

BOTANICAL SOCIETY OF THE BRITISH ISLES

# WELSH BULLETIN

Editor: R.D. Pryce

No. 54, WINTER 1992



CHENOPODIACEAE

*Corispermum leptopterum*  
(Aschers.) Iljin

Determined by J. E. Clement 11/90

FE 48-14-11

HERBARIUM, NATIONAL MUSEUM OF WALES (NMW)

FLORA OF G.L.A.M.

*CORISPERMUM LEPTOPTERUM* (Aschers.) Iljin

Locality *MARHAM Burrows.*  
*Sandy fore-shore.*

Det. E.J. Clement (11/90)

Collector *P.S. JONES*

Map/Grid Ref. *21/7-8*

V.C. 41

Date *8.1983*

Reg. No. v 91.63.1

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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 Botany, National Museum of Wales, Cathays Park, Cardiff CF1 3NP, specifying the issue number or year (which would have to include the season or month). Large runs - price negotiable.

## EDITORIAL

It is with the greatest sadness that we record the passing of Irene Vaughan M.B.E., F.L.S. on 27th January at the age of 103. Mrs Vaughan was a native of Suffolk but spent much of her life with her late husband, Capt. H.R.H. Vaughan R.N. in the Rhandirmwyn area of Carmarthenshire and with whom was principally responsible for the saving of the Red Kite from extinction in the inter-war years. She was always an enthusiastic and active field naturalist and with the late Ronald May concentrated on botanical recording in the county from the early 1950s. In fact it was Mrs. Vaughan and Mr May who can be credited with the coverage of most of Carmarthenshire for the B.S.B.I. Atlas published in 1962. She became B.S.B.I. Recorder in 1961 and continued until 1978 when she "retired" back to Woodbridge. I qualify "retired" as, of course, she continued to be very active, remaining as a referee for her beloved Rosa and even writing a paper on Suffolk Roses.

I am sure that everyone who met her will have formed their own favourite image of Mrs. Vaughan. Bill Condry, writing in "The Guardian" on 30th January, recalls that "there must still be people living in.....the beautiful country of the upper Tywi river who remember seeing this small figure on a large white horse disappearing up the tracks towards the hills". My own most vivid memory is of an excursion to record sites of the Tenby Daffodil (*Narcissus obvallaris*) in west Carmarthen when she was in her mid-80s. On climbing up to the site of the Gwal-y-filast dolmen, near Llanglydwen, she seemed to "skip" over the ground, her slight figure leaving others many decades her junior appearing to labour over the moderate gradient! Her 100th birthday was celebrated in a special issue of the *Welsh Bulletin* (no. 48, Winter 1989), when several writers recounted happy memories of the lady who I am sure will now be foremost in our thoughts. A full obituary will appear in *Watsonia* in due course.

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As usual, this edition of the Bulletin contains a variety of papers, which I hope you will find of interest. It also includes 1991 Welsh Plant Records. As the backlog of records has now been dealt with there will be plenty of space in the next issue for a plethora of contributions from you out there. I would be very glad to receive any articles of botanical interest, especially those with a Welsh flavour, so please don't delay in putting pen to paper.

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The full programme of B.S.B.I. meetings is reproduced in the society's Year Book. Please ensure that you book for any event that you wish to attend, so that the leader is made aware of your intended presence. Most Welsh meetings should be booked through Dr David Humphreys though the field-meetings list should be consulted to be certain.

I hope that the 1993 field season will be rewarding for you all and I look forward to seeing you at one or more of the organised meetings during the year.

Richard Pryce, Trevethin, School Road, Pwll, Llanelli, Dyfed SA4 5AL

8th February 1993

## ANNUAL GENERAL MEETING, 1992

The thirtieth Annual General Meeting and tenth Exhibition Meeting of BSBI Wales was held at Llysfas College of Agriculture, Ruthin, Clwyd, on Saturday July 4th 1992.

On the Friday, members staying at Llysfas enjoyed an evenings botanising in a local woodland, led by Jean Green. On Saturday morning and early afternoon, Goronwy Wynne and Jean Green took members to see several interesting botanical sites at Nant y Ffrith near Minera, before returning to Llysfas for the AGM.

After tea, the Chairman opened the Annual General Meeting with 16 Welsh members as well as a few observers from across the border. Apologies for absence were received from Stephen Evans, George Hutchinson, David Humphreys, Quentin Kay, Elsa Wood and Ray Woods. The minutes of the last AGM, published in the *Welsh Bulletin* No. 53, Spring 1992, were then taken as read and accepted without amendment.

The Chairman, in his opening remarks, welcomed all members present and thanked the members of the Committee for Wales and the treasurer and secretary for their help and support over the last year.

### Hon. Secretary's Report

The Hon. Secretary, Gwynn Ellis, then gave his report on the last years activities. He commented that the Committee for Wales had remained at full strength throughout the year. Following a request to CCW for an official observer to sit on the Committee for Wales, Paul Day, our vice-chairman was asked to act in this capacity.

Two issues of the *Welsh Bulletin* had been issued since the last AGM; nos 52 and 53. The editor Richard Pryce was congratulated on the high standard that had been maintained. George Hutchinson was again warmly thanked for hard work in planning and producing the *Bulletin*. Hope was again expressed that members would continue to send in notes and articles for publication. Production difficulties may necessitate having the photocopying done by a commercial firm which will inevitably increase costs. Ian Morgan was thanked for help with typing for *Bulletin* 53. *Welsh Plant Records* had almost caught up with the backlog and we would soon revert to having one set of records published each year. It was also pointed out that starting with *Welsh Plant Records* for 1992, the order and nomenclature would follow Kent's *List of Vascular Plants of the British Isles* and Stace's *New Flora of the British Isles*.

The Secretary then reported that eight field meetings had been arranged in Wales in 1992. Three had been held so far and attendance was good. Bookings for most of the others were adequate with the Meeting to Crymlyn Fen being doubled up to two weekends to cope with the demand. David Humphreys was warmly thanked for the splendid programme he had arranged in his first year as field secretary.

Topics of a conservation nature that had been discussed in Committee included continuing problem of obtaining wild flower seed of known provenance for use in landscaping projects. The difficulty in obtaining grass seed was a particular problem as it seems there is no source for native grass seed. The Joint Nature Conservancy Council had been approached for their comments. The Committee were also considering setting up a register of Welsh rare plants in cultivation. There was a scheme organised by the Chelsea Physic Garden which dealt with British rarities but it was felt that a more local approach would be beneficial in Wales. A small working group would report back to the Committee.

The Secretary then thanked the various organisations that had helped the Society in Wales over the last twelve months, including: the CCW for allowing the Committee for Wales to meet in its offices at Plas Gogerddan, Aberystwyth and Llandrindod Wells; the National Museum of Wales for secretarial assistance, for production of the *Welsh Bulletin*, and for its help in many other ways; The officers and staff of Llysfas College for looking after us so well; and finally Jean Green and Goronwy Wynne were thanked for all the hard work they had put into organising the meeting.

Members were then reminded about the following days field meeting looking at various sites near Minera, led again by Jean and Goronwy. Finally, members were reminded that after the AGM, Peter Rathbone would be giving a talk on *A Naturalist's Library*, and later that evening Jean Green would talk on the *Flora of Denbigh*. The exhibition meeting would also open and slides be shown after dinner that evening.

### Hon Treasurer's Report

The Hon Treasurer, Richard Pryce, then gave his report on the financial situation which was again satisfactory. He reported no change since the report published in the last *Bulletin* but new bills for production of the *Welsh Bulletin* had just been presented.

### Elections

In the elections that followed the Hon Secretary, Gwynn Ellis and Hon. Treasurer, Richard Pryce, were re-elected unopposed for their respective posts.

Stephen Evans, George Hutchinson, Quentin Kay and Goronwy Wynne were due to retire under rule 5 of the constitution and were eligible for immediate re-election and had indicated their willingness to stand again. In the absence of any other nominations from the floor, they were duly re-elected to serve on the Committee for Wales for a further period of two years.

Under Any other Business, Goronwy Wynne asked the Hon. Secretary to outline the proposals for Atlas 2000 which he did.

In the absence of any other business, the Chairman declared the meeting closed. Peter Rathbone was then invited to give his talk on *A Naturalist's Library*. Peter gave a fascinating insight into how his own Library was built up from the time he first saw the nest and eggs of a yellowhammer to his setting up as a Natural History bookseller three years ago. After dinner Jean Green gave an enthralling talk on the *Flora of Denbighshire* well illustrated with numerous excellent slides. The Exhibition was then opened and slides shown.

### Exhibits and slides

Among the exhibitors were:

Anne Conolly	Chromosome counts of Lleyn species; <i>Rosa</i> spp. in Lleyn; <i>Utricularia intermedia</i> .
Trevor Evans	<i>Carex elongata</i> ; <i>Rhinanthus angustifolia</i> .
Jean Green	Plant name quiz; <i>Cymbalaria</i> spp.; <i>Stellaria graminea</i> .
Jean Hughes	Original pen & ink drawings for <i>The Nature of North Wales</i> .
George Hutchinson	New recording card.
Goronwy Wynne	Tierra del Fuego; Illustrations for the <i>Flora of Flintshire</i> .

Slides were shown by:

Trevor Evans	Turkish flora
Geof Battershall	Maritime plants

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### COMMITTEE FOR WALES, 1992-1993

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

#### Officers

Chairman	Mr T.G. Evans
Vice-chairman	Mr P. Day
Secretary	Mr R.G. Ellis
Treasurer	Mr R.D. Pryce

#### Committee Members

Mr S.B. Evans	Mr N. Brown*
Dr G. Hutchinson	Dr D.R. Humphreys*
Dr Q.O.N. Kay	Mrs E. Wood*
Dr G. Wynne	Mr R.G. Woods*

\* members due to retire in 1993

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**BOTANICAL SOCIETY OF THE BRITISH ISLES**  
**31st WELSH ANNUAL GENERAL MEETING**  
**AND**

**11th EXHIBITION MEETING, 1993**

**Friday 9th July to Monday 12th July 1993**

**Parc-le-Breos House, Parkmill, Gower, West Glamorgan**

**Programme**

**Friday 9 July**

6.30 pm Dinner  
7.30pm Visit to local site

**Saturday 10 July**

8.30am Breakfast (Packed lunches collected afterwards)  
10.00am Meet at Broad Pool (SS/510.910) for Field Meeting (heathland and aquatic habitats), Leader Quentin Kay  
4.00pm Return to Parc-le-Breos for tea and Meeting of Committee for Wales  
4.30pm Annual General Meeting  
5.00pm Talk: *The Flora of Glamorgan* by Quentin Kay  
6.30pm Dinner  
7.30pm Exhibition/Members slides/discussion

**Sunday 11 July**

8.30am Breakfast (Packed lunches collected afterwards)  
10.00am Meet at Whiteford (SS/440.935) for Field Meeting (Dunes and limestone habitats), Leader Quentin Kay  
6.30pm Dinner, followed by exhibitions etc.

**Monday 12 July**

8.30am Breakfast  
Optional recording in v.c. 41 on the way home

**Accommodation**

Parc-le-Breos is a comfortable 19th century Gower country house surrounded by parkland and woods, about a mile from the sea near Penmaen (SS/528.895, reached by the lane leading NW from Parkmill). The accommodation at Parc-le-Breos consists of double or family rooms, all with hot and cold water or en-suite bathrooms. Workroom facilities, an exhibition area and a meeting room are available, and were used by the British Lichen Society when they visited Gower for their summer meeting in 1991 and stayed at Parc-le-Breos.

The standard charges are for double or shared rooms; a few single rooms may be available for an additional charge (£5 per night). The inclusive charge for dinner, bed and breakfast and packed lunch is £23.50 (B+B £16, packed lunch £1.50, dinner £6.00).

For further details and booking forms, please write to Dr D.R.Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR, and not to the leader.

The Welsh AGM of the BSBI is held in a different part of Wales each year, usually in July, moving between North, Mid and South Wales to cover the whole country as fairly as possible. Last year it was held at the College of Agriculture at Llysfas near Ruthin in Clwyd. Gower is an outstanding area botanically, and Parc-le-Breos promises to be another excellent venue.

## WELSH FIELD MEETINGS - 1993

### SATURDAY 29th MAY GRAIG FAWR, FLINTSHIRE (v.c.51)

Leader: Dr G. Wynne

Some plants of the Flintshire limestone. We will visit 2 or 3 sites on the limestone outcrops, with only moderate walking, and a little (optional) minor scrambling. If time permits we may visit the dune system between Prestatyn and Point of Ayr. Meet at SJ/056.804 on A547 at Meliden, between Prestatyn and Dyserth, at the foot of Graig Fawr, at 11.00 am.

Please send bookings to Dr D.R.Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR, and not to the leader.

### FRIDAY 11th JUNE to MONDAY 14th JUNE FERRYSIDE, CARMARTHEN (v.c.44) CARMARTHENSHIRE RECORDING WEEKEND

Leader: Mr R.D. Pryce

A meeting to assist in recording for the Flora of Carmarthenshire. It is intended to concentrate on the less well recorded areas in the north-west of the county by splitting participants into small groups. There will also be an expedition to one of the coastal areas. Accommodation will be in single rooms in the Ferryside Education Centre. The meeting is also open to non-residents. Approximate cost will be £25 per day, but full details of the meeting place and booking forms are available from the leader, Mr R.D. Pryce, Treveithin, School Road, Pwll, Llanelli, Dyfed SA15 4AL. Please apply before May 15th.

### SUNDAY JUNE 20th MARIANDYRYS and FEDW FAWR, ANGLESEY (v.c.52)

Leader: Mr N.H. Brown

A rich botanical area at the eastern tip of Anglesey, with limestone grassland and quarries, coastal cliffs and maritime heath, supporting a wide range of species such as *Helianthemum canum*, *Platanthera bifolia* and *Hypericum montanum*. Reasonably good walking, but wear boots or wellingtons as adders are common in this area. Meet at Glan-yr-afon SH/605.807, about 3 miles north of Beaumaris, at 11.00 am. Approach by B5109 from Beaumaris, through Llangoed, turn left on minor road signposted from Llangoed. Numbers restricted to 25.

Please send bookings to Dr D.R.Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR, and not to the leader.

### SATURDAY 3rd JULY NORTH-EAST MERIONETH (v.c. 48)

Leader: Mr P.M. Benoit

To explore Cefn caer-Euni, one of the lesser known areas of Merioneth, with rocky hill-pastures and lake. Meet at lay-by on A494 at SH/992.398, about 1/4 mile east of Bethel, 5 miles north-east of Bala, at 11.00 am. Bring waterproof boots and packed lunch. Moderate walk and scramble.

Please send bookings to Dr D.R.Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR, and not to the leader.

### FRIDAY 9th to MONDAY 12th JULY PARKMILL, GOWER (v.c. 41) (in conjunction with the Welsh AGM & Exhibition Meeting)

Leader: Dr Q.O.N. Kay

This meeting will be based at Parc-le-Breos House, Parkmill, Gower, West Glamorgan. On Friday evening there will be a visit to a local site with an interesting flora. Saturday morning and early afternoon will be spent examining the flora of heathland and aquatic habitats in central Gower. Meet at Broad Pool (SS/510.910) at 10.00am. Tea, the Welsh AGM, a talk on *The Flora of Glamorgan*, and the Welsh Exhibition Meeting will follow at 4pm at Parc-le-Breos House. Sunday will be spent examining the flora of sand dune and limestone habitats in North West Gower. Meet at Whiteford (SS/440.935) at 10.00am.

Accommodation is available at Parc-le-Breos House @ £23.50 per day full board for shared rooms. A few single rooms are available at extra cost.

For further details and booking forms, please write to Dr D.R.Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR, and not to the leader.

**SATURDAY, 17th JULY**  
**MERTHYR MAWR, GLAMORGAN (v.c. 41)**

**Leader:** Mr P. Jones

An opportunity to add to the botanical knowledge of this 600 acre calcareous dune system. The area has not been recently recorded, but interesting plants include *Frankenia* and *Aristolochia*. Easy walking of about 5 miles, carrying packed lunch. Numbers limited to 20. Meet at car park at Candleston Castle SS/871.772 at 11.00 am.

Please send bookings to Dr D.R.Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR, and not to the leader.

**FRIDAY 30th JULY to MONDAY 2nd AUGUST**  
**LAMPETER, CARMARTHEN (v.c. 44)**  
**CARMARTHENSHIRE RECORDING WEEKEND**

**Leader:** Mr R.D. Pryce

A meeting to assist in recording for the Flora of Carmarthenshire. It is intended to concentrate on the less well recorded areas in the north-east of the county by splitting participants into small groups.

Accommodation will be in single rooms in St David's College, Lampeter. The meeting is also open to non-residents. Approximate cost will be £25 per day, but full details of the meeting place and booking forms are available from the leader, Mr R.D. Pryce, Trevethin, School Road, Pwll, Llanelli, Dyfed SA15 4AL. Please apply before July 17th.

**SATURDAY 14th AUGUST**  
**MWNT, CARDIGAN (v.c. 46)**

**Leader** Mr. A.O. Chater

A meeting to record the remarkably rich arable weed flora of Ty-gwyn Farm. Some time will also be spent on maritime heath and other communities on the coast. Easy walking, lunch at the cars. Meet at 11.00 am in National Trust car park, Mwnt, SN/195.519, 6kms north of Cardigan. Wellingtons if the weather has been wet.

Please send bookings to Dr D.R.Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR, and not to the leader.

**SATURDAY 21st AUGUST**  
**LLANGORSE LAKE, BRECON (v.c. 42)**

**Leader** Mr M. Porter

A meeting to look at lakeside vegetation and wet meadows around a type of lowland lake that is not common in Wales. The terrain is not difficult, but wellingtons are advised. About 3 miles walk. Meet at the church at Llangasty-Talyllyn, SO/133.261, on the south edge of Llangorse Lake, at 11.00 am. Turn west off B4560 at Cathedine, 3kms south of Llangorse village. Please send bookings to Dr D.R.Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR, and not to the leader.

**SUNDAY, 12th SEPTEMBER**  
**CONWY MOUNTAIN, CAERNARFONSHIRE (v.c. 49)**

**Leader:** Mr N.H. Brown

The most northerly part of the Snowdon National Park, with heather moorland, cliffs and screes. To assist with recording for the county, in an area where *Pitularia* and *Asplenium lanceolatum* are known to occur. Meet at Pen-sychnant House, SH/752.770, 3kms SW of Conwy, towards the Sychnant Pass, at 11.00. Numbers limited to 25.

Please send bookings to Dr D.R.Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR, and not to the leader.



## PANTYLLYN: A WELSH TURLOUGH, OR NOW YOU SEE IT, NOW YOU DON'T

Pantyllyn is a small lake lying in the narrow gap between the remains of Craig y Ddinas and Craig y Derwyddon near the small village of the same name above Llandybie (N.G.R. SN606167). It is approximately 160 m. long, 50 m. wide and about 3 m. deep.

The lake is a geomorphological oddity, lying as it does on a base of Carboniferous limestone. This rock is usually one of the most permeable rocktypes found and normally limestone areas are devoid of streams and lakes as the surface waters disappear rapidly underground.

There is another peculiarity of this lake in that it appears and disappears according to the season. It is normally full from late autumn until the spring but drains away completely by June. Seasonal lakes are known as turloughs in Ireland and have been defined as areas which flood seasonally to a minimum depth of 0.5 m. There should also be no surface outlet, the waters should empty solely into the groundwater (Coxon 1987(i)). These turloughs are fairly common landscape features of the limestone areas of Western Ireland such as the Burren peninsula of Co. Clare. Turloughs or ephemeral lakes have only recently been recognised in Britain with most of these sites lying on the chalk deposits of East Anglia. Pantyllyn is the only such lake found in Wales.

No stream enters or leaves the lake although a pipe has been laid so as to allow excess water to drain into the river Gwenlais. Water enters the lake via springs in the lake bed. These springs may be associated with a geological fault known as the Bettws fault which runs the length of the lake. The water level of the lake is determined by the height of the groundwater table of the surrounding limestone outcrops.

The earliest reference we have to Pantyllyn is a lease from the Golden Grove estate which was granted in 1613. Estate maps of the eighteenth and early nineteenth century show this body of water clearly. It is remarkable that such a relatively small lake (0.64 hectare) should have survived for centuries. It could be expected that natural processes would have led to its gradual reduction and possible disappearance. Many lakes which were mapped during the last century have since disappeared beneath encroaching vegetation and peat. Several examples of this can be seen on the Mynydd Du.

There are, however, local factors which have acted against these trends. The absence of streams entering the lake has meant that no stream borne sediments have accumulated. Another factor is the transience of the lake which exposes the lake bed in summer and allows dead plant material to decompose rather than accumulate as peat as would happen under a permanent body of water.

During the winter, the only emergent vegetation are numerous willows, especially at the southern end of the lake. The submerged trunks of these trees are wrapped in a thick coat of Willow Moss (*Fontinalis antipyretica*). This moss is normally found growing in fast flowing streams. During the summer this covering of moss dries out and gives this woodland an almost tropical feel. This moss also grows on the lake bed and in summer this damp carpet provides shelter for aquatic organisms at this time. Samples taken from the benthic layer in winter have shown that Pea Mussels (*Picidium*) and the leech (*Herpobdella*) are present. These species have been shown to be indicative of base-rich waters in Wales.

During the summer months, the lake bed is covered with a marsh-fen vegetation which includes such grasses as the Reed Canary-grass (*Phalaris arundinacea*), Small Sweet-grass (*Glyceria declinata*), and Bladder-sedge (*Carex vesicaria*). Research on Irish turloughs has identified a group of 21 plant species with which they are associated. Eight of these species have been identified at Pantyllyn. They include Marsh Pennywort (*Hydrocotyle vulgaris*), Creeping Buttercup (*Ranunculus repens*), Lesser Spearwort (*Ranunculus flammula*), Marsh Bedstraw (*Galium palustre*), Water Mint

(*Mentha aquatica*), Meadowsweet (*Filipendula ulmaria*), Redshank (*Polygonum persicaria*) and Silverweed (*Potentilla anserina*). Silverweed has been found to be present in every turlough examined.

There are some similarities between the mosses of the Irish turloughs and Pantyllyn. *Fontinalis antipyretica* has been recognised as a turlough species. Experimental work has shown that it can withstand long periods of drought but cannot survive frequent alterations of drought and submergence. It can be inferred that *Fontinalis* is indicative of sites which are flooded for long periods. Surveys have identified another moss, (*Cinclidotus fontinaloides*), as an important turlough species. This species is absent from Pantyllyn - probably because *Cinclidotus* grows in areas which are heavily grazed, whereas Pantyllyn is ungrazed. *Fontinalis* does not normally produce spore bearing capsules but at Pantyllyn this moss fruits abundantly. The trigger for the formation of capsules is the drying out of the lake. Normally capsule formation is a rare event for those plants in flowing water.

The causes of turlough formation are not precisely understood because of a lack of large-scale geological maps and detailed studies of the last glaciation. They are usually associated with lowland areas with a gently undulating relief. They tend to occur above pure, well-bedded and well-jointed limestones. It has been suggested that where turloughs are aligned along faults, it is not because of any hydrological influence of the fault but to the fault determining the direction of glacial action (Coxon 1987 (ii)). In the case of Pantyllyn it appears that the Bettws fault has directed the line of glacial movement and that the lake was excavated by ice.

The lake produces a humid microclimate which is of crucial importance to lichens, mosses and liverworts. The area is sheltered and this humidity occurs when these plants are making their greatest growth in the winter.

The trees around and in the lake support a well developed lichen flora of over 30 species. This is in marked contrast with other local woodland blocks on the Glangwenlais ridge where the lichen flora is relatively impoverished as these woodlands are more exposed to drying winds and pollution.

The lichen, *Usnea ceratina*, has been found at Pantyllyn. This is the only locality known in Carmarthenshire for this pollution sensitive species. This lichen has declined markedly throughout Britain during the last 150 years.

Local tradition asserts that many years ago, a man drowned in the lake. During cold winters children were warned not to skate there as the place where the victim drowned never froze. During the summer this spot is marked by an overwhelming putrid smell. This story is capable of being explained by natural phenomena. The failure of one area to freeze is probably connected with powerful springs causing currents in the lake body. During the extremely cold weather of February 1991, the lake froze completely apart from one circular area about 2m. across. It is probable that as the water level drops, the remaining waters become increasingly concentrated with tadpoles and other aquatic organisms which eventually die and putrefy.

Like the Carmel woods nearby, this unusual site is threatened by quarry expansion. A century ago, the local poet, Watcyn Wyn, used the lake as a symbol of things eternal :

"Tra bydd calch yng Nhraig y Ddinas,  
a thra bod dwr ym Mhantyllyn"  
(Y ferch o Landybea)  
"Whilst there is lime in Craig y Ddinas  
and whilst there is water in Pantyllyn"

Today there is very little left of Craig y Ddinas. It has been almost totally quarried away and is now only a name on old maps. It remains to be seen whether or not Pantyllyn will follow it into oblivion. If it is destroyed, Wales will have lost a unique part of her landscape.

## REFERENCES

- (i) COXON, C.E. (1987) An examination of the characteristics of turloughs, using multivariate statistical techniques. *Irish Geography*, **20**, 24-42
- (ii) COXON, C.E. (1987) The spatial distribution of turloughs. *Irish Geography*, **20**, 11-23

R.H. Davies & Dr R.N. Stringer

Dydd Gwyl Dewi, 1.3.1991

### Species list of plants found growing in the dry lake bed Pantyllyn

The site was visited on 10th June 1990. We made no estimate of cover.

<i>Agrostis stolonifera</i>	<i>Mentha aquatica</i>
<i>Cardamine pratensis</i>	<i>Menyanthes trifoliata</i>
<i>Carex nigra</i>	<i>Myosotis secunda</i>
<i>Carex vesicaria</i>	<i>Phalaris arundinacea</i>
<i>Corylus avellana</i>	<i>Polygonum hydropiper</i>
<i>Crataegus monogyna</i>	<i>Polygonum persicaria</i>
<i>Eleocharis palustris</i>	<i>Potentilla anserina</i>
<i>Epilobium palustre</i>	<i>Ranunculus flammula</i>
<i>Filipendula ulmaria</i>	<i>Ranunculus repens</i>
<i>Galium palustre</i>	<i>Salix cinerea</i>
<i>Glyceria declinata</i>	<i>Solanum dulcamara</i>
<i>Hydrocotyle vulgaris</i>	

### Bryophytes found at Pantyllyn lake bed

<i>Acrocladium cordifolium</i>	on lake bed
<i>Fontinalis antipyretica</i>	on trees and lake bed
<i>Frullania tamariscinum</i>	on tree trunks above flood level
<i>Hypnum cupressiforme</i>	on tree trunks above flood level
<i>Leptodictyum riparium</i>	on tree bases
<i>Ulotia crispa</i>	on Hazel twigs

### Lichens found on Willows and lake environs at Pantyllyn

<i>Catillaria lightfootii</i>	<i>Parmelia revoluta</i>
<i>Cetraria chlorophylla</i>	<i>Parmelia saxatilis</i>
<i>Cladonia coniocraea</i>	<i>Parmelia subrudecta</i>
<i>Evernia prunastri</i>	<i>Parmelia sulcata</i>
<i>Graphis scripta</i>	<i>Peltigera horizontalis</i>
<i>Hypogymnia physodes</i>	<i>Peltigera polydactyla</i>
<i>Hypogymnia tubulosa</i>	<i>Pertusaria letoplaca</i>
<i>Lecanora jamesii</i>	<i>Platismatia glauca</i>
<i>Lecidella elaeochroma</i>	<i>Pyrenula macrospora</i>
<i>Lepraria incana</i>	<i>Ramalina farinacea</i>
<i>Leproplaca chrysodeta</i>	<i>Ramalina subfarinacea</i>
<i>Opegrapha atra</i>	<i>Usnea ceratina</i>
<i>Parmelia caperata</i>	<i>Usnea florida</i>
<i>Parmelia glabratula</i>	<i>Usnea fulvoreagens</i>
<i>Parmelia laevigata</i>	<i>Usnea subfloridana</i>
<i>Parmelia perlata</i>	<i>Xanthoria polycarpa</i>

### **RUBUS in West Llyn 1990 and 1991**

Following our 1988 visit (Newton & Conolly, 1989), a second visit was made to W. Llyn over four days in early August 1990, and a third, in 1991, also in early August. We aimed to examine in more detail areas only sparsely searched before, and to explore the more promising habitats not reached in 1988. Emphasis was given to margins of ancient trackways and drove roads, and to heathy uplands below open 'moorland'.

1990 saw the addition of five species of *Rubus* to those already listed for W. Llyn giving a current total of 29 species. No additional species were seen in 1991, but a further hybrid was added to the two or three noted previously. The sharp decline in the number of 'new' species seen in 1990 (five) and 1991 (none), following the 18 or so added in 1988, points to near exhaustion of species present; more over the number of 'new' 10km records made in 1991 was very much lower than in 1990.

In contrast to the two previous visits, it was decided in 1991 to concentrate on recording at a 1-km scale. Although the total 'squares' visited amounts only to 35% of the W. Llyn total of 230, the ground coverage (see map of recording sites: Fig. 1a) gives a coherent picture (despite a few lacunae) especially in the case of the commoner species. As a result of this greater coverage, a more informed appraisal can now be made of natural limitations and restrictions within W. Llyn which were only suspected in 1988.

The five species newly recorded for the W. Llyn in 1990 were:-

*Rubus villicauliformis*, *R. altiarquatus*,  
*R. rubritinctus*, *R. rhombifolius* and  
*R. echinatus*.

All but the last of these was also new for Caerns. v.c. 49.

Apart from these new finds, most of the new records made in 1990 and 1991, were extensions of range and 'gap' filling. For the rarer species (mostly those first recorded in 1988) a sprinkling of new localities provided additional 10km squares to the previous ranges.

#### **(1) Species newly recorded in 1990 (Fig. 1b)**

*Rubus villicauliformis*: seen just once, this is the first record for North Wales, though there are recent ones from South Wales for this primarily Devon & Cornwall bramble. The Llyn site (SH23) appears to be the most northerly British occurrence (Fig. 1b).

*Rubus altiarquatus*: seen at five sites (the last in 1991) (SH23), mostly north or NW of the Garn Fadryn massif and in the NE part of the peninsula. This includes one stand at first thought to be *R. monensis*. *R. altiarquatus* is another species limited to the south-west of Britain; here in W. Llyn it is new both to Caerns. and to North Wales. It had not previously been recorded north of southern Cardiganshire.

*Rubus rubritinctus*: found in two places: a heath in the Porth Neigwl area (SH22), and by an ancient track north of the Penrhos marshes (SH33). New to Caerns. and likewise to north-west Wales, the next nearest site being near Machynlleth. Also a species commonest in south-western Britain but with out-lying clusters in the W. Lancashire coastal fringe, for which the Llyn sites provide a link.

*Rubus rhombifolius*: seen on a single occasion (lane-side below Garn Fadryn (SH23)). New for vc 49 and for western and north-western Wales, the Welsh localities centred on Brecon and Radnor, with a single Glamorganshire coastal record prior to 1930. Unlike the three preceding species, *R. rhombifolius* is thinly distributed throughout England and Southern Scotland, but is rare in south western England.

*Rubus echinatus*: found at a single site near Abersoch in 1990 (SH 32), it was seen in 1991 in the two 10km squares to the west (SH 22 and SH 12). Apart from an old (c. 1900) record from Bangor area, there have been no other Caerns. records - nor indeed from northwest Wales. A species of the Midlands and central southern England westwards to the Marches, with these Lleyrn sites forming an extreme western outlier.

The first three of these newly-discovered species have the 'heart' of their British range in S.W. England, and are well represented in southern Wales, but in North Wales only occur in Lleyrn as rare outliers. This pattern applies equally to the earlier recorded *R. leyanus* and to a less extent to *R. dentatifolius* with its scatter of some 10 Lleyrn sites. But neither of these appear in western parts of Lleyrn.

(2) In contrast to these species primarily of south-western England and Wales, three species are virtually confined to Gwynedd. Two - *R. ordovicum* and *R. riparius* - form an interesting pair: *R. ordovicum* is especially luxuriant in Lleyrn, *R. riparius* scattered in small colonies. Particular attention was given to the distribution of *R. ordovicum* in 1990 and 1991 so that a 1-km map (Fig. 2a) now clearly demonstrates its virtual omnipresence in W. Lleyrn - compare this map (Fig. 2a) with that of recording sites (Fig. 1a).

In contrast *R. riparius* had only one 'extra' 10km square added in 1990, and only modest extension in 1991 - mainly infill.

A third 'Gwynedd' species of bramble has been found to be relatively common and widely distributed in Lleyrn. This bramble is an un-named species first found in 1870 (Llanberis) and later recognized on the western flank of Snowdonia southwards to Portmadoc (1920's, 1970's). It was referred to as the "narrow-leaved 'hystrix' of North Wales" by B.A. Miles (MS) and is apparently confined to Gwynedd: Anglesey as well as Caerns., also in north Merioneth. It seems to avoid the more exposed coastal areas (Fig. 2a). We give this plant the manuscript name *Rubus segontii*.

(3) A somewhat similar concentration of range, but centred over a much wider area of northern Wales and adjacent England, is shown by *R. bartonii* and *R. incurvatus*. The former is thinly scattered over much of Lleyrn, but *R. incurvatus* is much more frequent there. (Fig. 2b).

(4) Two other species, *R. vigorosus* and *R. infestus*, both rare in Wales, were first seen in Lleyrn in 1988. The former a 'southern' species in Britain, the latter a 'northern' one (upland). Both are sparse in Lleyrn. Additional 10km squares were recorded for both in 1990, as well as more localities. There were some good stands of *R. vigorosus* on Rhiw 'mountain' in 1991 (Fig. 3), but only a single further record for *R. infestus* (Fig. 3) with its preference for higher ground.

(5) Three species of general western range in Britain were referred to previously (Newton & Conolly 1989): *R. dumnoniensis*, *R. lanaticaulis* and *R. wirralensis*. Of these

*R. dumnoniensis*, despite the many records added in 1990 and 1991 including several further to the west and south, still lacks any from the westernmost coastal areas (Fig. 3); hence in this case, does not completely reflect, in its Lley 'picture', the 'national' western range. On the other hand, *R. wirralensis* maintained its extreme restriction to the far western end of the peninsula seen in 1988 with the further records of 1990. The 'woodland' *R. lanaticaulis*, however, was not seen again after 1988.

(6) The recently found *R. echinatus* represents a small group of predominantly Midlands and Southern England occurrence, extending west only to the eastern fringe of Wales and the Marches, leaving the Lley sites as outliers. Both *R. conjungens* and *R. amplificatus* have a similar distribution; *R. conjungens* is sparse and mainly coastal in Lley, while *R. amplificatus* occurs mainly in the central upland areas. (Fig. 4).

(7) The final grouping includes those species which were for the most part already recorded from Lley (before 1988) or were so common in adjacent Caerns. that the 1988 records gave a predictable expansion in their (Welsh) range. For most of these the 1990 and 1991 observations were made on a 1-km square basis. Not all though are common or widely seen in Lley, e.g. *R. pyramidalis* which is rare with no 'new' 10km records in the last two years, and the sparse *R. lindleyanus* which remained confined to a few sheltered inland spots (Fig. 5).

Of the remaining species in this (widespread British) group, *R. nemoralis* and *R. dasycarpus* lack coastal Lley records (Fig. 5); *R. tuberculatus*, *R. cardiophyllus* and *R. polyanthemus* all have a wide coverage in W. Lley and are not figured.

The final common species, *Rubus ulmifolius* is doubtless everywhere in the peninsula, but serious listing on a 1-km scale was not attempted in 1988. Never-the-less the mapping showed it to be present in almost all of the sites visited in 1990 and 1991.

#### The Hybrids

Of the two hybrid brambles seen in 1988, *R. caesius* x *R. ulmifolius* was seen in one new area (SH 23 in two sites) in 1990, and in 1991 a newly recorded hybrid: *R. ulmifolius* x *R. incurvatus* was identified in two places in the Botwnnog - Nanhoron vicinity (SH 23), as well as west of Rhiw (SH 22). More 'ulmifolius' hybrids - unspecified - were listed from SH 22, SH 23 and SH 33. The *R. caesius* hybrid is likely to be quite common locally (coastally), and was observed by the sand-dunes at Pwllheli (SH 33, APC) in 1990 (though not by AN). *Rubus caesius* s.s. Sightings from two sites in SH 12, and from one in SH 23 leave only the Rhiw-Porth Neigwl area (SH 22) without a record.

#### SUMMARY:

Three seasons' field-work has demonstrated the intriguing diversity of bramble geography within a small, clearly defined district of N. Wales. Nine previously un-recorded species have been found for v.c. 49 (Caerns.).

Of the 29 species now listed for West Lley, around ten rank as widespread British species, while some of the more restricted taxa occur at their northerly or southerly British limits; others scarce in Wales are almost as frequently found as in their major English foci. Perhaps most interestingly, outliers are found to occur of major south-westerly species, while the

presence of three Gwynedd endemics and two N. Wales regional species is strongly confirmed.

# References

1. EDEES, E.S. & NEWTON, A. (1988). *Brambles of the British Isles*. London.
2. ELLIS, R.G. (1983). *Flowering Plants of Wales*. Cardiff.
3. NEWTON, A. & CONOLLY, A. (1989). *Rubus* in West Lleyln, 1988. *B.S.B.I. Welsh Bulletin* 47: 6-13. References 1 & 2 were used for preparing the maps.

## Appendix 1. Check list of *Rubus* in West Lleyln (to 1991)

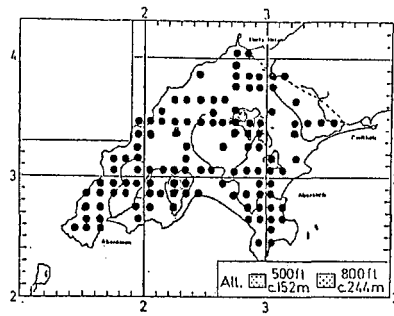
	Total 10km <sup>2</sup> /7		Total 10km <sup>2</sup> /7
<i>R. altiarquatus</i>	1	<i>R. ordovicum</i>	7
<i>R. amplificatus</i>	3	<i>R. polyanthemus</i>	7
<i>R. bartonii</i>	6	<i>R. pyramidalis</i>	2
<i>R. cardiophyllus</i>	7	<i>R. raduloides</i>	7
<i>R. conjungens</i>	4	<i>R. riparius</i>	5
<i>R. dasyphyllus</i>	4	<i>R. rhombifolius</i>	1
<i>R. dentatifolius</i>	3	<i>R. rubritinctus</i>	2
<i>R. dumnoniensis</i>	4	<i>R. segontii</i> MS	5
<i>R. echinatus</i>	3	<i>R. tuberculatus</i>	6
<i>R. incurvatus</i>	7	<i>R. ulmifolius</i>	7
<i>R. infestus</i>	2	<i>R. vigorousus</i>	4
<i>R. lanaticaulis</i>	2	<i>R. villicauliformis</i>	1
<i>R. leyanus</i>	2	<i>R. wirralensis</i>	2
<i>R. lindleianus</i>	2		
<i>R. nemoralis</i>	5	<i>R. caesius</i>	6

NB 6 species occur in all of the 7 W. Lleyln 10km squares.

# Hybrids

<i>R. caesius</i> x <i>R. ulmifolius</i>	<i>R. ulmifolius</i> x <i>R. incurvatus</i>
<i>R. ordovicum</i> x <i>R. ulmifolius</i>	<i>R. ulmifolius</i> x (unspecified)

Ann Conolly, 25 Brocks Hill Drive, Oadby, Leicester, LE2 5RE.



Recording sites 1988-1991

a few records from 1976  
have been included

Fig. 1a



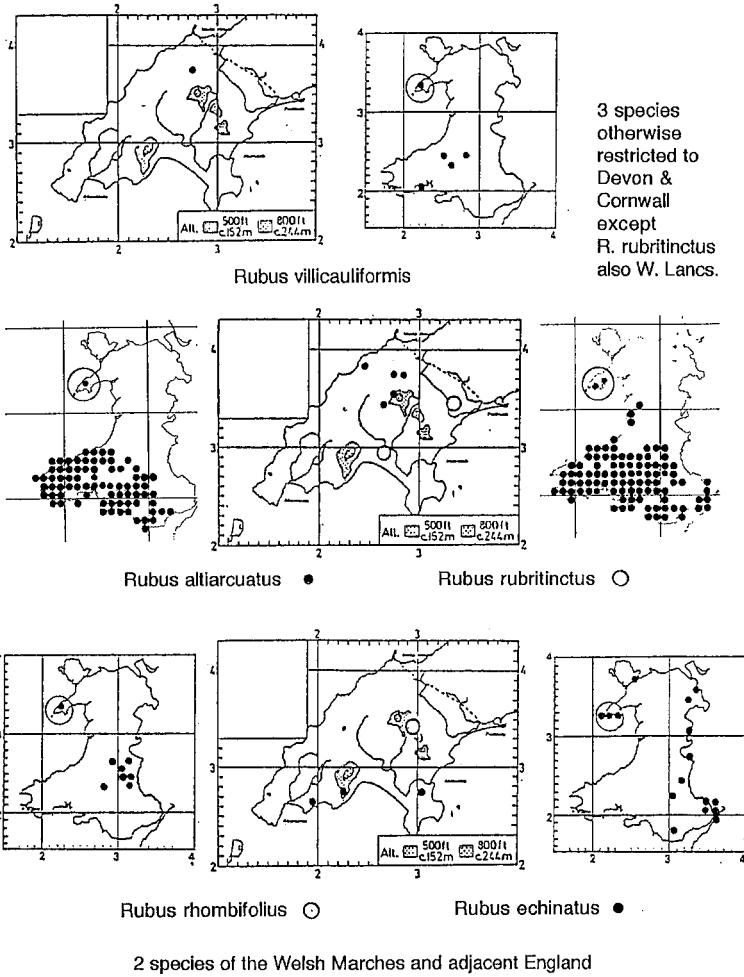
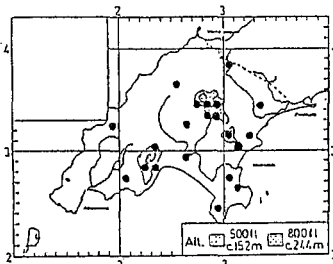
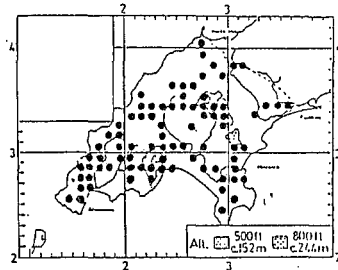


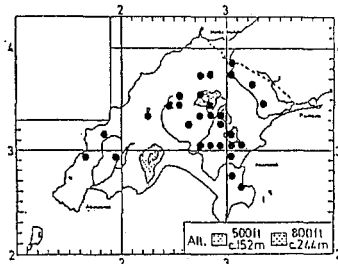
Fig. 1b

The 3 'Gwynedd' species

*Rubus ordovicum*

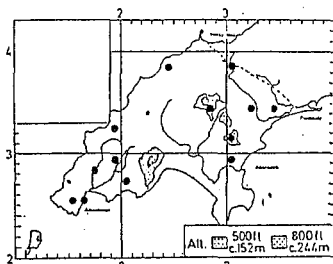


*Rubus riparius*

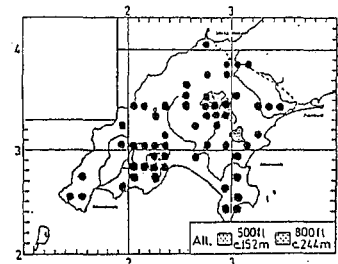


*Rubus segontii* MS

Fig. 2a



*Rubus bartonii*



*Rubus incurvatus*

Somewhat similar but wider range in N. Wales and adjacent England

Fig. 2b

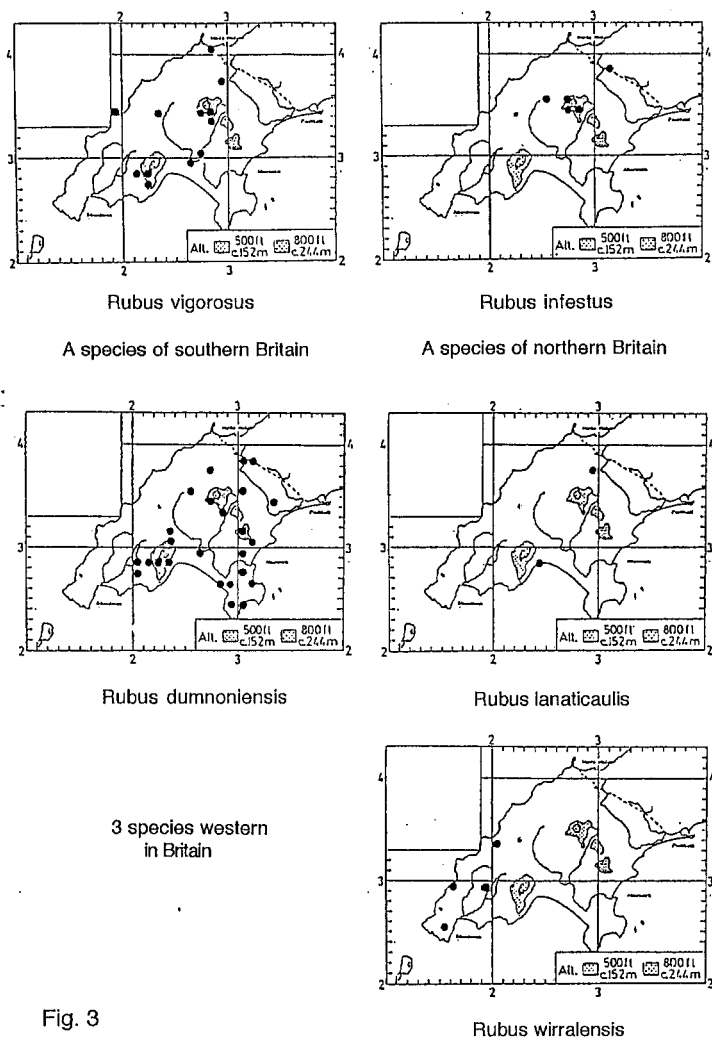


Fig. 3

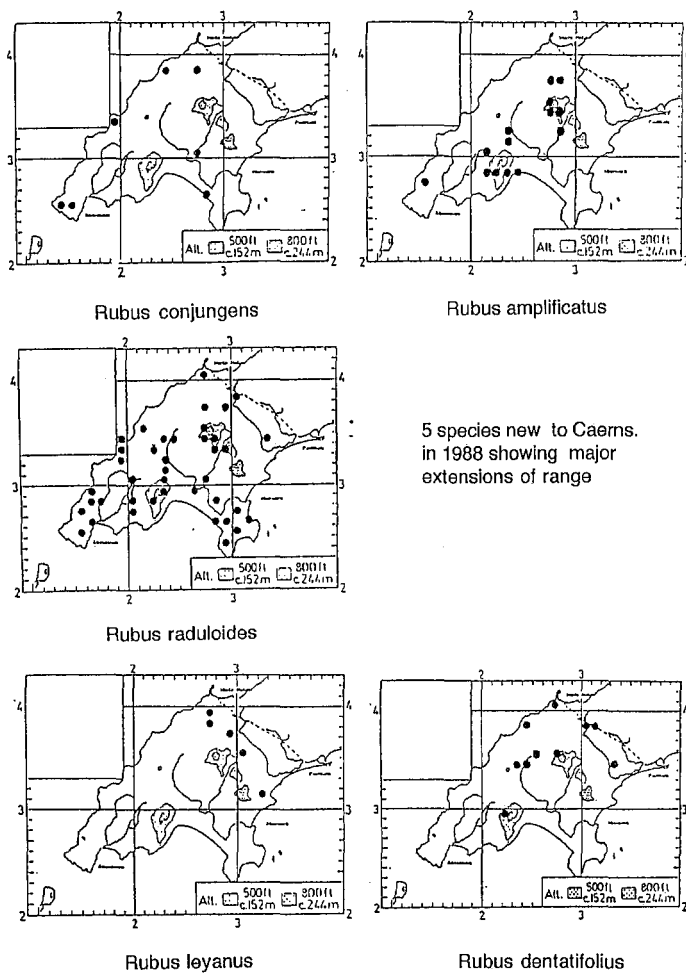


Fig. 4

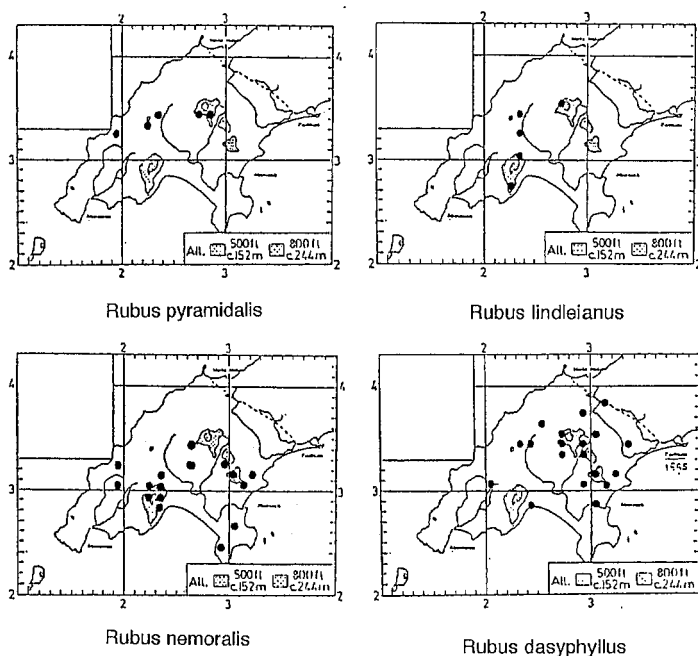


Fig. 5                      Relatively rare or restricted in  
W. Lleyn: widespread in England

## WELSH WILDLIFE LINK

BSBI has been invited to join Welsh Wildlife Link. We already participate in Wildlife Link which covers National and International issues. WWL was set up to ensure that issues with particular relevance to Wales should receive a fair hearing.

The role of WWL is to provide liaison on wildlife and countryside protection policy development. The member organisations jointly influence and work with Government and Statutory bodies to implement this policy in Wales and the U.K.

Member organisations nominate a representative to attend appropriate meetings. In addition the representative is responsible for endorsing WWL Group statements on behalf of BSBI and keeping BSBI informed of WWL activities.

It has been felt that plant conservation has lagged behind that of other groups such as mammals and that having a voice in organisations such as WL and WWL will help to redress the balance.

It is possible that we may be able to belong to WWL jointly with Plantlife thus halving the cost of the annual subscription but this will give us a smaller voice than if the two bodies belong separately.

I shall be interested to hear your views on whether BSBI should join WWL either independently or with Plantlife and become more involved with campaigning for plant conservation. I shall be especially interested in anyone out there willing to be the representative should we become members.

ELSA WOOD, The Nurtons, Tintern, Gwent NP6 7NX

## WELSH PLANT RECORDS - 1991

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 changed since 1958 can be given without giving the former name. However, for the critical genera *Rubus*, *Hieracium* and *Taraxacum*, the species numbers follow more recent works, viz: *Rubus* - *Brambles of the British Isles*, Edees & Newton, 1988, *Hieracium* - Sell & West in *Critical Supplement to the Atlas of the British Flora*, F.H.Perring, 1968, and *Taraxacum* - C.C.Haworth's typescript, *An Annotated List of British and Irish Dandelions*, 1988. English names are those in *English Names of Wild Flowers* ed. 2 (1986) by Dony *et al.*

The following symbols are used:

\* to indicate a new v.c. record

+ to indicate a new 10km square record

! to indicate that the species is not native to Wales

\$ to indicate a species which, although 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 records which are additional to those given in *Flowering Plants of Wales* by R.G.Ellis (1983) are listed. Other records are included at the discretion of the vice-county Recorder. The minimum grid reference is to a 10km square but, if supplied by the recorder, references to a 1km or even a 100m square may be included.

**Please note** that from *Welsh Plant Records - 1992*, the order and nomenclature will follow Kent's *List of Vascular Plants of the British Isles* and Stace's *New Flora of the British Isles*.

The Vice-county Recorders from 1/1/1993 are:

MONMOUTH, v.c. 35; T.G.Evans, La Cuesta, Mounton Road, Chepstow, Gwent NP6 5BS

GLAMORGAN, v.c. 41(East); P.S.Jones, 28b East Avenue, Kenfig Hill, Bridgend, Mid Glamorgan CF33 6NN

GLAMORGAN, v.c. 41(West); Dr Q.O.N.Kay, Dept. of Botany, University College, Singleton Park, Swansea, West Glamorgan SA2 8PP

BRECON, v.c. 42; M.Porter, Aberhoywy Farm, Cyffredyn Lane, Llangynidr, near Crickhowell, Powys NP8 1LR

RADNOR, v.c. 43; Dr D.R.Humphreys, Knill Court, Knill, nr Presteigne, Powys LD8 2PR

CARMARTHEN, v.c. 44; R.D.Pryce, Trevethin, School Road, Pwll, Llanelli, Dyfed SA15 4AL

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

CARDIGAN, v.c. 46; A.O.Chater, Windover, Penyrangor, Aberystwyth, Dyfed SY23 1BJ

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

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

CAERNARFON, v.c. 49; N.H.Brown, Treborth Botanic Garden, University College of North Wales, Bangor, Gwynedd

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

FLINT, v.c. 51; Dr G.Wynne, Gwylfa, Lixwm, Holywell, Clwyd CH8 8NQ

ANGLESEY, v.c. 52; R.H.Roberts, Quinton, 51 Belmont Road, Bangor, Gwynedd LL57 2HY

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

- 4/7. *Equisetum sylvaticum* L. (Wood Horsetail). Flush, Garden City, Ebbw Vale, SO167080, Shelagh Kerry, 1990.
- 29/1. *Ophioglossum vulgatum* L. (Adder's-tongue). About 1000 plants in meadow at Dinham, (RAF Caerwent), ST465915, Sq.Ldr Crockett, T.G.Evans, *et al.*, 1991; +Ty Mawr meadow, Starhill, SO470016, Elsa Wood, 1991.
- 46/9. *Ranunculus parviflorus* L. (Small-flowered Buttercup). About 100 plants on stony grassy banks, Dinham (RAF Caerwent), ST4691, T.G.Evans *et al.*, 1991. First record for c.90 years.
- 46/23. *Ranunculus baudotii* Godron. (Brackish Water-crowfoot). Reen, Lamby, Rummey Great Wharf, ST2377, T.G.& U.T.Evans, 1991.
- 57/2. *Ceratophyllum submersum* L. (Soft Hornwort). Reen, Rummey Great Wharf, ST2377, T.G.& U.T.Evans, 1991.
- 179/4. *Lepidium ruderae* L. (Narrow-leaved Pepperwort). Side of A40, Dixon, Monmouth, SO5214, T.G.Evans *et al.*, Welsh BSBI AGM., 1991. A rare v.c. casual.
- 197/7. *Cardamine raphanifolia* Pourret (Greater Cuckooflower). Extends for 3-400M down Whitebrook, SO5207; T.G.Evans, 1991. This species has spread extensively since first recorded over 10 years ago by Dr S.J.Tyler.
- 115/13. *Hypericum montanum* L. (Pale St John's-wort). Walls of Chepstow Castle, ST5394, recorded independently by R.Fraser and John V.H.Syms, 1991. Very rare in v.c.
- 115/14. *Hypericum elodes* L. (Marsh St John's-wort). Flush, Coronation Villas, Tredegar, SO1506, S.Kerry, 1990; +Acid flush, Coed Waun-Bleiddian, SO167045, S.Kerry, 1990.
- 143/1. *Spergularia rubra* (L.) J.S.Presl. & C.Presl (Sand Spurrey), On ash, rail ballast, Level of Mendalgief, Newport, ST3086, T.G.Evans, 1991.
- 154/9. *Chenopodium ficifolium* Smith (Fig-leaved Goosefoot). Field edge between arable and pasture, Chepstow Racecourse, ST5295, T.G. & U.T.Evans, 1991.
- 169/1. *Erodium maritimum* (L.) L'Hér (Sea Stork's-bill). Widespread in RAF Caerwent, ST4790 and elsewhere on ash (ballast). First reported by C.Titcombe in 1987. ?1,000's of plants, Sq.Ldr. Waldegrave, T.G.Evans, C.Titcombe *et al.*, 1991. Rare elsewhere in v.c.
- 192/5. *Trifolium squamosum* L. (Sea Clover). Sea 'wall', Goldcliff Pill, ST3682, T.G.Evans & Herefordshire Naturalists, 1991.
- 192/9. *Trifolium arvense* L. (Hare's-foot Clover). 1-2m<sup>2</sup> disused sidings on ash, Severn Tunnel Junction, ST4487, T.G.Evans, 1991.
- 200/3. *Astragalus glycyphyllos* L. (Wild Liquorice). +Rough grass, RAF Caerwent, ST4891, C. & G.Titcombe & T.G.Evans, 1991; +On Long Barrow, Helston Brake, Prtskewett, ST5088, Julian Woodman, first noticed by him in earl 1980s, still there in 1991. Four tetrads only in v.c.
- 202/1. *Ornithopus perpusillus* L. (Bird's-foot). Woodland path, Botany Bay, SO5102, T.G. & U.T.Evans, 1991. A scarce v.c. plant.
- 206/9. *Vicia orobus* DC. (Wood Bitter-vetch). +50-50 plants, haymeadow, Tyr Hen, Cefn Crib, ST2399, J.A.Whitfield & K.Rigby, 1988 & J.Woodman & C.Mockridge, 1991; +Meadow on common land (c.100 plants) Markham, SO1601, T.G. & U.T.Evans, 1991; +1 plant in wet heath Cwm Celyn, SO2008, J.Wohlgemuth, 1991.
- 218/2. *Agrimonia procera* Wallr. (Fragrant Agrimony). Rough grassy areas in NE area of RAF Caerwent, ST4892, T.G. & U.T.Evans, 1991. 100's of plants with *A. eupatoria* also present. Easily the best v.c. site for this very uncommon plant.
- 220/3/9. *Alchemilla xanthochlora* Rothm. (Lady's-mantle). Heath, Blackwood, ST1696, T.G. & U.T.Evans, 1991.
- 222/1. *Sanguisorba officinalis* L. (Great Burnet). +Wet grassland, Penllwyn (SSSI), ST1696, J.Woodman & C.Mockridge, 1991; +Memorial Park Meadows, Pontllanfraith, ST1796, J.Woodman & C.Mockridge; +Grassy bank, Cwm Du, SO2502, R.Fraser, 1991; +Semi-improved neutral grassland, Pen-y-garn, SO2801, S.Kerry, 1991; +Varteg Meadows, SO2605, S.Kerry, 1991. Confined to W of v.c.
- \*225/7. *Rosa stylosa* Desv. (Short-styled Field-rose). Rough grassy common, Stowball Common, Portskewett, ST499884, T.G.Evans, 1991, conf. G.G.Graham. First undoubted record for the county.
- \*225/8×7. *Rosa × andegavensis* Bast. (*R. canina* × *R. stylosa*) (a hybrid rose). Streamside and grassy bank, SE Caerleon, below Chistchurch, ST342897, T.G.Evans, 1990, det. G.G.Graham. First Welsh and county record.

- \*225/9gla. *Rosa caesia* subsp. *glauca* (Nyman) G.G.Graham & Primavesi (Glaucous Dog-rose). Waste ground in parkland, E Blackwood, ST1796, R.Fraser, 1990, det. G.G.Graham First record.
- 225/15. *Rosa rubiginosa* L. *sensu stricto* (Sweet-briar). Several bushes in hedgerow, roadside bank and rough of golf course, The Hendre, Monmouth, SO4514, T.G. & U.T.Evans, 1991.
- 232/7. *Sorbus torminalis* (L.) Crantz (Wild Service-tree). Steep wooded bank, Mounton, ST5193. T.G. & U.T.Evans, 1991.
- 247/1. *Drosera rotundifolia* L. (Round-leaved Sundew). Acid flush, Coronation Villas, Tredegar, SO1506, S.Kerry, 1990. An uncommon v.c. plant.
- 283/4. *Bupleurum tenuissimum* L. (Slender Hare's-ear). On grass near sea wall, W Goldcliffe, ST3782, T.G.Evans, 1991; +W of Porton House, ST3982, T.G. & U.T.Evans, 1991.
- 1286/1. *Petroselinum crispum* (Miller) Nyman ex A.W.Hill (Garden Parsley). Nr Keep, Chepstow Castle (not the crisped form), ST5394, R.Fraser & J.V.H.Syms, 1991.
- 325/4. *Rumex hydrolapathum* Huds. (Water Dock). Reen, Undy Common area, ST4386, T.G. & U.T.Evans, 1991. In 42 v.c. tetrads, mainly near R. Severn.
- 343/5. *Salix triandra* L. (Almond Willow). +Bank of R. Wye, Mounton, SO5112, B.J.Gregory, 1987; +Old ox-bow, R. Usk, W Abergavenny, SO2814, R.Fraser, 1989; +Bank of R.Wye, Nr Llandogo, SO5304, T.G.Evans, 1990; +Sandy River bank, Llanllowell, ST3898, T.G.Evans, 1991; +Meadow edge, Mounton, ST5093, T.G.Evans, 1991. All confirmed R.D.Meikle.
- 343/5×9. *Salix × mollissima* Hoffm. ex Elwert (*S. triandra* × *S. viminalis*) (Sharp-stipuled Willow). Sandy bank of R. Usk, Llanllowell, ST3898, T.G.Evans, 1991; +Bank of R. Usk, Llanfair Kilgeddin, SO3509, T.G.Evans, 1991. Both det. R.D.Meikle.
- 343/6. *Salix purpurea* L. (Purple Willow). Sandy right bank of R. Usk, Llanllowell, ST3898, T.G.Evans & D.E.Lewis, 1991; +Bank of R. Usk, Llanfair Kilgeddin, SO3508, T.G.Evans, 1991. Both conf. R.D.Meikle.
- 343/11×9. *Salix × sericans* Tausch ex A.Kerner (*S. viminalis* × *S. caprea*) (Broad-leaved Osier). +Old coal waste, Bran Bach Park, Tredegar, SO1110, T.G.Evans, 1988; +Ballast, Severn Tunnel Junction, disused sidings, ST4887, T.G.Evans, 1991; +Bank of R. Usk, Abergavenny, SO21, T.G.Evans & R.Fraser, 1991; +Linda Vista Car Park, SO3508, R.Fraser, 1991; +Bank of R. Wye, Monmouth, SO5113; T.G.Evans, 1991. All det. or conf. R.D.Meikle.
- 400/10. *Myosotis ramosissima* Rochel (Early Forget-me-not). 1000's of plants scattered over calcareous turf, RAF Caerwent, ST49, T.G. & U.T.Evans, 1991.
- !425/1×2×cup. *Mimulus guttatus* × *M. luteus* × *M. cupreus* (a hybrid monkeyflower). Cwm Gwyddon, ST2395, R.Fraser, 1991, Third v.c. site.
- \*435/19×13. *Euphrasia officinalis* × *E. nemorosa* (a hybrid eyebright). Extensive swarm on floor of disused carboniferous limestone quarry, Blackcliff, ST5398, T.G.Evans, 1988. det. A.J.Silverside. First Welsh record.
- 440/8. *Orobancha minor* Sm. var. *flava* (Common Broomrape). + Rough grassland, Newport Docks, ST3186, T.G.Evans, c.100 in 1970s reduced to 13 in 1991 due to disturbance; About 15 spikes growing on teasel or parsley (probably former), Chepstow garden, ST59, T.G.Evans, 1990 & 1991.
- 440/10. *Orobancha hederaceae* Duby (Ivy Broomrape). Growing on cliff top under Chepstow Castle, ST59, R.Fraser, 1991. A v.c. rarity.
- 448/1. *Thymus pulegioides* L. (Large Thyme). Numerous and widespread in short calcareous turf in RAF Caerwent, ST4790, T.G. & U.T.Evans, 1991.
- 455/3. *Salvia pratensis* L. (Meadow Clary). Rough meadow, electric fence preventing summer grazing has reduced plants from five to three, near old vicarage, Rogiet, ST4588, T.G.Evans, 1991. The only v.c. site.
- 469/2. *Scutellaria minor* Huds. (Lesser Skullcap). Marsh nr Castroggy brook, Bushes Farm, ST4495, C.Hurford & S.Westwood, 1991. Refind of an old record; +Marshy grassland, Pennar Gannol, ST2096, S.Kerry, 1991.
- 474/1. *Wahlenbergia hederacea* (L.) Reichb. (Ivy-leaved Bellflower). +Garden City, Ebbw Vale, SO1607, S.Kerry, 1990; Marshy grassland, Pennar Gannol, ST2096, S.Kerry, 1991.
- 499/1. *Scabiosa columbaria* L. (Small Scabious). Walls of Chepstow Castle, ST5394, John V.H.Syms, 1991. Third v.c. site.
- 539/1. *Carduus tenuiflorus* Curt. (Slender Thistle). Hundreds of plants scattered along 2km of Sea Wall, Rumney Great Wharf, ST233777 to ST248787, D.Upton, 1991. A scarce v.c. plant.
- 540/6. *Cirsium acaule* (L.) Scop (Dwarf Thistle). Calcareous meadow, Waltwood Hill, ST3887, Clive Hurford, 1991; +Meadow, Brockwells, ST4689, J.Woodman *et al.*, 1991.



- 540/8. *Cirsium dissectum* (L.) Hill (Meadow Thistle). +Nant Cwm-Crach, SO1700, S.Kerry, 1990; Marshy grass, Heol Ddu, ST1794, S.Kerry, 1991; +Grassland, Cwm Dows, SE Oakdale, ST1997, S.M.Gooch, 1991; +Ty Gwyn, ST2097, S.Kerry, 1991; +Flush, Crumlin Old Farm, ST202991, K.Rigby, A.Whitfield & S.Kerry, 1991; +Coed Cae marsh, SO2902, S.Kerry, 1991.
- \*1559/3. *Crepis setosa* Haller f. (Bristly Hawk's-beard), Meadow/house boundary, near Llanfoist, SO3011, R.Fraser, 1991. First record.
- 577/14. *Potamogeton obtusifolia* Mert. & Koch (Blunt-leaved Pondweed). Reed near Cold Harbour Pill, ST48, T.G. & U.T.Evans, 1991. Uncommon in v.c.
- 605/4. *Juncus compressus* Jacq. (Round-fruited Rush). Wet hollow near farm track, White House farm, near B4233 between Monmouth & Abergavenny, SO4214, P. & J.Hall, 1991. The only extant site, first recorded in 1966.
- 605/17. *Juncus subnodulosus* Schrank (Blunt-flowered Rush). Plentiful in two wet areas near Underwood and the M4, ST3889, T.Blackstock, C.Mockridge, G.Barter, J.Woodman & D.P.Stevens, 1991. The only two extant v.c. sites.
- 627/1. *Spiranthes spiralis* (L.) Chevall (Autumn Lady's-tresses). Three rosette patches, lawn, Chepstow garden, ST59, U.T.Evans, 1991.
- 629/1. *Neotilia nidus-avis* (L.) Rich (Bird's-nest Orchid). Lasgarn Wood, SO2703, Steven Williams, 1991. An uncommon v.c. orchid.
- 640/1. *Ophrys apifera* Huds. (Bee Orchid). Almost 700 spikes in disturbed ground, Newport Docks, ST3185, T.G.Evans, 1991.
- 642/5. *Orchis morio* L. (Green-winged Orchid). Lower Nex meadows, ST4798, C. & G.Titcombe, J.Woodman & C.Mockridge, 1991.
- 643/4. *Dactylorhiza praetermissa* (Druce) Soó (Southern Marsh-orchid). +Marshy acidic grassland, Ty'r Sais, SO1800, S.Kerry, 1990; +Marshy grassland, Heol Ddu, ST1794, S.Kerry, 1991.
- 663/23. *Carex strigosa* Huds. (Thin-spiked Wood-sedge). Extends over many meters along woodland path, Great Barnets Wood, ST5193, T.G.Evans, 1991.
- 663/54. *Carex paniculata* L. (Greater Tussock-sedge). Marshy grassland, Blaengavenny, SO3118, S.Kerry, 1991. Decreasing species due to drainage.
- 673/5. *Puccinellia rupestris* (With.) Fern & Weath. (Stiff Salmarsh-grass). Track near Sea Wall, Lamby, Rumney Great Wharf, ST2377, T.G.Evans, 1991; +near Sea Wall, Porton House, ST3982, T.G.Evans, 1991.
- 687/3. *Hordeum marinum* Huds. (Sea Barley). 1000's on short turf, near Sea Wall, Rumney Great Wharf, ST2377 & ST2478, T.G. & U.T.Evans, 1991. The best v.c. site.
- 693/2. *Helictotrichon pubescens* (Huds.) Pilger (Downy Oat-grass). Calcareous grassland, Wactwood Hill, ST3887, C.Hurford, 1991.
- 708/5. *Alopecurus bulbosus* Gouan (Bulbous Foxtail). +River Severn meadow, W of Caldicot Pill, ST4887, T.G.Evans, 1991; +Meadow, R. Wye, between M4 & Bulwark, ST5491, T.G.Evans, 1991. 100,000's of plants in the two best v.c. sites for this locally frequent species.

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

- \*1160Cor/lep. *Corispermum leptopterum* (Asch.) Iljin (an alien member of the Chenopodiaceae). Sandy fore-shore, Margam Burrows, SS78, P.S.Jones, 1983, det. E.J.Clement. First Welsh record.
- \*1163/alc. *Malva alcea* L. (Greater Musk-mallow). Waste ground, Sully, ST163679, S.G.Lambert, 1991, det. D.McClintock. First Welsh and county record.
- \*1164/thu. *Lavatera thuringiaca* L. (a tree-mallow). Waste ground near Sully, ST163679, S.G.Lambert, 1991, det. D.McClintock. First Welsh and county record.
- +1165/2. *Althaea hirsuta* L. (Rough Marsh-mallow). Waste ground, Barry Docks, ST125675, S.G.Lambert, 1991. First record since 1937.
- +202/1. *Ornithopus perpusillus* L. (Bird's-foot). A few plants in sheep-grazed unimproved grassland on village green, Reynoldstone, Gower, SS482900, Q.O.N.Kay, 1985. First certain post 1950 record for Gower.
- \*1388Pha/tan. *Phacelia tanacetifolia* Bentham (Phacelia). In scrub, top of railway cutting, Whitchurch, Cardiff, ST152795, Mr & Mrs M.F.Thomas, 1991. Second Welsh record, a garden throughout which has established itself.
- \*1455/off. *Salvia officinalis* L. (Sage). Entrance to waste ground near railway station, Aberdare, SO005028, G.Hutchinson, 1991. A garden escape.

- \*!455/ref. *Salvia reflexa* Hornem. (Mintweed). Bank of R. Neath, below Pont-nedd-fechan, SN9007, G.Hutchinson, 1984, det. D.McClintock. First Welsh and county record.
- \*!522/sum. *Conyza sumatrensis* (Retz.) E.Walker (Guernsey Fleabane). Garden weed, Llanishen, Cardiff, ST168817, D.Hart, 1991. First Welsh and county record.
- \*!530/1. *Santolina chamaecyparissus* L. subsp. *tomentosa* (Pers.) Arcangeli (Lavender-cotton). Link road embankment, Leckwith, Cardiff, ST169738, J.P.Curtis, 1980, det. D.McClintock. First Welsh and County record for subspecies, second county record for species.
- \*!569/1. *Egeria densa* Planchon (Large-flowered Waterweed). Among *Typha latifolia* in small pond, Fairwater Park, Cardiff, ST143778, M.E.Gillham, 1988, det. D.A.Simpson. First Welsh and county record.

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

- +38/2. *Helleborus viridis* L. (Green Hellebore). Base of limestone wall, pasture near Vaynor, SO11, J.Davies, 1990.
- \*!71/1. *Hirschfeldia incana* (L.) Lagrèze-Fossat (Hoary Mustard). Roadside verge, near Brecon, SO067278, M.Porter, 1991. First record.
- +113/5. *Viola reichenbachiana* Jordan ex Boreau (Early Dog-violet). Lane bank, Cwm Gwennol, SN93, M.Porter, 1991.
- \*+191/1. *Melilotus altissimus* Thuill. (Tall Melilot). Roadside near Brecon, SO02, M.Porter, 1991.
- +206/9. *Vicia orobus* DC. (Wood Bitter-vetch). Bank at edge of pasture, near Llanfihangel-nant-Bran, SN93, D.E.Gray, 1990
- +206/10. *Vicia sylvatica* L. (Wood Vetch). Plantation between Llangattock and Llangynidr, SO11, M.Porter, 1991
- +!207/2. *Lathyrus nissolia* L. (Grass Vetchling) Roadside verge near Brecon, SO078274, M.Porter, 1991. Second record.
- \*211/11/21. *Rubus nemorosus* Hayne & Willd. (a bramble). River bank, Llanhamlach, SO078274, M.Porter, 1991, conf. A.Newton. First record.
- \*211/11/229. *Rubus bloxamii* (Bab.) Lees (a bramble). Ride in conifer plantation, Crychan Forest near Tirabad, SN8742, M.Porter, 1991, det. A.Newton, First record.
- \*!224/1. *Acaena anserinifolia* (Forster & G.Forster) Druce, (Bronze Pirri-pirri-bur). Edge of ride in conifer plantation near Llangammarch, SN94, M.Porter, 1991.
- +232/7. *Sorbus torminalis* (L.) Crantz (Wild Service-tree). Low cliffs along river, Llangynidr, SO12, M.Porter, 1990
- +263/1. *Viscum album* L. (Mistletoe). On Crab-apple near Llanwrthwl, SN96, R. Knight, 1990.
- +\$417/1. *Misopates orontium* (L.) Raf. (Lesser Snapdragon). Garden weed, Trallong, SN92, P.Strong, 1990. Second record.
- +\$437/1. *Parentucellia viscosa* (L.) Caruel (Yellow Bartsia). Grassland by new pond, near Brecon, SO02, C.H.G.Allum, 1990. Probably introduced in grass seed.
- +\$592/1. *Ruscus aculeatus* L. (Butcher's-broom). Former garden, Llanhamlach, SO02, T.Sykes, 1991.
- +629/1. *Neottia nidus-avis* (L.) Rich. (Bird's-nest Orchid). Deciduous wood, Alltmawr, SO04, P. & G.Ransome, 1990.
- +642/5. *Orchis morio* L. (Green-winged Orchid). Meadow, Bwlch, SO12, T.B.Williams, 1991
- +650/1. *Spirodela polyrhiza* (L.) Schleiden (Greater Duckweed). River Usk, Llangynidr, SO11, M.Porter, 1990.
- +663/65. *Carex divulsa* Stokes subsp. *divulsa* (Grey Sedge). Roadside bank, formerly railway embankment, Brecon, SO02, R.G.Woods, 1991.
- +683/15. *Bromus commutatus* Schrader (Meadow Brome). Meadow, N of Llanwrtyd Wells, SN84, S.Gooch, 1990, det. T.A.Cope. Second record.
- 687/1. *Hordeum secalinum* Schreber (Meadow Barley). Lane verge, E of Coelbren, SN81, M.Porter, 1991.

# **RADNOR, v.c. 43** (comm. D.R.Humphreys)

- \*15/8. *Asplenium septentrionale* (L.) Hoffm. (Forked Spleenwort). Five plants on S facing Cambrian grit rock face, Yattwood, Dolyhir, SO246583, D.C.Boyce, D.R.Drewett & R.G.Woods, 1991. First record.

- +194/4. *Draba muralis* L. (Wall Whitlowgrass). About 50 plants on tipped spoil with garden plants, roadside verge of A470, S of Ashfield, Ysfa, SN9763, R.G.Woods, 1990. Spoil may have come from gardens affected by road widening in Llanwrthwl, v.c. 42!
- \*154/14. *Chenopodium rubrum* L. (Red Goosefoot). About 20 plants on organic matter on stony roadside tip, S of Upper Pitts Farm, Stanage, SO3170, R.G.Woods, 1990. +On mud of lake margin, Llanbwchllyn, SO1246, D.R.Druit & J.D.Soane, 1990, conf. R.G.Woods. First and second records.
- +232/7. *Sorbus torminalis* (L.) Crantz (Wild Service-tree). Only one small tree on S facing cliff in wooded gorge of Bach Howey, below Craig, Pwll Du, Llandeilo Graban, SO119435, R.G.Woods, D.C.Boyce & R.Cooke, 1991.
- +1425/1×2. *Mimulus guttatus* DC. × *M. luteus* L. (a hybrid monkeyflower). Shingle of River Ithon, Llandewi Ystradenny, SO105685, A.C.Powell, 1991.
- \*\$472/5. *Plantago coronopus* L. (Buck's-horn Plantain). Close grazed turf on roadside bank with *Cerastium diffusum* and *Trifolium micranthum*, Llannerch-y-cawr, Elan Valley, SN900616, M.Porter, 1991. First record.
- +656/3. *Eleocharis quinqueflora* (F.X.Hartmann) Schwarz (Few-flowered Spike-rush). Peaty flush, below Blaenocoel, Cwm Coel, Elan Valley, SN895638, R.G.Woods, 1991.
- \*663/81. *Carex dioica* L. (Dioecious Sedge). *Molinia* dominated wet flush, below Craig y Bwlch, Llansantfraid Cwmdeuddwr, SN900619, D.Reed, conf. R.G.Woods, 1991. First record.

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

- +21/7×6. *Dryopteris* × *deweveri* (Jansen) Jansen & Wachter (*D. dilatata* × *D. carthusiana*) (a hybrid buckler-fern). One clump in ungrazed valley mire, NE of Ffynnon Newydd, SN428276, I.K.Morgan, 1991.
- +127/1. *Azolla filiculoides* (Water Fern). Ornamental Pond, Gellideg Farm, Llandyfaelog, SN423105, T.S.Crosby, 1991. In varying amounts from year to year. First record. +Inlet to freshwater lake, Sandy Water Park, Llanelli, SN493005, G.Hutchinson, 1991. Only extant record for v.c. 44, second record.
- +38/2. *Helleborus viridis* L. (Green Hellebore). One plant, presumably planted, roadside bank, S of Brynmadog, SN534317, I.K.Morgan, 1991.
- 140/1×var. *Aconitum* × *cammarum* L. (*A. napellus* × *A. variegatum*) (Hybrid Monk's-hood). Roadside, Llangunnor, Carmarthen, SN422196, G.Hutchinson, 1990. Third Welsh and first county record.
- \*57/1. *Ceratophyllum demersum* L. (Rigid Hornwort). Freshwater lake, Sandy Water Park, Llanelli, SN493005, I.K.Morgan, 1991. First record.
- \*58/3. *Papaver lecoqii* Lamotte (Yellow-juiced Poppy). About 30 plants on burnt disturbed area on Carboniferous limestone cliff, Dolwen Point, Pendine, SN233078, I.K.Morgan, 1991.
- +179/1. *Lepidium sativum* L. (Garden Cress). River shingle, Afon Lleidi, Llanelli, SN509006, I.K.Morgan, 1991, conf. G.Hutchinson.
- \*102/5. *Rorippa amphibia* (L.) Besser. (Great Yellow-cress), On banks of R. Llŵchwr, Llanedi near Pontardulais, SN5906, I.K.Morgan, 1984. First record.
- +1108/5. *Sisymbrium altissimum* (Tall Rocket). About 18 plants on stable coastal shingle, Penrhynwyn, Machynys, SS516974, I.K.Morgan, 1991.
- +1124/cor. *Lychnis coronaria* (L.) Murray (Rose Campion). One plant on waste ground, site of old sidings, 1km E of Llanelli Station, SS516991, G.Hutchinson, 1991. Second record.
- +132/1. *Myosoton aquaticum* (L.) Moench (Water Chickweed). Penclacwydd Wildfowl Centre, SS530986, B.Stewart, 1991.
- +1149/3. *Montia sibirica* (L.) Howell (Pink Purslane). Semi-natural riverside woodland, wooded river cliff below Pont ar Finnant picnic site, SN507201, I.K.Morgan, 1991.
- 156/5. *Atriplex laciniata* L. (Frosted Orache). +One plant only with *Salsola kali* on tide line, Tywyn Point, SN3506, I.K.Morgan, 1991; +Four plants on drift line, Pembrey Harbour, SN436003, I.K.Morgan, 1991.
- 168/14. *Geranium pusillum* L. (Small-flowered Crane's-bill). +Several plants on waste ground, near Trostre roundabout, Llanelli, SS527997, I.K.Morgan, 1991; +One plant in flower and fruit with a few plants of *Ornithopus perpusillus* nearby, in short dry turf, Olchr-y-fforest ridge, SN763377, J.& M.Iliff, 1991.
- \*1170Tro/maj. *Tropaeolum majus* L. (Nasturtium). Behind rubble at edge of sea shore, St John's Hill, Laugharne, SN302104, G.Hutchinson, 1991. First record.

- +185/1. *Genista tinctoria* L. (Dyer's Greenweed). Grasslan, N side of Usk Reservoir, SN825296, H.J.Killick, 1991.
- +192/24. *Trifolium micranthum* Viv. (Slender Trefoil). Sandy area above High Water Mark, SW of Coleman, SN396067, I.K.Morgan, 1991.
- +1203/1. *Coronilla varia* L. (Crown Vetch). One clump in full flower on wall, Llanelli Railway Station, SS508993, G.Hutchinson, 1991.
- +206/9. *Vicia orobus* DC. (Wood Bitter-vetch). On rocky slope with *Jasione montana*, SE of WaunDdu Mire SSSI, SN818297, H.J.Killick, 1991.
- \*207/4.par. *Lathyrus pratensis* L. var. *parvifolius* (Meadow Vetchling). Frequent along gravelly shore in SE corner of lake, Sandy Water Park, Llanelli, SN495005, I.K.Morgan, 1991. First record of variety.
- \$210/1. *Filipendula vulgaris* Moench (Dropwort). +Frequent in N side of Cenarth churchyard, SN271415, I.K.Morgan, 1991; +Near Cwm Amm, SN576455, T.S.Crosby, 1991.
- 211/2. *Rubus saxatilis* L. (Stone Bramble). Wet, steep, rocky, streamside, above Pont Clydach, Mynydd Du, SN743189, I.K.Morgan, 1991. Plant refound in same locality as Guile's 1951 record.
- +212/13. *Potentilla erecta* (L.) Rausch. subsp. *strictissima* (Zimm.) A. Richards (Tormentil). Quartzite rock outcrop, SW of Carmel, SN584158, I.K. Morgan, 1991. Third record.
- +\$223/2. *Sanguisorba minor* Scop. ssp. *muricata* Briq. (Fodder Burnet). Hedgebanks on restored opencast site, Carway, SN455067, F.H.Webb, 1991. Frequent constituent of restored opencast site seed mixes.
- +1232/cro. *Sorbus croceocarpa* P.D.Sell (A whitebeam). Four trees on open oakwood on hillside, WSW of Llety-yr-Ychen Fawr, Burry Port, SN455015, I.K.Morgan, 1991, det. P.J.M.Nethercott. Second record.
- \*1259/aqu. *Myriophyllum aquaticum* (Velloso) Verdc. (Parrot's-feathers). Former industrial pond, now used for amenity, Dafen Pond, Llanelli, SN531015, I.K.Morgan, 1991. First record.
- +287/1. *Sison amomum* L. (Stone Parsely). Several strong plants on path edge, Penclacwydd Wildfowl Centre, Llwynhendy, SS530986, B.Stewart, 1991, First record since Motley's unlocalised record of c.1840.
- +320/14. *Polygonum minus* Hudson (Small Water-pepper). Rich muddy substrate on old oxbow of R. Tywi, Bishop's Pond, Abergwili, near Carmarthen, SN443/209, I.K.Morgan, 1991, conf. G.Hutchinson. First localised record.
- +320/15. *Fallopia convolvulus* (L.) A.Löve (Black Bindweed). Waste ground, N end of Usk Reservoir Dam, SN832291, H.J.Killick, 1991.
- +1336/1. *Alnus incana* (L.) Moench (Grey Alder). Forestry roadside, Crychan Forest, SN844389, J. & M.Illiff, 1991, conf. G.Hutchinson.
- \*1351/1. *Gaultheria shallon* Pursh (Shallon). Edge of conifer plantation, Gelli Aur, SN597197, I.K.Morgan, 1991.
- 411/1. *Hyoscyamus niger* L. (Henbane). Three plants only, in replanted Corsican Pine plantation on caostal dunes, Pembrey Forest, SN392033, Jane Kelsall, 1991. Last seen at this site in 1977.
- +430/23. *Veronica agrestis* L. (Green Field-speedwell). Waste ground, N end of Usk Reservoir Dam, SN832291, H.J.Killick, 1991.
- \*1431/fra. *Hebe × franciscana* (Eastw.) Souster (Hedge Veronica). Self sown in wall on vegetated coastal cliff above Dylan Thomas' Boathouse, Dylan's Walk, Laugharne, SN305110, BSBI Field meeting, 1991. First record.
- +437/1. *Parentucellia viscosa* (L.) Caruel. (Yellow Bartsia). Over 50 plants on disturbed ground, Garnant opencast site, SN683131, R.D.Pryce, 1991. First record away from coastal dunes.
- +1455/1. *Salvia verticillata* L. (Whorled Clary). Waste ground on disused railway sidings, Morfa, Llanelli, 1km E of Llanelli Station, SS517991, G.Hutchinson, 1991. Second record and first since 1970.
- \*1480/eri. *Lobelia erinus* L. (Garden Lobelia). One plant in flower, river shingle, R. Teifi, NE of Pentrecwrt, SN392395, G.Hutchinson, 1991. First record.
- 481/1. *Sherardia arvensis* L. (Field Maddar). +Several plants in sandy grassland, Penrhynwgwyn, Machynys, SS516974, I.K.Morgan, 1991; +River shingle, Afon Tywi, Llanwrda, SN715307, I.K.Morgan, 1991.
- +488/1. *Viburnum lantana* L. (Wayfaring-tree). Aberhenwen, SN82J, H.J.Killick, 1991.
- +494/2. *Valerianella carinata* Lois (Keeled-fruited Cornsalad). Few plants as weeds on bare ground, New Road, Furnace, Llanelli, SN503012, I.K.Morgan, 1991. Second record.

- +1502/3. *Bidens frondosa* L. (Beggarticks). Witchett Pool, Laugharne, SN2807, V.Gordon, 1956, det. G.Hutchinson. Second record.
- +514/1. *Filago vulgaris* Lam. (Common Cudweed). Mynydd Myddfai, SN82E, H.J. Killick, 1991. Third record and second post 1970.
- +558/1/223. *Hieracium vagum* Jord. (a hawkweed). Disturbed grassland, Sandy Water Park, Llanelli, SN497000, G.Hutchinson, 1991, det. J.Bevan.
- 577/19. *Potamogeton crispus* L. (Curled Pondweed). +In pond created in restored opencast land 4 years previously, Bryngwyn Farm, Penygroes, SN588143, J.Savidge, 1991; +Flooded limestone quarry, Pistyll Quarry Pond, Llandybie, SN624167, I.K.Morgan, 1991.
- !649/2. *Arum italicum* Mill. (Italian Lord's-and-Ladies). Base of wall, NE of Dylan Thomas' Boathouse, Laugharne, SN308112, I.K.Morgan, 1991. Previously recorded from Laugharne by J.F.Thomas in 1954.
- +650/4. *Lemna gibba* L. (Fat Duckweed). Slightly brackish water in ditch, N of Glanrhyd Farm, Pembrey, SN406043, I.K.Morgan, 1991; +Garden pond, Towy View, near Ffairfach, SN640225, I.K.Morgan, 1991. First and second records since Motley's unlocalised record of c.1840.
- \*!650/min. *Lemna minuscula* Herter (Least Duckweed). +Very abundant in ditch alongside 'Ffordd-y-Wagen', between Burry Port and Pwll, I.K.Morgan, 1991; +Flooded areas of reed swamp, E of Burry Port, SN458010, I.K.Morgan, 1991. First and second records.
- +663/57. *Carex otrubae* Podp. (False Fox-sedge). Rocky ground near old reservoir, Cwm Tawel, S of Cynwyl-elfed, SN385257, I.K.Morgan, 1991.
- +672/3. *Vulpia myuros* (L.) C.C.Gmel. (Rat's-tail Fescue). Roadside gravel, Crychan Forest, SN845389, J.& M.Iliff, 1991, det. G.Hutchinson.
- +676/9. *Poa compressa* L. (Flattened Meadow-grass). Restored grassland, Plasgwyn Farm, Penygroes, SN585140, K.A.Medcalf, 1991. This grass has appeared in several trial *Carum*-establishment plots on restored opencast land. It may have been a constituent of original seed mix used c.15 years ago.
- +680/1. *Briza media* L. (Quaking-grass). Aberhenwen, SN82J, H.J.Killick, 1991.
- 691/1. *Trisetum flavescens* (L.) Beauv. (Yellow Oat-grass). +Roadside verge, Mynydd Figyn, SN603303, T.S.Crosby, 1991, +Grassland, edge of forestry plantation, Aberhenwen, SN834290, H.J.Killick, 1991.
- +700/1. *Calamagrostis epigejos* (L.) Roth (Wood Small-reed). A stand about 1m square, old dried-up pulverised fuel ash lagoon on site of old power station, W of Tywyn Bach, Pwll, SN460005, I.K.Morgan, 1991.
- \*!718/uti. *Echinochloa utilis* Ohwi & Yab. (Japanese Millet). River shingle, Afon Lleidi, Llanelli, SN509006, I.K.Morgan, 1991, det. G.Hutchinson. Second Welsh and first county record.

# **PEMBROKE, v.c. 45 (Comm. S.B.Evans)**

- 1/4. *Lycopodium clavatum* L. (Stag's-horn Clubmoss). Several patches on heathland, E of Crugiau Dwy, SN1731, S.B.Evans, 1991.
- 15/2. *Asplenium billotii* F.W.Schultz (Lanceolate Spleenwort). Two clumps on sea cliff, W of Porth Lleuog, Ramsey Island, SM6922, S.B.Evans, 1991; 4 clumps on sea cliff, Foel Fawr, Ramsey Island, SM7022, S.B.Evans & J.E.Hodges, 1991.
- 29/1. *Ophioglossum vulgatum* L. (Adder's-tongue). Three fronds on dune grassland over limestone, Stackpole Warren, SR979949, S.B.Evans & R.J.Haycock, 1991.
- 189/3. *Ononis reclinata* L. (Small Restharrow). 15 plants, limestone sea cliff, New Quay, Trevallen Downs, SR9793, A.Jones, 1991; 26 plants on sandy limestone cliff, Broad Haven, Stackpole, SR9794, P.Brown, 1991; 190 plants on limestone sea cliff, E of Proud Giltar, Penally, SS1098, A.Jones, 1991; 160 plants on limestone sea cliff, W of Giltar Point, Penally, SS1198, A.Jones, 1991.
- 192/1. *Trifolium ornithopodioides* L. (Bird's-foot Clover). Large population with *Rumex pulger* & *Ranunculus parviflorus* in short turf on tractor traff, Ramsey Island, SM706237, S.B.Evans, 1991.
- 195/4. *Lotus subbiflorus* Lag. (Hairy Bird's-foot-trefoil). 7 plants on edge of low sea cliff, harbour, Ramsey Island, SM706236, S.B.Evans, 1991.
- 411/1. *Hyoscyamus niger* L. (Henbane). Boggy area behind slurry pit, Lower Treleddyn Farm, St David's, SM731258, T. Spittle, 1991.

- +420/2. *Orobanche purpurea* (Jacq.) Yarrow Broomrape). About 40 clumps, many with multiple stems, dunes over limestone, Church bank and dunes W of Manorbier Church, SS0697, M.Higgins, 1991. First record for over 40 years and only extant site.
- +440/8. *Orobanche minor* Sm. (Common Broomrape). Disused railway line, Westfield Pill, SM9606, A.Hanson, 1991.
- +494/2. *Valerianella carinata* Lois. (Keeled-fruited Cornsalad). Several plants in disturbed ground, Pavement edge, Old Mill grounds, Haverfordwest, SM952162, Jo Hannah, 1991.
- +541/1. *Silybum marianum* (L.) Gaertn. (Milk Thistle). Vegetable garden, St Nun's Street, St David's, SM721249, Mr Spens, 1991.
- +629/1. *Neottia nidus-avis* (L.) Rich. (Bird's-foot Orchid). 3 spikes only in cleared secondary woodland, Old Iron Works, Stepside, SN140073, S.P.Chambers, N.Wyatt & D.Armstrong, 1991.
- +686/1. *Leymus arenarius* (L.) Hochst. (Lyme-grass). Sand dunes, Freshwater East, SS016976, J.W.Donovan, 1991.

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

- +1/4. *Lycopodium clavatum* L. (Stag's-horn Clubmoss). Fruiting abundantly on *Calluna* heath at edge of Esgair Fraith lead mine, 8km E of Tal-y-bont, SN742911, A.O.Chater, 1991.
- +1/5. *Diphasastrum alpinum* (L.) J.Holub (Alpine-clubmoss). Summit moorland, 1km WSW of Carnfach-bugeilyn, Pumlumon Fawr, SN819901, A.O.Chater, 1991; stony heath at SW corner of Llyn Uchaf, N of Cwm Ystwyth, SN803761, A.O.Chater, 1991.
- 3/2. *Isoetes echinospora* Durieu (Spring Squillwort). Dominant over c.2 acres of bed of Cwm Rheidol Reservoir, SN695795, A.O.Chater, 1991. An even-aged population of young plants, just producing spores after the reservoir had been drained for about ten weeks.
- \*4/5×9. *Equisetum fluviatile* L. × *E. arvense* L. (a hybrid Horsetail). Disused railway embankment, Pendinas, Aberystwyth, SN581801, A.O.Chater, 1991; disturbed pasture, Llwyn-llwyd, Penparc, SN201488, A.O.Chater, 1991. First and second records.
- +4/7. *Equisetum sylvaticum* L. (Wood Horsetail). Scattered over several acres of alder carr, Nant Wysg, Talsarn, SN560549, A.O.Chater, 1991. By far the largest population known in Cards.
- +19/1. *Cystopteris fragilis* (L.) Bernh. (Brittle Bladder-fern). c.60 plants on old mortared wall of Blaenmyherin farmyard, SN800796, A.O.Chater, 1991.
- +21/8. *Dryopteris aemula* (Ait.) Kuntze (Hay-scented Buckler-fern). One plant by stream in Cwm Castell, Llyfnant, SN7397, D.A.Ratcliffe and R.G.Woods, 1976. The only record from this valley, and not seen here since.
- +22/2. *Polystichum aculeatum* (L.) Roth (Hard Shield-fern). Damp E-facing cliff by stream in Arth valley at Monachdy, SN500629, A.O.Chater and A.P.Fowles, 1991.
- +29/1. *Ophioglossum vulgatum* L. (Adder's-tongue). Pasture by Tal-glas, Pontsaeson, SN556632, A.O.Chater, 1991; pasture near Cae'r-meirch, Pontrhyd-y-groes, SN751735, A.Jones, 1991.
- +46/7. *Ranunculus sardous* Crantz (Hairy Buttercup). Scattered over several acres of sandy pasture, Gwbert, SN163498, A.O.Chater, 1991, conf. P.D.Sell. First localised record since 1930.
- +158/6. *Papaver somniferum* L. (Opium Poppy). Eroding dune slope above estuary, SE of Penyregyd, Gwbert, SN164485, A.O.Chater, 1991; waste ground, Aberaeron, SN459627, A.O.Chater, 1991; waste ground by railway, Aberystwyth, SN588811, A.O.Chater, 1991; overgrown refuse tip, S side of Pendinas, Aberystwyth, SN584798, A.O.Chater, 1991. Also at other sites in the same squares, apparently suddenly increasing this year.
- 66/2bab. *Fumaria capreolata* L. subsp. *babingtonii* (Pugsley) P.D.Sell. (White Ramping-fumitory). Potato field 500m E of Mwnt church, SN200520, A.O.Chater & D.L.Kelly, 1991.
- +67/4. *Brassica nigra* (L.) Koch (Black Mustard). Abundant in places on N bank of Afon Teifi downstream of Llechryd bridge, SN217436, A.O.Chater, 1991.
- +80/2. *Coronopus didymus* (L.) Sm. (Lesser Swine-cress). By road in caravan site by mouth of Afon Wyre, Llanrhystud, SN530698, A.O.Chater, 1991; reclaimed area of refuse tip, Pendinas, Aberystwyth, SN584798, A.O.Chater, 1991.
- +102/2×1. *Rorippa microphylla* (Boenn.) Hyl. × *R. nasturtium-aquaticum* (L.) Hayek (Hybrid Water-cress). Muddy watercourse in flush in pasture S of Old Cilgwyn, Adpar, SN316414, A.O.Chater, 1991.

- \*102/4. *Rorippa islandica* (Oeder ex Murray) Borbás (Northern Yellow-cress). Several plants on flat rocks by Afon Teifi just below Cenarth bridge, SN269416, A.O.Chater, 1991, det. T.C.G.Rich, conf. B.Jonsell. First Welsh record.
- +113/11. *Viola lutea* Hudson (Mountain Pansy). Top of Foel y Bryn, Allt-y-goch quarries, Cwrtnewydd, SN489481, A.O.Chater, 1991. A very isolated population at the SW extremity of its range in Cards.
- 123/6. *Silene gallica* L. (Small-flowered Catchfly). Over 1000 plants on lightly ploughed shaley slope at seaward edge of arable field 350m NE of Tygwyn farm, Mwnt, SN200521, A.O.Chater & D.L.Kelly, 1991.
- 133/4. *Stellaria neglecta* Weihe (Greater Chickweed). Edge of oakwood, Coed Cwm Du, Cwm Cou, SN306426, A.O.Chater, 1991. Apparently rare in Cards., and only seen in 3 sites in the last decade.
- +134/3. *Melampyrum pratense* L. var. *hians* Druce (Common Cow-wheat). Oakwood in dingle above Glynissa, Llangetho, SN619591, A.O.Chater, 1991. This variety seems about as common as the typical plant in Cards., occurring in both lowland woods and upland moorland.
- +141/1. *Arenaria serpyllifolia* L. (Thyme-leaved Sandwort). Sandy slope, N side of Banc y Warren, Penparc, SN203477, A.O.Chater, 1991.
- +154/14. *Chenopodium rubrum* L. (Red Goosefoot). 4 plants in hollow reached by high spring tides just NW of Information Centre, Ynys-las Dunes NNR, SN609941, A.O.Chater, 1991. Known here for c.15 years.
- +156/4. *Atriplex glabriuscula* Edmonst. (Babington's Orache). Stony slope at top of beach, Tresaith, SN278515, A.O.Chater, 1991.
- \*158/12. *Geranium rotundifolium* L. (Round-leaved Crane's-bill). Waste ground and scrub by Parish Hall, Llanbadarn Fawr, SN598810, S.P.Chambers, 1991. One of a number of naturalised aliens here presumably originating from the garden of J.H.Salter (d.1942) which is adjacent to the site.
- \*170/3. *Oxalis stricta* L. (a Yellow-sorrel). Several plants by side of track through rough pasture 200m S of Glanrheidol, Capel Bangor, SN663792, A.O.Chater, 1990.
- \*170/exi. *Oxalis exilis* Cunn. (Least Yellow-Sorrel). Abundant and in places dominant on lawns of Carrog mansion, Llanddeiniol, SN562724, A.O.Chater, 1991; a few plants, among abundant *O. corniculata*, on pavement and in alleys between houses, NW of Adpar bridge, SN306411, A.O.Chater, 1991. First and second records.
- +171/4. *Impatiens glandulifera* Royle (Indian Balsam). Near top of waterfall on sea cliffs, Tresaith, SN279516, A.O.Chater, 1991. Also in great abundance up the valley of this stream, the Afon Saith, even in dry pastures and dry slope woods.
- +192/9. *Trifolium arvense* L. (Hare's-foot Clover). Rocky bank by pond, Towyn Farm, Gwbert, SN163500, A.O.Chater, 1991.
- +206/2. *Vicia tetrasperma* (L.) Schreb. (Smooth Tare). Disused, overgrown railway 200m N of Felin-y-mor, Aberystwyth, SN580805, A.O.Chater, 1991; locally abundant in rank pasture 700m S of Old Cilgwyn, Adpar, SN316411, A.O.Chater, 1991.
- +1206/12. *Vicia lutea* L. subsp. *lutea* (Yellow-vetch). Several plants on weedy earth mound on building site, Cross Inn, 2km S of New Quay, SN388571, A.O.Chater, 1991.
- +207/2. *Lathyrus nissolia* L. (Grass Vetchling). In quantity along railway embankment opposite Ynys Edwin, Eglwys-Fach, SN6796, 1968-1972, not seen since, W.M.Condry. Second record, the first published one having been on the disused railway embankment at Cardigan, 1976-1979.
- 212/14×13. *Potentilla* × *suberecta* Zimm. (a hybrid Cinquefoil). By path on sea bank below Tre'r-ddol, SN649935, G.Halliday, 1970, det. B.Matfield.
- \*225/8×7. *Rosa canina* L. × *R. stylosa* Desv. (a hybrid Rose). Field hedge, Mwldan valley, Penparc, SN197486, A.O.Chater, 1991, det. G.G.Graham. *R. stylosa* has not yet been reliably recorded from Cards.
- \*225/cae×8. *Rosa caesia* Sm. × *R. canina* L. (a hybrid Rose). Roadside hedge 100m SE of Gwaryfelin, Penparcau, SN595794, A.O.Chater, 1991, det. G.G.Graham.
- \*225/10. *Rosa obtusifolia* Desv. (Round-leaved Dog-rose). One bush on roadside verge 400m S of Glanrheidol, Capel Bangor, SN663789, A.O.Chater, 1991, det. G.G.Graham.
- \*225/13×12. *Rosa mollis* Sm. × *R. sherardii* Davies (a hybrid Rose). Roadside hedge opposite N corner of Coed Cwmhwylog, Nanteos, SN622778, A.O.Chater, 1991, det. G.G.Graham.
- +236/1. *Sempervivum tectorum* L. (House-leek). 12 rosettes on old mortared wall of lead mine ruin, Cwmsymlog, SN699837, A.O.Chater, 1991; outside of drystone garden wall, NE of

- Cwmsymlog, SN702838, A.O.Chater, 1991. In at least the first of these sites appearing genuinely naturalised, growing with *Cystopteris fragilis*, *Ceterach*, etc.
- +262/bru. *Callitriche brutia* Petagna (Pedunculate Water-starwort). Covering 60% of seasonally dry pond, Pendre, Hafod, SN762734, A.O.Chater, 1991.
- \*1311/2. *Heracleum mantegazzianum* Sommier & Levier (Giant Hogweed). Waste ground around Ynys Edwin farm buildings, Eglwys Fach, SN678962, A.O.Chater & W.M.Condry, 1991. Introduced c.1970 and now well-established.
- \*\$319/5. *Euphorbia hyberna* L. (Irish Spurge). Scrub slope above Parish Hall, Llanbadarn Fawr, SN598810, S.P.Chambers, 1991.
- +319/17. *Euphorbia amygdaloides* L. (Wood Spurge). Damp rocks in oak/elm wood by Gyfarllwyd Falls, Devil's Bridge, SN742775, A.O.Chater, 1991.
- +320/22. *Polygonum campanulatum* Hook. f. (Lesser Knotweed). Colony c.1m across among rocks by Afon Leri in wooded gorge 1km N of Elerch, in a completely wild site, SN681875, A.O.Chater, 1990. Second record. (The first colony, found at Llanafan in 1961, was destroyed c.1976).
- \*325/2bif. *Rumex acetosa* subsp. *biformis* (Lange) Valdes-Bermejo & Castroviejo (a Sorrel). Sea cliffs 1km W of New Quay, SN373595, A.O.Chater, 1988; coastal grassland NE of mouth of Afon Drywi, SN426607, A.O.Chater, 1991, conf. P.D.Sell. First and second records.
- +325/15. *Rumex conglomeratus* Murr. (Clustered Dock). Waste ground by building site, Tresaith, SN280513, A.O.Chater, 1991.
- +328/1. *Urtica urens* L. (Small Nettle). Fallow field, 200m NW of Clynyrynys, Gwbert, SN165508, A.O.Chater, 1991.
- +1342/2. *Populus canescens* (Aiton) Sm. (Grey Poplar). Huge tree 320cm in girth in roadside hedge 800m NE of Ciliau Aeron church, suckering extensively along hedge and into adjacent pasture, SN507587, A.O.Chater, 1991.
- +343/11x12. *Salix* × *reichardtii* A. Kerner (a hybrid Willow). Verge of forestry road in mixed plantations, W of Trawsgoed, SN658726, A.O.Chater, 1991.
- \*1352/1. *Pernettya mucronata* (L.fil) Gaudich (Prickly Heath). Well-established on roadside slope at Eglwys-fach, origin unknown, SN685952, A.O.Chater & C.D.Preston, 1991.
- \*1406/1ros. *Calystegia sepium* subsp. *roseata* Brummitt (a Bindweed). At least 20 plants along 30m length of railway embankment W of Ynys Edwin, Eglwys-fach, SN673962, A.O.Chater and W.M.Condry, 1991; in hedge on W side of road near top of Tresaith village, where it grows close to subsp. *sepium*, *C. silvatica* and *C. pulchra*, SN279514, A.O.Chater, 1991. First and second records.
- +1416/3. *Verbascum phlomoides* L. (Orange Mullein). Colony of c.800 plants in 1977 (although known here for many years before, but never counted) dwindling to 11 in 1990, on disused railway N of Felin-y-mor, Aberystwyth, SN581804, A.O.Chater, 1977-1991, det. I.K.Ferguson. Second record. This colony had previously been erroneously considered to be *V. lychnitis* × *thapsus*. Also one plant 1km further along this railway, SN583799, A.O.Chater, 1987. Several plants on waste ground S of railway, Pendre, Llanbadarn Fawr, SN605804, A.O.Chater, 1990.
- +1430/25. *Veronica crista-galli* Stev. (a Speedwell). Waste ground by Parish Hall, Llanbadarn Fawr, SN598810, A.O.Chater, 1991. Second record.
- 456/1. *Melittis melissophyllum* L. (Bastard Balm). Oakwood, Coed Cwm Du, Cwm Cou, SN307427, A.O.Chater, 1991. First seen here by Charles Oldham in 1924, but lost since 1941.
- +462/1. *Lamium amplexicaule* L. (Henbit). Eroding dune slope above estuary, SE of Peryrergyd, Gwbert, SN164485, A.O.Chater, 1991; stubble field 2.5km S of Aberaeron, SN462604, R.P. Bray, det. A.O.Chater.
- +462/3. *Lamium hybridum* Vill. (Cut-leaved Dead-nettle). Several plants in flower on verge of old lane in wood SSW of Aberaeron Church, SN456625, A.O.Chater, 1991.
- +462/5. *Lamium album* L. (White Deadnettle). Colony 1.7m long on NW verge of A487(T), 150m NE of the Llanddeiniol turning, SN554721, A.O.Chater; 3 small colonies on laneside verge just E of Tynbwlich farm, Llanddeiniol, SN558732, A.O.Chater, 1991.
- 494/2. *Valerianella carinata* Lois. (Keel-fruited Cornsalad). Many plants on ballast of railway track in goods yard, Aberystwyth station, SN586815, A.O.Chater, 1991.
- +494/5. *Valerianella dentata* (L.) Poll. (Narrow-fruited Cornsalad). Margin of set-aside field 300m NNE of Clynyrynys, Gwbert, SN169509, A.O.Chater, 1991; potato field 500m W of Mwnt church, SN200520, A.O.Chater & D.L. Kelly, 1991.
- +498/1. *Knautia arvensis* (L.) Coulter (Field Scabious). Slope by A485, Llangybi, SN605528, A.O.Chater, 1991.



- +506/1×18. *Senecio* × *albescens* Burbridge and Colgan (a hybrid Ragwort). Roadside verge in Llandre village, SN623868, A.O.Chater, 1991.
- +1506/4. *Senecio squalidus* L. (Oxford Ragwort). One plant on roadside verge, Strata Florida, SN745657, A.O.Chater, 1991.
- +1519/6. *Aster novi-belgii* L. (Confused Michaelmas-daisy). Tidal river bank of Afon Rheidol, Aberystwyth, SN586812, and on waste ground by railway nearby, A.O.Chater, 1990, det. P.F.Yeo.
- \*1519/8. *Aster lanceolatus* Willd. (Narrow-leaved Michaelmas-daisy). Tidal river bank of Afon Rheidol at Aberystwyth, SN589811, A.O.Chater, 1990, det. P.F.Yeo; bank of Afon Rheidol at Glanrafon, SN612804, A.O.Chater, 1990, det. P.F.Yeo. First and second records.
- \*1519/9. *Aster* × *salignus* Willd. (Common Michaelmas-daisy). Tidal river bank of Afon Leri E of Borth church, SN616598, A.O.Chater, det. P.F.Yeo; railway embankment at v.c. boundary at Dovey Junction, SN696976, A.O.Chater, 1990, det. P.F.Yeo; reclaimed refuse tip. Pendinas, Aberystwyth, SN584798, A.O.Chater, 1990, det. P.F.Yeo. First, second and third records.
- \*538/3. *Arctium pubens* Bab. (a Burdock). Disturbed ground by caravan site, Ystrad Teilo, Llanrhystud, SN546695, A.O.Chater, 1991, conf. F.H.Perring.
- +570/3. *Elodea nuttallii* (Planchon) St John (Nuttall's Waterweed). In Afon Teifi 400m NNW of Coedmor Mansion, SN191438, A.O.Chater, 1991.
- +605/amb. *Juncus ambiguus* Guss. (a Toad Rush). In marsh by stream on sea cliffs E of Mwnt church, SN196521, A.O.Chater, 1991.
- +605/foi. *Juncus foliosus* Desf. (a Toad Rush). Muddy hollow in quarry below Penlan-fawr, Cwmsychbant, SN479466, A.O.Chater, 1991.
- +628/2. *Listera cordata* (L.) R.Br. (Lesser Twayblade). Moorland N of Cwm Ystwyth, SN812778, A.Jones, 1991. Second record.
- +643/1×4. *Dactylorhiza fuchsii* (Druce) Soó × *D. praetermissa* (Druce) Soó (a hybrid Marsh-orchid). Fen in Mwldan valley, Penparc, SN197483, F.Horsman, 1991. Second record.
- \*643/1×5. *Dactylorhiza fuchsii* (Druce) Soó × *D. purpurella* (T. & T.A.Stephenson) Soó (a hybrid Marsh-orchid). Dune-slack, Ynys-las Dunes NNR, SN611938, F.Horsman, 1991.
- \*643/2b×32. *Dactylorhiza maculata* subsp. *ericetorum* (E.F.Linton) P.F.Hunt and Summerhayes × *D. incarnata* (L.) Soó subsp. *incarnata* (a hybrid Marsh-orchid). Fen in Mwldan valley, Penparc, SN201488, F.Horsman, 1991.
- +643/3×2b. *Dactylorhiza incarnata* (L.) Soó subsp. *incarnata* × *D. maculata* subsp. *ericetorum* (E.F.Linton) P.F.Hunt and Summerhayes (a hybrid Marsh-orchid). Fen in Mwldan valley, Penparc, SN201488, F.Horsman, 1991. Second record.
- \*643/3c×6cam. *Dactylorhiza incarnata* subsp. *coccinea* (Pugsley) Soó × *D. majalis* subsp. *cambrensis* (R.H.Roberts) R.H.Roberts (a hybrid Marsh-orchid). Dune-slack, Ynys-las Dunes NNR, SN69, F.Horsman, 1991. A hybrid new to science.
- +643/4×2b. *Dactylorhiza praetermissa* (Druce) Soó × *D. maculata* subsp. *ericetorum* (E.F.Linton) P.F.Hunt & Summerhayes (a hybrid Marsh-orchid). Fen in Mwldan Valley, Penparc, SN197483, F.Horsman, 1991.
- \*643/4×6cam. *Dactylorhiza praetermissa* (Druce) Soó × *D. majalis* subsp. *cambrensis* (R.H.Roberts) R.H.Roberts (a hybrid Marsh-orchid). Dune-slack, Ynys-las Dunes NNR, SN69, F.Horsman, 1991. A hybrid new to science.
- \*643/5maj. *Dactylorhiza purpurella* subsp. *majaliformis* Nelson (a Marsh-orchid). Dune-slack, Ynys-las Dunes NNR, SN69, F.Horsman, 1991; above boulder clay sea cliffs, New Quay, SN45, F.Horsman, 1991. First and second records, first Welsh records.
- \*643/5×6cam. *Dactylorhiza purpurella* (T.&T.A.Stephenson) Soó × *D. majalis* subsp. *cambrensis* (R.H.Roberts) R.H.Roberts (a hybrid Marsh-orchid). Dune-slack, Ynys-las Dunes NNR, SN609939, D.C.Lang & A.P.Fowler, 1990.
- +643/6cam. *Dactylorhiza majalis* subsp. *cambrensis* (R.H.Roberts) R.H.Roberts (Welsh Marsh-orchid). Fen near Cardigan, SN14, F.Horsman, 1991; above boulder clay sea cliffs, New Quay, SN45, F.Horsman, 1991. Second and third records.
- +1648/1. *Lysichiton americanus* Hultén & St. John (Skunk Cabbage). Stream bank, Ty-glyn, Ciliau Aeron, SN498598, R.N.Stringer, 1991. Second record.
- +653/1. *Typha latifolia* L. (Bulrush). Dominant in overgrown farm pond, Clynyrnyns, Gwbet, SN166506, A.O.Chater, 1991.
- +655/12. *Scirpus fluitans* L. (Floating Club-rush). Abundant as huge floating masses, Llyn Gwngu, SN839729, A.O.Chater, 1991.

- +656/4. *Eleocharis multicaulis* (Sm.) Desv. (Many-stalked Spike-rush). Flushes by Clettwr Fawr, Talgarreg, SN420495, A.O.Chater & A.P.Fowles, 1991.
- +663/81. *Carex dioica* L. (Dioecious Sedge). Abundant in flush. on slope W of Llyn Gwngu, SN837728, A.O.Chater, 1991.
- +663/47. *Carex acuta* L. (Slender Tufted-sedge). Ditch W of disused railway 1km S of Ystrad Meurig, Cors Caron, SN708661, A.O.Chater, 1991.
- +685/1. *Elymus caninus* (L.) L. (Bearded Couch). Wooded river bank, Afon Aeron 1km above Aberaeron, SN465615, A.O.Chater, 1991. First record of this uncommon grass from the Aeron valley.
- +691/1. *Trisetum flavescens* (L.) Beauv. (Yellow Oat-grass). Small patch with c.25 inflorescences in grass at base of wall of deserted upland farm, Blaenmyherin, SN800796, A.O.Chater, 1991. Possibly introduced with hay for sheep, but nearest pasture site is 22km away, and the closest site 15km away is in a churchyard.
- +692/1. *Avena fatua* L. (Wild-oat). Disturbed ground by smallholding, Ffair-rhos, SN743679, A.O.Chater, 1991; set-aside field 300m NNE of Clynyrynys, Gwbert, SN168509, A.O.Chater, 1991; reconstructed verges of Cardigan bypass on A487(T), SN188468, A.O.Chater, 1991. No localised records given in *Fl. Pl. Wales* and presumably very under-recorded.
- +699/1. *Ammophila arenaria* (L.) Link (Marram). Railway embankment 250m S of Borth station, SN609898, A.P.Fowles, 1991.
- +701/4. *Agrostis gigantea* Roth (Bristle Bent). Disturbed ground by track to new golf course, Ystrad Teilo, Llanrhystud, SN550693, A.O.Chater, 1991.

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

- +115/6b×5. *Hypericum* × *desetangsii* Lamotte (*H. perforatum* × *H. maculatum*) (a hybrid St John's-wort). Shingle by R. Dovey, Jubilee Bridge, Cemmaes Road, SH805039, A.O.Chater, 1991. Second confirmed record.
- +193/1. *Anthyllis vulneraria* L. (Kidney Vetch). Machynlleth Station, SH745014, A.Morton, 1991.
- +225/8×9. *Rosa* × *dumalis* Bechst. (*R. canina* × *R. caesia*) (a hybrid rose). Laneside hedge, Llanwnnog, SO0494, A.Franks & J.Clark, 1991, det. A.L.Primavesi. First record.
- 225/15. *Rosa micrantha* Borrer ex Sm. (Small-flowered Sweet-briar). Scattered bushes in limestone gravel, Llanymynech Rocks Wildlife Trust Reserve, SJ263218, P.M.Benoit & M.Wainwright, 1988.
- \*232/6/cro. *Sorbus croceocarpa* Sell (a whitebeam). Trackside hedge, Brooks, SO146996, P.J.M.Nethercott, 1991. First record.
- \*1241/1. *Tolmiea menziesii* (Pursh.) Torrey & A.Gray (Pick-a-back-plant), Well established on S edge of R. Vyrnwy, E of bridge at Pont Llogel, SJ033154, R.G.Woods, 1991. First record. Not near habitation or track, possibly an outcast from somewhere upstream originally.
- \*343/2×4. *Salix* × *rubens* Schrank (*S. alba* × *S. fragilis*) (a hybrid willow). River bank, Cilcewydd, Welshpool, SJ227034, I.C.Trueman, 1991, conf. C.A.Sinker. First record.
- \*343/13×9. *Salix* × *fruticosa* Doell (*S. aurita* × *S. viminalis*) (a hybrid willow). River bank, Cilcewydd, Welshpool, SJ226033, I.C.Trueman, 1991, conf. C.A.Sinker. First record.
- +374/1. *Samolus valerandi* L. (Brookweed). Salt-marsh at Morben Isaf, SN7098, Mont. Trust Survey Team, 1988.
- +445/7. *Mentha suaveolens* Ehrh. (Round-leaved Mint) Grassy area by canal side, Belan Locks, S of Welshpool, SJ216053, P.M.Benoit & M.Wainwright, 1991. The only confirmed record for this taxon, as opposed to the hybrid, for the Montgomeryshire Flora project (post 1970).
- +465/4.2×1. *Galeopsis* × *ludwigii* Hausskn. (*G. bifida* × *G. tetrahit*) (a hybrid Hemp-nettle). Laneside hedgerow, N of Dolfor, SO111883, P.M.Benoit, 1991.
- +605/15. *Juncus gerardi* Loisel. (Saltmarsh Rush). Salt-marsh at Morben Isaf, SN7098, Mont. Trust Survey Team, 1988.
- +1648/1. *Lysichiton americanus* Hulten & St John (Yellow Skunk-cabbage). Roadside stream, Llanidloes, SN952848, P.Evans & M.Oliver, 1991.
- 650/2. *Lemna trisulca* L. (Ivy-leaved Duckweed). Granllyn Pool, Guilsfield, SJ224117, Mont. Trust Survey Team, 1988. One of the few records away from the Montgomery Canal.

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

- \*225/8×15. *Rosa* × *toddii* Wolley-Dod (*R. canina* × *R. micrantha*) (a hybrid rose). Two bushes with both parents but no other *Rosa* spp. present, side of track, Arthog, SH61, P.M.Benoit, 1991, conf. A.L.Primavesi. First record.
- \*1320/22. *Polygonum campanulatum* Hooker fil. (Lesser Knotweed). Established in some quantity along edge of stream, near Egryn Abbey, SH51, P.M.Benoit, 1991. First record.
- \*1461/larg. *Lamium galeobdolon* subsp. *argentatum* (Smejkal) Stace (Variegated Yellow-archangel). Scrubby waste ground, near Pen-y-cefn, Dolgellau, SH722185, R.G.Ellis, 1987. First record.
- \*663/60. *Carex disticha* Huds. (Brown Sedge). In quantity in *Phragmites* swamp, near Llanaber, P.M.Benoit, 1991. First certain record.
- \*672/5amb. *Vulpia ciliata* subsp. *ambigua* (le Gall) Stace & Auquier (Bearded Fescue). Locally abundant on low hummocks in dune grassland, Aberdyfi golf links, SN59 & 69, P.M.Benoit, 1991. First record.
- \*673/2. *Puccinellia distans* (L.) Parl. (Reflexed Saltmarsh-grass). In quantity in the one spot, on earth used to repair storm damage to embankment, Mawddach estuary at Garth Isaf, SH61, P.M.Benoit, 1991. First record.
- \*689/1. *Koeleria macrantha* (Ledeb.) Schultes *sensu lato* (Crested Hair-grass). Several plants on calcareous fixed dune grassland, Aberdyfi golf links, SN69, P.M.Benoit, 1991. First certain record.

**CAERNARFON, v.c. 49** (comm. N.H.Brown)

- +4/10. *Equisetum telmateia* Ehrh. (Great Horsetail). In damp hedgerow at side of Fferm Lane off Queens Drive, Llandudno, SH7980, R. Lewis, 1991.
- +127/1. *Azolla filiculoides* Lam. (Water Fern). Reservoir, near Pistyll Church, Lleyen Peninsular, SH328422, Lars J. Larsen, 1991. First record for Lleyen and only recent record for county.
- +198/4. *Barbarea verna* (Miller) Ascherson (American Winter-cress). On railway ballast, Conwy Valley railway S of Dolgarrog Halt, SH7868, R.Lewis, 1991. The locality is in a portion of the vice-county lying to the E of the Afon Conwy.
- 115/10. *Hypericum linariifolium* Vahl (Toadflax-leaved St John's-wort). Pwllheli, SH33, G.Goode, 1894. The earliest Lleyen record.
- +1131/3. *Cerastium tomentosum* L. (Snow-in-summer). Hedgebank at side of minor road between Mochdre and Bryn Pudew, SH8279, R.Lewis, 1991.
- \*1170/7. *Oxalis corymbosa* DC. (Large-flowered Pink-sorrel). Waste ground, near Dolgarrog Railway Halt, SH784669, R.Lewis, 1991. First record. The locality is in a portion of the vice-county lying to the E of the Afon Conwy.
- 225/8×9. *Rosa* × *dumalis* Bechst. (*R. canina* × *R. caesia*) (a hybrid dog-rose). +Hedge, Borth Colman. Llangwnadl, SH1934; +Roadside hedgebank, Abersoch, SH3028; +S of Rhyd-y-clafdy, SH3233, all Lleyen Peninsular, A.P.Conolly, 1991, det A.L.Primavesi.
- +225/8×12. *Rosa canina* × *R. sherardii* (a hybrid rose). Roadside, near Madryn Lodge, E of Machyn Castle, SH298359 and lane bank, Nant Bodlas, above Nanhoron Valley, SH296344, both Lleyen Peninsular, A.P.Conolly, 1991, conf. A.L.Primavesi.
- +1227/3. *Cotoneaster horizontalis* Decne (Wall Cotoneaster). On limestone crags above Mynydd Farm and North Wales Medical Centre, SE of Llandudno, SH7980, R.Lewis, 1991.
- \*1227/reh. *Cotoneaster rehderi* Pojark (Bullate Cotoneaster). One plant only, probably bird-sown, near centre of woodland, Bryn Maelgwyn, SE of Llandudno, SH797805, R.Lewis, 1991, conf. J.Fryer. First Welsh and county record.
- +239/9. *Saxifraga granulata* L. (Meadow Saxifrage). Near Llandwrog, SH45, D.Jones, 1991. Second record, first this century and only extant record.
- \*1246/4. *Ribes sanguineum* Pursh. (Flowering Currant). Naturalised in narrow strip of woodland located between B5106 road and minor road to Bwlch-y-Haearn, near Gwydyr Castle, W of Llanrwst, SH792611, R.Lewis, 1991. First record.
- +1320/18. *Fallopia aubertii* (Louis Henry) J.Holub (Russian-vine). On waste ground at side of lane leading from Porthmadog harbour to Borth-y-gest, SH5638, R.Lewis, 1991.
- \*365/bri.cel. *Limonium britannicum* subsp. *celticum* var. *pharense* Ingrouille (a rock sea-lavender). Sea cliff, Ogof-y-Gaseg, Bardsey Island, SH121211, K.A.Kershaw & A.D.Q.Agnew, 1956, P.Hope Jones, 1990, both det. M. Ingrouille. First Record.

- +403/1. *Echium vulgare* L. (Viper's-bugloss). Carreg Fawr garden, Bardsey Island, SH1121, recorder unknown, record per A.P.Conolly, 1991.
- +1418/1. *Antirrhinum majus* L. (Snapdragon). In woodland clearing, Garreg Oleu above Plas Maenan Hotel, c.5km S of Talycafn, SH7967, R.Lewis, 1991. The locality is in a portion of the vice-county lying to the E of the Afon Conwy.
- +474/1. *Wahlenbergia hederacea* (L.) Reichenb. (Ivy-leaved Bellflower). In boggy grassland NW of Llyn Chwythlyn, c.4km NE of Llanrwst, SH8364, R.Lewis, 1991. The locality is in a portion of the vice-county lying to the E of the Afon Conwy.
- +1492/1. *Leycesteria formosa* Wall. (Himalayan Honeysuckle). On waste ground at side of lane leading from Porthmadog harbour to Borth-y-gest, SH5638, R.Lewis, 1991.
- +1509/3. *Petasites japonicus* (Siebold & Zucc.) Maxim (Giant Butterbur). On tidal mud, bank of Afon Ro, near confluence with A. Conwy, SH7769, R.Lewis, 1991. Second record.
- +551/1. *Picris echinoides* L. (Bristly Oxtongue). Waste ground at side of track leading from B5106 road to Dolgarrog Railway Halt near footbridge over Afon Conwy, SH7766, R.Lewis, 1991.
- +561/1. *Baldellia ranunculoides* (L.) Parl. (Lesser Water-plantain). In a wet ditch in marshy field between the A470 road and railway N of Dolgarrog Railway Halt, SH7867, R.Lewis, 1991. The locality is in a portion of the vice-county lying to the E of the Afon Conwy.
- +577/1. *Potamogeton natans* L. (Broad-leaved Pondweed). Pond in disused quarry c.2.5km N of Llanddoget naer Llanrwst, SH8265, R.Lewis, 1991. The locality is in a portion of the vice-county lying to the E of the Afon Conwy.
- +1648/1. *Lysichiton americanus* Hulten & St John (American Skunk-cabbage). Bank of stream at entrance to Fynnon Bedr Farm on S side of minor road between Talybont and Llanbedr-y-cennin, SH7669, R.Lewis, 1991. The locality is in a portion of the vice-county lying to the E of the Afon Conwy.
- 670/6×672/1. × *Festulpia hubbardii* Stace & R.Cotton (*Festuca rubra* × *Vulpia fasciculata*) (a hybrid fescue). +Eroded area of sand dunes behind main dunes, Abersoch, SH314278; +Open areas in sand dunes, South Beach, Pwllheli, SH377342; both J.P.Bailey & A.P.Conolly, 1991.
- \*684/2. *Brachypodium pinnatum* (L.) Beauv. (Tor-grass). Limestone grassland, Great Orme, SH78, P.W.Ball, 1959. First confirmed record

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

- +1/1. *Hyperzia selago* (L.) Schrank & Mart. (Fir Clubmoss), Outcrop scree in wooded ravine, about 1km E of Clywedog Reservoir, SJ020573, P.Day, 1990.
- \*46/21×22a. *Ranunculus* × *lutzi* A.Felix (*R. trichophyllos* × *R. aquatilis*). Farm pond, Little Green Farm, Penley, SJ408412, BSBI meeting, 1991, conf. S.D.Webster. First Welsh and county record.
- \*171/1. *Hirschfeldia incana* (L.) Lagrèze-Fossat (Hoary Mustard). Kinmel Bay, SH990808, G.Battershall, 1991. First record.
- +192/1. *Lobularia maritima* (L.) Desv. (Sweet Alison). Colwyn Bay, SH846782, G.Battershall, 1991. Second record since 1930.
- +1164/1. *Lavatera arborea* L. (Tree-mallow). Kinmel Bay, SH994807, G.Battershall, 1991. Second record and first since 1859.
- +225/9/cae. *Rosa caesia* subsp. *glauca* (Nyman) G.Graham & Primavesi (Glaucous Dog-rose). Roadside hedge, Plas yn Rhos, SJ169480, K.Watson, 1991. Second record, first since 1943 and only extant record.
- +229/1. *Crataegus laevigata* (Poiret) DC. (Midland Hawthorn). Green lane near Penley, SJ421392, M.Rogers, 1991. Third record.
- \*232/2. *Sanguisorba minor* subsp. *muricata* (Gremli) Briq. (Fodder Burnet). Roadside near Redbrook, SJ508412, K.Watson, 1991. First record.
- +258/2. *Circaea* × *intermedia* Ehrh. (Upland Enchanter's-nightshade). Shady deciduous wood, S of Wrexham, SJ322474, J.A.Green, 1991. Second record.
- \*325/11×12. *Rumex* × *pratensis* Mert. & Koch (*R. crispus* × *R. obtusifolius*) (a hybrid dock). Arable feed, Penley, SJ408407, D.Tinston, 1991. First record.
- +1415/1. *Datura stramonium* L. (Thorn-apple). Garden weed, near Wrexham, SJ336491, B.Formstone, 1991.
- \*1423/2. *Cymbalaria pallida* (Ten.) Wettst. (Italian Toadflax). Old wall, Eglwys Bach, SH823665, BSBI group, 1991. First record.

- +494/2. *Valerianella carinata* Loisel. (Keeled-fruited Cornsalad). Colwyn Bay, SH845782, G.Battershall, 1991. Second record, first since 1930 and the only extant record.
- +1511/1. *Calendula officinalis* L. (Pot Marigold). Kinmel Bay, SH990808, G.Battershall, 1991. Second record.
- +1518/2. *Solidago canadensis* L. (Canadian Goldenrod). +Kinmel Bay, SH990808, G.Battershall, 1991; +Rhosddu, SJ342508, H.R.Hesketh, 1991. Second and third records.
- +1542/1. *Onopordium acanthium* L. (Cotton Thistle). Kinmel Bay, SH995806, G.Battershall, 1991.
- \*1544/2. *Centaurea montana* L. (Perennial Cornflower). Bryn dulas, Llandulas, SH907776, G.Battershall, 1991. First record.
- +568/1. *Stratiodes aloides* L. (Water-soldier). Farm pond near Penley (probably introduced), SJ407406, BSBI meeting, 1991.
- +1598/1. *Ornithogalum umbellatum* L. (Star-of-Bethlehem). Kinmel Bay, SH990808, G.Battershall, 1991.
- +605/18×19. *Juncus* × *surrejanus* Druce (*J. acutiflorus* × *R. articulatus*) (a hybrid rush). Wet meadow, Whitewell, SJ497417, K.Watson, 1991. Second record.
- +1646/1. *Acorus calamus* L. (Sweet Flag). Three clumps flowering, 600m from farm, near Marchwiel, SJ355468, P.Goodhind, 1991. Second record.
- +670/10. *Festuca vivipara* (L.) Sm. (Viviparous Fescue). Rock outcrop, Migneint, SH778425, G.Battershall, 1991. Second record.
- +663/28. *Carex limosa* L. (Bog-sedge). +Migneint, SH776433, G.Battershall, 1991; +Wet flush near Pentrefoelas, SH890545, J.A.Green, 1991. Second and third records.
- +673/2. *Puccinellia distans* (L.) Parl. (Reflexed Saltmarsh-grass). Edge of road in forestry plantation, Llanfiangel Glyn Myfyr, SJ031510, J.A.Green, 1989. Second record.
- +708/1. *Alopecurus myosuroides* Hudson (Black-grass). Roadside, Bettws-y-Coed, SH799554, J.A.Green, 1991.

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

- +382/6. *Centaurea littorale* (D.Turner) Gilmour (Seaside Century). Many plants in dune slacks, between Point of Ayr and the Warren, Talacre, SJ111851, Phillida Frost, 1991. First post-1930 record.
- \*1475/5. *Campanula persicifolia* L. (Peach-leaved Bellflower). Dune grassland near *Salix* scrub, Talacre Dunes, Point of Ayr, SJ120849, R.G.Ellis, 1988. First record.

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

- +16/1. *Ceterach officinarum* Willd. (Rustyback). On basic rock outcrop, Newborough Forest, SH3963, R.Cooke, 1991.
- \*94/4. *Draba muralis* L. (Wall Whitlowgrass). Disused quarry near Llangoed, SH6081, D.F.Evans, 1991. First record.
- +1154/2. *Chenopodium polyspermum* L. (Many-seeded Goosefoot). Garden weed, Llanfairpwll, SH5272, Jane Rees, 1991.
- 166/1. *Linum bienne* Mill. (Pale Flax). On sandy soil near New Pool, Newborough Forest, SH4167, R.H.Roberts, 1991.
- +192/7. *Trifolium incarnatum* L. subsp. *incarnatum* (Crimson Clover). Two plants on disturbed soil above shore E of Amlwch Port, SH4693, J.Clarke, 1991. Second record.
- +218/2. *Agrimonia procera* Wallr. (Fragrant Agrimony). Near lane to Llaneluad Church, Marianglas, SH4984, R.H.Roberts, 1991.
- +251/2. *Daphne laureola* L. (Spurge Laurel). Among scrub over limestone, Marian Dyrys, SH6081, D.F.Evans, 1991.
- +643/7. *Dactylorhiza traunsteineri* (Sauter) Soó (Narrow-leaved Marsh-orchid). On *Schoenus* tussocks, Cors Goch NR, near Benllech, SH5081, L.T.Colley, 1991, conf. R.H.Roberts.
- \*1701/8. *Polypogon viridis* (Gouan) Breistr. (Water Bent). Pool in disused limestone quarry, Benllech, SH5181, J.E.Hawksford, 1991. First record.





