

BOTANICAL SOCIETY OF THE BRITISH ISLES

WELSH BULLETIN

Editors : R. D. Pryce & G. Hutchinson

No. 68, WINTER 2000



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EDITORIAL

An important topical subject is the urgency given by most Welsh Local Authorities to the writing of their Local Biodiversity Action Plans (LBAPs) in order to meet their Unitary Development Plan (UDP) targets. Although many habitats and species of concern are protected within statutory sites such as Sites of Special Scientific Interest and National Nature Reserves, it is generally acknowledged that the well-being of the country's flora and fauna cannot be maintained by preserving these sites alone. The UK Biodiversity Action Plan (BAP) sets out to conserve those habitats and species as a general principle, wherever they may occur. Those species and habitats that have been identified as having less than favourable conservation status and which are listed on either the Priority List or the Species of Conservation Concern List of the UK BAP are subject to the drafting and the implementation of plans with the goal of ensuring their future security.

Several Authorities have done an admirable job by already completing their LBAPs and now only have to find sufficient resources to implement them (!). Some of those not in such a favourable situation, however, appear to me to be re-inventing the wheel by writing each plan from scratch when much of the work could be by-passed by merely adding their own local slants and targets to the existing published National BAPs. This would also promote some degree of standardisation between different Authority's LBAPs, a considerable advantage, when planners and other non-ecologists are ultimately charged with funding their implementation.

A further task which many Authorities are undertaking in parallel with the LBAP process is the identification of second tier sites of nature conservation significance (variously known as Wildlife Sites, Sites of Importance for Nature Conservation (SINC)s, Sites of Nature Conservation Importance (SNCIs), etc.), also for inclusion into their UDPs. Whilst some Authorities already have their SINC)s in place, it would appear that the majority will not be able to complete the necessary research in time to meet the required deadlines and will therefore have to rely on overarching Nature Conservation Policies within the new UDPs. In my view it must be a better solution to designate sites rather than to rely for their identification at planning application stage, on the Authorities' planners and development control staff (who will not necessarily have specialist ecological expertise). But UDP targets must be met! It is now an even more important issue as the newly enacted Countryside Bill gives a greater degree of statutory protection to these sites.

Ultimately, it boils down to insufficient funding and too few (already overloaded) experts spread too thinly to effectively complete the mammoth task. I fear an opportunity will have been lost, for instance, if some SINC)s are rushed to the degree that the concept is weakened by their failure if tested at Public Inquiry (to which some will inevitably be subjected). Hopefully, the increased protection given to second tier sites, as well as statutory sites, by the Countryside Bill, will attract more resources in the future in order to promote the BAP process and allow for the better management and conservation of sites.

I hope that you all have an enjoyable field season in 2000. As usual this edition of the Bulletin contains a varied and, I hope, interesting content, based on previous years' research. Please don't hesitate to put pen to paper if you have any topic of interest for future issues.

Finally, I hope that you all have a pleasant Christmas and New Year and I look forward to seeing you at one or more of next season's field meetings.

Richard Pryce, 15 December 2000

BSBI WALES ANNUAL GENERAL MEETING 2000 EXHIBITS

Titles of exhibits are listed together with a summary report where it has been received.

Ian R. Bonner

Display of living material from the University Botanic Garden, Treborth

Demonstration under the microscope of mega and microspores of *Pilularia globulifera* (Pillwort).

Specimens of *Juniperus communis* (Juniper) from South Stack, at its only known location on Anglesey.

An unknown *Equisetum* from near Valley. Later confirmed as *E. x trachodon*, (a hybrid Horsetail) a first record for vc 52.

British Whitebeams, including shoots of the following endemic taxa: *Sorbus pseudofennica*, *S. minima*, *S. anglica*, *S. lancastricensis*, and *S. devoniensis*.

Plants of *Ophrys apifera* (Bee Orchid), *Tuberaria guttata* (Spotted Rock-rose) and *Vicia orobus* (Wood Bitter-vetch).

A plant of the Great Orme Cotoneaster, *Cotoneaster cambricus* (Wild Cotoneaster) propagated as part of the conservation programme for this species.

Nigel Brown, Curator.

***Ranunculus tripartitus* (Three-lobed Crowfoot)**

Recent discoveries in Anglesey (vc 52) and Caernarfonshire (vc 49).

Dr RA Jones, CCW, Aberystwyth.

***Erodium lebelii* Jord. (Sticky Stork's-bill) in Wales**

Material from 12 major herbaria in Britain and Ireland have been critically examined with a view to mapping the distribution of this duneland member of the Geranium family. The results for Wales were exhibited.

The species may be under-recorded because of its confusion with *E. cicutarium* (Common Stork's-bill) with which it can cohabit and sometimes form the hybrid. *E. cicutarium* specimens were also checked in case the desired species had been missed.

Synonyms include *Erodium cicutarium* subsp. *bipinnatum* and *E. glutinosum*. Many specimens of *E. neglectum* turned out to be *E. lebelii*. To add to the confusion, *Erodium lebelii* was a name applied to a form of *E. cicutarium*, particularly in the 1920's and 1930's. A range of characters were considered for each specimen, the pitfalls of each having been highlighted in the literature over the years, especially by Peter Benoit.

Specimens from Wales were present in six of the twelve herbaria chosen, with representative sheets for v.cc. 41,44,45,48,49, and 52. The hybrid or putative hybrid with *E. cicutarium* was confirmed for v.cc. 41,44,45, and 48. I am grateful to the keepers of the herbaria for loaning the exsiccatae.

George Hutchinson, Dept of Biodiversity & Systematic Biology, National Museum & Gallery, Cardiff CF10 3NP.

***Fragaria moschata* (Hautbois Strawberry)**

Live material of *Fragaria moschata*, *F. vesca* and *F. x ananassa* was exhibited to encourage recorders to look out for the former species, which is probably under-recorded in Wales, as well as in the rest of Britain.

It was found in eleven sites, mostly hedgebanks and churchyards, in Cardiganshire in May - June 1999.

Plant Crib 1998 and *Stace's Flora* ed.2 both give good accounts. The best characters are the spreading or reflexed hairs on the pedicels, (at least the upper pedicels with appressed or ascending hairs in *F. vesca* and *F. x ananassa*), the yellowish green, not shiny leaves, (dark green and shiny in *F. vesca*, bluish green and scarcely shiny in *F. x ananassa*) and the leaves with the hairs not appressed on the lower surface, (closely appressed in the other two). The flowers are usually intermediate in size.

Arthur Chater, Aberystwyth.

Know your *Carex* Stomatal

The exhibit was of living material of *Carex rostrata*, *vesicaria*, *nigra*, *acuta*, *aquatilis* and *acuta x aquatilis* to give members the opportunity to see how easy it was to use the position of the stomata on the leaves, as described in *Plant Crib 1998*, to distinguish between the several difficult pairs of species.

Arthur Chater, Aberystwyth.

Possible *Mentha pulegium* (Pennyroyal) from Anglesey

Material collected in May from a wet, rushy pasture near Traeth Lligwy was exhibited and members were asked to confirm the identification.

The plant was subsequently grown on and sent to Dr RM Harley, who confirmed the identification - making this the first record since 1895 of this species on Anglesey.

Wendy McCarthy, Llandudno.

Are there any Cork Oaks in Wales?

On a recent visit to Corsica the bus broke down in what seemed a botanically uninspiring spot in the middle of an industrial estate on the outskirts of a small town.

Our wait was relieved by the discovery of a group of Cork Oaks on a piece of waste ground - my first sight of this famous tree.

According to *Trees of Britain* (1996) by Alan Mitchell there are several specimens growing in Scotland, a few in Eastern England and quite a number in Devon and Cornwall, including one specimen which is 72 feet tall at Anthony House, near Tor Point, in Cornwall.

In Wales I only know of two Cork Oaks, one at Broom Hall, near Pwllheli and the other at Llwyndyrus, near Llandygwydd, between Cenarth and Cardigan.

Members were asked to list other sites known to them.

Dr Goronwy Wynne, Llicswm.

What would you do if you saw a Wansi?

Today there is an increasing interest in alien and invasive plants, *Lepidium draba* (Hoary Cress) is a case in point.

The first record is from the banks of the Tawe, above Swansea, in 1802, (*Flora of Glamorgan* 1911). However the story of its main spread starts in Kent in 1809 when British troops returned from the Walcheren Expedition, their straw mattresses were dumped in a quarry, mixed with manure and spread on the fields. Hoary Cress soon sprung up and commenced its invasion of the British Isles.

In 1883 Owen C Jones and his sister emigrated from Llanuwchllyn, near Bala, to Y Wladfa, the new Welsh settlement in Patagonia. In the winter months Owen used to leave his farm in the Chubut Valley in Patagonia and travel to Britain, Australia and Canada.

On one of these trips he collected seed of Hairy Cress, which he hoped would provide food for his livestock and seed for his birds. Alas! the stock refused to eat the Cress and it soon spread to become a serious pest in the Valley.

Owen C Jones was not popular and the plant became known as the "Wansi".

Grateful thanks to Dr Llyr Gruffydd, Bangor for much of this information.

Dr Goronwy Wynne, Licswm

Only One Site Refound for *Hieracium linguans*

Abstract already printed in *BSBI News* No 84. Dr TCG Rich.

***Suaeda vera*, a new native Wales**

Abstract already printed in *BSBI News* No 84. Dr TCG Rich and N Brown.

What is *Anthyllis vulneraria* subsp. *corbleri*?

Abstract already printed in *BSBI News* No 84. Dr TCG Rich and Dr RA Jones.

Cardiff Hedgerow Survey 1998

Joanne Lewis and Dr TCG Rich.

Catalogue of *Rubus* specimens at the National Museum and Gallery, Cardiff.

Dr TCG Rich.

Distribution and Conservation of the two rare endemic Brambles, *Rubus daycoccus* and *R. trelleckensis*

RD Randall and Dr TCG Rich.

Distribution and Conservation of the two rare endemic Hawkweeds, *Hieracium cambricum* and *H. tavense*.

Dr TCG Rich.

Help! Do you know any sites for *Hieracium holosericeum* or *H. snowdoniense* in Snowdon?

Dr TCG Rich and Scott Hand.

A Mysterious "Horsetail" like shrub from Australia

Members were asked to identify an *Ephedra* - like shrub which grew to about 70cm. in height, with stiff erect branches. It was growing on a coastal cliff near Bateman's Bay, south of Sydney, New South Wales. The narrow greyish-green ridged stems were "noded", each section with c. 18 longitudinal ridges topped by minute triangular "leaf tips", as in *Equisetum*. However the central woody core and cone-like structures apparently filled with pale spores pointed to a different identification.

The answer was *Casuarina cf verticillata* (She-oak).

Dr Ann Conolly, Leicester.

Collections of Flowering Plants from Wales in the Linnean Society's JE Smith Herbarium

A project to database the approximately 24,000 specimens in the Linnean Society's JE Smith herbarium is well under way. So far we have found 152 specimens from Wales in this historic collection from a wide range of source localities, both wild and cultivated. A list of collectors, donors and localities is provided. Brief notes are given on some particularly noteworthy specimens.

Dr J Edmondson and Claire Sedgwick, National Museums & Galleries on Merseyside, Liverpool.

Botanical Survey of the Great Orme

Large-scale maps and text describing the vegetation of the Great Orme using the National Vegetation Classification (NVC).

Dr David Stevens & Stuart Smith, CCW, Bangor.

Anglesey Wetland Strategy

A poster display about the aims of this wetland initiative using funding from the Heritage Lottery Fund to a consortium of Welsh conservation bodies.

Dr John Ratcliffe, CCW.

Atlas 2000

A selection of draft distribution maps from the forthcoming Atlas, several of which were un-captioned and members were invited to suggest which taxa were involved.

Dr Trevor Dines, Bangor

Welsh Marsh-orchid

A display of a series of colour photographs of *Dactylorhiza majalis* subsp. *cambrensis*.

RH Roberts, Bangor.

Churchyard Trees and Shrubs - some Whys? And Wherefores?

Many intriguing questions have arisen from a preliminary analysis of data about trees and shrubs from a survey of almost 500 churchyards across 14 regions of the UK. In each churchyard the number of each tree species present was recorded, with an estimated diameter of each tree, together with a list of shrubs present.

Not suprisingly, *Taxus baccata* (yew) was the most common tree species present, though 20% of churchyards contained no *Taxus*. However if *Sambucus nigra* (elder) is counted as a tree species then that was even more ubiquitous, occurring in 83% of the churchyards.

Why are *Ilex aquifolium* (holly), *Chamaecyparis* spp.(mainly Lawson cypress), and *Buxus sempervirens* (box) particularly common in churchyards? - are they considered appropriate because of their evergreen sobriety? Why then are *Pinus* spp.(pines), *Thuja* spp.(red-cedars) and *Quercus ilex* (holm oak) far less common?

Why were some broadleaves, such as *Acer pseudoplatanus* (sycamore), *Tilia* spp.(limes) and *Fraxinus excelsior* (ash), found far more commonly than others, such as *Quercus* spp.(oaks), *Betula* spp.(birches), *Sorbus aucuparia* (rowan) and *Salix* spp.(willows)? Curiously though willow is often depicted on gravestones, especially in Wales, it was present in only 2% of churchyards surveyed. Some regional variations in diversity of tree and shrub species and in distribution of individual species are also puzzling.

Dr Pat Denne, Llanfairpwll.

Orchid Paintings

Three watercolour paintings of different species of orchid by Bob Dunnett.
RGS Dunnett, Lapworth.

CARMARTHENSHIRE FLORA: PROGRESS REPORT 1998, 1999 AND 2000

Introduction

I have again received (and am trying to deal with) so many records that this report is necessarily a selection of those which appear to me to be the more interesting. Any omissions are likely to be due to the fact that I am unable to keep my filing system as up to date as I would like but I have asked Dr George Hutchinson (GH) and Ian Morgan (KM) to read drafts of the text and I hope that they will have pointed out any glaring omissions or errors.

Three field seasons are covered by this report (1998, 1999 & 2000) which brings the state of botanical recording in Carmarthenshire right up to date. During this period I was able to produce, at the request of CCW and Carmarthenshire County Council, the Carmarthenshire Rare Plant Register, a document which records the present state of rare and scarce vascular plants in the county. It includes all protected, nationally rare and scarce species as well as county rarities (broadly those recorded in three or fewer sites) and a selection of scarce and characteristic species, and is intended, among other uses, as a tool to assist in the drafting of the county's Local Biodiversity Action Plan and to allow easier access to records of important plant populations for applications such as Development Control. It has also proved to be an invaluable tool and stimulus to revisit sites of rare species in order to monitor their current status. The document will be continually updated and new printings will be made available from time to time.

As always, I am grateful to all observers who have forwarded records and in particular those who participated in the annual Recording Weekends held in 1998 and 1999 at Llwyn-Celyn, Llandovery and in 2000 at Glynhir Mansion, Llandybie. Also to all referees, and particularly to GH, for their continuing support.

Red Data and Schedule 8 Plants

Following the discovery of 59 flowering plants of *Liparis loeselii* (Fen Orchid) at the East 4 Range on MoD land at Laugharne Burrows in 1997, no plants were reported in 1998 or 1999. Participants in the annual Recording Meeting re-visited the site on 25/6/00 but after a lengthy search only a single, non-flowering plant was found (by Dr Christine Cheffings (ChC)). The Countryside Council for Wales, in conjunction with the MoD, are planning management work to increase the chances of the species' survival and at the time of our visit, management plots had been marked out. It is hoped that the site may be returned to a more favourable status by scraping the top few cm of the surface in order to remove smothering vegetation and return the dune slacks to an earlier successional stage, as favoured by *Liparis*. Such action has been successful at Kenfig NNR in Glamorgan and it is hoped that similar management at Laugharne will be equally successful.

An extensive search of the short turf of the helipad on Tywyn Burrows during a Llanelli Naturalists field meeting on 25/9/99 (Hutchinson & Pryce, 2000) produced only six plants of *Gentianella uliginosa* (Dune Gentian) where hundreds had been two years before. It was suggested that a lapse in the mowing of the turf might be responsible. Neither *Spiranthes spiralis* (Autumn Lady's Tresses), nor the rare liverwort *Petalophyllum ralfsii* (Petalwort) were rediscovered, despite both having been present in 1997, again probably for the same reason. An examination of the nearby edge of the saltmarsh revealed numerous large clumps of *Juncus acutus* (Sharp-rush), here near the spot where John Ray had recorded the species in 1662 – the first botanical record for the v.c.. Along the 'Bee Orchid Ride', a depression between ridges of stable dunes parallel to the beach which, although having escaped forestry planting, is infested with *Hippophae rhamnoides* (Sea Buckthorn) and self-sown *Pinus nigra* ssp. *laricio* (Corsican Pine), a particular effort was made to refind the *Yucca recurvifolia* (Curved-leaved Spanish-daggers) last seen at the foot of a dune in 1979. In the intervening twenty years the plant had grown from two rosettes about 0.3m high to many rosettes 2.7m tall with previous year's flower spikes to almost 4m. Two spikes were also just coming into flower. Occasional plants of this species have become established over the years on the rear-faces of *Marram*-dunes close to the beach between Pembrey Burrows and Tywyn Point and are thought to have originated as drifted seeds or vegetative fragments from the American east coast (it is a native of the Carolinas) although this hypothesis is not accepted by the drift-seed expert, Charles Nelson (pers. comm.). As long ago as 1839, this mechanism was suggested by L W Dillwyn of Penllergare, Swansea, (Dillwyn, 1848) who described "a thriving young plant ... was found [at Crymlyn Burrows, Swansea] more than a mile from any house or garden ... and it had all the appearance of having arisen from a seed which the tide had cast there". Recent erosion of the seaward dune faces of Tywyn Burrows has destroyed some of the Carmarthenshire plants, a process which is likely to continue with present coastal erosional trends.

The Carmarthenshire population of *Dianthus armeria* (Deptford Pink) at Bryndias, Pinged (SN434034) was visited on 23/5/98 by RDP when 22 plants were counted, not yet in flower. More plants were counted, now in bloom and more conspicuous, when Phil Wilson visited a few weeks later, whilst monitoring all the British sites. However the population was thought to have been dealt a fatal blow in 1999 when the trackway along which it grows, was widened and made passable to cars. The property had changed hands and the new owners had not been made aware of its presence. They were distraught to discover what consequences their action may have had. However, Plantlife's National Biodiversity Action Plan for the species, received in early October 2000, reports the site to again be in good condition, with 58 flowering plants and a further 24 seedling rosettes having been recorded in 2000!

The fourth v.c. record (and new 10km square) of *Trichomanes speciosum* (Killarney Fern) (gametophyte) was found by Arthur Chater (AOC) under rock overhangs on a dry, acid, steep east-facing slope under *Quercus petraea* (Sessile Oak) woodland, 200m north-east of Pencastell, near Llanwinio (SN2584.2910).

The *Veronica spicata* ssp. *hybrida* (Spiked Speedwell) population on the limestone cliffs below Carreg Cennen Castle (SN667190) was visited on several occasions by various monitors during the three-year period and continues to flourish.

New Native V.C. Records and rediscoveries of Historical Records

Based in Gower, Tony and Viv Lewis (T&VL) have achieved a considerable amount of recording and monitoring over the past three years, bringing fresh eyes to already well-worked areas of the county. One of their most important discoveries was *Silene nutans* (Nottingham Catchfly), a species new to Carmarthenshire. They discovered about 35 well established plants on 1/5/99 growing on Penrhynwgwyn, the small remnant of natural coastal shingle at Machynys, Llanelli (SS514973). This population must have been overlooked by several local recorders as the site has been well botanised in the past. It is suspected that it may have been passed over as weather-beaten *S. latifolia* (White Campion) at this exposed site or have been grazed down by rabbits, as it was later in 2000!

Many plants of *Spirodela polyrrhiza* (Greater Duckweed) were seen in one of the northern ditches at the Wildfowl and Wetlands Trust centre at Penclacwydd, east of Llanelli (c.SS537987) during a Llanelli Naturalists field meeting on 1/8/99. This species had not been recorded in Carmarthenshire since James Motley's record of c.1850, presumably from a site in the Llanelli area. A solitary plant of *Lemna gibba* (Gibbous Duckweed) was also pulled out of the ditch by IKM. It was classically obese and clear-cut *L. gibba*; no others were found in spite of specific searches, though Barry Stewart (BS) had noted true *L. gibba* elsewhere at Penclacwydd several years previously. IKM revisited the same ditch in early October 2000 but was unable to re-find any *Spirodela* though it was common in another part of the same ditch. He suspects that there is an 'ebb and flow' of these surface aquatics, perhaps reflecting changes in water chemistry, temperature and interactive competition. For example, the *Lemna trisulca* (Ivy-leaved Duckweed) at Machynys Ponds and related ditches has fluctuated dramatically in recent years. *Lemna trisulca*, incidentally was reported from a new site by IKM on 13/8/00 when he recorded it growing abundantly along 150m of the Pembrey Canal (SN436009) intermixed with *L. minor* (Common Duckweed), and *L. minuta* (Least Duckweed).

Another re-discovery was that of *Descurainia sophia* (Flaxweed), found by IKM on 1/7/00. Having acquired comprehensive instructions from IKM on how to relocate the plants, on 5/7/00, RDP & Kath Cottingham (KAC) carried out an extensive but abortive search of about 1km of trackway (during which about 500 Marbled White butterflies were admired), when, just about to give up, 10 or 11 *Descurainia* plants were found just where the car had been parked! They covered an area of about 10m x 1m on the edge of the cinder-surfaced track at the north-western corner of Pembrey Burrows and Saltings Local Nature Reserve (SN417002) and were growing in association with about 50 plants of *Erysimum cheiranthoides* (Treadle Mustard). This is the second v.c. record for *Descurainia* and the first since Motley's unlocalized record of c.1850, and the sixth v.c. record of *E. cheiranthoides*.

M V Prosser and H L Wallace (MVP&HLW) discovered *Radiola linoides* (Allseed) on the accreting 'nose' at the eastern end of Pembrey Burrows (SS433993) in 1998 during a survey of Carmarthenshire saltmarshes which they were undertaking for CCW (Prosser & Wallace, 1999). *Radiola* was growing in a dune hollow which "might usually be expected to support dune slack vegetation" and was associated with *Sedum acre* (Biting Stonecrop), *Euphorbia paralias* (Sea Spurge) and *Inula crithmoides* (Golden Samphire) within more typical NV.C. SM24 community species including *Elytrigia atherica* (Sea Couch), *Festuca rubra* (Red Fescue), *Agrostis stolonifera* (Creeping Bent) and *Limonium binervosum* (Rock Sea-lavender). *Radiola* has not been recorded in the county

since about 1950 when J F Thomas noted it growing on Laugharne Burrows in damp hollows in dunes (SN307). MVP&HLW also found *Eleocharis uniglumis* at Morfa Uchaf, Ferryside (SN373126) during the same commission, a new species record for the 10km square.

Within the recently declared Cernydd Camel NNR, *Persicaria* × *intercedens*, the hybrid between *P. maculosa* (Redshank) and *P. hydropiper* (Water-pepper), growing with both parents, was identified at the side of a field-pond at Garn Farm, Carmel (SN591159) by members of the BSBI Welsh AGM on 22/8/99. Earlier at the same meeting, *Juncus* × *kern-reichgeltii*, the hybrid between *Juncus effusus* (Soft Rush) and *J. conglomeratus* (Conglomerated Rush), displaying its characteristic yellowish colour, was pointed-out by AOC on the southern slope into Pwll Edrychiad (SN585160). Both hybrids were first vice-county records. The second record of *J. × kern-reichgeltii* was made by AOC, GH, RDP & KAC in the rushy fields between Pembrey Forest and Penybedd Wood, Pembrey (SN408013) on 26/6/00.

Euphrasia confusa × *E. nemorosa* from the E6 Range (SN320074) on Laugharne Burrows, collected by RDP (16/8/97) was determined by GH (2/99) from material at NMW and proved to be the third v.c. record. More of GH's *Euphrasia* determinations are noted below.

IKM sent a negative record which may be of interest. In late July 1999 he visited the narrow, wooded dingle behind Ystradffin Farm (SN789465), in the extreme north-east of the county. He was following-up an old record of *Circaea alpina* (Alpine Enchanter's-nightshade) made by the noted bryologist, H H Knight (1862 – 1944), a master at Llandovery College until 1907 and reported in Barker (1905). Knight had recorded both *C. alpina* and the hybrid *C. × intermedia* (the latter being still frequent in the Rhandirmwyn area) and it was this fact, together with very recent records of *C. alpina* from the same upland massif in south-east Ceredigion, which made a Carms. search for the species plausible. But in spite of careful examination of suitable part-shaded, slightly base-enriched, damp gully habitat the search proved fruitless, although *C. lutetiana* (Enchanter's Nightshade) was seen and the discovery of *Phlegopteris connectilis* (Beech Fern) was partial compensation. IKM still considers *C. alpina* to be a species which is still likely to occur in the area, but poses a challenge to agile botanists! Another species which may also occur in similar habitats and one which has not been seen for many years in the county is *Stellaria nemorum* (Wood Stitchwort). It was recorded from 'near Llandovery', again by Knight, and most recently, in 1953, by Mrs M Barnes and R F May from 'near Taliaris'. Another challenge perhaps!

Nationally Scarce Plants

The small population of *Silene gallica* (Small-flowered Catchfly) discovered at Burry Port on the apron above the northern wall of the Western Inner Harbour (SN444006) in 1997, was searched for by Richard Pryce (RDP) on 7/4/98, but no plants were found. However at least 1000 plants, ranging from c.2cm to c.15cm tall, were found in full-flower at the site only a few weeks later, on 23/5/98. All were in seed three weeks later. The single tiny desiccated plant found at the site on 29/6/99 by AOC during the BSBI Welsh AGM field meeting was thought to be a leftover from the previous season and was the only plant seen during the year. However, 2000 produced about a dozen well-grown and photogenic plants, up to c.30cm high, which produced the best show of flowers seen since the species' rediscovery three years ago.

The second v.c. record of *Potamogeton coloratus* (Fen Pondweed) was made by IKM at the 'Starfish Pond' in Pembrey Forest (SN391015) on 20/4/98 and was subsequently confirmed by Nick Stewart.

Charophyte records were made by Richard Lansdown (RVHL) and RDP in Pembrey Forest and the RAF Bombing Range, Tywyn Burrows, on 22/3/1998. *Tolypella glomerata* (previously recorded from the RAF Range by IKM in 1986) was frequent in flooded ruts and tracks at SN376033, SN376035, SN373044, SN366044, SN364050 and SN365049. *Chara aspera* was also abundant in the pool by the targets (SN364050). Two other species were collected which await confirmation. *T. glomerata* was also found to be locally abundant in some well maintained but shallow ditches north of the C9 track at the MoD Establishment on Pendine Burrows when RVHL and RDP visited the site with John Rees on 29/3/98 (SN280073). At one point, near where the access road crosses the ditch, *Chara vulgaris* var. *vulgaris*, *C. vulgaris* var. *longibractiata*, *C. curta* and *C. virgata* were all growing in close proximity.

County Rare and Scarce Species

David Peaman, past president of the BSBI, visited the county on 26/2/99, anxious to assist in refinding the old *Carex strigosa* (Thin-spiked Wood-sedge) population at Allt-y-wern Wood, Llangathen (SN579217). Accompanied by RDP & KAC, several plants were duly found, displaying the characteristic asymmetrical ligule (best developed in winter) growing on the banks of a single tufa-

depositing stream, in light shade. Furthermore, the other small population discovered in a road-verge north of Cilsan Bridge (SN589217) by Robin Walls and John Killick (HJK) ten years earlier was re-found. RDP & KAC revisited the site on 13/5/99 when the plants were found in full flower. A new record of *Polypodium x mantoniae* (a hybrid Polypody) was also made at Allt-y-Wern during David's visit which was confirmed by GH on 9/6/99.

T&V.L drew attention to the relative abundance of *Geranium rotundifolium* (Round-leaved Crane's-bill) at Burry Port Harbour (SN443006) in 1998 (near the *Silene gallica* site), extending the local range of the species from GH's record from the site dating from 14/6/92. This is the sole extant population in the v.c. as far as is known, and extends for the whole distance of the old dock wall in addition to occasional plants growing on the road bank to the north, discovered by RDP on 22/5/00.

The visit to the West Pwll Fly-ash Lagoon (SN472010) by BSBI members attending the Welsh AGM on 21/8/99 (Pryce, 1999a) enabled it to be scrutinised by over forty of the country's most eminent botanists all of whom expressed their delight and sense of privilege at being introduced to such a unique site. Not surprisingly several new and outstanding findings were made. Several hundred tiny plants of the acidophobic *Centaureum pulchellum* (Lesser Centaury) were discovered in one spot. This species is known from the dune systems of Tywyn and Laugharne Burrows where characteristically it grows in rabbit-grazed dune slacks and formerly in a few rides in Pembrey Forest. It has not, however, been seen in the county since 1991, even at its previously known sites. But one of the highlights of the meeting was the discovery of the liverwort *Petalophyllum ralfsii* by AOC, a species included on Schedule 8 of The Wildlife and Countryside Act. This is a species which is rarely more than about 10mm across but when examined under the lens resembles a tiny lettuce! The wildlife interest of the lagoon has been known for some years with records of *Osmunda regalis* (Royal Fern), several pairs of Lapwings breeding in the vicinity and large numbers of Snipe feeding in winter. It is only in the last three years, however, that sustained and regular botanical monitoring has been carried out. The chemistry of the ash is such that after leaching for a few years it is able to support plant species which in natural habitats are often confined to highly acid or highly alkaline conditions. Thus, normally acidophile species such as *Osmunda regalis*, *Oreopteris limbosperma* (Lemon-scented Fern), *Drosera rotundifolia* (Common Sundew) and bog-mosses including *Sphagnum fimbriatum* and *S. subnitens*, grow in juxtaposition with acidophobes such as *Juncus subnodulosus* (Blunt-flowered Rush), *Isoplepis cernua* (Slender Club-rush) and *Dactylorhiza praetermissa* (Southern Marsh-orchid). Another significant discovery was made by members of the Wildlife Trust West Wales who visited the site on 5/7/98: three plants of *Pyrola minor* (Common Wintergreen) were growing at the foot of the low fuel-ash cliff on the south-side of the lagoon. The species has not been seen since although searched for on several occasions.

Monitoring

Hammarbya paludosa (Bog Orchid) was searched for at its only known v.c. site in the Twrch valley at SN768147 on 4/8/98 by IKM and Graham Motley (GSM) but no plants were found. However, a small population of at least 25 plants was discovered about 100m to the north-west growing in relatively bare ground, described by Ian as 'organic ooze' and not, as is characteristic, on moss tussocks (in the case of the original site, on *Campylopus atrovirens*). They also recorded *Vaccinium vitis-Idaea* (Cowberry) in block scree west of the river at SN771156, which was the 3rd v.c. record and first for the 10km square.

The inland record of *Equisetum variegatum* (Variegated Horsetail) from the filter beds below Llyn-y-fan Fach, which had been doubted by some experts in the past, was proved beyond doubt when, in 1997, Dick Davies (RHD) found a few m² of the plant growing on the eastern bank of the Sawdde above the filter beds (SN801237). Further small colonies were found by Graham Motley (GSM) in 1998 and were also seen by AOC, GH, RDP & KAC on 19/6/99 (SN801237 and SN802235). Later in the same year, another inland site was discovered at Pant-y-Drefnewydd on Mynydd-du, by GSM and Sam Bosanquet who recorded a patch covering 2m x 1m in a wet area on limestone spoil on the floor of an old quarry at SN726193 on 4/11/99, a new 10km square record. Further sites probably await discovery. IKM revisited the small Carmarthenshire populations of *Rubus saxatilis* (Stone Bramble) at Cwm Clydach, Mynydd-du (SN743189) (7/99) and *Carex montana* (Soft-leaved Sedge), *Galium boreale* (Northern Bedstraw) and *Gymnocarpium robertianum* (Limestone Fern) at Carreg-yr-Ogof (SN778217) (25/6/99) and found them all to be extant.

More mountain monitoring was undertaken by Dr Tim Rich (TGCR) and Tony Tipper (AT) of the National Museum and Gallery, Cardiff, who scaled the cliffs above Llyn-y-fan Fach on 5/8/99 in search of *Hieracia* (hawkweeds). They re-found *H. euprepes*, *H. orimeles* and the spotted-leaved *H. hypochaeroides* as well as a glaucous leaved sect. *Vulgata* plant within the SN7921 grid square and *H. orimeles*, *H. cf. substrigosum*, two sect. *Vulgata* and a sect. *Tridentata* plants in grid square

SN8021. They recorded several additional species most of which had also been seen recently at the site by other observers including AOC, GH, RDP & KAC on 19/6/99, and GSM, Jonathan Graham (JG) and Julian Woodman (JW) in May 1997. Species included *Galium boreale* (SN79217), *Huperzia selago* (Fir Clubmoss) (SN7921 & SN8021), *Sedum forsterianum* (Rock Stonecrop) (SN7921) and *Vaccinium vitis-idaea* (SN7921). Several plants of *Galium boreale* were also seen in SN8021 between SN800215 and SN816217 by GSM, JG & JW. TGCR & AT also refound *Nitella flexilis* (a stonewort) in the lake (SN8021) and *Callitriche hamulata* (Intermediate Water-starwort) on mud and stones in a flush at the north end of the cliffs (SN7921).

Clubmoss monitoring continued to be carried-out by James and Mary Ilff (J&MI). They visited the relatively large *Diphasiastrum alpinum* (Alpine Clubmoss) and *Lycopodium clavatum* (Stag's-horn Clubmoss) populations north-east of Craig Llech-gwynt in the Gwenslais valley (c.SN730427) on 18/6/00. Their very comprehensive report (an education to us all in how to complete a rare-species population form) maps the populations and concludes that they have remained more-or-less stable since at least c1968 and that the site's future is reasonably favourable. They also visited the clubmoss population at Crybin Du in the Pysgotwr valley on 19/6/99 but could find only four plants of *Lycopodium clavatum* at c.SN755488, and even more alarmingly, neither of the other species were seen. Another monitoring task undertaken by J&MI was to revisit the *Vicia orobus* (Wood Bitter-vetch) population west of Brynamman (SN700145), on 19/6/99. They again produced an admirably comprehensive report and sketch-map, recording about 50 plants with about ten under dwarf shrub which might be a future threat to the colony. A single *V. orobus* plant was discovered at a new site (also new for the 10km square) by ChC & MG on 20/6/99 on a lane bank near Llanllwini (SN490389) but they commented that there may have been more but the council had shorn the bank so short as to prevent recognition of further plants.

A new site was found for *Sibthorpia europaea* (Cornish Moneywort) by IKM & GSM at Cwm Hust, south of Llanybydder, on 1/4/99, where they found a patch of the plant c.1m² on a west facing streamside bank in an area of felled conifers. IKM found another new site for the species west of Ceulannau Duon, Brechfa (SN493315): a c.0.5m x 0.5m patch on a steep, flushed, west-facing, rocky bank on 20/5/99. Both are first 10km square records. It is very likely that this species is overlooked in the northern half of the county, and without thorough examination of all small streams, rills and pistylls, it is suspected that many populations will remain undetected. One problem is the plant's similarity with several others which grow in the same habitat (Chater & Pryce, 1999). AOC, GH & RDP were convinced that they had discovered *Sibthorpia* on the banks of the Afon Cennen, south-west of Trap on 20/6/99 (SN638183 to SN647188) but a small specimen taken and grown-on by RDP turned into, and flowered as, *Chrysosplenium alternifolium* (Alternate-leaved Golden-saxifrage), a species not recognised by the party in the field! This was also a new record for the Cennen, although previously recorded from the Loughor catchment less than 2km to the south (Coed Llandyfan SSSI, SN640169, R.G.Woods, 31/9/84 and the Loughor gorge at Glyn-hir, SN642152, R.N.Stringer & R.H.Davies, 1/5/84). It proved to be something of an embarrassment, however, particularly when RDP and KAC revisited the site on 25/3/00 and AOC and RDP on 27/8/00, all of whom were unable to find any convincing *Sibthorpia* plants, but instead, occasional patches of *Chrysosplenium alternifolium*. The subject remains unsolved but further visits are planned in 2001. All this overlooks the fact that the main reason for the 1999 visit was to monitor *Saxifraga granulata* (Meadow Saxifrage), which had not been seen on this part of the Cennen since 1979. Plants, many in seed, were found growing frequently on the river banks but other records of interest included a new site for *Gymnocarpium dryopteris* (Oak Fern) (AOC) in woodland to the south of, and above the river, together with, on 25/3/00, a new site for *Viola reichenbachiana* (Early Dog-violet) near the chapel (SN636180) (KAC & RDP). The Oak Fern record was later found to be a rediscovery after 141 years of an old locality for the species (W. Davies, 1858; G. Hutchinson, 2000).

About 28 plants, one in flower and one in fruit of *Andromeda polifolia* (Bog Rosemary) were recorded by Wendy McCarthy (VMC) & Alice Saville when they were asked to monitor the population at Cors Goch SSSI, Llanllwch, west of Carmarthen (SN365188) on 14/6/98. The plants were re-found in the same area, north of the railway, as when they were last reported in the late 1970s. This part of the SSSI does not form part of the Wildlife Trust's land-holding and is therefore the subject of few visits, but is the only area where *Andromeda* has been recorded.

Taliaris Pool (SN634283) was visited by AOC, GH & RDP on 14/6/98 in order to refine *Potamogeton alpinus* (Red Pondweed), last seen in about 1970 by Mrs Vaughan but the depth of the water and the inadequacy of the grapnel defeated the attempt. Even the conveniently placed resident dinghy had a hole in it! Another better equipped visit is obviously indicated in the future. However, *Carex rostrata* (Bottle Sedge) and *Menyanthes trifoliata* (Bogbean) were found to be abundant marginal species and AOC determined *Callitriche hamulata* (Intermediate Water-starwort) from the shallows.

Denys Smith has been monitoring *Orchis mascula* (Early Purple-orchid) at three roadside sites near Llandeilo since 1993, the results of which are reproduced below:

Year	Pentrefelin		Side of A40, Penroc		Penybanc Farn	
	SN596239		SN615235		SN604235	
1993	21/4	137				
1994	24/4	127				
1995	30/4	108			27/4	120
1996	16/5	45	14/5	75	17/5	61
1997	28/4	73	1/5	93	30/4	48
1998	24/4	143	27/4	56	27/4	102
1999	1/5	105	2/5	29	30/4	79
2000	22/4	115	23/4	0 (site tipped-over)	25/4	52

Denys' data shows the three colonies to fluctuate quite widely from year to year but generally they appear to be holding their own with the exception, of course, of Penroc in 2000, but he is hopeful that this population may recover in 2001.

Trollius europaeus (Globeflower) continues to be of concern in the county. The population on a small rocky knoll in the Sawdde Gorge, east of Coed Shon (SN71922563), last seen by AOC, GH, Jim Bevan and RDP on 28/6/97, was refound by RDP and KAC on 22/5/99 and was found to cover an area of about 6m x 5m, comprising of about 40 plants. The previous year (14/5/98) RDP had walked a short length of the gorge south of Pont-ar-llechau in the hope of finding previously unrecorded populations but only discovered one: a single robust but compact clump, with about 20 flowers, on the east side of the river in a rocky and gravelly area below Turkey Cottage (SN733237). J&M rediscovered the small population known on a rocky island in the Afon Cothi west of Bwlch-y-Rhiw (SN717461) 20/6/99, but they found it to remain very vulnerable, consisting of just one flowering plant and one seedling.

J&M refound the small population of *Neottia nidus-avis* (Bird's-nest Orchid) growing in woodland by the Afon Tywi south of Cilycwm (SN754373) and brought a single flower to the annual Recording Meeting at Glynhir as evidence. The site was first reported by Ray Woods (RGW) in 1994. The small population of *Coeloglossum viride* (Frog Orchid) regularly found in recent years growing on a little-used trackway through damp dunes on Laugharne Burrows west of the MoD C9 prep room was searched for by the participants of the annual Recording Meeting on 25/6/00. No plants were found. The site appears to have become very much more overgrown since it was last monitored on 9/8/97 when six plants were seen. The continued colonisation of rank vegetation and encroaching scrub is a severe problem affecting the whole of Carmarthenshire's dune systems, where rabbit grazing and past management practices have all but ceased. The introduction of cattle grazing has been proposed but this may not be appropriate for the well-being of some delicate species. The only other confirmed Carmarthenshire site of *Coeloglossum* (Pantycerrig, Abergorlech, SN565308, last seen in 1987) was visited by T&VL in 1999 but no plants could be found.

IKM had several excursions aimed at adding to the records of *Narcissus obvallaris* (Tenby Daffodil) during which he recorded the species from several new tetrads, as well as a record from SN537423 which was new for the part of the 10km square within v.c.44.

Critical Species and infra-specific taxa

GH determined many of the backlog of *Euphrasia* specimens lodged at NMW. Some significant records from his determinations (2/99) are as follows: *E. arctica* ssp. *borealis* from unimproved dry grassland banks at Wenallt, Meinciau (SN471110) (Llanelli Naturalists, 22/6/1996, new 10km square record); *E. confusa* and *E. confusa* x *E. nemorosa* (first v.c. record) from the E3 and E6 Ranges (SN291071 and SN320074 respectively) on Laugharne Burrows (RDP 8/97); *E. confusa* (possibly with some hybridity with *E. nemorosa*) on the hellpad at Tywyn Burrows (SN368050) (RDP 8/8/97) and *E. rostkoviana* ssp. *rostkoviana* from a mesotrophic pasture near Pont Tir-Clai (SN529121) (RDP, 3/7/96).

A herbarium sheet of three specimens labelled as *Hieracium perpropinquum* (*H. sabaudum*) collected by the River Towy [sic] at Rhandimwyn on 1 September 1958 by A E Wade was examined by David McCosh at NMW on 22/4/99. He found one of the three to be *Hieracium vagum* which was the first 10km square record for SN74.TGCR's hawkweed records are listed above under 'monitoring'.

D E Allen (DEA), AOC & RDP recorded *Rubus hylocharis*, on the edge of woodland on the south side of the Teifi valley at Allt Ddol-lan, Llandysul (SN420402) on 27/7/99, (det. DEA 7/00, NMW). AOC also noted *Rubus scissus* on relict heathy banks on Llanwinio Common on 18/6/99 (SN246289). Both were new 10km square records. AOC also recorded *Festuca ovina* ssp. *hirtula* (a sub-species of Sheep's Fescue) at this latter site, which was the third v.c. record for the sub-species.

Callitriche material in NMW was determined or confirmed by RVHL on 21/5/98 and produced several new records including *C. brutia* (Pedunculate Water-starwort) from Bishop's Pond Abergwili (SN4420, R F May, 8/6/60, the third v.c. record) and from Lower Talley Lake (SN630336, RDP & Liz Flood, 25/8/93, the fourth v.c. record). Another Carms. *Callitriche* specimen in NMW, collected on 25/8/95 by GH & RDP from a backwater of the Afon Tywi at Llanwrda (SN718309), was subsequently determined by TGR, also as *C. brutia*.

TGR critically examined *Erophila* material in NMW (4/00) and determined first, second and third v.c. records of *Erophila majuscula* (Hairy Whitlowgrass) as follows: limestone grassland, Carreg Cennen (SN6619, Mrs I M Vaughan, 15/4/55); limestone quarry, near Crwbin (SN468127, RNS & RHD, 5/85) and south-facing limestone cliff, Carreg Cennen (SN668191, IKM, 29/4/92).

Festuca rubra ssp. *megastachys* (a Red Fescue) was recorded by MG on a roadside verge north of Manordeilo (SN675268) on 18/6/99 and Laurie Spalton's research (Spalton, 1999) into *Bromus hordaceus* ssp. *longipedicellatus* (a Soft-brome) identified the first v.c. record from material in NMW collected from Llanegwad (SN52) by C W Begg in May 1926.

Other Notable Records

Rorippa islandica (Northern Yellow-cress) was reported to be frequent on a soil storage mound at the site of the Carmarthen Eastern By-pass construction site at Tanerdy (SN424209) by Trevor Hallett in October 1998. RDP & KAC visited the site on 18/10/98 and counted over 100 plants growing in company with abundant *R. palustris* (Marsh Yellow-cress). Another new *R. islandica* site was recorded by DEA, AOC & RDP in sparsely vegetated gravel on the left bank of the Afon Teifi near Llandysul (SN417403) on 27/7/99 which proved to be a first record for the Carms. part of this 10km square. Material collected from both sites was subsequently confirmed by AOC by examination of the ripe seeds.

Mrs June Leonard, a parishioner of Llansaint Church, reported seeing a few orchids and many cowslips whilst attending a grave at the cemetery on the outskirts of the village (SN391078) in April 1998. RDP visited the site on 27 of the month to find at least 300 flowering plants of *Orchis mascula* (Early Purple Orchid) and a sward co-dominated in parts by *Primula veris* (Cowslip). A single plant of *Galium mollugo* (Hedge Bedstraw) was also found in the centre of the large area of unused ground which is currently being managed similar to a traditional hay meadow with a view to promoting its floral diversity.

A visit by IKM to woodland on the Old Red Sandstone below Cadwgan Fawr, Llangydeyrn (SN472147) on 10/4/98 yielded *Viola reichenbachiana* (Early Dog-violet), *Orchis mascula* and *Scirpus sylvaticus* (Wood Club-rush).

Another good churchyard site was discovered at Llansawel (SN621363) by WMC, HJK & Bob Dunnett (RD) on 20/6/99 which had *Filipendula vulgaris* (Dropwort), *Persicaria bistorta* (Bistort), *Epipactis helleborine* (Broad-leaved Helleborine) and *Linaria repens* (Pale Toadflax). In the same tetrad they recorded two species-rich wet grasslands (at SN634373 and SN622378) which contained species including, for instance, *Carex echinata* (Star Sedge), *C. panicea* (Carnation Sedge), *Wahlenbergia hederacea* (Ivy-leaved Bellflower), *Viola palustris* (Marsh Violet) and *Succisa pratensis* (Devil's-bit Scabious). Other good wet grasslands were recorded at Pant-y-bedw, north of Cwrt Henry (SN548246, HJK & David George (DMG), 13/6/98) and at Blaen-nant Cadno (SN643095, Dorothy Brookman (DB) & Dorothy Phillips (DP), 18/6/99).

The area around Glynhir was searched by those staying for the annual Recording Weekend in June 2000. Notable records included x *Festulolium loliaceum* (Hybrid Fescue) (SN639152) and *Carex spicata* (Spiked Sedge) (eg SN638150), both quite frequent on road verges in the vicinity, the former was the 3rd post 1970 v.c. record and a new record for the 10km square. Several members walked down to the river in the hope of re-finding *Hymenophyllum tunbrigense* (Tunbridge Filmy-fern) and *Chrysosplenium alternifolium* but the high water level precluded a close approach to the waterfall (SN641150). However, AOC, keen-eyed as ever, distinguished several plants of *Dryopteris aemula* (Hay-scented Buckler-fern) growing by the path (SN64151512), the first time that the species had been recorded here since Augustine Ley discovered it in 1883! The latest discovery of *D. aemula* has

been at another Glynhir, near Ponthenri (SN473103), found by IKM and RNS on 3/12/00 [added as a late extra in press].

IKM discovered a new site for *Dryopteris aemula* on 29/3/00 whilst recording in Troserch Woods, Llangennech (SN549042). One mature and two young plants were growing at the base of a natural Pennant Sandstone cliff in oak-birch woodland and several more were later found near the northern top of the same cliff area. The Amroth *Dryopteris aemula* plants were re-visited on 18/3/99 by IKM at the request of RDP because there was some confusion as to whether there were two localities or just one. IKM duly confirmed two, c.12 plants on the streamside in Little Trellissey Wood (SN181078) and another smaller population on the wooded, rocky roadside north-west of Telpyn Farn (SN185078). Also in the extreme south-west of the county, IKM and Dr Nigel Stringer (RNS) refound several plants of *Asplenium obovatum* (Lanceolate Spleenwort), on acid scree at Ragwen Point, Pendine (SN223073), at a site where it was thought to be extinct in the County Rare Plant Register (Pryce, 1999b).

RGW recorded a new site for *Hymenophyllum tunbrigense* about 1km WNW of Gwernogle where he found about six colonies up to 0.75m x 0.75m on the left bank of a stream, over about 15m of shaded low cliffs in a wooded ravine. *H. wilsonii* (Wilson's Filmy-fern) and *Phegopteris connectilis* were present nearby on the opposite bank. These records are the first for SN53 for both *H. tunbrigense* and *H. wilsonii*.

Another notable fern record was *Asplenium trichomanes* ssp. *trichomanes* (Maidenhair Spleenwort), recorded from near Cynwyl Elfed (SN367266) by IKM on 22/2/99 and later confirmed by GH at NMW.

The *Pyrola minor* (Common Wintergreen) recorded at Tumble and mentioned in the last report (Pryce, 1998) was found to extend to a very substantial population by members of the Llanelli Naturalists on 17/7/99 and covers several hectares under conifers planted in the 1970s (Pryce, 2000b). Also at the site, a restored opencast mine, which is now managed by the County Council as a Community Woodland, are stands of *Poa compressa* (Flattened Meadow-grass), *Lathyrus nissolia* (Grass-leaved Vetchling), *Carex disticha* (Brown Sedge) and *Mentha pulegium* (Penny-royal), the latter species being the upright American variety. Both this and *L. nissolia* are thought to have been introduced with the restoration seed-mix originally used. IKM reported two clumps of *Myosoton aquaticum* (Water Chickweed) growing in streamside woodland at this site as well as the far less desirable, invasive alien *Myriophyllum aquaticum* (Parrot's Feather) in the pond (SN539126).

IKM also discovered *Lathyrus nissolia* on restored mine spoil south of Penybanc, Ammanford (SN613113) 1/10/98 and the same species was found by RDP, presumably originally sown but also self-seeding, at the WDA development site at Pensarn (SN413118). IKM also reported *Polygonum oxyspermum* ssp. *rail* (Ray's Knotgrass) on the driftline of the sandy beach at Machynys, one plant only, (SS506979, 4/10/98), the second post-1930 v.c. record. Single plants of the same taxon were seen in the same vicinity by T&V in 1999 and IKM in 2000.

Several plants of *Ranunculus sardous* (Hairy Buttercup) were found by IKM on 29/9/98 in water-logged grassland adjacent to the Afon Lluchwr, south-east of Hendy (SN585033 29/9/98) which was the first recent record for the 10km square.

New *Carum verticillatum* (Whorled Caraway) tetrad records received or collated since the last report include:

- Llanwinio Common, (SN240287, AOC, 18/6/99 with *Dactylorhiza maculata* (Heath-spotted Orchid) *Eriophorum angustifolium* (Common Cotton-grass) and Scarlet Tiger moth),
- Goetre Uchaf (SN22L, AOC, 12/6/98),
- Pen-rhiw Meredydd (SN532256, Jamie Bevan (JMSB) & GSM, 22/7/94),
- Pant-y-bedw (SN548246, HJK & DMG, 13/6/98),
- Cwm-mawr-du, Gwernogle (SN532325, J&MI, 3/6/96),
- Llwyn-celyn (SN597328, JMSB & GM, 18/6/93),
- Blaen-nant Cadno (SN643095, DB & DP, 18/6/99),
- Tre-waun Isaf, Llansawel (SN622378, WMC, HJK & RD, 20/6/99),
- Bolahaul, Talley (SN65953290, Jean Green, 7/8/96),
- Llathige (SN666371, JMSB & GM, 10/5/94),
- Llwynbwch (SN682313, JMSB & GM, 23/6/93) and
- Llwyn-y-bedw (SN736259, JB & Dawn Gray, 25/6/92).

A new 10km square record of *Picris echioides* (Bristly Ox-tongue) was made by RDP whilst waiting in a traffic-queue on the A48 dual-carriageway approaching Carmarthen where several plants were growing on the central reservation south-east of Safeways (SN415187) on 15/10/99.

Weed Flora

Chrysanthemum segetum (Corn Marigold) was discovered to be frequent by the trigonometrical station at Heol Smyrna, Llangain, SN385163, in a newly re-seeded field by Trevor Crosby in September 2000. One plant of *Anthemis cotula* (Stinking Chamomile) was recorded by IKM on 10/9/99, in a horse-grazed field south of Garn Farm, Mynydd Cerrig (SN513142), the second v.c. record.

A large, very productive (of weeds!) dung-heap deposited on an old tramway embankment crossing the grazing marshes between Pembrey Forest and Penybedd Wood (SN409014) was examined by AOC, GH, RDP & KAC on 26/6/00. Several plants of *Chenopodium ficifolium* (Fig-leaved Goosefoot), one of *Rorippa palustris* (Marsh Yellowcress), and a few *Urtica urens* (Annual Nettle), were recorded, whilst nearby, a very large population of *Trifolium micranthum* (Slender Trefoil) grew, often dominating the short sward of the old tramway bed. *Urtica urens* was also recorded on 29/7/00 by IKM, growing frequently along a sandy track just outside Pembrey Forest (SN388042) and GH found a further two plants of *Chenopodium ficifolium* at the base of the new Pont D'Agen cycleway bridge, near Old Castle Pond (SN499003) on the day of his visit to the National Eisteddfod (8/00).

Penyfan Quarry, (SS516994), a disused and recently regraded and sown, Pennant Sandstone quarry in Llanelli, was examined by several botanists during the summer of 2000 acting on a tipped-off by Jim Davies of Carmarthenshire County Council (Morgan, 2000b). RDP, GH and IKM produced a long list of casuals, aliens, throw-outs and seed-mix contaminants, which included, *Chrysanthemum segetum*, *Borago officinalis* (Borage), *Nigella damascena* (Love-in-a-mist), *Lychnis coronaria* (Rose Campion), *Origanum vulgare* (Marjoram) and *Iberis umbellata* (Garden Candytuft). Two species remain unidentified, one of which has been tentatively determined by RDP & GH as *Scabiosa atropurpurea* and the other may be *Clarkia amoena*. There was also a rich assemblage of more characteristic Llanelli weeds including *Stachys arvensis* (Field Woundwort), *Aethusa cynapium* (Fool's Parsley), *Convolvulus arvensis* (Field Bindweed), *Viola arvensis* (Field Pansy), *Trifolium arvense* (Hare's-foot Clover), *Fumaria muralis* (Common Ramping-fumitory) and *Fumaria capreolata* (Tall Ramping-fumitory).

Casuals and Aliens

T&VL provided an impressive list of casuals from a newly constructed embankment (for the Sustrans cycleway) at Morfa Bacas (SS547983) in December 1999 which included *Phalaris canariensis* (first 10km square record), *Panicum miliaceum*, *Silybum marianum* (Milk Thistle), *Chrysanthemum segetum* (Corn Marigold), *Lobularia maritima* (Sweet Alison), *Amaranthus retroflexus* (Common Amaranth) (2nd v.c. record and first 10km square record) and *Thlaspi arvense* (Field Pennycress). Three plants of *Galinsoga parviflora* (Gallant-soldier) were found by RNS & RHD in disturbed ground north of the large Machynys Pond (SS511983) on 30/10/99, the first v.c. record. In the same general area, IKM discovered a plant of *Stachys annua* (Annual Yellow-woundwort) east of Morfa Roundabout (SS518987) on 17/9/00 (det. GH 25/11/00) which is the first v.c. record for this rather rare casual and is only the sixth record for Wales (Ellis, 1983).

T&VL failed to refind *Muscari comosum* (Tassel Hyacinth) at the site on the east side of Penybedd Wood (SN419015) where it was known until 1978. They searched the area on 10/5/99 but in the meantime the sward has become very rank and is likely to have smothered the plant. However, they recorded two plants of *Dipsacus pilosus* (Small Teasel) within the Cernydd Carmel NNR at Glan Gwenlais Quarry, Pentregwenlais on 23/8/99 (SN604164) which was a first county record. They followed these in 2000 by discovering a single plant about 20m from the 1999 population (21/9/00, SN605164) and another single plant at Denham Avenue, Llanelli (2/9/00, SN496014). No sign was found of new plants at the original site!

A dump of rubble on a development site at Dafen (SN534019) had a number of unusual casuals including single plants of *Briza maxima* (Large Quaking-grass), *Linaria purpurea* (Purple Toadflax), *Papaver dubium* (Long-headed Poppy), *Sisymbrium orientale* (Eastern Rocket) (also recorded in abundance by RDP at a demolition site in Station Road, Llanelli, SS507994) and several plants of *Valerianella carinata* (Keel-fruited Cornsalad). This latter species seems to have had a population explosion in the last couple of years with other records as follows: one plant in a flower-bed on station platform of the Gwili Railway, near Cwmdwyfran (SN407258, RDP & KAC, 5/99); frequent on south-facing roadside bank, Trimsaran Road, Furnace (SN497013, IKM, 30/4/00); several strong plants at base of wall, 24 Pentrepoeth Road, Furnace (SN507015, IKM, 12/5/00) and three plants on walls of the former walled orchard, Aberglasney Gardens (SN581220, RDP & KAC, 13/5/00).

Lamium amplexicaule (Henbit Dead-nettle) seems also to have been recorded with greater regularity in the Llanelli area recently – mainly as a result of plants appearing at disturbed sites associated with works for the Millennium Coastal Park. T&VL recorded it at Pembrey Harbour (SN436002) in June 2000 and IKM reported two plants at Machynys (SS512978, 15/7/00), more in landscaped raised ground east of the ruin of Machynys House (SS508981, 8/9/00, with GH); c.20 plants at Machynys (SS513977 & SS518983, 17/9/00), three plants in disturbed soil on the western approach to the new Pont d'Agen cycleway bridge (SN499003, 10/9/00), three by the Ashpits Pond, Pwll (two plants at SN463012 (here with eight plants of *Thlaspi arvense* (Field Penny-cress)) and one plant at SN462012, 15/10/00) and a few at Bigyn Hill Allotments (SS509998) on 9/9/99. At this latter site, IKM also recorded *Lamium hybridum* (Cut-leaved Dead-nettle), *Urtica urens*, *Misopates orontium* (Weasel-snout) and about eight plants of *Erysimum cheiranthoides* and at the Pont d'Agen site, he found a plant of *Ambrosia artemisiifolia* (Ragweed) (conf. GH), the second v.c. record since Hamer's Llanelli record of 1911. A single plant of *Lamium hybridum* was also recorded by T&VL near the eastern level crossing at Llanelli Station (SS508993) on 8/4/00.

TGCR redetermined (1/3/99) a specimen collected by Mrs A M Pell and previously identified as *Lepidium campestre* from a roadside in Cross Hands (SN51) in August 1985 as *L. densiflorum*, which is a new record for the v.c.. The current synonym for this taxon is *Lepidium virginicum* (Least Pepperwort).

About 25 well established plants of *Adiantum capillus-veneris* (Maidenhair Fern) were discovered by IKM and RNS in the mortared brick-wall of a tomb in the graveyard of Carmel Chapel, Cwm Capel, Burry Port (SN458023) on 17/9/98. They also found *Kickxia elatine* (Sharp-leaved Fluellen) to be frequent in the graveyard, whilst in a nearby vegetable field (SN459024), a profusion of *Chrysanthemum segetum* was growing in addition to other weed species of local interest, in a county where such habitat is relatively rare. Five plants of *Adiantum capillus-veneris* were also recorded by RNS in 2000, on stone walls within the lime kilns at Cilyrychen Quarry (SN612116) where Dafydd Dafis recorded one in 1986.

Crassula helmsii (New Zealand Pigmy-weed) appears not to be spreading at a great rate through the county but some worrying populations have been reported recently. Plants in a pond on the flood plain of the Afon Taf within reach of both flood and tidal waters at Llyn-y-gors, near St Clears (SN272152) were of great concern to the owner of the farm, Mrs Fiona Lanc, who reported the problem on 15/1/00. She was concerned over the threat to other waterbodies in the vicinity, should flooding or tidal inundation occur. A large, flowering population of *C. helmsii* was found during the Annual Recording Meeting in June 2000 to be smothering an ornamental pond at Glynhir (SN639150). *Myriophyllum aquaticum* covered a similar area within the same pond, so much so that there was no open water to be seen. More worrying was the fact that *M. aquaticum* was present in another pond on the estate located adjacent to the Afon Llŵchwr, from where it could easily colonise riparian habitats downstream. Perhaps the most potentially damaging *C. helmsii* population is that by the jetty in the Witchett Pool, Laughame Burrows (SN2707), first observed in 1997 but it was found not to have increased when the site was visited by BSBI members on 25/6/00.

The *Heracleum mantegazzianum* (Giant Hogweed) which had been observed by the side of the A484 road at Trostre (SS533994) was last seen by Barry Stewart in April 1998 but three or four plants were found by ChC & MG at a new site near Llanllwni (SN482384) on 20/6/99. The long-established population along the side of the A40 near Manordeilo continues to move around, with T&VL recording several plants on 29/5/00 on the south side of the road at SN670261, a hundred or so m from the last recorded observation (GH, 30/6/88).

A batch of *Cotoneaster* specimens collected over the last few years was determined at NMW by GH in March 1999 and included the following new 10km square records (all plants believed to be self-sown):

<i>C. bullatus</i>	Llannon, SN5409, GH, 21/4/92,
<i>C. integrifolius</i>	Brynamman, SN708143, RDP, 16/7/93,
<i>C. simonsii</i>	Llanybydder, SN5242, GH, 4/7/91,
<i>C. sternianus</i>	Ammanford, on colliery spoil, SN620132, GH & RDP, 15/6/98,
<i>C. frigidus</i>	Kidwelly sewage works hedge, SN399063, GH & RDP, 31/8/91
<i>C. dielsianus</i>	Tanerdy, Carmarthen, SN4221, GH, 24/6/94
	St Anthony's Well, Llansteffan, SN346088, IKM, 30/9/93.

Other *Cotoneaster* material included that collected by J&MI from the Gwili Railway terminus at Bronwydd Arms (SN418236) in August 1997 which was determined by GH as *C. bullatus* and *C. sternianus*. Both were also new 10km square records.

IKM has monitored an expanding patch of *Allium triquetrum* (Three-cornered Garlic) in front of offices at North Dock, Llanelli (SS497998) since he first noted it on 4/4/98. He also noted *Oxalis exilis* (Least Yellow-sorrel) at the base of a mortared wall at Heol Waun-y-clun, Trimsaran (SN452039, 23/10/98, second v.c. record); *Oxalis incarnata* (Pale Pink-sorrel) on a roadside bank at Pen-y-fai Lane (SN497016, 21/5/97, det. GH, known here for c.20 years) and self-sown seedlings of *Alnus cordata* (Italian Alder) at several sites: a garden at Coronation Road, Llanelli (SS513999) which it reached from trees at least 300m away, old sidings east of the railway station near Langland Road, Llanelli (SS512993) and at Cynheidre (SN492082). Another record of a self-establishing tree is *Ficus carica* (Fig), two small plants of which (c.30cm tall) were noted by IKM on 30/10/99 at Machynys (SS509983). The *Ficus* tree at Christian Temple graveyard, Ammanford (SN831123), first recorded by Annie Mary Pell in 1985, was still present on 1/1/2000 despite continued tidying of the ground (T&VL).

RNS and IKM discovered a profusion of *Sedum sexangulare* (Tasteless Stonecrop) alongside the access road to the Great Mountain Colliery site, Tumble (SN536125) on 28/4/98, and a single plant of *Lactuca serriola* (Prickly Lettuce) found by IKM growing at the base of a wall near Station Road, Llanelli (SS507998) was only the second recent v.c. record (7/6/99).

A large stand (c.50m x 2m) of *Calamagrostis epigejos* (Wood Small-reed) was discovered adjacent to the railway line south-west of Llangennech Station (SN563011) by RDP, KAC & C A Cottingham on 26/4/99, which is probably the same population recorded by Mrs Vaughan from Llangennech over twenty years ago. A new population was discovered by RDP on the Blackwells development site at Dafen (SN537019) in semi-improved, damp, rushy grassland on 16/9/00, the fifth v.c. record.

Several small patches of *Cynodon dactylon* (Bermuda Grass) were noted by Eric Clement and Paul Stanley on grass verges in a housing estate (SN45150055) and abundantly around the swings in a nearby children's playground (SN44950060) in Burry Port when they visited the area in May 2000. This was a new record for the v.c. but when RDP tried to re-find the plants in June he found that the whole area had been recently mown and none were to be seen. RDP & KAC made the first v.c. record of *Lagurus ovatus* (Hare's-tail), a single plant growing in the gravelly forecourt of a house in Station Road, Llangennech (SN562015) in June 2000. IKM recorded *Setaria viridis* (Green Bristle-grass) growing in the back lane of Coronation Road, Llanelli (SS514999) on 26/9/99 and GH & IKM, recorded the same species at Adulam Chapelyard, Felinfoel (SN516022) on 8/9/00, where the population of *Misopates orontium* continues to survive with widely scattered flowering plants growing between the graves. These were the fourth and fifth v.c. records for *Setaria viridis*.

Another *Setaria viridis* plant was discovered by IKM on the shingle at the lake edge at Sandy Water Park (SN497003, 10/9/00) growing with *Echinochloa crus-galli* (Cockspar) and *Linum usitatissimum* (Flax). Another casual rare in Carmarthenshire, also discovered by IKM (12/9/00), was *Amaranthus hybridus* (Green Amaranth) (prov. det. GH) growing on recently bulldozed ground, south-west of Ty Mawr farm, Pembrey (SN418029) with *Viola tricolor* ssp. *tricolor* (Wild Pansy), also infrequent in the vice county.

Several plants of *Phacelia tanacetifolia* (Phacelia) were discovered by Paul Day growing by the gents at Burry Port Harbour during the break for lunch at the BSBI Welsh AGM field meeting on 21/8/00. This was a first v.c. record. No sign of any plants was seen during searches on various dates by RDP and KAC in 2000.

Landscape architects continue to specify inappropriate plants for new schemes in the county. *Salix cinerea* ssp. *cinerea* (Grey Willow) has been introduced in place of locally native ssp. *oleifolia* in plantings at the new Millennium Wetlands extension to the Wildfowl and Wetlands centre at Penclawdydd (SS535985, IKM, 23/9/98) and at Sandy Water Park (SN4900, IKM, 1999).

An alarming number of instances of plantings of *Hippophae rhamnoides* (Sea Buckthorn) have also come to light in schemes associated with the Llanelli Millennium Coastal Park. The threat that this plant poses to coastal habitats can be demonstrated only too well at the dune systems of Pembrey, Tywyn Burrows, Laugharne and Pendine, as well as across the Burry Inlet at Whiteford on Gower. The species was introduced by the Forestry Commission in the 1920s and 1930s to stabilize the dunes during the planting of Pembrey Forest. At all these sites, *Hippophae* originating from these Pembrey plantings, has aggressively smothered the dunes, causing extensive swathes of irreversible habitat loss and exterminating all of the more delicate native species. Carmarthenshire County Council has recently embarked on an expensive programme of reducing the amount of *Hippophae* at their Pembrey Saltings Local Nature Reserve but elsewhere they are allowing it to be planted as part of their own landscaping schemes! And despite advice to the contrary, the species is still being specified for coastal planting schemes located close to very sensitive and valuable dune systems all along the South Wales coast.

More insidious, perhaps, is the discovery of the Eastern European genotype of *Lotus corniculatus* (Common Bird's-foot-trefoil), *L. corniculatus* var. *sativus*, at several reclamation and development sites recently. These include Glyn-Glas restored opencast site, Llandybïe (SN607140, RDP, 7/98), a development site at Capel Hendre (SN597107, RDP & KAC, 29/6/00) and Penybanc near Tycroes (SN615114, IKM, 6/00) on old coal spoil tip.

Flora Production and the Future

GH continues with the back-room tasks of collating the bibliography and all first county records for inclusion in the forthcoming Flora, as well as receiving and dealing with material for passing to referees. He, of course, determines the majority of specimens that are sent to him and it is only critical material which gets sent to higher authority. To him I continue to be very grateful. The volume of records now collected is sufficient to produce meaningful distribution maps for most species, although some deficiencies remain. I am particularly grateful to J&Ml for taking the initiative to fill-in gaps for common species in their part of the county and in enlisting support of others through the local newspaper. The production of the county Rare Plants Register (Pryce, 1999b) has enabled the collation of records for a significant proportion of species and has provided a trial for the way the task might be tackled when writing the final work.

Further recording continues and the annual meetings will continue to be arranged because, apart from the new records they produce, they are generally acknowledged as being so enjoyable (and educational) by the participants. The emphasis, whilst still very much aimed towards recording under-worked areas, is increasingly biased towards monitoring sensitive species and re-finding populations which have not been seen for many years. Comprehensive site recording during Llanelli Naturalists' and Wildlife Trust meetings is also a potential source of records and, whilst many meetings continue to be led as a 'jolly' for members, an increasing number are productive. The Rare Plants Register catalogues many species in need of monitoring. *Gerista anglica* (Petty-whin), *G tinctoria* (Dyer's-greenweed), *Sibthorpia*, *Trollius* and *Vicia orobus* continue to need general monitoring, but also populations of more common species away from their main population ranges, such as the lowland populations of *Drosera rotundifolia* or *Wahlenbergia hederacea*, might also be worthy of attention.

There is still a great deal of work to be done, most of which, I feel, is resting on my shoulders! With good luck, I hope that the Flora will reach production stage in the not too distant future.

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Richard D Pryce, 25 November 2000

THREE-LOBED CROWFOOT *RANUNCULUS TRIPARTITUS* DC. IN WALES

Biodiversity Action Plan work has led to a change in our knowledge of the distribution, ecology and conservation requirements of Three-lobed Crowfoot (*Ranunculus tripartitus* DC.) in Wales. This change was initiated by a study commissioned by the Countryside Council for Wales in 1998, of known populations, historic records and survey of historic sites for the species (Lansdown, 1999). The survey resulted in rediscovery of some populations that had been considered extinct, rejection of some historic records and a revised description of the habitat preferences of the species. Interest in the species generated largely by this study encouraged botanists to search suitable sites and led to discovery of further new populations and rediscovery of populations believed extinct.

Three-lobed Crowfoot is now known to occur on Gower, south and north Pembrokeshire, the Llyn Peninsula and Anglesey. Review of specimens and historic records suggests that records from Breconshire, Radnorshire and Monmouthshire and at least some records from Carmarthenshire were erroneous. North-west Pembrokeshire still supports the greatest concentration of Welsh populations. All confirmed populations of *R. tripartitus* in Wales are within 15km of the coast, in the eueceanic or hyperoceanic zones (Bendelow and Hartnup, 1980. In: Ellis, 1983) and in Pembrokeshire there are healthy populations on the three seabird islands of Skomer, Skokholm and Ramsey. It is only found below 120m altitude and many sites are on level or gently sloping ground where surface deposits of glacial or periglacial origin mask the variable underlying solid geology. Three-lobed Crowfoot appears to occur on seasonally or permanently waterlogged, gleyed, peaty/humose topsoil over these surface deposits. In Wales it tends to occur in areas dominated by the M16 (*Erica tetralix* - *Sphagnum compactum* wet heath) and/or M25 (*Molinia caerulea* - *Potentilla erecta* mire) NVC communities. However, at most sites, it occurs specifically in transition zones between improved or semi-improved pasture and M23 (*Juncus effusus/acutiflorus* - *Galium palustre* rush-pasture). a. (*Juncus acutiflorus* subcommunity) or b. (*Juncus effusus* subcommunity) in areas of heathland.

The largest and "healthiest" *R. tripartitus* populations occur where there is localised, heavy poaching of seasonally inundated areas where poaching exposes underlying clays. *R. tripartitus* can survive beyond conversion of mire or heath communities to pasture – but may not be able to tolerate agricultural "improvement" or intensification.

Since completion of the CCW study, new populations have been found in a number of areas, including south Pembrokeshire, West Glamorgan, Cardiganshire, Caernarvonshire and Anglesey. It seems likely that there are further populations to be found and it is clear that effort directed at suitable habitat pays off. The best places to search are wet coastal heathland or unintensified pasture in areas characterised by heathland, which have active cattle-grazing.

Although Three-lobed Crowfoot can germinate throughout the year, flowering usually peaks in late April and early May. Counts of long-established populations scattered across the Pembrokeshire sites of Dowrog Common and Marloes Mere during the winter of 1999-2000 revealed over 1000 plants at each. Such high counts are only likely when appropriate grazing regimes coincide with long growing seasons of mild wet weather. Buried seed derived from such productive episodes may well persist for several years enabling an apparently small and declining population to rapidly recover if favourable conditions return.

ACKNOWLEDGEMENTS

The authors wish to thank the Pembrokeshire staff of the National Trust, Wildlife Trust West Wales, Royal Society for the Protection of Birds and Countryside Council for Wales for their help. With special thanks to Ian Jamieson for assistance with Dowrog Common and to Andy Jones for information and advice throughout.

The authors would also like to thank the following people for their help with location and survey of sites: Ian Bonner, Arthur Chater, Les Colley, J.W.Donovan, Dr. Iwan Edgar, Jane Hodges, Tim Jones, Dai Morris, Richard Pryce, John Ratcliffe, Dave Rees, Ian Simms, Nick Stewart, Caleb Watts and Julian Woodman. Stephen Jury, Gina Murrell and Gill Challen. Tim Rich and George Hutchinson helped with review of herbarium specimens.

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The current status of three-lobed crowfoot in Wales				
Site	VC	Most recent record	Negative survey*	Protected status
Anglesey				
Bryngwyn Farm	052	1998		None
Llyn Hafodol	052	1998		SSSI
nr. Penrhoslygwy Church	052	1892		None
Salbri Bog	052	2000		None
Caernarvonshire				
Mynydd Cilan, Lleyrn Peninsula	049	2000		SSSI
Cardiganshire				
pool nr. Mwnt	046	2000		None
nr. Aberporth	046	1941	1999	None
Pembrokeshire				
Dowrog Common	045	2000		SSSI
Gwadn Valley, Solva	045	2000		SSSI
Haverfordwest	045	1848		None
Llandigige Fawr	045	1998		SSSI
Llanwnwr Farm, Strumble Head	045	1985	1998	None
Marloes Mere	045	2000		SSSI
North Moor Common	045	2000		None
Northeast of Carn Silin	045	1997	1998	None
Penlan Farm, St.Davids	045	1999		None
Ramsey Island	045	1999		SSSI
Shortland Moors	045	2000		SSSI
Skokholm Island	045	2000		SSSI
Skomer Island	045	2000		SSSI
South of Dudwell Mountain	045	1986		None
Spittal Common	045	2000		None
St.Davids Airfield Heaths	045	2000		SSSI
St.Davids, nr. Porthmelgan	045	2000		SSSI
Trerhos Common	045	1984	1998	SSSI
Tretio Common	045	2000		SSSI
Waun Ffynnon Clyn	045	2000		None
Waun Isaf	045	2000		None
Ynys Barry	045	1996	1998	None
Ysgeifiog Moor	045	1998		None
West Glamorgan				
Kimleymoor Pond	041	1974	1998	None
Manselfield Common	041	1998		None
nr. Port Talbot	041	1960		?
Pitton Common/Great Pitton Farm	041	1976	1998	None
Rhosili Down	041	1907		SSSI
Tankeylake Pond	041	1940	1988	None
Ryer's Down	041	1999		None

*- Negative survey indicates that the most recent search of a site known to support populations of *R.tripartitus* has failed to locate any plants.

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S.B.Evans, Glan-y-mor, Dinas Cross, Newport, Pems. SA42 0UQ

WELSH PLANT RECORDS – 1999

Welsh Plant Records are compiled by Gwynn Ellis, 41 Marlborough Road, Roath, Cardiff, CF2 5BU, from reports of BSBI vice-county Recorders to whom records should preferably be sent. Plants are now listed for each county in the order of D.H. Kent's *List of Vascular Plants of the British Isles* (1992), and *Supplement 1* (1996), the number in those lists preceding the name, so that names changed since 1996 can be given without giving the former name. Latin names also follow Kent (1992) and Supplements 1 & 2 (1996 & 2000) or, if not in that list, the second edition of C.A. Stace's *New Flora of the British Isles* (1997), E.J. Clement & M.C. Foster's *Alien Plants of the British Isles* (1994) or T.B. Ryves, E.J. Clement & M.C. Foster's *Alien Grasses of the British Isles* (1996), authorities for Latin names are no longer given unless the name is not in any of these works. English names are those in *English Names of Wild Flowers* ed. 2 (1986) by Dony *et al.* or, if not in that list, Stace (1997), Clement & Foster (1994) or Ryves, Clement & Foster (1996). English names enclosed by square brackets do not occur in any of these books but are included in Davies & Jones (1995). Welsh names are those in Dafydd Davies & Arthur Jones' *Welsh names of plants* (1995).

The following symbols are used:

- * to indicate a new v.c. record
- + to indicate a new or updated hectad record
- † before the species number: to indicate that the species is not native to Wales
- † before the record: 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
- ‡ to indicate that the taxon is now believed to be extinct in the locality cited

In general only records which are additional to those given in *Flowering Plants of Wales* by R.G. Ellis (1983), *Distribution of Pteridophyta in Wales* by G. Hutchinson & B.A. Thomas (1992), *Flora of Flintshire* by G. Wynne, *Flora of Radnorshire* by R.G. Woods, *Flora of Glamorgan* by A.E. Wade *et al.*, and *Flora of Montgomeryshire* by I. Truman *et al.* are listed. Other records are included at the discretion of the vice-county recorder. The minimum grid reference is to a hectad but, if supplied by the recorder, references to a 1km or even a 100m square may be included. A letter in parenthesis following a 4 figure grid reference indicates a tetrad.

The Vice-county Recorders from 1/1/2000 are:

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

GLAMORGAN, v.c. 41(West); Dr Q.O.N. Kay, School of Biological Sciences, University of Wales, Swansea, SA2 8PP

GLAMORGAN, v.c. 41(East); Mr J. Woodman, c/o CCW, Unit 4, Castelton Court, Fortran Road, Cardiff CF3 0LT

BRECON, v.c. 42; Mr M. Porter, Aberhoewy Farm, Cyffredyn Lane, Llangynidr, nr Crickhowell, Powys NP8 1LR

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

CARMARTHEN, v.c. 44; Mr R.D. Pryce, Treveithin, School Road, Pwll, Llanelli, Carmarthenshire SA15 4AL

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

CARDIGAN, v.c. 46; Mr 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; Mr P.M. Benoit, Pencarreg, Barmouth, Gwynedd LL42 1BL

CAERNARFON, v.c. 49; Mr G. Battershall, 15 Rhodfa'r Grug, Upper Colwyn Bay, Conwy LL29 6DJ

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

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

ANGLESEY, v.c. 52; Dr N.H. Brown, Treborth Botanic Garden, University College of North Wales, Bangor, Gwynedd LL57 2RQ and Mr I.R. Bonner (all correspondence to Dr Brown).

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

- +1/1/1. *Huperzia selago* (Fir Clubmoss) (Cnwpfwsogl Mawr). +In small hollow in shelter of bedrock exposure, Blaenavon between Garn-yr-erw and Pwll du, SO244111, P.D. Moore, 1999. 2nd record and 1st since A. Ley's of 1890.
- +28/17/4. *Thalictrum minus* (Lesser Meadow-rue) (Arianllys Bach). +†Waste ground, Upper Cwmbran, ST2796(T), R. Fraser; +Grassy bank, Llanfllowell, ST3998(Z), E.D. & J.D. Pollard; +Rail bank, Goytre, SO326047, R. Fraser; all 1989.
- 43/1/13. *Chenopodium ficifolium* (Fig-leaved Goosefoot) (Troed yr Wydd Ffigys-ddail). Mounds of soil, Rogiet, ST464881, G. Hill & T.G. Evans, 1999. Growing with *Datura stramonium*.
- +45/3/1d. *Montia fontana* subsp. *chondrosperma* (Blinks) (Gwlyddyn y Ffynnon). Pasture on lower slope of Arwllt, SO3418(P), S.A. Rippin, 1999.
- 47/8/20. *Rumex palustris* (Marsh Dock) (Tafol y Llaid). One large plant growing through split in railway sleeper in wet meadow, S of Barecroft Common, ST4186, T.G. Evans, 1999.
- †61/1/5. *Populus candicans* (Balm-of-Gilead) (Poplysen Gilead). Small tree (not recently planted) in corner of field, Upper Green, W of Red Castle, SO388191, S.A. Rippin, 1999.
- *†62/14/cor. *Cardamine corymbosa* (New Zealand Bitter-cress). Over 100 plants as weed in pots and nursery beds, Waterwheel Nursery, Bullyhole Bottom, ST462963, C. Evans, 1999, NMW. 1st Welsh record. Also in at least three other nurseries in the area.
- +†73/1/3. *Crassula helmsii* (New Zealand Pigmyweed) (Corchwyn Seland Newydd). Massed around pond margins, Caldicot Castle, ST487886(Z), T.G. Evans, 1999.
- +†91/2/7. *Euphorbia serrulata* (Upright Spurge) (Llaethlys Mynwy). Disturbed soil in garden, 'Windyridge', Cobbler's Plain, SO475011, J. Woodman, 1999.
- 94/1/1. *Linum bienne* (Pale Flax) (Llin Culddail). Probably self-sown on dry dusty verge near Llanellen Bridge, SO305110, S.A. Rippin, 1999.
- +†110/9/1. *Datura stramonium* var. *chalybaea* (Thorn-apple) (Meiwyn). c.50 plants with purple flowers and stems in mounds of soil, Rogiet, ST464881, G. Hill & T.G. Evans, 1999. Growing with *Chenopodium ficifolium*.
- *135/25/63. *Taraxacum fulvicarpum* (a dandelion). Hedgebank N of Llanfihangel Crucorney, SO323219, T.G. Evans, 1999, det. A.A. Dudman & A.J. Richards, NMW. 1st record.
- *135/25/102. *Taraxacum aberrans* (a dandelion). Grass verge, near Penallt Old Church, SO/5210(F), T.G. Evans, 1999, det. A.A. Dudman & A.J. Richards, NMW. 1st record.
- +†135/79/1. *Helianthus annuus* (Sunflower) (Blodau'r Haul). +3 plants scattered in former farm field, Rogiet, ST464881, T.G. Evans, 1999; +c.20 ft above ground in crack of Church buttress, (photo in BSBI News 84: 34), SO324205, S.A. Rippin; both 1999.
- +148/3/1. *Wolffia arrhiza* (Rootless Duckweed) (Llinad Diwraidd). Petty Reen, Caldicot Level, ST419864, T.G. Evans, 1999.
- 151/1/11. *Juncus subnodulosus* (Blunt-flowered Rush) (Brwynen Flodbwll). A very local plant in field ditch N of Petty Reen, Barcroft Common, ST420862, C. Lindley, 1998. Small patches in meadows, Barecroft Common, ST4186, T.G. Evans, 1999.
- +152/16/47. *Carex pallescens* (Pale Sedge) (Hesgen Welwlas). 2 large patches in rough grass (former woodland), Cefn Campstone, SO343214, T.G. Evans, S.A. Rippin & Mrs Meats, 1999.
- 153/12/1×13/1. × *Festulolium loliaceum* (*F. pratensis* × *L. perenne*) (Hybrid Fescue) (Peisgwellt Croesryw). Meadow, Wilcrick Common, ST402873, T.C.G. Rich, 1999, det. T. Cope, K.
- +154/1/1a. *Sparganium erectum* subsp. *erectum* (Branched Bur-reed) (Cleddlys Canghennog). +Sea wall reen, E of Ton-y-Pill farm, ST271799; +Yoke Reen, Caldicot Level, ST393852; both T.G. Evans, 1999, conf. R.V. Lansdown. Reen adjacent to sea wall, E of Cold Harbour Pill, ST435845, T.G. Evans, 1999, herb. TGE.
- +154/1/1b. *Sparganium erectum* subsp. *microcarpum* (Branched Bur-reed) (Cleddlys Canghennog). +Drainage ditch in marsh, E of Pentre Bach, ST289924; +River Monnow, Monmouth Gap, SO399262; both T.G. Evans, 1999, conf. R.V. Lansdown.

- +154/1/1c. *Sparganium erectum* subsp. *neglectum* (Branched Bur-reed) (Cleddlys Canghennog). +Nedern Brook, N of Caldicot Castle, ST487886, T.G. Evans; +Bog, Pontyspig, SO295212, S.A. Rippin; both 1999, conf. R.V. Lansdown.
- *154/1/1d. *Sparganium erectum* subsp. *ocarpum* (Branched Bur-reed) (Cleddlys Canghennog). Drainage ditch, Pentre Bach, ST289924; Edge of Brecon-Newport Canal, Two Locks, Cwmbran, ST290940; both T.G. Evans, 1999, conf. R.V. Lansdown. 1st record.
- +162/16/1a. *Gymnadenia conopsea* subsp. *conopsea* (Fragrant Orchid) (Tegeirian Pêr). 14 plants counted in marsh adjacent to M4, underwood, Llanmartin, ST384895, T.G. Evans, 1999.
- 162/3/1. *Epipactis palustris* (Marsh Helleborine) (Caldrist y Gors). 31 plants in marsh adjacent to M4, Underwood, Llanmartin, ST384895, T.G. Evans, 1999.
- 162/18/2a. *Dactylorhiza maculata* subsp. *ericeorum* (Heath Spotted-orchid) (Tegeirian Brych). Over 100 plants, half in flower near Bal Mawr, SO264261, S.A. Rippin, 1999.

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

- +†2/1/2. *Selaginella kraussiana* (Kraus's Clubmoss) (Cnwpfwsogl Kraus). Lawn and border weed, Cwm Ivy, SS438937, Q.O.N. Kay; Ilston, SS5587, A.S. Lewis, both 1999.
- +17/3/5. *Dryopteris aemula* (Hay-scented Buckler-fern) (Marchredynen Aroglus). Single plant in gorge near small waterfall, Afon Corrwg Fechan, SN880017, A. Lucas, 1999, SWA
- +†19/1/1. *Azolla filiculoides* (Water Fern) (Rhedynen y Dŵr). Abundant in Tennant Canal between Jersey Marine and Neath Abbey, SS722944, C.R. Hipkin, 1999.
- +23/1/1. *Taxus baccata* (Yew) (Ywen). †Bird-sown in scrub near Eastmoor House, SS603896, Q.O.N. Kay, 1999.
- +28/13/11. *Ranunculus sceleratus* (Celery-leaved Buttercup) (Crafanc yr Eryr). Pondsides, Allt-y-graban, SN604021, A.S. Lewis, 1999.
- +28/13/20. *Ranunculus tripartitus* (Three-lobed Crowfoot) (Crafanc-Trilleb). Small pond in southern part of Ryer's Down, with *R. omiophyllus* and apparent hybrids, SS453918, J. Spencer, J.P. Woodman, A.O. Chater & M. Pickard, 1999.
- +28/17/3. *Thalictrum flavum* (Common Meadow-rue) (Arianllys). †Single plant on rough ground in village, Dyffryn (R. Afan), SS837957, A.S. Lewis, 1999.
- +30/4/1. *Glauclium flavum* (Yellow Horned-poppay) (Pabi'r Môr). Many plants in western part of Crymlyn Burrows, SS694933, C.R. Hipkin, 1999.
- +†36/3/1. *Soleirolia soleirolii* (Mind-your-own-business) (Mam Milloedd). Walls and pathsides, Port Eynon, SS468851, Q.O.N. Kay, 1999.
- +43/1/6. *Chenopodium rubrum* (Red Goosefoot) (Troed yr Wydd Ruddog). Single plant in supermarket car-park, SS608985, A.S. Lewis, 1999.
- +43/3/8. *Atriplex laciniata* (Frosted Orache) (Llygwyn Ariannaidd). Strandline, Blackpill, SS619904, A.S. Lewis, 1999.
- +†44/1/6. *Amaranthus albus* (White Amaranth) (Chwyn Moch Gwyn). Waste ground, High St., Swansea, SS650937, A.S. Lewis, det. C.R. Hipkin, 1999.
- +46/5/3. *Stellaria pallida* (Lesser Chickweed) (Gwlydd y Tywod). Sand-dunes, Crymlyn Burrows, SS7193, C.R. Hipkin, 1999.
- +51/1/14. *Hypericum hirsutum* (Hairy St John's-wort) (Eurinllys Blewog). 7 flowering stems at edge of wood near barrow in Green Cwm, SS537898, A.S. Lewis, 1999.
- +62/12/1x2. *Rorippa* × *sterilis* (*R. nasturtium-aquaticum* × *R. microphylla*) (Hybrid Water-cress) (Berwr Dŵr Croesryw). Burry Pill by Lake Farm, SS461891, Q.O.N. Kay, 1999.
- +62/12/4. *Rorippa palustris* (Marsh Yellow-cress) (Berwr Melyn y Gors). Banks of R. Loughor below Ynys Farm, SN600067, Q.O.N. Kay, 1999.
- +†62/20/1. *Lobularia maritima* (Sweet Alison) (Cuddlin). Weed of disturbed ground, Pontarddulais Garden Centre, SN604023, Q.O.N. Kay, 1999.

- +†69/3/1. *Cyclamen hederifolium* (Cyclamen) (Bara'r Hwch). +At edge of pine-wood on sandy soil at southern end of Whiteford Burrows, long-established and spreading, SS437941, Q.O.N. Kay; +West Cliff, Pennard, several clumps, SS553873, A.S. Lewis, both 1999.
- +†69/4/4. *Lysimachia punctata* (Dotted Loosestrife) (Trewynyn Brych). Pathside, Newton, Mumbles, SS603883; roadside north of Rhyd-y-fro, SN703875, both Q.O.N. Kay, 1999.
- +†73/5/10. *Sedum rupestre* (Reflexed Stonecrop) (Llwynau'r Fagwyr). Walls and dry grassy banks, Coltshill, Mumbles, SS607884, Q.O.N. Kay, 1999.
- +†75/19/15. *Alchemilla mollis* (Robust Lady's-mantle). Roadside weed, Oldwalls, SS/487918; waste ground at Gwenlais tip, SN600014, both Q.O.N. Kay, 1999.
- +75/20/2. *Aphanes australis* (Slender Parsley-piert) (Troed y Dryw Fain). Dry acid grassland, Graig Fawr, SN604053, Q.O.N. Kay, 1999.
- +75/28/24. *Sorbus torminalis* (Wild Service-tree) (Cerddinen Folwst). South-facing sandstone crag above Jersey Marine, one 5m tree above oak-birch scrub, SS712942, M. Hampton, 1999. A second recent apparently native site in this 10km square for this very scarce tree, found on a sandstone bluff at Earlswood, SS728939, by C.R.Hipkin in 1990 (see Welsh Plant Records 1990) but before that recorded in the square only by J.W.G. Gutch in c.1840 and previously by J.M. Traherne in 1808 ('Briton Ferry').
- +77/18/5. *Medicago arabica* (Spotted Medick) (Maglys Amrywedd). Single plant on grassy bank at Coltshill, Mumbles, SS607884, Q.O.N. Kay, 1999. First record in area since before c.1900.
- +77/25/4. *Genista anglica* (Petty Whin) (Cracheithin). Scarce in moorland at S end of Clyne Common, SS603896, Q.O.N. Kay, 1999.
- *†77/23/3. *Cytisus striatus* (Hairy-fruited Broom) (Banadl Blewog). Regenerating abundantly on bank of roadside cutting by A 4067, Alltwen, SN722034, A.S. Lewis, 1999. 1st record.
- +84/1/5. *Epilobium tetragonum* subsp. *tetragonum* (Square-stalked Willowherb) (Helyglys Pedronglog). Damp hedgebanks by pasture to S of Pontlliw, SN612001, Q.O.N. Kay, 1999.
- +†102/1/3. *Oxalis corniculata* (Procumbent Yellow-sorrel) (Suran Felen-Orweddol). Garden weed, Cwm Ivy, SS438937, Q.O.N. Kay, 1999.
- +†102/1/8. *Oxalis articulata* (Pink-sorrel) (Suran Ruddgoch). Pathsides in Port Eynon, SS468851, Q.O.N. Kay, 1999.
- +†102/1/10. *Oxalis debilis* (Large-flowered Pink-sorrel) (Suran Oddfog). Pennard, SS5487, A.S. Lewis 1999; sandy waste ground on West Cross seafront, SS616895, Q.O.N. Kay, 1999.
- +†102/1/11. *Oxalis latifolia* (Garden Pink-sorrel) (Suran Ruddgoch yr Ardd). Invasive and persistent garden weed at Cwm Ivy, SS438937, Q.O.N. Kay, 1999.
- +†103/1/1x2. *Geranium* × *oxonianum* (*G. endressii* × *G. versicolor*) (Druce's Crane's-bill). Roadside, West Cross, SS616895, Q.O.N. Kay, 1999.
- +†105/1/4. *Impatiens glandulifera* (Indian Balsam) (Ffromlys Chwarennog). Pathsides above Horton, SS471858, Q.O.N. Kay, 1999.
- +†110/9/fer. *Datura ferox* (Angels'-trumpets). Disturbed waste ground at Dinam Rd, Swansea, SS686945, A.S. Lewis, 1999.
- +†115/1/1. *Phacelia tanacetifolia* (Phacelia). Waste ground, High St., Swansea, SS650937, A.S. Lewis, det. C.R. Hipkin, 1999. 2nd record.
- +†116/9/1. *Borago officinalis* (Borage) (Tafod y Fuwch). Weed on tip at Coltshill, Mumbles, SS609884, Q.O.N. Kay, 1999.
- +†118/5/2. *Lamium maculatum* (Spotted Dead-nettle) (Marddanhadlen Fraith). Parkmill and Ilston Cwm, SS5589, A.S. Lewis, 1999.
- +120/1/5. *Callitriche obtusangula* (Blunt-fruited Water-starwort) (Brigwlydd Ffrwyth-aflem). Shallow pond at S edge of Clyne Common, SS601890, R. Lansdown & Q.O.N. Kay, 1999.
- +120/1/6. *Callitriche brutia* (Pedunculate Water-starwort) (Brigwlydd Coesog). Shallow pond at S edge of Clyne Common, SS601890, R. Lansdown & Q.O.N. Kay, 1999.
- +†122/1/2. *Buddleja davidii* (Butterfly-bush) (Llwyn Iâr Fach). Parkmill, SS5788, Bishopston, SS5788, Clyne Common SW, SS5989, A.S. Lewis, 1999. Still spreading in Glamorgan; present in

- this 10km square for several years but not recorded during the 1970-1990 Flora of Glamorgan survey.
- +124/9/1. *Misopates orontium* (Weasel's-snout) (Trwyn y Llo Bychan). Several plants in ungrazed stubble near Berry, SS479985, H. Rose, 1999.
 - +†124/15/1. *Erimus alpinus* (Fairy Foxglove) (Clychau'r Tylwyth Teg). Well established on retaining wall, Hendrefoilan House, Sketty, SS612937, A.S. Lewis, 1999.
 - +†129/1/10. *Campanula poscharskyana* (Trailing Bellflower) (Clychlys Ymlusgol). Naturalised on walls at Oldwalls, Llanrhidian, SS487918, Q.O.N. Kay, 1999.
 - +†133/3/1. *Centranthus ruber* (Red Valerian) (Triaglog Coch). Gwenlais tip west of Pontlliw, SN600014, Q.O.N. Kay, 1999.
 - +135/9/1. *Serratula tinctoria* (Saw-wort) (Dant y Pysgoden). Marshy grassland, Upper Cimla, SS7796, C.R. Hipkin, 1999.
 - +135/17/1. *Picris echioides* (Bristly Oxtongue) (Tafod y Llew). Weed on tip at Coltshill, Mumbles, SS609884, Q.O.N. Kay, 1999.
 - +†135/26/5a. *Crepis vesicaria* subsp. *taraxacifolia* (Beaked Hawk's-beard) (Gwalchlys Gylfinhir). Weed of waste ground at Pontarddulais Garden Centre, SN604023, Q.O.N. Kay, 1999.
 - +135/37/1. *Pulicaria dysenterica* (Common Fleabane) (Cedowydd). Patch c.4×4m on lower S slope of Inner Head, Worm's Head, SS393875, Q.O.N. Kay, 1999.
 - +†135/Gui/aby. *Guizotia abyssinica* (Niger) (Olewlys). Waste ground, High St, Swansea, SS650937, A.S. Lewis, 1999.
 - +137/2/1. *Baldellia ranunculoides* (Lesser Water-plantain) (Llyren Fechan). Pool in SW part of Clyne Common, SS5989, A.S. Lewis, 1999.
 - +†138/6/1. *Lagarosiphon major* (Curly Waterweed) (Pib-flodyn Crych). Abundant in new pond to W of Frog Moor, SS469904, Q.O.N. Kay, 1999.
 - +152/8/1. *Isolepis setacea* (Bristle Club-rush) (Clwbfrwynen Fach). Drainage ditch in S part of Clyne Common, SS601890, Q.O.N. Kay, 1999.
 - +152/9/1. *Eleogiton fluitans* (Floating Club-rush) (Clwbfrwynen Nawf). Abundant in reed in marshy meadow, Ynys-lletty, SN602061, Q.O.N. Kay, 1999. First localised record in hectad.
 - +†152/11/2. *Cyperus eragrostis* (Pale Galingale) (Ysnoden Fair Welw). With abundant *Carex pendula* at Derwen Fawr, Swansea, SS69, A.S. Lewis, 1999. 3rd and the only extant record.
 - +152/16/55. *Carex pihlifer* (Pill Sedge) (Hesgen Bengron). Acid moorland above Pwllfawatkin, SN695083, Q.O.N. Kay, 1999.
 - +152/16/43. *Carex extensa* (Long-bracted Sedge) (Hesgen Hirian). Locally frequent on and above sea-wall at West Cross, SS616895, Q.O.N. Kay, 1999.
 - *†153/4/1. *Sasaella ramosa* (Hairy Bamboo). Naturalised and spreading at edge of woodland to S of Coltshill Cemetery, Mumbles, SS607884, Q.O.N. Kay, 1999. 1st record.
 - +153/23/1. *Parapholis strigosa* (Hard-grass) (Corwelltyn y Morfa). Locally abundant on West Cross/Norton seafront, SS624889, Q.O.N. Kay, 1999.
 - +153/40/1. *Calamagrostis epigejos* (Wood Small-reed) (Mawnweltl). Roadside bank to N of Rhyd-y-fro, SN703075, Q.O.N. Kay, 1999.
 - +†153/68/1. *Echinochloa crus-galli* (Cockspur) (Cibogwellt Rhydd). +Weed at Cwm Ivy, SS438937, Q.O.N. Kay; +Cannisland Park, Parkmill, SS565899, A.S. Lewis, both 1999.
 - *†153/70/adh. *Setaria adhaerens* (Adherent Bristle-grass). Waste ground, High St., Swansea, SS650937, A.S. Lewis, det. C.R. Hipkin, 1999. 1st record.
 - +†153/70/pum. *Setaria pumila* (Yellow Bristle-grass) (Cibogwellt Melyn). Garden weed, perhaps bird-sown, Cannisland Park, Parkmill, SS565899, A.S. Lewis, 1999.
 - *†158/24/9. *Allium paradoxum* (Few-flowered Leek) (Cenhinen Brin-flodeuog). Hen Parc Lane, Upper Killay, SS592923, A.S. Lewis, 1999. 1st record.

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

- 17/3/6. *Dryopteris submontana* (Rigid Buckler-fern) (Marchredynen Anhyblyg). c.30 plants in rocky limestone grassland and scree, Cefn-Cil-Sanws, NW of Merthyr Tydfil, SO022100, T.C.G. Rich, 1999. Rediscovery of site found in 1976 and reported as SO025097.
- *†36/3/1. *Soleirolia soleirolii* (Mind-your-own-business) (Mam Miloeidd). Abundant in road verge turf over several square metres, Llangattock, SO208183, M. Porter, 1999. 1st record.
- *62/23/5. *Cochlearia danica* (Danish Scurvygrass) (Llwylys Denmarc). Road verge, 2km E of Brynmawr, SO217126, M. & C. Porter, 1999. 1st record.
- +†73/1/3. *Crassula helmsii* (New Zealand Pigmyweed) (Corchwyn Seland Newydd). Pool, Glasfynydd Forest, SN876259, M. Howells, 1999. 2nd record.
- +75/8/71. *Rubus plymensis* (a bramble). Conifer plantation, 6km NW of Llywel, SN847357, M. Porter, 1998.
- +75/8/132. *Rubus sprengelii* (a bramble). Lane bank, Princetown, SO106097, M. Porter, 1998.
- +75/8/175. *Rubus acutifrons* (a bramble). Hedge, nr Sennybridge, SN928292, M. Porter, 1998.
- +75/8/315. *Rubus pruinosis* (a bramble). Beside disused railway, Dolygaer, SO057145, M. Porter, 1998.
- +75/9/13b. *Potentilla erecta* subsp. *strictissima* (Tormentil) (Tresgl y Moch). Conifer plantation, 2km W of Llwyn-on, SN993114, G.S. Motley, 1999.
- +†75/32/33. *Cotoneaster simonsii* (Himalayan Cotoneaster). (Cotoneaster y Graig). Streamside, nr Llanwrtyd, SN884475, A.O. Chater, S. Bosanquet & I. Henning, 1999.
- +118/16/1. *Melissa officinalis* (Balm). (Gwenyddail). †Lane bank, Llanigon, SO294398, M. & C. Porter, 1999.
- *†131/5/1. *Leycesteria formosa* (Himalayan Honeysuckle) (Bachgen Llwm). One small bush in scrub, canal bank, Llangynidr, SO154201, M. Porter, 1999. 1st record.
- +†135/23/2a. *Cicerbita macrophylla* subsp. *uralensis* (Common Blue-sow-thistle) (Llaethysgallen-las). Beside track in conifer plantation, 4km NW of Llanwrtyd Wells, SN8547, M. & C. Porter, 1999. 2nd record.
- +135/25/bre. *Taraxacum breconense* (a dandelion). Lane bank, 3km SW of Ystradfellte, SN911105, M. Porter, 1999.
- +†135/43/4. *Erigeron karvinskianus* (Mexican Fleabane) (Cedowydd y Clogwyn). Paving by roadside, 1.6km SW of Gilwern, SO239141, M. Porter, 1999. 2nd record.
- +151/1/6. *Juncus foliosus* (Leafy Rush) (Brwynen Ddeiliog). Beside muddy track, Nant Cerdin, N of Llanwrtyd Wells, SN877492, A.O. Chater, S. Bosanquet & I. Henning, 1999, det. AOC. 3rd record and 1st since 1925.
- +152/9/1. *Eleogiton fluitans* (Floating Club-rush) (Clwbfrwynen Nawf). Wet moorland, S of Ystradfellte, SN919107, S.D.S. Bosanquet, 1999.
- *153/32/1b. *Deschampsia cespitosa* subsp. *parviflora* (Tufted Hair-grass) (Brigwellt Cudynnog). Edge of woodland, in gorge, Cwm Clydach, near Blackrock, SO217125, H. McAlister, L. Kilgallen & M. Porter, 1996, det. H. McA. +Edge of wood along river, Gwynne Fawr, near Pont Cadwgan, SO268250, M. Porter, 1997. 1st & 2nd records for subspecies.
- +153/50/3. *Bromus racemosus* (Smooth Brome) (Pawrwellt Llyfn). Field entrance, Penderyn, SN950093, G.S. Motley, 1999. 2nd record.
- +158/17/1. *Paris quadrifolia* (Herb-Paris) (Cwlwm Cariad). Limestone pavement, W of Ystradfellte, SN912137, G.S. Motley, 1999.
- *†158/20/2×3. *Hyacinthoides non-scripta* × *H. hispanica* (a hybrid bluebell). Established in native woodland by Afon Clydach, Gilwern, SO244145; +Naturalised in wood by river, W of Abercraf, SN800126; both M. Porter, 1999. 1st & 2nd records.
- *†159/5/2. *Iris sibirica* (Siberian Iris). Introduced at margin of ? artificial lake and apparently naturalised, Abernant Lake, Llanwrtyd Wells, SN891461, R.G. Woods *et al.*, 1999. 1st record.
- +159/5/8. *Iris foetidissima* (Stinking Iris) (Iris Ddrewllyd). Lane side, near Llanwrtyd Wells, SN866476, B. Thompson, R. Green, J. Wynne-Jones & M. Lawley, 1999.

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- *4/1/4×5. *Equisetum* × *litorale* (*E. fluviatile* × *E. arvense*) (Shore Horsetail). Gilfach River shingle, SN966720, S.P. Chambers, 1997, conf. A.O. Chater. 1st record.
- *†28/6/1×var. *Aconitum* × *cammarum* (*A. napellus* × *A. variegatum*) (Hybrid Monk's-hood). Roadside hedge, Fron Goch, SO225725, D.R. Humphreys, 1997. 1st record.
- *28/13/27. *Ranunculus circinatus* (Fan-leaved Water-crowfoot) (Egylt Cylchol-ddail). River island, River Wye, SO179398, M.A.V. Gill, 1996. 1st record.
- *†30/6/1. *Eschscholzia californica* (Californian Poppy) (Pabi California). Sandy stream bank, Glasbury, SO177388, M.A.V. Gill, 1996. 1st record.
- *†32/1/occ×ori. *Platanus* × *hispanica* (*P. occidentalis* × *P. orientalis*) (London Plane) (Pilcoes y Ddinas). Hedgerow, Pentre, SO2466, D.R. Humphreys & E.R. Dean, 1994. 1st record.
- *33/1/1×3. *Ulmus* × *vegeta* (*U. glabra* × *U. minor*) (Huntingdon Elm). Hedgerow, Glasnant, SO1850, D.R. Humphreys & E.R. Dean, 1997. 1st record.
- *†33/1/1×3×4 *Ulmus* × *hollandica* (*U. glabra* × *U. minor* × *U. plotii*) (Dutch Elm). Two layered trees in hedge, Pentrosfa SO058595, S.P. Chambers, 1998. 1st record.
- *40/1/1×2. *Betula* × *aurata* (*B. pendula* × *B. pubescens*) (a hybrid birch). Glasbury Churchyard, SO177385, M.A.V. Gill, 1996. 1st record.
- *45/3/la. *Montia fontana* subsp. *fontana* (Blinks) (Gwlyddyn y Ffynnon). Wet flush, Glanhirin, SN8671, BSBI Meeting, 1996, det. A.O. Chater. 1st record.
- *47/1/16. *Persicaria minor* (Small Water-pepper) (Clymog Bychan). Wet meadow, Pwll Patti, SO166392, M.A.V. Gill, 1998, conf. D.R. Humphreys. 1st record.
- +50/1/1. *Elatine hexandra* (Six-stamened Waterwort) (Gwybybyr Chwe Brigerog). Reservoir margin, Dol y Mynach, SN905617, R.G. Woods, 1994.
- *†51/1/4. *Hypericum hircinum* (Stinking Tutsan) (Eurinllys Drewllyd). Base of brick wall, Llandrindod Wells, SO058612, S.P. Chambers, 1997, conf. N.K. Robson. 1st record.
- *51/1/6×7. *Hypericum* × *desetangsii* (*H. perforatum* × *H. maculatum*) (Des Etangs' St John's-wort). Bank of cutting, Rhayader tunnel, SN963673, S.P. Chambers, 1997. 1st record.
- *52/1/1. *Tilia platyphyllos* (Large-leaved Lime) (Pisgwydden Deilen Fawr). Edge of farmland, Glasbury, SO178387, M.A.V. Gill, 1996. +Hedge, Withybeds, Presteigne, SO310649, S.P. Chambers, 1997, det. D. Pigott. 1st & 2nd records.
- +57/1/6. *Viola canina* (Heath Dog-violet) (Fioled y Cŵn). Locally frequent in two W facing fields, Gilfach, SN964715, S.P. Chambers, 1998.
- *†158/23/2. *Muscari armeniacum* (Garden Grape-hyacinth) (Clychau Glas yr Ardd). Roadside, Ackhill, SO2966, D.R. Humphreys, 1994. 1st record.
- *†158/33/3. *Narcissus poeticus* (Pheasant's-eye Daffodil) (Gylfinog Barddol). Roadside, Glasbury Village, SO1739, M.A.V. Gill, 1997. 1st record.
- *†61/1/3×del. *Populus* × *canadensis* (*P. nigra* × *P. deltoides*) (Hybrid Black-poplar) (Poplysen Ddu Ffrengig). Wet woodland, Withybeds, Presteigne, SO309650, S.P. Chambers, 1997. 1st record.
- +61/2/9×10. *Salix* × *sericans* (*S. viminalis* × *S. caprea*) (Broad-leaved Osier). Wet woodland, Withybeds, Presteigne, SO310649, S.P. Chambers, 1997.
- *†62/42/2. *Raphanus sativus* (Garden Radish) (Rhuddygi). Glangwey Farm, SO1537, M.A.V. Gill, 1997. 1st record.
- *†62/2/1. *Descurainia sophia* (Flixweed) (Berwr y Fam). 1 plant on former dung heap, Llanstephan, SO127417, R.G. Woods, 1997. 1st record.
- *†62/30/8a. *Lepidium draba* subsp. *draba* (Hoary Cress) (Pupurlys Llwyd). Roadside, Presteigne, SO312647, 1994; +Old station yard, Penybont Gravel yard, SO098648, 1995; +Roadside verge, Llandrindod Wells, SO054597, 1998; all R.G. Woods, 1st and subsequent records.

- *†73/1/3. *Crassula helmsii* (New Zealand Pigmyweed) (Corchwyn Seland Newydd). Welsh Show Ground, Llanlanelwedd SO049519, J. Donovan, 1991. +Penywrldod Pond, SO2146, S. Holtermann, 1999. 1st & 2nd records.
- *73/5/5b. *Sedum telephium* subsp. *fabaria* (Orpine) (Berwr Taliesin). Shady bank, Rhayader tunnel, SN963673, S.P. Chambers, 1997. 1st record.
- *†75/7/1. *Kerria japonica* (Kerria). Roadside, Penisarlwyf, SO112444, D.R. Humphreys & E.R. Dean, 1999. 1st record.
- *†75/9/1. *Potentilla fruticosa* (Shrubby Cinquefoil) (Llwyn Pumbys). Boughrood Brest, SO1438, M.A.V. Gill, 1997. 1st record.
- *75/9/13b. *Potentilla erecta* subsp. *strictissima* (Tormentil) (Tresgl y Moch). Burfa Bog on *Molinia* tussocks, SO274610, S.P. Chambers, 1997, conf. A.O. Chater. 1st record.
- *75/9/14×15. *Potentilla* × *mixta* (*P. erecta* × *P. reptans* & *P. anglica* × *P. reptans*) (Hybrid Cinquefoil). Churchyard, Glasbury, SO177385, M.A.V. Gill, 1996. + Disused railway, Rhayader tunnel, SN962671, S.P. Chambers, 1997. 1st & 2nd records.
- +75/21/12×13. *Rosa* × *dumalis* (*R. canina* × *R. caesia*) (a hybrid dog-rose). Hedge, Pentrosfa, SO058596, S.P. Chambers, 1997.
- +75/21/13a. *Rosa caesia* subsp. *caesia* (Hairy Dog-rose) (Rhosyn Blewog). Burfa Bog, SO273611, S.P. Chambers, 1997, conf. G.G. Graham
- +†75/22/5b. *Prunus domestica* subsp. *insititia* (Bullace) (Eirinen Fulas). Roadside, Glasbury, SO188396, M.A.V. Gill, 1996, 1st record.
- +75/27/1. *Malus sylvestris* (Crab Apple) (Pren Afal Sur). +Woodland, Glasbury, SO145523, 1980; +Woodland; Bach Howey, SO173464, 1983; both A.C. Powell.
- *†75/32/33. *Cotoneaster simonsii* (Himalayan Cotoneaster) (Cotoneaster y Graig). Glasbury Churchyard, SO177385, M.A.V. Gill, 1996, det. G. Hutchinson. 1st record.
- *†77/21/1. *Lupinus arboreus* (Tree Lupin) (Coeden Bys y Blaidd). Roadside, Boughrood Brest, SO1438, M.A.V. Gill, 1997. 1st record.
- *77/14/11b. *Vicia sativa* subsp. *segetalis* (Common Vetch) (Fflugbysen Faethol). Hedgebank, Knucklas Castle, SO248744, D.R. Humphreys, 1996. 1st record.
- †77/17/1. *Melilotus altissimus* (Tall Melilot) (Meillionen y Ceirw). Glasbury, SO1839, M.A.V. Gill, 1998.
- *†84/14/amo. *Clarkia amoena* (Godetia). Pavement weed, Llandrindod Wells, SO057613, S.P. Chambers, 1997. 1st record.
- +84/1/6×8. *Epilobium ciliatum* × *E. obscurum* (a. hybrid willowherb). Railway cutting, Rhayader, SN964674, S.P. Chambers, 1997, conf. T.D. Pennington.
- +84/1/6×9. *Epilobium ciliatum* × *E. palustre* (a hybrid willowherb). Mire, Pentrosfa, SO058595, S.P. Chambers, 1997, conf. T.D. Pennington.
- *†84/4/3. *Oenothera biennis* (Common Evening-primrose) (Melyn yr Hwyr). Roadside, Glasbury, SO185389, M.A.V. Gill, 1996. 1st record.
- *†84/4/4. *Oenothera cambrica* (Small-flowered Evening-primrose) (Melyn yr Hwyr Cymreig). Near Church, Boughrood, SO1239, M.A.V. Gill, 1998, 1st record.
- *†91/2/15. *Euphorbia cyparissias* (Cypress Spurge) (Fflamgoed Gyprysol). Roadside banks, E side of B4567 nr A481 W of bridge & electricity substation, Llanlanelwedd, SO062517, S.P. Chambers, 1999. 1st record.
- *91/2/7. †*Euphorbia serrulata* (Upright Spurge) (Llaethlys Mynwy). Garden weed, Glasbury, SO177384, M.A.V. Gill, 1996. 1st record.
- *†93/2/1. *Parthenocissus quinquefolia* (Virginia-creeper) (Dringwr Fflamgoch). Hedge, Pwll Patti, SO164391, M.A.V. Gill, 1996. 1st record.
- *†94/1/2. *Linum usitatissimum* (Flax) (Llin Amaeth). Nr Walton, SO263581, J.O. Mountford, 1971. +Roadside, Treble Hill, SO183394, M.A.V. Gill, 1996. 1st & 2nd records.
- *95/1/b. *Polygala vulgaris* subsp. *collina* (Common Milkwort) (Llysiau Crist). Dry spoil mound, Giffach, SN964716, S.P. Chambers, 1997. 1st record.

- *†102/1/3. *Oxalis corniculata* (Procumbent Yellow-sorrel) (Suran Felen Orweddol). Glangwye, SO1538, M.A.V. Gill, 1997. 1st record.
- *†103/1/1. *Geranium endressii* (French Crane's-bill) (Troedrudd Ffrengig). Roadside, Harley's Hill, SO2964, Roadside, D.R. Humphreys, 1999. 1st record.
- *†103/1/17. *Geranium macrorrhizum* (Rock Crane's-bill). Former tip, Aberedw Rocks, SO076459, R.G. Woods, 1996. 1st record.
- *†LIM/Lim/dou. *Limnanthes douglasii* (Meadow-foam). Roadside, Cwmbach, SO166396, M.A.V. Gill, 1996. 1st record.
- +†107/21/1. *Foeniculum vulgare* (Fennel) (Ffenigl). Clyro Road below churchyard, SO213439, R.G. Woods, 1996.
- *107/30/1. *Sison amomum* (Stone Parsley) (Githran). Garden weed, Glasbury, SO177384, M.A.V. Gill, 1996, det. D.R. Humphreys. 1st record.
- *116/2/1. *Echium vulgare* (Viper's-bugloss) (Glas y Graean). †Sandy stream bank, Glasbury, SO177388, M.A.V. Gill, 1996. 1st record.
- *118/1/5×6. *Stachys* × *ambigua* (*S. sylvatica* × *S. palustris*) (Hybrid Woundwort) (Briwlys Croesryw). River bank, Castell Foel-allt, SO1738, SO1739, SO258676, D.R. Humphreys & E.R. Dean, 1993. 1st record.
- *118/23/4. *Mentha suaveolens* (Round-leaved Mint) (Mintys Deilgrwn). Roadside, Glasbury, SO178386, M.A.V. Gill, 1996. 1st record.
- +120/1/5. *Callitriche obtusangula* (Blunt-fruited Water-starwort) (Brigwyldd Ffrwyth-aflem). Large mats in withybeds, Presteigne Mill-race, SO310649, S.P. Chambers, 1997.
- *121/1/4. *Plantago media* (Hoary Plantain) (Llwynhidydd. Llwyd). Dolyhir Quarry Grassland, SO24.58, H. Bowen, 1987. Churchyard, Glasbury, SO177385, M.A.V. Gill, 1996. 1st records.
- *†123/1/sus×vir. *Forsythia* × *intermedia* (*F. suspensa* × *F. viridissima*) (Forsythia). Glasbury SO1738, M.A.V. Gill, 1996. 1st record.
- *†124/1/11. *Verbascum pulverulentum* (Hoary Mullein) (Pannog Blawrwywn). Garden weed, Glasbury, SO1738, M.A.V. Gill, 1997. 1st record.
- *124/16/24a. *Veronica hederifolia* subsp. *hederifolia* (Ivy-leaved Speedwell) (Rhwyddlwyn Eiddewddail). Roadside, Llanbedr, SO1446, D.R. Humphreys, 1995. 1st record for subspecies.
- *124/16/24b. *Veronica hederifolia* subsp. *lucorum* (Ivy-leaved Speedwell) (Rhwyddlwyn Eiddewddail). Roadside, Sulphur Springs, SO1463, D.R. Humphreys, 1994. 1st record for subspecies.
- *124/16/20. *Veronica polita* (Grey Field-speedwell) (Rhwyddlwyn Llwyd). Road verge, Broadheath, SO334635, D.R. Humphreys & E.R. Dean, 1996. 1st record.
- +124/20/1b. *Euphrasia rostkoviana* subsp. *montana* [Mountain Eyebright] (Torfagl Mynyddog). W facing bank, Gilfach, SN964717, S.P. Chambers, 1997, conf. A.O. Chater.
- +124/20/3. *Euphrasia anglica* [English Eyebright] (Effros Chwareog Gwalltlog). Field in front of mire, with *Serratula*, etc., Cors y Llyn, SO015556, S.P. Chambers, 1999.
- +124/20/5b. *Euphrasia arctica* subsp. *borealis* [Arctic Eyebright] (Effros â Gwallt Byr). Top of entrance to Rhayader tunnel, SN964675, S.P. Chambers, 1997, conf. A.O. Chater.
- +124/20/7. *Euphrasia nemorosa* [Woodland Eyebright] (Llygad Effros). +Old railway, Aberedw, SO04, R.G. Woods, 1987; +Old railway, Rhayader tunnel, SN965676, S.P. Chambers, 1997, both det. M. Porter.
- +124/20/19. *Euphrasia scottica* [Scottish Eyebright] (Effros Eiddil y Fignen Fynyddig). Flushes on NW slope, above River Marteg, SN964713, S.P. Chambers, 1997, conf. A.O. Chater.
- *124/24/2a. *Rhinanthus minor* subsp. *minor* (Yellow-rattle) (Cribell Felen). Streamside, Rhyd y Clwydau, SO0078, A.J. Morton, 1995. 1st record as subsp. *minor*.
- *130/6/5b. *Galium palustre* subsp. *elongatum* (Great Marsh-bedstraw) (Briwydden Fawr y Llyn). Burfa Bog, SO275612, S.P. Chambers, 1997. 1st record.
- *†131/6/3. *Lonicera involucrata* (Californian Honeysuckle) (Gwyddfid California). Well naturalised by bridge, streamside, David's Well, SO060786, D.R. Humphreys & E.R. Dean, 1996, det. R.G. Woods. 1st record.

- *135/3/1. *Arctium lappa* (Greater Burdock) (Cyngaf Mawr). Roadside, Presteigne, SO3164, D.R. Humphreys, 1994. +Track edge behind entrance gate, Llanbwchllyn SO115466, S.P. Chambers, 1998. 1st & 2nd records.
- +135/11/7. *Centaurea nigra* subsp. *nemoralis* (Common Knapweed) (Pengaled). Llangunllo Railway cutting, Pye Corner, SO210722, P. Richards, 1995.
- *135/27/2. *Pilosella officinarum* subsp. *trichosoma* (Mouse-ear-hawkweed) (Clust y Llygoden). On tumulus mound, Burfa Bog, SO273611, S.P. Chambers, 1997. 1st record.
- +135/27/2. *Pilosella officinarum* subsp. *euronota* (Mouse-ear-hawkweed) (Clust y Llygoden). Dry grassland, Rhayader tunnel, SN964675, S.P. Chambers, 1997.
- +135/27/2. *Pilosella officinarum* subsp. *micradenia* (Mouse-ear-hawkweed) (Clust y Llygoden). Grassy bank, Rhayader cutting, SN962671, S.P. Chambers, 1997.
- +135/28/5. *Hieracium vagum* (a hawkweed). Dry banks by Elan Valley Visitor Centre, SN920643, S.P. Chambers, 1998.
- +135/28/6a. *Hieracium umbellatum* subsp. *umbellatum* (Narrow-leaved Hawkweed) (Heboglys Culddail). Roadside, Brilley Mountain, SO232495, A.C. Powell, 1985, det. R.G. Ellis. +On verge, just outside reserve fence, Cefncennarth, SN966754, S.P. Chambers, 1998
- *135/28/72. *Hieracium diaphanum* (a hawkweed). Bank of cutting, Rhayader tunnel, SN963673, S.P. Chambers, 1997. 1st record.
- *†135/41/4×5. *Aster* × *salignus* (*A. novi-belgii* × *A. lanceolatus*) (Common Michaelmas-daisy). Boughrood Brest, SO1438, M.A.V. Gill, 1997. 1st record.
- +†135/62/12. *Senecio erucifolius* (Hoary Ragwort) (Creulys Llwyd). Gateway, Crochan Mill, SO084812, I.H. Soane, 1983.
- +137/3/1. *Luronium natans* (Floating Water-plantain) (Dŵr-lyriad Nofiadwy). Non-flowering at 2m depth, mountain lake, Llyn Cerrigllwydion Isaf, SN843699, R.A. Jones, 1995; also flowering on lake margins, D.R. Drewett, 1999. +2×5m patch in Llyn Cerrigllwydion Isaf, SN843701, BSBI meeting, 1996.
- +†138/4/2. *Elodea nuttallii* (Nuttall's Waterweed) (Alaw Nuttall). Depths of pond, Withybeds Presteigne, SO309650, S.P. Chambers, 1997.
- *151/1/15. *Juncus bulbosus* subsp. *kochii* (Bulbous Rush) (Brwynen Oddfog). Streamside, Nant Cletwr, SN8868, A.J. Morton, 1995. 1st record.
- +151/2/6b. *Luzula multiflora* subsp. *congesta* (Heath Wood-rush) (Coedfrwynen Luosben). Pentrosfa Mire, SO059596, S.P. Chambers, 1997. +Wet meadow, Esgairdraenllwyn, SO084820, BSBI meeting, 1999.
- *152/16/3. *Carex diandra* (Lesser Tussock-sedge) (Hesgen Rafinog Leiaf). Patch, 16×5m, central flushes, Pentrosfa Mire, SO0559, S.P. Chambers, 1997, conf. A.O. Chater. 1st record.
- +152/16/9a. *Carex divulsa* subsp. *divulsa* (Grey Sedge) (Hesgen Lwydlas). Damp woodland, Bach Howey, SO106428, D.R. Humphreys, 1995, det. A.O. Chater. 1st record since 1950.
- +152/16/44×46. *Carex* × *fulva* (*C. hostiana* × *C. viridula*) (a hybrid sedge). Pasture, Newbridge, SO016555; +Begwns, SO160435, both R.G. Woods, 1984. +Calicicolous fen, Pentrosfa Bog, SO0559, R.G. Woods, 1987. +Wet bank, Esgairdraenllwyn, SO079822, BSBI meeting, 1999, det. A.O. Chater.
- *153/27/1. *Arrhenatherum elatius* subsp. *bulbosus* (Onion Couch). Hillside, Cefn Llech, SN9577, A.J. Morton, 1995. 1st record for subspecies.
- *†153/28/3. *Avena fatua* (Wild-oat) (Ceirchwellt Gwyllt y Gwanwyn). Roadside, Knowle, SO2261, D.R. Humphreys, 1995. 1st record.
- +153/32/1b. *Deschampsia cespitosa* subsp. *parviflora* (Tufted Hair-grass) (Brigwellt Cudynnog). Woodland path, Sideland, SO104638, S.P. Chambers, 1998, conf. H. Bowen.
- +153/47/1×2. *Alopecurus* × *brachystylus* (*A. pratensis* × *A. geniculatus*) (a hybrid foxtail). Damp meadow, Gladestry, SO226565, A.C. Powell, 1979. +Streamside, Boulitbrook, SO312658, A.C. Powell, 1986.
- +153/47/4. *Alopecurus aequalis* (Orange Foxtail) (Cynffonwellt y Llyn). Pool, Maefienydd, SO139713, D.R. Humphreys, 1999.

- *153/47/6. *Alopecurus myosuroides* (Black-grass) (Cynffonwellt Du). Fields, Little Lloyney, SO074204, D.R. Humphreys & E.R. Dean, 1997. 1st record.
- *153/59/4. *Hordeum secalinum* (Meadow Barley) (Heiddwellt y Maes). Roadside, Glasbury, SO182382, M.A.V. Gill, 1996. 1st record.
- +154/1/1c. *Sparganium erectum* subsp. *neglectum* (Branched Bur-reed) (Cleddlys Canghennog). Pond, S side and by old leat, Withybeds, Presteigne, SO309650, S.P. Chambers, 1997.
- +154/1/3. *Sparganium angustifolium* (Floating Bur-reed) (Cleddlys Culddail). +Mountain lake, Llyn Cerrigllwydion Isaf, SN843696, BSBI meeting, 1996. +Abundant in shallow water near inflow, Llyn Cerrigllwydion Isaf, SN843698, D.R. Drewett, 1999.
- *†158/18/2. *Ornithogalum angustifolium* (Star-of-Bethlehem) (Seren Fethlehem). Churchyard, Glasbury, SO17738, M.A.V. Gill, SO177385. 1st record.
- *158/20/2×3. †*Hyacinthoides non-scripta* × *H. hispanica* (a hybrid bluebell). Churchyard, Glasbury, SO177385, M.A.V. Gill, 1996. 1st record.
- +158/33/5b. †*Narcissus pseudonarcissus* subsp. *obvallaris* (Tenby Daffodil) (Cenhinen Dinbych y Pysgod). Woodland, well away from houses, Evan Gwynne Dingle, Llandrindod Wells, SO217448, R.G. Woods, 1996. +Bank by track, Castle Kinsey, SO215447, S.P. Chambers, 1998.
- *162/6/2. *Listera cordata* (Lesser Twayblade) (Ceineirian Bach). Under heather, Beacon Hill, SO172767, R.G. Woods; and SO167767, D.R. Humphreys, both 1994. 1st records.
- *162/14/1. *Anacamptis pyramidalis* (Pyramidal Orchid) (Tegeirian Bera). Roadside, Glasbury, SO178388, M.A.V. Gill, 1996. 1st record. Found again and confirmed by D.R. Humphreys 18.7.98.
- +162/18/1×2. *Dactylorhiza* × *transiens* (*D. fuchsii* × *D. maculata*) (a hybrid spotted-orchid). Edge of mire, Pentrosfa, SO059596, S.P. Chambers, 1997, conf. R.H. Roberts.

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

- +4/1/3. *Equisetum variegatum* (Variegated Horsetail) (Marchrawn Amrywiol). In wet limestone spoil on floor of old limestone quarry covering an area 2×1m, Pant-y-drefnewydd, Mynydd Du, SN726193, G.S. Motley & S.D.S. Bosanquet, 1999.
- +31/5/3. *Fumaria bastardi* (Tall Ramping-fumitory) (Mwg y Ddaear Grymus). +Disturbed ground, Castle Street, Kidwelly, SN408070, V. & T. Lewis, 1999. +1 plant at foot of chain-link fence in back lane W of Station Road, Llangennech, SN561016, R. D. Pryce & K.A. & C.A. Cottingham, 1999, NMW, det. A.O. Chater.
- +43/1/6. *Chenopodium rubrum* (Red Goosefoot) (Troed yr Wŷdd Ruddog). +Dominant over large area of open, disturbed ground, W of Ash lagoon, Pwll, Llanelli, SN467.011; +Waste ground, presumably disturbed by road works and now levelled, Tanerdy, Carmarthen, SN422.208; both V. & T. Lewis, 1999.
- +43/3/8. *Atriplex laciniata* (Frosted Orache) (Llygwyn Ariannaidd). Several plants on sandy beach on drift line, Machynys, Llanelli, SS505982, V. & T. Lewis, 1999.
- *46/20/2. *Silene mutans* (Nottingham Catchfly) (Gludlys Gogwyddol). 23 plants on coastal shingle spit, Penrhynwyn, SS516973, T. & V. Lewis, 1999. 1st record.
- †46/25/7. *Dianthus armeria* (Deptford Pink) (Penigan y Porfeydd). At least 22 plants, probably more on sheltered, rocky, trackside between tall hedges, Bryndias Farm, Pinged, SN434034, R.D. Pryce, 1998. Site almost destroyed in 1999 by track improvements but the few remaining plants being actively conserved.
- +61/2/11×12. *Salix* × *multinervis* (*S. cinerea* × *S. aurita*) (a hybrid willow). Trackway on edge of *Calluna/Erica* heath, NE of Pant-y-ffynnon Farm, 1.6km NW of Trelech, SN270315, G. Hutchinson & R.D. Pryce, 1992, NMW, det. GH.
- +†62/7/1. *Erysimum cheiranthoides* (Treacle Mustard) (Triagl-arfog). c.8 plants in allotments, Bigyn Hill, Llanelli, SS509998, I.K. Morgan, 1999.
- +62/12/3. *Rorippa islandica* ss. (Northern Yellow-cress) (Berwr Melyn y Gogledd). Waste ground, presumably disturbed by road works and now levelled, Tanerdy, Carmarthen, SN422208, V. & T.

- Lewis, 1999. +Sparsely vegetated gravel, bank of Afon Teifi nr Llandysul, SN417403, D.E. Allen, A.O. Chater & R.D. Pryce, 1999.
- +62/23/3. *Cochlearia officinalis* (Common Scurvygrass) (Llwylys Cyffredin). Several large plants around concrete marker post in roadside hedgebank, N bank of A482, 300m W of Tafarn Jem, 4km SSE of Cwmann, SN612437, R.G. Woods & A.O. Chater, 1998.
- *†62/30/4. *Lepidium virginicum* (Least Pepperwort) (Pupurlys Lleiaf). Roadside, Crosshands, SN51, A.M. Pell, 1985, NMW, det. T.C.G. Rich (as *L. densiflorum*). 1st record.
- +62/30/6. *Lepidium latifolium* (Dittander) (Berwr Gwyllt). +Several patches SW of Ferry Point, on rough bank nr beach, Llansteffan, SN359112; +Large stand beside stream in saltmarsh, Cwm Clyd, Llansteffan, SN365127; both V. & T. Lewis, 1999.
- +62/31/1. *Coronopus squamatus* (Swine-cress) (Olbrain). A few small plants on worn path on grassy bank beside service road, Trostre, Llanelli, SS525999, V. & T. Lewis, 1999.
- +69/2/1. *Hottonia palustris* (Water-violet) (Pluddalen). Established for 3-4 years in small pond beside Nant Gwenlais, nr Eithin Tewion, Cilycwm, SN746413, M. & J. Iliff, 1999. Escape from garden pond at Eithin Tewion where it has now disappeared.
- +†73/1/3. *Crassula helmsii* (New Zealand Pigmyweed) (Corchwyn Seland Newydd). Few plants by jetty on W side of duneland lake, Witchett Pool, SN282075, N. Stewart, 1998. 1st seen on BSBI meeting in 1997. Still there in 2000 but apparently not spreading.
- +75/13/1×2. *Geum × intermedium* (*G. rivale* × *G. urbanum*) (Hybrid Avens) (Mappgoll Croesryw). +Streamside, NW of Alltwallis Farm, SN4532, W. McCarthy, 1999, NMW. +Spontaneous garden 'weed', 16 Clos yr Hendre, Capel Hendre, SN594113, Mrs A.M. Pell, 1999.
- +77/14/1. *Vicia orobus* (Wood Bitter-vetch) (Pysen y Coed). 1 plant on bank by lane S of road junction nr Llanllwni, SN490389, C. Cheffings & M. Godfrey, 1999.
- +91/2/10. *Euphorbia exigua* (Dwarf Spurge) (Fflamgoed Fach yr Yd). Nr Garn Farm, Drefach, SN51, I.K. Morgan, 1986.
- +103/1/4. *Geranium rotundifolium* (Round-leaved Crane's-bill) (Pig yr Aran Cryddail). Frequent on apron of northern wall of dock, W dock, Burry Port, SN445006, T. Lewis, 1999.
- +103/1/9. *Geranium sanguineum* (Bloody Crane's-bill) (Pig yr Aran Rhuddgoch). Dry, stable dunes in vicinity of eutrophic pond, Pembrey Burrows, SS416994, Wildlife Trust West Wales meeting, 1999, det. R.D. Pryce.
- *†107/21/1. *Foeniculum vulgare* c.v. '*purpurascens*' (Fennel) (Ffenigl). Several plants along edge of harbour, N side of W harbour, Burry Port, SN445006, G. Hutchinson, R.D. Pryce, *et al.*, 1999, NMW, det. GH. 1st record for variety.
- +†107/41/2. *Heracleum mantegazzianum* (Giant Hogweed) (Efwr Enfawr). +3 plants, 1 in flower at bottom of road embankment at foot of hedge above ditch, on N side of new Trostre Link Road, Trostre, Llanelli, SS533994, S. Rhodes, 1997, conf. R.D. Pryce. +3-4 plants on bank by lane, nr Llanllwni, SN482384, C. Cheffings & M. Godfrey, 1999.
- *†113/3/4. *Calystegia silvatica* subsp. *disjuncta* (Large Bindweed) (Taglys Estron). Roadside hedge, S of Coedshon, Sawdde Gorge, SN719256, A.O. Chater, Jim Bevan, G. Hutchinson & R.D. Pryce, 1997, NMW, det. AOC. 1st record for subsp.
- *†115/1/1. *Phacelia tanacetifolia* (Phacelia). Near public conveniences, S side of W Harbour, Burry Port, SN444005, P. Day, 1999, NMW. 1st record.
- +118/23/1×2. *Mentha × verticillata* (*M. arvensis* × *M. aquatica*) (Whorled Mint) (Mintys Troellaid). Embankment of B4297, 0.4km W of Bryn, Llanelli, SN540006, G. Hutchinson, 1989, NMW, det. R.M. Harley.
- +†118/23/2×3. *Mentha × piperita* (*M. aquatica* × *M. spicata*) (Peppermint) (Mintys Poethion). Wet flush, NE of ruins of old cottage in wood, 0.7km W of Cwmbach, SN246260, G. Hutchinson & R.D. Pryce, 1990, NMW, det. R.M. Harley.
- +†118/23/3×4. *Mentha × villosa* (*M. spicata* × *M. suaveolens*) (Apple Mint) (Mintys Lled-grynddail). +W of Pwll, Llanelli, SN4601, I.K. Morgan, 1982. +Marshy area to NE of church, Llandefaelog, SN415119, G. Hutchinson & R.G. Ellis, 1989, both NMW, det. R.M. Harley.

- *†118/23/3×lon. *Mentha* × *villosanervata* (*M. spicata* × *M. longifolia*) (Sharp-toothed Mint). Nr southernmost pond, Machynys, Llanelli, SS5197, I.K. Morgan, 1982. Garden of ruined house, Johnston, Carmarthen, SN401190, G. Hutchinson, 1986, both NMW, det. R.M. Harley. 1st & 2nd records.
- +118/23/4. *Mentha suaveolens* (Round-leaved Mint) (Mintys Deilgrwn). Cwrt-y-cadno, SN694440, J. Killick, 1986, NMW, det. R.M. Harley.
- +120/1/4. *Callitriche platycarpa* (Various-leaved Water-starwort) (Brigwlydd y Gwanwyn). Ditch in forestry plantation, Mynydd Tre-beddau, SN490341, P.A. Smith & A.O. Chater, 1996, det. AOC.
- +124/9/1. *Misopates orontium* (Weasel's-snout) (Trwyn y Llo Bychan). Frequent in allotments, Bigyn Hill, Llanelli, SS509998, I.K. Morgan, 1999. +Graveyard, Adulam Chapel, Felinfoel, SN517022, T. & V. Lewis, 1999. Regularly seen at this latter site.
- +124/12/1. *Kickxia elatine* (Sharp-leaved Fluellen) (Llysiau Llywelyn). +Several plants in graveyard, Adulam Chapel, Felinfoel, SN517022, T. & V. Lewis, 1999. Regularly seen at this site.
- +124/18/1. *Sibthorpia europaea* (Cornish Moneywort) (Ceinioglys). +Flushed W facing steep rocky bank, W of Ceulannau Duon, Brechfa, SN493315, I.K. Morgan; + Patch c.1×1m, on W facing clayey stream-side bank in area of felled conifers, Cwm Hust, S of Llanybydder, SN537405, G.S. Motley & I.K. Morgan; all 1999.
- *124/19/3. *Melampyrum pratense* subsp. *pratense* var. *hians* (Common Cow-wheat) (Gliniogai). Rocky river gorge in shady woodland, Crud-yr-awel, Sawdde Gorge, SN736232, A.O. Chater, Jim Bevan, G. Hutchinson & R.D. Pryce, 1997, det. AOC. 1st record for variety.
- *†130/4/1. *Phuopsis stylosa* (Caucasian Crosswort). Derelict garden, The Parade, Carmarthen, SN418203, V. & T. Lewis, 1999. 1st record.
- *†131/6/3. *Lonicera involucrata* (Californian Honeysuckle) (Gwyddfid California). Laugharne Castle grounds, SN302108, G. Hutchinson & R.D. Pryce, *et al.*, 1991, NMW. 1st record.
- *134/1/3. *Dipsacus pilosus* (Small Teasel) (Ffon y Bugai). 2 plants on shaded steam bank, Gwenlais Quarry, Llanybyie, SN604164, V. & T. Lewis, 1999. 1st record.
- +135/17/2. *Picris hieracioides* (Hawkweed Oxtongue) (Gwylaeth yr Hebog). Waste ground beside access road to disused sewage works, Morfa Burrows, SS547983, V. & T. Lewis, 1999.
- *135/26/4. *Crepis capillaris* var. *agrestis* (Smooth Hawk's-beard) (Gwalchlys Llyfn). Roadside verge at field gateway, S of Coed Shon, Sawdde Gorge, SN719256, A.O. Chater, Jim Bevan, G. Hutchinson & R.D. Pryce, 1997, det. AOC. 1st record for variety.
- +135/28/5. *Hieracium vagum* (a hawkweed). By Afon Tywi, Rhandirmwyn, SN7743, A.E. Wade, 1958, NMW, det. D. McCosh.
- *†135/80/1. *Galinsoga parviflora* (Gallant-soldier) (Galinsoga). 3 plants, Machynys, Llanelli, SS511983, R.N. Stringer & R.H. Davies, 1999. 1st record.
- +142/1/19. *Potamogeton crispus* (Curled Pondweed) (Dyffillys Crych). Ditch in dunes, Laugharne Burrows, SN294073, N. Stewart, 1997.
- +148/1/1. *Spirodela polyrrhiza* (Greater Duckweed) (Llinad Mawr). 'Levels' ditch, 'The Swannery' WWT, Penclawdd, SS538985, Llanelli Naturalists' *et al.*, 1999, det. I.K. Morgan, G. Hutchinson & R.D. Pryce. 1st localised record and 1st since Motley's record of c.1850.
- +148/2/1. *Lemna gibba* (Fat Duckweed) (Llinad Crythog). 'Levels' ditch, 'The Swannery' WWT, Penclawdd, SS538985, Llanelli Nats. *et al.*, 1999, det. I.K. Morgan, G. Hutchinson & R.D. Pryce.
- +151/1/21. *Juncus acutus* (Sharp Rush) (Llymfrwynen). A few plants in dunes, Llansteffan, SN356107, P. Day, 1999.
- +153/18/9. *Poa compressa* (Flattened Meadow-grass) (Gweunwellt Cywasg). 1 plant only on sparsely vegetated 'restored' opencast spoil, 'Tumble Community Woodland', SN540124, Llanelli Naturalists', *et al.*, 1999, det. R.D. Pryce & G. Hutchinson, NMW.
- 158/34/1b. *Asparagus officinalis* subsp. *officinalis* (Garden Asparagus) (Merllys). Dune grassland with some scrub, Pembrey Burrows, 'Lifeboat Dunes', SN430003, R.D. Pryce *et al.*, 1999. Not seen previously at Pembrey Burrows, although grown in the last century on the nearby Ashburnham Estate.

162/23/3. *Ophrys apifera* (Bee Orchid) (Tegeirian y Gwenyn). 8 plants seen on dune grassland, Pembrey Burrows, 'Lifeboat Dunes', SN430003, R.D. Pryce *et al.*, 1999. 1st record at this site although 1 plant seen c.300m to W in 1993 by P.A. Jones.

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

- +17/3/5. *Dryopteris aemula* (Hay-scented Buckler-fern) (Marchredynen Aroglus). About 19 healthy clumps on hedgebank and streamside in ancient woodland, Eweston Wood, Roch, SM879228, S.B. Evans, 1999.
- +26/2/1. *Nuphar lutea* (Yellow Water-lily) (Lili Ddŵr Felen). †Established in small pond in wet woodland, alongside railway, Treffgarne Gorge, SM958248, S.B. & A.E. Evans, 1999.
- *28/13/19×20. *Ranunculus* × *novae-forestae* (*R. omiophyllus* × *R. tripartitus*) (New Forest Crowfoot). Spittal Common, SM972225, S.B. Evans, 1999. 1st record.
- 28/13/7. *Ranunculus parviflorus* (Small-flowered Buttercup) (Crafanc y Frân Manflodeuog). 6 clumps in flower at foot of stone faced bank near farmyard, Penlan Farm, St Davids, SM746256, S.B. Evans, J.W. Donovan & A. Jones, 1999.
- 28/13/20. *Ranunculus tripartitus* (Three-lobed Crowfoot) (Crafanc Trillob). 16 plants (13 in flower) in cattle poached clay in wet heath/wet grassland mosaic, Penlan Farm, St Davids, SM743258, S.B. Evans, J.W. Donovan & A. Jones; +10 plants counted in cattle grazed and trampled mire and fen meadow, Shortland Moors, Martletwy, SN028097, M. Sutton; both 1999.
- +30/2/1. *Meconopsis cambrica* (Welsh Poppy) (Pabi Cymreig). †Several plants on wall of old cottage ruins in woodland, N of Parc-y-nole, Granston, SM888334, S.B. & A.E. Evans, 1999.
- +†33/1/1×3×4. *Ulmus* × *hollandica* (*U. glabra* × *U. minor* × *U. plotii*) (Dutch Elm). Form with distinctive, very upright growth and diagnostic leaves, in overgrown corner of old runway road – copse, Templeton Airfield, SN094113, S.B. & A.E. Evans, 1999.
- *†34/1/1. *Cannabis sativa* (Hemp) (Cywarch). Several plants on site of former pheasant pen, disturbed sand dune, Kilpaison Burrows, SM897002, S.B. Evans & A. McConnell, 1999. 1st record.
- +43/3/8. *Atriplex laciniata* (Frosted Orache) (Llygwyn Ariannaidd). 10 plants in strand zone below dune face, South beach, Tenby, SS126996, S.B. & A.E. Evans, 1999.
- +43/6/1. *Salicornia pusilla* (One-flowered Glasswort). 1 plant only in inter-tidal mud, Inner Harbour, Saundersfoot, SN136047, S.B. & A.E. Evans, 1999.
- +46/20/11. *Silene gallica* (Small-flowered Catchfly) (Gludlys Amryliw). Two populations in untilled corners of Linseed crops, E of Goose Green, St Ishmaels, SM833067, K.J.S. Devonald, 1999.
- +47/8/13×19. *Rumex* × *pratensis* (*R. crispus* × *R. obtusifolius*) (Meadow Dock) (Tafol y Maes). Unimproved pasture, Glan-teg, Dinas Cross, SN001379, S.B. & A.E. Evans, 1999.
- 48/1/9a. *Limonium procerum* subsp. *procerum* (a sea-lavender). Crevices of sea-cliff, Dinas Fach, Pointz Castle, SM825228, S.B. & A.E. Evans; +Crevice zone of sea-cliff, Pen-y-bal, 2km N of Newport, SN047415, S.B. Evans; both 1999.
- 48/1/10c. *Limonium britannicum* subsp. *transcanalis* (a sea-lavender). Crevice zone of limestone sea-cliff, Trevalen Downs, Bosherton, SR969929, S.B. Evans, S.J. Leach, R.J. Haycock & A. Jones, 1999.
- 48/1/11. *Limonium paryum* [Pembroke Sea-lavender] (Corlafant Penfro). Crevice zone of limestone sea-cliff, New Quay, NE corner of inlet, Bosherton, SR974931; Crevice zone of limestone sea-cliff, Newton Down, Bosherton, SR964928; both, S.B. Evans, S.J. Leach, R.J. Haycock & A. Jones, 1999.
- +57/1/7. *Viola lactea* (Pale Dog-violet) (Millyn Gwelw Grugog). 5 flowering plants on heathland, Templeton Airfield, SN103112, M. Sutton & J. Woodman, 1999.
- +†62/7/2. *Erysimum cheiri* (Wallflower) (Blodyn y Fagwyr). A long established population on old walls in builders yard behind market, Fishguard, SM958369, S.B. & A.E. Evans, 1999.
- +†62/11/3. *Barbarea intermedia* (Medium-flowered Winter-cress) (Berwr Cyfryngol). Ruderal on damp clay, disused airfield, St Davids, SM792260, S.B. Evans, 1999.

- +69/4/3. *Lysimachia vulgaris* (Yellow Loosestrife) (Trewynyn). Emergent zone of eutrophic lake, SE corner of Middle Mill Pond, Pembroke, SM989014, S.B. & A.E. Evans, 1999.
- 77/19/8. *Trifolium fragiferum* (Strawberry Clover) (Meillionen Fefusaidd). 2 patches with over 230 flowering heads on margins of shallow fen/wet heath mere on clay, Maendewi Pool, Dowrog Common, St Davids, SM769270, 1999.
- +77/19/22. *Trifolium scabrum* (Rough Clover) (Meillionen Ger y Môr). Sandy turf, Pwll Gwaelod, Dinas Cross, SN004399, S.B. Evans, 1999.
- *†77/22/1×2. *Laburnum* × *watereri* (*L. anagyroides* × *L. alpinum*). Roadside bank, B4313, W of Cilrhedyn, SM999344; Roadside bank, W of Vagwrlas, SN030322; both S.B. & A.E. Evans, 1999. 1st & 2nd records.
- +79/2/3. *Myriophyllum spicatum* (Spiked Water-milfoil) (Myrddail Tywysennaidd). Eutrophiated ponds, Trehenlliw Farm, St Davids, SM756265, S.B. Evans, 1999.
- †84/1/12. *Epilobium brunnescens* (New Zealand Willowherb) (Helyglys Gorweddol). Abundant on the shale surface of car park, Rosebush Caravan Park, SN073293, S.B. Evans, 1999.
- 88/1/1. *Euonymus europaeus* (Spindle) (Piswydden). Several small saplings on dry bank in disused brick pits, Goodwick, SM939376, S.B. & A.E. Evans, 1999.
- +†89/1/1×per. *Ilex* × *altaclerensis* (*I. aquifolium* × *I. perado*) (Highclere Holly). Several bushes, well established in deciduous woodland, Broom Wood, Aber Mawr, SM886336, S.B. & A.E. Evans, 1999.
- +91/2/9. *Euphorbia lathyris* (Caper Spurge) (Llysiau y Cyfog). 1 plant in small spoil dump, S of Portheiddy, SM803307, S.B. & A.E. Evans, 1999.
- +†99/1/1. *Acer platanoides* (Norway Maple) (Masarnen Norwy). Self-sown young trees on A477 road cutting and verge of minor road, E of Kilgetty, SN132073, S.B. & A.E. Evans, 1999.
- +103/1/4. *Geranium rotundifolium* (Round-leaved Crane's-bill) (Pig yr Aran Crynddail). Steps down to water, Milford Docks, SM900059, J. Hannah, 1999.
- +103/1/9. *Geranium sanguineum* (Bloody Crane's-bill) (Pig yr Aran Rhuddgoch). †Grassland verge, track to Soldier's Rock, St Ishmaels, SM833065, K.J.S. Devonald, 1999. Known here since 1980s and thought to be a relict of wartime occupation of the headland. The species is not native in Pems.
- +†104/1/maj. *Tropaeolum majus* (Nasturtium) (Meri a Mari). Shingle, Saundersfoot, SN138050, S.B. Evans, 1999.
- +107/6/2. *Anthriscus caucalis* (Bur Chervil) (Gorthyfail Cyffredin). Disturbed sand in dune system, Broomhill Burrows, SM895005, S.B. Evans & A. McConnell, 1999.
- +107/40/1. *Pastinaca sativa* var. *sylvestris* (Wild Parsnip) (Panasen Wyllt). †Few plants on railway ballast, Goodwick Railway Station, SM944381, S.B. & A.E. Evans, 1999. Not native in Pems.
- +107/43/3. *Torilis nodosa* (Knotted Hedge-parsley) (Troed-y-cyw Clymog). +Several plants, some almost 1.5m high, besides wall bounding barley field, W of St Brides Haven, SM794110, S.B. Evans; +Farmyard, Tresinwen, near Strumble Head, SM901405, J.W. Donovan; both 1999.
- †110/7/1. *Lycopersicon esculentum* (Tomato) (Tomato). c.200 plants germinated at field margin and in willow carr following sewage spillage into pasture, Clŷn, Dinas Cross, SM997378, S.B. Evans, 1999.
- +†110/9/1. *Datura stramonium* (Thorn-apple) (Meiwyn). Site of old garden aviary, with other bird-seed aliens, bulldozed gardens and houses, Rhoscrowther Village, SM904021, S.B. Evans, 1999.
- +118/8/1. *Melittis melissophyllum* (Bastard Balm) (Gwenynog). Many plants amongst bracken on steep slope beneath massive rock outcrop of sheltered sea-cliff, Crincoed, Goodwick, SM951400, S.B. & A.E. Evans, 1999.
- *121/1/3b. *Plantago major* subsp. *intermedia* (Greater Plantain) (Llwynhidydd Mawr). Damp open areas in maritime heath, Trevalen Downs, Bosherton, SR968931, S.B. Evans, S.J. Leach, R.J. Haycock & A. Jones; Farm track, Lower Treginnis, St Davids, SM723238, S.B. Evans & A. Jones; both 1999. 1st & 2nd records.

- †124/2/4. *Scrophularia scorodonia* (Balm-leaved Figwort) (Gornerth Gwenynddail). Few plants at back of building, St Davids, SM755252, S.B. & A.E. Evans; +Slipway wall, Old slipway, Milford Docks, SM899059, S.B. Evans; both 1999.
- +124/8/2. *Chaenorhinum minus* (Small Toadflax) (Gingroen Bychan). Railway ballast, Johnston, SM932107, S.B. Evans, 1999.
- +124/23/1. *Parentucellia viscosa* (Yellow Bartsia) (Gorudd Melyn). Over 40 plants in small area of disturbed ground in pig pen, Trehenlliw Farm, St Davids, SM758265, S.B. Evans, 1999.
- +129/3/1. *Wahlenbergia hederacea* (Ivy-leaved Bellflower) (Clychlys Eiddew). 2 small plants in ruts on edge of track in woodland, Canaston Wood, SN076140, S.B. & A.E. Evans, 1999.
- +†131/5/1. *Leycesteria formosa* (Himalayan Honeysuckle) (Bachgen Llwm). Roadside bank, Hean Castle, SN137056, S.B. & A.E. Evans, 1999.
- +†135/11/3. *Centaurea cyamus* (Cornflower) (Penlas yr Ŷd). Single clump in overgrown potato field put down to grass, The Ridgeway, W of Penally, SS092997, S.B. & A.E. Evans, 1999. Not a deliberate introduction.
- +135/19/1. *Tragopogon pratensis* subsp. *minor* (Goat's-beard) (Barf yr Afr Felen). Lane edge behind Bethel Chapel, SN159169, S.B. Evans, 1999.
- +135/30/1. *Filago vulgaris* (Common Cudweed) (Edafeddog). Frequent in open ground of old railway sidings, old scrapyard, Johnston, SM932110, S.B. Evans, 1999.
- +†135/43/6. *Erigeron acer* (Blue Fleabane) (Cedowydd Glas). Frequent in old railway yard, Mathry Road disused railway station, Letterston, SM927306, S.B. Evans, 1999.
- +†135/44/1. *Conyza canadensis* (Canadian Fleabane) (Amrhydlwyd Canada). +Frequent in old railway yard, Mathry Road disused railway station, Letterston; SM927306; +Abundant in old railway sidings, Goodwick railway station, SM944381; both S.B. Evans, 1999.
- †138/6/1. *Lagarosiphon major* (Curly Waterweed) (Pib-flodyn Crych). Flooded quarry pit, Treffgarne Quarry Lake, SM959239, S.B. & A.E. Evans, 1999.
- +152/3/3. *Eleocharis uniglumis* (Slender Spike-rush) (Sbigfrwynen Un Plisgyn). Brackish ditch banks, just inland of road, Newgale, SM848220, S.B. Evans, 1999.
- +152/11/1. *Cyperus longus* (Galingale) (Ysnoden Fair). †1 clump at edge of minor stream, N of car park entrance, Nolton Haven, SM859186, S.B. & A.E. Evans, 1999.
- +152/16/9a. *Carex divulsa* subsp. *divulsa* (Grey Sedge) (Hesgen Lwyddlas). Grassland, coast path E side of Sandy Haven, SM856073, K.J.S. Devonald, 1999, conf. S.B. Evans.
- +153/12/1. *Festuca pratensis* (Meadow Fescue) (Peisgwellt y Waun). +Unimproved grassland, Glan-teg, Dinas Cross, SN001379, S.B. & A.E. Evans; +Unimproved grassland, Rhyd-y-Beinw, Bridell, SN173422, S.B. Evans & C. Thomas, both 1999.
- 153/17/1. *Briza media* (Quaking-grass) (Crydwellt). Neutral/calcareous grassland, Pen-ffordd Chapel, SN076223, S.B. & A.E. Evans, 1999. Outside its 'normal range'.
- +153/39/2. *Agrostis gigantea* (Black Bent) (Maeswellt Mawr). Maize field, Milton, SN037034, M. Sutton, 1999.
- +153/51/1. *Bromopsis ramosa* (Hairy-brome) (Pawrwellt Blewog). Secondary woodland, Nevern Castle Motte, SN082401, S.B. Evans, 1999.
- +153/59/4. *Hordeum secalinum* (Meadow Barley) (Heiddwellt y Maes). Grassland by tidal inlet, Radford Pill, Milton, SN041033, M. Sutton, 1999.
- *†158/20/2×3. *Hyacinthoides non-scripta* × *H. hispanica* (a hybrid bluebell). Stream bank, Merryvale Common, St Davids, SM748254; Woodland path, Old Mill grounds Nature Reserve, Haverfordwest, SM952160; both S.B. Evans, 1999. 1st record.
- +†158/20/3. *Hyacinthoides hispanica* (Spanish Bluebell) (Clychau Cog Sbaen). 1 clump in disused brick pits, Goodwick, SM939376, S.B. & A.E. Evans, 1999.
- *†158/24/3. *Allium roseum* (Rosy Garlic) (Garllig Gwridog). Neutral grassland in and just outside Haroldston churchyard, SM866154, S.B. & A.E. Evans, S. Schofield & C. Moseley, 1999. Also recorded from along a shady sandy lane in the same area. 1st records.

- +†158/33/1×3. *Narcissus* × *medioluteus* (*N. tazetta* × *N. poeticus*) (Primrose-peerless) (Gylfinog Dauflodeuog). Spreading slowly in permanent pasture/hayfield, Pen Rhiw Fach, Cilgwyn, Newport, SN075367, J. Helyer, 1999, conf. S.B. Evans. Present here since at least 1983.
- †158/33/3. *Narcissus poeticus* (Pheasant's-eye Daffodil) (Gylfinog Barddol). Naturalised at side of path, Granston Wood, Granston, SM891334, S.B. & A.E. Evans, 1999.

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

- +6/1/1. *Osmunda regalis* (Royal Fern) (Rhedynen Gyfrdwy). +One clump, Rhos Gellie SSSI, Plwmp, SN380535, C. Mockridge, 1994. +W side of West Bog, Cors Caron NNR, SN676636, P. Culyer, 1999. +40-50 mostly small plants, NE part of Cors Caron NNR, E of disused railway, SN705642, J.P. Lyons, 1993.
- +7/1/1. *Cryptogramma crispera* (Parsley Fern) (Rhedynen Bersli). One plant on quarried cliff above Forestry road 700m NNW of Nantystalwyn, SN802582, J.P. Woodman & A.O. Chater, 1999.
- 17/3/5. *Dryopteris aemula* (Hay-scented Buckler-fern) (Marchredynen Arogus). One plant on cliff halfway up valley, Coed Cwm Cletwr Wildlife Trust Reserve, SN672919, A.O. Chater, R. Bamford & L. Gander, 1999. The 1st record in this valley since 1978, when it was seen much lower down.
- *†20/7/peu. *Pinus peuce* (Macedonian Pine) (Pinwydden Macedonia). Five self-sown trees 4-10 years old on leadmine spoil heap and in adjacent gully, Ystrad Einion mine, 3km SE of Eglwys-fach, SN707938, A.O. Chater, 1999. 1st record.
- *†29/19×emp. *Berberis* × *stenophylla* (*B. darwinii* × *B. empetrifolia*) (Hedge Barberry). Roadside hedgebank, Gwynfryn, Llanarth, SN422S73, A.O. Chater, 1999, NMW. +Along 5m of laneside hedgebank 300m SE of Vicarage Crossroads, Aberaeron, SN459618, A.O. Chater, 1999. 1st and 2nd records.
- +†45/2/2. *Claytonia sibirica* (Pink Purslane) (Gwlyddyn Rhudd). +Wood 300m SE of Towyn, New Quay, SN387593, M.D. Sutton, 1997. +Roadside hedgebank SSE of Rhydowen crossroads, SN444450, A.O. Chater, 1999.
- +46/7/10. *Cerastium diffusum* (Sea Mouse-ear) (Clust Llygoden Arfor). By footpath on rocky ridge, 250m SW of Cae-crwd, Henllan, SN350409, A.O. Chater, 1999. Very uncommon inland in the v.c.
- +†46/18/1. *Lychnis coronaria* (Rose Campion) (Lluglys Gwridog). By footpath at edge of coastal scrub 1.5km W of New Quay, SN373592, A.O. Chater, 1999.
- *47/1/11×14. *Persicaria* × *intercedens* (*P. maculosa* × *P. hydropiper*) (a hybrid knotweed). Fallow enclosure by farmyard, Cymerau Farm, Glandyfi, SN698961, A.O. Chater & J.P. Woodman, 1998, NMW, conf. J.R. Akeroyd. 1st record.
- +47/8/14. *Rumex conglomeratus* (Clustered Dock) (Tafol Blaen). Abundant weed in organic lettuce crop, Blaencamel. Cilcennin, SN507602, A.O. Chater, 1999. Very unusual as an arable weed anywhere in the v.c.
- 47/8/15. *Rumex sanguineus* var. *sanguineus* (Blood-veined Dock) (Tafolen Gwythien-goch). Two plants, on shingle and under alders, by Afon Cerdin 100m below Bargoed Bridge, SN387461, A.O. Chater, 1999. Apparently natural occurrence of this spectacular variety.
- +†51/1/4a. *Hypericum hircinum* subsp. *majus* (Stinking Tutsan) (Eurinllys Drewllyd). Old wall 30m E of Aberaeron church, SN457627, A.O. Chater, 1998, NMW, det. N.K.B. Robson. 2nd record.
- 55/1/1×2. *Drosera* × *obovata* (*D. rotundifolia* × *D. anglica*). On firebreak area between Llanycynfelin Common and raised mire, Cors Fochno NNR, SN635921, S. Morley per M. Bailey, 1993. The only sighting since it was seen on the bog by P.M. Benoit in 1960.
- +55/1/3. *Drosera intermedia* (Oblong-leaved Sundew) (Gwlithlys Hirddail). Mire near NW corner of Cors Caron NNR, SN704664, M.D. Sutton & D. Guest, 1999.
- 62/12/3. *Rorippa islandica* (Northern Yellow-cress) (Berwr Melyn y Gogledd). Abundant weed in chicken yard, Porth-y-fynwent, Brongwyn. SN286435; Muddy shingle in bay of Teifi 450m SSE of Stradmore Mansion, SN252413; both A.O. Chater, 1999. Apart from the colony on rocks at

- Cenarth, the latter is the only site where it has been found on the shore of the river itself rather than on the adjacent floodplain.
- +62/12/4. *Rorippa palustris* (Marsh Yellow-cress) (Berwr Melyn y Gors). Disturbed ground by bowling greens, Queen's Road, Aberystwyth, SN584820, S.P. Chambers, 1999.
- +62/23/5. *Cochlearia danica* (Danish Scurvygrass) (Llwylys Denmarc). Abundant on roadside hedgebanks 150m NE of Llwynnelyn crossroads, SN442597, A.O. Chater, 1999.
- +64/1/a. *Empetrum nigrum* subsp. *nigrum* (Crowberry) (Creiglys). Relic heath 500m NNW of Garn Wen, Ffostrasol, SN370499, A.O. Chater, 1999.
- *65/13/4×6. *Vaccinium* × *intermedium* (*V. vitis-idaea* × *V. myrtillus*). A few plants in *Molinia* tussock mire, rand of West Bog, Cors Caron, SN686634, J.P. Savidge, c.1980. 1st record.
- 69/6/3. *Anagallis minima* (Chaffweed) (Corfrilys). Abundant in area 20×5m, with another smaller colony nearby, in damp, heavily sheep-grazed pasture on E side of Llangranog Head, SN314552, W. McCarthy & BSBI Field Meeting, 1999.
- +†73/5/7. *Sedum spurium* (Caucasian-stonecrop) (Briweg Rwsieg). Roadside bank, Llangranog, SN312541, A.S. & V. Lewis, 1999.
- †75/5/8. *Sedum stoloniferum* (Lesser Caucasian-stonecrop). Roadside hedgebank 300m E of Capel Dewi church, SN453426, A.O. Chater, 1999. 2nd record.
- *†74/3/1. *Bergenia crassifolia* (Elephant-ears). Streambank, Aber-arth, SN479639. A.O. Chater, 1998. 1st record.
- *†74/5/2. *Saxifraga cymbalaria* (Celandine Saxifrage) (Tormaen Deilaren). Old wall, Alltyrolyn, Capel Dewi, SN450443, M.L. Lewes, c.1921, **ABS**, det. A.D.Q. Agnew & A.O. Chater. 1st record.
- *†74/8/1. *Tellima grandiflora* (Fringe-cups) (Clychau'r Clawdd). Roadside bank, Blaenpant, Dihewyd, SN491556, **NMW**; +Streambank, 100m W of Llanfihangel-y-Creuddyn church, SN664760; both A.O. Chater, 1999. 1st & 2nd records.
- *75/8/120. *Rubus rhombifolius* (a bramble). Felled woodland, Coed Newydd, Coedmor, SN196443, D.E. Allen & A.O. Chater, 1998, **BM**, conf. A. Newton. 1st record.
- *75/8/172. *Rubus mucronatoides* (a bramble). Felled woodland, Coed Newydd, Coedmor, SN196443, D.E. Allen & A.O. Chater, 1998, **BM**, conf. A. Newton. 1st record.
- *75/8/193. *Rubus melanodermis* (a bramble). Rocky slope by road, 1.5km NW of Cenarth, SN258424, D.E. Allen & A.O. Chater, 1998, **BM**, conf. A. Newton. 1st record.
- *75/8/199. *Rubus raduloides* (a bramble). Cwm Einion, SN69, W.H. Painter, 1906, **BM**, det. D.E. Allen, conf. A. Newton. +Scrub by footpath, Ty-gwyn, Mwnt, SN199516, D.E. Allen & A.O. Chater, 1998, **BM**, conf. A. Newton. 1st & 2nd records.
- *75/8/241. *Rubus largificus* (a bramble). Felled woodland, Gwachal Dwmlo, 1.5km NW of Cenarth, SN258425, D.E. Allen & A.O. Chater, **BM**, conf. A. Newton. 1st record.
- 75/17/3a. *Sanguisorba minor* subsp. *minor* (Salad Burnet) (Gwyddldwn Cyffredin). +One plant in churchyard, Llanddeiniol, SN560721, B. Evans, 1997. +Steep MG5b pasture above vineyard, Llanrhystud, SN537699, M.D. Sutton & A.O. Chater, 1999. 2nd & 3rd records; the first of these records might have been considered a casual introduction, but the later discovery of the plant just 3km away in some quantity in semi-natural grassland makes its nativeness more probable.
- †75/11/2. *Fragaria moschata* (Hautbois Strawberry) (Mefusen Fawr). +Abundant in Pencae chapel graveyard, 1km SE of Llanarth, SN431566, A.O. Chater, **NMW**; +Hedgebank just below upper chapel, Cwmerfyn, SN700828, S.P. Chambers; both 1999. Also found well-naturalised in ten other sites, mostly in the south of the v.c., so probably still at least as common as in the 1930s.
- †75/13/3. *Geum macrophyllum* (Large-leaved Avens). +Abundant on streambanks and on tracks around village, Llangwryfon, SN597706; +Streamside rocks and banks along 200m of wooded valley upstream from Lledrod church, SN645700; +Abundant by track through wood to sewage works by housing estate, Ponterwyd, SN751808, **NMW**; all A.O. Chater, 1999. Now known from five hectads in the v.c.
- +†75/18/1. *Acaena novae-zelandiae* (Pirri-pirri-bur) (Cyngaf Piripiri). Roadside verge, Rhydyfelin hill, SN593792, S.P. Chambers, 1999. 2nd record.

- +†75/21/9. *Rosa virginiana* (Virginian Rose) (Rhodyn Virginia). Hedge in chapel graveyard, Ponterwyd, SN749809, A.O. Chater, 1999, **NMW**. 2nd record.
- +75/21/15×12. *Rosa* × *scabriuacula* (*R. tomentosa* × *R. canina*) (a hybrid rose). Flush in pasture, Banc y Mwldan SSSI, Penparc, SN201488, S.P. Chambers, 1999, conf. R. Maskew.
- †77/15/9. *Lathyrus latifolius* (Broad-leaved Everlasting-pea) (Ytbyesen Barhaus Lydanddail). +By footpath in coastal scrub, 1.5km W of New Quay, SN373592, A.O. Chater, **NMW**; +Roadside bank, NW end of Penparc, SN209483, S.P. Chambers; both 1999. 2nd & 3rd records.
- 84/1/7. *Epilobium roseum* (Pale Willowherb) (Helyglys Coesig). +Base of wall, back streets of Lampeter, SNc.575481, A.P. Conolly; +On river shingle, Ty'n-yr-helyg, Llanfarian, SN595767, S.P. Chambers; Base of wall among buildings, Plas Gogerddan, SN628837, S.P. Chambers; all 1999.
- +84/4/1×3. *Oenothera* × *fallax* (*O. glazioviana* × *O. biennis*) (Intermediate Evening-primrose). Hybrid swarm of c.130 plants, waste plot, Glanyrafon Industrial Estate, SN611802, A.O. Chater, 1999, **NMW**, det. J.C. Bowra.
- +84/4.1×3×4. *Oenothera glazioviana* × *O. biennis* × *O. cambrica* (a hybrid evening-primrose). Hybrid swarm of some thousands of plants, Ynys-las Dunes NNR, SN606933, A.O. Chater, 1999, det. J.C. Bowra.
- *†91/2/17. *Euphorbia characias* subsp. *characias* (Mediterranean Spurge). Scrub by lane NW of Llanbadarn Fawr church, SN596813, A.O. Chater, 1999, **NMW**. 1st record.
- †96/1/1. *Staphylea pinnata* (Bladdernut) (Dagrau Addaf). Bush suckering vigorously along hedgebank 150m N of Llandyfriog church, SN332412, A.O. Chater, 1999, **NMW**. A specimen from here in **NMW** collected by V. Thomas in 1958 states that it had been 'known in the locality for at least 20 years'.
- 103/1/14. *Geranium pyrenaicum* (Hedgerow Crane's-bill) (Pig yr Aran y Gwrych). Roadside verge near N end of Ynys-las golf course, SN607934, R.G. Woods, 1999.
- 103/1/15. *Geranium pusillum* (Small-flowered Crane's-bill) (Pig yr Aran Mânflodeuog). +Patch in potato field, Hawthorn Grange, Penparc, SN206487, S.P. Chambers; +Roadside verge 200m NNW of school, Felin-fach, SN529558, A.O. Chater; both 1999.
- +103/2/1. *Erodium maritimum* (Sea Stork's-bill) (Pig y Crëyr Arfor). Several hundred plants in chapel yard 400m SW of Borth church, SN609894, T. Lovering, 1999. Probably the largest colony in the v.c.
- *103/24. *Erodium lebelii* (Sticky Stork's-bill) (Pig y Crëyr Gludog). At least six plants at edge of dune slack, Ynys-las Dunes NNR, SN607936, J. Higgins, 1999, conf. P.M. Benoit. 1st confirmed record; reported erroneously several times in the past from both Ynys-las and Penyrygyd.
- *111/3/2a×3. *Calystegia* × *scanica* (*C. sepium* × *C. pulchra*) (a hybrid bindweed). Roadside hedgebank 600m S of Aber-porth church, SN250507, R.K. Brummitt & A.O. Chater, 1996, **K**. 1st record. Different forms of this hybrid have now been reported from several sites in the south-west of the v.c. (cf. R.K. Brummitt & A.O. Chater, *Watsonia* 23: 161-165 (2000)).
- *†116/4/4. *Symphytum grandiflorum* (Creeping Comfrey) (Cyfardwf Llwg). Scrub by old cottage site, 600m NNW of crossroads, Rhydowen, SN441457, A.O. Chater, 1999, **NMW**. 1st record.
- *†116/10/1. *Trachystemon orientalis* (Abraham-Isaac-Jacob) (Abraham-Isaac-Jacob). Scrub slope above shore, New Quay, SN390595, A.O. Chater & J.P. Woodman, 1998, **NMW**. 1st record.
- +†118/5/2. *Lamium maculatum* (Spotted Dead-nettle) (Marddanhadlen Fraith). Roadside verge 300m S of Brongwyn church, SN286435, A.O. Chater, 1999. 1st localised record since 1904.
- *†124/1/10. *Verbascum speciosum* (Hungarian Mullein). Four plants by footpath in coastal scrub, 1.5km W of New Quay, SN373592, A.O. Chater, 1999, **NMW**. 1st record.
- 124/2/2. *Scrophularia auriculata* (Water Figwort) (Gornerth y Dŵr). Abundant by streamlet in scrub on boulder clay at top of sea beach, Cei Bach, Llanina, SN412598, J.P. Woodman & A.O. Chater, 1999. Recorded here by J.H. Salter in 1902.
- +†124/4.2×3. *Mimulus* × *robertsii* (*M. guttatus* × *M. luteus*) (Hybrid Monkeyflower). W side of Piliu meanders, Teifi Marshes Wildlife Trust Reserve, SN/184448, L. Gander, 1999, det. A.O. Chater.

- +124/9/1. *Misopates orontium* (Weasel's-snout) (Trwyn y Llo Bychan). Weed in potato field, Glanyrafon, Llanilar, SN617755, J.P. Lyons, 1999.
- +†124/11/2. *Cymbalaria pallida* (Italian Toadflax) (Llin y Fagwyr Mwyaf). Old roadside wall by cottages, Felin-fach, SN530557, A.O. Chater, 1999. 2nd record.
- 124/18/1. *Sibthorpia europaea* (Cornish Moneywort) (Ceinioglys). Flush with scrub in NE facing cwm, Fforest-Cerdin, Tre-groes, SN394450. A.O. Chater, 1999. 1.3km from a site at SN387461 where J.H. Salter knew it from 1907-1931, but where it no longer occurs.
- 125/2/2. *Orobancha rapum-genistae* (Greater Broomrape) (Gorfanc Mwyaf). Frequent along c.400m of gorse scrub on slope W of Tregibby Farm, Cardigan, SN181474. M.D. Sutton & A.O. Chater, 1999. Probably several hundred plants and by far the biggest colony in the v.c.
- +128/2/6. *Utricularia minor* (Lesser Bladderwort) (Swigenddail Lleiaf). Basin mire 500m E of Tyllwyd, Llanfarian, SN601774, A.D. Hale & R.A. Jones, 1999.
- *129/1/12. *Campanula trachelium* (Nettle-leaved Bellflower) (Clychlys Danadl). †Rough grassland, Tyglyn Aeron, SN5059, M.L. Lewes, 1908, **ABS**. 1st record.
- +133/2/3. *Valeriana dioica* (Marsh Valerian) (Triaglog y Gors). *Molinia* tussock mire, Cross Inn, Nebo, SN549636, S.L.N. Smith & M.D. Sutton, 1999. Only extant record.
- +135/30/1. *Filago vulgaris* (Common Cudweed) (Edafeddog). Steep MG5b slope above vineyard, Llanrhystud, SN537699. M.D. Sutton & A.O. Chater, 1999.
- *†135/40/lep. *Solidago lepida* DC. (a goldenrod). Near Lampeter, SN54, H.J. Riddelsdell, 1900, **BM**, det. D.H. Kent 1952. Status unknown. 1st Welsh record.
- *†135/41/con. *Aster concinnus* (Narrow-leaved Smooth-aster). Riverbank at tidal limit, Afon Cletwr, Tre'r-ddol, SN654929; +Riverbank at tidal limit, Afon Rheidol, Aberystwyth, SN587812; both A.O. Chater, 1990, **CGE**, det. P.F. Yeo & P.D. Sell. 1st & 2nd Welsh records.
- +†135/44/1. *Conyza canadensis* (Canadian Fleabane) (Amrhydylwyd Canada). Weed in potato field, Hawthorn Grange, Penparc, SN206487, S.P. Chambers, 1999.
- *135/62/13×15. *Senecio* × *baxteri* (*S. squalidus* × *S. vulgaris*) (a hybrid groundsel). Garden weed, Fairview, Llanbadarn Fawr, SN598810, J.H. Salter, 1935, *Fl. Pl. Ferns Cards* 82 (1935). A hitherto overlooked record as only mentioned in passing. 1st record.
- 136/2/1. *Butomus umbellatus* (Flowering-rush) (Engraff). †Naturalised (from garden ditches) along ditch N of Ynys-hir gardens, Eglwys-fach, SN682961, P. Condry, c.1965, but now gone.
- 137/2/1. *Baldellia ranunculoides* (Lesser Water-plantain) (Llyren Fechan). Pool in large scrape in Aberleri Fields, SN610918; Artificial slack E. of road, Ynys-las Dunes NNR, SN610939; both R.A. Jones & A.D. Hale, 1999. Recently spread to these two sites in the NNR from the nearby Hen Afon Leri SSSI.
- +152/1/3. *Eriophorum latifolium* (Broad-leaved Cottongrass) (Plu'r Gweunydd Llydanddail). Abundant in depression in valley mire 800m WNW of Pont Glanmarchnant, Ffair-rhos, SN729699, M.D. Sutton, 1999.
- *152/2/2a×2b. *Trichophorum cespitosum* subsp. *cespitosum* × subsp. *germanicum* (Deergrass) (Clwbfrwynen y Mawn). Flush in blanket mire 1.5km SE of Hafod, SN771717, A.O. Chater, 1963, **NMW**, det. G.A. Swan, proliferous form. 1st record for the form. The non-proliferous form of this hybrid turns out to be dominant over the raised mires at Cors Caron and Cors Fochno, and has also been found in many areas of flushed blanket mire, and was found in seven hectads in the v.c. in 1999.
- +152/16/18. *Carex dioica* (Diocious Sedge) (Hesgen Ysgar). +Flushes in rhos pasture SE of Cross Inn, Nebo, SN548635, S.L.N. Smith & C. Mockridge; +Flush in blanket mire just W of Figyn Blaenbrefi, SN714549, A.O. Chater & L. Gander; Several extensive colonies in flushes in blanket mire 1.6km WNW of Trawsalt, SN762709. A.O. Chater; all 1999.
- +152/16/27. *Carex pseudocyperus* (Cyperus Sedge) (Hesgen Hopysaid). Large clump in basin mire WNW of Dolwerdd, 2km SE of Blaen-porth, SN274471, A.O. Chater & M.D. Sutton, 1999.
- 152/16/46a. *Carex viridula* subsp. *brachyrrhyncha* (Long-stalked Yellow-sedge) (Hesgen Felen Baladr Hir). +Base-rich flush in rhos pasture NW of Nant Bryn-maen, 3.5km SSE of Llangeitho,

- SN634571; +Depression in valley mire 800m WNW of Pont Glanmarchnant, Ffair-rhos, SN729699; both M.D. Sutton, 1999. The hybrid with *C. hostiana* is also present nearby in the latter site.
- +152/16/57. *Carex limosa* (Bog-sedge) (Hesgen Eurwerdd). Abundant in basin mire 700m W of Pont Glanmarchnant, SN730696, M.D. Sutton, 1997.
- *152/16/64×65. *Carex aquatilis* × *C. acuta* (a hybrid sedge). Ditch by disused railway, 100m S of Teifi bridge, Cors Caron NNR, SN708662, A.O. Chater, NMW, conf. A. C. Jermy & P.M. Benoit. 1st record.
- +153/14/1. *Vulpia fasciculata* (Dune Fescue) (Peisgwellt Uncib). Sandy beach by mouth of stream, Traeth Penbryn, SN293524, A.O. Chater & S.P. Chambers, 1999.
- +153/32/1b. *Deschampsia cespitosa* subsp. *parviflora* (Tufted Hair-grass) (Brigwellt Cudynnog). +Alder carr in valley 200m S of Liedrod church, SN645699-SN645700; +Damp woodland on clay, 300m WNW of Glanrhyd, Trebedw, SN361414; both A.O. Chater, 1999. 2nd and 3rd records.
- +†153/53/3. *Ceratochloa cathartica* (Rescue Brome) (Pawrwellt America). Roadside verge and garden weed, Maesyreglwys, Aber-arth, SN476632, A.O. Chater, 1999, NMW. 2nd record.
- *153/56/1×3. *Elytrigia* × *laxa* (*E. repens* × *E. juncea*) (a hybrid couch). Sandy top of sea beach, Tan-y-bwlch, Aberystwyth, SN579799, S.P. Chambers, 1999, Herb. S.P.C., conf. T.A. Cope. 1st record.
- *†158/7/1. *Colchicum autumnale* (Meadow Saffron) (Saffrwm y Gweunydd). Wooded slope 150m SE of crossroads, Pont-sian, SN439460, A.O. Chater, 1999, NMW. 1st record.
- +158/31/1. *Leucojum aestivum* (Summer Snowflake) (Eiriaidd). †Shaded roadside bank below Penmorfa Chapel, Penbryn, SN304521, A.S. & V. Lewis, 1999.
- *†159/5/9. *Iris latifolia* (English Iris). Widely naturalised in Tregroes churchyard, SN406448, A.O. Chater, 1999, NMW. 1st record; known here for at least 20 years but not previously identified.
- +162/18/3a. *Dactylorhiza incarnata* subsp. *incarnata* (Early Marsh-orchid) (Tegeirian Rhuddgoch). Depression in valley mire 800m WNW of Pont Glanmarchnant; SN729699, D. Guest, M.D. Sutton & A.O. Chater, 1999.

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

- +28/17/4. *Thalictrum minus* (Lesser Meadow-rue) (Arianllys Bach). 1 plant on cliff beside River Yrnwy, Pontrobert, SJ1013, R.G. Woods, 1999. 2nd record as a native.
- *†46/24/3. *Petrorhagia saxifraga* (Tunicflower) (Penigan Tormaen). 1 plant forming a 20cm cushion in pavement outside Town Hall, Llanidloes, SN955845, D. Woodland & C.A. Small, 1999. 1st record; locality is where market stalls sell plants!
- *47/8/13×19. *Rumex* × *pratensis* (*R. crispus* × *R. obtusifolius*) (Meadow Dock) (Tafol y Maes). British Waterways Reserve, Wern Claypit, Arddlin, SJ252140, R.V. Lansdown, 1997. 1st record.
- *†62/10/1on. *Matthiola longipetala* (Night-scented Stock). Casual in crack between shop-wall and pavement, Severn St, Welshpool, SJ226075, A. Markwick, 1999. 1st record.
- +62/12/1×2. *Rorippa* × *sterilis* (*R. nasturtium-aquaticum* × *R. microphylla*) (Hybrid Water-cress) (Berwr Dŵr Croesryw). By Montgomery Canal, near Welshpool, SJ230077, R.V. Lansdown, 1998. 2nd recent record.
- +62/21/4. *Draba muralis* (Wall Whitlowgrass) (Bystwn y Fagwyr). Roadside bank, Breidden, SJ21, M. Wainwright & S. Stafford, 1999. Re-find of a 1948 record, last seen in 1985 and believed lost.
- +62/23/5. *Cochlearia danica* (Danish Scurvygrass) (Llwylys Denmarc). +†Roadside verges, A483 throughout hectad, Pool Quay to Llanymynech, SJ21, R. Dawes; +†Bridge over River Severn, Abermule, SO157945, C.A. Small; both 1999. 1st records for 20 years and only extant records.
- *†72/1/1. *Escallonia macrantha* (Escallonia) (Esgalonia). Roadside hedge, lane between Anchor Bridge and Kerry Pole, SO170857, S. Kingsbury, 1999. 1st record.
- +†75/11/3. *Fragaria ananassa* (Garden Strawberry) (Mefusen). Large patch nr chapel on species-rich roadside bank, Dolfor, SO106869, S. Kingsbury, 1999. 1st recent record.

- +†110/8/7. *Solanum tuberosum* (Potato) (Taten). Growing in river gravel beside River Severn, Llanidloes, SN955847, M. Oliver, 1999. 2nd record.
- +†135/58/lac×max. *Leucanthemum* × *superbum* (*L. lacustre* × *L. maximum*) (Shasta Daisy) (Llygad Ych Mawr). British Waterways Reserve, Wern Claypit, Arddlin, SJ252140, Canal survey team, 1997. 2nd record.
- +†135/73/1. *Calendula officinalis* (Pot Marigold) (Melyn Mair). Canal bank, Montgomery Canal, SO161951, R.V. Lansdown & S. Whild, 1997. 2nd & 1st recent record.
- +152/16/46a. *Carex viridula* subsp. *brachyrrhyncha* (Long-stalked Yellow-sedge) (Hesgen Felen Baladr Hir). Ditches fed by moorland flushes, Crugyn Llwyd, SO016796, S. Kingsbury, 1999. 1st recent record.
- +153/47/6. *Alopecurus myosuroides* (Black-grass) (Cynffonwellt Du). Newly excavated soil beside old farmhouse, Llansantffraid, SJ186149, T. Teearu, 1999. 2nd & 1st recent record.
- 154/1/1a. *Sparganium erectum* subsp. *erectum* (Branched Bur-reed) (Cleddlys Canghennog). Montgomery Canal, near Pool Quay, SJ256117, R.V. Lansdown, 1997. 2nd record.
- *154/1/1d. *Sparganium erectum* subsp. *oocarpum* (Branched Bur-reed) (Cleddlys Canghennog). Montgomery Canal, near, Carreghofa, SJ254202, R.V. Lansdown, 1997. 1st record.

CAERNARFON, v.c. 49 (comm. G. Battershall)

- +2/1/1. *Selaginella selaginoides* (Lesser Clubmoss) (Cnwpsfwsogl Bach). Caeau Tan-y-bwlch NR, near Clynnog Fawr, SH4349, CCW team, 1989.
- +4/1/9. *Equisetum telmateia* (Great Horsetail) (Marchrawn Mawr) Hedgerow, Penmorfa near Porthmadog, SH5440, G. & I. Battershall, 1999.
- +5/1/1. *Ophioglossum vulgatum* (Adder's-tongue) (Tafod y Neidr). +Caeau Tan-y-bwlch NR, near Clynnog Fawr, SH4349, CCW team, 1989. +Chwarel-goch, Bethesda, SH6067; +Ffriddoedd Garndolbenmaen, near Criccieth, SH5044; both CCW team, 1990. +Dune slack, Morfa Bychan near Porthmadog, SH5337, N. Stewart, 1998.
- +5/2/1. *Botrychium lunaria* (Moonwort) (Lloerlys). Ffriddoedd Garndolbenmaen, near Criccieth, SH5044, CCW team, 1990. +Near Llandudno, SH8081, CCW team, 1994.
- +16/4/1. *Gymnocarpium dryopteris* (Oak Fern) (Llawredynen y Derw). Rock crevice, Cwm Clogwyn, Snowdon, SH5955, G. Higgins, 1996.
- +17/3/10. *Dryopteris expansa* (Northern Buckler-fern) (Marchredynen y Gogledd). Among rocks, Yr Eifl, SH3645, D. Jones, 1999.
- +17/3/8. *Dryopteris carthusiana* (Narrow Buckler-fern) (Marchredynen Gul). Marshland, Llyn Ystumllyn SSSI, near Criccieth, SH5238, CCW team, 1993.
- +†19/1/1. *Azolla filiculoides* (Water Fern) (Rhedynen y Dŵr). Pool on E side of lane between Pontwgan and Llanbedr y Cennin, SH7670, R. Lewis, 1999.
- +†20/1/1. *Abies alba* (European Silver-fir) (Ffynidwydden Arian). Hillside, probably planted, Dinas Emrys near Beddgelert, SH6049, G. Battershall, 1998.
- +†20/1/3. *Abies procera* (Noble Fir) (Ffynidwydden Urdasol). Hillside, probably planted, Dinas Emrys near Beddgelert, SH6049, G. Battershall, 1998.
- +†20/2/1. *Pseudotsuga menziesii* (Douglas Fir) (Ffynidwydden Douglas). Self-sown on hillside, Dinas Emrys near Beddgelert, SH6049, G. Battershall, 1998.
- +†20/4/2. *Picea abies* (Norway Spruce) (Spriswen Norway). Llŷn Peninsular, SH22, A. Daly, 1999.
- +†20/7/2a. *Pinus nigra* subsp. *nigra* (Austrian Pine) (Pinwydden Awstria). Hillside, probably planted, Dinas Emrys near Beddgelert, SH6049, G. Battershall, 1998. 1st post-1970 record.
- +†20/7/4. *Pinus pinaster* (Maritime Pine) (Pinwydden Arfor). Rear of beach, Aber, SH/64.73, G. Hutchinson, 1994. 1st post-1970 record.
- +†21/2/1. *Chamaecyparis lawsoniana* (Lawson's Cypress) (Cypreswydden Lawson). Hillside, probably planted, Dinas Emrys near Beddgelert, SH6049, G. Battershall, 1998. 1st post-1970 record.

- +26/1/1. *Nymphaea alba* (White Water-lily) (Lili Ddŵr Wen). +Edge of lake, Pen Llyn near Porthmadog, SH5537, N. Stewart, 1998. +Small lake, above Tremadog, SH5642, BSBI meeting, 1999.
- +28/2/1. *Trollius europaeus* (Globeflower) (Cronnell). Wet meadow, Ysbyty-Ifan, SH8458, CCW team, 1998.
- +28/3/1. *Helleborus foetidus* (Stinking Hellebore) (Palf yr Arth Ddrewedig). 1 plant on limestone crags, Great Orme, Llandudno, SH7783, W. McCarthy, 1999. 1st post-1970 record.
- +28/13/22. *Ranunculus trichophyllus* (Thread-leaved Water-crowfoot) (Egylt Dail Edafaidd). Dune slack pool, Morfa Bychan near Porthmadog, SH5337, N. Stewart, 1998.
- +28/13/24. *Ranunculus peltatus* (Pond Water-crowfoot) (Crafanc y Llyn). Edge of pool, Morfa Bychan near Porthmadog, SH5337, N. Stewart, 1998.
- +†29/1/9. *Berberis darwinii* (Darwin's Barberry). Roadside verge, Abergwyngregin, SH6573, G. Hutchinson, 1994.
- +30/5/1. *Chelidonium majus* (Greater Celandine) (Dilwydd). †Waste ground, Dolbenmaen, near Criccieth, SH5053, G. & I. Battershall, 1999.
- +†31/3/1. *Pseudofumaria lutea* (Yellow Corydalis) (Mwg y Ddaear Melyn). Base of wall, above Tremadog, SH5640, BSBI meeting, 1999. 1st post-1970 record.
- +36/1/2. *Urtica urens* (Small Nettle) (Danhadlen Leiaf). Waste ground, Dolbenmaen, near Criccieth, SH5053, G. & I. Battershall, 1999.
- +†39/4/2. *Quercus cerris* (Turkey Oak) (Derwen Twrci). Side of track, above Tremadog, SH5443, BSBI meeting, 1999.
- +39/4/5×6. *Quercus* × *rosacea* (*Q. petraea* × *Q. robur*) (a hybrid oak). Porth Ceriad, SH302245, A. Daly, 1999. 1st post-1970 record.
- *43/1/13. *Chenopodium ficifolium* (Fig-leaved Goosefoot) (Troed yr Ŵydd Ffigys-ddail). †Llangian, SH294288, A. Daly, 1999. 1st record.
- +46/20/9×10. *Silene* × *hampeana* (*S. latifolia* × *S. dioica*) [Pink Champion]. Side of track, above Tremadog, SH5640, BSBI meeting, 1999.
- +†47/1/2. *Persicaria campanulata* (Lesser Knotweed) (Clymlys Lleiaf). Naturalised in hedgerow, near Waunfawr, SH5358, G. & I. Battershall, 1999.
- +47/1/9. *Persicaria amphibia* (Amphibious Bistort) (Canwraidd Goch). Edge of small lake, Afon Wen, SH4437, N. Stewart, 1998.
- +†47/5/2. *Fallopia sachalinensis* (Giant Knotweed) (Clymog Sachalin). Castle grounds, Penrhyn Castle, Bangor, SH6070, G. Hutchinson, 1994. 1st post-1970 record.
- +50/1/1. *Elatine hexandra* (Six-stamened Waterwort) (Gwybybyr Chwe Brigerog). Muddy shore, Llyn Cwellyn near Bethesda, SH5655, W. McCarthy, 1999.
- +57/1/6. *Viola canina* (Heath Dog-violet) (Fioled y Cŵn). Mobile dune, Morfa Dinlle, near Caernarfon, SH4359, CCW team, 1987.
- +†61/1/3×del. *Populus* × *canadensis* (*P. nigra* × *P. deltoides*) (Hybrid Black-poplar) (Poplysen Ddu Ffrengig). Llŷn Peninsular, SH22, A. Daly, 1999. 1st post-1970 record.
- +61/2/3. *Salix alba* (White Willow) (Helygen Wen). Llŷn Peninsular, SH22, A. Daly, 1999.
- +61/2/11×12. *Salix* × *multinervis* (*S. cinerea* × *S. aurita*) (a hybrid willow). Nant Ffrancon near Bangor, SH6363, A.O. Chater, 1994.
- +62/11/1. *Barbarea vulgaris* (Winter-cress) (Berwr y Gaeaf). Waste ground, Dolbenmaen, near Criccieth, SH5053, G. & I. Battershall, 1999.
- +62/12/5. *Rorippa sylvestris* (Creeping Yellow-cress) (Berwr Melyn Ymlusgol y Dŵr). Waste ground, Tremadog, SH5640, BSBI meeting, 1999.
- +62/23/1. *Cochlearia anglica* (English Scurvygrass) (Llwylys Lloegr). Muddy tidal silt, Aber, SH/65.73, G. Hutchinson, 1994.
- +62/28/1. *Thlaspi arvense* (Field Penny-cress) (Codywasg). Roadside verge, Abergwyngregin, SH6572, G. Hutchinson, 1994.
- +†62/23/2. *Coronopus didymus* (Lesser Swine-cress) (Olbrain Lleiaf). Waste ground. near Beddgelert, SH5748, G. & I. Battershall, 1999.

- +63/1/1. *Reseda luteola* (Weld) (Melengu). Waste ground, Dolbenmaen, near Criccieth, SH5053, G. & I. Battershall, 1999.
- +69/1/3. *Primula veris* (Cowslip) (Briallu Mair). Ffriddoedd Garndolbenmaen, near Criccieth, SH5044, CCW team, 1990.
- *†69/1/8. *Primula sikkimensis* (Sikkim Cowslip). Rock ledge, Cwm Glas Mawr, SH615554, G. Battershall & W. McCarthy, 1999. 1st record.
- +†69/4/5. *Lysimachia punctata* (Dotted Loosestrife) (Trewynyn Brych). Llandudno Junction railway station, SH7977, G. Hutchinson, 1994.
- +†72/2/4. *Ribes sanguineum* (Flowering Currant) (Rhyfon Blodeuog). Hedgerow on E side of B5106, S end of Tyn y Groes, SH7771, R. Lewis, 1999.
- +75/8/93. *Rubus cardiophyllus* (a bramble). Hedgerow, near Tal y Cafn, SH7871, G. Battershall, 1998, conf. A. Newton.
- 75/8/159. *Rubus ordovicum* (a bramble). Hedgerow, Aber Ogwen near Bangor, SH6171, G. Battershall, 1998, conf. A. Newton.
- +†75/21/6. *Rosa rugosa* (Japanese Rose) (Rhosyn Japan). Dunes, Pwllheli, SH371340, A. Daly, 1999. 1st post-1970 record.
- +75/21/16. *Rosa sherardii* (Sherard's Downy-rose) (Rhosyn Sherard). Hedgerow, above Tremadog, SH5640, BSBI meeting, 1999.
- +†75/22/5a. *Prunus domestica* subsp. *domestica* (Plum). Hedgerow, Tremadog, SH5640, BSBI meeting, 1999. 1st post-1970.
- +†75/32/40. *Cotoneaster sternianus* (Stern's Cotoneaster). Hedgerow, Myntho, near Llanbedrog, SH3030, G. Battershall, 1998, conf. J. Fryer.
- +77/25/4. *Genista anglica* (Petty Whin) (Cracheithin). +Phyllech-uchaf, near Llanbedrog, SH3335; +Llys Padrig, near Pwllheli, SH4038; both CCW team, 1989. +Lletty, near Caernarfon, SH5060, CCW team, 1990.
- +79/2/4. *Myriophyllum alterniflorum* (Alternate Water-milfoil) (Myrddail Bob yn Ail). Edge of lake, Pen Llyn near Porthmadog, SH5537, N. Stewart, 1998.
- +84/1/5. *Epilobium tetragonum* (Square-stalked Willowherb) (Helyglys Pedronglog). Flower beds, Haulfre Gardens, Llandudno, SH7782, W. McCarthy, 1999.
- +†84/4/4. *Oenothera cambrica* (Small-flowered Evening-primrose) (Melyn yr Hwyr Cymreig). Waste ground, Tremadog, SH5640, BSBI meeting, 1999. 1st post-1970 record.
- +91/2/12. *Euphorbia portlandica* (Portland Spurge) (Llaethlys Portland). Fore dune, near Pwllheli, SH4235, CCW team, 1987.
- +†93/2/1. *Parthenocissus quinquefolia* (Virginia-creeper) (Dringwr Fflamgoch). Waste ground, Tremadog, SH5640, BSBI meeting, 1999.
- +94/2/1. *Radiola linoides* (Allseed) (Gorhilig). Fixed dune grassland, near Pwllheli, SH4135, N. Stewart, 1987.
- +†102/1/3. *Oxalis corniculata* (Procumbent Yellow-sorrel) (Suran Felen Orweddol). Edge of track, above Tremadog, SH5640, BSBI meeting, 1999. 1st post-1970 record.
- +†103/1/1×2. *Geranium* × *oxonianum* (*G. endressii* × *G. versicolor*) (Druce's Crane's-bill) Side of disused railway, Dinas, near Caernarfon, SH4258, I. Battershall, 1999
- +106/1/2b. *Hedera helix* subsp. *hibernica* (Atlantic Ivy). Hedgerow, Tremadog, SH5640, BSBI meeting, 1999.
- +107/19/1. *Oenanthe fistulosa* (Tubular Water-dropwort) (Dibynlor Pibellaidd). Cae-haidd, near Penygroes, SH4956, CCW team, 1990.
- +107/25/1. *Conium maculatum* (Hemlock) (Cegiden). Waste ground, near Waunfawr, SH5457, G. & I. Battershall, 1999.
- +107/28/4. *Apium inundatum* (Lesser Marshwort) (Dyfforonen Leiaf). Edge of pool, Morfa Bychan near Porthmadog, SH5337, N. Stewart, 1998.
- +113/1/1. *Menyanthes trifoliata* (Bogbean) (Ffa'r Gors). +Edge of pond, Penychain, near Pwllheli, SH4335; +Edge of lake, Pen Llyn near Porthmadog, SH5537; both N. Stewart, 1998.

- +†116/8/1. *Pentaglottis sempervirens* (Green Alkanet) (Llys y Gwrid). Betws Garmon, SH549562, D. Jones, 1999.
- +†118/2/1. *Ballota nigra* (Black Horehound) (Marddanhadlen Ddu). Waste ground, Dolbenmaen, near Criccieth, SH5053, G. & I. Battershall, 1999.
- +118/16/1. *Melissa officinalis* (Balm) (Gwenynddail). Base of wall, above Tremadog, SH5640, BSBI meeting, 1999. 1st post-1970 record.
- +118/23/1. *Mentha arvensis* (Corn Mint) (Mintys yr Ŷd). Calcifugous grassland, near Criccieth, SH5237, N. Stewart, 1998.
- +†118/23/1×3. *Mentha* × *gracilis* (*M. arvensis* × *M. spicata*) (Bushy Mint) (Mintys Culddail). Muddy shore, Llyn Cwellyn near Bethesda, SH5655, W. McCarthy, 1999. 1st post-1970 record.
- +†122/1/2. *Buddleja davidii* (Butterfly-bush) (Llwyn Iâr Fach). Planted at edge of road, near Llanfairfechan, SH67, G. Battershall, 1999.
- *†122/1/3. *Buddleja globosa* (Orange-ball-tree) (Peli Pili Pala). Planted on roadside verge, near Penmaenmawr, SH77, G. Battershall, 1999. 1st record.
- *†123/JAS/bee. *Jasminum hesianum* (Red Jasmine). Established on grassland near ruined cottage, Vardre, Deganwy, SH7879, W. McCarthy, 1999, det. P.S. Green. 1st record.
- +124/2/2. *Scrophularia auriculata* (Water Figwort) (Gornerth y Dŵr) Llŷn Peninsular, SH32, A. Daly, 1999. 1st post-1970 record.
- +†124/4/2. *Mimulus guttatus* (Monkeyflower) (Blodyn y Mwnci). Edge of small pond, Pistyll, near Nefyn, SH3242, G. & I. Battershall, 1999.
- +†124/7/1. *Antirrhinum majus* (Snapdragon) (Safn y Llew). Base of wall, Dolbenmaen, near Criccieth, SH5053, G. & I. Battershall, 1999.
- +124/13/3×4. *Linaria* × *dominii* (*L. purpurea* × *L. repens*) (a hybrid toadflax). Llandudno Junction railway station, SH7977, G. Hutchinson, 1994.
- +124/21/2. *Odontites vernus* (Red Bartsia) (Gorudd). Roadside verge, near Beddgelert, SH5748, G. & I. Battershall, 1999.
- +128/2/2. *Utricularia australis* (Bladderwort) (Swigenddail). Lakeside, S side of Llyn Anafon near Bethesda, SH6969, W. McCarthy, 1999.
- +130/7/1. *Cruciatia laevipes* (Crosswort) (Croeslys). Hedgerow, near Waunfawr, SH5457, G. & I. Battershall, 1999.
- +131/2/2. *Viburnum lantana* (Wayfaring-tree) (Gwifwrnwydden). Pryn Pydew NR, near Colwyn Bay, SH8179, T. Sykes, 1991. 1st post-1970 record.
- +†131/5/1. *Leycesteria formosa* (Himalayan Honeysuckle) (Bachgen Llwm). Castle grounds, Penrhyn Castle, Bangor, SH6070, G. Hutchinson, 1994. +Waste ground, Tremadog, SH5640, BSBI meeting, 1999.
- +134/1/1. *Dipsacus fullonum* (Wild Teasel) (Crib y Pannwr). Waste ground, Dolbenmaen, near Criccieth, SH5053, G. & I. Battershall, 1999.
- +134/3/1. *Knautia arvensis* (Field Scabious) (Clafillys). +Side of old railway track, Caernarfon, SH4863, I. Battershall; +Hedgerow, above Tremadog, SH5640, BSBI meeting; both 1999.
- *†135/1/1. *Echinops sphaerocephalus* (Glandular Globe-thistle) (Ysgallen Bengrwn). 6 flower heads in bud on waste ground, Llandudno Junction, SH8077, J.A. Green, 1994. 1st record.
- +135/3/1. *Arctium lappa* (Greater Burdock) (Cyngaf Mawr). Edge of field, near Waunfawr, SH5457, G. & I. Battershall, 1999.
- +135/14/7. *Aster linosyris* (Goldilocks Aster) (Gold y Môr). Deganwy Castle, Deganwy, SH7879, Anon., pre 1900. Ex Griffiths' *Flora of Anglesey and Caernarvonshire*.
- +135/16/2. *Leontodon hispidus* (Rough Hawkbit) (Peradyl Garw). Llŷn Peninsular, SH33, A. Daly, 1999.
- +135/17/2. *Picris hieracioides* (Hawkweed Oxtongue) (Gwylaeth yr Hebog). Llŷn Peninsular, SH22, A. Daly, 1999. 1st post-1970 record.
- +135/19/1. *Tragopogon pratensis* subsp. *minor* (Goat's-beard) (Barf yr Afr Felen). Waste ground, Dolbenmaen, near Criccieth, SH5053, G. & I. Battershall, 1999.

- *135/25/64. *Taraxacum gelertii* (a dandelion). Roadside verge, Gwydr Castle, Llanrwst, SH7860, P. Hackney, 1973, **BEL**, det. A.J. Richards. 1st record (see *Nature in Wales* **14**: 203 (1975)).
- *135/25/89. *Taraxacum hamatum* (a dandelion). Spruce plantation and garden weed in lawn, Nant Bwlch yr Haiarn, SH7860, P. Hackney, 1973, **BEL**, det. A.J. Richards. 1st record (see *Nature in Wales* **14**: 203 (1975)).
- *135/25/125. *Taraxacum cyanolepis* (a dandelion). Roadside verge, Gwydr Castle, Llanrwst, SH7860, P. Hackney, 1973, **BEL**, det. A.J. Richards. 1st record (see *Nature in Wales* **14**: 203 (1975)).
- +135/28/5. *Hieracium vagum* (a hawkweed). Hedgerow, above Tremadog, SH5640, BSBI meeting, 1999. 1st post-1970 record.
- +135/28/6. *Hieracium umbellatum* (Narrow-leaved Hawkweed) (Heboglys Culddail). Fran Heulog, Cilau, SH296241, A. Daly, 1999.
- +†135/44/1. *Conyza canadensis* (Canadian Fleabane) (Amrhydlwyd Canada). +Base of wall, Penmorfa near Porthmadog, SH5440; +Base of wall, Llanfairfechan, SH6874; both G. & I. Battershall, 1999. 1st post-1970 records.
- +135/48/1. *Tanacetum parthenium* (Feverfew) (Wermod Wen). Base of wall, Nant Peris, SH6058, I. Battershall, 1999.
- +135/62/18. *Senecio viscosus* (Sticky Groundsel) (Creulys Gludiog). Base of wall, near Beddgelert, SH5748, G. & I. Battershall, 1999.
- +†135/66/1. *Brachyglottis monroi* (Monro's Ragwort). Bodlondeb Wood, Conwy, SH7878, G. Hutchinson, 1994.
- +†135/69/1. *Doronicum pardalianches* (Leopard's-bane) (Llysiau y Llewpar). Betws Garmon, SH549562, D. Jones, 1999.
- +†135/71/4. *Petasites fragrans* (Winter Heliotrope) (Alan Mis Bach). Side of track, above Tremadog, SH5640, BSBI meeting, 1999.
- +151/1/1. *Juncus squarrosus* (Heath Rush) (Brwynen Droellgorun). Llŷn Peninsular, SH22, A. Daly, 1999.
- *151/2/1. *Luzula forsteri* (Southern Wood-rush) (Coedfrwynen.Gulddail). Under trees, Penrhyn Castle, Bangor, SH6071, G. Hutchinson, 1994. 1st record.
- +152/1/2. *Eriophorum latifolium* (Broad-leaved Cottongrass) (Plu'r Gweunydd Llydanddail). Coed Elernion Meadows, near Llanaelhaearn, SH3745, CCW team, 1989.
- +152/3/3. *Eleocharis uniglumis* (Slender Spike-rush) (Sbigfrwynen Un Plisgyn). Edge of small lake, Afon Wen, SH4437, N. Stewart, 1998.
- +152/7/1. *Schoenoplectus lacustris* (Common Club-rush) (Llafwrwynen). Edge of lake, Pen Llŷn near Porthmadog, SH5537, N. Stewart, 1998. +Llŷn Peninsular, SH22, A. Daly, 1999. 1st post-1970 records.
- +152/8/1. *Isolepis setacea* (Bristle Club-rush) (Clwbfrwynen Fach). Acid bog, above Tremadog, SH5642, BSBI meeting, 1999.
- +152/9/1. *Eleogiton fluitans* (Floating Club-rush) (Clwbfrwynen Nawf). Dune slack pool, Morfa Bychan near Porthmadog, SH5337, N. Stewart, 1998.
- +152/16/7. *Carex spicata* (Spiked Sedge) (Hesgen Dywysennog Borffor). Llŷn Peninsular, SH22 & SH32, A. Daly, 1999.
- +152/16/11. *Carex disticha* (Brown Sedge) (Hesgen Lygliw Benblydd). Glangors near Aberdaron, SH2028, CCW team, 1989.
- +152/16/22. *Carex curta* (White Sedge) (Hesgen Benwen). Wet field, Pen y Groes, SH472527, D. Jones, 1999.
- +152/16/24. *Carex lasiocarpa* (Slender Sedge) (Hesgen Fain). Porth Dinllaen, SH2640, CCW team, 1989.
- +152/16/57. *Carex limosa* (Bog-sedge) (Hesgen Eurwerdd). Acid bog, above Tremadog, SH5642, BSBI meeting, 1999.
- +152/16/68. *Carex elata* (Tufted-sedge) (Hesgen Oleulas Sythddail). Nant Ffrancon near Bangor, SH66, N. Woodhead, 1924, det. A.O. Chater.

- *†153/3/1. *Sasa palmata* (Broad-leaved Bamboo) (Bambŵ). Penrhyn Castle, Bangor, SH6070, G. Hutchinson, 1994. 1st record.
- *†153/5/1. *Pseudosasa japonica* (Arrow Bamboo). Caste grounds, Penrhyn Castle, Bangor, SH6070; +Bodlondeb Wood, Conwy, SH7877; both G. Hutchinson, 1994. 1st & 2nd records.
- +153/14/1. *Vulpia fasciculata* (Dune Fescue) (Peisgwellt Uncib). Fixed dune grassland, near Pwllheli, SH4135, N. Stewart, 1987. +Short sandy turf at beach, Aber, SH/65.73, G. Hutchinson, 1994.
- +153/14/3. *Vulpia myuros* (Rat's-tail Fescue) (Peisgwellt y Fagwyr). Station platform, Dolwyddelan, SH/7352, W. McCarthy, 1999.
- +153/20/1. *Catabrosa aquatica* (Whorl-grass) (Brigwellt Dyfrdrig). Porth Dinllaen, SH2640, CCW team, 1989. 1st post-1970 record.
- +153/24/3. *Glyceria declinata* (Small Sweet-grass) (Perwellt Llwydilas). Edge of ditch, near Beddgelert, SH5748, G. & I. Battershall, 1999.
- +153/31/2. *Koeleria macrantha* (Crested Hair-grass) (Cribwellt). +Waste ground, Morfa Nefyn car park, SH2840, G. Battershall; +Edge of road, Pistyll, near Nefyn, SH3242, G. & I. Battershall; both 1999.
- +153/39/2. *Agrostis gigantea* (Black Bent) (Maeswellt Mawr). Waste ground, Tremadog, SH5640, BSBI meeting, 1999.
- +153/39/8. *Agrostis vinealis* (Brown Bent) (Maeswellt y Cŵn). Dry heath, Great Orme, Llandudno, SH7783, W. McCarthy, 1999.
- +153/55/1. *Elymus caninus* (Bearded Couch) (Marchwellt y Coed). Old railway track, Caernarfon, SH4863, G. & I. Battershall, 1999.
- +155/1/1. *Typha latifolia* (Bulrush) (Cynffon y Gath). Edge of pool, Penychain, SH4335, N. Stewart, 1998.
- *155/1/1×2. *Typha* × *glauc*a (*T. latifolia* × *T. angustifolia*) (a hybrid bulrush). Edge of small lake, Afon Wen, SH4537, N. Stewart, 1998. 1st record.
- +†158/24/7. *Allium triquetrum* (Three-cornered Garlic) (Cenhinen Driehornel). Abersoch, SH309280, A. Daly, 1999.
- +158/24/16. *Allium vineale* (Wild Onion) (Garlleg Gwylt). Roadside verge, Dolbenmaen, near Crickieth, SH5053, G. & I. Battershall, 1999.
- +†159/13/3×aur. *Crocossia* × *crocossia*flora (*C. pottsii* × *C. aurea*) (Montbretia) (Montbretlys). Hedgerow, Tremadog, SH5640, BSBI meeting, 1999.
- +162/3/1. *Epipactis palustris* (Marsh Helleborine) (Caldrist y Gors). Porth Dinllaen, SH2640, CCW team, 1989.
- +162/16/1. *Gymnadenia conopsea* (Fragrant Orchid) (Tegeirian Pêr). Limestone grassland, Little Orme, Llandudno, SH8182, CCW team, 1998.
- +162/18/3a. *Dactylorhiza incarnata* subsp. *incarnata* (Early Marsh-orchid) (Tegeirian Rhuddgoch) Dune slack, Morfa Bychan near Porthmadog, SH5337, N. Stewart, 1998.
- +162/18/5. *Dactylorhiza purpurella* (Northern Marsh-orchid) (Tegeirian y Fign). +Dune slack, Morfa Bychan near Porthmadog, SH5337, N. Stewart, 1998. +Tyddyn-diawm, near Tregarth, SH6068, CCW team, 1990.
- +162/23/3. *Ophrys apifera* (Bee Orchid) (Tegeirian y Gwenyn). Limestone grassland, Little Orme, Llandudno, SH8182, G. Battershall, 1999. 1st post-1970 record.

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- +17/1/1. *Polystichum setiferum* (Soft Shield-fern) (Gwrychredynen Feddal). Woodland, Llanrhaeadr ym Mochnant, SJ120285, P. Thomas, 1999.
- +17/3/1. *Dryopteris oreades* (Mountain Male-fern) (Marchredynen Fach y Mynydd). Roadside bank / wall, Capel Garmon, SK823543, J.A. Green, 1999.
- +28/17/4. *Thalictrum minus* (Lesser Meadow-rue) (Arianllys Bach). Limestone pavement, Eryrys, SJ200577, J.A. Green, 1999.

- +43/1/6. *Chenopodium rubrum* (Red Goosefoot) (Troed yr Ŵydd Ruddog). Farmyard, Bronington, SJ499387, J.A. Green, 1999.
- +46/17/3. *Spergularia marina* (Lesser Sea-spurrey) (Troellys Bach). +Roadside salt, Llangwm, SH950458; +Roadside salt pile, Derwen, SJ054497; both J.A. Green, 1999.
- +46/20/9×10. *Silene* × *hampeana* (*S. latifolia* × *S. dioica*) [Pink Campion]. Roadside, Llanrhaeadr ym Mochnant, SJ1529, S. Stille, 1999.
- *†46/25/car. *Dianthus carthusianorum* (Carthusian Pink). Waste ground, roadside, Pentrefoelas, SH874514, J.A. Green, 1999. 1st record.
- +47/5/4. *Fallopia convolvulus* (Black-bindweed) (Taglys yr Ŵd). Roadverge, Pentrefoelas, SH874515, J.A. Green, 1999.
- +47/8/13×19. *Rumex* × *pratensis* (*R. crispus* × *R. obtusifolius*) (Meadow Dock) (Tafol y Maes). Grassland on old coal mine, Chirk, SJ298383, G. Kay, 1999.
- +52/1/2. *Tilia cordata* (Small-leaved Lime) (Pisgwydden Deilen Fach). River gorge, Llangwm, SH993443, J.A. Green, 1999.
- +†61/1/1×2. *Populus* × *canescens* (*P. alba* × *P. tremula*) (Grey Poplar) (Poplysen Lwyd). Many trees in hedges, Worthenbury, SJ413466, J.A. Green, 1999.
- +61/1/2. *Populus tremula* (Aspen) (Aethnen). Roadside, Cerrig-y-Druidion, SH956472, J.A. Green, 1999.
- +†61/1/3×del. *Populus* × *canadensis* (*P. nigra* × *P. deltoides*) (Hybrid Black-poplar) (Poplysen Ddu Ffrengig). Planted by farm, Bodfari, SJ103707, J.A. Green, 1999.
- +61/2/1. *Salix pentandra* (Bay Willow) (Helygen Beraroglaidd). +Streamside, Pentrefoelas, SH869521, J.A. Green; +Canalside, Llangollen, SJ198432, H. Worsley; both 1999.
- +61/2/1×2. *Salix* × *meyeriana* (*S. pentandra* × *S. fragilis*) (Shiny-leaved Willow). Beside R. Dee, Cefn Bychan, SJ279413, J.A. Green, 1999.
- +61/2/9×10. *Salix* × *sericans* (*S. viminalis* × *S. caprea*) (Broad-leaved Osier). +Roadside, Llanrhaeadr ym Mochnant, SJ1228, BSBI group; +Forest edge, Glyn Ceiriog, SJ1638, J.A. Green; +Streamside, Bodfari, SJ100706, J.A. Green; all 1999.
- +†61/2/10×11. *Salix* × *reichardtii* (*S. caprea* × *S. cinerea*) (a hybrid willow). Laneside, Llanrhaeadr ym Mochnant, SJ1228, BSBI group; +Lane, Brymbo, SJ284538, G. Kay, both 1999. 2nd record.
- +61/2/11×12. *Salix* × *multinervis* (*S. cinerea* × *S. aurita*) (a hybrid willow). Forest road, Glyn Ceiriog, SJ1538, J.A. Green, 1999.
- +62/12/1×2. *Rorippa* × *sterilis* (*R. nasturtium-aquaticum* × *R. microphylla*) (Hybrid Water-cress) (Berwr Dŵr Croesryw). Stream, Melin-y-Wig, SJ052497, J.A. Green, 1999.
- +62/12/2. *Rorippa microphylla* (Narrow-fruited Water-cress) (Berwr Dŵr Lleiaf). Wet field, Pentrefoelas, SH882513, J.A. Green, 1999.
- +62/28/1. *Thlaspi arvense* (Field Penny-cress) (Codywasg). Weedy field, Cerrig-y-Druidion, SH956461, J.A. Green, 1999.
- *†62/29/3. *Iberis umbellata* (Garden Candytuft) (Beryn yr Ardd). Lane by garden, Brymbo, SJ284539, BSBI group, 1999. 1st record.
- +65/13/4. *Vaccinium vitis-idaea* (Cowberry) (Llus Coch). Moorland, Berwyn, SJ0936, P. Thomas, 1999.
- +67/1/1. *Monotropa hypopitys* (Yellow Bird's-nest) (Cytwf). Alyn Waters park, Wrexham, SJ324551, E. Bartley, 1998.
- +69/1/1×3. *Primula* × *polyantha* (*P. vulgaris* × *P. veris*) (False Oxlip) (Briallu Tal Ffug). Grassy bank, Cefn Berain, SH997691, BSBI group, 1999.
- +69/4/3. *Lysimachia vulgaris* (Yellow Loosestrife) (Trewynyn). +Bank of R. Dee, Cefn Bychan, SJ279413; +Banks of Oxbow, R. Dee, Sutton Green, SJ416485; both J.A. Green, 1999.
- +†69/4/5. *Lysimachia punctata* (Dotted Loosestrife) (Trewynyn Brych). +Roadside, Pentrefoelas, SH874514, J.A. Green; +Roadside, Llanferres, SJ172611, G. Wynne; both 1999.
- +73/5/11. *Sedum forsterianum* (Rock Stonecrop) (Briweg Cymreig). +†Garden escape, Pentrefoelas, SH872516, J.A. Green; +Top of big boulder, Llanrhaeadr ym Mochnant, SJ120285, P. Thomas; both 1999.

- +†73/5/17. *Sedum dasyphyllum* (Thick-leaved Stonecrop) (Briweg Praffddail). Old concrete base, Penley, SJ415399, J.A. Green, 1999.
- +†74/5/8×9. *Saxifraga* × *urbium* (*S. umbrosa* × *S. spathularis*) (Londonpride) (Balchder Llundain). Edge of ditch, Brymbo, SJ284541, BSBI group, 1999.
- +†75/17/3b. *Sanguisorba minor* subsp. *muricata* (Fodder Burnet) (Gwyddlwdn Tramor). Commercial sowing on new road, Llangwm, SH998445, J.A. Green, 1999.
- +†75/19/15. *Alchemilla mollis* (Robust Lady's-mantle). Roadside, Capel Garmon, SH814553, J.A. Green, 1999.
- +†75/22/3. *Prunus cerasifera* (Cherry Plum) (Gaugeiriosen). Hedge, Bronington, SJ488392, J.A. Green, 1999.
- +77/10/3. *Ornithopus perpusillus* (Bird's-foot) (Troed yr Aderyn). Short grass, Llanrhaeadr ym Mochnant, SJ1128, BSBI group, 1999.
- +77/15/12. *Lathyrus nissolia* (Grass Vetchling) (Ytbyesen Goch). Grassland on old coal mine, Chirk, SJ299383, J.A. Green, 1999.
- +†77/15/9. *Lathyrus latifolius* (Broad-leaved Everlasting-pea) (Ytbyesen Barhaus Lydanddail). Shingle beach, Pensarn, SH942787, J.A. Green, 1999. 2nd record.
- +78/1/1. *Hippophae rhamnoides* (Sea-buckthorn) (Rhafnwydd y Môr). †Roadside, Bwlchgwyn, SS264536, BSBI group, 1999.
- +79/2/4. *Myriophyllum alterniflorum* (Alternate Water-milfoil) (Myrddail Bob yn Ail). Lake, Brymbo, SJ287538, BSBI group, 1999.
- +81/1/1. *Lythrum salicaria* (Purple-loosestrife) (Llys y Milwr). Wetland, Moelfre, SJ1728, J.A. Green, 1999.
- +81/1/3. *Lythrum portula* (Water-purslane) (Troed y Gywen). Ditch, Isycoed, SJ419508, J.A. Green, 1999.
- +84/1/2. *Epilobium parviflorum* (Hoary Willowherb) (Helyglys Lledlwyd). Wet field, Pentrefoelas, SH871507, BSBI group, 1999.
- +84/1/5. *Epilobium tetragonum* (Square-stalked Willowherb) (Helyglys Pedronglog). Roadside, Trefnant, SJ071709, NMW; +Street weed, Ruthin, SJ122582; +Roadside, Trefnant, SJ071709; all J.A. Green, 1999.
- +†84/4/1. *Oenothera glazioviana* (Large-flowered Evening-primrose) (Melyn yr Hwyr Mwyaf). Roadside, Llanrhaeadr ym Mochnant, SJ1127, P. Thomas, 1999.
- +88/1/1. *Euonymus europaeus* (Spindle) (Piswydden). River gorge, Llangwm, SH993443, J.A. Green, 1999.
- +†94/1/2. *Linum usitatissimum* (Flax) (Llin Amaeth). Lane, Bronington, SJ484397, J.A. Green, 1999.
- +†103/1/2. *Geranium versicolor* (Pencilled Crane's-bill) (Pig yr Aran Llinellgoch). Llanrhaeadr ym Mochnant, SJ123259, J.A. Green, 1999.
- +103/1/7. *Geranium pratense* (Meadow Crane's-bill) (Pig yr Aran y Weirglodd). New road, Pentrefoelas, SH873515, BSBI group, 1999.
- +†103/1/9. *Geranium sanguineum* (Bloody Crane's-bill) (Pig yr Aran Rhuddgoch). Dunes, Kinnel Bay, SH989803, J.A. Green, 1999.
- +†105/1/4. *Impatiens glandulifera* (Indian Balsam) (Jac y Neidiwr). River bank, Pentrefoelas, SH874514, J.A. Green, 1999.
- +†107/8/1. *Myrrhis odorata* (Sweet Cicely) (Cegiden Bêr). Bank, Melin-y-Wig, SJ055497, J.A. Green, 1999.
- +†107/21/1. *Foeniculum vulgare* (Fennel) (Ffenigl). Waste ground, Penley, SJ417399, J.A. Green, 1999.
- +107/22/1. *Silva silaus* (Pepper-saxifrage) (Ffenigl yr Hwch). Grassland, Sutton Green, SJ402476, BSBI group, 1999.
- +107/28/4. *Apium inundatum* (Lesser Marshwort) (Dyfforonen Leiaf). Pond edge, Sutton Green, SJ405478, J.A. Green, 1999.
- +107/40/1. *Pastinaca sativa* (Wild Parsnip) (Panasen Wyllt). Roadside, Bylchau, SH977626, J.A. Green, 1999.

- +†109/1/1. *Vinca minor* (Lesser Periwinkle) (Perfagl). Lane edge, Bodfari, SJ099699, J.A. Green, 1999.
- *†110/1/1. *Nicandra physalodes* (Apple-of-Peru) (Afal Periw). Farmyard, The Conery, Bronington, SJ499387, J.A. Green, 1999. NMW. 1st record.
- *†110/7/1. *Lycopersicon esculentum* (Tomato). Weed in field, Worthenbury, SJ408467; +Shingle beach, Pensarn, SH937785; both J.A. Green, 1999. 1st & 2nd records.
- +†111/3/3. *Calystegia pulchra* (Hairy Bindweed) (Taglys Blewog). Roadside, Pentrefoelas, SH882510, J.A. Green, 1999.
- +†116/9/1. *Borago officinalis* (Borage) (Tafod y Fuwch). Roadside, Penley, SJ485394, J.A. Green, 1999.
- +†118/5/2. *Lamium maculatum* (Spotted Dead-nettle) (Marddanhadlen Fraith). Playing field, Llanrhaeadr ym Mochnant, SJ126259, J.A. Green, 1999.
- +118/1/5×6. *Stachys* × *ambigua* (*S. sylvatica* × *S. palustris*) (Hybrid Woundwort) (Briwlys Croesryw). Wet field, Pentrefoelas, SH870521, J.A. Green, 1999.
- +118/6/5. *Galeopsis bifida* (Bifid Hemp-nettle) (Penboeth Lleiaf). +Roadside, Derwen, SJ0549; +Roadside, Bronington, SJ498497; both J.A. Green, 1999.
- +118/10/2. *Scutellaria galericulata* (Skullcap) (Cwcwll). Ditch, Pentrefoelas, SH874514, J.A. Green, 1999.
- +†122/1/2. *Buddleja davidii* (Butterfly-bush) (Llwyn Iâr Fach). Gravel area, Pentrefoelas, SH872516, J.A. Green, 1999.
- +†124/4/2×3. *Mimulus* × *robertsii* (*M. guttatus* × *M. luteus*) (Hybrid Monkeyflower). Roadside gully, Llanrhaidr ym Mochnant, SJ113273, P. Thomas, 1999, det. R.H. Roberts.
- *124/23/1. *Parentucellia viscosa* (Yellow Bartsia) (Gorudd Melyn). Grassland, reclaimed coal mine, Chirk, SJ296383, G. Kay, 1999, conf. J.A. Green & W. McCarthy. 1st record.
- +†124/13/3. *Linaria purpurea* (Purple Toadflax) (Gingroen Cochlas). Garden weed, Llanrhaeadr ym Mochnant, SJ123261, J.A. Green, 1999.
- +†124/16/23. *Veronica filiformis* (Slender Speedwell) (Rhwyddlwyn Crwnddail). Playing field, Llanrhaeadr ym Mochnant, SJ126259, J.A. Green, 1999.
- +133/1/2. *Valerianella carinata* (Keeled-fruited Cornsalad) (Llysiau'r Oen Rhychiog). Wall, Cerrig-y-Druidion, SH953487, J.A. Green, 1999.
- +135/3/1. *Arctium lappa* (Greater Burdock) (Cyngaf Mawr). Farm track, Worthenbury, SJ418465, J.A. Green, 1999.
- +†135/11/2. *Centaurea montana* (Perennial Cornflower) (Penlas Eythol). Roadside waste ground, Pandy, SJ195352, W. McCarthy, 1999.
- +135/26/1. *Crepis paludosa* (Marsh Hawk's-beard) (Gwalchlys y Gors). Marsh, oxbow, R. Dee, Sutton Green, SJ414485, J.A. Green, 1999.
- +†135/27/6b. *Pilosella aurantiaca* subsp. *carpathicola* (Fox-and-cubs) (Heboglys Euraid). Waste gravel, Pentrefoelas, SH872516, J.A. Green, 1999.
- +†135/40/4. *Solidago gigantea* (Early Goldenrod) (Eurwialen Gynnar). +Dunes, Kinnel Bay, SH989803; +Roadside, Pwll Glas, SJ126553; both J.A. Green, 1999.
- +†138/4/2. *Elodea nuttallii* (Nuttall's Waterweed) (Alaw Nuttall). Lake, Brymbo, SJ287538, G. Kay, 1999. 2nd record.
- +142/1/19. *Potamogeton crispus* (Curled Pondweed) (Dyfrllys Crych). Lake, Brymbo, SJ287538, J.A. Green, 1999.
- +142/1/21. *Potamogeton pectinatus* (Fennel Pondweed) (Dyfrllys Danheddog). +Lake, Brymbo, SJ287538, J.A. Green; +River Clywedog, Sutton Green, SJ408474, M. Stead; both 1999.
- +145/1/1. *Zannichellia palustris* (Horned Pondweed) (Cornwlyddyn). Ditch, Worthenbury, SJ413466, J.A. Green, 1999.
- *†145/5/2. *Arum italicum* subsp. *italicum* (Italian Lords-and-Ladies) (Pidyn y Gog Eidalaidd). Open pasture, Llanferres, SJ197604, A. Yates, 1996, NMW, det. G. Hutchinson. 1st record.
- +152/5/1. *Scirpus sylvaticus* (Wood Club-rush) (Clwbfrwynen y Coed). Banks of Oxbow, R. Dee, Sutton Green, SJ414485, J.A. Green, 1999.

- +152/16/8b. *Carex muricata* subsp. *lamprocarpa* (Small-fruited Prickly-sedge) (Hesgen Bigog Hwyr). Bank, Melin y Wig, SJ054497, J.A. Green, 1999.
- +152/16/9a. *Carex divulsa* subsp. *divulsa* (Grey Sedge) (Hesgen Lwydylas). +Roadside bank, Cerrig-y-Druidion, SH949490; +Roadside, Penley, SJ419397, J.A. Green, 1999.
- +152/16/29. *Carex vesicaria* (Bladder-sedge) (Hesgen Chwysigenaidd). Oxbow lake on R. Conwy, Llanrwst, SH791626, R. Lewis, 1999. NMW.
- +152/16/39. *Carex laevigata* (Smooth-stalked Sedge) (Hesgen Ylfinog Lefn). Wet ditch, Pentrefoelas, SH874514, BSBI group, 1999.
- +152/16/44. *Carex hostiana* (Tawny Sedge) (Hesgen Dywyll-felen). Marsh, Capel Garmon, SH814537, J.A. Green, 1999.
- +153/12/1×13/1. ×*Festulolium loliaceum* (*F. pratensis* × *L. perenne*) (Hybrid Fescue) (Peisgwellett Croesryw). +Roadside, Llanrhaeadr ym Mochnant, SJ1228, BSBI group; +Lane edge, Is-y-coed, SJ411515, J.A. Green, NMW; both 1999.
- +153/18/9. *Poa compressa* (Flattened Meadow-grass) (Gweunwellt Cywasg). Shingle beach, Pensarn, SH942786, J.A. Green, 1999.
- +153/24/2×4. *Glyceria* × *pedicellata* (*G. fluitans* × *G. notata*) (Hybrid Sweet-grass) (Perwellt Croesryw). Wet meadow, Pentrefoelas, SH871507, BSBI group, 1999.
- +†153/59/1. *Hordeum distichon* (Two-rowed Barley) (Haidd Dwy-resog). Farm tip, Pentrefoelas, SH871511, J.A. Green, 1999.
- +153/59/2. *Hordeum murinum* (Wall Barley) (Heiddwellt y Mur). Paving, Pentrefoelas, SH873513, J.A. Green, 1999.
- +153/59/4. *Hordeum secalinum* (Meadow Barley) (Heiddwellt y Maes). Grassland, Isycoed, SJ412513, J.A. Green, 1999.

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- +26/1/1. *Nymphaea alba* (White Water-lily) (Lili Ddŵr Wen). †Introduced to Llyn Helyg, SJ1177, N.F. Stewart, 1998. 2nd recent record.
- +26/2/1. *Nuphar lutea* (Yellow Water-lily) (Lili Ddŵr Felen). Quarry lake, E of Buckley Mountain, SJ278649, N.F. Stewart, 1998. 3rd recent record.
- +28/13/12. *Ranunculus lingua* (Greater Spearwort) (Llafnlys Mawr). Muddy edge of pond, Trap Pool, Buckley, SJ279649, J. Phillips, 1996. 3rd recent record.
- +28/13/27. *Ranunculus circinatus* (Fan-leaved Water-crowfoot) (Egylt Cylchol-ddail). Small, shallow quarry lake, N of Knowl Hill, Buckley, SJ286646, N.F. Stewart, 1998. 1st record since 1918.
- *†30/1/2. *Papaver atlanticum* (Atlas Poppy) (Pabi'r Atlas). Casual on roadside near house, Bridge End, Caergwrle, SJ310573, G. Wynne, 1999. 1st record.
- +†36/3/1. *Soleirolia soleirolii* (Mind-your-own-business) (Mam Miloedd). Established on roadside outside garden, Cilcain, SJ175650, G. Wynne, 1998. 2nd recent record.
- †40/2/2. *Alnus incana* (Grey Alder) (Gwernen Lwyd). Copse near farm, 'Deeside House', Sealand, SJ349677, G. Wynne, 1999. 2nd record.
- *46/13/1. *Herniaria glabra* (Smooth Rupturewort) (Llys y Fors). Floor of disused sandstone quarry, Caer Estyn, 1km E of Caergwrle, SJ315576, G.M. Kaye, 1999. 1st record.
- +47/4/2a. *Polygonum oxyspermum* subsp. *rail* (Ray's Knotgrass) (Canclwm Ray). Sandy margin of track, 400m WSW of lighthouse, Point of Ayr, SJ118851, A.O. Chater & BSBI field meeting, 1996, conf. D.A. Pearman.
- +47/4/6. *Polygonum rurivagum* (Cornfield Knotgrass) (Canclwm Tir Âr). Waste and planted ground, just NW of Flint castle, SJ246735, A.O. Chater & BSBI Field Meeting, 1996.
- *†75/32/10. *Cotoneaster salicifolius* (Willow-leaved Cotoneaster). Disused limestone quarry, near houses, Prestatyn, SJ073821, G. Wynne, 1981, det. J. Fryer. 1st record.
- *†75/32/18. *Cotoneaster conspicuus* (Tibetan Cotoneaster). Disused quarry, Caer Estyn, Caergwrle, SJ316576, G. Wynne, 1999, det. J. Fryer. 1st record.

- *†75/32/27. *Cotoneaster nitens* (Few-flowered Cotoneaster). Disused quarry, Caer Estyn, Caergwrle, SJ316576, G. Wynne, 1999, det. J. Fryer. 1st record.
- *†75/32/34. *Cotoneaster bullatus* (Hollyberry Cotoneaster). 1 plant in hedge near public footpath, Northophall, SJ274673, J. Phillips, 1998, det. J. Fryer. 1st record.
- *†75/7/1. *Kerria japonica* (Kerria). Naturalised in old abandoned nursery, Sealand, SJ355674, G. Wynne, 1999. 1st record.
- *†77/1/1. *Robinia pseudoacacia* (False-acacia) (Fflug-acesia). Waste ground, factory environs, Shotton Paper Mill, SJ307715, G. Wynne, 1999. 1st record.
- *†103/1/1×2. *Geranium* × *oxonianum* (*G. endressii* × *G. versicolor*) (Druce's Crane's-bill). Garden throw-out established in dry ditch, Middle Common, Buckley, SJ276651, J. Phillips and BSBI group, 1996. 1st record.
- *120/1/6. *Callitriche brutia* (Pedunculate Water-starwort) (Brigwlydd Coesog). Ditch in conservation grassland restored opencast site, Maes-y-Grug, Alltami, SJ261666, S. Whild, 1995. 1st definite record, may have been recorded as *C. hamulata* in the past.
- *†153/59/3. *Hordeum jubatum* (Foxtail Barley) (Heiddwellt Cribog). Grass verge of dual carriageway road, near slip-road from A55 to St Asaph Industrial Estate, Bodelwyddan, SJ0175, W. McCarthy, 1999. 1st record.
- *153/12/2×13/1. × *Festulolium holmbergii* (*Festuca arundinacea* × *Lolium perenne*). Roadside verge, Waun, St Asaph, SJ055757, J.A. Green, 1995, det. T.A. Cope. 1st record.
- *153/12/7×14/1. × *Festulipia hubbardii* (*Festuca rubra* × *Vulpia fasciculata*). With Marram on active dunes, Point of Ayr, SJ122850, P.L. Thomas, 1999. 1st record.
- *77/19/14. *Trifolium pratense* var. *parviflorum* (Red Clover) (Meillionen Goch). Waste, rough ground behind sea wall, W of Greenfield Dock, SJ195784, G. Wynne, 1998, det. C.D. Preston. 1st record for variety.
- +†73/3/1. *Sempervivum tectorum* (House-leek) (Llysiau Pen Tai). Cottage roof, Cilcain, SJ176650, J. Phillips, 1998. 1st recent record.
- +77/6/1. *Onobrychis viciifolia* (Sainfoin) (Codog). Waste ground, factory environs, Shotton Paper Mill, SJ306714, G. Wynne, 1999. 1st recent record.
- +77/15/13. *Lathyrus aphaca* (Yellow Vetchling) (Ytbsyen Felen). Roadside, 1.6km E of Halkyn, SJ221706, R. Hesketh, 1999. 3rd post-1930 record.
- +†77/22/1. *Laburnum anagyroides* (Laburnum) (Tresi Aur). Birch wood, Caer Estyn, Caergwrle, SJ315576, G. Wynne, 1999. 2nd record.
- +103/2/1. *Erodium maritimum* (Sea Stork's-bill) (Pig y Crëyr Arfor). Slag from Iron Works, Mostyn Breakwater, SJ160817, P. Day, 1995. 1st recent record.
- +†110/9/1. *Datura stramonium* (Thorn-apple) (Meiwyn). Weedy field, flooded in winter 1km N of St Asaph, J.A. Green, 1995.
- +†113/2/1. *Nymphoides peltata* (Fringed Water-lily) (Ffaen Gors Eddiög). In quantity in Industrial pool now a Nature Reserve, Shotton Steel Works, SJ297711, G. Wynne, 1999. 3rd record.
- +†118/23/3×4. *Mentha* × *villosa* var. *alopecuroides* (*M. spicata* × *M. suaveolens*) (Apple Mint) (Mintys Lled-grynddail). Large stand on old roadside, near Rhuddlan, SJ045777, J.A. Green, 1989, det. R.M. Harley, NMW.
- +†118/4/1c. *Lamiastrum galeobdolon* subsp. *argentatum* (Variegated Yellow Archangel) (Marddanhadlen Felen Arianddail). +Narrow lane, Cilcain, SJ183655, J. Phillips, 1995. +Large patch by path under scrub, possible garden throwout, near Buckley Mountain, SJ283652, P. Harnes, 1996. 1st & 2nd records.
- +†135/11/2. *Centaurea montana* (Perennial Cornflower) (Penlas Fythol). Disused landfill site in old quarry, Caer Estyn, Caergwrle, SJ316576, G. Wynne, 1999. 3rd record.
- +†135/8/1. *Silybum marianum* (Milk Thistle) (Ysgallen Fair). Garden weed, 'Y Fedwen Arian', Cilcain, SJ184651, Mrs G. Harvey, 1996. 3rd recent record.
- +137/4/2. *Alisma lanceolatum* (Narrow-leaved Water-plantain) (Dŵr-lyriad Culddail). Pool in refugium at opencast coal site, Maes-y-Grug, SJ263663, S. Whild, 1994 & 1995, det. I.C. Trueman. 2nd record.

- +†138/4/2. *Elodea nuttallii* (Nuttall's Waterweed) (Alaw Nuttall). Southern (and largest) quarry lake of a group N of Knowl Hill, Buckley, SJ286645, N.F. Stewart, 1998. 3rd record.
- +152/16/18. *Carex dioica* (Dioecious Sedge) (Hesgen Ysgar). Fen, SW of Llyn Helyg, SJ105767, S.P. Chambers, 1996, conf. A.O. Chater. 2nd localised record.
- +153/49/5. *Phleum arenarium* (Sand Cat's-tail) (Rhonwellt y Tywyn). Active coastal dune, Point of Ayr, SJ122851, P.L. Thomas, 1999. 3rd record.
- +153/50/3. *Bromus racemosus* (Smooth Brome) (Pawrwellt Llyfn). Hayfield, Caer Estyn, between Caergwrie and Abermorddu, G. Wynne, 1999. 2nd recent record.

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- +28/13/10. *Ranunculus auricomus* (Goldilocks Buttercup) (Peneuraidd). Beside footpath through woodland near Llangoed, SH6179, I.R. Bonner, 1999. Re-confirmation of a pre-1970 record.
- +28/13/24. *Ranunculus pellatus* (Pond Water-crowfoot) (Crafanc y Llyn). Damp hollow in former sandpit, Glantraeth, SH4166, N.F. Stewart, 1996.
- *29/1/1. *Berberis vulgaris* (Barberry) (Burdain). †Scrub on edge of Marianglas common, SH5084, J. Hawksford, 1992. 1st record.
- +43/6/2. *Salicornia ramosissima* (Purple Glasswort) (Llyrllys Gorweddol). Saltmarsh, Black Creek, Rhoscolyn, SH2975, T.C.G. Rich, det. I.K. Ferguson, 1999.
- *43/6/6. *Salicornia fragilis* (Yellow Glasswort) (Llyrllys Brau). Lower saltmarsh, Inland Sea, Rhoscolyn, SH2876, T.C.G. Rich, det. I.K. Ferguson, 1999. 1st record.
- +43/6/7. *Salicornia dolichostachya* (Long-spiked Glasswort) (Llyrllys Canghennog). Lower saltmarsh, Inland Sea, Rhoscolyn, SH2876, T.C.G. Rich, det. I.K. Ferguson, 1999.
- *43/7/1. *Suaeda vera* (Shrubby Sea-blite) (Llwynhelys). Upper shore, Inland Sea, Rhoscolyn, SH2975, T.C.G. Rich, 1999, NMW. 1st record.
- +46/9/1. *Moenchia erecta* (Upright Chickweed) (Cornwlyddyn Syth). In short turf, Tywyn Trewan, SH3275, A.J. Byfield, 1989.
- +53/1/7. *Malva neglecta* (Dwarf Mallow) (Hocys Bychan). Farm gateway, Mariandyrns, SH6081, D.F. Evans, 1999.
- +†62/11/4. *Barbarea verna* (American Winter-cress) (Berwr Tir). Laneside, Llangainwen, SH4366, R.H. Roberts & M.R. Davies, 1992.
- +62/12/5. *Rorippa sylvestris* (Creeping Yellow-cress) (Berwr Melyn Ymlusgol y Dŵr). Market garden, Brynsiencyn, SH4967, G. Halliday, 1995.
- *62/22/1. *Erophila majuscula* (Hairy Whitlowgrass) (Bystwn Blewog). Road verge north-east of Mallaeth, SH4169, R.H. Roberts, det. T.T. Elkington, 1995. 1st record for segregate.
- *62/22/3. *Erophila glabrescens* (Glabrous Whitlowgrass) (Bystwn Llyfn). Sand dunes, Aberffraw, SH3568, J. Lowell, det. T.T. Elkington, 1994. 1st record for segregate.
- +†69/3/rep. *Cyclamen repandum* (Spring Sowbread). Well established in woodland, Penrhos, Holyhead, SH2781, I.R. & S.P. Bonner, 1999. Recorded from waste places, Penrhos by G.C. Druce in 1924.
- *†73/1/3. *Crassula helmsii* (New Zealand Pigmyweed) (Corchwyn Seland Newydd). Garden pond, Dwyran, SH4465, P. Whalley, 1993. 1st record.
- +75/21/19. *Rosa micrantha* (Small-flowered Sweet-briar) (Rhoslwyn Pêr). Woodland edge, Bodior, SH2876, T.C.G. Rich, 1999.
- *†75/22/12. *Prunus serotina* (Rum Cherry) (Ceiriosen Hwyrddail). Roadside edge of Newborough Forest, planted, SH 4167, G. Halliday, 1996. 1st record.
- *84/16×9. *Epilobium* × *schmidium* (*E. obscurum* × *E. palustre*) (a hybrid willowherb). Cors Erddreiniog, SH4782, I.C. Lawrence, 1999. 1st record.
- *124/25/2b. *Pedicularis sylvatica* subsp. *hibernica* (Lousewort) (Melog y Cŵn). Bryn, Rhoscolyn. SH2876, T.G. Rich, 1999. 1st record.

- *133/1/2. *Valerianella carinata* (Keeled-fruited Cornsalad) (Llysiau'r Oen Rhychiog). Wall-base outside transport garage, Llanedwen, SH5069, I.R. Bonner, 1999. +Wall-bases, Llangefni, SH4575, independently recorded by J. Hawksford and I.R. Bonner, 1999. +Wall-bases, Menai Bridge, SH5571, J. Hawksford, 1999. 1st records.
- *†138/4/2. *Elodea nuttallii* (Nuttall's Waterweed) (Alaw Nuttall). Llyn Rhosddu, Newborough, SH4264, N.F. Stewart, 1996. 1st record.
- *†147/1/1. *Acorus calamus* (Sweet-flag) (Gellesgen Bêr). Reservoir margin, Menai Bridge, probably planted, SH5476, J. Bratton, 1997. 1st record.
- *153/12/1×2. *Festuca* × *aschersoniana* (*F. pratensis* × *F. arundinacea*) (a hybrid fescue). Waste ground near the Fish Dock, Holyhead, SH2582, W. McCarthy & I.R. Bonner, det. T.A. Cope & C.A. Stace. 1st record.
- *153/12/8c. *Festuca ovina* subsp. *ophiolithicola* (Sheep's-fescue) (Peisgwellt y Defaid). Bodior, SH2876, T.C.G. Rich, 1999, NMW. 1st record.
- *153/50/2. *Bromus commutatus* var. *pubens* (Meadow Brome) (Pawrwellt Mwyaf y Maes). †Bodior, SH28.76, T.C.G. Rich, det. L.M. Spalton, 1999, NMW. 1st record for variety, recorded here as a casual.
- *158/20/2×3. *Hyacinthoides non-scripta* × *H. hispanica* (a hybrid bluebell). Road bank, Pont Sarn-lew, SH4769, I.R. Bonner & N. Brown, 1999. 1st record; almost certainly under recorded.
- 43/1/13. *Chenopodium ficifolium* (Fig-leaved Goosefoot) (Troed yr Ŵydd Ffigys-ddail). Mounds of soil, Rogiet, ST464881, G. Hill & T.G. Evans, 1999. Growing with *Datura stramonium*.

