

BOTANICAL SOCIETY OF THE BRITISH ISLES

WELSH BULLETIN

Editor : R. D. Pryce

No. 63, SPRING 1998



Photocopy of specimens of *Lathyrus japonicus* subsp. *maritimus* at NMW ($\times \frac{1}{2}$).
Juvenile plant from Aberthaw (Glam.) 1933, colony destroyed by building of power-station; mature
plant from Camber (E. Sussex) 1965. Seeds (life-size) showing the long hilum, from Chesil Beach
(Dorset) 1912, del. Mrs Annette Townsend.

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All back issues of the BSBI Welsh Bulletin are still available on request (originals or photocopies). Please send cheque (made payable to BSBI Wales), @ £1 per issue, which includes p & p, to - Dr G. Hutchinson, Department of Biodiversity & Systematic Biology, National Museum & Gallery, Cathays Park, Cardiff CF1 3NP, specifying the issue number, or year (which would have to include the season or month). Large runs - price negotiable.

EDITORIAL

This year, Wales is hosting the BSBI AGM from Friday 8th to Sunday 10th May. Based at the National Museum & Gallery, Cardiff, there will be opportunities to visit several sites of interest in South Wales. Early birds among you may already have booked for the voyage to Flatholm, but the excursion is now fully subscribed and several members have already been disappointed. Other sites on the agenda include Porthkerry on Friday, and East Aberthaw and Old Castle Down, between Ogmores-by-Sea and Bridgend, on Sunday. We will also have the choice to view for ourselves the progress being made on the development of the Welsh National Botanic Garden at Middleton Hall, near Carmarthen, which is now taking shape, followed by a visit to some rich botanical sites situated in Llanelli's proposed Millennium Coastal Park.

As usual, a full and varied Welsh field programme has been arranged to cover the season which embraces both recording for the Atlas 2000 project in addition to conducted 'Cook's Tours'. Of course, as these latter are generally to well-known botanical highlight sites, may I urge you to use these meetings to monitor previously known plant populations and update past records. In my experience, many local, organised meetings (generally not those organised by BSBI, I may add) miss the opportunity of contributing valuable records. Many participants go along just for entertainment, resulting in the loss of valuable data – it only requires *one* member to act as scribe.

If you wish to combine good botanising, good and erudite company whilst taking part in what some would say has become the social highlight of the Welsh BSBI calendar, the Carmarthenshire Flora Recording Meeting centred on Llandoverly, still has places available. If you are free from Friday 12th to Monday 15th June please make your reservation with me.

In addition to the notices and reports of forthcoming and past AGMs, two articles are featured in this issue. Arthur Chater's contribution on Cardiganshire drift seeds furthers this intriguing subject and I hope it will stimulate you to look for these intriguing objects on suitable beaches. The Bulletin concludes with my much belated Carmarthenshire Flora Report which originally was to cover just 1995 but, due to delays in its writing, now covers the *three* year period 1995 to 1997, and in fact also includes a few early 1998 goodies.

We have exhausted material in stock so may I appeal to aspiring authors to contribute to ensure the Bulletin's regular appearance: without a regular supply of suitable articles to print, intervals between successive issues increases. Your efforts will be greatly appreciated.

Finally, I hope that the 1998 field season is rewarding for all members and I look forward to seeing you at one or more of this year's meetings.

Richard Pryce
22 March 1998

IMPORTANT NOTICE**BSBI WALES 9th QUADRENNIAL MEETING****36th ANNUAL GENERAL MEETING and 16th EXHIBITION MEETING, 1998**

Notice is hereby given that a meeting of members of the Society, normally resident in Wales, will be held at Coleg Harlech, Harlech, on Saturday, August 22nd at 4.30 pm.

AGENDA

1. Election of Chairman and member to serve as Representative on BSBI Council.
2. Election of Hon. Secretary, Hon. Treasurer and members of Committee for Wales.
3. Any other business.

Nominations of members for election as Chairman and Representative on Council must be in writing, signed by two members normally resident in Wales, and accompanied by written consent of the candidate to serve if elected. Such nominations, and nominations for members and officers of the Committee for Wales, should be sent to the Hon. Secretary of the Committee for Wales, Mr R.G. Ellis, 41 Marlborough Road, Roath, Cardiff CF2 5BU, to arrive not later than 30 May 1998.

ANNUAL GENERAL MEETING, 1997

The 35th Annual General Meeting and 15th Exhibition Meeting of BSBI Wales was held at Gwent Tertiary College, Usk, Gwent on Saturday 30th August, 1997.

The day began with a well attended series of site visits focussed on the Blaenavon Upland. The Chairman, Paul Day opened the AGM at the end of the afternoon, by expressing his delight that both the President, David Pearman and the President Elect, Mary Briggs, had been able to join Welsh members for the occasion. Apologies were received from Nigel Brown. Minutes of the last AGM, published in BSBI Welsh Bulletin 62: 4-6, were taken as read and accepted without amendment.

The Chairman thanked Trevor Evans for organising the weekend at the Gwent Tertiary College and other Wales Committee members for their work during the year. He was especially pleased to report that Gwynn Ellis had agreed to remain as Secretary, on the understanding that other members undertook to produce the minutes.

The prestigious Atlas 2000 project was then mentioned as well as the need to prepare "County" rare plant registers. The registers would be invaluable for the preparation of local biodiversity action plans. The Chairman went on to appeal for more members to come forward to assist vice-county recorders in these very worthwhile projects.

Before closing the Chairman reported on progress with the National Botanic Garden at Middleton Hall, Carmarthenshire. The Committee for Wales had had its

April meeting at Middleton and members hope to develop close links to ensure that the Society plays a role over the gardens work towards the conservation of the Welsh flora. [The Chairman's opening remarks can be read in more detail on p. 8].

The Society's President then took the opportunity to say a few words, and he started by stressing that local meetings were the BSBI's hidden strength. He then referred to the effort that was going into Atlas 2000 and how the winter of 1997-98 will be a critical period for members to pass records on to Trevor Dines. Cameron Crook's role as co-ordinator had fortuitously coincided with the Atlas programme but by September 1998 his three year term comes to an end - his role and support of vice-county recorders with computers will then require careful thought. He agreed with the Chairman over the importance of "County" rare plant registers but warned that county red data books would be difficult to complete. The whole area was one where the Society could give a stronger lead. Finally he commented briefly on the uncertainties arising from the National Biodiversity Network.

HON. SECRETARY'S REPORT

The Hon. Secretary Gwynn Ellis, then gave a short report on the last years activities.

He confirmed that he had agreed to continue as secretary of the Committee for Wales now that other members would provide a minuting secretary in rotation. As an ex officio member, however, this still left two vacancies as reported at the 1996 AGM.

Two issues of the Welsh Bulletin have been published since the last AGM; nos 61 & 62, and the editor Richard Pryce was again congratulated on the high standard that he has maintained. George Hutchinson has also put in a tremendous amount of work in planning and producing the Bulletin. We all hope that members will continue to send in notes and articles for publication. Welsh Plant records for 1994 and 1995 appeared in nos 61 & 62 respectively.

Ten field meetings have been arranged in Wales in 1997, including one Atlas 2000 Meeting led by Trevor Dines; attendance has generally been adequate but only a few reached double figures. We must again thank David Humphreys for the splendid programme he arranged. In 1998 we hope to arrange a similar number of field meetings; and again some of these will be square bashing meetings to help with recording for the Atlas 2000 project; others will be traditionally led meetings to areas of interest.

Perhaps the most significant and far reaching botanical event to have taken place in Wales for many years was the establishment of the National Botanic Garden of Wales at Middleton Hall, Carmarthen. As remarked by our Chairman we hope to forge close links between our two organisations and we have just appointed Quentin Kay as the official NBGW representative on our committee.

Another significant Welsh botanical event that took place earlier this year was the publication of the 7th edition of Welsh Ferns and our own George Hutchinson is to be congratulated, together with his co-author Barry Thomas, on a magnificent achievement.

Perhaps this is the place to mention the demise of the Botany and Zoology Departments of the National Museum and Gallery of Wales and the creation of a new super department of Biodiversity and Systematic Biology.

Among the many important topics that have received attention at our Committee Meetings during the year one has yet to be referred to the Millennium Seed Bank Project. Ray Woods & Andy Jones have discussed the project with Simon Linington of Wakehurst Place who has produced a list of species that only

occur in Wales, and suggested that what was needed was a co-ordinator to ensure that the seed was collected in the correct way and all taxa visited. It was suggested that the NBGW could be the primary depository for Welsh populations and Wakehurst Place secondary. Welsh taxa not yet represented in the seed bank include: Coton cam, Draba aiz (QK), Helia can (GW), Senec cam (GW); Sorby lep, ley & min (MP). Liz McDonnell has now been appointed as BSBI seed bank co-ordinator and she has been in touch with Welsh vice-county Recorders to make sure that coverage could be monitored and duplication of effort avoided.

He reported that next year's Welsh AGM will be north Wales at Bala on August 22-23-24 and that next year's BSBI AGM will also be held in Wales, this time in South Wales, at the National Museum and Gallery of Wales, Cardiff on Saturday May 9th.

Finally he mentioned for the first time in public, that the BSBI has now really entered the computer age with its very own World Wide Web site on the Internet. Thanks to the help of Mark Atkinson, it was planned to go online in September 1997.

The Secretary then thanked the various organisations that have helped the Society in Wales over the last twelve months, including: the CCW and NBGW for allowing the Committee for Wales to meet in its offices at Llandrindod Wells and Middleton Hall; the National Museum and Gallery of Wales for secretarial assistance, for production of the Welsh Bulletin, and for its help in many other ways. The officers and staff of Gwent Tertiary College, Usk for looking after us so well; and finally to Trevor Evans for all the hard work he put into organising this meeting.

Finally, he reminded members that after the AGM, there would be a 'Conservation - with a difference' talk by Elsa Wood, and after dinner, Trevor Evans would give a talk on the Flora of Monmouthshire. This would be followed by time to peruse the exhibition.

HON. TREASURER'S REPORT

The Hon. Treasurer, Peter Jones, then reported on the financial situation which was again satisfactory. He mentioned a complementary letter from the BSBI Treasurer which referred to Wales' success in raising sufficient finance to cover all its expenditure. This excellent position was a result of the previous Treasurers work, the way the Bulletin was produced and to the profits made at the AGM's. A balance sheet was passed round.

B.S.B.I. COMMITTEE for WALES - Statement of Accounts to 26 August 1997

RECEIPTS		PAYMENTS	
From BSBI Treasurer	0.00	1996 AGM	1666.87
Bulletin Subs & Back Nos	34.00	Welsh Bull 61 Print	102.50
1996 AGM	1410.25	Welsh Bull 61 Post	65.56
1997 AGM	1746.00	Refund for 1997 AGM	54.00
		Welsh Bull 62 Print	148.80.
		Transfer to Dep. Acc.	200.00
Total	3190.25		2237.72
Excess receipts over payments	952.52		
Carried forward from 31.8.96	687.00		
Balance... Current Account	1639.52		
Balance... Deposit Account	353.63 (as of 14.7.97).		

Peter S. Jones (Hon. Treasurer, Committee for Wales) 26 August 1997

ELECTIONS

The Hon. Secretary, Gwynn Ellis, Hon. Treasurer, Peter Jones and Hon. Field Secretary, David Humphreys, were re-elected unopposed to their respective posts.

Nigel Brown, Trevor Evans, Elsa Wood and Goronwy Wynne were all due to retire under Rule 5 of the Constitution and were eligible for immediate re-election. All had indicated their willingness to stand again and were duly re-elected for a period of two years. As the Hon. Secretary was an ex officio member and Ray Woods, represented CCW, there were two vacancies on the Committee. Julian Woodman and Joe Phillips were nominated from the floor to fill those two vacancies and were duly elected.

AGM & EXHIBITION MEETING 1998

The 1998 Annual General and Exhibition Meeting will be held at Bala from Friday 21 August to Sunday 23 August.

BSBI AGM Cardiff, 9 May 1998

Attention was drawn to the Society's AGM being held in Cardiff at the National Museum and friends of Wales on Saturday 9 May with associated gallery meetings on the 8th and 10th.

The Chairman declared the meeting closed at 5.35pm.

COMMITTEE FOR WALES, 1997-1998

Following the election of officers and members at the Annual General Meeting, the composition of the Committee for Wales is as follows:

Officers

Chairman and Welsh Rep. on Council	Mr P. Day
Vice-chairman	Mr R.D. Pryce
Secretary	Mr R.G. Ellis
Treasurer	Dr P.S. Jones
Field Meeting Secretary	Dr D. Humphreys

Committee Members

Mr N.H. Brown	Mr A.O. Chater*
Mr T.G. Evans	Mr S.B. Evans*
Mrs E.G. Wood	Dr G. Hutchinson*
Mr R.G. Woods	Dr Q.O.N. Kay*
Dr G. Wynne	Mr M. Porter*
	Mrs W. McCarthy*

* members due to retire in 1998

CHAIRMAN'S OPENING REMARKS - WELSH AGM, 1997

Paul Day

Welcome everyone to the 35th AGM of the Welsh Committee of the B.S.B.I. I would particularly like to welcome both the President, Mr David Pearman and the President Elect, Mrs Mary Briggs to the AGM. It hardly seems yesterday that we were in SE Wales based at Caer Llan, Monmouth but I believe it was 6 years ago. I for one find such visits to new places particularly interesting and educational as it enables one to broaden one's knowledge of the disjunct distribution of the Welsh Flora. As an employee of CCW in NE Wales, it helps me, in my everyday work, to visit other botanically rich areas elsewhere in Wales and to assess them against sites I am more familiar with. I also find it amusing that I often look at more Welsh National Nature Reserves (NNR) over the weekend of the BSBI Welsh AGM, than I do over the rest of the year in work, but this does reflect perhaps the unfortunate paucity of such sites in NE Wales. I look forward to visiting more of Wales tomorrow particularly the Gwent Levels.

At this juncture, I would like to thank Trevor Evans who has organised the weekend so efficiently and who will again be revealing more of his "germs" to us. I did wonder whether TE, in defence to his age, might have been present at the 1st AGM of the Welsh Committee but the yearbook revealed that he only joined in 1971. Other members of the Welsh Committee joined the Society earlier, I won't reveal their names, but none appear to have been present at the First AGM (on the basis of the Yearbook at least).

In addition to TE, I would like to thank all other members of the Committee for their help and assistance throughout the years and in particular to those who represent the Committee on other Committees within BSBI. I would particularly wish to thank the following:

- a) Mr Gwynn Ellis, our Secretary, who has now agreed to remain in the post, now that he has been relieved of the onerous chore of producing the minutes of the Committee meetings. Perhaps we can allow him this dispensation given his wide ranging obligations elsewhere within BSBI. His involvement elsewhere within BSBI certainly helps to keep the Welsh Committee informed.
- b) Dr Peter Jones, our Treasurer, who appears to organise the accounts very efficiently.
- c) Dr David Humphreys, for continuing to organise the Welsh Field visits so efficiently.
- d) Mr Richard Pryce and Dr George Hutchinson, for organising the publication of the Welsh Bulletin, which is a very creditable achievement.

Having given this general introduction, I would like to mention the following initiatives with which the BSBI is involved with or may be involved with in the future:

i) Atlas 2000 Project

As you are aware, this project is now underway to update the 1962 *Atlas of the British Flora*. This is a prestigious project for the BSBI which needs the support of the membership. I guess that I am as guilty as many of you as a general BSBI

member and not a vice-county recorder of not doing enough to assist this project. David Pearman earlier this year indicated that in his view, the project had not yet captured the imagination of members as opposed to vice-county recorders and this clearly had implications for what was being achieved voluntarily. We all need collectively to make this recording project a success in Wales at least - I would therefore urge all of you to find as much time as possible to assist your various v.c. recorders in undertaking as much recording as you can. Searching for plants is a relaxing and enjoyable pastime and I still get a thrill from recording a new v.c. record or of refinding a plant that was thought extinct in a v-c or locality. I must admit that I will never be able to go back to the halcyon days of 15 years ago when I undertook the Anglesey rare plant survey for NCC and was out every day recording. Nevertheless I am sure that I and most of you in this room can do more work for the Atlas 2000 project and I urge you to do so.

If any members have any thoughts on how we might get other members involved, please let me know.

ii) "County" Rare Plant Registers

A couple of years ago, I wrote on behalf of the Committee for Wales to all the embryo unitary authorities urging them not to forget nature conservation in their new set-ups and drawing their attention of the need for a Nature Conservation Strategy citing the Gwent Strategy, with which Elsa Woods was involved, as a useful role model.

Perhaps because of the timing of the letter, it produced few responses (9 out of 27) and few of any substance, although I am sure that it did at least make authorities aware of our existence. Denbighshire County Council were the only authority who offered to meet. Although I never formally met the nominated individual, Mr Tony Hughes, I have nevertheless informally discussed what BSBI does with him. It was clear that Tony Hughes knew nothing of BSBI and expected all his conservation advice to come from the larger ngo's such as North Wales Wildlife Trust, RSPB, etc. It seems to me that BSBI through its v.c. recorder network holds much of the information on higher plants and pteridophytes and their local distribution. This we should use to promote BSBI and its work by the production of "County" rare plant registers. I am aware that some registers do already exist - for instance Arthur Chater's admirable list for Ceredigion, provides a useful role model for their production.

At a time when new Welsh unitary authorities are having to produce local biodiversity action plans for their areas in line with the requirements for biodiversity and sustainability that came out through the UK Government ratification of the Convention on Biological Diversity in 1994 and in which local distinctiveness is a theme (i.e. distinctive character of different localities across the country), a county rare plant register, which in my opinion would need to include all RDB/Scare plants too, would be a particularly useful document in the process of producing local biodiversity action plans.

If we wish our information to be used we need to provide it. I am aware that the production of "County" registers will not be straight forward and that many v.c. recorders have at least one new unitary authority in their patch - v.c. Denbighshire has at least four new authorities - and more than one register might ideally need to be prepared. At a time when v.c. recorders are busy with Atlas 2000 project work,

this is yet another task which falls on their shoulders. However, again if the membership assists, the production of county registers will be possible. This will raise the profile of BSBI locally, will provide all of us including unitary authorities with much needed botanical information and no doubt will provide a useful impetus for individuals to provide additional records which will assist in the Atlas 2000 project.

I apologise for making this speech, one seeking to encourage greater membership participation, but I feel that if both of these very worthwhile projects so far described are to succeed, this is needed.

Before closing, I would just wish to mention the NBG in Wales.

iii) National Botanic Garden in Wales

This represents a major initiative in Wales for the establishment of a National Botanic Garden in Wales at Middleton Hall, Carmarthenshire. The April meeting of the Welsh Committee was held at the "embryo gardens", when an opportunity to visit the Gardens was taken. I was unfortunately unable to attend but look forward to visiting the Gardens next year at the Cardiff AGM of BSBI. With this exciting project now making progress, we will need to endeavour to ensure that the conservation of our native Welsh flora forms an integral part of the gardens. We therefore intend forging closer links to the Garden and will therefore be requesting that an official representative from the Garden be invited to sit on the Committee for Wales.

9th WELSH QUADRENNIAL MEETING

36th ANNUAL GENERAL MEETING

and 16th EXHIBITION MEETING

Friday August 21st to Monday August 24th 1998: Coleg Harlech,
Harlech, Merionethshire (Grid Ref. SH578307)

Programme

Friday August 21st

- 4.00 (to 6.00) Arrival
- 6.30 Dinner
- 7.30 Walk - to local site followed by
Exhibits & slides as time allows

Saturday August 22nd

- 8.30 Breakfast (collect and pay for packed lunch)
- 10.00 Meet at College (SH578307) for Field Meeting:
Llechwedd Woods nr Harlech
- 4.00 Return to College for tea and biscuits
Meeting of Committee for Wales
- 4.30 Quadrennial and Annual General Meeting in College
- 5.00 Talk: *Morfa Harlech NNR* - Jonathan Neale

- 6.30 Dinner
 7.30 Talk: *Recording in Caerns. (v.c.49) with special reference to scarce and rare plants* - Geoff Battershall

8.30 Exhibition & slides

Sunday August 23rd

- 8.30 Breakfast (collect and pay for packed lunch)
 10.00 Meet at College (SH578307) for Field Meeting: Morfa Harlech
 NNR - Leader Peter Benoit
 6.30 Dinner
 7.30 Exhibition & slides

Monday August 24th

- 8.30 Breakfast (collect and pay for packed lunch)
 10.00 Depart, with optional recording for Atlas 2000

ACCOMMODATION

Mostly single, some twin available, all with wash basin

COSTS

Evening meal and Bed & Breakfast £20.00; or Evening tea/coffee and Bed & Breakfast £14.10. Please state if vegetarian meals required. Packed lunch £3 - £5 (Price varies with contents and must be paid for separately on the day). Conference fee (payable by all participants) £2.00.

Booking forms must be returned by July 31st and are available from Mr R. G. Ellis, 41 Marlborough Road, Roath, Cardiff CF2 5BU

FIELD MEETINGS PROGRAMME 1998

For full list and procedure, see BSBI Yearbook 1998.

FRIDAY 8th to SUNDAY 10th MAY

**FLAT HOLM, PORTHKERRY, EAST ABERTHAW, PEMBREY & NBGW SITE
 (v.cc. 41 & 44)**

For details of these meetings please see the AGM notice with BSBI News No. 77.

FRIDAY 12th to MONDAY 15th JUNE

**LLANDOVERY, CARMARTHENSHIRE (v.c. 44)
 Leader: Mr R.D. Pryce**

A meeting to continue recording in underworked areas of Carmarthenshire for Atlas 2000 and the Carmarthenshire Flora Project. Both upland and lowland areas will be included and participants will be divided into small groups in order to cover as much ground as possible.

The meeting will again be based at the highly acclaimed Llwyn Celyn Guesthouse on the western outskirts of Llandovery (SN/760.347). It is situated on the north-west bank of the River Tywi adjacent to the A40, and is within easy walking distance of Llandovery Station. Approximate cost of the weekend accommodation in either

single or double rooms is expected to be about £90 per person, and will include bed, breakfast and evening meal from Friday evening to Monday morning. Non-resident participants will be welcome, and evening dinner will be available at Llwyn Celyn. All seven rooms have been provisionally reserved, but it is essential to book NOW so that extra costs are not incurred should some rooms remain vacant. Please send bookings immediately to Richard Pryce, Trevethin, School Road, Pwll, Llanelli, Dyfed SA15 4AL, tel.: 01554-775847.

SUNDAY 14th JUNE
LLANLLEIANNA, ANGLESEY (v.c. 52)
Leader: Mr N.H. Brown

A meeting in a most attractive and scenic area on the north coast of Anglesey to include recording for Atlas 2000. There is coastal heath, cliff, marsh, meadows, species-rich hedgerows and a disused limestone quarry. The geology is varied Precambrian, with Iron-age earthworks. The terrain is hilly with mainly good paths. Meet at Llanbadrig Churchyard (SH/376.947) 1 km north of Cemaes Bay at 10.30 a.m.

Please send bookings to Dr D.R. Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR

SATURDAY 20th JUNE
TREUDDYN, FLINTSHIRE (v.c. 51)
Leader: Dr G. Wynne

An Atlas 2000 meeting to record in various habitats in Flintshire, in small groups. Meet at Treuddyn School (SJ/253.850) at 10.30 a.m.

Please send bookings to Dr D.R. Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR

SATURDAY 27th JUNE
EPYNT RANGES, BRECKNOCK (v.c. 42)
Leader: Mr R.G. Woods

A meeting on the restricted artillery range of the Mynydd Epynt. By special permission, an escorted party will visit an extensive area of mire, wet woodland and unimproved grassland in the Cilienni Valley. Numbers limited to 15, and booking is essential so that names can be submitted to the MOD. Booking must be made before 6th June.

Meet at Dixies Corner (SN/874.364) at 11.00 a.m. on the Llywel - Tirabad Road. Note that these are the only two permitted access points onto the western part of the Range. All other roads are closed.

Please send bookings to Dr D.R. Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR

SATURDAY 4th JULY
MARCHWIEL, DENBIGHSHIRE (v.c. 50)
Leader: Mrs J.A. Green

A meeting to look at derelict industrial sites near Wrexham, with various aliens likely, and species such as *Lathyrus nissolia*, *Senecio fluviatilis*, *Lactuca serriola*, *Verbascum* spp.

Meet in Station Road, Marchwiel, just east of Marchwiel Church (SJ/357.477). This is off the A525 about 3 km south-east of Wrexham, a temporary meeting place from which we will move on.

Please send bookings to Dr D.R. Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR

SUNDAY 19th JULY
CLYNNOG AREA, CAERNARFONSHIRE (v.c. 49)
Leader: Mrs W.N. McCarthy

A meeting to record for Atlas 2000 in SJ/4.4, in habitats including river gorge, woodland, upland and bog communities. Meet at 10.30 a.m. near the church at Pant Glas, (SJ/472.472) on the A487 about 16 km south of Caernarfon. OS map 123.

Please send bookings to Dr D.R. Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR

SATURDAY 15th AUGUST
ESGAIR FRAETH, CARDIGANSHIRE (v.c. 46)
Leader: Mr A.O. Chater

A meeting to look at a lead mine area unusually rich in ferns and fern allies, as well as a wide range of conifers in adjacent Forestry Commission plantations and experimental plots.

Meet at 11.00 a.m. Approach via Talybont or Ponterwyd and along roads to SN/723.909, then along good but unmetalled roads and park just west of gate at SN/734.912. Not strenuous, but good footwear recommended.

Please send bookings to Dr D.R. Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR

SUNDAY 16th AUGUST
PEN-Y-GROES, CAERNARFONSHIRE (v.c. 49)
Leader: Mr G.H. Battershall

A meeting in the Pen-y-Groes area to include recording for Atlas 2000. There will be a variety of habitats, including saltmarsh, shingle and sandy beaches, woodland, marsh, riverside and waste ground.

Meet at the car park (with toilets) at Pen-y-Groes (SH/471.523) at 10.30 a.m.

Please send bookings to Dr D.R. Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR

**FRIDAY 21st to MONDAY 24th AUGUST
WELSH AGM & FIELD MEETINGS
COLEG HARLECH, HARLECH, MERIONETH (v.c. 48)**

The meeting will be based at Coleg Harlech, Harlech. It will begin with dinner at 6.30 p.m. on Friday followed by some local botanising. There will be field meetings at 10.00 a.m. on Saturday and Sunday to various habitats in the county including Morfa Harlech, all starting from the College, with the option of recording for Atlas 2000 on Monday. The AGM will be at 4.30 p.m. on Saturday. On Saturday evening there will be talks entitled 'Morfa Harlech NNR' by Jonathan Neale and 'Recording in Caerns. (v.c.49), with special reference to scarce and rare plants' by Geoff Battershall. There will also be plenty of time to look at the exhibits and show slides. Accommodation, in single rooms, including dinner and packed lunch, is available at the attractive price of about £25 per day. The meeting is open to non-residents and day visitors, but all meals must be booked in advance. Further details and booking forms from Mr R.G. Ellis, 41 Marlborough Road, Roath, Cardiff CF2 5BU.

**SATURDAY 29th AUGUST
NASH POINT, GLAMORGAN (v.c. 41)
Leader: Mr J.P. Woodman**

A led meeting to explore some of the species-rich cliff top grassland of this stretch of dramatic coastline. Some of the botanical highlights include *Cirsium tuberosum* (Tuberous Thistle), *Campanula glomerata* (Clustered Bellflower) and hopefully *Gastidium ventricosum* (Nit-grass). The cliff face also holds interesting species such as *Adiantum capillus-veneris* (Maidenhair Fern) which can be viewed with binoculars. Reference will be made to the National Vegetation Classification to describe the grassland habitats.

Meet at 10.30 a.m. at the Nash Point car park (SS/916.681). There is a 50 p car park charge.

Please send bookings to Dr D.R. Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR

DRIFT SEEDS IN CARDIGANSHIRE VC 46

INTRODUCTION

Plant disseminules that have crossed the Atlantic on ocean currents and become stranded on the shores of Western Europe are commonly known as drift seeds. Most of what is known about them can be found in a series of papers by Charles Nelson (see references), and they can profitably be searched for on beaches all along the west coast of Britain and Ireland. Nelson records a few Welsh occurrences, but the only paper devoted solely to Welsh drift seeds is by Morgan (1992) who, besides listing all the Carmarthenshire records, gives a record of *Mucuna sloanei* at Ynys-Ias which is the only publication of a Cardiganshire drift seed. Thinking that there must have been more occurrences, I made enquiries locally and did some beachcombing myself, and the present paper brings together the records to date.

Nelson (1988) describes how drift seeds can enter the Irish Sea from both directions, the main current flowing clockwise round Ireland bringing flotsam in from the north after it has crossed the Atlantic on the North Atlantic Drift, and residual currents from the same Drift moving along the north coast of Cornwall and into Cardigan Bay across the Bristol Channel. It takes at least a year for small objects like seeds to cross the Atlantic.

Apart from drift seeds as defined above, two other categories of seeds occur commonly on Cardiganshire beaches. Local disseminules, presumably mostly washed down rivers, are common and consist predominantly of *Corylus avellana* (Hazel) nuts, *Fagus sylvatica* (Beech) cupules and mast, *Pinus* spp. (Pine), *Larix* spp. (Larch) and *Alnus glutinosa* (Alder) cones, *Malus sylvestris* (Crab Apple) apples, *Quercus* spp. (Oak) acorns and *Arrhenatherum elatius* var. *bulbosum* (False Oat-grass) bulbs. It is perhaps surprising that other disseminules of local origin are not more common. The remaining category is refuse of human origin, consisting of such objects as Peach, Almond and Cherry stones, Brazil Nuts and Coconuts.

Illustrations of the drift seeds can be found in Nelson (1983, 1986, 1988 etc) as well as in Morgan (1992).

FINDING THE SEA PEA

When I showed a preliminary list of the records of drift seeds found on Cardiganshire beaches to Charles Nelson, he expressed surprise that *Lathyrus japonicus* subsp. *maritimus* (Sea Pea), was not among them. He advised me to look in the driftline where it is full of little plastic bobbles and said that I would be sure to find it. Not knowing quite what he meant, I went to Ynys-Ias and was surprised to find vast quantities of variously shaped and coloured pill-like bits of hard plastic (not to be confused with the even commoner soft, whitish, expanded polystyrene bobbles) in parts of the highest driftline. (Plastics are apparently sold in bulk in this form for manufacturing, but I have so far been unable to discover how or why they get into the sea in such variety and quantity.) These pills are mostly 4-6mm across, about the same size as the *Lathyrus* seeds which are 4-5mm across, and therefore they accumulate together in the driftline. They are obviously much easier to find on sand than on shingle. This material can be concentrated by sieving the driftline with a mesh as little above 5mm as possible, and with a mesh below 4mm to get rid of sand, and then spread out on a tray and searched. One should bear in mind though

that other small seeds, such as those of *Calystegia* spp. (Bindweed), may be present and would be missed by too critical sieving. Sea Pea seeds can be recognised by their nearly spherical shape, greyish-, greenish- or reddish-brown colour and their linear hilum which occupies about a third of the circumference. Once found, they can usually be grown if they are first scarified with sandpaper and soaked in water until they swell. Both Steve Chambers and I have plants grown from Ynys-las seeds, although they have not yet flowered; the seeds swelled overnight in water, and when planted in seed compost a radicle appeared in about a week and a shoot in about another week. Much anecdotal information on growing drift seeds can be found in Nelson (1990).

It is extremely unlikely that the Ynys-las Sea Peas originate from British native populations as most of these are on the south and east coasts of England (Randall, 1977), and the pattern of currents strongly suggests that they have come from eastern North America (Nelson, 1986). The very few Welsh records of Sea Pea plants from Wales, such as those from Criccieth c.1966 and from Bardsey in 1978 (Ellis, 1983), doubtless grew from drift seeds. Since there must be considerable quantities of these seeds arriving on our shores it is surprising that more of them do not germinate and get recorded as mature plants.

CARDIGANSHIRE RECORDS

Cocos nucifera (Coconut) 1 seed.

SN/607.890, spring 1995: one small Coconut, with complete husk, on beach at south end of Borth, Louis Delahaye. Probably of refuse origin, but the small size, and the presence of the husk, give a slight possibility that it has drifted across the Atlantic (Nelson 1978).

Entada gigas (Sea Bean, Molucca Bean) c.17 seeds.

These more or less circular, flattened, dark brown beans c.5cm in diameter and c.2cm thick with a small hilum are the most familiar drift seeds. The plant is a woody leguminous vine with pods 1m or more long, native of tropical America and the West Indies as well as of Africa.

SN/607.890 - 604.924, 1987-1997: c.10 seeds found between Borth and Ynys-las (mostly in 1km square 60.91) by Lee Trubshaw; two seen by A. O. C. in 1997 were 39 and 49mm in diameter.

SN/60.91, late December 1995: 2 seeds 48 and 52mm in diameter found between Borth and Ynys-las; summer 1996, 1 seed 43mm in diameter, ditto; January 1997, 1 seed 42mm in diameter being pecked at by a Jackdaw on a walltop a few metres above the driftline, ditto; all found by Louis Delahaye.

SN/610.952, summer 1996: 1 seed found by a visitor on Cerrigypenrhyn sands at north end of Ynys-las beach and shown to CCW staff at the Visitor Centre.

I have heard of two more seeds from Ynys-las but have not yet got details.

Lathyrus japonicus subsp. *maritimus* (Sea Pea) 5 seeds.

See above for description.

SN/605.928, March 1997: 5 seeds sieved from driftline in 5¼ hours (driftline of storm of mid February 1997 thrown up 10-30m onto the Marram dunes, containing vast numbers of plastic bobbles 4-6mm in diameter) at south end of Ynys-las dunes by A. O. C.

Mucuna cf. sloanei (Horse-eye Bean) 1 seed.

Dark brown seeds c.2.5 cm in diameter, slightly compressed and with a conspicuous hilum occupying c.3/4 of the circumference. The plant is a woody leguminous vine whose legumes are covered with irritant hairs, pantropical in distribution, and the species are difficult to separate using seed characters alone.

SN/60.93, June 1989: 1 seed found by an unknown visitor on the shore at Ynys-las, identified by Heather Slade of CCW from Barrett & Yonge (1958) in 1989 and confirmed from the drawing in Nelson (1983) in 1997. The seed was put on display in the Visitor Centre but was stolen shortly afterwards. Reported in Morgan (1992).

ACKNOWLEDGEMENTS

I am grateful to Louis Delahaye, Heather Slade and Lee Trubshaw for their records and to Charles Nelson for his help and for communicating his enthusiasm for these intriguing objects.

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CARMARTHENSHIRE FLORA: PROGRESS REPORT 1995, 1996 AND 1997.

Three seasons' recording provides the material for this report. Demands on my time since giving up my 9 to 5 job and setting up my own business have taken their toll on the amount of time I have been able to devote to progressing the County Flora. Of necessity, this report contains only the highlights and I apologise in advance for the omission of any records which recorders feel were worthy of inclusion.

RED DATA PLANTS

After an absence of six years, eleven plants of *Liparis loeselii* (Fen Orchid) were discovered in 1996 at the species' only extant Carmarthenshire site at the East 4 Range within the military establishment on Laugharne Burrows (SN301072). The following year, the BSBI party, which visited the site on 29 June, counted 76 flowering stems but all except eleven had been destroyed by slugs (*Arion ater*) by 9 August (John Rees (JR), Barry & Sandra Stewart (B&SS) and RDP) and most of those remaining had been severely damaged. However, several new rosettes were also noted which hopefully will reach maturity in subsequent years. RDP's survey of the county's dune systems searching for potential *Liparis* sites, commissioned by the Countryside Council for Wales (CCW) as a contribution to developing a *Liparis* Biodiversity Action Plan, failed to identify any previously undiscovered populations. However, the presence of possibly suitable habitat in conjunction with proposed site management at both Laugharne and Tywyn Burrows may promote the maintenance of the plant as a Carmarthenshire species.

The most convincing population of *Gentianella uliginosa* (Dune Gentian) that RDP had seen for many years was discovered on 26/9/97 growing in the short rabbit-disturbed and grazed turf of the helipad at the RAF range on Tywyn Burrows (SN368050). These were all current year's annual plants and ranged from 10mm tall with one or two flowers to 80mm tall with up to five flowers and many had yet to open. In fact many were still in flower on 2 November. They displayed typical morphological characters and were readily distinguishable from *G. amarella*, which also grew mixed in with the population. In the densest areas, it was impossible to walk without treading on them. This site had been examined earlier in the year but only robust biennial *Gentianella* plants up to about 250mm tall were seen, none of which displayed definitive *G. uliginosa* characters. It would appear, therefore, that biennial plants of *G. uliginosa* (if indeed they do occur) may not conspicuously develop characters such as long terminal petioles and lax calyx segments which are so well displayed by the annual forms. The question might be prompted as to whether *G. uliginosa* does produce biennial forms distinct from *G. amarella* in Carmarthenshire. On Laugharne/Pendine Burrows, only a single *Gentianella* plant, which could possibly have been *G. uliginosa*, was seen in 1997. This was found by the BSBI party on 29 June on the track west of the C9 prep room (SN277074) but was probably the hybrid *G. amarella* x *G. uliginosa*: apex damage prevented certain determination. It was associated with several *Coeloglossum viride* (Frog Orchid) plants, occasional *Ophioglossum vulgatum* (Adder's-tongue) and a single *Botrichium lunaria* (Moonwort).

The third vc record of *Trichomanes speciosum* (Killarney Fern) gametophyte was recorded by Arthur Chater (AOC) and Clive Jermy from Allt Rhyd-y-groes NNR (SN767478) on 23/10/97 in a cavity in a north-east facing rock outcrop in a sessile oakwood.

A thriving population of *Linaria supina* (Prostrate Toadflax) was discovered at a new site by Philip Jones (PAJ) in 1996, growing in the recently limestone-ballast surfaced car park of the Burry Port AFC (SN452005). When RDP visited the site on 9/7/97,

associates of *L. supina* were found to include occasional *Trifolium squamosum* (Sea Clover) and locally frequent *Silene conica* (Sand Catchfly), both Nationally Scarce species.

NATIONALLY SCARCE PLANTS

Potamogeton coloratus (Fen Pondweed) was discovered by Nick Stewart (NS) in 1996 in the recently enlarged Conservation Pond in Pembrey Country Park (SN397007). This was a first vc record and only the second record for South Wales (the other being at Castlemartin Course, Pembrokeshire). He also recorded two Nationally Scarce stonewort species, the principal reason for his visit to the pond. They were *Chara contraria* var. *hispidula* (*C. vulgaris* var. *hispidula*), a first vc record for the variety and a second vc record for the species, and *C. curta* (*C. aspera* var. *curta*), a second vc record. He also determined a collection made at the same site by IKM on 22/9/97, which comprised *C. hispida* and *C. curta*, both rare in Wales. He also identified *C. hispida* collected by IKM on the same date from the 'Sciomyzid Pond' in Pembrey Forest (SN371040). These were the fourth and fifth vc records for *C. hispida* and the third for *C. curta*. Material collected on 8/6/96 by RDP from the 'Ski Slope Pond' in the Country Park (SN409000) was also identified by NS and proved to be *Chara contraria* var. *hispidula* (second vc record for the var. and third for the species) and *Tolypella glomerata* (third vc record for this Nationally Scarce and rare Welsh species). NS identified another specimen collected by IKM on 27/7/97, from a quarry west of Glyngwernan, Felinfoel (SN533025), as *Chara vulgaris* var. *longibracteata*, the first confirmed vc record of the variety.

A small population of *Silene gallica* (Small-flowered Catchfly) was discovered by RDP at Burry Port on the apron above the northern wall of the Western Inner Harbour (SN444006) on 28/7/97, a species not seen in the vc for about forty years. Associates included *Trifolium squamosum* and *Limonium procerum* ssp. *procerum* (a Rock Sea-lavender), both also Nationally Scarce, together with more familiar plants such as *Trifolium arvense* (Hare's-foot Clover), *Anthyllis vulneraria* (Kidney Vetch) and *Crithmum maritimum* (Rock Samphire). He also recorded a third population of *T. squamosum*, in cracks in the paving in front of the Burry Port Yacht Club house (SN444003). This was growing close to the only extant vc population of *Malva neglecta* (Dwarf Mallow), consisting of c.15 plants, re-discovered here a few weeks earlier after an absence of several years, by B&SS. The population of *Dianthus armeria* (Deptford Pink) at Bryndias (SN434034), discovered by Jan and Keith Crowden in 1994, continues to thrive with about sixty plants present in 1997 (RDP).

Several new populations of *Carex punctata* (Dotted Sedge) were discovered by RDP in the vicinity of the E3 Range within the defence establishment at Laugharne Burrows (SN289070 – SN293071) during the *Liparis* survey (reported above).

Whilst carrying out a survey of the Afon Tywi for CCW in 1997, Richard Lansdown (RL) discovered *Limosella aquatica* (Mudwort) growing on a muddy sand bar near Drysiwyn (SN558201). The species has only once before been recorded in Carmarthenshire, as reported by Barker from the Bishop's Pond, Abergwili (1905) and has not been seen in the interim. Other species recorded from the Tywi during the survey included *Potamogeton crispus* (Curled Pondweed), *P. bertholdii* (Small Pondweed) and *P. perfoliatus* (Perfoliate Pondweed), the latter recorded only twice previously from the vice-county.

The first vc record for about fifty years of *Mentha pulegium* (Pennyroyal) was made by GH & RDP when they found a substantial clump growing on a shingle bar by the Afon Tywi at Llanwrda (SN718309) on 25/8/95. Subsequently, information received from the occupier of a local farm suggests that the species has been present on this

part of the Tywi for several years but it is not clear whether the population is of native origin or an escape from cultivation.

The first record for *Alopecurus bulbosus* (Bulbous Foxtail) from the Carmarthenshire side of the Afon Llŵchwr was made by RDP on 27/5/95 when he discovered a few plants in grassy marshland subject to inundation by the highest tides, on Bryngwill Manor land, Hendy (SN581033). *Carum verticillatum* (Whorled Caraway) was found growing nearby in pastureland subject to brackish influence, and the only such site for the species in RDP's experience.

Twelve spikes of *Orobanche rapum-genistae* (Greater Broomrape) between about 0.8m and 1.0m tall, were recorded growing on gorse at the edge of a heathy pasture field at Sir John's Hill, Laugharne (SN301098) by JR on 3/8/96, the ninth post 1950 vc record of the species.

LOCALLY SCARCE SPECIES

The 'new' record of *Sorbus torminalis* (Wild Service Tree) from woodland at Coed-y-Glyn between Glyn Abbey and Waun-gwiall-fach, Four Roads (SN447084), reported by the owner, Andrew Stevens (6/97), was presumably a rediscovery of James Motley's pre 1848 record noted as '*Pyrus torminalis* found in the Glyn Abbey Woods'. Mr Stevens also reported the presence of both *Epipactis helleborine* (Broad-leaved Helleborine) and *Listera ovata* (Common Twayblade) in the vicinity. A second new record of *S. torminalis* was made at Babel (SN834356) by GH & Jim Bevan (JB) in July 1996. This brings the total of known naturally occurring trees in Carmarthenshire to six. The hot summer of 1996 produced a good crop of fruit and IKM successfully germinated seed from the Stradey Woods, Delacorse and Babel trees, which will be used for planting in the new habitats planned for the Llanelli Millennium Coastal Park.

Philip Davies of Gwynfe reported c.50 plants of *Botrychium lunaria* (Moonwort) in sheep-cropped limestone grassland at Banc Wern Wgan (SN680183) together with two depauperate plants of *Ophioglossum vulgatum* (Adder's-tongue). Nearby (SN683184) he also suspected *Asplenium obovatum* (Lanceolate Spleenwort) to be growing in a wet crevice c2m from the base of a low limestone cliff but on later examination by GH & RDP it disappointingly proved to be only a prolific colony of *A. ruta-muraria* (Black Spleenwort). Jean Green (JAG) and Wendy McCarthy (WMcC) also recorded *B. lunaria* growing with *Orchis morio* (Green-winged Orchid) near Nantsais (SN347337). *Platanthera chlorantha* (Greater Butterfly Orchid), *Carex caryophyllea* (Spring Sedge, a new 10km record), *Ranunculus bulbosus* (Bulbous Buttercup), *Wahlenbergia hederacea* (Ivy-leaved Bellflower) and *Berberis vulgaris* (Barberry) were also present in the same tetrad.

Andy Jones recorded 5-10 small plants of *Anagallis minima* (Chaffweed) growing in deep wheel-ruts in a scrubbed-over dune slack on Laugharne Burrows (SN291071) in October 1996. This was the first vc record for about forty years but RDP failed to find any plants at the site in October 1997, the ruts being under about 0.5m of water. The first confirmed vc record since 1977 of *Scleranthus annuus* (Annual Knawel), another diminutive annual, was made by John Killick on a dry, acid, shaly, sheep-grazed, track-side bank at Cefn Telych near Llandoverly (SN785333) in June 1996.

A single plant of *Spiranthes spiralis* (Autumn Lady's-tresses) was discovered by RDP on the helipad at the RAF bombing range on Tywyn Burrows in company with a large population of *Gentianella* spp. This was the first coastal record since 1989, prior to which, plants were regularly recorded. Now, however, it is extinct at most of these sites due to habitat destruction or degradation. The only presumed extant

inland population, at Llandyfan (SN6417), has not been seen since 1985 – a monitoring task for 1998?

Also a victim of the alarming degradation of the county's duneland habitats due to unchecked scrub colonisation over the last twenty years is *Carex pseudocyperus* (Cyperus Sedge). Only about fifty plants remain in a small area of species-rich tall fen at the south-eastern margin of the Witchett Pool, Laugharne Burrows (SN287075) (RDP). This is the only site for the species in the vc but represents a very significant reduction in population size when compared to the early 1980s. At that time, the near-monospecific stand covered up to a hectare on fen at the eastern end of the pool, but has now been completely over-run by *Alnus glutinosa* (Alder) scrub. Another casualty of scrub encroachment is *Asparagus officinalis* (Wild Asparagus), a single plant of which was noted on dune grassland in the vicinity, the first record at the site for about ten years.

Four new records of *Ophrys apifera* (Bee Orchid) were made in 1996 and 1997. The first was by Geoff Proffitt of a plant growing at the edge of a limestone ballast path at the Wildfowl and Wetlands Trust Centre at Penclacwydd (SS531983). PAJ reported three plants growing on vegetated fly-ash on the site of the former Carmarthen Bay Power Station, Burry Port (SN454006) in association with *Orobanche minor* (Common Broomrape). Another population, this time of about 22 plants, was discovered in dune grassland west of the E5 Range at the MoD Establishment on *Laugharne Burrows* (SN309071). Jonathan Price (of the Carmarthenshire County Council Ranger Service) recorded three plants, possibly more, in company with hundreds of dactylorchids, on the edge of the restored opencast site at Pant y felin, Tumble (SN540122). The number of extant Carmarthenshire *O. apifera* sites now amounts, therefore, to nine, an increase of 40% in the last two years. Also at Pant-y-felin, Bob and Rannveig Wallis reported a *Pyrola* species (wintergreen) growing extensively within a plantation of *Pinus nigra* ssp. *laricio* (Corsican Pine) and *P. contorta* (Lodgepole Pine) established on restored opencast land on soil-less shale (SN538127, 11/97). On visiting the site on 14/2/98, RDP established its identity as *Pyrola minor* (Common Wintergreen), the only extant record away from its populations within Pembrey Forest.

A new site for *Dactylorhiza purpurella* (Northern Marsh-orchid) was recorded by Graham Motley (GSM) and J Murphy from an unimproved meadow at Pant Soar (SN6228) with *Carum verticillatum*, *Epipactis helleborine* and *Pedicularis palustris* (Marsh Lousewort) growing in the vicinity. GSM & Jamie Bevan (JMSB) also discovered a few plants of *Bromus racemosus* (Smooth Brome) growing in a semi-improved meadow at Halfway, Talley (SN658302) and GSM found the same species growing at Whitehill Down SSSI, Laugharne (SN2913), the fifth and sixth post 1950 vc records. JMSB and Dawn Gray made the second vc record of *Carex dioica* (Dioecious Sedge) consisting of several hundred plants growing in a base-rich NVC M10 flush at Gellybevan, Gwynfe in 1992 (included in a previous annual report), which now appears to be the only extant population. The first, at Clogau Bach, Mynydd Du (SN 720194), which was last seen by Mrs Vaughan in 1976, eluded AOC, JB, GH and RDP who failed to refind it on 28/6/97 despite diligent searching.

GH & JB recorded a *Valerianella* plant in June 1996, 400m west of Dagfa farm, near Llandovery (SN804325) on a heap of disturbed soil at the edge of a forestry plantation. GH & RDP revisited the site on 4/7/96 to find that the plant had matured and set seed, confirming its identity as *V. carinata* (Keel-fruited Cornsalad). IKM also discovered this species as a street weed in Marsh Street, Llanelli (SS509995) in May 1997. These were the fourth and fifth post 1950 vc records.

Annie Mary Pell made the first vc record of *Calystegia silvatica* var. *quinquepartita* (the five-lobed corolla form of Large Bindweed) at Llanedi Churchyard (SN588066) in 1995. GH & RDP visited the site on 4/7/96 and found the plant scrambling over an old tree stump by the south-eastern boundary wall of the graveyard.

CRITICAL SPECIES

There were three new records for *Rorippa islandica* ss (Northern Yellowcress), the first in stream-side mud in the Nant Gurrey fach on the eastern outskirts of Llandeilo (SN632230) (GH, 15/7/1995), the second from a spoil slope at Pen-y-Dinas quarry, Llansawel (SN629355) (AOC, 17/9/95) and thirdly from Clwtaw, below Pont Ynyswen (SN526233), the first record for the Cothi valley, reported by Ralph Goodchild, (9/96) who has known the population at this location for at least ten years. All were confirmed by AOC.

AOC also recorded a hybrid willowherb growing on spoil tips at Pen-y-Dinas quarry, Llansawel (SN629355) on 2/6/95 which was determined by T.D.Pennington on 17/9/95 as *Epilobium brunnescens* x *E. ciliatum*, the first British record. It was growing with both parents.

Both 1994 and 1995 *Taraxacum* (dandelion) collections have been determined by John Richards (AJR) and Andrew Dudman (AAD) and included twelve first vc records and eleven second records. Of greatest interest was the sect. *Celtica* specimen collected by AOC and Paul Smith (PAS) from the cliffs above Llyn-y-Fan fach (SN801216) which turned out to be a previously unknown plant and has been given the working name *T. nigrimontanum* by AJR and AAD. It has a combination of 'black stigmas, absent pollen, midrib purple to the tip, and bracts with wide white margins, erect.' This needs to be looked for in similar situations in the Brecon Beacons, and may have been collected in the past by visiting botanists. All material in the following lists were collected by either GH or RDP or together. First records were *T. macranthoides* (Pontyfenni, SN238168), *T. nigridentatum* (Lan, Cynwyl Elfed, SN367289), *T. spiculatum* (near Maudsland, SN330348), *T. acutifrons* (Berwick Roundabout, Trostre, SS542987), *T. landmarkii* (Crug Melyn WTWW Reserve, SN502281), *T. rubicundum* (Mynydd Du, SN735189), *T. obliquilobum* (Bwlchyrhiw Chapel, SN802320), *T. arenastrum* (Shoreline Dunes, Burry Port, SN443002), *T. fasciatum* (Plasgwyn, Penygroes, SN587138), *T. fulviforme* and *T. obtusifrons* (both Trostre, SS533989). Second records were *T. pannulatiforme* (Nazareth Cemetery, Whitland, SN196178), *T. sinuatum* (Cyffig Churchyard, SN207139), *T. hesperium* (near Bwlchychdomen, SN326371), *T. marklundii* (Penybedd Wood, SN418018), *T. euryphyllum* (Llanddeusant Churchyard, SN777245), *T. celticum* (Pembrey Forest, SN389010), *T. laticordatum* (near Llanddowror, SN251145), *T. rubicundum* (Shoreline Dunes, Burry Port, SN440001), *T. sublaeticolor* (Plasgwyn, Penygroes, SN587138), *T. inane* and *T. argutum* (both Mynydd Du, SN736188).

The 'suberect' bramble collected from the edge of a rank, *Molinia*-dominated enclosure at Cwm Garenig, Glanamman (SN672122) on 22/8/95 by RDP was determined by M. Porter (10/11/96) as *Rubus plicatus*, the second vc record. The identity of a further three specimens of another 'suberect' bramble, *R. scissus*, all from the Hermon area (SN351318, SN359310 and SN360310) collected by GH & RDP on 3/7/94, were confirmed by Alan Newton in February 1996.

Hieracium lasiophyllum is a hawkweed known to occur on crags above the Afon Doethie in Cardiganshire but only recorded in error from Carmarthenshire in the past. By following the outcrop of the stratum on the geological map on which the plants occur in Cardiganshire across the border into Carmarthenshire, GH was able to predict that the species would occur on Craig Gallt-y-Berau on the north face of

Mynydd Mallaen (SN772463). On 4/6/95, JB, GH & RDP scaled the prescribed crag and as if by magic discovered nine plants of *H. lasiophyllum* scattered over a small number of rock outcrops. The re-examination of previously collected *Hieracium* specimens in **NMW** by Jim Bevan is continuing.

A *Salix* (willow) specimen collected by RDP from near Maudsland (SN332321) on 30/10/92 was confirmed as *Salix x capreola* (= *S. aurita* x *S. caprea*) by R.D. Meikle (29/8/95) and was the first confirmed record for this hybrid from Carmarthenshire.

MONITORING

Mark Atkinson and S.C. Thurston spent a weekend (28-29/9/96) revisiting the sites of many past records of *Sambucus ebulus* (Danewort) including a new site found only a few weeks previously by JAG & WMcC south of Llanfraith (SN344330) They also made a new record for the species at Cwmfelinboeth (SN195196).

At RDP's request, in June 1997, J&MI started a monitoring exercise to ascertain the current status of *Sibthorpia europaea* (Cornish Moneywort) in Carmarthenshire. They were successful in refinding two of the previously known populations, near Fforest Farm, Brechfa (SN522311) and at Llanfihangel Rhos-y-Corn (SN547345) but other populations remained elusive. The task continues but the status of this Nationally Scarce species must give some cause for concern.

On 4/6/95 AOC and PAS visited some poorly worked part-tetrads on the vc boundary with a view to making more thorough records and also took the opportunity to monitor the Arctic-Alpine flora of the cliffs above Llyn-y-Fan fach. In addition to the expected species, they recorded *Saxifraga granulata* (Meadow Saxifrage), a new record for the site, growing by a streamlet flowing into the lake (SN798218). They did not, however, find *Salix herbacea* (Dwarf Willow) which has now not been seen for 15 years on these cliffs. They also recorded ten fronds of *Ophioglossum vulgatum* (Adder's-tongue) at SN807354, and nearby species-rich grassland and fen habitat (SN808365) had *Genista anglica* (Petty-whin), *Carex hostiana* (Tawny Sedge), *Equisetum sylvaticum* (Wood Horsetail), *Scutellaria minor* (Lesser Scullcap), *Carum verticillatum* and *Hypericum elodes* (Bog St.John's-wort).

Several plants of *Antennaria dioica* (Mountain Everlasting) and 19 plants of *Gentianella amarella* were recorded in a sparse, sheep-grazed, grass sward on limestone spoil tips at Clogau Bach, Mynydd Du (c.SN720194) (AOC, JB, GH & RDP, 28/6/97). *Hieracium diaphanum* and *H. anglorum*. were also present on the old quarry faces. Several plants of *A. dioica*, two of *Helianthemum nummularia* (Common Rockrose) and about twenty *G. amarella* were also refound at Pal-y-cwrt (c.SN679183). A small patch of *A. dioica* was also found at a new site well away from any previous recorded population by JMSB and GSM on the edge of a rock outcrop in species-rich dry acid grassland (NVC U4c), at Blaen-byderyn, Llanybydder (SN58438). *Anthriscus caucalis* (Bur-chervil) was last recorded in Carmarthenshire on limestone scree below the castle at Carreg Cennen (SN669190) by Mrs Vaughan in 1962 and was searched for without success on 28/6/97 by Dorothy Brookman, John Killick and David George. However, good populations of *Veronica spicata* ssp. *hybrida* (Spiked Speedwell) and *Allium schoenoprasum* (Chives) were present, and *Cochlearia danica* (Danish Scurvygrass) was a new record for the site.

Carex aquatilis (Water Sedge) was noted by AOC, RL and T. Pankhurst on 15/9/97 from the Teifi valley, firstly in an ox-bow at Henfaes, south-west of Llanybydder (SN503426) and secondly in a marsh 3.3km west-southwest of Lampeter (SN547460). These were the first records from the area since the mid-1980s.

During a search for a small population of *Chrysosplenium alternifolium* (Alternate-leaved Golden Saxifrage) recorded on 12/4/97 by Ray Woods in the

Sawdde gorge north of Pontarllechau (SN722251), a c.5m x 2m stand of *Trollius europaeus* (Globoseflower) in abundant seed, was recorded on a rocky bluff (SN719256) (AOC, JB, GH & RDP, 8/6/97) which, following recent population declines, may now be the largest extant stand in the vc.

About twenty plants of *Crepis biennis* (Rough Hawk's-beard) were recorded growing in tipped limestone chippings on the road verge by Gorswen Quarry, near Maesybont (SN578159) by RDP on 29/5/1995. Another small population of this species was discovered growing on disturbed ground in old limestone workings by WMcC and JAG at Craig Dwf, Llandyfan (SN649171) on 28/6/97. *Gentianella amarella* (Autumn Gentian), *Helianthemum nummularium* (Common Rockrose), *Filago minima* (Small Cudweed), *Saxifraga tridactylites* (Rue-leaved Saxifrage), *Epipactis helleborine* (Broad-leaved Helleborine), *Geranium columbinum* (Long-stalked Crane's-bill), *Helleborus foetidus* (Stinking Hellebore), *Iris foetidissima* (Stinking Iris), *Listera ovata* (Common Twayblade), *Sherardia arvensis* (Field Madder) and *Trisetum flavescens* (Yellow Oat-grass) were all present in the vicinity. Mrs Gwenllian Smith reported that the population of albino *Scutellaria galericulata* (Skullcap) located between the lakes at Talley and first discovered by Margeret Humphrey and Mrs Vaughan many years ago is extant and thriving (comm. Denys Smith).

OTHER NOTABLE RECORDS

Carum verticillatum was noted from new tetrads by several recorders. These included SN50W, SN51Z, SN52X and SN63C.

A record of a single plant of *Viscum album* (Mistletoe) growing in a young oak at eye level in the middle of a wood, well away from habitation, was made by Sarah Andrews near Lwynbedw in the Cych Valley (SN150597) in June 1994. Other recent *Viscum* records include plants in a garden orchard at Bethlehem (SN6825) and in a garden in Croesyceiliog (SN4016). In addition, IKM has successfully germinated seed in his garden in Llanelli over the last two years.

Hordeum secalinum (Meadow Barley), unusual away from the coast and lowland river valleys in Carmarthenshire, was recorded by JAG on 27/6/97 from near Caio (SN681427) growing on a roadside bank.

Lemna trisulca (Ivy-leaved Duckweed) was found by IKM growing in a ditch north-east of the Berwick Roundabout, Lwynthendy (SS545986) in July 1995, the second record for the vc. Indeed, it may now be the only extant population as it has apparently disappeared from its traditional site at one of the smaller Machynys Ponds (part of the SSSI) probably due to pollution or water-table changes caused by nearby works associated with the redevelopment of South Llanelli.

RDP noted that *Cochlearia danica* (Danish Scurvy-grass) was frequently growing along the central reservation of the M4 motorway between Hendy and Pont-Abraham obviously taking advantage of the salty run-off (e.g. SN575035, SN572042, SN572055 & SN573067, 17/4/95) but interestingly appears not to be present along the A48 dual-carriageway further west.

WEED FLORA

Quentin Kay (QONK) completed an arable weed survey of three Carmarthenshire farms participating in the Tir-Cymen countryside stewardship scheme for CCW. All three were situated in SN52 and the survey provided new 10km square records for *Kickxia elatine* (Round-leaved Fluellen), *Viola arvensis* (Field Pansy), *Viola tricolor* (Wild Pansy), *Stachys arvensis* (Field Woundwort), *Euphorbia helioscopia* (Sun Spurge), *Fumaria muralis* (Common Ramping-Fumitory), *F. bastardii* (Tall

Ramping-Fumitory), *Lamium hybridum* (Cut-leaved Dead-nettle) and *Matricaria recutita* (Scented Mayweed).

Viola tricolor ssp. *tricolor* was recorded by Huwel Manley in dry acid grassland on the upland fringe at Glanmarlais, Llansadwrn (SN676333) (conf. Prof. D.M. Moore) and by GSM in upland pasture at SN6847.

Kickxia elatine was also recorded by Viv and Tony Lewis (V&TL) growing abundantly in the car park at Llyn Llech Owain Country Park (SN565148) (9/97) and was also present in an arable field at Cencoed uchaf (SN478029) (IKM, Sept 96) at the same site where it was recorded in 1988. (*Kickxia* continues to thrive as a weed in RDP's garden!). Other Llanelli records made by IKM included *Stachys arvensis* growing in allotments south of Coronation Road (SS513998), six plants of *Misopates orontium* (Weasel's-snout) in a disturbed soil bank to the east of Machynys Pond (SS514980), the sixth vc record, and one plant of *Mercurialis annua* (Annual Mercury) in the back-lane linking College Hill and Glenalla Road (SN514003).

NON-NATIVES

About a dozen plants of *Dipsacus laciniatus* (Cut-leaved Teasel) were found independently by both IKM and RDP growing by the main railway between Pwll and Burry Port (SN467007) in July 1997, a first record for Carmarthenshire.

A single plant of *Silybum marianum* (Milk Thistle) was found by RDP in a farmyard at Blaenycoed (SN348257) on 9/6/96 (the sixth vc record) and an unusual weed reported by Mary Williams in her garden at Maesyquarre, Bethlehem (SN653233) was identified as *Nicandra physalodes* (Apple-of-Peru) by GH during the Llanelli Naturalists' meeting hosted by Mrs Williams (15/7/95). It was the second vc record for the species. The population of *Paris quadrifolia* (Herb Paris) in the small valley adjacent to the garden was also seen during the meeting.

Field hedges near Llanilwni (SN487352), planted with *Laburnum alpinum* x *anagyroides* (= *L. x watereri*) (hybrid Laburnum) were recorded by AOC (8/6/96) and was the first vc record. *L. alpinum* (Scottish Laburnum) was reported from hedges at both Capel Isaac (SN583273, 3/6/95) and Bryndafydd uchaf, Llansawel (SN608397, 4/6/95) by JAG, D.M.George and Edna Stephenson and were confirmed by AOC.

V&TL recorded a single plant of *Galinsoga quadriradiata* (Shaggy-soldier) in waste ground south of Tyle Teg, Burry Port (SN458010) in October 1997 which was the third vc and first post 1970 record. A month or so earlier they had recorded *Heracleum mantegazzianum* (Giant Hogweed) from a ride in Pembrey Forest (SN3901) which was the second record for the species during the year. The first report was of three plants, one in full flower, made by David Corscadden growing on the south side of the new Swansea Link Road near Trostre works (SS533994) in August. These records were the fourth and fifth for the vc; the species was last recorded in 1983 at Llansteffan.

Carpinus betulus (Hornbeam), a rather uncommon, planted tree in Carmarthenshire, was found growing on a roadside at Froodvale Farm (SN648389) (JAG 5/6/95) and was a new 10km square record. Six plants of *Adiantum capillus-veneris* (Maidenhair Fern) were reported by Nigel Stringer growing from the mortar of an old wall in Stepney Road, Pwll (SN481011) having first been noted by Mrs C. Lewis. One plant of *Verbascum lychnitis* (White Mullein) was discovered at North Dock Llanelli (SS498993) (IKM, 15/8/96) and the species was also present as a garden weed at Eithin Tewion, Cilycwm (SN744413) (M&JI, 11/9/1996).

The third and fourth vc records of *Oxalis stricta* (Upright Yellow-sorrel) were recorded as farm weeds. On 4/6/95, HJK & DB recorded the plant from a farmyard near Bwch-y-Rhyd, Talley (SN621337) and QONK from a barley stubble field at Hafod-Neddy, Llangathen (SN583243) on 11/8/97.

A clump of *Cortaderia richardii* (Early Pampas-grass) found by IKM & GH (1/8/94) on waste ground below Cwmbach Road, Llanelli (det. T.B. Ryves, 1/95) was the first vc record. In 1996 IKM found several noteworthy garden escapes including a plant of *Hypericum x inodorum* (Tall Tutsan) in limestone chippings at the Penclacwydd wildfowl centre (SS555990) and a plant of *Melissa officinalis* (Balm) by a roadside lay-by at Rhydyffynnon (SN611195). He also noted *Thalictrum minus* (Lesser Meadow-rue) and *Crococsmia paniculata* (*Curtonus paniculatus*) (Aunt-Eliza) in the allotments south of Coronation Road (SS513998).

Holly Harries recorded *Crassula helmsii* (New Zealand Pigmyweed) in a recently constructed ornamental pond at Glandwr, Llanpumsaint (SN411301), the third vc record. The fourth was made by IKM from an artificial pond at Y Winllan, Brechfa (SN524303) on 30/6/97 and the fifth, also by IKM, from the demonstration pond, east of the main pond in front of the restaurant at the Wildfowl and Wetlands Trust Centre, Penclacwydd (SS531985) on 29/7/97.

WRITING-UP

Planning the eventual form that the *Flora of Carmarthenshire* will take has been addressed by GH and RDP with the help of Tim Rich. Indeed, writing-up has also started: GH has already completed the bibliography (although this is constantly being extended as relevant new papers appear) and has checked and amended RDP's initial list of species, bringing them into the new 'Stace' order and adding Welsh names. He is also continuing to assemble all first species records, a task started by RDP over a year ago. The recent completion of the Carmarthenshire Rare and Scarce Plant Register (Provisional) by RDP has also provided the opportunity to research all of the species which meet the criteria for inclusion in that work. The data so obtained will act as a foundation from which to build the species accounts. The content of the introductory chapters has also been decided but their writing has not yet started. So progress is being made, but there is also scope for additional field work both in the form of monitoring and also by completing the recording of less well-worked tetrads.

Richard D Pryce, 16 February 1998

