WYE (v.c. 42/43), POWYS

Leaders: Miss A. Powell & Mr R.G. Woods

A meeting to record in 10km square SO(32)/05 for the BSBI Monitoring Scheme. Possibly the most diverse and species rich square in mid Wales. Fine sections of the Rivers Wye and Irton, Internationally Important basin mire, species rich pastures, steppe grassland with fine spring ephemerals, woodland and heather moor. Meet in the car park opposite the New Inn, Newbridge-on-Wye at junction of A470 and B4358 in Newbridge-on-Wye, (map ref. SO/016583; O.S. 1:50,000 Sheet No. 147), at 10.30a.m.; bring packed lunch.

SUNDAY 5th JULY

MOUNTAIN ASH (v.c. 41), GLAMORGAN

Leaders: Mr J.P. Curtis & Mrs A.M. Pell

A meeting to record in 10km square ST(31)/09 for the BSBI Monitoring Scheme. This square has a very rich introduced flora in the industrial areas and a diversity of upland habitats. Meet at layby-like street adjoining A4224, Fernhill, Mountain Ash (map ref. ST/035995; O.S. 1:50,000 Sheet No. 170), at 10.30a.m.; bring packed lunch.

SUNDAY 12th JULY

ABERSYCHAN (v.c.35), GWENT

Leader: Mr T.G. Evans

A meeting to help with recording for the proposed 'Flora of Gwent' and the BSBI Monitoring Scheme. Meet at car park south of the B4246 Abersychan - Talywaun Rd just west of the A4043 (map ref. SO/269034; O.S. 1:50,000 Sheet Nos 161 + 171), at 10.30 a.m.; bring packed lunch.

This meeting is held in conjunction with the BSBI Wales AGM and Exhibition Meeting on Saturday 11th July. Accommodation for all or part of the meeting is available at Usk Agricultural College.

Please apply for details and booking form to Mr R.G. Ellis, at the address given above, before 1st June.

SATURDAY 18th JULY

LLANGADFAN (v.c.47), POWYS

Leader: Mrs M. Walnwright

A meeting to record in 10km square SJ(33)/01 for the BSBI Monitoring Scheme. A mainly upland square with pasture, moorland, bogs, lakes pools and wooded areas, but with some lowland habitats along the River Banwy. Meet at Cann Office Hotel on A458, just north of the village of Llangadfan (map ref. SJ/012107; O.S. 1:50,000 Sheet No. 125), at 10.30a.m.; bring packed lunch.

SUNDAY 19th JULY

RHEIDOL GORGE, PONTERWYD (v.c. 46), DYFED

Leader: Mr A.O. Chater

A meeting to record in 10km square SN(22)/78 for the BSBI Monitoring Scheme. Sites to be visited include unbotanized parts of the Rheidol gorge, upland rocks, and ponds and reservoirs with Isoetes and other aquatics.

Meet on short stretch of road W of the River Rhedol between the two bridges in Ponterwyd village (map ref. SN/748800; O.S. 1:50,000 Sheet No. 135), at 11a.m.; bring packed lunch; waterproof footwear advised.

FRIDAY 31st JULY to MONDAY 3rd AUGUST.
CARMARTHENSHIRE (v.c. 44), DYFED
Leader: Mr A. Newton

A *Rubus* recording weekend based at Trinity College, Carmarthen, which will concentrate on recording *Rubi* in as many different tetrads as possible for the proposed 'Flora of Carmarthenshire'. Accommodation is available in Trinity College Halls of Residence. Please apply for details and booking forms to Mr R.D. Pryce, Rhyd-Deg, Maesybont, LLANELLI SA14 3HG, before July 1st.

SUNDAY 2nd AUGUST
CERRIGCEINWEN & LLANGRISTIOLUS (v.c. 52), ANGLESEY
Leader: Mr N.H. Brown & Mr R.H. Roberts

A meeting to record in 10km square SH(23)/47 for the BSBI Monitoring Scheme. Particular attention will be paid to the arable weeds and wayside flora, but visits will also be made to some rocky outcrops. Meet at the Dingle car park, Llangefnl (map ref. SH/458759; O.S. 1:50,000 Sheet No. 114), at 10.30a.m.; bring packed lunch.

FRIDAY 14th to MONDAY 17th AUGUST
CARMARTHENSHIRE (v.c. 44), DYFED
Leader: Mr R.D. Pryce

A 'Flora of Carmarthenshire' recording weekend based at Trinity College, Carmarthen, which will concentrate on tetrad recording in a wide range of habitats in 10km squares SN42 and SN72. Accommodation is available in Trinity College Halls of Residence. Please apply for details and booking forms to Mr R.D. Pryce, Rhyd-Deg, Maesybont, LLANELLI SA14 3HG, before July 1st.

SATURDAY 12th SEPTEMBER
RUABON (v.c. 50), CLWYD
Leader: Mr P. Day

A meeting to record in 10km square SJ(33)/34 for the BSBI Monitoring Scheme. Many varied habitats including wooded river valleys, parkland, disused railways and industrial areas. Meet at Ruabon Station car park (map ref. SJ/301438; O.S. 1:50,000 Sheet No. 117) at 11a.m.; bring packed lunch.

SUNDAY 13th SEPTEMBER
MELIN-Y-WIG (v.c. 48/50) GWYNEDD/CLWYD
Leaders: Mr P.M. Benoit & Mrs J.A. Green

A meeting to record in 10km square SJ(33)/04 for the BSBI Monitoring Scheme. A botanically underworked square, mainly upland habitats but includes a long stretch of disused railway and lowland meadows and marshes along the valley of the River Dee. Meet near cross-roads in Melin-y-Wig village (map ref. SJ/039487; O.S. 1:50,000 Sheet Nos 116 + 125), at 11a.m.; bring packed lunch.

RED PRIMULA VERIS AND P. VULGARIS

On Saturday May 11 1986 I set out on a bike ride to check a record. In a cottage garden across the road I saw a crimson *Primula veris*. Further on and deep into Wales and a good quarter-mile from the nearest house I noted a deep crimson false oxlip, or possibly polyanthus, with a white edge to its dark petals and a foot-long stalk, (Grid reference S0239996). Along the lane was yet another, a soft slightly pinky-red, with no white edge, (Grid reference S0236999). There were good patches of *Primula vulgaris* along the lane, and many scattered plants of ordinary golden *P. veris*. Both red ones had very long stalks to their one flower head.

JOYCE ROPER, Lower Brook House, Priest Weston, Montgomery, Powys

Polyanthus and *Primula* - as any gardener will tell you - are notorious for the ease by which they hybridize and since pollination is often effected by flying insects such as various bees, seemingly unexpected colour forms can occur at substantial distances from gardens. To confuse the issue though, false oxlips can be unusually coloured - I remember seeing brick-red individuals on the limestone ridge near Crubin in Carmarthenshire. Do members have any observations on this matter? Ed. .

VALERIANA OFFICINALIS IN WALES

I am at present conducting research into the distribution of specific forms of *Valeriana officinalis* L. and am particularly interested in populations on well drained sloping sites especially on calcareous soils. I would be most grateful for information on any such sites in Mid and North Wales.

KENNETH HANMER, Department of Biological Sciences, University of Keele, Keele, Staffordshire ST5 5BG

SURVEY OF SOME OF THE CARMARTHENSHIRE BURIAL GROUNDS PART 2

Many burial grounds seem to harbour a great variety of species. Most have one or more of special interest because locally they do not grow outside the graveyard. The following are a few Carmarthenshire examples.

Euphorbia exigua (Dwarf Spurge) grows abundantly in three graveyards in Amanford. In 1984 there were over 700 plants in Christian Temple's new graveyard. This spurge had not been recorded in Carmarthenshire since T.W. Barker's record of 1905 see note below. Ed. .
Valerianella carinata (Keelad-fruited Cornsalad) is also found in this graveyard, discovered, new to the v.c., in 1985 (AMP) growing with *Sedum anglicum* (English Stonecrop), *S. album* (White Stonecrop) and *Alchemilla mollis*. The old graveyard of Christian Temple also had a good population of *Euphorbia exigua* together with *Erophila verna* (Common Whitlowgrass), *Aethusa cynapius* (Fool's Parsley) and a single

magnificent specimen tree of *Ficus carica* (Fig). A couple of years ago the whole was given the 'new-look': gravestones up-rooted and stood all around the walls and the ground 'tidied' and levelled and made into a beautiful green lawn. Did they have to demolish the *Ficus* - and concrete over the soil where it grew? Time passed and in August a healthy sucker has appeared growing out of the boundary wall, about 1.5 m from the spot where the plant had its root.... *mirabile dictum!*

Geranium vermicolor (Pencilled Crane's-bill) was found dotted all over a long-since disused Baptist graveyard in Penrhigoch. It can only be approached by a footpath through an old meadow and then through an old kissing-gate. The first chapel was built in 1798: there is little trace of any chapel today. A tiny stream flows through the baptistry with an abundance of associated *Caltha palustris* (Marsh-marigold) and *Lychnis flos-cuculi* (Ragged-Robin) and nearby, *Nasturtium microphyllum* (Narrow-fruited Water-cress) was recorded for the first time in the v.c. (AMP). On a dry bank, by the rubble that is all that remains of the old chapel, 150 stems of *Aconitum napellus* (Monk's-hood) were counted. Alongside were a few plants of *Viola odorata* (Sweet Violet) but, alas!, the ground is fast becoming an impenetrable jungle of briars and brambles, willows and tall hogweeds. At the opposite end of the footpath there is a large stand of *Lilium pyrenaicum* (Pyrenean Lily) growing in the laneside hedge, as if to mark the way for worshippers.

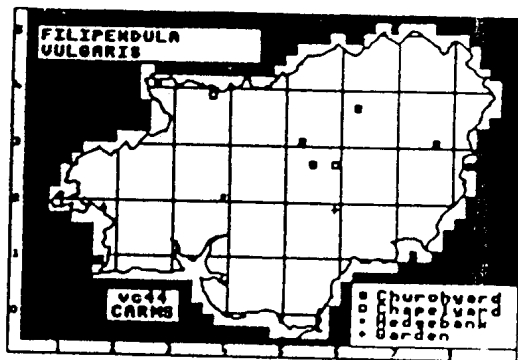
Within a mile or so of the coast, *Rubus caesius* (Dewberry) grows in St. Paul's Churchyard, Llanelli. *Oenothera cambrica* (Welsh Evening-priarose), *Centaurea scabiosa* (Greater Knapweed), *Silene vulgaris* subsp. *vulgaris* (Bladder Campion) and *Saponaria officinalis* (Soapwort) also grow here these are not rare, nor confined to graveyards but were very colourful and quite unexpected.

Rich grassland habitats are often found in graveyards which mirror the flora of old species-rich pastures formerly widespread before the advance of destructive agricultural practices. *Sanguisorba officinalis* (Great Burnet) is frequently found in sites which are sown only once or twice a year and can tolerate a reasonable amount of rank competition. *Orchis mascula* (Early-purple Orchid) is less tolerant of competition but, together with *Dactylorhiza fuchsii* (Common Spotted-orchid), is probably the most commonly encountered orchid in the county's cemeteries. Occasionally rarer species are found: one plant of *Orchis morio* (Green-winged Orchid) was seen growing in a large population of *O. mascula* at a Whitland cemetery and at least fifty plants of *Platanthera chlorantha* (Greater Butterfly-orchid) occur at Nantgeredig and another smaller population in Llanedwrn Churchyard. *Listera ovata* (Common Twayblade) has been recorded at Malpenny Furze together with *Ononis repens* (Common Restharrow). Large, only partially occupied graveyards are often managed using a cutting regime similar to that of old hay-meadows. Bethel Chapel, Glanamman is such a site where *Sanguisorba officinalis* is codominant with *Rhinanthus minor* (Yellow-rattle), *Briza media* (Quaking-grass), *Conopodium majus* (Pignut) and *Euphrasia* sp. (Eyebright) among more familiar species. (Wetter areas at the same site are rich in sedges, *Dactylorhiza* and *Carum verticillatum* (Whorled Caraway)).

Vicia tetrasperma (Smooth Tare) grows plentifully in Calfaria graveyard, Penygroes. It grows in the unused, species-rich part of the enclosure, billowing over the grass. *Allium vineale* (Wild onion) grows

in Llangadog and Capel Bedyddwyr cemeteries, *Sanguisorba minor* (Saled Burnet) in Llanfynydd, *Polygonum bistorta* (Common Bistort) and *Adoxa moschatellina* (Mochatel) in Bethel, Bethlehem and *Primula veris* (Cowslip) in Llandeilo-abercofin and Pont Wedst, Cenarth.

In Carmarthenshire *Filipendula vulgaris* (Dropwort) has rarely been recorded outside burial grounds. (The notable exceptions, however, are the hedgebank plants known to T.W. Barker at Nantybwia, near Carmarthen, in 1905 which are extant). This species is well established in Brechfa, Cenarth, Llanfynydd, Llansawel and Myddfai Churchyards as well as Capel Isaac and Saron, Llanelier Chapel graveyards (see map) and is often found growing with *Lilium pyrenaicum*. Certainly the lily is planted but is *F. vulgaris* a native or also merely an introduction? It is not recorded in any local limestone grassland where it could be expected to grow if a native of the area. If not native, has it any particular religious significance?



In the west of the county, *Narcissus obvallaris* (Tenby Daffodil) is commonly seen growing in graveyards (as well as lane verges), often in company with *N. pseudonarcissus* (Wild Daffodil), *N. pseudonarcissus* subsp. *major* (Common Double Daffodil) and the so-called "Derwydd Daffodil" with green, leafy, double perianth segments.

Cultivated plants are often introduced to adorn the graves of loved-ones. Lilies, Arums and Peonies are obvious choices but there are several burial-ground records of *Rhodiola rosea* (Roseroot) and one of *Rosa pimpinellifolia* (Burnet Rose) in addition to two or three of what appears to be *Valeriana phu* but is as yet unconfirmed.

Botanical coverage of Carmarthenshire's graveyards is still far from complete and it is likely that many interesting plants await discovery. Every site will, no doubt, eventually be visited during the recording for the Flora Project but it may be some years before the complete picture is known. We would, however, like to thank all recorders whose notes have been used to make this account more comprehensive.

Since this article was written, *Euphorbia exigua* has additionally been discovered growing abundantly on the floor of a disused limestone quarry at Mynydd Cerrig. Ed.

MRS A.M. PELL, 16 Clos yr Hendre, Capel Hendre, Ammanford, Dyfed and
R.D. PRYCE, Rhyd-Deg, Maesybont, Llanelli, Dyfed.

WHITHER WEEDS?

The success of herbicides, improvements in commercial seed cleaning techniques and changes in agricultural practices seem generally to have led to the decline of many of the annual arable weeds which were perhaps once familiar in the Welsh countryside. Corncockle, corn flower and poppy are rare or gone. Weeds are largely confined now to faryards, tips, derelict industrial sites, and road verges. Farmland has now become a very dull hunting ground. Ayla Smith of the Nature Conservancy Council at Peterborough has been charged with the task of identifying the current status of 25 species of mainly arable weeds. Enlisting the help of BSBI members, the task in Wales seems to be a very light one. In Radnor only 3 of these 25 species have been seen in the last 50 years, and only field woundwort (*Stachys arvensis*) occurs still as an arable weed.

With this survey biased to the SE (an admission of its author), has Wales and particularly the cold and soggy bit of it in the middle, got any sort of weed flora worth conserving? With past records so sparse, can we tell if it ever did have a significant flora?

Opportunities for an agricultural weed flora to develop in the sheep country of mid Wales are not great. The ploughing and rotovating of semi-permanent pasture at irregular intervals (typically between 5 and 10 years) causes enough disturbance to allow weeds to germinate, but in a good growing season the sown rye grass and clover grow fast and grazing often commences around six weeks after sowing, giving few weed species a chance to flower and seed. The only significant arable crop grown is swedes. Swede fields can be very rewarding to the weed hunter. Field woundwort (*Stachys arvensis*), sun spurge (*Euphorbia helioscopia*), corn marigold (*Chrysanthemum segetum*), field and wild pansy (*Viola arvensis* and *V. tricolor*), and large-flowered heap nettle (*Galeopsis speciosa*) all have their headquarters now amongst the swedes. Not all swede fields are good for weeds, however. Pre-emergence weedkillers are available and may severely limit the development of many of these species, if its manufacturers are to be believed. Regular usage of herbicides could well threaten the arable weed flora as has occurred amongst the cereals of lowland Britain.

Yet it is a remarkably resilient flora. Jim Dixon elsewhere in this bulletin describes his findings on seed banks in the upland soils. Seeds of many species can remain dormant for decades, possibly passing deep into the soil where stable low temperatures may prolong their life. Arthur Chater and Glyn Jones noted a particularly rich weed flora on soil excavated from a deep trench at Aberporth, Cardiganshire. The site had been almost certainly under permanent pasture since the start of the 2nd World War. (Sanctuary, the Conservation Bulletin of the Ministry of Defence, Vol 9, pp 11-13. 1982).

Deep digging for roadworks and pipe laying in fields in mid Wales have produced some rich weed floras. The major roadworks at Henallt, S of Builth Wells, Brecknock provided soil for road verges near Troedrhivdalar, Llanafan (SN9453). In July 1985, 49 species of weed appeared on the verges, including cornflower (*Centaurea cyanus*), field woundwort *Stachys arvensis* and, new to Brecknock, henbit dead-nettle (*Lamium amplexicaule*). Was this the flora typical of the oat and potato fields of 50 or more years ago? Not so good for the farmer, but what a botanical feast. I'm looking for an enthusiast with a JCB or a botanist with grave digging experience. There seems to be a fascinating flora sleeping six feet down.

R.G. WOODS, NCC, Llysdinam Field Centre, Newbridge on eye, Powys.

WELSH PLANT RECORDS - 1985

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. 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 County Recorder.

The County Recorders 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, Department 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, Aberhoewy Farm, Cyffredyn Lane, Llangynidr, Crickhowell, Powys.

RADNOR v.c. 43; Miss A.C. Powell, Corner Cottage, Great Oak, Eardisley, Hereford HR3 6LU.

CARMARTHEN v.c. 44; R.D. Pryce, Rhyd-Deg, Maesybont, Llanelli, Dyfed SA14 7HG.

PEMBROKE v.c. 45; S.B. Evans, Glan-y-Mor, Dinas Cross, Newport, Dyfed SA42 0UQ.

CARDIGAN v.c. 46; A.O. Chater, Department of Botany, British Museum (Natural History), Cromwell Road, London, SW7 5BD.

MONTGOMERY v.c. 47; Mrs M. Walwright, 'Troy', 1 Green End, Oswestry, Shropshire, SY11 1BT.

MERIONETH v.c. 48; P.M. Benoit, Pencarreg, Barmouth, Gwynedd LL42 1BL.

CAERNARFON v.c. 49; M. Morris, Plas Derwen, Penmachno, Gwynedd LL24 0PT.

DENBIGH v.c. 50; Mrs J.A. Green, Coed Duon, Tremorchion, St Asaph, Clwyd LL17 0UH.

FLINT v.c. 51; G. Wynne, Gwylfa, Lixwm, Holywell, Clwyd.

ANGLESEY v.c. 52; R.H. Roberts, Quinton, Belmont Road, Bangor, Gwynedd LL57 2HY.

MONMOUTH, v.c. 35 (comm. T.G. Evans)

- 46/11. *Ranunculus lingua* L. (Greater Spearwort). A small area in a marsh below St Pierre Lake, ST59, Dr Allstair Jacks.
- 158/15. *Papaver argemone* L. (Prickly Poppy). A small number as weeds among Blom's bulbs in a Chepstow garden, ST59, TGE.
- 113/12. *Viola tricolor* L. subsp. *tricolor* (Wild Pansy). + Weeds on edge of cornfield near Penterry Church, ST59; + and near Henllys Fen, ST29; TGE.
- 131/3. *Cerastium tomentosum* L. (Snow-in-summer). On top of cliffs, Sudbrook, ST48, TGE. Present many years, possibly originating from garden refuse tipped over cliff edge by gardeners.
- 148/1. *Scleranthus annuus* L. (Annual Knawel). Numerous plants on wall top, Pen-y-parc. ST49, TGE. A plant rarely recorded in the vice-county.
- 1154/13. *Chenopodium hybridum* L. (Maple-leaved Goosefoot). Numerous plants as a small-holding weed, The Nurtons, Tintern, SO50, det. Elsa Wood, conf. TGE.
- !166/2. *Linum usitatissimum* L. (Flax). Many plants on Newport Tip, ST38, TGE. The commonest *Linum* on rubbish tips and in dock areas.
- !168/. *Geranium ibericum* Cav. x *G. platypetalum* Fischer & C.A. Meyer = *G. x magnificentum* Hyl. (Purple Crane's-bill). Disused railway station, with other garden throw-outs, Govilon near Abergavenny, SO21, S. Waldren. Third record and first for 43 years.
- 1184/1. *Laburnum anagyroides* Medicus (Laburnum). Well established tree in old part of Newport Rubbish Tip near allotments, ST38, TGE.
- 192/5. *Trifolium squamosum* L. (Sea Clover). A plant on the sea wall (earth bank), Collister Pill, ST48, TGE. Much less common now than in the past due to management changes along the Severn shore.
- 207/2. *Lathyrus nissolia* L. (Grass Vetchling). Abundant in a number of sites: Newport, ST38; Caldicot, ST48; + and Sudbrook, ST58; all TGE.
- 218/2. *Agrimonia procera* Wallr. (Fragrant Agrimony). One plant Gaerllwyd, and one at Wolvesnewton, both ST49, TGE & U.T. Evans. An uncommon Mons. plant.
- 254/4. *Epilobium lanceolatum* Sebastiani & Mauri (Spear-leaved Willowherb). An uncommon Mons. plant but recorded from + the Nurtons, SO50, EW; + and near St Maugham's, SO41/42, Mr & Mrs P.C. Hall.
- 259/1. *Myriophyllum verticillatum* L. (Whorled Water-milfoil). A patch in reed, Magor, ST48, Dr P.R. Glading. Rare in Mons.
- 283/4. *Dupleurum tenuissimum* L. (Slender Hare's-ear). One plant, Magor, ST48, J.P. Curtis. First record at this site this century.
- 286/2. *Petroselinum segetum* (L.) Koch (Corn Parsley). Many small plants on sea bank near *Artemisia maritima* (Sea Wormwood), Magor Pill mouth, ST48, TGE.
- !289/1. *Ammi majus* L. (Bullwort). A weed coming up through a hydrangea in a Chepstow garden, ST59, TGE. A plant usually associated with tips in Mons.

*300/2. *Oenanthe pimpinelloides* L. (Corky-fruited Water-dropwort). One plant established on clayey roadside verge, Tynewydd, NW of Bettws, ST29, TGE. First v.c. and Welsh record.

*320/13. *Polygonum mite* Schrank (Tasteless Water-pepper). Many plants around Penpergwm pond, SO30, TGE & Bob Hewitt. First recent record.

!321/1. *Fagopyrum esculentum* Moench (Buckwheat). + Numerous plants with *Sinapis alba* (White Mustard) in tiny section of maize field bounded on three sides by wood, W of Shirenewton, ST49; and one plant with deep pink flowers, Newport Tip, ST38, both TGE.

*!428/1. *Erinus alpinus* L. (Fairy Foxglove). Long established on old wall, Trewyn, SO32, TGE.

*435/15x13. *Euphrasia confusa* Pugsley x *E. nemorosa* (Pers.) Wallr. (a hybrid Eyebright). Abundant in Chepstow Park Wood, ST39, TGE & UTE, det. Dr A.J. Silverside.

*437/1. *Parentucella viscosa* (L.) Caruel (Yellow Bartsia). One plant on new bank of River Usk, Llanbadoc, Usk, ST39, Dr S.J. Tyler, conf. TGE.

*!459/byz. *Stachys byzantina* C. Koch (Lambsear). Disused railway station, with other garden throw-outs, Govilon near Abergavenny, SO21, SW.

!535/-. *Artemisia biennis* Willd. (Lesser Mugwort). Over 50 plants in Newport Docks, ST38, TGE & Manpower Services Team.

544/3. *Centaurea cyanus* L. (Cornflower). + One plant of the real cornflower weed in rye grass, Peterstone Grout, ST28, Allison Jones; unlike the garden escape + near Denny View, Caldicot, ST48, TGE.

!570/3. *Elodea nuttallii* (Planchon) St John (Nuttall's Waterweed). Torwick reed, Rumney, Cardiff, ST27, Mrs A. Jones, det. N.T.Holmes. Third record.

*663/72. *Carex curta* Good. (White Sedge). Two plants, Kit's Wood, Whitelye, SO50, EW. First recent record.

669/3. *Glyceria declinata* Breb. (Small Sweet-grass). Drainage ditch, W bank of River Ebbw, Maes-glas, ST38, TGE.

708/4. *Alopecurus aequalis* Sobol. (Orange Foxtail). Abundant around Penpergwm Pond SSSI site, SO30, TGE & BH. An extremely good year for this species at this site.

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

*25/3x2. *Polypodium Interjectum* Shivas x *P. vulgare* L. + *P. x mantoniae* Rothm. (a hybrid Polypody). Sand dunes, Kenfig Burrows, SS78, Dr G. Hutchinson, conf. R.H. Roberts.

-Cha/law. *Chamaecyparis lawsoniana* (A. Murray) Parl. (Lawson Cypress).-Margam Park, SS88, R.G. Ellis, 1982, det. S.G. Harrison.

*\$85/1. *Teesdalia nudicaulis* (L.) R. Br. (Shepherd's Cress). Newly sown grass bank, Asda Superstore car park, Whitchurch, Cardiff, ST18, GH, conf. JPC. First record

since 1805 and first confirmed record, although only adventive at this new site.

•1113/wit. *Viola x wittrockiana* Gams (Garden Pansy). Bank of Afon Taff, Cardiff, ST17, Miss E.G. Roberts, 1984, conf. RGE. Second record.

•1130/1. *Petrorhagia nanteuilii* (Burnat) P.W. Ball & Heywood (Childing Pink). Growing abundantly on grassy bank behind electricity sub-station, Dare Valley Country Park, Aberdare, SN90, Miss H.J. Dawson. Second record. According to HJD, the probable source is nearby gardens, but established in grassland with no signs of disturbance.

•160/2. *Salicornia dolichostachya* Moss (a Glasswort). Saltmarsh, Loughor Bridge near Gorseinon, SS59, BSBI Meeting, 1984, det. QONK.

•162/2. *Tilia cordata* Miller (Small-leaved Lime). Appearing native at edge of golf-course above Cwm George, Dinas Powys, ST17, A.R. Perry, 1984.

168/16b. *Geranium robertianum* L. subsp. *celticum* Ostenf. (Herb-Robert). Cliff crevice facing sea, West Cliff, Southgate, Gower, SS58, R.J. Pankhurst. First record for 40 years in this square.

•1170/6. *Oxalis articulata* Savigny (Pink-sorrel). Waste ground, Cardiff Docks (off Collingdon Road), ST17, G.S. Walters, 1983.

!Sco/mur. *Scorpiurus muricatus* L. • Garden weed, Bonvilston, ST07, Mrs J. Littley, conf. RGE, 1974; garden weed, Llandaff, Cardiff, P. Jarvis, 1981, det A. Grenfell; and base of wall, Cathays, Cardiff, R.J. Tidswell, both ST17, conf. RGE. First, second and third records since 1925.

[259/1. *Myriophyllum verticillatum* L. (Whorled Water-milfoil) Cosmeston Pond, ST16. Recorded in error for the following.]

•1259/aqu. *Myriophyllum aquaticum* (Velloso) Verdc. (a Water-milfoil). Cosmeston Lakes, Penarth, ST16, V.P. Robbins, 1975, det. RGE. First Welsh Record.

•1312/2. *Euphorbia lathyris* L. (Caper Spurge). Spontaneous garden weed, Sketty Park, Swansea, SS69, V.C. Samuel.

!Can/sat. *Cannabis sativa* L. (Hemp). Spontaneous garden weed, Mackintosh Place, Cardiff, ST17, P. Walsh, 1984, det. RGE. Plant subsequently destroyed by police.

•365/5/pro. *Limonium procerum* (C.E. Salmon) Ingrouille subsp. *procerum* (a Rock Sea-lavender). • Burry Holmes, SS39; • Port Eynon Point, and Overton Cliff, both SS48; • Whitford Burrows, SS49; • Whiteshell Point, Pwlldu, and Oxwich Burrows, all SS58; • Crymlyn Burrows, SS79; • Ogmere, SS87; • Llantwit Major, SS96; • Aberthaw, ST06; • and Barry Island, ST16; all M.J. Ingrouille, 1979. In 'The *Limonium binervosum* aggregate (Plumbaginaceae) in the British Isles', (*J. Linn. Soc. (Bot)* (1986) 92: 177-217).

•1397/1. *Anchusa arvensis* (L.) Bieb. (Bugloss). Newly made roadside bank, Pengam, Cardiff, ST27, JPC.

1420/2. *Linaria purpurea* (L.) Miller (Purple Toadflax). Spontaneous garden weed, both pink and purple forms, Rhiwbina, Cardiff, ST18, P. Dunn.

1509/3. *Petasites japonicus* (Siebold & Zucc.) Maxim. (Giant Butterbur). About 100 flowering spikes in damp woodland by River Ely, St Georges, ST07, Dr D.J. Thomas, 1983, conf. RGE. A new locality but not a new 10km square record.

+1533/1. *Chrysanthemum segetum* L. (Corn Marigold). Disturbed ground by new road, bank of Mellngriffith canal feeder, Whitchurch, Cardiff, ST18, GH, 1984. First post-1930 record for the square.

625/1. *Epipactis palustris* (L.) Crantz (Marsh Helleborine). Disused quarry floor, Rhoose, ST06, JPC.

1658/era. *Cyperus eragrostis* Lam. Industrial wasteland, W Bute East Dock, Cardiff, ST17, JPC & GH, conf. E.J. Clement. Second v.c. record and first for over 100 years, but in same 10km square.

+669/3. *Glyceria declinata* Breb. (Small Sweet-grass). Filling stream at Dunraven, SS87, T.G. Evans.

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

*1417/1. *Misopates orontium* (L.) Rafin. (Lesser Snapdragon). Two plants in vegetable garden associated with a failed row of carrots, Ty Mawr Mill, Llysdyman, SN95, R.G. Woods.

*430/20a. *Veronica hederifolia* L. subsp. *hederifolia* (Ivy-leaved Speedwell). Lane-side bank, Capel-y-ffin road near Hay-on-Wye, SO24, R.G. Ellis.

+440/3. *Orobanche rapum-genistae* Thuill. A large number under Broom in grounds of Gilwern Leisure Centre, C. Titcombe, SO21. A very rare plant in Brecs., of haphazard occurrence.

*1462/1. *Lamium amplexicaule* L. (Henbit Dead-nettle). On recently constructed roadside verge, Glandulas, Llanafan Fawr, SN95, RGW.

RADNOR, v.c. 43 (comm. Miss A.C. Powell)

+4/7. *Asplenium adiantum-nigrum* L. (Black Spleenwort). Steep, shady rocks on verge of hill farm track, Llangunllo, SO17, ACP.

15/1. *Polystichum aculeatum* (L.) Roth. (Hard Shield-fern). Steep, shady rocks on verge of hill farm track, Llangunllo, SO17, ACP.

26/1. *Pillularia globulifera* L. (Pillwort). Small hillside pool, Begwyns, Llandewi-fach, SO14, Hereford Bot. Soc. field meeting.

46/22b. *Ranunculus peltatus* Schrank (Pond Water-crowfoot). Small pool, Llanfhangeth Rhydithon, SO16, Cicely & John Port; and deep hill pool, Bleddfa, SO27, ACP.

+98/1. *Barbarea vulgaris* R. Br. (Winter-cress). Old railway ballast, disused station, Stanner, SO25, R.G. Ellis, 1983.

+113/12. *Viola tricolor* L. subsp. *tricolor* (Wild Pansy). Bank of track below forestry plantation, Bleddfa, SO16, M. Wilson & ACP.

+115/14. *Hypericum elodes* L. (Marsh St John's-wort). Wet flush near Bryn, SO07, R.G. Woods, 1982.

- 131/10. *Cerastium diffusum* Pers. (Sea Mouse-ear). On disturbed soil of roadside near Bach Howey viaduct, Llanbedr - Palnscastle, SO14, RGW, (BSBI *Taraxacum* meeting). Second record.
- 170/4. *Oxalis europaea* Jordan (Upright Yellow-sorrel). On tipped refuse, Argoed Mill, Doldowlod, SN96, RGW. Second record.
- 177/1. *Euonymus europaeus* L. (Spindle). In quantity in woodland, Stange Park near Knighton, SO37, RGW, 1983.
- †185/eur. *Cytisus striatus* (Hill) Rothm. (Halcy-fruited Broom). • Trunk road near Cnbalva, planted by County Council, SO24, RGW, 1985; • and planted on roadside banks by old Mill, SO14, ACP, 1963.
- 202/1. *Ornithopus perpusillus* L. (Bird's-foot). Track verge, Llanfihangel Rhydlithon, SO16, C & JP.
- 206/9. *Vicia orobus* DC. (Wood Bitter-vetch). • Bank beside River Ithon, Crochan Hill, SO08, D.R. Druit & I.H. Slater, 1983; • and roadside bank and field margin, Llanbadarn-fynydd, SO18, C. Collingridge & IHS, 1983.
- 239/8. *Saxifraga tridactylites* L. (Rue-leaved Saxifrage). Common on mortar of walls, Prestelgne, SO36, RGW, 1984.
- 1274/3. *Anthriscus cerefolium* (L.) Hoffm. One plant under hedge on narrow grassy roadside verge, W of Boughrood, SO14, T.G. & U.T. Evans.
- 285/4. *Aplum inundatum* (L.) Reichenb. fil. (Lesser Marshwort). • Marshy ground near Barland, SO26; • and pool on hill near Harpton, SO25, both C & JP.
- 320/6. *Polygonum bistorta* L. (Common Bistort). • Horse grazed pasture, Buckyard Cottage, Cefnllys Rural, SO16, F. Everingham & CC, 1983; • and hay meadow, Cae Cwm Bach, Llansantffraed Cwmdeuddwr, SN97, FE & CC.
- 320/6. *Polygonum amphibium* L. (Amphibious Bistort). Gilweir Brook, near Stanner, SO25, C.A. Chadwell, 1982.
- 372/1. *Anagallis tenella* (L.) L. (Bog Pimpernel). • Peaty flush in dingle below Rhyd near Bwlch-y-Sarnau, SO07, RGW, 1985; • and Peaty pool N of Bryngwyn, SO15, RGW, 1983.
- 372/4. *Anagallis minima* (L.) E.H.L. Krause (Chaffweed). On damp soil by small stream by road to Pentre Caeau, Llandello Graban, SO04, RGW. Second record, but in same 10km square as first.
- 1379/2. *Vinca major* L. (Greater Periwinkle). Roadside hedge, Erwood, SO04, ACP.
- 1422/2. *Kickxia elatine* (L.) Dumort. (Sharp-leaved Fluellen). On rubble used to infill on railway bridge, Yr Allt, Llandello Graban, SO04, RGW. Second record.
- 432/1. *Pedicularis palustris* L. (Marsh Lousewort). Wet ground by hill stream, Bleddfa, SO16, ACP.
- 432/2. *Pedicularis sylvatica* L. (Lousewort). Wet flush, Coxhead Bank, Maelynydd, SO17, C & JP.

- 1445/5. *Mentha spicata* L. (Spearmint). Above Rhydspence, SO24, ACP.
- 1462/6. *Lamium maculatum* L. (Spotted Dead-nettle). Roadside near Dolyhir, SO25, RGE.
- 469/1. *Scutellaria galericulata* L. (Skullcap). Wet meadow, Bwlchllwyn, SO15, D.R. Drutt & FE, 1983.
- 469/2. *Scutellaria minor* L. (Lesser Skullcap). Dried-out pool, Manfynydd, SO17, JP, 1984.
- 475/2. *Campanula trachelium* L. (Nettle-leaved Bellflower). Roadside bank, Upper Hall Farm, Heyop, SO27; corner of wood, Burfa Bank, Knill, SO26, both J & CP; and roadside bank near Dolyhir, SO25, Mrs Jenkins.
- 485/1. *Gallium odoratum* (L.) Scop. (Woodruff). Steep shady bank on verge of hill farm track, Llangunllo, SO17, ACP.
- 494/1. *Valerianella locusta* (L.) Betcke (Common Cornsalad). • On shale, Knucklas Castle, SO27, C & JP, 1984; • and on shallow soil on boulder by lay-by on road constructed on old railway track below Twyn-y-garth, Llandelfo Graban, SO14, RGW. Second and third records.
- 502/1. *Bidens cernua* L. (Nodding Bur-marigold). Pool verge, Llangunllo, SO27, C & JP. First recorded from same site by P. Richards in 1964.
- 506/6. *Senecio sylvaticus* L. (Heath Groundsel). • Woodland scrub, Carregfran, Beguilly, SO17, C & JP; • Craig Fawr, Hundred House, SO15, Hereford B.S. field meeting, 1983; • and on rock ledge in gorge of River Teme, Cilfaesty Hill, SO18, RGW, 1983.
- 1507/2. *Doronicum plantagineum* L. (Plantain-leaved Leopard's-bane). In wood, c.200m W of Stow Bridge, Millebrook, SO37, Mrs J.M. Roper, 1978.
- 1533/cor. *Chrysanthemum coronarium* L. Appeared on cultivated soil in garden with *Agrostemma githago* (Corncockle), Llanyre, SO06, RGW.
- 540/1. *Cirsium eriophorum* (L.) Scop. (Woolly Thistle). Upland pasture, Ysgubor Dol-Ilech, SN97, FE & JC, 1983.
- 540/8. *Cirsium dissectum* (L.) Hill (Meadow Thistle). Upland pasture, Ysgubor Dol-Ilech, SN97, FE & JC, 1983.
- 558/1/217. *Hieracium umbellatum* L. subsp. *umbellatum* (a Hawkweed). Brillley Mountain, SO24, ACP, det. RGE.
- 558/1/219. *Hieracium perpropinquum* (Zahn) Druce (a Hawkweed). Roadside, Aberedw, SO04, ACP, det. RGE.
- 574/1. *Triglochin palustris* L. (Marsh Arrowgrass). Wet flush in meadow near Llangunllo, SO27, JL & LMP, 1982.
- 580/1. *Zannichellia palustris* L. (Horned Pondweed). Llynheliyn Pool, near Llanfihangel-nant-melan, SO15, with *Potamogeton berchtoldii* (Small Pondweed) and *P. crispus* (Curled Pondweed), I. Soane & ACP. Second record.
- 638/1. *Platanthera chlorantha* (Custer) Reichenb. (Greater Butterfly-orchid). Meadow, Fford-rhiw-drain, Llanantffraid Cwmdeuddwr, SN86, RGW & M. Massey, 1983.

- 655/10. *Scirpus setaceus* L. (Bristle Club-rush). Damp stony verge of hillside track, Llandegley, SO16, with *Senecio sylvaticus* (Heath Groundsel) in quantity, ACP.
- 663/68. *Carex muricata* L. subsp. *lamprocarpa* Celak (Small-fruited Prickly-sedge). Arable field, Llangunllo, SO27, J & CP. Second post-1930 record.
- 681/1. *Melica uniflora* Retz. (Wood Melick). Steep shady bank verge of hill farm track, Llangunllo, SO17, ACP.
- 691/1. *Trietum flavescens* (L.) Beauv. (Yellow Oat-grass). Roadside bank on Bach Howey viaduct, Llanbedr, Painscastle, SO14, RGW, 1984; + Glaschw Churchyard, SO15, DRD, 1983; + on track through forestry N of Fforest Fach, SO16, RGW, 1983; + loamy bank in garden of Norton Manor, SO26, RGW, 1983; + and old railway track, Prestelgne, SO36, C & JP, 1984.

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

- *Cha/glo. *Chara globularis* Thuill. var. *virgata* (Kutz.) R.D. Wood (a Stonewort). Pool, Tywya Burrows near Kidwelly, SN30, I.K. Morgan, det. Mrs J. A. Moore.
- 21/6. *Dryopteris carthusiana* (Vill.) H.P. Fuchs (Narrow Buckler-fern). Frequent in recently cleared *Quercus*/*Alnus* woodland, drained and replanted with conifers, Maes Glas Farm, Llangadog, SN72, IKM.
- 21/8. *Dryopteris aemula* (Ait.) Kuntze (Hay-scented Buckler-fern). Twelve strongly growing plants, small wooded valley, Cwmcoch, Llanllwch, SN31, IKM.
- 25/1. *Polypodium cambricum* L. (Southern Polypody). On degraded Old Red Sandstone cliff, Dylan's Walk, Laugharne, SN31, IKM; several plants on limestone scree, Craig Ddu, Llanbyri, SN31, A.O. Chater, IKM & RDP; and on *Quercus* and *Ulmus*, Castle woods and Dynafwr Deer Park, Llandello, SN62, IKM. Previously only recorded in the county from old walls.
- 33/rad. *Pinus radiata* Aiton (Maritime Pine). One large mature tree near bridge in Stradey Woods, Llanelli, SN40, IKM, 1984. First localized record.
- *164/for. *Dicentra formosa* Walpers (Western Bleeding-heart). Naturalized on hedgebank, near Cwmann, SN64, AOC.
- 168/1. *Erucastrum gallicum* (Willd.) O.E. Schultz (Halvy Rocket). Roadside waste ground, Cross Hands, SN51, Mrs A.M. Pell, det. R.G. Ellis. Second record and first since 1920.
- 83/umb. *Iberis umbellata* L. (Garden Candytuft). Bed of River Amman, Pantyffynnon, Ammanford, SN61, AMP, 1984.
- Lun/ann. *Lunaria annua* L. Banks of River Loughor, far from habitation, near Pantyffynnon, Ammanford, SN60, AMP.
- 136/1. *Sagina apetala* Ard. subsp. *erecta* (Hornem.) F. Hermann (Annual Pearlwort). Abundant on old railway siding W of Clynderwen station, SN11, Dr G. Hutchinson.
- 136/2. *Sagina subulata* (Swartz) C. Presl (Heath Pearlwort). Roadside bank, Cefn Llwydlo, SN84, RDP. Second record since 1908.

- 149/1d. *Montia fontana* L. subsp. *variabilis* Walters (Blinks). Wet mountain flush, Bryn Mawr, S of Afon Llechach, SN82, RGE & GH.
- 168/7. *Geranium sanguineum* L. (Bloody Crane's-bill). + One plant, old limestone quarry, near The Green Bridge, Pendine, SN20, Llanelli Naturalists' field meeting; \$+ and churchyard, Maerdy, Tallaris, SN62, RDP, conf. RGE.
- 168/10. *Geranium columbinum* L. (Long-stalked Crane's-bill). + Near Fella Cwrt, SN12, IKM; + roadside verge near Fellingwm Isaf, SN42, RDP; + hedgebank, Aberdaunant, Llanwrda, SN63, GH; + and north shore of Usk Reservoir, SN82, T.S. Crosby.
- +179/1. *Rhamnus catharticus* L. (Buckthorn). One bush in hedgerow, Garn Farm, Mynydd Selon, SN51, IKM. Fourth record and first since 1964.
- +181/1. *Vitis vinifera* L. (Grape-vine). Hedge near Pantylfynnon station, Ammanford, SN61, AMP, 1984. Third record.
- 202/1. *Ornithopus perpusillus* L. (Bird's-foot). + Dry sheep-grazed hilltop, with *Moenchia erecta* (Upright Chickweed), Mandinam, SN72, R.G. Woods, 1983; + and sheep-grazed bank, Crychan valley, SN83, GH.
- \$210/1. *Filipendula vulgaris* Moench (Dropwort). + Chapelyard, Saron, Llangeler, SN33, AMP; + and Brechfa Churchyard, SN53, Dr E. Grey, 1984.
- +212/13. *Potentilla erecta* (L.) Rauschel subsp. *strictissima* (Zimmerer) A.-J. Richards (Tormentil). Acid moorland on quartzite, Mynydd Llangydeyrn, SN41, IKM, 1983, det. A.-J. Richards. Second record for sub-species.
- +227/bul. *Cotoneaster bullatus* Boiss. Naturalized on wooded cliff, near The Boathouse, Laugharne, SN31, J. Rees & TSC. Second record.
- +229/1. *Crataegus laevigata* (Poiret) DC. (Midland Hawthorn). Hedge near Trostre Farm, Llanelli, SS59, IKM, 1983, det. A.D. Bradshaw. First certain record.
- +229/1x2. *Crataegus laevigata* (Poiret) DC. x *C. monogyna* Jacq. + *C. x media* Boeckl. (a hybrid Hawthorn). Hedge, S of Trostre Farm, Llanelli, with both parents, SS59, IKM, 1983, det. ADB. First record for the county, and the first confirmed Welsh record.
- 232/7. *Sorbus torminalis* (L.) Crantz (Wild Service-tree). One good specimen tree, together with two well-grown suckers within 0.5km of tree known since 1974, Stradey Woods, Llanelli, SN40, Llanelli Nats. field meeting; and one tree, Poor Man's Wood, Llandovery, SN73, I. Watt, 1984, rediscovery of specimen known to D. Davies, c. 1969. Four known plants in v.c. 44.
- *!Auc/Jap. *Aucuba japonica* Thunb. (variegated forms called Spotted-laurel or Gold-dust-tree). Several self-sown seedlings in woodland, Gellideg, Llandyfaelog, SN41, TSC. First Welsh record of this commonly cultivated shrub.
- 285/4. *Aplium inundatum* (L.) Reichb. fil. (Lesser Marshwort). + Marsh, Marros, SN20, IKM; + and one abnormally large plant growing in semi-shade in Telfi flood-plain drainage ditch, Cillyblaid, Pencarreg, SN54, BSBI Wales field meeting; considered this species by consensus of experts present.
- +291/1. *Carum verticillatum* (L.) Koch (Whorled Caraway). Wet flush, Cothi valley near Darren fawr, Brechfa, SN52, West Wales Trust for Nature Conservation field meeting. det. RDP.

- 319/11. *Euphorbia exigua* L. (Dwarf Spurge). Chapelyards at Caersalem, Tycroes; and Bethany, Ammanford, both SN61, AMP. Second and third recent records.
- !320/21. *Polygonum polystachyum* Wallich ex Meisner (Himalayan Knotweed). Roadside near Brechfa, SN53, R.H. Davies & R.N. Stringer.
- !331/1. *Ficus carica* L. Graveyard, Christian Temple, Ammanford, SN61, AMP, 1984.
- \$337/1. *Carpinus betulus* L. (Hornbeam). Parcyrhos Churchyard, SN54, H.J. Killick.
- 342/3. *Populus tremula* L. (Aspen). Hedge, Capel Hendre, SN51, AMP, 1984.
- *365/5/pro. *Limonium procerum* (C.E. Salmon) Ingrouille subsp. *procerum* (a Rock Sea-lavender). + Pembrey Burrows, SS49; + and Llanelli Dock, SSS9; both M.J. Ingrouille, 1979+ in 'The *Limonium binervosum* aggregate (Plumbaginaceae) in the British Isles', (*J. Linn. Soc. (Bot)* (1986) 92: 177-217).
- 367/3. *Primula verta* L. (Cowslip). + Near Pont Hywel, Efallwen, SN12, TSC; + and wooded cwm, Cwmbach, SN22, D.H. Williams & RDP, 1984.
- *435/15x13. *Euphrasia confusa* Pugsley x *E. nemorosa* (Pers.) Wallr. (a hybrid Eyebright). About 20 plants on calcareous, grassy, laneside bank, Van Quarry, Meinciau, SN41, GH, det. A.J. Silverside.
- 437/1. *Parentucellia viscosa* (L.) Caruel (Yellow Bartsia). On verges of ride and locally dominant over large area of recently clear-felled pines, Pembrey Forest, SN40, WWTNC & Llanelli Nats. joint field meeting, det. RDP.
- 439/1. *Lathraea squamaria* L. (Toothwort). About 15 flowering spikes on shady hedgebank under *Corylus*, Garn Farm, Mynydd Selon, SN51, IKM. Fifth record.
- 440/3. *Orobanche rapum-genistae* Thuill. (Greater Broomrape). Two small stands under *Ulex*, Cwm Bryr, Ferryside, SN31, T. Frampton. Fifth recent record.
- 442/4. *Utricularia minor* L. (Lesser Bladderwort). Base-rich moorland pool, Bylchau Duon, SN64, Mrs J.A. Green & HJK, conf. RGE. Second record since 1920.
- 435/1. *Clinopodium vulgare* L. (Wild Basil). Old limestone quarry, Craig Ddu, Llanybri, SN31, IKM & P.S. Jones; Gellideg, Llandyfaelog, SN41, TSC; roadside hedgebank, near Gwempa, SN41, GH; + and limestone grassland, Garn Farm, Mynydd Selon, SN51, IKM.
- 483/2. *Asperula cynanchica* L. agg. (Squinnancywort). On limestone scree and rocks, Garn fawr Quarry, near Bank y Mansel, SN51, IKM.
- *494/2. *Valerianella carinata* Lois. (Keeled-fruited Cornsalad). Abundant in chapel graveyard, Ammanford, SN61, AMP, det. RGE.
- !544/2. *Centaurea montana* L. (Perennial Cornflower). Graveyard, Capel Hendre, SN51, AMP, 1983.
- *558/1/45. *Hieracium lasiophyllum* Koch (a Hawkweed). Frequent on base-rich cliffs, Craig Clyngwyn and Craig Ddu, SN74, NCC Wales Field Unit Upland Vegetation Survey No. W79/6/2, 1982. First and second records.
- *558/1/103. *Hieracium stenstroemii* (Dahlst.) K. Joh. (a Hawkweed). Bridge parapet, Caco, SN63, Mrs I.M. Vaughan, 1965, det. J. Bevan.

- *558/1/222. *Hieracium salticola* (Sudre) Sell & West (a Hawkweed). Railway embankment, Cynghordy, SN84, IMV, 1965; and disused railway sidings, Whitland, SN11, GH; both det JB. First and second records.
- *559/8. *Crepis paludosa* (L.) Moench. (Marsh Hawk's-beard). Frequent on rock outcrops, valley of Afon Merchon, SN74, P. Day, 1980. Second record and first since c.1840.
- *589/3. *Polygonatum multiflorum* (L.) All. (Solomon's-seal). Valley woodland near Tyddynfari, SN22, Mr & Mrs J. Iliff, apparently native.
- *1593/2. *Lilium pyrenaicum* Gouan (Pyrenean Lily). Chapelyard, Saron, Llangelier, SN33, AMP.
- *1600/2. *Hyacinthoides hispanica* (Miller) Rothm. (Spanish Bluebell). Graveyard, Capel Hendre, Ammanford, SN51, AMP, 1983.
- 603/1. *Paris quadrifolia* L. (Herb-Paris). Thinly scattered over rocky limestone woodland floor, Garn fach, Maesybont, SN51, M.J. Pryce *et al*, rediscovery of IMV's 1965 record; + and several plants in woodland clearing, Coed Tregyb, SN62, R.C. Woods, presumably a rediscovery of D. Morgan's record of c. 1895 from 'near Llandello'.
- *605/7/101. *Juncus foliosus* Desf. (a Toad Rush). Wet pasture, Cilyblaidd, Pencarreg, SN54, BSBI Wales field meeting, det. RGE.
- 627/1. *Spiranthes spiralis* (L.) Chevall. (Autumn Lady's-tresses). + Four plants in dry dunes, Laugharne Burrows, SN20, S.B. Evans, JR & RDP, 1982; and 58 flowering plants counted in association with *Gentianella amarella* (Autumn Gentian), on old limestone spoil heaps and nearby calcareous grassland, Llandyfan, SN61, IKM.
- *638/1. *Platanthera chlorantha* (Custer) Reichenb. (Greater Butterfly-orchid). Three plants on roadside verge, Maudsland, SN33, B.J. Reely.
- 640/1. *Ophrys apifera* Hudson (Bee Orchid). + Coygen, Laugharne, SN20, R.H. Tyler, 1925, in 'Tyler's Book on Laugharne' compiled in 1925: 'The bee-orchid is found on Colgan, a limestone headland', not seen since, presumably destroyed by quarrying; about 12 flowering plants, Laugharne Burrows, SN20, JR, 1984; a second colony on Laugharne Burrows, near Ginst Point, SN30, JR; and seven spent spikes in closed ground cover of *Hedera*, Craig Ddu, Llanybri, SN31, IKM & PSJ, rediscovery of colony last seen in 1971. Five colonies now known from v.c. 44, four extant.
- *643/1x3. *Dactylorhiza fuchsii* (Druce) Soo x *D. incarnata* (L.) Soo = *D. x kernerorum* (Soo) Soo (a hybrid Orchid). Dune slack, W of Wichett Pool, Pendine Burrows, SN20, JR, 1984, det. RDP, conf. R.H. Roberts.
- *663/3. *Carex punctata* Gaudin (Dotted Sedge). Mown dune meadow, Tywyn Burrows, SN30, R. Meade & RDP, 1982, det. AOC, conf. R.W. Dayld.
- *663/4x8. *Carex demissa* Hornem. x *C. hostiana* DC. (a hybrid Sedge). Nant yr ast, SN75, M & J1, det. AOC. Third record.
- 663/16x17. *Carex rostrata* Stokes x *C. vesicaria* L. = *C. x involuta* (Bab.) Syme (a hybrid Sedge). Substantial population at margin of deep pool in stream, Cefn Gwenffrwd, SN74, J & M1, det. AOC. Second record.
- *663/72. *Carex curta* Good. (White Sedge). Frequent in kettle-hole mire, Cilyblaidd, Pencarreg, SN54, BSBI Wales field meeting.

708/5. *Alopecurus bulbosus* Gouan (Bulbous Foxtail). + Abundant in wet meadow by ditch, The Lees, Laugharne, SN20, E.A. Stanway; + and four small clumps in transition zone between brackish *Phragmites* reedbed and dry, unimproved grassland, Whitehill Down, Laugharne, SN21, L.R. Smith.

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

46/18. *Ranunculus tripartitus* DC. (Three-lobed Crowfoot). + Small population on path in wet heath, Waun Ffynnon, Clun, Goodwick, SM93, E. Gwynn; + 5-10 plants in shallow water of deep ditch, Strumble Head, SM84, SBE; + about 20 plants in shallow ditches, Gwadr, Solva, SM82, SBE & EG; a few hundred plants in small spring, West Wick, Skomer Island, SM70, SBE; and a major population to W of old station first found by T.A.W. Davis in 1963, Marloes Mere, SM70, SBE; also recorded from Skokholm (SM70) and Ramsey (+ SM62) Islands.

This winter annual is at present found in about 14 different locations, largely on the coastal fringe of Pems., where it requires naturally open habitats or, more usually, shallow ditches, wet tracks or paths to flourish.

+1191/1. *Mellilotus altissima* Thuill. (Tall Mellilot). Thirteen plants near Manorbler Camp, Skrinkle, SS09, M. Higgins.

192/13. *Trifolium subterraneum* L. (Subterranean Clover). Lower Treginnis, St David's, SM72, SBE & J.W. Donovan. Thousands of plants on shallow soil over rocky knolls adjacent to old farmyard. *Carduus nutans* (Musk Thistle) and *Medicago arabica* (Spotted Medick) were also nearby. These three species have prospered in Pems. the last few years, due perhaps to the good summers of 1983 and 1984.

220/3/10. *Alchemilla glabra* Neeyenf. (Smooth Lady's-mantle). Over 15 plants in short, improved, cattle grazed pasture on level ground, Plas-dwbl, Mynachlogddu, SN12, SBE. Acid to neutral grassland that has had one application of calcified seaweed, not species rich.

+325/13. *Rumex pulcher* L. (Fiddle Dock). Hundreds of plants on dry, trampled, calcareous grassland, Carew Castle, Carew, SN00, SBE, A. Lees, M. Finch & J. Hodges.

+337/1. *Carpinus betulus* L. (Hornbeam). Hedgerow, East Cuckoo Farm near Haverfordwest, SM91, Miss E.C. Howells, 1984.

*365/5/pro.a. *Limonium procerum* (C.E. Salmon) Ingrouille subsp. *procerum* (a Rock Sea-lavender). + Sandy Haven Pill, Crabhall Farm, and St Ann's Head, all SM80; + Porthmynawyd, SM82; + Lawrenny, SN00; + St Govan's Head, SR99; + Lydstep Point, SS09; + and Giltar Point, SS19; all M.J. Ingrouille, 1979+ in 'The *Limonium binervosum* aggregate (Plumbaginaceae) in the British Isles', (J. Linn. Soc. (Bot) (1986) 92: 177-217).

*365/5/pro.b. *Limonium procerum* (C.E. Salmon) Ingrouille subsp. *cambrense* Ingrouille (a Rock Sea-lavender). Stackpole Head, and Saddle Point, both SR99, M.J. Ingrouille, 1979+ in 'The *Limonium binervosum* aggregate (Plumbaginaceae) in the British Isles', (J. Linn. Soc. (Bot) (1986) 92: 177-217).

*365/5/bri. *Limonium britannicum* Ingrouille subsp. *transcanalis* Ingrouille (a Rock Sea-lavender). + Linney Head, SR89; + Saddle Point, and Stack Rocks, both SR99; all M.J. Ingrouille, 1979+ in 'The *Limonium binervosum* aggregate (Plumbaginaceae) in the British Isles', (J. Linn. Soc. (Bot) (1986) 92: 177-217).

*365/5/par. *Limonium parvum* Inghouille (a Rock Sea-lavender). Saddle Point, Stackpole, SR99, M.J. Inghouille, 1979+ in 'The *Limonium binervosum* aggregate (Plumbaginaceae) in the British Isles', *J. Linn. Soc. (Bot)* (1986) 92: 177-217). A newly described endemic species known only from this locality.

411/1. *Hyoscyamus niger* L. (Henbane). Over 35 first year plants on recently disturbed sand (for Golf Course fairway), Whitesands Dunes, St David's, SM72, D. Stephens & Mrs G.C. Lambourne. The last major disturbance at the site was during the 2nd World War. Other species of disturbed sand recorded, include *Solanum nigrum* (Black Nightshade) and *Viola tricolor* subsp. *curtisii* (E. Forst.) Syme (Wild Pansy).

642/5. *Orchis morio* L. (Green-winged Orchid). + Six spikes in short, species-rich, sward, Parish Church of St John the Baptist, Slebech, Haverfordwest, SN01, SBE. This churchyard has an exceptional flora. Of note are large stands of *Primula veris* (Cowslip), *P. vulgaris* (Primrose) and their hybrid *P. x tommasinii*, *Trisetum flavescens* (Yellow Oat-grass), *Gallium mollugo* (Hedge-bedstraw), *Briza media* (Quaking-grass), *Listera ovata* (Twayblade), and *Avenula pubescens* (Downy Oat-grass); + Twelve spikes in turf over water storage tanks, Pen-y-bryn, Fishguard, SM93, SBE. (The flora is rich neutral grassland with enormous populations of *Primula veris* (Cowslip); *Listera ovata* (Twayblade), *Orchis mascula* (Early-purple Orchid), *Knautia arvensis* (Field Scabious) are also present in quantity. The site is cut once a year in August with a flail mower); and 176 spikes in short turf grazed by rabbits in dry fixed-dune slope, Freshwater East, SS09, JH, AL & MF.

655/4. *Scirpus sylvaticus* L. (Sea Club-rush). Small colony by brook, Merlin's Bridge, Haverfordwest, SM91, J. Comont. The second population in the lower reaches of the Western Cleddau catchment

683/6. *Bromus madritensis* L. (Compact Brome). Thousands of plants, Carew Castle, Carew, SN00, AL, MF & JH. Abundant on tops of castle walls and amongst calcareous grassland, rocky outcrops and rubble around foot of castle walls. This attractive grass, of questionable native status here, was first found at Carew Castle by J.L. Knapp in the early 19th Century. A specimen resides in Bristol Museum. A detailed survey of the population by the Pembs. Coast National Park in 1985 followed its rediscovery by JWD & Dr R.G. Crump in 1984. Notable associates include *Tortilis nodosa* (L.) Gaertner (Knotted Hedge-parsley), *Carex divulsa* Stokes (Grey Sedge), *Trisetum flavescens* (L.) Beauv. (Yellow Oat-grass) and *Geranium columbinum* L. (Long-stalked Crane's-bill).

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

+5/1. *Osmunda regalis* L. (Royal Fern). One plant in damp hollow in rocks by Camddwr stream, SN75, D. Davies, c.1969.

28/1. *Botrychium lunaria* (L.) Sw. (Moonwort). + Unimproved dry pasture above Pontrhyd-y-groes, SN77, D. Glyn Jones et al.; + and a similar site 2km W of Blaenpennal, SN66, DGJ. Unusually abundant at its other three extant sites this year.

29/1. *Ophloglossum vulgatum* L. (Adder's-tongue). + Unimproved dry pasture 2km W of Blaenpennal, SN66, DGJ; + and a similar site between Synod Inn and Plwmp, SN35, F. Evans & DGJ.

+46/10. *Ranunculus auricomus* L. (Goldilocks Buttercup). Ash/beechn wood on terrace above river in Telfi gorge 200m NW of Coedmore mansion, SN14, AOC. Second record.

- 66/8. *Fumaria officinalis* L. subsp. *wirtgenii* (Koch) Arcangeli (Common Fumitory). Edge of silage field, with *Sherardia arvensis* (Field Madder) and other locally uncommon weed species, between Coybal and Byrlip, 2km SW of New Quay, SN35, J.R. Akeroyd & C.D. Preston, det. P.D. Sell. First record for subsp.
- 80/2. *Coronopus didymus* (L.) Sm. (Lesser Swine-cress). Path by old limekiln, Cwm Tudu, SN35, AOC. Only the third post-1950 record.
- 136/9. *Sagina subulata* (Sw.) C. Presl (Heath Pearlwort). Edge of Forestry Commission road W of Llyn Brianne, 700m NE of Dalar-wen, SN74, AOC & DD. A recent colonizer of this F.C. road system, along with *Spergularia rubra* (Sand Spurrey), and, apart from an old record from Strata Florida station, the only inland record.
- 148/1. *Scleranthus annuus* L. (Annual Knawel). Old track over rocky ridge S of Ynys-greiglog, Eglwys-fach, SN69, AOC. The only recent record from the northern half of the county.
- 192/1. *Trifolium ornithopodioides* L. (Bird's-foot Clover). Beach S of Aberaeron harbour, SN46; and The Patch dunes, Gwbert, SN14, both JRA & CDP. First records since 1941.
- 206/16. *Vicia lathyroides* L. (Spring Vetch). Rocky ridge by footpath from Henllan church to Cae-crw'd, SN34, AOC. The only inland site for this species otherwise known only from the Ynys-las and Gwbert sand dunes.
- 211/2. *Rubus saxatilis* L. (Stone Bramble). Rock ledge by waterfall under oaks in stream gorge in conifer forest on W side of Llyn Brianne, SN74, AOC & DD. Third record, growing with *Gymnocarpium dryopteris* (Oak Fern), *Trollius europaeus* (Globeflower) etc. in this relic damp woodland surrounded by conifers.
- 220/3/10. *Alchemilla glabra* Neysgenf. (Smooth Lady's-mantle). Scattered throughout meadow 200m NW of Pont Llanio railway bridge, SN65, AOC.
- !1320/20. *Reynoutria sachalinensis* (Friedrich Schmidt Petrop.) Nakai (Giant Knotweed). Several large colonies occupying much of Moor Wood, Highmead, SN54, AOC; + and a colony in damp woodland 250m SW of Highmead mansion, SN44, AOC. The colonies in Moor Wood, a mixed wood with much alder carr on the Telfi plain, are by far the largest in the county.
- 325/4. *Rumex hydrolapathum* Hudson (Water Dock). Many hundreds of plants by pond in wood 250m SW of Highmead mansion, SN44, AOC. Probably arrived here naturally, as present on the Telfi only 800m distant in SN54.
- 350/1. *Andromeda polifolia* L. (Bog-rosemary). Rhos Rhydd valley mire, Llanddeiniol, SN57, Welsh Wetland Survey Team, 1979.
- 417/1. *Misopates orontium* (L.) Raf. (Lesser Snapdragon). Edge of barley field above Carreg Wynt, Aber-porth, SN35, A.P. Fowles. Third record since 1950, the other two being from similar coastal fields, near New Quay and Tresaith.
- 430/23. *Veronica agrestis* L. (Green Field-speedwell). Behind wall on promenade, Aberaeron, SN46, Mrs A.M. Pell, 1984.
- 481/1. *Sherardia arvensis* L. (Field Madder). By caravans on sand dunes, The Patch, Gwbert, SN14, AOC; + and edge of field between Coybal and Byrlip, 2km SW of New Quay, SN35, AOC.

*1506/18. *Senecio bicolor* (Willd.) Tod. subsp. *cineraria* (DC.) Chater (Silver Ragwort). Several plants well-established on back of beach south of the harbour, Aberaeron, SN46, AOC.

*506/18x1. *Senecio bicolor* (Willd.) Tod. subsp. *cineraria* (DC.) Chater x *Jacobaea* L. • *S. x albescens* Burbridge & Colgan. Growing with both parents on back of shingle beach S of Aberaeron harbour, SN46, AOC. Second record.

1552/2. *Tragopogon porrifolius* L. (Salsify). Roadside S of Aberaeron harbour, SN46, JRA & CDP.

*558/1/144. *Hieracium angustisquamum* (Pugsley.) Pugsley. (a Hawkweed). Rocks by stream in Nant Rhuddnant gorge, SN87, AOC, det. PDS. First record for Wales of this species which occurs in a few sites in S. England, E. Ireland and W. Scotland.

640/1. *Ophrys apifera* Hudson (Bee Orchid). The Patch dunes, Gwbert, SN14, JRA & CDP. Last seen here in 1978 (Mrs R. Bowen), and previously only by Charles Oldham.

*1646/1. *Acorus calamus* L. (Sweet-flag). Dominant over an area 25x10m, and scattered elsewhere, in overgrown pond in copse 250m SW of Hendy, Highmead, SN44, AOC. Not flowering, probably originally introduced but this pond has been undisturbed for many decades and contains no other introduced species.

*660/1. *Rhynchospora alba* (L.) Vahl (White Beak-sedge). Peaty pool, Llawn-cwrt NNR, SN45, APF. First record for the SW half of the county.

*663/2. *Carex distans* L. (Distant Sedge). Rock ledge above beach at mouth of Afon Soden, SN35, CDP & BSBI Field Meeting. Previously known only from the Dyfl estuary and by the Clarach stream in the north of the county.

*663/48. *Carex aquatilis* Wahlenb. (Water Sedge). Abundant in alder carr below Llwynyrheol-fawr, Capel Vicar, SN45, AOC & DGJ.

*663/67. *Carex spicata* Hudson (Spiked Sedge). Two clumps on railway embankment, disused since 1965, across Cors Caron, 1km due E of Crug-las, SN15, AOC, conf. R.W. David.

*1Aru/jan. *Arundinaria jansauensis* Gamble (a Bamboo). Several large thickets, well-established in damp mixed woodland 200m SW of Highmead mansion, SN44, AOC, det. D. McClintock. First Welsh record, growing with two other bamboos *Sasa palmata* and *Arundinaria japonica*.

*676/9. *Poa compressa* L. (Flattened Meadow-grass). Top of old mortared wall behind Carpenter Hall, backing onto Queen's Road, Aberystwyth, SN58, AOC. Now known from 9 sites in the county, all walls.

*700/1. *Calamagrostis epigejos* (L.) Roth (Wood Small-reed). Dense colony 80x25m on steep slope above sea 500m WSW of Traeth y Munt, SN15, AOC. Second record.

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

3/2. *Isotetes echinospora* Durieu (Spring Quillwort). Southern end of Llyn Bugellyn and several other pools, SN89; and margin of Llyn Pen-rhaladr, SN79, all A.J. Morton.

7/1. *Hymenophyllum tunbrigense* (L.) Sm. (Tonbridge Filmy-fern). A good patch with *H. wilsonii* (Wilson's Filmy-fern), shaded rock by stream near Aberllefenni, SH71, P.M. Benoit, S. Grasse, Allison Morton & Mrs D.E.M. Palsh. Second record.

- *21/8. *Dryopteris acaulis* (Alton) O. Kuntze (Hay-scented Buckler-fern). Wooded ravine at Llwyrylyn, SN99, AJM.
- *28/1. *Botrychium lunaria* (L.) Swartz (Moonwort). Five fronds in old deciduous woodland at Cwm Nant-y-melchiald, SJ11, C. Leythorne.
- *1113/10. *Viola cornuta* L. (a Pansy). Roadside near Gregynog Hall, SO09, Mrs A.M. Pell, 1984. Second Welsh record.
- 131/12. *Cerastium semidecandrum* L. (Little Mouse-ear). Rocky outcrops on eastern slopes of Roundton Hill, SO29, Montg, Flora Project field meeting.
- 133/3. *Stellaria pallida* (Dumort) Pire (Lesser Chickweed). On rocky outcrops and steep slopes of Roundton Hill, SO29, MFP field meeting.
- 135/1. *Moenchia erecta* (L.) P. Gaertner, B. Meyer & Scherb. (Upright Chickweed). Rocky outcrops on Todleth Hill, SO29; * and rocky outcrops on Corndon Hill, SO39, both MFP field meetings.
- 143/1. *Spergularia rubra* (L.) J. & C. Presl (Sand Spurrey). On shallow soil, Darowen, SH80, PMB; * and occasional on tracks in Hafren Forest, SN89, AJM.
- *149/1b. *Montia fontana* L. subsp. *chondrosperma* (Fenzl) Walters (Blinks). Seasonally damp, very shallow soil deposit over flat rock outcrop, Pen-y-graig, Darowen, SH80, PMB & MFP recording party. Second record.
- *192/24. *Trifolium micranthum* Viv. (Slender Trefoll). On dry sunny bank in thin turf overlying flat rock outcrop, Pen-y-graig near Llanfyllin, with *T. dubium* (Lesser Trefoll), SJ11, PMB & MW. Third record.
- *!Pel/pel. *Peltiphyllum peltatum* (Torr.) Engl. (Umbrella-plant). Muddy bank of River Severn, Llanidloes, SN98, Joyce W., comm. Cella Jarratt, det. Mrs M. Briggs & E.J. Clement. First Welsh record of this N. American plant; a garden escape.
- *254/3x9. *Epilobium montanum* L. x *E. obscurum* Schreber = *E. x aggregatum* Celak (a hybrid Willowherb). One plant near both parents in vegetable garden, Llywydiarth Hall, Aberllefenni, SH71, PMB, SG, AM & DEMP. First localized record.
- *254/5. *Epilobium roseum* Schreber (Pale Willowherb). Three plants on roadside near entrance to Powis Castle Park from Welshpool town, SJ20, PMB, 1983 and again in 1985.
- 291/1. *Carum verticillatum* (L.) Koch (Whorled Caraway). Boggy ground in the Celrig valley SH80, MFP field meeting.
- *350/1. *Androseda polifolia* L. (Bog-rosemary). Growing on moribund tussocks of *Eriophorum vaginatum* (Hare's-tail Cottongrass), near Bugellyn, SN89, AJM.
- *420/3x4. *Linaria repens* (L.) Miller x *L. vulgaris* Miller = *L. x seplum* Allman (a hybrid Toadflax). One plant with both parents, railway yard, Machynlleth station, SH70, B. Gale & FMP recording party.
- 430/22. *Veronica polita* Fries (Grey Field-speedwell). Weed in gardens, Powis Castle, Welshpool, SJ20, PMB.
- *440/3. *Orobanche rapum-genistae* Thuill. (Greater Broomrape). Three or four plants growing on broom, near Roundton, SO29, Mrs J.M. Roper.

*465/4/2. *Galeopsis bifida* Boenn. (Lesser Hemp-nettle). + Grassy roadside bank, Pont ar Byllfa, 3km E of Mallwyd, SH81; + one plant seen in neutral deciduous woodland, Cwm Nant-y-melchiald, SJ11; + and in good quantity on roadside bank W of Plas Coch, 3.5km N of Llanfair Caereinion, SJ01, all PMB & MW. First, second and third records. On many roadside verges in SJ01, often as common as *G. tetrahit* (Common Hemp-nettle); also recorded from + SH80.

*465/4/2x1. *Galeopsis bifida* Boenn. x *G. tetrahit* L. = *G. x ludwigii* Hauskn. (a hybrid Hemp-nettle). One plant with both parents on grassy roadside bank, Pont ar Byllfa, 3km E of Mallwyd, SH81, PMB & MW.

494/2. *Valerianella carinata* Loisel. (Keeled-fruited Cornsalad). On grassy banks near Priest Weston and southwest side of Todleth Hill, both SO29, JMR, conf. PMB.

*506/18x1. *Senecio bicolor* (Willd.) Tod. subsp. *cineraria* (DC.) Chater x *S. jacobaea* L. = *S. x albescens* Burbidge & Colgan (a hybrid Ragwort). One plant with several of *S. jacobaea* (Common Ragwort), on recently disturbed soil, north side of Newtown road at Felin-gerrig, 1 mile E of Machynlleth, SH70, C.A. Small, det. PMB.

*542/1. *Onopordum acanthium* L. (Cotton Thistle). Waste ground on roadside E of Churchstoke, SO29, JMR.

*577/9. *Potamogeton perfoliatus* L. (Perfoliate Pondweed). In River Severn near Crew Green, SJ31, Mrs S. Stafford.

605/18x19. *Juncus acutiflorus* Hoffm. x *J. articulatus* L. = *J. x surrejanus* Druce (a hybrid Rush). + In quantity with *J. acutiflorus* (Sharp-flowered Rush), in valley bog, 1km E of Pont Crugnant, SN89, PMB & MFP recording party; + and with both parents in damp, species-rich meadow, Cwm Nant-y-melchiald, SJ11, PMB.

*663/8x4. *Carex demissa* Hornem. x *C. hostiana* DC. (a hybrid Sedge). Boggy flush near Corndon Cottage, Corndon Hill, SO39, PMB & EDP, 1981; + boggy flush on southwest side of Lan Fawr, Corndon Hill, SO29, JMR, 1984, det. L.C. Trueman; + and in quantity with both parents above Pont Crugnant, SN89, PMB. First second and third records.

*683/14. *Bromus racemosus* L. (Smooth Brome). Scattered along N verge of A495, 3km N of Llanfair Caereinion, SJ10, W.A. Thompson & ICT.

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

*420/2x3. *Linaria purpurea* (L.) Miller x *L. repens* (L.) Miller = *L. x dominii* Druce (a hybrid Toadflax). With both parents by fence between railway ballast and road farmac, Penrhyndeudraeth, by the approach road to Pont Brewit, opposite chemical works, SH63, Miss A.P. Conolly, 1983 & 1984, det. C.A. Stace.

*1441/4. *Pinguicula grandiflora* Lam. (Large-flowered Butterwort). Basic boggy rill, Brithdir near Dolgellau, SH71, PMB, 1983. New to Wales, probably planted, growing in a completely natural habitat (with *P. vulgaris* (Common Butterwort), but only two plants found despite search; there is a cottage with a garden close by.

605/18x19. *Juncus acutiflorus* Hoffm. x *J. articulatus* L. = *J. x surrejanus* Druce (a hybrid Rush). Acidic mire, Cwmnantol, E of Llanbedr, SH62, T.H. Blackstock, 1983.

CAERNARFON, v.c. 49 (comm. M. Morris)

- 2/1. *Selaginella selaginoides* (L.) Link (Lesser Clubmoss). Six plants on eastern slope of Y Garn, Mynydd Drws-y-Coed, SH55, Dewi Jones.
- *4/7. *Equisetum sylvaticum* L. (Wood Horsetail). In fair quantity on wooded slope above Afon Llyfni, near Pont-y-Cim, SH45, DJ.
- 15/1. *Asplenium viride* Hudson (Green Spleenwort). One plant on west facing cliffs, Mynydd Drws-y-Coed, SH55, DJ.
- *16/1. *Ceterach officinarum* DC. (Rustyback). In fair quantity on perimeter wall of Salem Chapel, Llanllyfni, SH45, DJ.
- *21/8. *Dryopteris semula* (Aiton) O. Kuntze (Hay-scented Buckler-fern). Two plants in mixed broad-leaved woodland, near Criccleth, SH43, P.M. Benoit.
- 24/3. *Phegopteris connectilis* (Michx) Watt (Beech Fern). One plant in Cwmgwared, SH44; and in good quantity at Cwm Marchnad, Mynydd Drws-y-Coed, SH55, both DJ.
- *37/1. *Trollius europæus* L. (Globeflower). Four plants on west facing cliff between Mynydd Drws-y-Coed and Trum-y-Ddysgl, SH55, DJ.
- 46/15. *Ranunculus aceleratus* L. (Celery-leaved Buttercup). Three or four plants near Foryd Bay, SH45, DJ & R. Lewis.
- 61/1. *Glaucium flavum* Crantz (Yellow Horned-poppy). In fair quantity along Pontllyfni beach, and northwards towards Ty Mawr Farm, SH45, DJ.
- 162/1. *Chelidonium majus* L. (Greater Celandine). At three sites in the village of Pen-y-Groes, SH45, DJ.
- *172/1. *Diploxys muralis* (L.) DC. (Annual Wall-rocket). Base of sea-wall, landward side, Borth y Gest near Porthmadog, SH53, R.E. Hughes, conf. R.G. Ellis.
- *131/3. *Cerastium tomentosum* L. (Snow-In-summer). Seen every year since 1981 in thriving quantity on earth wall at Dolydd near Groeslon, SH45, DJ.
- *1164/2. *Lavatera cretica* L. (Smaller Tree-mallow). Wood, Murlau near Criccleth, SH43, REH, 1984, conf. RGE.
- *1166/2. *Linum usitatissimum* L. (Flax). In abundance near Abersoch, SH32, Miss A. P. Conolly.
- *220/3/8. *Alchemilla xanthochlora* Rothm. (Intermediate Lady's-mantle). On path near cottages Rhllw mountain, SH23, APC. Perhaps introduced but not obviously ex garden.
- *225/15. *Rosa micrantha* Sm. (Small-flowered Sweet-briar). Field hedge away from houses, W of Morfa Nefyn, SH24, APC.
- 241/1. *Carum verticillatum* (L.) Koch (Whorled Caraway). Plentiful in a damp meadow by Afon Glaslyn, SH54, A. Colston.
- *1320/18. *Fallopia aubertii* (Louis Henry) J. Holub (Russian-vine). Growing well on waste ground, near Mynytho, SH33, APC. Second record.

- *1341/2. *Quercus ilex* L. (Evergreen Oak). One tree near Plaslyn, Cwmystradllyn, SH54, DJ.
- *343/11x12. *Salix caprea* L. x *S. cinerea* L. = *S. x reichardtii* A. Kerner (a hybrid Willow). Near Abersoch, SH32, APC, conf. C.A. Stace.
- *358/4. *Vaccinium oxycoccos* L. (Cranberry). In small quantity at Cors Cau Efa Lwyd, near Pen-y-Groes, SH45, DJ.
- *365/5/pro. *Limonium procerum* (C.E. Salmon) Inghouille subsp. *procerum* (a Rock Sea-lavender). + St Mary's Well, SH12; + Porth Ysgo, SH22; + Porth Gwylan, SH23; + Tryn Wylfa, SH32; + and Great Orme's Head, SH78; all M.J. Inghouille, 1979. In 'The *Limonium binervosum* aggregate (Plumbaginaceae) in the British Isles', *J. Linn. Soc. (Bot)* (1986) 92: 177-217.
- 367/3. *Primula veris* L. (Cowslip). Between 10 and 15 plants in field near junction of Nant-y-Garth and Bangor road; and near Old Rectory, Llanddeiniolen, in very good quantity this year, due to field being grazed by cattle instead of sheep, both SH56, DJ.
- *382/4x6. *Centaurium erythraea* Rafn x *C. littorale* (D. Turner) Gilmour (a hybrid Centaury). Drift sea cliff, E of Porth Iago and W of Porth Ferrin, SH13, APC.
- 386/1. *Menyanthes trifoliata* L. (Bogbean). In fair quantity at Cors Efa Lwyd, near Pen-y-Groes, SH45, DJ.
- *400/4. *Myosotis laxa* Lehm. subsp. *caespitosa* (C.F. Schultz) Hylander (Tufted Forget-me-not). A few plants at Cors Efa Lwyd, near Pen-y-Groes, SH45, DJ.
- *1400/7. *Myosotis sylvatica* Hoffm. (Wood Forget-me-not). One patch on roadside at Llon Ddwri, Llanllyfni, SH45, DJ. Second record for the County and the first post-1930.
- 445/3x5. *Mentha arvensis* L. x *M. spicata* L. = *M. x gentilis* L. (Bushy Mint). + By Afon Soch, W of Tywyn, SH22, 1978; + near Edryn, 1974; and near Tudwelllog, 1976 & 1985, both SH23, all APC, det./conf. R.M. Harley.
- *445/4x3. *Mentha aquatica* L. x *M. arvensis* L. = *M. x verticillata* L. (Whorled Mint). N of Tudwelllog, SH23, APC, conf. RMH.
- 445/4x5. *Mentha aquatica* L. x *M. spicata* L. = *M. x piperita* L. (Peppermint). + Between Porth Ysgo and Llanfaelrhys, SH22, 1975; + and near Mynytho, SH33, 1985, both APC, conf. RMH.
- *445/5x7. *Mentha spicata* L. x *M. suaveolens* Ehrh. = *M. x villosa* Hudson nm. *alopecuroides* (Hull) Briq. (Apple Mint). Mynydd Cilan, SH22, APC, conf. RMH.
- *1445/6x5. *Mentha longifolia* (L.) Hudson x *M. spicata* L. = *M. x villosanervata* auct., ? an Opiz (a hybrid Mint). + Bardsey Island, SH12, 1962 & 1972; + and S of Abersoch, SH23, 1979 & 1985, all APC, det./conf. RMH. First and second records.
- 445/7. *Mentha suaveolens* Ehrh. (Round-leaved Mint). + Bardsey Island, SH12, 1976 - 1985; + Llanbedrog, 1969 & 1985, near Mynytho, 1975 & 1976, and northwest end of Cors Gelrch, 1983, all SH33; all APC, det./conf. RMH.
- *446/1. *Lycopus europaeus* L. (Gipsywort). In small quantity on the southern shore of Llyn Nantlle, SH55, DJ.
- *1535/2. *Artemisia verlotiorum* Lamotte (Chinese Mugwort). Well established on waste ground near Mynytho, SH33, APC. Third record.

- 555/1. *Mycelis muralis* (L.) Dumort. (Wall Lettuce). On made up ground with 'foreign' slate, c. 2km NE of Botwnnog, SH23, APC.
- 559/8. *Crepis paludosa* (L.) Moench (Marsh Hawk's-beard). At Cors Cae Efa Lwyd, near Pen-y-Groes, SH45, DJ & RL.
- 563/1. *Allisma plantago-aquatica* L. (Water-plantain). Ditches around Pontllyfni in good quantity, SH45, DJ.
- 580/1. *Zannichella palustris* L. (Horned Pondweed). Near Porth Meudwy, SH12, APC.
- 605/18x19. *Juncus acutiflorus* Hoffm. x *J. articulatus* L. = *J. x surrejanus* Druce (a hybrid Rush). Partly drained isolated area of base-rich fen, Cors Gelrch, SH33;
 • lightly grazed riverside marsh, east side of Afon Dwyfach, near Pant Glas, SH44;
 • and marsh by river, west side of Afon Cedron, Llyn Ystumlllyn, E of Criccleth, SH53, all T.H. Blackstock, 1983.
- 5612/1. *Galanthus nivalis* L. (Snowdrop). By Afon Daron, near bridge, Bodwrdda near Aberdaron, SH12, Miss E.G. Roberts, 1984. First record for Lleyn, but obviously an escape.
- 625/2. *Epipactis helleborine* (L.) Crantz (Broad-leaved Helleborine). Three plants in Fachwen woods, SH56, DJ.
- 643/1. *Dactylorhiza fuchsii* (Druce) Soo (Common Spotted-orchid). Eight plants on steep grassy bank at Gyrr Goch beach, SH44, DJ.
- 643/5. *Dactylorhiza purpurella* (T. & T.A. Steph.) Soo (Northern Marsh-orchid). Upwards of 50 plants in disused gravel pit at Pen-y-Groes, SH45, DJ.
- 653/1. *Typha latifolia* L. (Bulrush). In fair quantity in swampy area below Cae-hooden, between Llanrug and Caeathro, SH56, DJ.
- 658/1. *Cyperus longus* L. (Galingale). Steep slope of wet gravelly soil near sea, Pwllhell, SH53, L.J. Larsen. First record for SW Caerns and second county record.
- 663/1. *Carex laevigata* Sm. (Smooth-stalked Sedge). A few plants at Cwmgwared, SH44; and in a small wooded field at the bottom end of Allt Goch near Pen-y-Groes, SH45, both DJ.
- 663/12. *Carex sylvatica* Hudson (Wood-sedge). A few plants in wooded field below Eithnog, opposite southern perimeter wall of Glynllifon Estate, SH45, DJ.
- 663/54. *Carex paniculata* L. (Greater Tussock-sedge). In fair quantity approx. 1 mile SE of Llanaelhaearn, SH34; + and plentiful at Cors Efa Lwyd, near Pen-y-Groes, SH45, both DJ.
- 663/57. *Carex otrubae* Podp. (False Fox-sedge). Plentiful below Ty Mawr Farm, Pontllyfni; and also in fair quantity at Foryd Bay, both SH45, DJ.
- 663/72. *Carex curta* Good. (White Sedge). Sparingly around the shore of Llyn Nantlle, SH55, DJ.
- 683/11. *Bromus bordeaceus* L. subsp. *ferronii* (Mabilie) P.M. Smith (Least Soft-brome). Maritime turf, Bardsey Island, SH12, Agnew & Kershaw, 1956, det. P.M. Smith.

- *683/12. *Bromus hordeaceus* L. subsp. *thomlinii* (Hard.) Maire & Weiller (in Soft-brome). Bardsey Island, SH12, APC & PMS, 1954 and A & K, 1956, det. PMS.
- +683/14. *Bromus racemosus* L. (Smooth Brome). Bardsey Island, SH12, A & K, 1956, det. PMS.
- +689/1. *Koeleria macrantha* (Ledeb.) Schultes (Crested Hair-grass). South end of Mynydd Cilan, SH22, APC, conf. CAS.
- +691/1. *Trietum flavescens* (L.) Beauv. (Yellow Oat-grass). Near Abersoch, SH32, APC. Introduced, probably in grass seed.
- *714/2. *Parapholis incurva* (L.) C.E. Hubbard (Curved Hard-grass). In open community on eroding drift cliff above the beach at Porth Ysgadan, SH23, J.R. Akeroyd.

DENBIGH, v.c. 50 (comm. Mrs J. A. Green)

- 50/1. *Thalictrum flavum* L. (Common Meadow-rue). Rough wet ground near Hblt, SJ45, G. Kay.
- *168/1. *Erucastrum gallicum* (Willd.) O.E. Schultz (Hairy Rocket). Single plant on disturbed ground by Offa's Dyke path, near Ruthin, SJ15, JAG.
- *176/2. *Rapistrum rugosum* (L.) All. subsp. *rugosum* (Bastard Cabbage). Single plant on disturbed ground by field pond, Fenn's old Hall, near Bronington, SJ53, JAG.
- 585/1. *Toesadalla nudicaulis* (L.) R. Br. (Shepherd's Cress). Abundant along half a mile of gravelly road edge, Glyndyfrdwy, near Corwen, SJ14, JAG.
- +133/3. *Stellaria pallida* (Dumort.) Pire (Lesser Chickweed). In short mown grass inside the walls of Denbigh Castle, SJ06, JAG.
- +1149/3. *Montia sibirica* (L.) Howell (Pink Purslane). By a stream in an isolated wood, Caerwys, SJ17, JAG.
- 154/11. *Chenopodium murale* L. (Nettle-leaved Goosefoot). Allotments near Gresford, SJ35, J.B. Formestone, 1981; + and waste ground near Bronington, SJ54, JAG.
- *1154/13. *Chenopodium hybridum* L. (Maple-leaved Goosefoot). Unstable banks of River Clywedog, near Redwither, Wrexham Industrial Estate, SJ34, JAG.
- *154/14. *Chenopodium rubrum* L. (Red Goosefoot). Several very large plants on piles of loose soil on Chirk town tip, Halton, near Chirk, SJ33, JAG.
- 1173/2. *Acer platanoides* L. (Norway Maple). Several trees and saplings, Nant y ffrith, SJ25, A.G. Spencer.
- +192/24. *Trifolium micranthum* Viv. (Slender Trefoil). Arable weed on Pantyrochain Farm, near Wrexham, SJ35, AGS.
- 206/16. *Vicia lathyroides* L. (Spring Vetch). Short grass on sand dunes, Kinmel Bay, SH98, JAG.
- 207/2. *Lathyrus rissolia* L. (Grass Vetchling). A few plants in Pant Quarry, Gresford, SJ35, AGS.

- 222/1. *Sanguisorba officinalis* L. (Great Burnet). Damp ditch near the sea, Kinmel Bay, SH98, JAG.
- 263/1. *Vincetoxicum album* L. (Mistletoe). Single plant on old hawthorn, Manor Farm, Erddig, SJ33, AGS.
- 288/1. *Cicuta virosa* L. (Cowbane). Abundant in ponds near Horseman's Green, SJ44, JAG.
- 297/1. *Berula erecta* (Hudson) Coville (Lesser Water-parsnip). Wet ditch by River Clywedog, near Wrexham, SJ34, JAG.
- 300/1. *Oenanthe fistulosa* L. (Tubular Water-dropwort). Pond, Marchwiel Old Hall, SJ34, AGS.
- 300/6. *Oenanthe aquatica* (L.) Polret (Fine-leaved Water-dropwort). • Edges of farm pond near Overton, SJ34, JAG; and farm pond near Coxwood lane, Llay, SJ35, AGS.
- *320/13. *Polygonum mite* Schrank (Tasteless Water-pepper). Growing with other species of *Polygonum*, *Oenanthe aquatica* (Fine-leaved Water-dropwort) and *Sparganium erectum* (Branched Bur-reed) at edge of pond in field near Overton, SJ34, JAG, det. J.R. Akeroyd.
- 325/18. *Rumex maritimus* L. (Golden Dock). Pantyochaln lake, near Wrexham, SJ35, AGS.
- 343/13x12. *Salix aurita* L. x *S. cinerea* L. = *S. x multinervis* Doll (a hybrid Willow). Bank of field pond near Bronington, SJ53, JAG.
- *1352/1. *Pernettya mucronata* (L. fil.) Gaudich. (Prickly Heath). Thriving over 100 sq. metres of steep hillside, Nant y ffrith, SJ25, AGS.
- 368/1. *Hottonia palustris* L. (Water-violet). Field pond near Overton, SJ34, JAG.
- 413/3. *Solanum nigrum* L. (Black Nightshade). Chirk town tip, near Halton, SJ33, JAG.
- 439/1. *Lathraea squamaria* L. (Toothwort). On hazel roots, Merin-y-Wlgs, SJ04, Jo Phillips.
- *459/6x7. *Stachys palustris* L. x *S. sylvatica* L. = *S. x ambigua* Sm. (a hybrid Woundwort). With both parents on bank of River Clywedog near Redwither, Wrexham, SJ34, M. Rogers & G. Kay.
- 1506/13. *Senecio fluviatilis* Wallr. (Broad-leaved Ragwort). Flourishing new colony along River Dee, Holt, SJ45, AGS.
- 1512/1. *Inula helenium* L. (Elecampane). Small colony in Nant y ffrith, SJ25, AGS.
- 538/1. *Arctium lappa* L. (Greater Burdock). Field grazed by cows, near Overton, SJ34, GK.
- 1541/1. *Silybum marianum* (L.) Gaertner (Milk Thistle). Small colony, Nant y ffrith, SJ25, AGS.
- 544/1. *Centaurea scabiosa* L. (Greater Knapweed). N facing bank at field edge, unmown but open to grazing after meadow is cut for hay, Hope Mountain, SJ25, AGS.

- 562/1. *Luronium natans* (L.) Raffin (Floating Water-plantain). Two small canal-side colonies, Bryn-yr-Eos, near Froncysyllte, SJ24, MR, conf. AGS.
- *1598/1. *Ornithogalum umbellatum* L. (Star-of-Bethlehem). Small colony on waste ground near Borras, Wrexham, SJ35, AGS.
- 605/17. *Juncus subnodulosus* Schrank (Blunt-flowered Rush). Small colony, Cefn Park Estate, Wrexham, SJ35, AGS.
- 663/32. *Carex hirta* L. (Hairy Sedge). Wet flushes on steep slope of Dee valley, Wynnstey Estate near Newbridge, SJ24, AGS.
- *663/47. *Carex acuta* L. (Slender Tufted-sedge). Edge of ditch by River Clwyd near Denbigh, SJ06, JAG, det. A.O. Chater., Second record.
- 663/66. *Carex divulsa* Stokes subsp. *leersii* (Kneucker) W. Koch (a Grey Sedge). Steep slope, south side of Denbigh Castle, SJ06, JAG, det. AOC.
- *663/67. *Carex spicata* Hudson (Spiked Sedge). Waste ground, Wrexham Industrial Estate, SJ34, JAG, det. AOC.
- *663/68. *Carex muricata* L. subsp. *lamprocarpa* Celak (Small-fruited Prickly-sedge). Near Maen y goron, Rhewl, Llangollen, SJ14, JAG, det. AOC.
- *669/3. *Glyceria declinata* Breb. (Small Sweet-grass). Wet stony ground, Plas Jolyn near Pentrefoelas, SH85, JAG.
- *669/4. *Glyceria maxima* (Hartman) Holmberg (Reed Sweet-grass). Chirk town tip near Halton, SJ33, JAG.
- *1720/1. *Setaria viridis* (L.) Beauv. (Green Bristle-grass). Edge of road opposite Ty Gwyn Farm, Mochdre, SH87, E. Phenna. Second record.

FLINT, v.c. 51 (comm. G. Wynne)

- 84/1. *Thlaspi arvense* L. (Field Penny-cress). Rough limestone grassland above Ffynnon Beuno, Tremelrchlon, SJ07, Mrs J.A. Green & GW.
- *133/3. *Stellaria pallida* (Dumort.) Pire (Lesser Chickweed). Limestone grassland, Graig, Tremelrchlon, SJ07, JAG. Second record.
- *185/2. *Genista anglica* L. (Petty Whin). Marsh, Llyn Helyg, SJ07, JAG. Second recent record.
- *251/1. *Daphne mezereum* L. (Mezereon). One small shrub in flower, Ddol Uchaf nature reserve, SJ17, Dr B. Ing. Probably a garden escape.
- 277/3. *Tortilis nodosa* (L.) Gaertner (Knotted Hedge-parsley). Dry limestone slope above Ffynnon Beuno, Tremelrchlon, SJ07, JAG & GW.
- *319/2. *Euphorbia lathyris* L. (Caper Spurge). Disturbed ground in public house car park, Tremelrchlon, SJ07, JAG. Second recent record, probably a garden escape.
- 399/2. *Pulmonaria officinalis* L. (Lungwort). Scrub on woodland edge, Wepre Wood, Connah's Quay, SJ26, P. Harmes, det. Dr G.A. Nelson.

- 469/2. *Scutellaria minor* L. (Lesser Skullcap). Marsh above Ffynnon Beuno, Tremelrchion, SJ07, JAG & GW. Second recent record.
- 1509/3. *Petasites japonicus* (Siebold & Zucc.) Maxim. (Giant Butterbur). About 80 plants on rough roadside waste ground, possibly a garden dump - but not near houses, between Aelwyd Uchaf and Toledo Farm, Tremelrchion, SJ07, Mrs M. Wild.
- 607/6. *Allium oleraceum* L. (Field Garlic). Farm lane, Mynydd Llan, Ysceiflog, SJ17, Miss J. Hughes.
- 629/1. *Neottia nidus-avis* (L.) L.C.M. Richard (Bird's-nest Orchid). Two plants in deep beech/sycamore leaf litter, Coed Fron-drain, S of Cilcaln Hall, SJ16, Ieuan ap Sion & GW.
- 663/4. *Carex hostiana* DC. (Tawny Sedge). Upland mire above Bryn Ffynnon, Nannerch, SJ16, GW, det. A.O. Chater. (This record was published in 'Welsh Plant Records 1983-84', Welsh Bulletin No. 42, p. 52, but with the wrong grid reference (SJ17) which should be corrected.)
- 663/11. *Carex extensa* Good. (Long-bracketed Sedge). Edge of brackish pool near Point of Ayr, SJ18, JAG.
- 663/57. *Carex otrubae* Pop. x *C. remota* L. = *C. x pseudaxillaris* K. Richter (a hybrid Sedge). Growing in orchard of house, Tremelrchion, SJ07, JAG, conf. AOC. First post 1930 record.
- 674/2. *Desmazeria marina* (L.) Druce (Sea Fern-grass). Sand dunes, Talacre, SJ18, JAG & GW.

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

- 1/1. *Huperzia selago* (L.) Bernh. ex Schrank & Mart. (Fir Clubmoss). Rock outcrop, Newborough Forest, SH36, J. Smith, conf. RHR.
- 26/1. *Pilularia globulifera* L. (Pillwort). Shallow pool on Malltraeth Marsh, SH46, T.H. Blackstock, 1984.
- 127/1. *Azolla filiculoides* Lam. (Water Fern). Pond near Llyn Alaw, SH48, THB, 1984. First confirmed record.
- 28/1. *Botrychium lunaria* (L.) Swartz (Moonwort). Heath near Pentre Gwyddel, Rhoscolyn, SH27, P. Day.
- 67/1. *Brassica oleracea* L. (Wild Cabbage). Shingle bank, Red Wharf, SH58, PD.
- 75/1. *Crambe maritima* L. (Sea-kale). Hen Borth, SH39; between Trearddur and Porth-y-post, SH27; near Porth-y-garan, SH27; and Traeth Bychan, SH58; below Tendinas, SH58; all PD.
- 113/2. *Viola hirta* L. (Hairy Violet). On dried-out fen peat, Cors Erddreintlog NNR, SH48, L.J. Colley.
- 113/5. *Viola reichenbachiana* Jord. ex Boreau (Early Dog-violet). Hazel scrub near Cors Erddreintlog, SH48, L.J.C.

- +168/10. *Geranium columbinum* L. (Long-stalked Crane's-bill). Near Cerrig-moellon and Rhyd-y-bont, SH27, PD.
- 192/24. *Trifolium micranthum* Viv. (Slender Trefoll). + Porth Diana, SH27, B.R. Fowler, conf. R.G. Ellis; and near Cemlyn, SH39, Mrs L.J. Rees, 1985.
- +223/1. *Sanguisorba minor* Scop. subsp. *minor* (Salad Burnet). Sandy grassland, Porth Dafarch, SH28, PD.
- +225/15. *Rosa micrantha* Borrer ex Sm. (Small-flowered Sweet-briar). Limestone scrub, Marlanglas, SH58, RHR.
- +274/1. *Anthriscus caucalis* Bleb. (Bur Chervil). Bodorgan headland, SH36, PD, conf. RHR.
- +359/1. *Pyrola minor* L. (Common Wintergreen). Corsican Pine plantation, Newborough Forest, SH46, Mr & Mrs J. Davidson, 1984, conf. N. Brown & RHR. First record since 1813.
- +359/3. *Pyrola rotundifolia* L. subsp. *maritima* (Kenyon) E.F. Warb. (Round-leaved Wintergreen). Dune slack near Rhosnelgr, SH37, PD, 1983.
- *365/5/pro. *Limonium procerum* (C.E. Salmon) Ingrouille subsp. *procerum* (a Rock Sea-lavender). + Porth Dafarch, SH27; + Llanddwyn Island, and Aberffraw, SH36; + and Treacastell and Rhosnelgr, SH37; all M.J. Ingrouille, 1979. In 'The *Limonium binervosum* aggregate (Plumbaginaceae) in the British Isles', (*J. Linn. Soc. (Bot)* (1986) 92: 177-217).
- *365/5/bri. *Limonium britannicum* Ingrouille subsp. *celticum* Ingrouille (a Rock Sea-lavender). South Stack, SH27, M.J. Ingrouille, 1979. In 'The *Limonium binervosum* aggregate (Plumbaginaceae) in the British Isles', (*J. Linn. Soc. (Bot)* (1986) 92: 177-217).
- *1392/6. *Symphytum tuberosum* L. (Tuberous Comfrey). Waste ground, Marlanglas, SH58, RHR.
- 407/3. *Cuscuta epithymum* (L.) L. (Dodder). + Heath, Porth-y-garan, SH27; + and sandy pasture, Porth Dafarch, SH28; parasitic on *Thymus* at both places, PD.
- 440/10. *Orobancha hederac* Duby (Ivy Broomrape). + Serpentine outcrop, Cerrig-moellon, SH27, RHR, 1984; + and limestone outcrop, Trwyn Dinmor, SH68, PD, 1984.
- *1462/2. *Lamium moluccellifolium* Fries (Northern Dead-nettle). Single casual plant, waste ground, Beaumaris, SH67, R.M. Burton, conf. RGE.
- 487/1. *Sambucus ebulus* L. (Dwarf Elder). Waste ground, Pendref Street, Newborough, SH46, Dr E. Lacey.
- 535/7. *Artemisia maritima* L. (Sea Wormwood). Offshore islet, Bodorgan head, SH36, PD. Re-found in the locality where it was known to Hugh Davies in 1813.
- +1598/1. *Ornithogalum umbellatum* L. (Star-of-Bethlehem). Near cliff-tops, Moelfre, SH58, BRF.
- +605/7/foL. *Juncus foliosus* Desf. (a Toad Rush). Cerrig-moellon fen, and near Porth-y-garan, SH27, RHR & PD.

•605/7/amb. *Juncus ambiguus* Guss. (a Toad Rush). Llelnog meadows, SH67, THB.

605/18x19. *Juncus acutiflorus* Ehrh. ex Hoffm. x *J. articulatus* L. = *J. x surrejanus* Druce (a hybrid Rush). + Partially drained marsh, E side of Afon Crugyll, N of Rhosneigr, SH37; + on edge of ditch, S of Pont Marquis, Malltraeth Marsh, SH46; + and edge of base-rich fen, S of Gwenfro Isaf, near Llanddyfnon; all THB, 1983.

•607/1. *Allium ampeloprasum* L. (Wild Leek). Field border near South Stack, Holyhead, SH28, D.B. Hornby, 1975, conf. PD & RHR.

653/2. *Typha angustifolia* L. (Lesser Bulrush). Ditch, Ty'n Llan, Cemlyn, SH39, LJR.

654/3. *Eriophorum latifolium* Hoppe (Broad-leaved Cottongrass). Near Rhosmeirch, SH47. PD.

•663/17. *Carex vesicaria* L. (Bladder-sedge). Llangefnl Dingle, SH47, PD, 1984.

•663/67. *Carex spicata* Hudson (Spiked Sedge). Disused limestone quarry, N of Moel-y-don, SH56, PD, conf. R.W. David.

673/2. *Puccinellia distans* (Jacq.) Parl. (Reflexed Saltmarsh-grass). Beaumaris Green, SH67, RMB.

700/1. *Calamagrostis epigejos* (L.) Roth (Wood Small-reed). Cliff-top scrub, Fedw Fawr, SH58; + under Bodowen, SH36; + Porth Eilian, SH49; + and near Pentre Gwyddel, SH27; all PD.