

BOTANICAL SOCIETY OF THE BRITISH ISLES

WELSH BULLETIN

Editor : R. D. Pryce

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Photocopy (reduced) of specimen of *Cytisus scoparius* subsp. *maritimus* at NMW

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EDITORIAL

This Bulletin comes at the start of the first season of "in earnest" recording for Atlas 2000. The aim is to produce a complete update of the original 1962 Atlas by the year 2000 and will involve recording all species to the 10km square level. Results of recent recording schemes, ie the 1987-88 Monitoring Scheme and the Scarce Plants Project, will be incorporated, which means that all post 1st January 1987 records will be acceptable for the new project. This is going to involve a great deal of work and in my own case, in addition to extra field work, will involve the separation of post 1988 records from existing 1970-1995 records currently stored on computer by reference to original master cards. Help with recording areas not recently visited will always be welcome and the success of the project will depend on such assistance from the membership. In Wales we have had a tradition of first class organisation of such research and I, and the other members of the BSBI Committee for Wales, would be very grateful for prospective helpers to contact their local vice-county recorder whose address can be found at the start of Welsh Plant Records in this issue.

The national Mistletoe survey currently being promoted by the BSBI and Plantlife has received a good deal of publicity recently and has, no doubt, prompted some botanists to be more active over the past winter months than in previous years. In my own county of Carmarthenshire the species has always been rare and is unlikely to be native, with those few plants recorded outside apple orchards likely to have been bird-sown from nearby cultivated sources. But was this always the case? O. Donovan, in *Science Gossip* of 1885, is reported to have recorded Mistletoe "on oaks in the remains of old forest along the courses of the Rivers Towy and Cothi". This is unusual as oak is not a tree favoured as a host in this area. As I discovered recently (!) Ivy can frequently resemble Mistletoe in tree tops and I wonder whether Donovan's observations were, in fact, of Ivy and not Mistletoe. Every other record in the county refers to one, or at best, a few plants, growing in apple orchards, sometimes with presumably bird-sown singletons established on other tree species in the vicinity. The total number of Mistletoe records made in Carmarthenshire between 1858 (the first record) and 1994 was fifteen. Monitoring of these known sites in the last few weeks has established that only four were extant and of these, three occurred at Hermon (west of Llangadog), within 0.5km of each other. Appeals in the local press produced a new record of a plant in an orchard at Croesyceiliog, south of Carmarthen, together with a planted seedling at Hermon (again!). It would appear that Mistletoe is on the verge of extinction in the county with the only flourishing colony of about thirteen plants established on four apple trees in an old orchard in Glanamman. Further local press appeals are planned and with luck additional sites may come to light.

The contents of this Bulletin consist of two short papers by Gordon Knight reporting on some of his personal observations in Pembrokeshire and an appeal by Andy Jones who you may know as being responsible for the monitoring or rare plants in The Principality for the Countryside Council of Wales. But the bulk of this edition is taken up by the 1993 Welsh Plant Records compiled as usual by Gwynn Ellis, to whom we all owe a debt of gratitude for his continued and unfailing attention to Society matters. Thanks to authors, contributors of records and to the membership for your support; more articles for the Bulletin are always welcome.

Lastly please let me reiterate my appeal for help with Atlas 2000 recording: I hope to see you at one or more of the Welsh field meetings, many of which are being held in under-recorded areas to assist with the project.

Richard Pryce, Trevethin, School Road, Pwll, LLANELLI, Dyfed, SA15 4AL.
29th March 1995.

REPRODUCTION OF CYTISUS SCOPARIUS SUBSP. MARITIMUS IN WEST WALES

Cytisus scoparius subsp. *maritimus* (Prostrate Broom) grows within walking distance of my house in Trefin (SM 840325) which is midway between St. Davids and Fishguard on the Pembrokeshire coast. Its mat of brilliant flowers and prostrate habit catch the eye in May and invite comparison with the more familiar subsp. *scoparius* (Common Broom). It inhabits the most exposed, eroded sites along cliff tops and their near-vertical faces where there is no competition, demanding of these rigorous habitats only that they face south.

So far I have failed to find a seedling or young plant, though dead ones are present, as is only to be expected in this short-lived genus. Although difficult to count with confidence, the annual rings suggest that they died aged about 10 years. That is they germinated between 1981 and 1985 after freak winters when normally mild West Wales suffered extremely hard frosts. It will be remembered how reluctant many Leguminous seeds are to germinate. I have quite failed to germinate subsp. *maritimus* seeds, despite freezing or sandpapering them on the advice of a commercial grower. If frost did break their dormancy, the fact that subsp. *maritimus* faces south would protect the seedlings from the cold north winds which occasionally race down the Irish Sea to the detriment of many other species. In case this hypothesis sounds a bit too neat I must report that there were a few younger-looking plants about.

Less well-known than its striking prostrate habit is the fact that subsp. *maritimus* packs its whole flowering season, at any rate locally, into May, whereas subsp. *scoparius*'s flowering season spans May to July. Along with its exposed sites, this restriction to May only, when there are fewer pollinators about, presents subsp. *maritimus* with a pollination problem which is reflected in the number of subsequent pods (legumes) produced.

At this point it would be wise to be cautious about the necessity of insect pollinators because of the situation in the related *Ulex europaeus* (Common Gorse) which grows so profusely in Pembrokeshire. After looking at literally billions of *Ulex* flowers over several seasons I have to say that except where there was a nearby hive (at two miles or less) I have rarely seen the similar flowers of *Ulex* being sprung by either *Apis mellifera* or *Bombus* species, but this has not prevented virtually every *Ulex* flower from producing pods with seeds. Out of what appeared to be an original 12 ovules, each pod averaged 2.2 seeds, demonstrating clearly that *Ulex* is self-compatible and able to successfully self-pollinate.

In the case of the related *C. scoparius* subspp. it seems that insect visits are necessary, only sprung flowers producing seed. Visits are not difficult to observe in the case of subsp. *scoparius* (Common Broom) although it can be seen that *Apis* has difficulty in springing the flowers to reach the pollen (*Ulex* and *Cytisus* produce no nectar, but only a rich, orange pollen), so that *Apis* is often content to hoover up pollen from flowers already sprung by *Bombus*. Normally every flower is sprung and out of an original 15 ovules each pod averaged 7 seeds.

The situation in subsp. *maritimus*, however, is very different. I have rarely seen *Bombus* visit the flowers in May even during perfect weather and on only one occasion have I seen *Apis*, which is a fair-weather flier, visit one plant in force. Typically one can watch the dense, brilliant flowers of subsp. *maritimus* in brilliant sunshine in May, and witness no visits and find no sprung flowers.

When I visited these same plants in late June and early July to collect pods, the situation supported my earlier observations. In the Dinas Mawr site (SM 887387) 7 plants had produced no pods whatsoever, 3 had produced very few and 7 plants had some pods. Collecting 50 pods, with difficulty, out of an average of 11.6 ovules per flower the pods averaged 5.7 seeds, but of course these figures are of little value because of the few flowers which actually produced seeds.

Hence it does really appear that at least along this particular strip of the north Pembrokeshire coast subsp. *maritimus* is rarely visited, rarely produces seeds and rarely produces replacement plants in its chosen precarious habitat. It would be interesting to know if these observations and results apply elsewhere.

Gordon Knight, 12 Ffordd y Felin, Trefin, Haverfordwest.

THE RELATIONSHIP BETWEEN BADGERS AND *CONOPODIUM MAJUS* IN WEST WALES

Conopodium majus (Pignut) flourishes along the acid, Atlantic coast of Pembrokeshire and despite its small, delicate appearance, it is conspicuous in early summer along virtually the whole coastal strip in unimproved meadows and pastures, on exposed headlands and in nearby Welsh woods. Although, compared with its coarser relations such as *Heracleum sphondylium* (Cow Parsnip) and *Angelica sylvestris* (Angelica) which are equally common along the coast, it would seem to be disadvantaged in competition with rival species in the closed community of coarse grasses or the *Festuca rubra* carpet of headlands, in fact it survives very well.

Where the coastal strip of Pembrokeshire has escaped intensive farming there is a great concentration of mammals (and for that matter all other animal life) including badgers. There, their food is particularly abundant and the diggings of badgers and their dung pits are a common enough sight, but the problem usually is, what were they digging for? Just because the bulbs of *Hyacinthoides non-scripta* (Bluebell) have been unearthed does not imply that they were the objective, which is also true of most other exposed organs of perennation. Only when rabbit fur, dazed bumble bees or wasps lie about the surface is it safe to say what badgers were digging for, with the notable exception amongst plants of the remains of *Conopodium majus*.

was at first drawn towards this relationship, probably an important one for *Conopodium*, when I noticed that badgers regularly visited a particular headland near Trefin called Castell Coch (SM 837338) where their many diggings were concentrated in the centre about a fairly restricted site. Despite the thick carpet of *Festuca rubra* other potential food-species grew very well here and there around the headland, including robust specimens of *Hyacinthoides non-scripta* and *Angelica sylvestris*, along with a variety of other species unlikely to be of any interest, but only where the "colony" of *Conopodium* grew were there any badger diggings. Also the excavated stems with flower-heads lay about, with the "nut" clearly bitten off. I suppose I had been reluctant to believe that badgers would regard digging up the nuts a "cost-effective" operation as they can be quite deep and often rather small, but as the first time I noticed it was during a very dry summer when the badger's staple diet - worms, would have retreated to greater depths, it made sense. But since then whatever the summer and whatever the habitat, including woods, it has become abundantly clear that badgers look upon pignuts as a very desirable food item (almost an obsession in fact) and areas of many square metres are often grubbed up.

One's initial reaction to this wholesale plunder of *Conopodium* colonies is to assume that badgers are destroying them, but I now believe that on balance they are perpetuating them. Whilst at first this was no more than a supposition, in late April, 1994, I had for the first time actual proof that this was the case. In a "Cowslip Field" at Pen Brush (SM 883397) numerous *Conopodium* seedlings had sprung up on the badger diggings (and also on many mole diggings). These of course gave the seedlings both a seed-bed and a "leg-start" in the race to establish themselves in the competitive, closed, grassland community. If true this is yet another example of how deceptive Nature can be and how careful one needs to be to interpret what one sees. The surprise, to me, is that so few, if any, other species exploit these natural seed-beds.

Gordon Knight, 12 Ffordd y Felin, Trefin, Haverfordwest.

MONITORING RARE FERNS IN WALES

Dick David once observed that "... more plants have been lost through excessive secrecy than through too wide a publication of their whereabouts. ... And though one is repeatedly shocked by the sheet upon sheet of specimens of a rarity that were taken by Victorian botanists, I can think of no plant that has become scarcer as a result of the botanists' depredations". He went on, immediately, to add, however: "The depredations of gardeners, and especially of fern-fanciers, are another matter." ('Gentlemen and Players', BSBI Presidential Address 1980; *Watsonia* 13, 173-179.)

Unfortunately, we still have to agree with the last point. The sporophytes of Killarney fern (*Trichomanes speciosum*), Alpine and Oblong Woodsias (*Woodsia alpina* and *W. ilvensis*) might have always been rare, restricted niche-specialists in Wales, but they were then driven to extinction in many places by collectors. Even today, the specimen-hunter or rogue gardener cannot be quite ruled out, and the innocent botanist could be just as much trouble. As with some other rare plants (for instance, Tufted saxifrage, *Saxifraga caespitosa*, or Perennial knawel, *Scleranthus perennis*, for instance), the habitat of these ferns is vulnerable to disturbance, and even the most careful visitor risks leaving a trail for others to enlarge.

For these reasons, the best protection is confidentiality, and perhaps only a limited access to sites. We know so little about the ecology of rare ferns, and rare species generally, that some form of regular surveillance is also required. Conservation of *Trichomanes* and *Woodsia* spp. is, in fact, a legal requirement under the Wildlife and Countryside Act, Schedule 8, and it would be particularly valuable to bring together all the existing data on size, and vigour of populations - without necessarily recording details of locality.

If you know of a protected fern locality (i.e. for *Trichomanes*, or *Woodsia* spp.), and wish to keep it confidential, it would greatly help conservation to make regular observations, such as those listed below. Where the site of a protected species is privately known, and does not appear to be imminently threatened, the statutory agency (the Countryside Council for Wales in this instance) has no need of the exact location, so long as routine information could be made available to that agency.

Annual frond counts, lists of associated species, measures of abundance, habitat descriptions and detailed drawings all have increasing value over time. Perhaps the most efficient form of monitoring, though, is repeat photography, ideally using a fixed-point tripod, and ruler for scale. At a number of sites, particularly in the dripping, dark *Trichomanes* habitat, there are practical difficulties with photography, but CCW will readily provide advice and equipment (including film, flash, and camera) where required, and pay for postage of reports, etc.

Nature conservation spans both the private and the public domain. We hope that our readers will approve this arrangement, and respond, to the following address, where appropriate. By collating this information we will be in a better position to understand the changing status of these special Welsh plants and take action, where necessary, to better conserve them.

Andrew Jones, CCW, Ladywell House, Newtown, Powys SY16 1RD.

WELSH PLANT RECORDS - 1993

Welsh Plant Records are compiled by R.Gwynn Ellis, Dept. of Botany, National Museum of Wales, CARDIFF CF1 3NP, from reports of BSBI vice-county Recorders to whom records should preferably be sent. Plants are now listed for each county in the order of D.H.Kent's *List of Vascular Plants of the British Isles* (1992), the number in that list preceding the name, so that names changed since 1992 can be given without giving the former name. Latin names also follow Kent (1992) or, if not in that list, C.A.Stace's *New Flora of the British Isles* (1991) or E.J.Clement & M.C.Foster's *Athena Plants of the British Isles* (1994); 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 (1991) or Clement & Foster (1994). English names enclosed by square brackets do not occur in any of these books but are included in Davies & Jones (1995). Welsh names, included for the first time, 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 10km square record
- ! to indicate that the species is not native to Wales
- \$ to indicate a species which, although native in some parts of Wales, is not so in the locality recorded
- [] to indicate that the record, previously published in error, should be deleted
- † to indicate that the taxon is now believed to be extinct in the locality cited

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

In general only records which are additional to those given in *Flowering Plants of Wales* by R.G.Ellis (1913) or *Distribution of Pteridophyta in Wales* by G.Hutchinson & B.A.Thomas (1992) are listed. Other records are included at the discretion of the vice-county Recorder. The minimum grid reference is in a 10km square but, if supplied by the recorder, references to a 1km or even a 100m square may be included.

The Vice-county Recorders from 1/1/1994 are:

MENMOUTH, v.c. 35; T.G.Evans, La Cuesta, Mounton Road, Chepstow, Gwent NP6 5BS
 GLAMORGAN, v.c. 41(East); P.S.Jones, 13 The Mount, Dinas Powis, Cardiff CF6 4DP
 GLAMORGAN, v.c. 41(West); Dr Q.O.N.Kay, Dept. of Botany, University College, Singleton Park, Swansea, West Glamorgan SA2 8PP

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

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

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

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

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

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

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

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

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

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

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

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

- 28/17/3. *Thalictrum flavum* (Common Meadow-rue) (Arianllys). Meadow near road, between Newbridge and Llantrisant, ST/38.95, C.Titcombe, 1993. A declining species due to drainage of farm land.
- 36/12. *Urtica urens* (Small Nettle) (Danhadlen Leiaf). Disturbed waste ground, RAF Caerwent, ST/45.91, C.Titcombe, 1993. Locally frequent but with a restricted v.c. distribution.
- *139/2/1. *Nothofagus obliqua* (Roble). Mixed woodland Cumberland Plantation, SO/47.02, T.G.Evans, 1991. First record.
- *139/2/2. *Nothofagus nervosa* ((Rauli)). Mixed woodland, Mill Farm, Wentwood, ST/40.92, T.G.Evans, 1987. First record.
- *43/3/6. *Atriplex littoralis* (Grass-leaved Orache) (Llygwyn Arfor). Several small plants where waders wander on bare rust-brown margin of old sludge pond, Newport, ST/33.84, T.G.Evans & M.Jones, 1993. First authenticated record.
- +145/2/2. *Claytonia sibirica* (Pink Purslane) (Gwyddyn Rhudd). Bank of River Rhymney N of Michaelstone-y-Vedw, ST/24.86, T.G.Evans, 1991.
- 61/1/3a. *Populus nigra* subsp. *betulifolia* (Black Poplar) (Poplysen Ddu). Ten trees in row on peaty moorland, Magor, ST/42.86, T.G.Evans, 1993. Looking 'unhappy' and stunted.
- 62/30/6. *Lepidium latifolium* (Dittander) (Berwr Gwyllt). Small colonies on waste ground and banks of River Usk, Newport, ST/32.86 to 32.87, G.Hutchinson, 1990.
- *175/17/3b. *Sanguisorba minor* subsp. *muricata* (Fodder Burnet) (Gwyddlwdn Tramor). Grassy bank of Nant Hafod-tudur, Wattsville, ST/20.91, T.G.Evans, 1986; bank of River Ebbw, Risca, ST/2.9, J.Harper, 1992. First & second records.
- *175/32/40. *Cotoneaster sternianus* (Stern's Cotoneaster). Top of railway embankment, Newport, ST/33.86, G.Hutchinson, 1990. First record.
- *175/35/5. *Crataegus persimilis* (Broad-leaved Cockspur-thorn). Hedgerow on hilltop, Ysguborwen, ST/41.95, T.G.Evans & P.Macpherson, 1993, conf. C.A.Stace. First Welsh record. Bush previously identified as *C. crus-galli*.
- *177/3/1. *Colutea arborescens* (Bladder-senna) (Llwyn Senna). Two plants on soil bulldozed 2-3 years previously, Tregarn House between Langstone and Llanbed, ST/38.90, D.Green, 1993. First record.
- *177/23/3. *Cytisus striatus* (Hairy-fruited Broom) (Banadl Blewog). Side of A4042, Pontypool, SO/29.00 & SO/30.00, T.G.Evans, 1990; +steep roadside bank, S of Cook's Wood, N of Goytre Farm, ST/47.97, T.G.Evans, 1991. First & second records, both probably planted originally.
- 103/1/2. *Geranium versicolor* (Pencilled Crane's-bill) (Pig yr Aran Llinellgoch). Hedge, Pen-y-fan, SO/53.05, C.Titcombe. Third recent record.
- 107/26/3. *Bupleurum tenuissimum* (Slender Hare's-ear) (Paladr Trwyddo Eiddlldail). Dry top of sea wall, Goldcliffe Point, ST/36.82, C.Titcombe, 1993. Locally distributed on Severn saltmarsh, very variable in quantity due to overgrazing most years.
- *118/1/2. *Stachys byzantina* (Lambsear) (Clust yr Oen). Waste ground in disused railway station, Govilon, SO/27.13, R.Fraser, 1989. First record; with other garden throwouts.
- 118/1/8. *Stachys arvensis* (Field Woundwort) (Briwlys yr Yd). Shingle of River Usk, Pant-y-Goitre, SO/34.09, C.Titcombe, 1993.
- *124/1/2. *Verbascum virgatum* (Twiggy Mullein) (Tewbannog). Many plants mixed with *V. thapsus*, some typical *V. virgatum*, others with single flowers with hardly any peduncle at each node, rail ballast, old shunting lines, Undy, ST/44.87, T.G.Evans, 1993. First record.
- 135/6/1. *Cirsium eriophorum* (Woolly Thistle) (Ysgallen Benylanog). Roadside, Cwmcarn, ST/23.93, C.Titcombe, 1993. A scarce plant in the vice-county.
- *135/25/15. *Taraxacum lacistophyllum* (a dandelion). Grassy area, Dinham, ST/4.9, T.G.Evans, 1989, det. C.C.Haworth. First record.

- +135/25/16. *Taraxacum oxoniense* (a dandelion). Disused grassy railway, Tredegar, SO/1.0, T.G.Evans, 1989; +stoney ground, Lasgarn wood, SO/2.0, T.G.Evans, 1988; +Grassy quarry floor, ST/2.9, T.G.Evans, 1989, all det. C.C.Haworth.
- *135/25/39. *Taraxacum euryphyllum* (a dandelion). Lane bank, Crumlin, ST/2.9, T.G.Evans, 1989, det. C.C.Haworth. First record.
- *135/25/55. *Taraxacum bracteatum* (a dandelion). River meadow, E of Llanbradach, ST/1.9; +Roadside bank, Pen-y-fan, SO/1.0, both T.G.Evans, 1988, det. C.C.Haworth. First & second records.
- *135/25/60. *Taraxacum duplidentifrons* (a dandelion)Grassy area, Dinham, ST/4.9; +Abercarn, ST/2.9, both T.G.Evans, 1989, det. C.C.Haworth. First & second records.
- +135/25/64. *Taraxacum gelertii* (a dandelion). Sandy river meadow, River Usk, SO/36.02, T.G.Evans, 1984, det. C.C.Haworth.
- *135/25/78. *Taraxacum porteri* (a dandelion). Hedge bank, Michaelstone-y Fedw, ST/25.85, T.G.Evans, 1991, det. A.J.Richards. First record.
- *135/25/85. *Taraxacum boekmanii* (a dandelion). Road verge, Coed Llifos, ST/45.96, T.G.Evans, 1989, det. C.C.Haworth. First record.
- +135/25/101. *Taraxacum subhamatum* (a dandelion). Grassy bank, near River Rhymney, Llanrumney, ST/21.80, G.Hutchinson, 1986, det. A.J.Richards.
- +135/25/126. *Taraxacum dahlstedtii* (a dandelion). Churchyard, Llangeview, SO/3.0, T.G.Evans, 1989, conf. C.C.Haworth
- +135/25/157. *Taraxacum lingulatum* (a dandelion). Grassy area, Dinham, ST/4.9, T.G.Evans, 1989, det. C.C.Haworth.
- The following species of *Hieracium* have all been identified by J.Bevan from specimens in NMW; they all represent new 10km square records and only the square, collector and date are given.
- 135/28/1. *Hieracium sabaudum* (a hawkweed). SO/2.0, T.G.Evans & R.Fraser, 1987; SO/4.1, T.G.Evans, 1985.
- +135/28/24. *Hieracium scabriisetum* (a hawkweed). ST/1.9, T.G.Evans, 1988; ST/2.9, R.Fraser, 1990; SO/2.0, T.G.Evans, 1987; SO/3.0, T.G.Evans, 1987; SO/3.1, T.G.Evans, 1989.
- +135/28/69. *Hieracium acuminatum* (a hawkweed). ST/2.8, A.E.Wade, 1922; SO/1.0, P.C. & J.Hall & I. & D.Hart, 1987; SO/2.2, A.Ley, 1906; SO/4.2, P.C. & J.Hall, 1986; SO/5.0, P.C. & J.Hall, 1987.
- 135/28/123. *Hieracium stenstroemii* (a hawkweed)SO/4.2, P.C. & J.Hall, 1986.
- +135/28/138. *Hieracium grandidens* (a hawkweed). ST/2.9, T.G.Evans, 1936; ST/5.9, T.G.Evans, 1985; SO/3.0, D.Lewis, 1990.
- +151/1/1. *Juncus tenuis* (Slender Rush) (Brwynnen Fain). Penrhiew Road, Graig, ST/2.8, A.Jones, 1954.
- +151/1/11. *Juncus subnodulosus* (Blunt-flowered Rush) (Brwynnen Flodbwli). Marshy field, Wern Mellin, SO/41.10, J.Woodman & C.Mockridge, 1990, conf. T.G.Evans. Third extant site.
- +152/1/1. *Eriophorum angustifolium* (Common Cottongrass) (Plu'r Gweunydd). Bank of reen by seawall, St Bride's Wentlooge, ST/30.82, A.R.Perry, 1991.
- *152/3/4. *Eleocharis multicaulis* (Many-stalked Spike-rush) (Sbigfrwynen Gadeiriog). Several patches by stream on hillside, N of The British, Abersychan, SO/24.04, T.G.Evans & R.Hewitt, 1987; +small patch growing near *Hypericum elodes*, wet heath above Abertwsswg, SO/14.06, T.G.Evans & R.Fraser, 1988. First and second records.
- +152/16/10. *Carex arenaria* (Sand Sedge) (Hesgen Arfor). Railway embankment, NE Pontypool station, SO/30.00, G.Hutchinson, 1989.
- +153/20/1. *Catabrosa aquatica* (Whorl-grass) (Brigwellt Dyfrdrig). Reen by sea wall, St Bride's Wentlooge, ST/30.82, A.R.Perry, 1991.
- +153/32/1b. *Deschampsia cespitosa* subsp. *parviflora* (Tufted Hair-grass) (Brigwellt Alpaidd). Shady bank at edge of River Honddu, NW of Cwmyoy, SO/29.24, T.G.Evans, 1993. Second record.

*155/1x2. *Typha × glauca* (*T. latifolia* × *T. angustifolia*) (a hybrid bulrush). Inside old galvanised rectangular structure at edge of sludge pond, Newport, ST/33.84, T.G.Evans & M.Jones, 1993. First record. *Typha angustifolia* is only known as a planted species in private ponds in v.c. 35.

GLAMORGAN, v.c. 41 (comm. P.S.Jones & Q.O.N.Kay)

+4/1/3. *Equisetum variegatum* (Variegated Horsetail) (Marchrawn Amrywiol). Base of slope in old railway cutting, between Beddau and Llantwit Fadre, ST/067.846, J.Woodman, 1992.

5/1/1. *Ophioglossum vulgatum* (Adder's-tongue) (Tafod y Neidr). Freshwater seepage face of boulder clay cliff above storm beach, Rest Bay, near Porthcawl, SS/802.784, P.S.Jones, 1986; dune slack, Merthyr Mawr, SS/865.770, P.S.Jones, 1981.

6/1/1. *Osmunda regalis* (Royal Fern) (Rhedyne Gyfrdy). Wet meadow, Waun Cimla near Cefn Cribwr, SS/850.828; 2 large clumps near Brynna, Llantrisant, SS/970.837, both J.Woodman, 1993; +Tower Colliery, Hirwaun, SN/947.058, G.Hutchinson & I.B.Hart, 1991.

14/1/1. *Thelypteris palustris* (Marsh Fern) (Marchredynen y Gors). Wet meadow, near Cefn Cribwr, SS/8.8, J.Woodman, 1993. The only extant site.

+16/4/1. *Gymnocarpium dryopteris* (Oak Fern) (Llawredynen y Derw). Deep cleft in Pennant-sandstone, Craig Fawr, Rhondda, SS/925.957, P.S.Jones, 1984.

17/3/3a. *Dryopteris affinis* subsp. *affinis* var. *paleaceo-lobata* (Scaly Male-fern) (Marchredynen Euraid). Tower Colliery & Washery, Hirwaun, SN/946.058, G.Hutchinson & I.B.Hart, 1991, det. C.R.Fraser-Jenkins.

17/3/5. *Dryopteris aemula* (Hay-scented Buckler-fern) (Marchredynen Aroglus). Near Blackmill, Bridgend, SS/9.8, P.S.Jones, A.J.Williams & N.Ward, 1993. One plant only in the only extant site in the county.

+35/2/1. *Ficus carica* (Fig) (Ffigysbren). Wall, SE end of Bridgend railway station, SS/908.797, G.Hutchinson, 1991; +base of wall near River Taff, Cyfarthfa; Merthyr Tydfil, SO/038.070, G.James, 1993.

*46/4/2. *Minuartia verna* (Spring Sandwort) (Tywodlys y Gwanwyn). Smelter waste tips, Pentre-chwyth, Swansea, SS/669.953, C.R.Hipkin & S.J.Wainwright, 1993. Possibly introduced as site was Lower Swansea Valley experimental plots.

+47/1/2a. *Polygonum oxyspermum* subsp. *raii* (Ray's Knotgrass) (Canclwin Ray). Southern shore of River Kenfig, SS/781.833, C.Hurford, 1991; +drift line, Newton Burrows, SS/842.771, C.Hurford, 1992; dry upper saltmarsh, River Ogmore, Bridgend, SS/874.764, BSBI group, 1993.

+51/1/9. *Hypericum tetrapterum* (Square-stalked St John's-wort) (Eurinllys Pedronglog). Wet ditch, Tower Colliery, Hirwaun, SN/945.053, G.Hutchinson & I.B.Hart, 1991.

61/1/2. *Populus tremula* (Aspen) (Aethnen). Large population on dune grassland, Kenfig NNR, SS/805.826, P.S.Jones, 1992.

*62/12/3. *Rorippa islandica* (Northern Yellow-cress) (Berwr Melyn y Gogledd). Near sewage works, River Loughor, Garnswllt, SN/62.10, R.G.Ellis, 1981, det. T.C.G.Rich.

+62/26/1. *Hornungia petraea* (Hutchinsia) (Beryn Creigio). About 50 plants, semi-fixed dunes, Merthyr Mawr, SS/865.765, J.Woodman, 1992.

+66/1/3b. *Pyrola rotundifolia* subsp. *maritima* (Round-leaved Wintergreen) (Coedwyrrd Crynddail). Sand dune, Kenfig NNR, SS/801.822, P.S.Jones, 1992.

+73/2/1. *Umbilicus rupestris* (Navelwort) (Deilen Gron). Stone wall, Sker farm, SS/797.799, P.S.Jones, 1992.

+75/8/183. *Rubus gallofuscus* (a bramble). Ystalyfera, SN/7.0, H.J.Riddelsdell, 1906, det. M.Porter.

+75/21/11. *Rosa stylosa* (Short-styled Field-rose) (Rhosyn Ungolofn). Bank of disused railway, near Rhiwsaeson, ST/08.82, A.E.Wade & A.R.Perry, 1974, det. A.L. Primavesi.

- +75/21/16. *Rosa sherardii* (Sherard's Downy-rose) (Rhosyn Sherard). N of Llantrisant Common, ST/0.8, 1971; +near Tir-y-berth, ST/15.96, 1974, both A.E.Wade & A.B.Pinkard, det. A.L.Primavesi.
- *75/28/dom. *Sorbus domestica* (Service-tree) (Cerddinen Ddof). S facing limestone cliffs, 25-30 trees and 55-60 smaller saplings, Glamorgan Heritage Coast, ST/0.6, M.Hampton, 1993. Known since 1983 but not certainly identified previously. First British record of a native population.
- **14/1. *Vicia orobus* (Wood Bitter-vetch) (Pysen y Coed). Hundreds of plants in wet meadow, near Aberdare, SN/9.0, J.Woodman, 1992.
- **16/3. *Ononis spinosa* (Spiny Restharrow) (Tagaradr Pigog). Calcareous grassland, Cosmeston, Penarth, ST/180.687, C.Lindley, 1992.
- **17/2. *Melilotus albus* (White Melilot) (Meillionen Tair Dalen Wen). Coal waste track, Tower Colliery, Hirwaun, SN/9.0, G.Hutchinson & I.B.Hart, 1991.
- **19/19a. *Trifolium incarnatum* subsp. *incarnatum* (Crimson Clover) (Meillionen Ysgarlad). Re-seeded open-cast working, W of Tondu, SS/874.840, J.P.Curtis & N.Ajax Lewis, 1990.
- **19/20. *Trifolium striatum* (Knotted Clover) (Meillionen Rychog). Damp area behind pebble-beach ridge, Porthkerry Country Park, ST/086.666, J.Woodman, 1993.
- **19/22. *Trifolium scabrum* (Rough Clover) (Meillionen Ger y Môr). Very extensive popylation on damp bare soil, limestone cliff grassland, Ogmore-by-Sea, SS/875.739, P.S.Jones, 1992.
- **19/25. *Trifolium subterraneum* (Subterranean Clover) (Meillionen Wen Ymgudd). Sandy hollow, near Porthcawl, SS/8.7, P.S.Jones, 1993. Second post-1970 record.
- **24/1. *Spartium junceum* (Spanish Broom) (Banadl Sbaeneg). Near disused railway cutting, Sully, ST/156.682, S.G.Lambert, 1991.
- **21/1. *Rhamnus cathartica* (Buckthorn) (Rhafnwydden). Dune grassland, Kenfig NNR, SS/796.812, P.S.Jones, 1992.
- **19/4. *Oenanthe lachenalii* (Parsley Water-dropwort) (Dibynlor Perllysddail). Ditch, Cog Moors, Sully, ST/164.696, J.Woodman, 1992.
- **34/2. *Carum verticillatum* (Whorled Caraway) (Carwas Troellog). Wet *Molinia* grassland, Pen-y-Fai Common, Bridgend, SS/893.827, P.S.Jones, 1986.
- **17/44/1. *Daucus carota* (Wild Carrot) (Moronen y Maes). Coal waste near lagoons, Tower Colliery, Hirwaun, SN/946.058, G.Hutchinson & I.B.Hart, 1991.
- **34/1. *Hyoscyamus niger* (Henbane) (Ffa'r Moch). About 80 plants in farm yard, Sker Farm, Porthcawl, SS/796.799, P.S.Jones, 1992.
- **1/3/4. *Calystegia silvatica* (Large Bindweed) (Taglys Estron). NE side of railway line to NW of Cwmbach railway station, SO/023.013, G.Hutchinson, 1991.
- **2/1. *Echium vulgare* (Viper's-bugloss) (Glas y Graean). One substantial plant in waste ground, Mountain Ash, SO/031.003, R.D.Pryce, 1990.
- +**18/10/2. *Scutellaria galericulata* (Skullcap) (Cwcwll). Llanbetherwy, ST/03.69, R.M.Walls, 1988.
- +**18/18/5. *Clinopodium acinos* (Basil Thyme) (Brenhinlllys). Sand dune, Kenfig NNR, SS/787.829, P.S.Jones, 1992.
- +**18/23/3x4. *Mentha x villosa* nothovar. *alopecuroides* (*M. spicata* × *M. suaveolens*) (Apple Mint) (Mintys Lled-grynddail). Waste ground, E end of Sully, ST/163.679, S.G.Lambert, 1991.
- +**123/1/susxvir. *Forsythia x intermedia* (*F. suspensa* × *F. viridissima*) (Forsythia). One shrub in wooded area S Pen-y-Fai, Bridgend, SS/895.814, G.Hutchinson, 1991.
- +**14/16/6. *Veronica officinalis* (Heath Speedwell) (Rhwyddlwyn Meddygol). Heathy grassy bank, Tower Colliery, Hirwaun, SN/940.054, G.Hutchinson & I.B.Hart, 1991.
- **24/18/1. *Sibiraea europaea* (Cornish Moneywort) (Ceinioglys). Over 10 plants found at streamside amongst *Juncus effusus*, valley between Carnedd Llwyd and Cefn Eglwysilan, ST/103.904, G.Barter & J.Woodman, 1992; streambank in *Molinia* grassland, Llantrisant Common, ST/046.844, P.S.Jones, G.M.Barter & J.Woodman, 1992.
- ***14/25/2b. *Pedicularis sylvatica* subsp. *hibernica* (Lousewort) (Melog y Cŵn). Abundant in *Molinia* bog to NE of Broad Pool, Gower, SS/51.91, E.nic Lughadha et al., 1993; +coastal heath, with subsp. *sylvatica*, Overton Cliff, Gower, T.C.G.Rich et al., 1993. First and second records.

- +129/7/2. *Lobelia erinus* (Garden Lobelia). One plant growing out of concrete pavement, County Hall, Swansea, SS/65.92, R.D.Pryce, 1993. Forth record.
- 130/6/3. *Galium uliginosum* (Fen Bedstraw) (Briwydden y Fign). Wet meadow, Llwyd-y-Coed, Aberdare, SS/0.0, J.Woodman, 1992. Third post-1970 record.
- +131/6/2. *Lonicera nitida* (Wilson's Honeysuckle) (Gwyddfid Wilson). Hedge, The Beacons, c.1km W of Tythegston, SS/848.788, G.Hutchinson & R.G.Ellis, 1986.
- +135/6/1. *Cirsium eriophorum* (Woolly Thistle) (Ysgallen Benwlanog). Grassland, near Pencoed, SS/972.823, C.Lindley, 1992.
- +135/15/2. *Hypochaeris glabra* (Smooth Cat's-ear) (Melynnydd Moel). Sandy field, near Porthcawl, SS/7.7 & SS/8.7, both P.S.Jones & Q.O.N.Kay, 1992.
- +135/25/25. *Taraxacum silesiacum* (a dandelion). Merthyr Tydfil, SO/08.05, R.D.Pryce, 1992, det. A.J.Richards. Second record and first post 1970.
- 135/25/55. *Taraxacum bracteatum* (a dandelion). Morganstown, ST/12.81, G.Hutchinson, 1986, det. A.J.Richards.
- +135/25/108. *Taraxacum alatum* (a dandelion). Morganstown, ST/12.81, G.Hutchinson, 1986, det. A.J.Richards. Second record.
- +135/26/5a. *Crepis vesicaria* subsp. *taraxacifolia* (Beaked Hawk's-beard) (Gwalchlys Gylfinhir). Road verge, Abercynon, ST/090.954; +roadside verges, Aberaman Industrial Estate, SO/020.010, both R.D.Pryce, 1992.
- The following species of *Hieracium* have all been identified by J.Bevan from specimens in NMW; they all represent new 10km square records and only brief details of locality, grid reference, collector and date are given.
- +135/28/1. *Hieracium sabaudum* (a hawkweed). Bryn Bach, SN/6.0, I.K.Morgan, 1985; Pyrddyn Valley, SN/8.0, R.G.Ellis, 1969; Port Eynon, SS/4.8, B.E.Jones, 1970; Swansea, SS/6.9, G.Hutchinson, 1993; Merthyr Mawr, SS/8.7, S.Waldren, 1981; Pont Rhŷd-y-cyff, SS/8.8, A.B.Pinkard, B.Scotter & A.E.Wade, 1975; Maesteg, SS/8.9, A.E.Wade, 1973; Tonteg, ST/0.8, A.E.Wade, 1974; St Fagans, ST/1.7, G.Hutchinson, 1990.
- +135/28/6a. *Hieracium umbellatum* subsp. *umbellatum* [Narrow-leaved Hawkweed] (Heboglys Culddail). Maesteg, SS/8.9, A.E.Wade, 1973; Llantrisant, ST/0.8, A.E.Wade & A.B.Pinkard, 1971; St Fagans, ST/1.7, G.Hutchinson, 1990; Llancaiah, ST/1.9, A.B.Pinkard & A.E.Wade, 1973.
- +135/28/62. *Hieracium vulgatum* (Common Hawkweed) (Llys yr Hebog). Efail-isaf, ST/0.8, A.E.Wade & R.G.Ellis, 1972.
- +135/28/69. *Hieracium acuminatum* (a hawkweed). Pont Rhŷd y Cyff, SS/8.8, A.B.Pinkard, A.E.Wade & B.Scotter, 1975; Llansannor, SS/9.7, A.E.Wade, 1970; Brynna, SS/9.8, R.D.Pryce, 1991; Pen-pych, SS/9.9, M.E.Gillham, 1985.
- +135/28/70. *Hieracium diaphanoides* (a hawkweed). Rhondda, SS/9.9, R.G.Ellis, 1970; Mountain Ash, ST/0.9, A.M.Pell, 1974.
- +135/28/72. *Hieracium diaphanum* (a hawkweed). Rhondda, SS/9.9, R.G.Ellis, 1970.
- +135/28/77. *Hieracium submutabile* (a hawkweed). Radyr, ST/1.8, G.Hutchinson, 1987.
- +135/28/136. *Hieracium subleptooides* (a hawkweed). Morlais Hill, SO/0.0, A.E.Wade, A.B.Pinkard & B.Scotter, 1973; Efail Isaf, ST/0.8, A.E.Wade & R.G.Ellis, 1972.
- +135/28/151. *Hieracium cacuminum* (a hawkweed). Rhondda, SS/9.9, R.G.Ellis, 1970.
- +135/40/3. *Solidago canadensis* (Canadian Goldenrod) (Eurwialen Canada). Railway embankment, Peterstone-super-Ely, ST/086.764, G.Hutchinson, 1991.
- +135/41/4x5. *Aster × salignus* (*A. lanceolatus* × *A. novi-belgii*) (Common Michaelmas-daisy). Dune system, Kenfig NNR, SS/787.812, P.B.Guha, 1991.
- +135/55/3. *Anthemis cotula* (Stinking Chamomile) (Camri'r Cŵn). Compacted coal waste, Tower Colliery, Hirwaun, G.Hutchinson & I.B.Hart, 1991.
- +135/59/1. *Matricaria recutita* (Scented Mayweed) (Amranwen). Coal waste, Tower Colliery, Hirwaun, SN/946.058, G.Hutchinson & I.B.Hart, 1991.

- +137/6/1. *Lagarosiphon major* (Curly Waterweed) (Pib-fodyn Crych). Small pond, Howardian NR, Cardiff, ST/205.789, M.E.Gillham, 1992, det. D.A.Simpson. Third record. A strange form with long straightish leaves.
- +145/1/1. *Zannichellia palustris* (Horned Pondweed) (Cornwlyddyn). Colliery lagoons, Tower Colliery, Hirwaun, SN/946.058, G.Hutchinson & I.B.Hart, 1991.
- 147/5/2a. *Arum italicum* subsp. *neglectum* (Italian Lords-and-Ladies) (Pidyn y Gog Eidalaidd). Two plants only in mixed deciduous woodland on limestone, near Dinas Powys, ST/1.7, P.S.Jones & A.Jones, 1993. First definite post-1970 record.
- *151/1/3. *Juncus compressus* (Round-fruited Rush) (Brwynnen Dalgron). Tussocks at upper limit of saltmarsh, Whiteford Point, Gower, SS/444.945, R.Murphy, F.H.Perring & T.G.Evans, 1993. Associated with abundant *J. gerardii* and presumably overlooked as that species in the past. This confirms a doubtful earlier record from N Gower by P.F.Waring.
- 151/1/11. *Juncus subnodulosus* (Blunt-flowered Rush) (Brwynnen Flodbwli). Extensive stand in wet meadow, Cefn Cribwr, SS/8.8, J.Woodman, 1993.
- 151/1/21. *Juncus acutus* (Sharp Rush) (Llymfrwynen). Extensive population of about 100-150 plants on dune slack, Kenfig NNR, SS/801.822, P.S.Jones, 1992.
- +152/3/5. *Eleocharis quinqueflora* (Few-flowered Spike-rush) (Sbigfrwynen Goch). Wet meadow, Llwyd-y-Coed, Aberdare, SN/9.0, J.Woodman, 1992.
- 152/4/1. *Bolboschoenus maritimus* (Sea Club-rush) (Clwbfrwynen Arfor). Tower Colliery and Washery, Hirwaun, SN/945.058, G.Hutchinson & I.B.Hart, 1991. Possibly introduced with salt used in separating coal from shale.
- 152/8/2. *Isolurus cernua* (Slender Club-rush) (Clwbfrwynen Eiddil). Spray washed seepage face above storm beach, Rest Bay, near Porthcawl, SS/802.784, P.S.Jones, 1992.
- 152/16/8b. *Carex muricata* subsp. *lamprocarpa* (Small-fruited Prickly-sedge) (Hesgen Bigog Hwy). Marshy ground, Cardiff Docks, ST/19.75, R.Tiddeswell, 1983, det. A.O.Chater
- 152/16/9a. *Carex divisa* subsp. *divisa* (Grey Sedge) (Hesgen Lwydias). Near Llandaff Cathedral, Cardiff, ST/155.780, G.Hutchinson, 1993, det. A.O.Chater.
- 152/16/9b. *Carex divisa* subsp. *leersii* [Many-leaved Sedge] (Hesgen Felen-werdd y Calch). Roadside bank, near Wenvoe, ST/11.74, M.E.Gillham, 1988, det. A.O.Chater.
- 152/16/11. *Carex disticha* (Brown Sedge) (Hesgen Lyglw Benblydd). Damp grassland, Cog Moors, Sully, ST/159.695, G.M.Barter, 1992; +wet slope on waste land, Merthyr Tydfil, SO/05.07, J.Davies, 1988, det. A.O.Chater. Depauperate form; most northerly site in county.
- 152/16/22. *Carex curta* (White Sedge) (Hesgen Benwen). Extensive valley mire, between Brynna and Llanharan, SS/992.830, R.D.Pryce, 1990.
- +152/16/25. *Carex acutiformis* (Lesser Pond-sedge) (Hesgen Ganolig-dywysennog). Bryncae near Llanharan, SS/992.830, R.D.Pryce, 1990; +streamside, Roath, Cardiff, ST/184.805, G.Hutchinson, 1989, det. A.O.Chater
- 153/16/41. *Carex distans* (Distant Sedge) (Hesgen Bell). Saltmarsh, Kenfig NNR, SS/783.830, P.S.Jones, 1992; +spray washed maritime grassland, Rest Bay, near Porthcawl, SS/802.784, P.S.Jones, 1992; relict tidal river meadow in open marshy ground, Howardian NR, Cardiff, ST/206.790, G.Hutchinson, 1986.
- +152/16/42a. *Carex viridula* subsp. *brachyrhyncha* (Long-stalked Yellow-sedge) (Hesgen Felen Baladr Hir). Wet heathy ground, Tower Colliery, Hirwaun, SN/940.056, G.Hutchinson & I.B.Hart, 1991, det. A.O.Chater; Under rocks on bank of River Taf Fechan, 4km N of Merthyr Tydfil, SO/04.09, I.Ruzicka, 1993, det. G.Hutchinson, conf. A.O.Chater.
- +152/16/73. *Carex pulicaris* (Flea Sedge) (Chwein-hesgen). Dune slack, Kenfig NNR, SS/796.810, V.Westhoff, 1992.
- +152/16/44. *Carex hostiana* (Tawny Sedge) (Hesgen Dywyll-felen). Below pond, NW slopes of Mynydd Pen-y-cae, SE of Blaengwrach, SN/889.045, R.D.Pryce, 1990, det. G.Hutchinson.
- +153/13/2. *Lolium multiflorum* (Italian Rye-grass) (Rhygwellt Eidalaidd). Grassy area, Tower Colliery, Hirwaun, SN/946.057, G.Hutchinson & I.B.Hart, 1991.

- +153/14/3. *Vulpia myuros* (Rat's-tail Fescue) (Peisgwelit y Fagwyr). Abundant at Pontypridd railway station, ST/071.898, G.Hutchinson, 1991.
- +153/23/2. *Parapholis incurva* (Curved Hard-grass) (Corwelltyn Camaidd). About 20 plants, saltmarsh, Kenfig NNR, SS/781.831, P.S.Jones, 1992.
- +153/28/3. *Avena fatua* (Wild-oat) (Ceirchwellt Gwyllt y Gwanwyn). Road verge, Blaengwrach, SN/868.059, G.Hutchinson & R.G.Ellis, 1991.
- +153/43/1. *Lagurus ovatus* (Hare's-tail) (Cwt Ysgyfarnog). Roadside, Porthcawl, SS/817.767, P.S.Jones, 1993.
- 153/47/3. *Alopecurus bulbosus* (Bulbous Foxtail) (Cynffonwellt Oddfog). Damp hay meadow, Cog Moors, near Sully, ST/156.693, J.Woodman, 1993.
- +153/47/6. *Alopecurus myosuroides* (Black-grass) (Cynffonwellt Du). About 5 plants in sandy hollow, Porthcawl, SS/8.7, P.S.Jones, 1993. Probably one of only a small number of extant sites.
- +153/59/2. *Hordeum murinum* (Wall Barley) (Heiddwellt y Mur). Waste ground, Aberdare railway station, SO/004.028, G.Hutchinson, 1991.
- +153/59/3. *Hordeum jubatum* (Foxtail Barley) (Heiddwellt Cribog). Fly-ash, The Leys, Aberthaw, ST/03.65, J.P.Curtis, 1991 and J. woodman, 1992.
- +153/64/1. *Phragmites australis* (Common Reed) (Corsen). Colliey lagoons, Tower Colliery, Hirwaun, SN/945.058, G.Hutchinson & I.B.Hart, 1991.
- 158/7/1. *Colchicum autumnale* (Meadow Saffron) (Saffrwm y Gweunydd). Damp grassland, Bridgend, SS/8.7, C.Lindley, 1993. Possibly the only extant site in the county.
- 162/5/1. *Neottia nidus-avis* (Bird's-nest Orchid) (Tegeirian Nyth Aderyn). Mixed deciduous woodland, near Barry, ST/12.70, S.G.Lambert, 1993, det. R.G.Ellis.
- +162/7/1. *Spiranthes spiralis* (Autumn Lady's-tresses) (Caineirian Troellog). Calcareous grassland on roadside bank, Kenfig Industrial Estate, SS/801.831, P.S.Jones, 1992.
- +162/13/1. *Platanthera chlorantha* (Greater Butterfly-orchid) (Tegeirian Llydanwyrd). Wet meadow, near Kenfig Hill, SS/8.8, P.S.Jones & M.Havard, 1986; +wet upland meadow, near Llwyd-y-Coed, SN/9.0, C.Lindley & G.M.Barter, 1992.
- +162/14/1. *Anacamptis pyramidalis* (Pyramidal Orchid) (Tegeirian Bera). About 30 plants on dune grassland, Kenfig NNR, SS/804.822, P.S.Jones, 1992.
- +162/20/3. *Orchis morio* (Green-winged Orchid) (Tegeirian y Waun). 280 spikes recorded in grassland, Llantrisant, ST/052.822, J.Woodman, 1993.
- *162/20/4. *Orchis ustulata* (Burnt Orchid) (Cordegeirian). Eight spikes in species-rich limestone grassland with *O. morio*, Llanmadoc, Gower, SS/41.93, N.Benson, 1993. First certain Welsh record.

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

- *162/18/2. *Alyssum saxatile* (Golden Alison). River bank, NW of Gilwern, SO/242.154, M.Porter, 1992. First record.
- +75/8/183. *Rubus gallicus* (a bramble). Senni Valley, SN/9.2, A.Ley, 1906, det M.Porter (19991).
- *75/8/314. *Rubus pictorum* (a bramble). Woodland, Cusop dingle, SO/2.4, A.Ley, 1896, det. M.Porter
- *75/8/ari. *Rubus ariconiensis* A.Newton & M.Porter (a bramble). Scrub, Llangorse Common, SO/13.27, W.M.Rogers, 1898, det. M.Porter; +Hedgerow, near Llangorse Lake, SO/1.2, A.Ley, 1906, det. M.Porter. First and second records
- *75/8/isc. *Rubus iscanus* A.Newton & M.Porter (a bramble). Streambank, Llanddew, SO/049.308, M.Porter, 1983. First record.

- *75/8/vag. *Rubus vagensis* A.Newton & M.Porter (a bramble). Woodland, Park Wood, Talgarth, SO/168.338, M.Porter, 1991. First record.
- *1129/9/1. *Downingia elegans* (Californian Lobelia). Edge of new pond, Cwm Gwdi, near Brecon, SO/02.26, C.H.G.Allum, det. E.J.Clement. Probably introduced with grass seed imported from USA. First Welsh record.
- *1135/43/4. *Erigeron karvinskianus* (Mexican Fleabane) (Cedowydd y Clogwyn). Pavement and walls, Crickhowell, SO/216.183, M.Porter, 1993. First record.
- *1148/2/4. *Lemna minuta* (Least Dickweed) (Corliniad). Edge of lake, Llangasty Tal-y-llyn, SO/133262. M.Porter, 1993. First record.
- *1153/71/san. *Digitaria sanguinalis* (Hairy Finger-grass) (Bysweltl Blewog). Kitchen garden, 3.5 km SE of Llanwrthwl, SO/005.616, R.G.Woods, 1993. First record.
- +153/59/4. *Hordeum secalinum* (Meadow Barley) (Heiddwellt y Maes). Single, large tufted plant at edge of road verge, Llanfihangel, SN/985.557, R.G.Woods, 1987.

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

- 116/6/1. *Pulmonaria officinalis* (Lungwort) (Llys yr Ysgyfaint). In bottom of old hedge, near bank of River Ithon, Bailey Einon, Cefnllys, SO/083.616, R.G.Woods, 1990.
- *115/22/1. *Lactuca serriola* (Prickly Lettuce) (Gwylaeth Bigog). Recently excavated ground, Presteigne by-pass, SO/321.634, D.R.Humphreys, 1993. First record.
- 1525/16. *Taraxacum oxoniiense* (a dandelion). Quarry, Llanelwedd, SO/0.5, T.G.Evans, 1985, det. C.C.Haworth.
- 1521/14. *Potamogeton obtusifolius* (Blunt-leaved Pondweed) (Dyfrllys Gwelltog). Pond, NW of Gogia, The Begwns, Llowes, SO/164.436, R.G.Woods, 1990.
- 1525/1. *Melica nutans* (Mountain Melick) (Meligwellt Gogwydd). Wooded roadside bank, N of Llanbadarn Fynydd, SO/086.790, R.G.Woods, 1989.

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

- +17/1. *Huperzia selago* (Fir Clubmoss) (Cnwpfwsogl Mawr). One plant only seen on grazed upland heath, Mynydd Du, SN/687.168, I.K.Morgan, 1992.
- +152/5a. *Asplenium trichomanes* subsp. *trichomanes* (Maidenhair Spleenwort) (Duegredynen Gwallt y Forwyn). Acid crag, SW side of Nant Ceiliog, near Llanllwni, SN/519.397, M.& J.Humphrey & R.D.Pryce, 1993, det. G.Hutchinson
- +17/1/1x2. *Polystichum × bicknellii* (*P. setiferum* × *P. aculeatum*) (a hybrid shield-fern). Roadside hedgebank, 0.6km SS/E of Trapp, SN/654.183, G.Hutchinson, 1988; +hedgebank, Tavernspite, SN/179.123, G.Hutchinson, 1987.
- +17/3/3a. *Dryopteris affinis* subsp. *affinis* (Scaly Male-fern) (Marchredynen Euraid). Lane side, 2.4km SW of Cilycwm, SN/737.383, J.A.Green & P.M.Goodhind, 1990, det. C.R.Fraser-Jenkins.
- +17/3/3b. *Dryopteris affinis* subsp. *cambrensis* (Scaly Male-fern) (Marchredynen Euraid). Heathy bank, 1.5km W of Maudslad, SN/319.337, G.Hutchinson & R.D.& M.Pryce, 1990, det. C.R.Fraser-Jenkins.
- +17/3/3x2. *Dryopteris × complexa* (*D. affinis* × *D. filix-mas*) (a hybrid male-fern). 1.5km E of Cwmmorgan, SN/319.349, D.L.Brookman, 1992, det. G.Hutchinson.

- +!19/1/1. *Azolla filiculoides* (Water Fern) (Rhodyn y Dŵr). Pond, Carmel Road, Golden Grove, SN/591.189, J.N.Davies, 1993, conf. G.Hutchinson. A quarter of the water's surface was covered with *Azolla*, a half with *Lemna*.
- +33/1/1x3. *Ulmus × vegeta* (*U. glabra* × *U. minor*) (Huntingdon Elm). Hedgerow, Ffordd-y-Wagen, Pwll, Llanelli, SN/471.011, I.K.Morgan, 1992, det. G.Hutchinson. Third record.
- +33/1/1x3x4. *Ulmus × hollandica* var. *hollandica* (Dutch Elm). Hedgerow, side of A484 near Dolhaidd, SN/348.403, I.K.Morgan, 1993, det. G.Hutchinson.
- +43/6/1. *Salicornia pusilla* (One-flowered Glasswort). Two plants only in tidal estuary, Morfa Uchaf, Ferryside, SN/369.118, G.Hutchinson, 1990; +Upper saltmarsh, SW of Kidwelly, G.Hutchinson & R.D.Pryce, 1990, first record in this area since 1911.
- +43/6/7. *Salicornia dolichostachya* (Long-spiked Glasswort) (Llyrlys Canghenog). Mudbanks, Morfa Bacas, 1.7km SW of Bynea, SS/540.977, I.K.Morgan, 1990, conf. G.Hutchinson; +saltmarsh, below E point of Sir John's Hill, Laugharne, SN/306.099; +saltmaesh, SE of Pant-yr-Arthro, Llanstephan, SN/371.132, both G.Hutchinson & R.D.Pryce, 1990.
- *!46/20/7. *Silene armeria* (Sweet-William Catchfly) (Gludlys Crynswth). One plant only in derelict ground, Brynamman, SN/708.143, J.Hoskins & R.D.Pryce, 1993. Third Welsh and first county record.
- 47/8/13x19. *Rumex × pratensis* (*R. crispus* × *R. obtusifolius*) (Meadow Dock) (Tafol y Maes). A few plants on roadside c.5km NW of St Clears, SN/236.143, H.J.Killick, 1990, det. J.R.Akeroyd.
- +48/1/9a. *Limonium procerum* subsp. *procerum* var. *medium* (a sea-lavender). Breakwater wall, Burry Port harbour, SS/444.999, G.Hutchinson, 1986.
- +!61/1/tre. *Populus tremuloides* (American Aspen). Sand dune overlooking River Towy, Ferryside, SN/367.107, J.A.Gibson & G.Hutchinson, 1993. First Welsh record, clearly planted originally.
- 61/2/11x9. *Salix × smithiana* (*S. cinerea* × *S. viminalis*) (Silky-leaved Osier) (Helygen Sidanddail). Hedge by track, Felinwm Isaf, SN/505.239, H.J.Killick, 1989, det. R.D.Meikle.
- *62/12/3. *Rorippa islandica* (Northern Yellow-cress) (Berwr Melyn y Gogledd). Wet, muddy hollow in silage field, 800m E of Newcastle Emlyn Castle, SN/319.408, T.C.G.Rich & A.O.Chater, 1993; +shingle of River Bran, near Bridge, N of Llandovery, SN/783.362, R.D.Pryce, 1981, det. T.C.G.Rich, First and second records.
- 62/37/1b. *Coincya monensis* subsp. *recurvata* (Wallflower Cabbage) (Berwr Murwyll y Môr). Llwynhendy, SS/53.99, R.D.Pryce & I.K.Morgan, 1982, det. T.C.G.Rich. Specimen originally named *Brassica napus*.
- +!62/38/1. *Hirschfeldia incana* (Hoary Mustard) (Cedw Penllwyd). Disturbed roadside embankment, SS/E of Rhycymerau, SN/581.379, G.Hutchinson & J.Bevan, 1993.
- *!74/5/are. *Saxifraga × arendsii* group (Garden Mossy Saxifrages). Grass bank near houses, Llanwrda, SN/71.31, G.Hutchinson, 1986; +hedgebank opposite houses in village, Llanfihangel-ar-Arth, SN/452.393, G.Hutchinson, 1988, both det. R.J.Gornall. First and second records for group
- *!75/18/4. *Acaena inermis* (Spineless Acaena). Disturbed river shingle, Carreg Sawdde Common, Llangadog, SN/706.277, I.K.Morgan & R.D.Pryce, 1987, det. G.Hutchinson. First Welsh record.
- +75/21/4x11. *Rosa × pseudorusticana* (*R. arvensis* × *R. stylosa*) (a hybrid rose). Hedge, c.1km E of Ponthenri, SN/490.093, G.Hutchinson, 1992, det A.L.Primavesi.
- +75/21/19. *Rosa micrantha* (Small-flowered Sweet-briar) (Rhoslyn Pêr). Scrambling up hedgerow opposite nursery garden, c.6km SW of St Clears, SN/239.131, H.J.Killick, 1990.
- *75/30/1. *Amelanchier lamarckii* (Juneberry) (Hefinwydden). One shrub on SE side of ride on edge of plantation block, Pen-y-bedd Wood, Pembrey, SN/417.017, G.Hutchinson & I.K.Morgan, 1993. First record.
- *!75/32/9. *Cotoneaster frigidus* (Tree Cotoneaster). Hedgerow, Kidwelly sewage treatment works, SN/399.063, G.Hutchinson, 1991.

- * 7/15/12. *Lathyrus nissolia* (Grass Vetchling) (Ytbysen Goch). Well-established colony on roadside verge, Cae'r-bryn, near Ammanford, SN/597.143, J.Branscombe, 1993; +roadside verge, near Porthyrhyd, SN/521.166, G.Hutchinson, 1993. First and second records.
- + 7/19/4. *Trifolium hybridum* (Alsike Clover) (Meillionen Alsike). Disturbed ground at new roadside crash-barrier, SS/E of Rhycymerau, SN/581.379, G.Hutchinson & J.Bevan, 1993.
- + 7/19/24. *Trifolium squamosum* (Sea Clover) (Meillionen y Morfa). Disturbed soil, S end of Glanmor Road, Llanelli, SS/503.989, G.Hutchinson, 1990. Site now destroyed by industrial development.
- + 8/4/1. *Oenothera glazioviana* (Large-flowered Evening-primrose) (Melyn yr Hwyr Mwyaf). Disturbed ground at new roadside crash-barrier, SS/E of Rhycymerau, SN/581.379, G.Hutchinson & J.Bevan, 1993.
- * 8/4/Zau.cal. *Zauschneria californica* (Californian Fuchsia). Garden weed, Laugharne, SN/306.110, J.Rees, 1993, det. R.W.Rutherford & G.Hutchinson. First Welsh record.
- + 1/7/34/2. *Carum verticillatum* (Whorled Caraway) (Carwas Troellog). Only three plants in semi-improved, cattle grazed, damp meadow, near Llansaint, SN/398.092, R.D.Pryce, 1993. All other likely habitats in SN/3.0 searched for this species but without success.
- 1/8/1/5x6. *Stachys × ambigua* (*S. sylvatica* × *S. palustris*) (Hybrid Woundwort) (Briwlys Croesryw). Farm garden, E of Llandeilo, SN/666.213, D.Brockman & H.J.Killick, 1993.
- + 1/8/13/5. *Linaria supina* (Prostrate Toadflax) (Gingroen Gorweddol). Clinker and sand, Burry Port, SN/44.00, R.D.Pryce, 1993. Introduced at this site in 1970s when original site c.50m away destroyed by sea defences.
- * 1/8/7B/Ecc/sca. *Eccremocarpus scaber* (Chilean Glory-flower). Pavement weed, Little Water Street, Carmarthen, SN/413.203, I.K.Morgan, 1993. First Welsh record.
- * 1/8/3/orbxmic. *Symporicarpos × chenaultii* (Pink Snowberry) (Llus Eira Pinc). Disused quarry, N of Cwmduyfran, SN/408.257, G.Hutchinson, 1992. First Welsh record.
- The following species of *Taraxacum* have all been identified by A.J.Richards and/or A.A. Dudman from specimens in NMW; all represent new 10km square records and only brief details of locality, grid reference, collector and date are given.
- * 1/8/25/14. *Taraxacum inopinatum* (a dandelion). Roadside, SW of Crwbin, SN/46.13, R.D.Pryce & G.Hutchinson, 1992. First record.
- 1/8/25/15. *Taraxacum lacistophyllum* (a dandelion). Dunes, Burry Port, SN/44.00, G.Hutchinson, 1990; +Llanstephan Castle, SN/35.10, R.D.Pryce, 1992; +SE of Crwbin, SN/47.12, R.D.Pryce & G.Hutchinson, 1992. Second, 3rd & 4th records.
- + 1/8/25/16. *Taraxacum oxonense* (a dandelion). Trackway in quarry SW of Crwbin, SN/46.12, R.D.Pryce & G.Hutchinson, 1992.
- + 1/8/25/35. *Taraxacum faeroense* (a dandelion). Garden, NW of Cilycwm, SN/74.41, J. & M.Iliff, 1983.
- + 1/8/25/55. *Taraxacum bracteatum* (a dandelion). Glyn Glas river diversion, SN/61.14, R.D.Pryce, 1990.
- + 1/8/25/64. *Taraxacum gelertii* (a dandelion); Kidwelly Castle, SN/40.07, R.D.Pryce, 1991; +SW of Crwbin, SN/46.12, R.D.Pryce & G.Hutchinson, 1992; +Near Llannon, SN/54.10, G.Hutchinson, 1992; +SW of Llanfynydd, SN/53.25, R.D.Pryce & G.Hutchinson, 1992; +S of Llidiadnenog, SN/54.35, R.D.Pryce & G.Hutchinson, 1992.
- * 1/8/25/68. *Taraxacum inane* (a dandelion). Dunes, Burry Port, SN/44.00, G.Hutchinson, 1990. First record.
- + 1/8/25/72. *Taraxacum nordstedtii* (a dandelion). Laugharne, SN/30.11, G.Hutchinson, 1989; +Capel Hendre, SN/5.1, A.M.Pell, 1985; +Salem, SN/62.26, A.M.Pell, 1989.
- * 1/8/25/78. *Taraxacum porteri* (a dandelion). Glyn Glas river diversion, SN/61.14, R.D.Pryce, 1990; +Roadside verge Clydach valley, ENE of Brechfa, SN/53.31, R.D.Pryce & G.Hutchinson, 1992. First & second records.

- *135/25/80. *Taraxacum subbracteatum* (a dandelion). Roadside verge, Clydach valley, ENE of Brechfa, SN/53.31; +bank, SS/E of Llanybyther, SN/53.40, both R.D.Pryce & G.Hutchinson, 1992. Second & third records.
- +135/25/84. *Taraxacum atactum* (a dandelion). Woodland edge, Aber Arad, SN/31.40, R.D.Pryce, 1992; +amongst bracken, SE of Crwbin, SN/48.12, R.D.Pryce & G.Hutchinson, 1992; +roadside verge, SE of Brechfa, SN/53.28; +roadside verge, ENE of Brechfa, SN/53.31; +roadside hedgebank, E of Llanybyther, SN/54.43, all R.D.Pryce & G.Hutchinson, 1992.
- +135/25/85. *Taraxacum boekmanii* (a dandelion). Dune, Laugharne Burrows, SN/28.07, R.D.Pryce, 1989; +roadverge, Newcastle Emlyn, SN/29.40; +roadside bank, Gorllwyn, both R.D.Pryce, 1992; +roadside verge, SE of Crwbin, SN/48.12; +wooded area, SE of Brechfa, SN/53.28; +roadside bank, S of Llidiadnenog, SN/54.35, all R.D.Pryce & G.Hutchinson, 1992; +Glyn Glas river diversion, SN/61.14, R.D.Pryce, 1990; +roadside verge, SS/W of Esgerdawe, SN/60.40, R.D.Pryce & G.Hutchinson, 1992.
- +135/25/89. *Taraxacum hamatum* (a dandelion). Waste ground, Carmarthen, SN/41.19, G.Hutchinson, 1989.
- *135/25/90. *Taraxacum hamiferum* (a dandelion). Roadside verge, near Newcastle Emlyn, SN/29.40; +colliery tip, Glynhebog, SN/51.12; both R.D.Pryce, 1992. First & second records.
- +135/25/92. *Taraxacum lamprophyllum* (a dandelion). Roadside verge, NW of Penrherber, SN/28.39, R.D.Pryce, 1992; +roadside verge, SE of Crwbin, SN/48.12; +roadside bank, S of Llidiadnenog, SN/54.35; roadside hedgebank, E of Llanybyther, all R.D.Pryce & G.Hutchinson, 1992.
- 135/25/98. *Taraxacum pseudohamatum* (a dandelion). Ridge, SE of Crwbin, SN/47.13, R.D.Pryce & G.Hutchinson, 1992; +grass verge, NE of Llannon, SN/54.09, G.Hutchinson, 1992; woodland, Glynhebog, SN/51.12, R.D.Pryce, 1992.
- +135/25/99. *Taraxacum quadrans* (a dandelion). Grassy area, Burry Port, SN/45.00; +roadside hedgebank, E of Llanybyther, both R.D.Pryce & G.Hutchinson, 1992.
- *135/25/102. *Taraxacum aberrans* (a dandelion). Roadside bank, Gorllwyn, SN/35.33, R.D.Pryce, 1992. First record.
- +135/25/111. *Taraxacum ancistrolobum* (a dandelion). Roadside verge, SS/W of Esgerdawe, SN/60.40, R.D.Pryce & G.Hutchinson, 1992.
- *135/25/119. *Taraxacum chrysophaenum* (a dandelion). Roadside verge, SE of Crwbin, SN/48.12, R.D.Pryce & G.Hutchinson, 1992. First record. Also recorded from SN/47.13 on same day.
- *135/25/121. *Taraxacum cordatum* (a dandelion). Dunes, Llanstephan, SN/35.10, R.D.Pryce, 1992. First record.
- +135/25/126. *Taraxacum dahlgrenii* (a dandelion). Ridge, SE of Crwbin, SN/47.13, R.D.Pryce & G.Hutchinson, 1992. Third record.
- *135/25/130. *Taraxacum dilatatum* (a dandelion). Roadside verge, ENE of Brechfa, SN/53.31, R.D.Pryce & G.Hutchinson, 1992. First record.
- +135/25/131. *Taraxacum ekmani* (a dandelion). Roadside verge, ENE of Brechfa, SN/53.31, R.D.Pryce & G.Hutchinson, 1992. Third record.
- *135/25/133. *Taraxacum expallidiforme* (a dandelion). Glyn Glas river diversion, SN/61.14, R.D.Pryce, 1990; +roadside verge, S of Blaengwyddon, SN/30.39, R.D.Pryce, 1992; +roadside verge, ENE of Brechfa, SN/53.31, R.D.Pryce & G.Hutchinson, 1992. First and subsequent records.
- *135/25/145. *Taraxacum intumescens* (a dandelion). Waste ground, Carmarthen, SN/41.19, G.Hutchinson, 1989. First record.
- +135/25/156. *Taraxacum linguatum* (a dandelion). Roadside, SW of Crwbin, SN/46.13, R.D.Pryce & G.Hutchinson, 1992; +wayside, Capel Hendre, SN/5.1., A.M.Pell, 1985; +roadside verge, SS/W of Esgerdawe, SN/60.40, R.D.Pryce & G.Hutchinson, 1992.
- *135/25/157. *Taraxacum lingulatum* (a dandelion). Meadow, Capel Hendre, SN/5.1, A.M.Pell, 1985, det. C.C.Haworth; +roadside verge, SS/W of Esgerdawe, SN/60.40, R.D.Pryce & G.Hutchinson, 1992. First records.

- * 135/25/159. *Taraxacum lucidum* (a dandelion). Roadside bank, SW of Crwbin, SN/46.13, R.D.Pryce & G.Hutchinson, 1992. First record.
- * 135/25/169. *Taraxacum necessarium* (a dandelion). Glyn Glas river diversion, SN/61.14, R.D.Pryce, 1990. First record.
- * 135/25/170. *Taraxacum nitidum* (a dandelion). Roadside verge, SW of Cwmdawe, Esgerdawe, SN/60.40, R.D.Pryce & G.Hutchinson, 1992. First record.
- + 135/25/172. *Taraxacum oblongatum* (a dandelion). Roadside verge, S of Blaengwyddon, SN/30.39, 1992; +garden weed, Pwll, Llanelli, SN/47.01, 1991, both R.D.Pryce.
- * 135/25/184. *Taraxacum piceatum* (a dandelion). Glyn Glas river diversion, SN/61.14, R.D.Pryce, 1990; +short grass, N of Bryndu near Llannon, SN/54.10, G.Hutchinson, 1992. First and second records.
- + 135/25/186. *Taraxacum polyodon* (a dandelion). Dunes, Burry Port, SN/44.00, G.Hutchinson, 1990. Second record.
- * 135/25/199. *Taraxacum sinuatum* (a dandelion). Quarry trackway, SW of Crwbin, SN/46.12, R.D.Pryce & G.Hutchinson, 1992. First record.
- * 135/25/202. *Taraxacum stereodes* (a dandelion). Muddy ground, E of Burry Port harbour, SN/44.00, R.D.Pryce & G.Hutchinson, 1992.
- 135/25/217. *Taraxacum undulatum* (a dandelion). Roadside verge, NW of Penrherber, SN/28.39, R.D.Pryce, 1992. Second record.
- * 135/25/236. *Taraxacum undulatiflorum* (a dandelion). Waste ground, Carmarthen, SN/41.19, G.Hutchinson, 1989. First record.
- 135/28/1. *Hieracium sabaudum* (a hawkweed). Railway, E of Bynea station, SS/55.99, G.Hutchinson, 1989; +Laugharne Burrows, SN/3.0, R.D.Pryce & Pendine MOD Conservation group, 1988; +tip, Carway colliery, SN/46.06, I.M.Vaughan, 1975; +Easgair Llaethdy, Myddfai, SN/78.29, J.& M.Iliff, 1987, det. J.Bevan.
- 135/28/3. *Hieracium rigens* (a hawkweed). Wall, E of Burry Port station, SN/44.00, G.Hutchinson, 1989. Second record.
- 135/28/6a. *Hieracium umbellatum* subsp. *umbellatum* [Narrow-leaved Hawkweed] (Heboglys Culddail). Roadside verge, 2.5km WSW of Llansawel, SN/59.35, J.& M.Iliff, 1986, det. J.Bevan.
- 135/28/6b. *Hieracium umbellatum* subsp. *bichlorophyllum* [Narrow-leaved Hawkweed] (Heboglys Culddail). Hedgebank, near Carreg Cennen, SN/67.19, I.M.Vaughan, 1972, det. J.Bevan.
- 135/28/24. *Hieracium scabrisetum* (a hawkweed). Waste ground, Morfa, Llanelli, SS/51.99, G.Hutchinson, 1989; +Shale rock, Sugar Loaf, SN/83.42, G.Hutchinson, 1987, det. J.Bevan.
- + 135/28/67. *Hieracium subamplifolium* (a hawkweed). Damp river gully, Nant Garw, Black Mountain, SN/72.16, P.S.Jones, 1985, det. J.Bevan.
- 135/28/69. *Hieracium acuminatum* (a hawkweed). Railway embankment, N of Llanpumsaint, SN/41.30, R.D.Pryce & G.Hutchinson, 1988; +Nant Llwyd, SN/54.36, R.D.Pryce, 1985; roadside verge, S of Penyrallt, Llangadog, SN/75.31, R.D.Pryce, 1982, all det. J.Bevan.
- + 135/28/72. *Hieracium diaphanum* (a hawkweed). Roadside hedgebank, WSW of Cwmdu, SN/60.29, R.D.Pryce, 1986.
- + 152/16/25. *Carex acutiformis* (Lesser Pond-sedge) (Hesgen Ganolig-dywysennog). Carr woodland, Gorswen, 1.2km N of Porthyrhyd, SN/517.172, G.Hutchinson, 1993, det. A.O.Chater.
- + 152/16/29. *Carex vesicaria* (Bladder-sedge) (Hesgen Chwysigennaidd). Pond, Maes-y-bidau, near Nant-y-ffin, SN/56.32, J.N.Davies, 1993, det. A.O.Chater.
- 153/28/3. *Avena fatua* (Wild-oat) (Ceirchwellt Gwyllt y Gwanwyn). Roadside verge below hedgebank, N side of A485, 600m SW of Cwmann, SN/579.469, A.O.Chater, 1993.
- * 153/53/3. *Ceratochloa cathartica* (Rescue Brome) (Pawrwellt America). Garden weed, Laugharne, SN/307.111, J.Rees, 1992, det. G.Hutchinson. First record.
- + 153/63/1b. *Molinia caerulea* subsp. *arundinacea* (Purple Moor-grass) (Glaswellt y Gweunydd). Edge of willow scrub, SE corner of Lower Lleidi Reservoir, Llanelli, SN/519.033, I.K.Morgan, 1992, conf. G.Hutchinson.

+153/70/pum/ *Setaria pumila* (Yellow Bristle-grass) (Cibogwellt Melyn). Garden weed, Laugharne, SN/307.111, J.Rees, 1992, det. G.Hutchinson.

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

- 14/2/1. *Phegopteris connectilis* (Beech Fern) (Rhodyn y Graig). Extensive population on banks of mountain stream, Afon Tewgyll, Mynachlog-ddu, SN/138.311; scattered population amongst crevices between boulders, Cerig Pant y Cadno, Mynachlog-ddu, SN/137.314, both A.E. & S.B.Evans, 1993; and in hedgebank WNW of Tafarn-y-bwlch, Brynberian, SN/076.337, A.E., H.H.& S.B.Evans, 1993.
- 17/3/5. *Dryopteris aemula* (Hay-scented Buckler-fern) (Marchredynen Aroglos). Single large clump growing under canopy of *Betula pubescens*, secondary woodland, Yr Allt, Pentre Ifan, Nevern, SN/086.376, A.E. & S.B.Evans, 1993. First record away from wooded gorge/steep slopes or hedgebanks in the v.c.
- 28/13/10. *Ranunculus auricomus* (Goldilocks Buttercup) (Peneuraidd). Low hundreds of plants in flower in small oak woodland, Cilgerran, SN/183.424, K.J.S.Devonald, 1992.
- 28/13/20. *Ranunculus tripartitus* (Three-lobed Crowfoot) (Crafanc Trillob). Hundred's of plants in shallow pool and ruts on Commonon, Waun Isaf Moor, St David's, SM/746.246, J.Hughes, 1993.
- *62/12/3. *Rorippa islandica* (Northern Yellow-cress) (Berwr Melyn y Gogledd). About 20 fruiting plants, many non-flowering rosettes, with *R. palustris*, in muddy area by gate and track across drained, long-disused canal, S of minor road S of Teifi, 600m E of Llechryd Bridge, SN/187.452, T.C.G.Rich & A.O.Chater, 1993.
- 62/12/4. *Rorippa palustris* (Marsh Yellow-cress) (Berwr Melyn y Gors). About 10 fruiting plants, many non-flowering rosettes, with *R. islandica*, in muddy area by gate and track across drained, long-disused canal, S of minor road S of Teifi, 600m E of Llechryd Bridge, SN/187.452, T.C.G.Rich & A.O.Chater, 1993.
- 75/19/10b. *Alchemilla filicaulis* subsp. *vestita* (Hairy Lady's-mantle) (Mantell Fair Flewog). Two plants on partly consolidated scree on sea-cliffs, Trefrane, S of Newgale, SM/855.203, F.Hudson, 1993.
- +75/19/14. *Alchemilla glabra* (Smooth Lady's-mantle) (Mantell Fair y Nant). Road verge, W of Blaendynant, Llanfyrnach, SN/232.295, S.B.Evans, 1990.
- 77/19/25. *Trifolium subterraneum* (Subterranean Clover) (Meillionen Wen Ymgudd). Pathside amongst acid grassland and heath, Clegyr Boia, Trefeiddan, SM/737.250, F.Hudson, 1993.
- 84/1/5. *Epilobium tetragonum* (Square-stalked Willowherb) (Helyglys Pedronglog). Damp clayey ground between *Phragmites* swamp and bank, Teifi Marshes DWT Reserve, just NE of Bass Lagoon, SN/187.452, T.C.G.Rich & A.O.Chater, 1993.
- 125/2/10. *Orobanche minor* (Common Broomrape) (Gorfanc Lleiaf). Four spikes on sandy bank of track in reclaimed dunes, Castlemartin, SR/890.991, L.Laxton & J.M.Humphris, 1992.
- 130/6/7. *Galium mollugo* (Hedge-bedstraw) (Briwydden y Clawdd). Roadside verge, Freemans Way, Haverfordwest, SM/957.150, E.C.K.Redd, 1993, conf. S.B.Evans.
- +135/21/2. *Sonchus arvensis* (Perennial Sow-thistle) (Llaethysgalen yr Yd) Very exposed rocky island, North Bishop, SM/670.280, M.Alexander & C.Gillow, 1985.
- +1135/43/4. *Erigeron karvinskianus* (Mexican Fleabane) (Cedowydd y Clogwyn). Old walls, opposite pottery, Penally, SS/116.990, G.Hutchinson, 1988.
- +152/3/5. *Eleocharis quinqueflora* (Few-flowered Spike-rush) (Sbigrwynden Goch). Boggy flush in wet heath, near Nant Rhigian, Carnigli, Newport, SN/045372, S.B.Evans, 1982.
- +152/16/22. *Carex curta* (White Sedge) (Hesgen Benwen). Marsh, opposite Sychpant, Cwm Gwaun, SN/0.3, B.Welch, 1939.
- 152/16/47. *Carex pallescens* (Pale Sedge) (Hesgen Welwas). Acid marshy grassland on edge of ancient woodland, Pengelli Forest, WNW of Eglwyswrw, SN/136.390, S.B.Evans, 1986.

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

- +1/3/1. *Lycopodium clavatum* (Stag's-horn Clubmoss) (Cnwpfwsogl Corn Carw). By stream below spoil heaps of Esgair-mwyn leadmine, Ffair Rhos, SN/755.692, S.P.Chambers, 1993.
- +4/1/8. *Equisetum palustre* (Marsh Horsetail) (Marchrrawn y Gors). Co-dominant with *Molinia* over c.1 acre of outwash gravel of spoil heaps of Glog Fach leadmine, Ysbyty Ystwyth, SN/744.708, A.O.Chater, 1993.
- +5/1/1. *Ophioglossum vulgatum* (Adder's-tongue) (Tafod y Neidr). Unimproved pasture near coast, 600m N of Pencarreg, Llanrhystud, SN/533.700, A.Moorby, S.Morley & P.Dalley, 1993.
- +7/1/1. *Cryptogramma crispa* (Parsley Fern) (Rhedynen Bersli). One plant in shaly scree, Graig Goch, S side of Cwm Ystwyth, SN/803.742, D.K.Reed, 1993.
- *16/4/2. *Gymnocarpium robertianum* (Limestone Fern) (Llawredynen y Calchfaen). Five colonies with c.350, 30, 20, 10 and 2 fronds, on overgrown stoney mound, banks and wall on site of Mynach Vale leadmine in conifer forest 3km E of Devil's Bridge, SN/772.775, D.K.Reed, 1993. Over 40km from the next site, in Carmarthenshire (v.c. 44), this population was found during the Dyfed Wildlife Trust's metal mine survey.
- +17/1/2. *Polystichum aculeatum* (Hard Shield-fern) (Gwrychredynen Galed). Wheel-pit of Cwmsymlog leadmine, SN/696.835, A.O.Chater & E.Cloutman, 1993.
- +17/3/1. *Dryopteris oreades* (Mountain Male-fern) (Marchredynen Fach y Mynydd). Dry NE facing cliffs, Lluest y Graig, Pumlumon, SN/800.891, A.O.Chater, 1993.
- *19/1/1. *Azolla filiculoides* (Water Fern) (Rhedynen y Dŵr). Along c.1km of ditches in Clarach valley, E from Llangorwen church, SN/603.838, S.P.Chambers, 1993; pond in converted slurry pit, Llain-wen, Synod Inn, SN/392.550, R.J.Williams, 1993; ditches behind beach, Clarach, SN/587.840, A.O.Chater. First and subsequent records.
- 25/13/4. *Ranunculus sardous* (Hairy Buttercup) (Crafanc y Frân Blewog). Abundant in small paddock, Crugmore Farm, Penparc, SN/206.472; +scattered throughout pasture S of B4353 and 100m SE of Ynys-las level crossing, SN/619.930, both A.O.Chater, 1993.
- 28/13/25a. *Ranunculus penicillatus* subsp.*penicillatus* (Stream Water-crowfoot) (Crafanc y Nant). In leaf by Afon Aeron at Lovers' Bridge, Aberaeron, SN/457.625; +in Afon Aeron, Newbridge, Ciliau Aeron, SN/507.591, both A.O.Chater, 1993.
- 33/1/3a. *Papaver somniferum* subsp.*somniferum* (Opium Poppy) (Cwsglys). Waste ground by A44(T), Eisteddfa Gurig, SN/797.840, S.P.Chambers, 1993.
- 30/1/5b. *Papaver dubium* subsp.*lecoqii* (Yellow-juiced Poppy) (Pabi Sudd Melyn). Three plants on waste ground, Penrhyn-coch, SN/638.839, S.P.Chambers, 1993. Although Salter says that *lecoqii* is the poppy of Cards. cornfields (though subsp. *dubium* is now much the commonest poppy), this seems to be only the second post-1930 record.
- +36/1/2. *Urtica urens* (Small Nettle) (Danhadlen Leiaf). Weed in maize field, 200m ESE of Pant-y-dwr, Penparc, SN/208.481, A.O.Chater, 1993. A rare species in v.c. 46 with only 7 post-war records.
- +43/1/6. *Chenopodium rubrum* (Red Goosefoot) (Troed yr Wydd Ruddog). Manure heap by road 2km NNE of Pennant, SN/ 523.647, A.O.Chater, 1993. Second post-1930 record.
- *43/3/6. *Atriplex littoralis* (Grass-leaved Orache) (Llygwyn Arfor). Disturbed saltmarsh, W bank of Afon Leri, Ynys-las, SN/616.934; disturbed saltmarsh, Aberystwyth harbour, SN/582.811; clearing in *Bolboschoenus maritimus/Carex riparia* brackish marsh, Glandyfi, SN/596.970; top of rank saltmarsh, Ystwyth estuary, Aberystwyth, SN/580.806, all A.O.Chater, 1993. First, second and subsequent records.
- *43/3/2×4. *Atriplex × gustafssoniana* (*A. prostrata* × *A. longipes*) (Kattegat Orache). Disturbed saltmarsh, W bank of Afon Leri, Ynys-las, SN/616.934; saltmarsh by house on shore, Netpool, Cardigan, SN/173.461, A.O.Chater, 1993. First and second records. Frequent in most suitable sites in v.c. 46, in the Dyfi, Clarach, Aberystwyth, Aberaeron and Teifi saltmarshes.

- *!44/1/1x2. *Amaranthus × ozanorii* (*A. retroflexus* × *A. hybridus*) (a hybrid amaranth). Frequent in maize fields on Oernant farm, Penparc, SN/203.480 – 195.476, A.O.Chater, 1992, det. T.B.Ryves. Neither parent present; the plants grew well from seed sown in garden in 1993.
- +46/1/1c. *Arenaria serpyllifolia* subsp. *leptoclados* (Slender Sandwort) (Tywodlys Main). Gravelly car parking area by farm and trunk road, Eisteddfa Gurig, SN/797.840, A.O.Chater, 1993. Perhaps introduced to this upland site at 410m a.s.l. with gravel.
- +46/7/12. *Cerastium semidecandrum* (Little Mouse-ear) (Clust Llygoden Bach). Disturbed sandy ground, Penparc sand quarries, SN/201.487, S.P.Chambers & A.O.Chater, 1993.
- *!46/18/1. *Lychnis coronaria* (Rose Campion) (Lluglys Gwridog). Disused railway, Llanfarian, SN/591.778, S.P.Chambers, 1993.
- +46/20/9a. *Silene latifolia* subsp. *alba* (White Campion) (Gludlys Gwyn). Waste ground by new house, Eisteddfa-gurig, SN/797.840, S.P.Chambers, 1993.
- +46/20/11. *Silene gallica* (Small-flowered Catchfly) (Gludlys Amryliw). Disturbed sandy ground, Penparc sand quarries, SN/201.487, A.O.Chater & S.P.Chambers, 1993.
- +!47/1/2. *Persicaria campanulata* (Lesser Knotweed) (Clymllys Lleiaf). Colony 3×2m on roadside verge, Penpompren, Ty'n-y-graig, SN/694.686, A.O.Chater & L.Gander, 1993.
- +47/1/9. *Persicaria amphibia* (Amphibious Bistort) (Canwraidd Goch). Muddy hollow by Afon Teifi, 200m SS/E of Pont Ceri, SN/296.417; marshy pool, The Moat, Llandyfröög, SN/341.408, both A.O.Chater & T.C.G.Rich, 1993.
- +47/4/6. *Polygonum rurivagum* (Cornfield Knotgrass) (Canclwm Tir År). Fallow field (oats in 1992), Penralltisaf, Llechryd, SN/217.445, A.O.Chater & L.Gander, 1993.
- +47/8/1b. *Rumex acetosella* subsp. *pyrenaicus* (Sheep's Sorrel) (Suran yr Yd). Dominant on spoil heap of Ty-llwyd leadmine, Cwm Rehidol, SN/699.797, S.P.Chambers, 1993.
- +47/8/3c. *Rumex acetosa* subsp. *biformis* [Sea Sorrel] (Suran Arfor). Sea cliffs, Alt Wen, 2km S of Aberystwyth, SN/576.795, S.P.Chambers, 1993.
- *47/8/15x19. *Rumex sanguineus* × *R. obtusifolius* (a hybrid dock). Waste ground, Glanyrafon Industrial Estate, Llanbadarn Fawr, SN/611.803, A.O.Chater, 1993, conf. J.R.Akeroyd.
- +50/1/1. *Elatine hexandra* (Six-stamened Waterwort) (Gwybybyr Chwe Brigerog). Growing on gravel substrate and floating free in Llyn Maeslyn, SN/693.627, A.O.Chater & C.Mossop, 1993. Not seen before in this much-botanised lake.
- +\$62/10/1. *Matthiola incana* (Hoary Stock) (Murwyll Coesbren). Landward slope of sea beach 100m N of Lifeboat Station, Borth, SN/608.891, A.O.Chater, 1993. First post-1930 record and second record for v.c.; known here fore several years
- +62/12/3. *Rorippa islandica* (Northern Yellow-cress) (Berwr Melyn y Gogledd). Ox-bow depression by Afon Teifi, 200m SS/E of Newcastle Emlyn castle, SN/312.405, T.C.G.Rich & A.O.Chater, 1993. Second record. Details of further records and of the species' general distribution on the Teifi are being published separately.
- +62/22/1. *Erophila majuscula* (Hairy Whitlowgrass) (Bystwn Blewog). Rabbit-grazed grey dunes, well away from colonies of *E. verna* and *E. glabrescens*, Ynys-las, SN/610.940, A.O.Chater, 1993, conf. T.T.Elkington.
- +62/22/3. *Erophila glabrescens* (Glabrous Whitlowgrass) (Bystwn Llyfn). Sandy grassland, Penyrgydyd dunes, Gwbert, SN/162.485, A.O.Chater, 1991, det. T.T.Elkington. Second record.
- +62/23/1. *Cochlearia anglica* (English Scurvygrass) (Llwylys Lloegr). Tidal bank of Afon Leri E of Borth church, SN/616.898, A.O.Chater, 1993.
- +\$62/34/5. *Brassica nigra* (Black Mustard) (Cedw Du). Sparse weed in barley crop, 500m N of Cledan, Nebò, SN/539.659, A.O.Chater, 1993, conf. T.C.G.Rich.
- +65/7/1. *Andromeda polifolia* (Bog-rosemary) (Rhosmari Gwyllt). Erosion mire 600m WNW of Bryn Llychese, SN/819.809, A.O.Chater, 1993.
- +65/13/4. *Vaccinium vitis-idaea* (Cowberry) (Llus Coch). Gorge of Nant y Gerwyn in conifer plantations, 1.5km WNW of Nantystalwyn, SN/790.578, R.N.Thompson, 1993.
- *75/9/13b. *Potentilla erecta* subsp. *strictissima* (Tormentil) (Tresgl y Moch). Deep heather, Draws Drum, 5km E of Ponterwyd, SN/797.805; deep heather in conifer plantation, 2km E of Ysbyty

- Cynfyn, SN/772.790, both A.O.Chater, 1991, conf. B.Harold. First and second records; also in several other places in upland heather on blanket mire.
- *75/9/14 x15 *Potentilla × mixta* (*P. anglica* × *P. reptans*) (Hybrid Cinquefoil). Grassy laneside bank, Felin Ganol, Penparc, SN/199.487; mown grassland, A.A.E. Site, Aber-porth, SN/241.522, both A.O.Chater, 1992; conf. B.Harold. First and second records.
- *75/13/3. *Geum macrophyllum* (Large-leaved Avens). Abundant along 30m of roadside verge and banks, and for 130m up wooded dingle of Afon Wyre, Cwmyrochfa, 1.5km N of Bronnant, SN/640.688, Gwyn Jones, 1993, det. A.O.Chater. The owner of the land says it has been abundant here for at least 40 years. First record for Wales.
- 75/17/1. *Sanguisorba officinalis* (Great Burnet) (Llysyrlys). Roadside verge below Braich-garw, Tal-y-bont, SN/661.888, S.P.Chambers, 1993.
- *75/18/1. *Acaena novae-zelandiae* (Pirri-pirri-bur) (Cyngaf Piripiri). Shale slopes under pines, U.C.W. campus, Penglais, Aberystwyth, SN/597.817, S.P.Chambers, 1993.
- 75/19/14. *Alchemilla glabra* (Smooth Lady's-mantle) (Mantell Fair y Nant). Frequent in unimproved pasture, 2km W of Llangwyryfon, SN/577.703, A.Moorby, 1993.
- *75/32/5. *Cotoneaster affinis* (Purpleberry Cotoneaster). Dominant in hedges on both sides of road, including many self-sown bushes, for 150m N of Ty-rhos, 1km S of Plwmp, SN/371.513, M.Evans, 1978, det. J.Fryer, 1993.
- 77/19/20. *Trifolium striatum* (Knotted Clover) (Meillionen Rychog). Disturbed sandy ground, Penparc sand quarries, SN/201.487, A.O.Chater & S.P.Chambers, 1993.
- *79/2/2. *Myriophyllum aquaticum* (Parrot's-feather). Among *Azolla* in pond in converted slurry pit, Llain-wen, Synod Inn, SN/392.550, A.O.Chater, 1993.
- 84/4/4. *Oenothera cambrica* (Small-flowered Evening-primerose) (Melyn yr Hwyr Cymreig). Disturbed ground, Penparc sand quarries, SN/201.483, A.O.Chater, 1993.
- 11/2/1/6. *Oxalis stricta* (Upright Yellow-sorrel) (Suran Felen Unionsyth). Riverbank by playing fields, Llandysul, SN/420.404, A.O.Chater & T.C.G.Rich, 1993.
- *13/3/1/1. *Geranium endressii* (French Crane's-bill) (Troedrudd Ffrengig). Near layby in mixed woodland, Cwm Woods, 2km NE of Aberystwyth, SN/602.832, S.P.Chambers, 1993.
- *13/5/1/1. *Impatiens noli-tangere* (Touch-me-not Balsam) (Ffromlys). 'in a gulley at Capel Bangor', SN/6.7, C.Morley in MS. notebook in Ipswich Museum, 1939, per A.P.Fowles. Claude Morley, lepidopterist, was familiar with this species as the food plant of the Netted Carpet moth, and recorded finding 'one strong bed' of the *Impatiens* but not the moth here.
- 10/7/43/3. *Torilis nodosa* (Knotted Hedge-parsley) (Troed-y-cyw Clymog). Lawn of Royal Aircraft Establishment site, Aber-porth, SN/247.516, A.O.Chater, 1993.
- 10/7/44/1c. *Daucus carota* subsp. *gummifer* (Sea Carrot) (Moronen y Môr). Mixed population with subsp. *carota* on grassy slope above sea beach, Cwmtudu, SN/355.575, A.O.Chater, 1993.
- 116/1/2. *Lithospermum officinale* (Common Gromwell) (Maenhad Meddygol). Two shrivelled plants among weedy vegetation on sandy slope reconstructed in 1991 between road and beach, 450m N of Nantyferwig, Gwbert, SN/165.484, 1993, A.O.Chater. The only previous record for v.c. 46 is by Salter from here in 1929, a remarkable instance of persistence in a much-disturbed site.
- *115/15/1x4. *Myosotis × suzae* (*M. scorpioides* × *M. laxa*) (a hybrid forget-me-not). Several plants at muddy, poached margin of pond, The Moat, Llandyfriog, SN/342.408, A.O.Chater, 1993, conf. P.M.Benoit. Having been shown this hybrid near Bala by P.M.B. the previous week it proved easy to spot by the Teifi.
- +113/23/1. *Mentha arvensis* (Corn Mint) (Mintys yr Yd). Fallow field (oats in 1992), Penralltisaf, Llechryd, SN/217.445, A.O.Chater & L.Gander, 1993. Although frequently recorded in the past, there seems to be only one other post-war record.
- +130/1/6. *Callitrichia brutia* (Pedunculate Water-starwort) (Brigwlydd Coesog). Ox-bow hollow by Teifi 200m S of Newcastle Emlyn castle, SN/312.405; +wet hollow in pasture, 500m SW of Llwynduris Farm, Llandygwydd, SN/236.433; +muddy hollow behind shingle beach by Teifi 200m W of Pont Llanfihangel, SN/453.401; +muddy margin of Teifi 400m S of Llanybydder church; all A.O.Chater & T.C.G.Rich, 1993.

- *121/1/3b. *Plantago major* subsp. *intermedia* (Greater Plantain) (Llwynhidydd Mawr). Edge of ploughed field, Ty-gwyn, Mwnt, SN/197.521, J.R.Akeroyd, A.O.Chater & C.D.Preston, 1987; reconstructed roadside bank by A44, Lovesgrove, SN/636.810, S.P.Chambers, 1992. First and second records.
- *124/20/5x9. *Euphrasia arctica* × *E. confusa* (a hybrid eyebright). Llwynimalus leadmine, Ty'n-y-graig, SN/690.679, S.P.Chambers, 1993, det. A.J.Silverside.
- *124/25/2b. *Pedicularis sylvatica* subsp. *hibernica* (Lousewort) (Melog y Cŵn). Heathy grassland, Nanthenfoel, Pont Creuddyn, SN/542.521, A.O.Chater & D.Glyn Jones, 1993; flush in pasture, Cefnyresgair-fawr, 3km ESE of Tregaron, SN/707.541, A.O.Chater, 1993. First and second records; although searched for for many years, these are the only two records so the subsp. is probably genuinely rare in v.c. 46.
- 125/2/2. *Orobanche rapum-genistae* (Greater Broomrape) (Gorfanc Mwyaf). c.8 spikes in gorse at edge of wood NNE of Pen-y-bwlch, Tan-y-bwlch, SN/681.790, A.Moorby, 1993 (known here by J.H.Salter from 1904 to 1939); 7 spikes among gorse and broom on N bank of Afon Ystwyth, 150m S of Pant-mawr, Llanilar, SN/609.754, J.P.Lyons, 1993; 15 spikes among gorse 250m N of here, SN/613.754, J.Morley, 1993. Currently known from 9 sites in v.c. 46.
- *1129/1/4. *Campanula persicifolia* (Peach-leaved Bellflower) (Clychlys Peatws-ddail). Patch with c.12 inflorescences on streambank by road bridge E of Ynys-hir, Eglwys-fach, SN/684.958, A.O.Chater, 1993.
- +1131/5/1. *Leycesteria formosa* (Himalayan Honeysuckle) (Bachgen Llwm). Naturalised in estate woodland, Derry Ormond, Betws Bledrws, SN/592.523, A.O.Chater, 1993.
- +133/1/2. *Valerianella carinata* (Keeled-fruited Cornsalad) (Llysiau'r Oen Rhychiog). One plant on reconstructed hedgebank, Cefn Hendre farm, Waun Fawr, SN/606.820, S.P.Chambers, 1993.
- +135/6/3. *Cirsium dissectum* (Meadow Thistle) (Ysgallen Gorswaun). Colony c.30 × 20m, and another of a few shoots only, centre of Silian Common, SN/565.517, J.Turner & S.L.N.Smith, 1993.
- +\$135/22/1. *Lactuca serriola* (Prickly Lettuce) (Gwylfaeth Bigog). Waste ground, SW corner of Glanyrafon Industrial Estate, Llanbadarn Fawr, SN/610.800, A.O.Chater, 1993.
- +135/30/4. *Filago minima* (Small Cudweed) (Edafeddog Lleiaf). Abundant on track verges and open ground, Penparc sand quarries, SN/199.484, A.O.Chater & C.D.Preston, 1993. Only extant site, and only second record since 1935 (E.H.Chater saw it at Ynys-las in 1958).
- *1135/41/3 × 4. *Aster × versicolor* (*A. laevis* × *A. novi-belgii*) (Late Michaelmas-daisy). Bank of Afon Cletwr by tidal limit, Tre'r-ddol, SN/653.929, A.O.Chater, 1992, det. P.F.Yeo. Another colony of *Aster* nearby is considered by Yeo to be close to *A. concinnus* but its exact identity remains uncertain.
- +135/56/1. *Chrysanthemum segetum* (Corn Marigold) (Melyn yr Ŷd). Waste ground by farm, Eisteddfa-gurig, SN/797.840, S.P.Chambers, 1993.
- +†135/71/3. *Petasites albus* (White Butterbur) (Alan Bach). Mixed estate woodland E of Falcondale mansion, Lampeter, SN/565.491, A.O.Chater, 1993. Second record.
- +1138/4/2. *Elodea nuttallii* (Nuttall's Waterweed) (Alaw Nuttall). Dominant over c.1 acre pond 100m W of Blaenplwyf Farm, Felin Wynt, SN/217.512, A.O.Chater & S.P.Chambers, 1993.
- +142/1/5. *Potamogeton berchtoldii* (Small Pondweed) (Dyfrillys Eiddil). Ox-bow pond NW of Afon Teifi, 400m NE of Cellan church, SN/616.499, A.O.Chater, 1993; +in Teifi 400m S of Llanybydder church, SN/518.435, A.O.Chater & T.C.G.Rich, 1993.
- +142/1/14. *Potamogeton obtusifolius* (Blunt-leaved Pondweed) (Dyfrillys Gwelltog). Mesotrophic lake, Llyn Maeslllyn, SN/693.627, A.O.Chater & C.Moscrop, 1993. Second record. Probably a new arrival in this regularly botanised lake.
- +151/1/6. *Juncus foliosus* (Leafy Rush) (Brwynen Ddeiliog). Gravelly streamsides by ford, Dolauwgwyrddonisaf, Lampeter, SN/556.466, A.O.Chater & T.C.G.Rich, 1993; +margin of drained reservoir, Bryndyfi leadmine, Tre'r-ddol, SN/684.935, A.O.Chater, 1993; +track by moorland stream, 300m NE of Ceiro, Pumlumon, SN/760.823, A.O.Chater, 1993; +base-rich

- flush, N of Llwyn-llywd, Penparc, SN/201.488, A.O.Chater & S.P.Chambers, 1993; +flush above Braich-garw, Tal-y-bont, SN/661.887, S.P.Chambers, 1993.
- +152/1/8. *Juncus ambiguus* (Frog Rush) (Brwynen y Broga). Saltmarsh hollows in horse-grazed pasture, S of Felin-y-mor, 1km S of Aberystwyth, SN/581.801, A.O.Chater, 1993.
- +152/3/5. *Eleocharis quinqueflora* (Few-flowered Spike-rush) (Sbigfrwynen Goch). Locally dominant in flush on N facing slope 1.2km ESE of Pontrhyd-y-groes, SN/752.718, A.O.Chater, 1993. The only upland (320m a.s.l) record in v.c. 46.
- +152/5/1. *Scirpus sylvaticus* (Wood Club-rush) (Clwbfrwynen y Coed). Abundant in damp hollow in pasture by Teifi, 200m W of Cellan church, SN/611.497, A.O.Chater, 1993.
- +152/16/8b. *Carex muricata* subsp. *lamprocarpa* (Small-fruited Prickly-sedge) (Hesgen Bigog Hwyr). Abundant huge tussocks in recently felled conifer plantation S of Afon Tarenig, 200m N of Cae Gaer, SN/823.822, A.O.Chater, 1993.
- +152/16/18. *Carex dioica* (Dioecious Sedge) (Hesgen Ysgar). Base-rich flushes below Maesymfeillion, Penparc, SN/195.482, A.O.Chater & S.P.Chambers, 1993.
- +152/16/24. *Carex lasiocarpa* (Slender Sedge) (Hesgen Fain). Locally dominant in boggy pools, but only one inflorescence seen, S part of big mire at source of Afon Tywi, SN/801.628, A.O.Chater, 1993.
- +152/16/27. *Carex pseudocyperus* (Cyperus Sedge) (Hesgen Hopysaidd). Abundant around pond dug out of swampy wooded hollow a year ago, Cwmsaeson, Oakford, SN/453.585, A.O.Chater & D.Glyn Jones, 1993. Second record; clearly present here before pond was dug. The site is only 3km from the only other site for this species, where there is a solitary clump.
- *+152/16/59a. *Carex magellanica* subsp. *irrigua* (Tall Bog-sedge) (Hesgen Eurwerdd Lefn). Watershed mire with abundant *Andromeda*, Drybedd, Pumlumon, SN/779.832, A.O.Chater, 1993.
- +152/16/65. *Carex aquatilis* (Water Sedge) (Hesgen y Dŵr). Fringing S bank of Afon Teifi 350m WNW of Cellan church, SN/610.498, A.O.Chater, 1993.
- +152/16/2a. *Puccinellia distans* subsp. *distans* (Reflexed Saltmarsh-grass) (Gweunwellt Gwrthblygedigaidd). Sown with *Trifolium fragiferum* and *Lolium perenne* along 2.5km of reconstructed floodbank along tidal part of Afon Leri between Borth and Ynys-las, W of river, SN/616.898 – 616.920, A.O.Chater, 1993.
- *+153/28/2a. *Avena sterilis* subsp. *ludoviciana* (Winter Wild-oat) (Ceirchwellt Gwyllt yr Hydref). Manure heap on Welsh Agricultural College field, Lovesgrove, SN/634.811, S.P.Chambers, 1993. The manure and straw came from the College stables, but the origin of the feed and straw before that is uncertain.
- +153/30/1. *Trisetum flavescens* (Yellow Oat-grass) (Ceirchwellt Melyn). 2 colonies on mortar-rich mound, Cwmsymlog leadmine, SN/699.837, A.O.Chater, 1993. Presumably a recent arrival on this much-botanised site.
- +153/47/6. *Alopecurus myosuroides* (Black-grass) (Cynffonwellt Du). Vegetated rubble-tip in marshy pasture, just SE of Pont Einon, 2km WNW of Tregaron, SN/672.612; +building site at N end of Llandre village, SN/626.871, both A.O.Chater, 1993.
- +153/59/4. *Hordeum secalinum* (Meadow Barley) (Heiddwellt y Maes). Roadside verge of B4343 opposite Aber-coed, 2km SS/W of Tregaron, SN/669.580, A.O.Chater, 1993.
- *+153/62/ric. *Cortaderia richardii* (Endlicher) Zotov (a pampas-grass). Self-sown tussock with 26 inflorescences in gorse on slope above refuse tip, SW side of Pendinas, Aberystwyth, SN/584.799, A.O.Chater, 1993.
- *+153/68/1. *Echinochloa crusgalli* (Cockspur) (Cibogwellt Rhydd). Abundant in marsh on site of former woodyard, 500m N of Lampeter College, SN/579.488, A.O.Chater, 1993.
- +158/12/2. *Lilium pyrenaicum* (Pyrenean Lily) (Cap y Twrc Melyn). 2 clumps on roadside hedgebank 700m WSW of Rhod-mad, on B4576, SN/587.737, R.Howard, 1993.
- +162/13/1. *Platanthera chlorantha* (Greater Butterfly-orchid) (Tegeirian Llydanwyrrdd). 2 spikes in pasture above Braich-garw, Tal-y-bont, SN/661.887, S.P.Chambers, 1993.

- +162/17/1. *Coeloglossum viride* (Frog Orchid) (Llys Ysgyfarnog). Frequent in pasture near Llanfair Clydogau, unploughed since at least 1945, SN/6.4, A.O.Chater & L.Gander, 1993. Second extant locality and only the second record since 1926.
- +162/20/3. *Orchis morio* (Green-winged Orchid) (Tegeirian y Waun). c.30 spikes in unimproved grassland, 500m W of Banc, Llanrhystud, SN/534.703, A.Williams, A.Moorby & S.Morley, 1993.
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MONTGOMERY, v.c. 47 (comm. Mrs M.Wainwright)

- *!75/32/13. *Cotoneaster lacteus* (Late Cotoneaster). Limestone scree, Llanymynech rocks, SJ/261.218, M.Wainwright & J.Pedlow, 1993, conf. J.Fryer. First record.
- +!75/32/21. *Cotoneaster horizontalis* (Wall Cotoneaster) (Cotoneaster y Mur). Bridge over River Twymyn, SH/846.031, C.A.Small & H.Formaggia, 1993. Second record.
- *!75/32/22. *Cotoneaster hjelmqvistii* (Hjelmqvist's Cotoneaster). Limestone scree, Llanymynech rocks, SJ/261.218, M.Wainwright & J.Pedlow, 1993, conf. J.Fryer. First record.
- *84/1/3x8. *Epilobium montanum* × *E. ciliatum* (a hybrid willowherb). Gravel in car park, Caersws, SO/031.918, P.M.Benoit, 1993. First record.
- *!118/23/3x4. *Mentha × villosa* (*M. spicata* × *M. suaveolens*) (Apple Mint) (Mintys Lled-grynddail). Large clump, probably a well-established garden outcast, car park, Caersws, SO/031.918, P.M.Benoit & Flora Recording party, 1993. First record.
- *124/20/7x9. *Euphrasia nemorosa* × *E. confusa* (a hybrid eyebright). Large population in mortar-rich turf below tumbled building, Dylife, SN/862.941, S.P.Chambers, 1993. First record.
- +125/5/1. *Limosella aquatica* (Mudwort) (Lleidlys). Drying mud of River Severn oxbows, near Newtown, SO/1.9., M.E.Gillham, 1986.
- +135/6/9x10. *Cirsium × celakovskianum* (*C. palustre* × *C. arvense*) (a hybrid thistle). One plant with *C. palustre* on derelict railway land near Caersws station, SO/029.919, P.M.Benoit, 1993. Second record.
- +135/28/1. *Hieracium sabaudum* (a hawkweed). Roadside bank, near City, SO/21.89, R.G.Ellis, 1982, det. G.Hutchinson.
- *135/62/13x18. *Senecio × subnebrodensis* (*S. squalidus* × *S. viscosus*) (a hybrid ragwort). One plant, with both parents, on derelict railway land near Caersws station, SO/029.919, P.M.Benoit, 1993. First record.
- 162/16/1b. *Gymnadenia conopsea* subsp. *densiflora* (Fragrant Orchid) (Tegeirian Pér). Winter-wet limestone grassland, Llanymynech Rocks, SJ/26.21, one plant, E.D.Pugh, 1978, now a colony of 25+ and confirmed as subsp. *densiflora* by F.Rose in 1993.
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MERIONETH, v.c. 48 (comm. P.M.Benoit)

- *!75/19/15. *Alchemilla mollis* (a lady's-mantle). Bushy lake shore, with *A. glabra*, Llyn Tegid near Llanycil, SH/9.3, P.M.Benoit & A.O.Chater, 1993.
- *!125/1/2. *Lathraea clandestina* (Purple Toothwort) (Dantlys Porffor). Semi-artificial woodland, W bank of Afon Dulas near Esgair-geiliog, N of Machynlleth, SH/7.0, Selina Grasse & Alison Morton, 1990; +and well established, thriving and spreading in open *Salix* scrub and short grassland on shore line, Dwyryd estuary, N of Clogwyn Melyn, SH/589.375, R.E.Hughes, 1993. First and second records.
- +147/2/1. *Lysichiton americanus* (American Skunk-cabbage). Well established and thriving in open *Salix* scrub and short grassland on shore line, Dwyryd estuary, N of Clogwyn Melyn, SH/589.375, R.E.Hughes, 1993.
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- *152/12/1. *Schoenus nigricans* (Black Bog-rush) (Corsfrwynen Ddu). In some quantity with *Juncus maritimus* in upper saltmarsh, near Pennal, SN/6.9, R.Squires, 1993, conf. P.M.Benoit, First certain record.
- S162/3/4. *Epipactis helleborine* (Broad-leaved Helleborine) (Caldryst Llydanddail). Lawn of chalet on former Army camp site, Bronaber, SH/71.31, I.T.Jones, 1993, conf. G.Hutchinson.

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

- 164/1. *Gymnocarpium dryopteris* (Oak Fern) (Llawredynen y Derw). Luxurious colony amongst boulders near summit, Moel yr Ogof, SH/55.47, D.Jones, 1992, conf. G.Hutchinson.
- 207/2a. *Pinus nigra* subsp. *nigra* (Austrian Pine) (Piniwydden Awstria). Edge of woodland, Great Orme, Llandudno, SH/77.82, G.Battershall, 1993.
- +28/17/4. *Thalictrum minus* (Lesser Meadow-rue) (Ariantlys Bach). Limestone, Little Orme, SH/81.82, G.Battershall, 1990.
- +130/1/3. *Papaver somniferum* (Opium Poppy) (Cwsglys). Disturbed ground, Great Orme Copper Mines, SH/770.830, W.McCarthy, 1993; +waste ground, Penrhyn Bay, SH/82.81, G.Battershall, 1990.
- +31/4/1. *Ceratocapnos claviculata* (Climbing Corydalis)(Mwg y Ddaear Gafaelgar). Scrambling amongst gorse on Cwm Mountain, Llandudno, SH/786.803, W.McCarthy, 1993.
- +34/2/1. *Humulus lupulus* (Hop) (Hopsyen). Banks of brook from reservoir, near Pistyll Church, Lleyn Peninsula, SH/32.42, Lars J.Larsen, 1991.
- +43/1/8. *Chenopodium polyspermum* (Many-seeded Goosefoot) (Troed yr Wydd Luos-hadog). Garden weed, Great Orme, SH/773.827, W.McCarthy, 1991 & 1992.
- +43/1/12. *Chenopodium murale* (Nettle-leaved Goosefoot) (Troed yr Wydd Ddynad-ddail). Garden weed, Penmachno, SH/7.5, M.Morris, 1989, det. R.G.Ellis & M.Mullin.
- +143/4/1c. *Beta vulgaris* subsp. *vulgaris* (Root Beet). Waste ground, Glan Conwy RSPB Reserve, SH/79.77, G.Battershall, 1993.
- +46/5/4. *Stellaria neglecta* (Greater Chickweed) (Brechlys Mwyaf). Woodland edge, Nant y Gamar, SH/80.81, G.Battershall, 1991.
- +145/7/3. *Cerastium tomentosum* (Snow-in-summer) (Clust Llygoden y Felin). Waste ground, Penrhyn Bay, SH/82.81, G.Battershall, 1990.
- 467/11. *Cerastium pumilum* (Dwarf Mouse-ear) (Clust Llygoden Bitw). Limestone grassland, Nant y Gamar, Llandudno, SH/80.81, G.Battershall, 1992. First record for c.40 years.
- +46/10/1. *Sagina nodosa* (Knotted Pearlwort) (Corwlyddyn Clymog). Closely grazed turf near tram station, Great Orme, SH/771.833, W.McCarthy, 1993.
- +46/17/2. *Spergularia media* (Greater Sea-spurrey) (Troellys Mawr). Sandy grassland above beach, below Marine Drive, Great Orme, SH/762.826, W.McCarthy, 1993.
- +46/17/4. *Spergularia rubra* (Sand Spurrey) (Troellys Coch). Limestone grassland, Little Orme, SH/81.82, G.Battershall, 1990.
- +146/18/1. *Lychins coronaria* (Rose Campion) (Lluglys Gwridog). Waste ground near railway station, Llandudno, SH/793.778, W.McCarthy, 1993.
- 467/0/11. *Silene gallica* (Small-flowered Catchfly) (Gludlys Amryliw). Exposed soil beneath 'slipped' cliff, Porth Dinllaen towards Morfa Nefyn, SH/279.408, R.FitzGerald, 1981, not seen subsequently.
- +146/22/1. *Saponaria officinalis* (Soapwort) (Sebonllys). Waste ground, Penrhyn Bay, SH/82.81, G.Battershall, 1990.
- 147/1/3. *Persicaria wallichii* (Himalayan Knotweed) (Clymog yr Himalaya). River bank, Bettws-y-Coed, SH/79.57, G.Battershall, 1993.
- +471/11. *Persicaria maculosa* (Redshank) (Coesgoch). Waste ground, Penrhyn Bay, SH/82.81, G.Battershall, 1990.

- +47/1/12. *Persicaria lapathifolium* (Pale Persicaria) (Costog y Domen). Disturbed ground, Llandudno, SH/776.808, W.McCarthy, 1993.
- +47/5/3. *Fallopia baldschuanica* (Russian-vine) (Taglys Tibet). Clambering amongst bushes and trees, lane side between Rowen and Pont Hafoty Gwyni, c.1km SW of Rowen, SH/74.71, R.Lewis, 1993.
- +51/1/4. *Hypericum hircinum* (Stinking Tutsan) (Burlinlys Drewwlyd). Many self-sown plants in pavement edges and on wall tops, Great Orme, SH/77.82, W.McCarthy, 1993.
- +53/1/1. *Malva moschata* (Musk Mallow) (Hocysen Fwsg). Limestone grassland, Bryn Euryn, SH/83.80, G.Battershall, 1990.
- 53/2/1. *Lavatera arborea* (Tree-mallow) (Hocyswydden). Waste ground, Glan Conwy RSPB Reserve, SH/79.77, G.Battershall, 1993.
- +57/1/5. *Viola reichenbachiana* (Early Dog-violet) (Gwiolydd y Goedwig). Woodland, Gloddaeth Woods, SH/80.80, G.Battershall, 1993.
- 57/1/4x6. *Viola x intersita* (*V. riviniana* x *V. canina*) (a hybrid dog-violet). Colony c.2m across, grassland, Great Orme, SH/774.826, W.McCarthy, 1993, det. D.M.Moore.
- +57/1/13. *Viola arvensis* (Field Pansy) (Ofergaru). Disturbed ground near entrance to Great Orme Copper Mines, SH/770.830, W.McCarthy, 1993.
- +60/1/1. *Bryonia dioica* (White Bryony) (Bloneg y Ddear). Hedge in woodland, near Goedlodd, Bryn Pydew, SH/807.795, W.McCarthy, 1993.
- +61/1/1. *Populus alba* (White Poplar) (Poplysen Wen). Hedgerow, Mynydd Pant, SH/81.81, G.Battershall, 1991.
- +61/1/1x2. *Populus x canescens* (Grey Poplar) (Poplysen Lwyd). Woodland edge, Bryn Euryn, SH/83.80, G.Battershall, 1990.
- \$61/1/3a. *Populus nigra* subsp. *betulifolia* (Black-9oplar) (Poplysen Ddu). Two trees in each of two sites on grassy banks of River Conway, near Tu hwnt i'r Bont, Pont Fawr, Llanrwst, SH/79.61; one tree in estate woodland, Pensychnant Conservation Centre, Sychnant Pass, W of Conway, SH/752.769; two trees in separate sites, c.1km NW of Llanbedr-y-cennin, SH/75.70; grassland c.1.5km N of Tyn-y-Groes, SH/775.732; border of waste ground, S of A547, Llandudno Junction, SH/802.776, all R.Lewis, 1993. All trees probably planted originally.
- +61/1/3xdel. *Populus x canadensis* (Hybrid Black-poplar) (Poplysen Ddu Ffrengig). Waste ground, Penrhyn Bay, SH/82.81, G.Battershall, 1990.
- +61/2/2. *Salix fragilis* (Crack Willow) (Helygen Frau). Golf course, Llandudno, SH/776.809, W.McCarthy, 1993.
- +61/2/7. *Salix acutifolia* (Siberian Violet-willow). Path through dunes, West Shore, Llandudno, SH/773.812, W.McCarthy, 1993.
- +62/9/1. *Malcolmia maritima* (Virginia Stock) (Murwyll Arfor). Self-sown plants in pavement cracks, Great Orme, SH/773.827, W.McCarthy, 1993.
- +62/11/1. *Barbarea vulgaris* (Winter-cress) (Berwr y Gaeaf). One plant, woodland edge, Great Orme, SH/776.827, W.McCarthy, 1993.
- +62/11/4. *Barbarea verna* (American Winter-cress) (Berwr Tir). Garden weed, Great Orme, SH/773.827, W.McCarthy, 1992, a few plants present each year since 1985; +disturbed roadside, Llandudno, SH/778.812, W.McCarthy, 1992
- +62/12/4. *Rorippa palustris* (Marsh Yellow-cress) (Berwr Melyn y Gors). Shore of Coed-ty reservoir, Dolgarrog, SH/755.665, W.McCarthy, 1992, conf. T.C.G.Rich.
- +62/17/1. *Lunaria annua* (Honesty) (Swilt Dyn Tlawd). Hedgerow, Little Orme, SH/81.82, G.Battershall, 1990.
- +62/22/2. *Erophila glabrescens* (Glabrous Whitlowgrass) (Bystwn Llyfn). Open rocky grassland, in many places, Great Orme, SH/76.82, W.McCarthy, 1993, det. T. Elkington.
- +62/30/1. *Lepidium sativum* (Garden Cress) (Berwr Gardd). Several flowering plants on wall-top, Llandudno, SH/778.826, W.McCarthy, 1992, conf. T.C.G.Rich.
- +62/31/2. *Coronopus didymus* (Lesser Swine-cress) (Olbrain Lleiaf). Old bonfire site, Great Orme, SH/773.825, W.McCarthy, 1993.

- +6/3/1/3. *Reseda lutea* (Wild Mignonette) (Melengu Wyllt Ddisawr). Newly landscaped bank, Pwllheli, SH/38.34, A.P.Conolly & E.Roberts, 1993.
- +6/4/4/1. *Lysimachia nemorum* (Yellow Pimpernel) (Gwlydd Melyn Mair). Woodland, near Gloddaeth Hall, SH/80.80, G.Battershall, 1993.
- +7/9/4/5. *Lysimachia punctata* (Dotted Loosestrife) (Trewynyn Brych). Large clump in disused quarry, Bodafon, Llandudno, SH/801.816, W.McCarthy, 1993.
- +7/1/1/1. *Philadelphus coronarius* (Mock-orange). In rough ground near sandhills, West Shore, Llandudno, SH/774.812, W.McCarthy, 1993.
- 7/2/2/4. *Ribes sanguineum* (Flowering Currant) (Rhyfon Blodeuog). Waste ground S of A547, Llandudno Junction, SH/802.776, R.Lewis, 1993; Woodland edge, Bryn Euryn, SH/83.80, G.Battershall, 1990.
- *7/3/1/3. *Crassula helmsii* (New Zealand Pigmyweed) (Corchwyn Seland Newydd). Filling small pond in grounds of Port Merion village, SH/58.37, R.G.Ellis, 1993.
- +7/3/5/11. *Sedum forsterianum* (Rock Stonecrop) (Briweg Cymreig). Hedgerow, Nant y Gamar, SH/80.81, G.Battershall, 1990.
- +7/5/8/60. *Rubus lindleianus* (a bramble). Hedgerow near Ty'n-y-Groes, SH/78.71, G.Battershall, 1993, det. A.Newton.
- 7/5/8/90. *Rubus amplificatus* (a bramble). Hedgerow, near Llanrwst, SH/79.61, G.Battershall, 1993, det. A.Newton.
- *7/5/8/105. *Rubus incurviformis* (a bramble). Hedgerow, Ty'n-y-Groes, SH/78.71, G.Battershall, 1993, det. A.Newton. First record.
- 7/5/8/112. *Rubus nemoralis* (a bramble). Hedgerow near Rowen, SH/73.70, G.Battershall, 1993, det. A.Newton.
- *7/5/8/122. *Rubus rubritinctus* (a bramble). Hedgerow near Bangor, SH/57.70, G.Battershall, 1993, det. A.Newton. First record.
- *7/5/8/128. *Rubus villicauliformis* (a bramble). Hedgerow near Bangor, SH/55.68, G.Battershall, 1993, det. A.Newton. First Welsh and county record.
- 7/5/8/146. *Rubus bartonii* (a bramble). Hedgerow near Rowen, SH/77.73, G.Battershall, 1993, det. A.Newton.
- 7/5/8/154. *Rubus lanaticaulis* (a bramble). Hedgerow near Rowen, SH/75.70, G.Battershall, 1993, det. A.Newton.
- 7/5/8/174. *Rubus wirralensis* (a bramble). Hedgerow near Rowen, SH/77.73, G.Battershall, 1993, det. A.Newton.
- *7/5/8/209. *Rubus dentatifolius* (a bramble). Hedgerow near Rowen, SH/77.73, G.Battershall, 1993, det. A.Newton. First record.
- *7/5/8/218. *Rubus leyianus* (a bramble). Hedgerow near Bangor, SH/58.68, G.Battershall, 1993, det. A.Newton. First record.
- +7/5/8/287. *Rubus semiglaber* (a bramble). Hedgerow near Rowen, SH/73.70, G.Battershall, 1993, det. A.Newton.
- +7/5/8/319. *Rubus tuberculatus* (a bramble). On limestone, Little Orme, SH/81.82, G.Battershall, 1990.
- +7/5/9/7. *Potentilla recta* (Sulphur Cinquefoil) (Pumdalen Talsyth). Three plants in disused quarry, Bodafon, Llandudno, SH/801.816, W.McCarthy, 1993.
- +7/5/21/4x12. *Rosa x verticillacantha* (*R. arvensis* × *R. canina*) (a hybrid rose). Side of beach path, Porth Oer, N of Aberdaron, SH/16.29, A.P.Conolly & A.Burns, 1993, det. A.L.Primavesi
- *7/5/21/5x18. *Rosa x cantiana* (*R. pimpinellifolia* × *R. rubiginosa*) (a hybrid rose). Hedge, 1km N of Tudweiliog, SH/23.38, A.P.Conolly, 1984, det G.G.Graham & A.L.Primavesi. First Welsh record.
- ?7/5/21/6. *Rosa rugosa* (Japanese Rose) (Rhosyn Japan). Spreading along hedge, Uwchmynydd, SH/14.25, 1980; field, Porth Neigwl, SH/28.26, 1974; hedge, W of Edeyrn, SH/25.38, 1984; shore below dunes, Abersoch, SH/31.29, 1984; dunes, W end of Pwllheli, SH/36.34, 1980; all A.P.Conolly.

- 75/21/12Dum. *Rosa canina* group *Dumales* (Dog-rose) (Rhosyn Coch Gwyllt). Edge of steep bank, Uwchmynydd, SH/15.25, A.P.Conolly, 1993, det. A.L.Primavesi.
- 75/21/12x13. *Rosa × dumalis* (*R. canina* × *R. caesia* subsp. *glaucua*) (a hybrid dog-rose). W of Llangwnadl, SH/19.29, A.P.Conolly, 1984, det A.L.Primavesi.
- 75/21/13b. *Rosa caesia* subsp. *glaucua* (Glaucous Dog-rose) (Rhosyn Llwydwyrrd). Roadside verge, near Bangor, SH/58.68, G.Battershall, 1993, det. A.Newton.
- +75/21/16. *Rosa sherardii* (Sherard's Downy-rose) (Rhosyn Sherard). Roadside bank, E of Aberdaron, SH/18.26, A.P.Conolly, 1980.
- 75/21/19. *Rosa micrantha* (Small-flowered Sweet-briar) (Rhoslyn Pêr). Hedge, Porth Dinllaen, SH/27.40, 1985; pasture W of Efail-newydd, SH/34.35, 1961; both A.P.Conolly, det. A.L.Primavesi.
- +175/22/3. *Prunus cerasifera* (Cherry Plum) (Gaugeiriosen). Hedge at edge of path to Happy Valley, Great Orme, SH/782.828, W.McCarthy, 1993.
- +75/22/5a. *Prunus domestica* subsp. *domestica* (Wild Plum) (Eirinen). Hedgerow, Penrhynside, SH/81.81, G.Battershall, 1992.
- +75/22/6. *Prunus avium* (Wild Cherry) (Ceiriesen Ddu). Woodland edge, Nant y Gamar, SH/80.81, G.Battershall, 1990.
- *!75/22/13. *Prunus lusitanica* (Portugal Laurel) (Llawr-sirianen Portiwgal). Steeply sloping copse between Tyn y Groes and Talycrafn Bridge, SH/785.717, R.Lewis, 1993. First record, originally planted but subsequently bird-sown.
- +75/28/16. *Sorbus rupicola* (Rock Whitebeam) (Cerddinen y Graig). On limestone, Mynydd Pant, SH/81.81, G.Battershall, 199
- *!75/32/10. *Cotoneaster salicifolius* (Willow-leaved Cotoneaster). Hedgerow, Little Orme, Llandudno, SH/81.81, G.Battershall, 1993, det. J.Fryer. First record.
- +!75/32/21. *Cotoneaster horizontalis* (Wall Cotoneaster) (Cotoneaster y Mur). On limestone, Little Orme, SH/81.82, G.Battershall, 1990.
- +175/32/35. *Cotoneaster rehderi* (Bullate Cotoneaster). Bird sown on edge of woodland, between Pontwgan and Rowen, SH/761.717, R.Lewis, 1993. Second record
- +77/14/8. *Vicia tetrasperma* (Smooth Tare) (Corbysen Lefn Ronynnog). Hedgerow, Llandudno, SH/795.789, W.McCarthy, 1992.
- +77/14/12. *Vicia lathyroides* (Spring Vetch) (Ffugbysen y Gwanwyn). Sandy grassland, West shore, Llandudno, SH/773.806, W.McCarthy, 1992.
- +!77/17/1. *Melilotus altissimus* (Tall Melilot) (Meillionen y Ceirw). One plant at roadside, Esgyrynn, near Llandudno Junction, SH/805.788, W.McCarthy, 1992.
- *77/19/1. *Trifolium ornithopodioides* (Bird's-foot Clover) (Corfeillionen Wen). A single plant on sand covered ground, W end of Pwllheli, SH/36.34, A.P.Conolly, 1993. First record.
- +77/19/13. *Trifolium micranthum* (Slender Trefoil) (Meillionen Felen Eiddil). Lawns, Happy Valley, Llandudno, SH/780.830, W.McCarthy, 1992.
- *!77/22/1. *Laburnum anagyroides* (Laburnum) (Tresi Aur). Waste ground, Penrhyn Bay, SH/82.81, G.Battershall, 1992. Third record.
- +81/1/1. *Lythrum salicaria* (Purple-loosestrife) (Llys y Milwr). West roadside ditch between Pantwgan and Llanbedr-y-cennin, SH/76.70, R.Lewis, 1993.
- +84/6/1. *Circaea lutetiana* (Enchanter's-nightshade) (Llysiau Steffan). Woodland near Mynydd Pant, SH/81.81, G.Battershall, 1993.
- +85/1/1. *Cornus sanguinea* (Dogwood) (Cwyros). Hedge in lane to Gloddaeth Isaf farm, Penrhynside, SH/810.807, W.McCarthy, 1993.
- +91/2/9. *Euphorbia lathyris* (Caper Spurge) (Llysiau y Cyfog). One plant in wall of neglected garden, Llandudno, SH/779.820, W.McCarthy, 1993.
- +193/2/1. *Parthenocissus quinquefolia* (Virginia-creeper) (Dringwr Fflamgoch). Waste ground away from gardens, climbing through brambles, Llandudno, SH/774.815, W.McCarthy, 1993.
- +194/1/2. *Linum usitatissimum* (Flax) (Llin Amaeth). Many plants on rough ground, Haulfre Gardens, Great Orme, SH/775.825, W.McCarthy, 1992.

- +102/1/3. *Oxalis corniculata* (Procumbent Yellow-sorrel) (Suran Felen Orweddol). Walls and path edges, Llandudno, SH/775.824, W.McCarthy, 1993.
- +102/1/8. *Oxalis articulata* (Pink-sorrel) (Suran Ruddgoch). Waste ground, Penrhyn Bay, SH/82.81, G.Battershall, 1990.
- 103/1/1 x 2. *Geranium × oxonianum* (*G. endresii* × *G. versicolor*) (Druce's Crane's-bill). Waste ground, Penrhyn Bay, SH/82.81, G.Battershall, 1990.
- +103/1/4. *Geranium rotundifolium* (Round-leaved Crane's-bill) (Pig yr Aran Crynddail). Roadside verge, Great Orme, Llandudno, SH/77.82, G.Battershall & W.McCarthy, 1993.
- +107/8/1. *Myrrhis odorata* (Sweet Cicely) (Cegidien Bér). One plant growing through roses in weedy garden, near Little Orme, SH/812.821, W.McCarthy, 1993.
- +107/28/1. *Apium graveolens* (Wild Celery) (Perllys y Morfa). Sea-cliffs below Marine Drive, Great Orme, SH/752.834, W.McCarthy, 1993.
- +107/40/1. *Pastinaca sativa* (Wild Parsnip) (Panasen Wyllt). Hedgerow, Little Orme, SH/81.82, G.Battershall, 1993.
- +108/3/3. *Centaurium littorale* (Seaside Centaury) (Canri Goch Arfor). Over 100 plants on eroding clay-cliffs above beach, Great Orme, SH/758.829, W.McCarthy, 1992.
- +110/1/3. *Vinca major* (Greater Periwinkle) (Perfagl Mwyaf). Old quarry on Great Orme, SH/766.824, W.McCarthy, 1993.
- +110/9/1. *Datura stramonium* (Thorn-apple) (Meiwyn). Waste ground, Glan Conwy, SH/79.77, G.Battershall, 1993; +in pavement crack, Llandudno, SH/781.824, W.McCarthy, 1990.
- +116/15/7. *Myosotis sylvatica* (Wood Forget-me-not) (Ysgorpionllys y Coed). Hedgerow, Little Orme, SH/81.82, G.Battershall, 1990.
- +116/15/10. *Myosotis discolor* (Changing Forget-me-not) (Ysgorpionllys Amryliw). Limestone grassland, Little Orme, SH/81.82, G.Battershall, 1990.
- +113/1/5x6. *Stachys × ambigua* (Hybrid Woundwort) (Briwlys Croesryw). Small colony at stream-side near Caerhun church, Tyn-y-Groes, SH/777.707, W.McCarthy, 1992.
- +113/1/8. *Stachys arvensis* (Field Woundwort) (Briwlys yr Ŷd). Waste ground, Penrhyn Bay, SH/82.81, G.Battershall, 1990 & 1993.
- +113/5/4. *Lamium hybridum* (Cut-leaved Dead-nettle) (Marddanhadlen Rwygddail). Edge of path to miniature golf-course, Great Orme, SH/774.827, W.McCarthy, 1993.
- 113/6/5. *Galeopsis bifida* (Lesser Hemp-nettle) (Penboeth Liefa). Disturbed ground near entrance to Great Orme Copper Mines, SH/770.830, W.McCarthy, 1993.
- +113/8/13/racxnep. *Nepeta × faassenii* (*N. racemosa* × *N. nepetella*) (a hybrid cat-mint). Waste ground, Great Orme, SH/772.824, W.McCarthy, 1993.
- +113/22/1. *Lycopus europaeus* (Gipsywort) (Llys y Sipsiwn). Rough grassland, golf course, Llandudno, SH/775.806, W.McCarthy, 1993.
- +113/23/1x2. *Mentha × verticillata* (*M. arvensis* × *M. aquatica*) (Whorled Mint) (Mintys Troellaidd). Stream W of Coed Parc Mawr Woodland Trust Reserve, c.1.5km N of Rowen, SH/756.735; +wet marshy area W of River Conway, c.0.65km NW of Tu hwnt i'r Bont, Pont Fawr, Llanrwst, SH/793.618, both R.Lewis, 1993.
- 118/23/4. *Mentha suaveolens* (Round-leaved Mint) (Mintys Deilgrwn). Hedgerow, Mynydd Pant, SH/81.81, G.Battershall, 1990.
- 124/1/2. *Verbascum virgatum* (Twiggy Mullein) (Tewbannog). Rough sand near houses, W end of Pwllheli, SH/36.34, A.P.Conolly, 1993, det. C.A.Stace.
- +124/1/9. *Verbascum nigrum* (Dark Mullein) (Pannog Tywylldu). Edge of field, Mynydd Pant, SH/80.81, G.Battershall, 1993.
- +124/2/2. *Scrophularia auriculata* (Water Figwort) (Gornerth y Dŵr). Hedgerow, Penrhyn Bay, SH/82.81, G.Battershall, 1990.
- +124/7/1. *Antirrhinum majus* (Snapdragon) (Safn y Llew). Hedgerow, Nant y Gamar, SH/80.81, G.Battershall, 1993.
- +124/8/2. *Chaenorhinum minus* (Small Toadflax) (Gingroen Bychan). Path edge, Happy Valley, Llandudno, SH/780.830; platform edge, Llandudno station, SH783.818, both W.McCarthy, 1993.

- +124/9/1. *Misopates orontium* (Lesser Snapdragon) (Trwyn y Llo Bychan). In newly turfed lawn, Great Orme, SH/773.833, W.McCarthy, 1990.
- +124/13/3. *Linaria purpurea* (Purple Toadflax) (Gingroen Cochlas). Waste ground, Penrhyn Bay, SH/82.81, G.Battershall, 1990.
- +124/13/4. *Linaria repens* (Pale Toadlfax) (Gingroen Gwelw). Waste ground behind railway station, Llandudno, SH/784.819, W.McCarthy, 1992
- +124/16/5a. *Veronica austriaca* subsp. *teucrium* (Large Speedwell). Disused quarry, Bodafon, Llandudno, SH/801.816, W.McCarthy, 1993.
- +124/16/12. *Veronica catenata* (Pink Water-speedwell) (Graeanlys y Dŵr Rhuddgoch). Many plants in ditch, Abbey Place, Llandudno, SH/771.822; +around pond, Penrhynside, SH/812.806, both W.McCarthy, 1992
- +124/16/23. *Veronica filiformis* (Slender Speedwell) (Rhwyddlwyn Crwnddail). Grassland, miniature golf course, Great Orme, SH/775.826, W.McCarthy, 1993; +waste ground, Penrhyn Bay, SH/82.81, G.Battershall, 1990.
- +124/16/24b. *Veronica hederifolia* subsp. *hederifolia* (Ivy-leaved Speedwell) (Rhwyddlwyn Eiddewddail). Waste ground, Penrhyn Bay, SH/82.81, G.Battershall, 1992.
- 124/17/ellxspe. *Hebe* × *franciscana* (*H. elliptica* × *H. speciosa*) (Hedge Veronica) (Hebe'r Gwrych). Sand dunes, Llandudno, SH/77.81, G.Battershall, 1993.
- +124/20/5b. *Euphrasia arctica* subsp. *borealis* [Arctic Eyebright] (Effros à Gwallt Byr). Roadside near Llanrwst, SH/8.6, T.G.Evans, 1985, det. A.J.Silverside.
- +129/6/1. *Jasione montana* (Sheep's-bit) (Clefrynn). Limestone grassland, Little Orme, SH/81.82, G.Battershall, 1990.
- 131/1/4. *Sambucus ebulus* (Dwarf Elder) (Ysgawen Fair). Deep cut brook from reservoir, near Pistyll Church, Lleyn Peninsula, SH/32.42, Lars J.Larsen, 1991. Known here for many years.
- +131/2/3. *Viburnum tinus* (Laurustinus) (Tinws). Open hillside, Little Orme, SH/813.821, W.McCarthy, 1993.
- +133/2/2. *Valeriana pyrenaica* (Pyrenean Valerian) (Triaglog Pyreneaid). Roadside near Half-way Bridge, Bethesda, SH/606.690, W.McCarthy, 1993.
- +135/8/1. *Silybum marianum* (Milk Thistle) (Ysgallen Fair). Disturbed ground, Little Orme, SH/812.822, W.McCarthy, 1993.
- +135/11/2. *Centaurea montana* (Perennial Cornflower) (Penlas Fythol). Waste ground, Penrhyn Bay, SH/82.81, G.Battershall, 1990.
- +135/12/1. *Cichorium intybus* (Chicory) (Ysgellog). One plant at path edge, Haulfre Gardens, Great Orme, SH/775.824, W.McCarthy, 1993.
- +135/41/5. *Aster lanceolatus* (Narrow-leaved Michaelmas-daisy). Amongst *Leymus arenarius* on dunes, West Shore, Llandudno, SH/774.812, W.McCarthy, 1993.
- +135/44/1. *Conyza canadensis* (Canadian Fleabane) (Amrhylwyd Canada). Several plants in flower beds, Mostyn Broadway, Llandudno, SH/789.820, W.McCarthy, 1992
- *135/45/1. *Olearia paniculata* (Akiraho). Sand dunes, Llandudno, SH/77.81, G.Battershall, 1993.
- +135/55/1. *Anthemis punctata* (Sicilian Chamomile) (Camri Arfor). Sea-cliffs below Marine Drive, Great Orme, SH/766.823, W.McCarthy, 1993.
- +135/56/1. *Chrysanthemum segetum* (Corn Marigold) (Melyn yr Yd). Roadside verge, Beddgelert, SH/57.49, G.Battershall, 1993.
- +135/62/17. *Senecio sylvaticus* (Heath Groundsel) (Creulys y Rhosydd). Meadow, Mynydd Pant, SH/81.81, G.Battershall, 1990.
- +145/1/1. *Zannichellia palustris* (Horned Pondweed) (Cornwlyddyn). Ditch in golf course, Llandudno, SH/775.806, W.McCarthy, 1993.
- +151/1/13. *Juncus articulatus* (Jointed Rush) (Brwynen Gymalog). Waste ground, Glan Conwy, SH/80.77, G.Battershall, 1993.
- +151/1/15. *Juncus bulbosus* (Bulbous Rush) (Brwynen Oddfog). Damp trackways, golf course, Llandudno, SH/775.805, W.McCarthy, 1993.

- +151/1/20. *Juncus maritimus* (Sea Rush) (Brwynen Arfor). Sea rocks and grassland below Marine Drive, Llandudno, SH/770.840, W.McCarthy, 1993.
- +152/1/1. *Isolepis setacea* (Bristle Club-rush) (Clwbfrwynen Fach). Damp trackways, golf course, Llandudno, SH/775.808, W.McCarthy, 1993.
- +152/3/5. *Eleocharis quinqueflora* (Few-flowered Spike-rush) (Sbigfrwynen Goch). Wet flush near Porth-yr-Helyg, Great Orme, SH/771.840, W.McCarthy, 1992.
- +152/16/8b. *Carex muricata* subsp. *lamprocarpa* (Small-fruited Prickly-sedge) (Hesgen Bigog Hwy). Rough grassland, Pen-y-Dinas, Great Orme, SH/778.830, W.McCarthy, 1993, det. A.O.Chater.
- +152/16/9b. *Carex divisa* subsp. *leersii* [Many-leaved Sedge] (Hesgen Felen-werdd y Calch). Base of limestone cliffs, Pen-y-Dinas, Great Orme, SH/778.829, W.McCarthy, 1993, det. A.O.Chater.
- +152/16/32. *Carex sylvatica* (Wood-sedge) (Hesgen y Coed). Woodland, Nant y Gamar, SH/80.81, G.Battershall, 1993.
- 152/16/55. *Carex pilulifera* (Pill Sedge) (Hesgen Bengron). Grassy slopes near lighthouse, Great Orme, SH/752.841, W.McCarthy, 1993.
- +152/16/73. *Carex pulicaris* (Flea Sedge) (Chwein-hesgen). Wet flush above Marine Drive, Great Orme, SH/770.839, W.McCarthy, 1993
- +153/11/1. *Milium effusum* (Wood Millet) (Miledwellt). Woodland in Goedlodd, Bryn Pydew, SH/807.796; in Marl Woods, Llandudno Junction, SH/798.789, both W.McCarthy, 1992.
- 153/12/2. *Festuca arundinacea* (Tall Fescue) (Peisgwelt Tal). Sandy ground, West Shore, Llandudno, SH/774.814, W.McCarthy, 1993.
- 153/12/7b. *Festuca rubra* subsp. *junccea* (Red Fescue) (Peisgwelt Coch). Sea rocks and grassland below Marine Drive, Great Orme, SH/770.840, W.McCarthy, 1993
- **153/12/7e. *Festuca rubra* subsp. *arctica* (Red Fescue) (Peisgwelt Coch). Steep grassy slopes, between Llyn Llydaw and Glaslyn, Snowdon, SH/6.5, E.K.Horwood, 1955, det. A.K.Al-Bermani. The only known Welsh record.
- 153/14/2. *Vulpia bromoides* (Squirreltail Fescue) (Peisgwelt Anhiliog). Path edge, Happy Valley, Llandudno, SH/780.831, W.McCarthy, 1993.
- +153/14/3. *Vulpia myuros* (Rat's-tail Fescue) (Peisgwelt y Fagwyr). Platforms, Llandudno railway station, SH/784.819, W.McCarthy, 1992.
- 153/16/2. *Puccinellia distans* (Reflexed Saltmarsh-grass) (Gweunwelt Gwrthblygedigaidd). Sandy grassland near beach below Marine Drive, Great Orme, SH/762.826, W.McCarthy, 1993
- +153/18/5. *Poa pratensis* (Smooth Meadow-grass) (Gweunwelt Llyfn). Waste ground, Penrhyn Bay, SH/82.81, G.Battershall, 1990.
- +153/18/9. *Poa compressa* (Flattened Meadow-grass) (Gweunwelt Cywasg). Amongst roadside gravel, Llandudno Junction, SH/787.782; +path edges, RSPB Reserve, Glan Conwy, SH/80.77, both W.McCarthy, 1993.
- +153/18/12. *Poa nemoralis* (Wood Meadow-grass) (Gweunwelt y Coed). Woodland, Gloddaeth Woods, SH/80.80, G.Battershall, 1993.
- +153/28/3. *Avena fatua* (Wild-oat) (Ceirchwelt Gwylt y Gwanwyn). Path edge in wood above Haulfre Gardens, Great Orme, SH/775.824, W.McCarthy, 1993.
- +153/49/2. *Phleum bertolonii* (Smaller Cat's-tail) (Rhonwellt Penfain). Rough grass by bushes, old island, Pwllheli harbour, SH/37.34, A.P.Conolly, 1993.
- +156/6/2. *Kniphofia praecox* (Greater Red-hot-poker). Sand dunes, Llandudno, SH/77.81, G.Battershall, 1993.
- *151/7/1. *Colchicum autumnale* (Meadow Saffron) (Saffrwm y Gweunydd). Meadow land, Bryn Pydew, Llandudno, SH/81.79, G.Battershall, 1992. First record.
- *158/19/3. *Scilla siberica* (Siberian Squill). Woodland, Gloddaeth Woods, near Llandudno, SH/80.80, G.Battershall, 1993. First record.
- *151/20/2x3. *Hyacinthoides non-scripta* × *H. hispanica* (a hybrid bluebell). Hedgerow, Nant y Gamar, Llandudno, SH/80.81, G.Battershall, 1991. First record.

- +158/18/2. *Ornithogalum angustifolium* (Star-of-Bethlehem) (Seren Fethlehem). Grassy banks in wood above Haulfre Gardens, Great Orme, SH/775.824, W.McCarthy, 1993.
- *1158/33/3a. *Narcissus poeticus* subsp. *poeticus* (Pheasant's-eye Daffodil) (Gylfinog Barddol). Grassy bank, W side of B5106, Tyn-y-Groes, SH/775.718, R.Lewis, 1993. First record.
- +1159/13/3xaur. *Crocospnia × crocosmiiflora* (Montbretia) (Montbretlys). Waste ground, Little Orme, SH/81.82, G.Battershall, 1990.
- +162/6/1. *Listera ovata* (Common Twayblade) (Ceineirian). Rough grassland, golf course, Llandudno, SH/775.806, W.McCarthy, 1992.

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

- +7/1/1. *Cryptogramma crispa* (Parsley Fern) (Rhedynen Bersli). Disused slate quarry, Nantglyn, SJ/978.598, J.A.Green, 1993.
- *15/2/5a. *Asplenium trichomanes* subsp. *trichomanes* (Maidenhair Spleenwort) (Duegredynen Gwallt y Forwyn). River gorge, Ysbyty Ifan, SH/817.458, J.A.Green, 1993. First record for subspecies.
- +15/3/1. *Ceterach officinaria* (Rustyback) (Rhedynen Gefngoch). Brick garden wall, Llangedwyn, SJ/183.237, BSBI group, 1993.
- +16/4/2. *Gymnocarpium robertianum* (Limestone Fern) (Llawredynen y Calchfaen). Hundreds of plants on slate waste, Llangollen, SJ/184479, BSBI group, 1993.
- +17/3/3a. *Dryopteris affinis* subsp. *affinis* (Scaly Male-fern) (Marchredynen Euraid). Wooded bank near stream, Bodnant, SH/798.721, G.Hutchinson, 1991.
- +17/3/3c. *Dryopteris affinis* subsp. *borreri* [Borrer's Male-fern] (Marchredynen Feddal). Wooded bank near stream, Bodnant, SH/798.721, G.Hutchinson, 1991.
- *17/3/8x9. *Dryopteris × deweveri* (*D. carthusiana* × *D. dilatata*) (a hybrid buckler-fern). Marsh/lake shore, Alwen Reservoir, SH/927.554, G.Battershall, 1993. First record.
- +28/13/4. *Ranunculus sardous* (Hairy Buttercup) (Crafanc y Frân Blewog). Gravel near the sea, Fordy, Rhyl, SH/991.808, J.A.Green, 1993. Second post-1950 record.
- +29/1/1. *Berberis vulgaris* (Barberry) (Burdrain). About 10 plants in old hedge, Eryrys, SJ/207.572, J.A.Green, 1993.
- +43/1/6. *Chenopodium rubrum* (Red Goosefoot) (Troed yr Wydd Ruddog). Manure store, Knolton Bryn, SJ/390.394, J.A.Green, 1993.
- 46/11/2. *Scleranthus annuus* (Annual Knawel) (Dinodd Blynnyddol). Stoney field edge, Tal-y-Cafn, SH/791.699, W.McCarthy, 1993.
- +52/1/1. *Tilia platyphyllos* (Large-leaved Lime) (Pisgwydden Deilen Fawr). Hedgerow, Colwyn Bay, SH/835.809, G.Battershall, 1993. Second record.
- +52/1/2. *Tilia cordata* (Small-leaved Lime) (Pisgwydden Deilen Fach). Riverside, Rhewl, SJ/106.606, J.A.Green, 1993.
- +153/2/1. *Lavatera arborea* (Tree-mallow) (Hocyswydden). Hedgerow, Llysfaen, SH/899.784, G.Battershall, 1993. Second record.
- +61/1/3. *Populus nigra* (Black Poplar) (Poplysen Ddu). Roadside, Johnstown, SJ/307.465, J.A.Green, 1993.
- +61/1/3a. *Populus nigra* subsp. *betulifolia* (Black Poplar) (Poplysen Ddu). Near farm pond, Knolton Bryn, SJ/367.397, I.Ralphs, 1990.
- 72/2/6. *Ribes alpinum* (Mountain Currant) (Rhyfon Mynydd). 20-30 plants along lane hedge, Llansannan, SH/96.64, BSBI group, 1993. Possibly planted.
- +173/5/17. *Sedum dasyphyllum* (Thick-leaved Stonecrop) (Briweg Praffddail). Rhos-on-Sea, SH/843.808, G.Battershall, 1993. Second record since 1943.
- +174/5/8x9. *Saxifraga × urbium* (Londonpride) (Balchder Llundain). Damp wood, Nant y Garth Pass, Ruthin, SJ/150.518, J.A.Green, 1993. Second record and first for 40 years.

- +75/8/60. *Rubus lindleianus* (a bramble). Hedge, Capel Garmon, SH/814.575, G.Battershall, 1993, det. A.Newton.
- *75/8/105. *Rubus incurviformis* (a bramble). Hedge, Bryn y Maen, SH/836.765, G.Battershall, 1993. First record.
- +75/8/106. *Rubus incurvatus* (a bramble). Hedge, Capel Garmon, SH/812.582, G.Battershall, 1993, det. A.Newton.
- +75/8/117. *Rubus polyanthemus* (a bramble). Hedge, Capel Garmon, SH/814.575, G.Battershall, 1993, det. A.Newton.
- +75/8/146. *Rubus bartonii* (a bramble). Hedge, Capel Garmon, SH/812.582, G.Battershall, 1993, det. A.Newton.
- *75/8/159. *Rubus ordovicum* (a bramble). Hedge, Capel Garmon, SH/812.582, G.Battershall, 1993, conf. A.Newton. First Record.
- +75/8/163. *Rubus vestitus* (a bramble). Hedge, Capel Garmon, SH/814.575, G.Battershall, 1993, det. A.Newton.
- *75/8/169. *Rubus fuscicortex* (a bramble). Hedge, Capel Garmon, SH/812.582, G.Battershall, 1993, conf. A.Newton.
- +75/8/287. *Rubus semiglaber* (a bramble). Hedge, Colwyn Bay, SH/846.783, G.Battershall, 1993, det. A.Newton.
- +75/8/319. *Rubus tuberculatus* (a bramble). Hedge, Colwyn Bay, SH/846.783, G.Battershall, 1993, det. A.Newton.
- +75/21/13b. *Rosa caesia* subsp. *glaucia* (Glaucous Dog-rose) (Rhosyn Llwydwyrrd). Roadside hedge, Ysbyty Ifan, SH/857.493, J.A.Green, 1993, det. A.L.Primavesi.
- *75/21/16. *Rosa sherardii* (Sherard's Downy-rose) (Rhosyn Sherard). Edge of wood, near Efenechtyd, SJ/113.560, J.A.Green, 1993, det. A.L.Primavesi. Originally named *R. caesia* subsp. *caesia*.
- +75/22/3. *Prunus cerasifera* (Cherry Plum) (Gaugeirosen). Tal y Cafn, SH/795.717, G.Battershall, 1993; +near farm, Ysbyty Ifan, SH/822.462, J.A.Green, 1993.
- +75/22/7. *Prunus cerasus* (Dwarf Cherry) (Ceiriosen). Hedge, Gwytherin, SH/877.616; +road hedge, Cefn Berain, SH/979.687, both J.A.Green, 1993. First records since 1943.
- *75/32/10. *Cotoneaster × watereri* (*C. frigidus* × *C. salicifolius*) (Waterer's Cotoneaster). Woods, Colwyn Bay, SH/844.786, G.Battershall, 1993. First record.
- +77/18/5. *Medicago arabica* (Spotted Medick) (Maglys Amrywedd). Gravel bank above shingle beach, Pensarn, SH/923.783, E.Wood, 1993.
- !84/4/1. *Oenothera glazioviana* (Large-flowered Evening-primrose) (Melyn yr Hwyr Mwyaf). Roadside, Cloy Farm, SJ/401.428, K.Watson, 1993.
- +93/1/1. *Buxus sempervirens* (Box) (Pren Bocs). Several plants in hedge, Llangedwyn, SJ/171.234, BSBI group, 1993. Possibly planted.
- +92/1/1. *Rhamnus cathartica* (Buckthorn) (Rhafnwydden). Hedge, Nant y Garth pass, SJ/175.515, J.A.Green, 1993.
- *110/1/1. *Rhus hirta* (Stag's-horn Sumach). Waste ground, Llandulas, SH/918.782, G.Battershall, 1993. First record.
- *110/1/6. *Oxalis stricta* (Upright Yellow-sorrel) (Suran Felen Unionsyth). Flowerbeds, Loggerheads, SJ/199.626, R.Maycock & A.Woods, 1993.
- +107/41/2. *Heracleum mantegazzianum* (Giant Hogweed) (Efwr Enfawr). Old castle, Holt, SJ/412.537, J.Osley, 1993. Second record.
- +105/5/2. *Genianella campestris* (Field Gentian) (Crwynlllys y Maes). Limestone turf, Maeshafn, SJ/200.615, R.Maycock & A.Woods, 1993. Second post-1950 record.
- +111/3/3. *Calystegia pulchra* (Hairy Bindweed) (Taglys Blewog). Roadside, Groes, SH/997.647, J.A.Green, 1993.
- *116/4/6. *Symphytum orientale* (White Comfrey) (Cyfardwf Gwyn). Roadside, Eglwysbach, SH/804.716, W.McCarthy, 1993. First record.

- +118/1/5x6. *Stachys × ambigua* (Hybrid Woundwort) (Briwlys Croesryw). Wet ditch, forest track-side, Pentre Llyn Cwmmer, SH/980.524, J.A.Green, 1993; +wet ditch, Dymocks Mill, SJ/457.440, K.Watson, 1990
- +118/23/3x4. *Mentha × villosa* (*M. spicata* × *M. suaveolens*) (Apple Mint) (Mintys Lled-grynddail). Wet ditch, Llangedwyn, SJ/168.223, BSBI group, 1993. Second Welsh record.
- *121/1/3b. *Plantago major* subsp. *intermedia* (Greater Plantain) (Llwynhidyd Mawr). Sandy bank, Sutton Green, SJ/417.489, K.Watson, 1993. First record for subspecies.
- +124/2/5. *Scrophularia vernalis* (Yellow Figwort) (Gornerth Melyn). Overton, SJ/356.410, A.Showler, 1991.
- *124/17/1. *Hebe salicifolia* (Koromiko) (Coromico). Woods, Pwllycrochan, SH/842.785 G.Battershall, 1993. First record.
- +130/6/3. *Galium uliginosum* (Fen Bedstraw) (Briwydden y Fign). NWNT reserve, S. of Wrexham, SJ/338.476, J.A.Green, 1989.
- *130/6/7b. *Galium mollugo* subsp. *erectum* (Upright Hedge-bedstraw) (Briwydden Syth). Edge of lane, Eryris, SJ/209.571, J.A.Green, 1993. First record for subspecies.
- *131/2/3. *Viburnum tinus* (Laurustinus) (Tinws). Two large shrubs in woodland outside garden boundary on N side of Bryn Euryn, Colwyn Bay, SH/83.80; +roadside bank, E of A470 c. 1.75km NE of Talycafn Bridge, SH/79.72, both R.Lewis, 1993. First and second records.
- +133/1/2. *Valerianella carinata* (Keeled-fruited Cornsalad) (Llysiau'r Oen Rhychiog). Colwyn Bay, SH/833.802, G.Battershall, 1993. Second record since 1930.
- +135/3/1. *Arctium lappa* (Greater Burdock) (Cyngaf Mawr). Roadside, Ridley Wood, SJ/406.518, K.Watson, 1992; +woods near old house, near Overton, SJ/356.410, A.Showler, 1991.
- +135/15/2. *Centaurea montana* (Perennial Cornflower) (Penlas Fythol). Mynydd Llanelian, SH/850.744, G.Battershall, 1993. Second record.
- *135/25/105. *Taraxacum acutifrons* (a dandelion). Gresford, SJ/36.54, T.Edmondson, 1984, det. H.Øllgaard. First record.
- *135/25/140. *Taraxacum horridifrons* (a dandelion). Ballswood, SJ/34.56, T.Edmonson, 1991, det. H.Øllgaard. First Welsh record.
- *135/25/170. *Taraxacum nitidum* (a dandelion). Hanmer, SJ/45.39, T.Edmondson, 1985. First Welsh record.
- *135/25/179. *Taraxacum pallidipes* (a dandelion). Gyffyllog, SJ/06.57, T.Edmondson, 1985. First Welsh record.
- +135/25/194. *Taraxacum rhamphodes* (a dandelion). Eyton, SJ/35.45, T.Edmondson, 1983, det. H.Øllgaard.
- *135/25/209. *Taraxacum subpraticola* (a dandelion). Cross Lanes, Wrexham, SJ/37.46, T.Edmondson, 1978. First Welsh record.
- *135/25/210. *Taraxacum subundulatum* (a dandelion). Worthenbury, SJ/41.46, T.Edmondson, 1981, det. A.J.Richards.
- *135/25/lat. *Taraxacum latens* H.Øllgaard (a dandelion). Hanmer, SJ/46.41, T.Edmondson, 1985. First Welsh record.
- +135/28/168. *Hieracium hypochoeroides* (a hawkweed). Eyarth Rocks, SH/121.541, J.Hughes, 1990, det. J.Bevan.
- +135/40/3. *Solidago canadensis* (Canadian Goldenrod) (Eurwialen Canada). Colwyn Bay, SH/845.783, G.Battershall, 1993.
- *135/40/4. *Solidago gigantea* (Early Goldenrod) (Eurwialen Gynnar). Waste ground, Cadole, SJ/205.626, K.Watson, 1993. First record.
- +135/43/4. *Erigeron karvinskianus* (Mexican Fleabane) (Cedowydd y Clogwyn). Several plants naturalised on vertical limestone rock face on lowest W facing crags above woodland on W side of Bryn Euryn, Colwyn Bay, SH/83.79, R.Lewis, 1993. Second record.
- +135/62/14. *Senecio camrensis* (Welsh Groundsel) (Creulys Cymreig). Layby on A55, Llandulas, SH/912.784, J.A.Green 1993.

- +135/80/1. *Galinsoga parviflora* (Gallant Soldier) (Galinsoga). Wall, Llangollen, SJ/214.420, R.Hesketh, 1993.
- 142/1/9. *Potamogeton perfoliatus* (Perfoliate Pondweed) (Dyfrillys Trydwill). River Dee, Sutton Green, SJ/417.487, K.Watson, 1993.
- 142/1/15. *Potamogeton berchtoldii* (Small Pondweed) (Dyfrillys Eiddil). Farm pond near Knolton Bryn, SJ/365.394, J.A.Green, 1993, det. C.D.Preston. Specimen originally det. as *P. pusillus*.
- 153/18/4. *Poa humilis* (Spreading Meadow-grass) (Gweunwelt Helaeth). Sandy bank, Sutton Green, SJ/417.489, K.Watson, 1993. Underrecorded in the county.
- +153/24/3. *Glyceria declinata* (Small Sweet-grass) (Perwellt Llwydlas). Marshy ground, Plas Jolyn, near Pentrefoelas, SH/880.504, J.A.Green, 1989.
- 153/59/4. *Hordeum secalinum* (Meadow Barley) (Heiddwellt y Maes). Field, Sutton Green, SJ/410.485, K.Watson, 1993.
- +153/70/1. *Setaria viridis* (Green Bristle-grass) (Cibogwellt Gwyrdllas). In grass near old rubbish tip, SW of Mochdre, SH/820.780, J.Palmer & E.Phenna, 1985. Growing near *Senecio camrensis*.
- +154/1/4. *Sparganium natans* (Least Bur-reed) (Cleddlys Bach). Gors Maen Llwyd, SH/972.581, J.A.Green, 1989.
- +158/12/2. *Lilium pyrenaicum* (Pyrenean Lily) (Cap y Twrc Melyn). Edge of potato field, Llandoget, SH/797.641, W.McCarthy, 1993. Second record since 1960.
- 162/7/1. *Spiranthes spiralis* (Autumn Lady's-tresses) (Caineirian Troellog). 35 spikes in garden lawn, Llysfaen, SH/894.765, A.Child, 1993.

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

- 9 11. *Pilularia globulifera* (Pillwort) (Pelenllys). Muddy edge of lake, Llyn Helyg, SJ/115.775, W.Hay, 1993 First record for 20 years.
- * 32/1/1. *Cannabis sativa* (Hemp) (Cywarch). Roadside grid near ditch, Deeside Industrial Estate, SJ/334.708, P.I.Morris, 1993. First localised record for v.c.
- 6 19/1. *Agrostemma githago* (Corncockle) (Bulwg yr Ŷd). New earth bank hiding rifle range, between Burton Point and nearby water storage tanks, SJ/30.73, P.I.Morris, 1993. Second post-1970 record for county.
- 6 2/1. *Descurainia sophia* (Flixweed) (Berwr y Fam). New earth bank hiding rifle range, between Burton Point and nearby water storage tanks, SJ/30.73, P.I.Morris, 1993. Second post-1970 record for county.
- +6 23/5. *Cochlearia danica* (Danish Scurvygrass) (Llwyllys Denmarc). Central reservation of A55, Pentre Halkyn, SJ/2.7, T.C.G.Rich, 1990.
- 6 2/3/1. *Thlaspi arvense* (Field Penny-cress) (Codywasg). Disturbed ground between railway and River Dee, Sandycroft, SJ/339.671, G.Wynne, 1993. First post-1970 record for square.
- * 62/41/1. *Crambe maritima* (Sea-kale) (Ysgedd). Base of coastal dune, Prestatyn coast, Top of shore above coast protection work, SJ/074.842, P.Day & R.Carter, 1993. First record.
- +77/19/1. *Trifolium ornithopodioides* (Bird's-foot Clover) (Corfeillionen Wen). Point of Ayr, SJ/1.8, D.Green, 1993. First record post-1930.
- +103/1/15. *Geranium pusillum* (Small-flowered Crane's-bill) (Pig yr Aran Mânflodeuog). Path, near car park, Graig Fawr, Meliden, SJ/062.801, W.Hay, 1993. Third record post-1970.
- +113/18/2. *Clinopodium ascendens* (Common Calamint) (Erbin Cyffredin). Walls below castle, Ruddlan, SJ/023.779, W.Hay, 1993. First record post-1970.
- * 135/25/141. *Taraxacum huelphersianum* (a dandelion). Lane above Bodfari, SJ/098.707, T.Edmondson, 1983. First Welsh record.

- +135/25/194. *Taraxacum rhamphodes* (a dandelion). Hawarden, SJ/33.64, T.Edmondson, 1981, det. H.Øllgaard.
- +135/56/1. *Chrysanthemum segetum* (Corn Marigold) (Melyn yr Ŷd). Hundreds of plants, on earth bank, Burton Point, P.I.Morris, 1993.
- +152/16/47. *Carex pallescens* (Pale Sedge) (Hesgen Welwlas). Wet part of old limestone meadow, with C. flacca, C. hirta & C. ovalis, near Coed Talon, Flint, SJ/2.6, A.G.Spencer, 1986.
- +153/14/1. *Vulpia fasciculata* (Dune Fescue) (Peisgwelt Uncib). The Warren, Talacre, SJ/110.850, P.Day, 1993. Third record.

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

- 6/1/1. *Osmunda regalis* (Royal Fern) (Rhedyne Gyfrdwy). Maritime cliffs near Point Lynas, SH/46.93, R.H.Roberts, 1993.
- *9/2/1. *Trichomanes speciosum* (Killarney Fern) (Rhedyne Wrychog). On damp shaded rocks, Cadnant Dingle, near Menai Bridge, SH/53.73, Rob Cooke, 1993. *Gametophyte only*, locally common.
- \$26/3/2a. *Helleborus viridis* subsp. *occidentalis* (Green Hellebore) (Pelydr Gwyrdd). Near Holyhead, SH/26.79, G.Pritchard, 1993.
- 46/5/3. *Stellaria pallida* (Lesser Chickweed) (Gwlydd y Tywod). Sandy roadside verge, Warren Point, Malltraeth, SH/40.68, R.H.Roberts, 1993.
- +62/30/2. *Lepidium campestre* (Field Pepperwort) (Codywasg y Maes). South Stack, Holyhead, SH/2.8, A.Jones, 1970.
- +175/21/6. *Rosa rugosa* (Japanese Rose) (Rhosyn Japan). Newborough, SH/4.6, R.D.Pryce, 1965, det. A.Primavesi, 1990.
- +81/1/3. *Lythrum portula* (Water-purslane) (Troed y Gywen). Aberffraw, SH/3.6, A.Jones, 1970.
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