Front Cover Photo and Above (top) : *Luronium natans* (Floating Water Plantain) from around the margin of Ramsey Pipe Dam pond which is set in acid marshy grassland in the Welsh Black grazing area (see page 41). © S.B. Evans

Above (bottom) : *Matthiola sinuata* (Sea Stock) with *Orobanche hederae* (Ivy Broomrape) as an associate on *Hedera helix* (Ivy). This plant was recorded from Caldey Island, Pembrokeshire (v.c. 45) by Les Smith on 30/08/2008. Image taken on 11/08/2009. (see page 37). © S.B. Evans
Guest Editorial

D. Parker

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Cwm Idwal, a 30 year reflection

Dr. D. M. PARKER, Director of Science, Countryside Council for Wales

My first visit to Cwm Idwal was in October 1977 with my PhD supervisor, Hugh McAllister and the then Warden of the Cwm Idwal NNR, Iorrie Ellis Williams. We were there to look into my then embryonic proposal to carry out a restocking of Tufted Saxifrage (Saxifraga cespitosa) which was down to four plants on a single small moss cushion on the boulder scree. At the time, I was impressed with the sight of great quantities of other arctic-alpine plants and their survival in the face of grazing pressure from the enormous numbers of sheep. This intense grazing allowed no prospect of these delicate plants increasing their numbers by colonising new, adjacent, habitats. The subsequent elimination of sheep from Cwm Idwal in 1999, by the Countryside Council for Wales, was done at least partly to give this special vegetation a chance to spread.

because it was pouring with rain!) and, by the next day, it had been grazed off by a sheep. I, and nobody else, has seen another plant there since. However, I do wonder whether the removal of sheep grazing will create the conditions to allow this plant again to flower?

I recommend a visit to Cwm Idwal from May to August to see how the largely ungrazed vegetation of the Cwm has responded. To me, the most impressive sights are the profusion of flowering stems of grasses, yellow-orange drifts of Bog Asphodel (Narthecium ossifragum) and the recovering heath, with Bell Heather (Erica cinerea) and Western Gorse (Ulex gallii). Who knows, you may also find the Small-white Orchid!

In spite of the grazing pressure in the late 1970s, I have been reminded that I found a single plant of the Small-white Orchid (Leuchorchis albida) in the species-rich grassland at the base of the boulder scree in July 1979. I did not photograph it (probably
BSBI Wales Annual General Meeting 2009

The 47th Annual General Meeting of the BSBI in Wales, held at Llanelwedd Jubilee Hall, Builth Wells on Saturday 27th June 2009

1. Welcome. The Chairman, Andy Jones, welcomed everyone, especially the President, Michael Braithwaite and his wife, to the Royal Welsh Showground and to the Jubilee Hall where the AGM and Exhibitions were being held.


3. Minutes. The minutes of the AGM held on 9th August 2008 at Gregynog Hall, Newtown, Monts. were approved as printed in Welsh Bulletin No. 84.

4. Matters Arising. The Chairman took the opportunity to tell members that Jean Green, who has recently retired from the Recordship of Denbighshire, v.c. 50, was to have major surgery the following week. The meeting agreed to send her a card from the AGM with our good wishes. [Members will be pleased to know that Jean has made a good recovery and is able to again get out into the great outdoors to continue her passion for field botany this season - ed.]

5. Chairman’s Statement
   a. Andy Jones commented on the high standard of the exhibitions “the best in years”, and of the two workshops run by Julian Woodman and John Poland.
   b. Next year’s AGM is to be in Anglesey, run by Trevor Dines, probably in June. Outline arrangements for subsequent years are:
      i. 2011 – Pembrokeshire (Stephen Evans)
      ii. 2012 – Llangollen (Delyth Williams)
   c. BSBI in Wales:
   d. Liaison with the Countryside Council for Wales (CCW) is in a similar vane to that of the UK and with almost complete coverage of County Rare Plant Registers.
   e. Our membership is more fully participatory, with field meetings better attended.
   f. A Welsh Officer in line with the Scottish Officer would organise the AGM and arrange workshops, as well as supporting Vice-County Recorders and co-coordinating field meetings in Wales. Prospects are dependent on BSBI providing match funding with the 50% available from CCW.
   g. Wales is ahead with all its plans and botanical activity is going well.
6. Hon. Secretary’s Report
a. The Secretary added his welcome to the President and his wife, Michael and Paddy Braithwaite.

b. He thanked Tim Blackstock for agreeing to give the keynote speech that evening, and members for coming to support the meeting.

c. He commented on the good programme of field meetings this year with still four more to come, and on the planned future AGMs.

d. He explained that Trevor Dines had not been able to come because of a clash with a Plantlife meeting.

e. The Welsh Bulletin was published twice a year and had previously cost in the region of £300 per issue. By outsourcing colour printing, costs had now increased and there was a case for a contribution from central BSBI funds. The Irish and Scottish publications were totally funded by such funds.

f. Publications by BSBI this year were the *Callitriche* and *Fumaria* Handbooks and John Poland’s Vegetative Key to the British Flora. The Secretary commended all these to members.

7. Hon. Treasurer’s Report

**Annual Statement of Accounts for the period 1st January 2009 - 1st June 2009**

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<thead>
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<th>Payments</th>
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Receipts less payments £2,250.33

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**Accounts for the year 1 January - 31 December 2008**

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The accounts were approved unanimously.
8. Election of Officers
The following had still a year to serve of their current term of office:
  Andy Jones (Chairman)
  Delyth Williams (Vice Chair – to take up the Chair at the next AGM)
  Richard Pryce (Secretary – gave notice of his wish to stand down in 2010)

The following members consented to stand for re-election:
  Ian Bonner (Ian had earlier resigned as he felt unable to arrange an AGM in Anglesey but had now agreed to come back onto the Committee)
  Trevor Evans
  Trevor Dines
  Richard Pryce
  Ray Woods
Their re-election was approved.

Other members were not due for re-election until 2010, but there was still a vacant place on the committee. Kath Pryce was nominated and elected unanimously.

The new co-editors of the Welsh Bulletin, Katherine Slade and Sally Whyman had been co-opted onto the Committee, and George Hutchinson will resign when he retires from Amgueddfa Cymru - National Museum Wales in March 2010.

Trevor Dines also sits on the Committee as Plantlife representative, and Paul Day represents CCW.

9. Any Other Business
a. Andy Shaw said he could take samples of *Potentilla rupestris* and grow them on to make them available to members;
b. Trevor Evans said that although he had been awarded the President’s Prize in 2009 for his Flora of Monmouthshire, no acknowledgement had been published by the BSBI, nor by the Wildflower Society. (The President’s Prize is awarded alternately by the BSBI and the Wildflower Society and Trevor’s award was made by Sir Ghillean Prance, President of WFS). [Both Andy Jones as Chairman, and Richard Pryce as Secretary, confirmed this to be the case and congratulated Trevor on his award whilst also regretting the apparent lack of its recognition in the publications of two Societies].
c. Diana Reynolds apologised for her and her husband’s absence but said that we must keep trust in Welsh Assembly Government to work towards biodiversity targets. Vice-County Recorders were reminded that small grants were
available from WAG for books and maps, but that the uptake had been small, and it was important that this money should not be lost.
d. Delegates were reminded of Tim Blackstock’s talk that evening after dinner.
e. Michael Braithwaite, on behalf of himself and Paddy, said what a pleasure it was to be here. He emphasised that he was available to listen to members’ concerns and take them up with Council. He reminded members that regional activity was what the BSBI was all about – it never set out to be centralised – and he emphasised the importance of the Welsh and Scottish committees and of small get-togethers elsewhere.
f. Steve Coker had liaised with CCW over many years and offered to help with digitised mapping for recording purposes.

The Meeting then closed. The AGM was attended by 33 members.

---

**Calendar of Meetings 2010**

Full details and procedure for booking are also available in the BSBI Year Book 2010 and the BSBI Welsh Bulletin, No. 85.

**Saturday 22nd May** Nant Gwynant, Snowdon, Caernarvonshire, v.c.49. Wendy McCarthy.

**Saturday 29th May** Cefn Cribwr, Glamorgan, v.c.41. Julian Woodman.

**Friday/Saturday/Sunday 11th/12th/13th June** Welsh AGM and Exhibition Meeting and associated field meetings, Anglesey, v.c.52.

**Saturday 19th June** Cae Blaen Dyffryn Plantlife reserve, Lampeter, Carmarthenshire, v.c.44. Trevor Dines.

**Saturday 26th June** Caeau Tan y Bwlch Plantlife reserve, Clynnogfawr, Caernarvonshire, v.c.49. Trevor Dines.

**Saturday 3rd July** Cefn Caer Euni, Merionethshire, v.c.48. Sarah Stille.

**Saturday 10th July** Gwent Levels, near Newport, Glamorgan, v.c.41. Richard Lansdown.

**Friday 16th July to Friday 23rd July** Glynhir Mansion, Llandybie, Carmarthenshire, v.c.44. Kath and Richard Pryce.

**Sunday 25th July** Cors Fochno (Borth Bog), Cardiganshire, v.c.46. Mike Bailey (CCW warden).

**Saturday 31st July** Brymbo Steelworks, Denbighshire, v.c.50. Leader: Delyth Williams.

**Saturday 7th August** Llangorse Lake, Breconshire, v.c.42. Ray Woods.
This is a quick reminder that the BSBI Wales AGM for 2010 is being held at Hotel Cymyran, Valley, Anglesey with a “Coastal and Heathlands” theme. It will be centred on a remarkable area of Wales rich in coastal habitats, especially coastal heathland. The AGM extends a warm welcome to all members at all levels of experience.

There will be:

- Friday afternoon walk to Cymyran coastal heathland to look for *Juncus capitatus* and other specialities.
- Saturday morning excursions to coastal/heathland sites including South Stack and the Inland Sea.
- Identification workshop to assist with identification of material collected in the morning and with members’ specimens brought to the AGM.
- A series of short illustrated talks on the Anglesey flora on Saturday evening.
- Sunday excursions to coastal/heathland sites including Newborough Warren, Aberffraw and Traeth Lligwy (horsetails).

**Exhibits** Any material (posters, exhibits of herbarium specimen and live specimens) that will be of interest to other members will be very welcome. We've not had many offers for exhibits yet so please let the organiser know if you'd like to produce something, or use the space on the booking form.

A booking form is enclosed with this bulletin as a reminder to those that have not yet booked (please use this form rather than the one circulated in January, which contains an error). For any queries please contact Trevor Dines, Uned 14, Llys Castan, Ffordd Y Parc, Parc Menai, Bangor, Gwynedd LL57 4FD. e-mail: trevor.dines@plantlife.org.uk
Imagine you could identify any plant species in Wales from the tiniest fragment of leaf, seed or pollen grain; this is possible using DNA barcoding. This technique uses a small section of DNA to act as a unique identifier for that species. The first step is to assemble reference barcodes for the species that we want to identify. For example, here is part of the barcode for *Campanula patula*.

```
Campanula_patula_CTTATTATAC
TCCGGACTATGAAACCAAGGA
TACCGATATTTTGCGAGCCTTT
CGAGTAACTCCTCAACCCCGGA
GTTCCCCCGGAAAGAAGCAGGG
GCCGCACTAGCTGCCGATACG
TCTACTGGTACATGGACAACTG
TGTGG_rbcL
```

Once reference barcodes are in place, unknown DNA sequences can be compared to these in order to find out what they are. The real importance of the technique is that it can identify species from tiny fragments, different life stages, or from mixtures of samples. Species can be identified from pollen grains, fragments of seeds or roots, wood samples, stomach contents or environmental samples collected from the air, soil or water. Projects are now underway throughout the world to DNA barcode all living things and ensure that these barcodes are freely available online as a global resource (www.barcodinglife.org). There are many potential applications of DNA barcoding for plants, for example we can:

- Identify plants that are difficult to I.D. morphologically. Research is currently underway to develop a handheld barcoder for identifying species from tiny fragments.
- Revolutionise our understanding of pollinator services by allowing us to track the movements of all the pollinators within an ecosystem.
- Reconstruct past landscapes by identifying plants from seeds within the soil profile.
- Construct previously unknowable food webs and understand plant/animal interactions through analysing stomach contents or faecal samples to find out all of the plants that an animal has eaten.
- Help to reduce the effects of hayfever by being able to identify exactly what pollen is in the atmosphere.
- Assist in forensic investigations by being able to identify plant fragments or pollen found on clothing or at crime scenes.
- Provide quality control for plant based products such as herbal medicines by identifying the constituent components.

Improve animal health by analysing the exact composition of the diet of...
livestock in pastures.

The National Botanic Garden of Wales (NBGW), along with the Institute of Biological, Environmental and Rural Sciences of Aberystwyth University (IBERS) and Amgueddfa Cymru - National Museum Wales (NMW) are working on a project to DNA barcode all of the native and archaeophyte plants found within Wales. We aim to be one of the first nations to barcode all of their plant species and to use our plant barcodes for ecological applications.

Vital to the establishment of DNA barcodes is having correctly identified source material, every reference barcode must have a voucher specimen so that its I.D can be verified. We are concentrating on using herbarium specimens for the barcoding effort as these are convenient to use and already verified. Most of our herbarium specimens have come from the Welsh National Herbarium (NMW) with project partner Dr. Tim Rich selecting material and double checking its I.D. Many of the herbarium specimens that we have used have come from current BSBI recorders with certain collectors featuring highly (see table below). We have also used some herbarium specimens from our newly established herbarium at NBGW and have collected fresh material for species that are difficult to barcode, once again assisted by BSBI members. For all fresh specimens a leaf is collected for barcoding and a voucher herbarium specimen made. This process is continuing where we still have gaps.

A tiny fragment of the herbarium specimen is removed and the DNA extracted from this. We then amplify the barcode DNA; for plants there are two barcode regions, the genes rbcL and MatK (CBOL Plant Working Group, 2009). These are recognised internationally so that everyone

<table>
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<th>BSBI Recorder</th>
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<th>Number of specimens successfully barcoded with rbcL</th>
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</thead>
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<td>155</td>
<td>130</td>
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<tr>
<td>Mr TG Evans</td>
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<tr>
<td>Mr RD Pryce</td>
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<tr>
<td>Mr PM Benoit</td>
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<td>6</td>
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<tr>
<td>Mr SB Evans</td>
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<tr>
<td>Mr JP Woodman</td>
<td>41</td>
<td>3</td>
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<tr>
<td>Mr M Porter</td>
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<tr>
<td>Dr QON Kay</td>
<td>41</td>
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</tr>
<tr>
<td>Ms W McCarthy</td>
<td>49</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Table: Herbarium specimens barcoded with current BSBI Wales recorders as collectors
Barcode Wales Project

throughout the world uses a standard approach. The barcodes for plants were officially announced at the Third International Barcode of Life conference held in New Mexico in November 2009. Once the barcodes are amplified we sequence them to find out the exact DNA code for that specimen for the two barcode regions. So far in the project, we have used the labs at Aberystwyth University but I have now set up a molecular lab at NBGW allowing us to carry out DNA barcoding here at the Garden as well.

The completed barcodes are uploaded on to the Barcode of Life Database (www.barcodinglife.org) along with the voucher information and a scan of the herbarium specimen. Once this process is complete, visitors to the website can view the barcode information. For each species, we need to have multiple specimens barcoded, this allows us to spot errors and also to pick up if there is intraspecific variation in the barcode sequences. Intraspecific variation should be fairly minimal as the barcode regions have been specifically chosen so that they are different between species without having too much variation within species.

So how far have we got? There are 1134 Welsh native and archaeophyte species (Stace 1997, Preston, Pearman & Dines 2002). We have collected 3741 samples for analysis (aiming for at least three samples per species). The DNA is extracted from 2543 of these. We have rbcL barcodes for 928 species and MatK barcodes for around 300 species. We are already using our barcodes to investigate pollinator service in Rhos pasture. Sandra Ronca, a PhD student from Aberystwyth University has collected bees from Rhos pasture communities and used second generation DNA sequencing to generate hundreds of thousands of DNA sequences from the pollen that the bees are carrying. These are compared to our database of Welsh flora barcodes to determine what plant species the pollen came from. We are the first researchers to use this approach to track pollinator movements and have just presented the preliminary results of this work at the barcode of life conference in Mexico (de Vere et al 2009). Work continues to complete the native and archaeophyte species and then, if we can get further funding, we can begin on the non-native flora.

The barcode Wales team are: National Botanic Garden of Wales: Dr Natasha de Vere, Chris Moore, Danielle Satterthwaite, Col Ford. Amgueddfa Cymru - National Museum Wales: Dr Tim Rich. Aberystwyth University: Prof Mike Wilkinson, Sandra Ronca, Dr Joel Allainguillaume. We would like to thank the BSBI for their great contribution to our barcoding effort.

References

Stellaria nemorum subsp. montana has a very interesting distribution in Britain: seemingly confined to Wales, in Merionethshire, Cardiganshire, Radnorshire, Breconshire, Carmarthenshire and Monmouthshire but with a toehold, as the hybrid with subsp. nemorum, in west Gloucestershire. The last Atlas records only 13 native Welsh hectads (Preston et al, 2002) but there are at least 4 more in mid Wales (Woods, 1993; M. Porter: pers. comm.) and perhaps others elsewhere (eg. Pryce, 1999). The situation is somewhat obscured, however, by possible confusion with S. nemorum subsp. nemorum ... and the hybrid.

At the same time, there is a lack of recent evidence for S. nemorum subsp. montana in Wales. Five hectad records in the last Atlas are pre-1987 and two of these were last seen between 1930 and 1969. The two additional Radnorshire sites (in SO19 and SO24) also need updating and have in fact both not been recently refound (R.G. Woods: pers. comm.). And this decline may be more widespread. Several quite precise localities for S. nemorum subsp. montana have been searched for lately without success: at least two small populations in SH71, Merioneth, disappeared between 1968 and 1978 (Benoit, 1978) and the tiny SN69 population in Cwm Clettwr, Cardiganshire, seems to have recently died out. In Breconshire, two sites in SO04, near Crickadarn and Llanddewi'r Cwm, were searched without success in 2005 and all the other v.c. 42 populations (near Llysdinam, SO05; Llangynidr, SO11 and near Llywel, SN94) show a marked drop in numbers (M. Porter & R.G. Woods: pers. comm.).

Welsh Wood Stitchwort (Stellaria nemorum subsp. montana) under Threat

R.A. JONES, c/o Countryside Council for Wales, Welsh Assembly Government Building, Rhodfa Padarn, Aberystwyth, Ceredigion SY23 3UR.
a.jones@ccw.gov.uk

Stellaria nemorum subsp. montana has a very interesting distribution in Britain: seemingly confined to Wales, in Merionethshire, Cardiganshire, Radnorshire, Breconshire, Carmarthenshire and Monmouthshire but with a toehold, as the hybrid with subsp. nemorum, in west Gloucestershire. The last Atlas records only 13 native Welsh hectads (Preston et al, 2002) but there are at least 4 more in mid Wales (Woods, 1993; M. Porter: pers. comm.) and perhaps others elsewhere (eg. Pryce, 1999). The situation is somewhat obscured, however, by possible confusion with S. nemorum subsp. nemorum ... and the hybrid.

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Welsh Wood Stitchwort (*Stellaria nemorum* subsp. *montana*) under Threat

But there seems to be most evidence for this trend in Monmouthshire, where *S. nemorum* subsp. *montana* was first recognised in Britain (Green, 1954). The new 'Flora of Monmouthshire' reports its disappearance and / or decline at all known sites over the last 30-40 years and likely hybridisation with subsp. *nemorum* at other former sites (Evans, 2007b; see also Evans, 2007a). When Julian Woodman and I searched the last extant locality for *S. nemorum* subsp. *montana* in the 'Flora' (the Angiddy Valley, ST5099 & S05100) in June 2009 we failed to find any plants but, fortunately, we were also given directions to another, newly-discovered site at Whitebrook, SO5306, and this proved to be flourishing (see image on back page).

*Stellaria nemorum* subsp. *montana* has an uncertain threat status ("Data Deficient") in 'The Vascular Plant Red Data List for Great Britain' (Cheffings & Farrell, 2005) but is judged "Vulnerable" in the Welsh Red Data List (Dines, 2008), on range and decline criteria: “extent of occurrence (and area of occupancy) estimated to be less than 20,000 km sq and ... severely fragmented ... [with] continuing decline in number of locations”. The subspecies' range might even be less than 5,000 km sq, however, which would make it 'Endangered' on the same occupancy / occurrence criteria. And this agrees with the current finding: a likely “reduction in population size of ≥50% over the last 10 years or three generations, whichever is longer, where the causes may not have ceased or may not be understood”. *S. nemorum* subsp. *montana* is a perennial species with an unknown average life-span but there seems to be little doubt of a decline on this scale ... or even more. If its population as a whole is shown to have had ≥70% declines in any 10 year period the subspecies' threat status would be raised to 'Critically Endangered', with considerable cause for concern.

Clearly there is need for more detailed surveys and research into the causes of this perceived decline, the subspecies' ecology and possible measures to redress the balance. The best time for a survey is when the plant is in flower, from late May to June, with seeds available for checking subspecies status in July. Trevor Evans' illustration of subsp. *montana* and its hybrid with subsp. *nemorum* is invaluable (Evans, 2007b) but, for later observations – or for possibly non-flowering populations – surveyors should take note of Mike Porter's observation that the vegetative plant looks very much like Upland Enchanter's-nightshade, *Circaea x intermedia* (with which it often grows). The new Vegetative Key reliably distinguishes *S. nemorum*, however, on the absence of marginal teeth (Poland, 2009). Finally, the typical streamside habitat is perhaps best searched from the watercourse, so wellingtons are essential. Any measurements of distribution and abundance (ideally...
sketch maps and numbers of plants, using a 'broken log scale': 1-3; 4-10; 11-30; 31-100; 101-300; 301-1,000 etc.) and notes on possible threats / management would be very gratefully received. For more detailed locality information, please contact the relevant Vice-County Recorder or Andy Jones.

References

- Evans, T.G. (2007a). Monmouthshire County Rare Plant Register. BSBI.
- Pryce, R.D. (1999). Carmarthenshire Rare Plant Register. BSBI.

Launch of the BSBI Welsh webpages

K. SLADE, Dept of Biodiversity & Systematic Biology, Amgueddfa Cymru-National Museum Wales, Cardiff CF10 3NP

The Welsh presence on the BSBI website is expanding. We now have a dedicated webpage on botanical events occurring around Wales. It includes details of the Welsh Bulletin as well as forthcoming field meetings. We saw this as an opportunity to advertise to potential new members, so tasters of the last two issues of the Welsh Bulletin have been included.

The friendly and dynamic nature of the BSBI is very important to convey. To this end, there is a link to photos taken on past and present field trips, collected on to a Google Picasa Photo website. It is hoped there will be lots of reasons for people to keep revisiting the website and keep better connected with the Welsh section of the society.

Visit www.bsbi.org.uk/wales.html

Editors Note: Please send photos and articles for the website and the Welsh Bulletin to any editor: either digital or paper format is acceptable.
Welsh Plant Records 2009

Welsh Plant Records are compiled by Gwynn Ellis, 41 Marlborough Road, Roath, Cardiff, CF23 5BU, from reports of BSBI Vice-County Recorders to whom records should preferably be sent. Plants are listed for each vice-county in the order of D.H. Kent’s List of Vascular Plants of the British Isles (1992) and Supplements 1 & 2 (1996 & 2000), the number in those lists preceding the name, so that names changed since 1996 can be given without giving the former name. Latin names also follow Kent (1992) and Supplements 1, 2 or 3 or, if not in that list, the Vice-county Census Catalogue (2003), the 2nd edition of C.A. Stace’s New Flora of the British Isles (1997), E.J. Clement & M.C. Foster’s Alien Plants of the British Isles (1994), T.B. Ryves, E.J. Clement & M.C. Foster’s Alien Grasses of the British Isles (1996) or Sell & Murrell’s Flora of Great Britain and Ireland (1996-2009). Authorities for Latin names are not given unless the name is not in any of these works. English names are those in English Names of Wild Flowers ed. 2 (1986) by Dony et al, or, if not in that list, Stace (1997). Clement & Foster (1994). Ryves, Clement & Foster (1996). or Sell & Murrell (1996-2009). English names enclosed by square brackets do not occur in any of these books but have been used elsewhere. Welsh names are those in Planhigion Blodeuol, Conwydd a Rhedyn, published by Cymdeithas Edward Llwyd (2003).

The following symbols are used:
* to indicate a new v.c. record
+ to indicate a new or updated hectad record
† indicates archaeophyte; ‡ indicates neophyte; © indicates casual
†‡© before the species number: to indicate that the species is regarded as an archaeophyte, neophyte or casual at least somewhere in the British Isles.
†‡© before the record: to indicate a species which although a native, archaeophyte or neophyte at least somewhere in the British Isles, is not so in the locality recorded
[ ] to indicate that the record, previously published in error, should be deleted
¤ to indicate an update to a rare or scarce taxon
Æ to indicate that the taxon is now believed to be extinct in the locality cited

In general, only records which update the Vice-county Census Catalogue (2003) or the New Atlas of the British & Irish Flora (2002) will be listed. Other records are included at the discretion of the vice-county recorder. The minimum grid reference is to a hectad but, if supplied by the recorder, references to a 1km or even a 100m square may be included. A letter in parentheses following a grid reference indicates a tetrad.

The Vice-County Recorders from 1/1/2010 are:

MONMOUTH, v.c. 35; Mr. T.G. Evans, La Cuesta, Mounton Road, Chepstow, Monmouthshire NP16 5BS
GLAMORGAN, v.c. 41 (West); Dr. Q.O.N. Kay, West Cwm Ivy, Llanmadoc, Gower, Swansea SA3 1DG
GLAMORGAN, v.c. 41 (East); Mr. J. Woodman, c/o CCW, Unit 4, Castelton Court,
Fortan Road, Cardiff CF3 0LT (Please mark PERSONAL)

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

RADNOR, v.c. 43; Miss. E.R. Dean, Enmore House, Croft Lane, Kingsland, Leominster, Herefordshire, HR6 9PP & Mrs S.M. Spencer (all correspondence to Miss Dean)

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

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

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

MONTGOMERY, v.c. 47; Dr. A K Thorne, Churton House, Church Pulverbatch, Shropshire, SY5 8BZ

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

CAERNARFON, v.c. 49; Mrs. W.N. McCarthy, 5 Tyn-y-coed, Great Orme, Llandudno, Conwy LL30 2QA

DENBIGH, v.c. 50; Mrs. D. Williams, Bryn Siriol, Graigfechan, Ruthin, Denbighshire, LL15 2HA

FLINT, v.c. 51; Ms. E. Meilleur, One Glan Aber, Hill Street, Llangollen, Denbighshire, LL20 8EU.

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

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


+‡35/2.1. Ficus carica (Fig)(Ffigysbren). 1 large tree, dam wall, New Quay Gout, ST277806, T. G. Evans, 2009. All ‘wild’ v.c.35 Figs are on walls over water.
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53/3.1. **Althaea officinalis** (Marsh-mallow)(Hocysen y Morfa). 3 sites near sea wall (37 plants in total), Peterstone Wharf, ST26807982, Also at ST26107944 to ST25977934; 100s plants along 400m of the upper left bank of, Goldcliff Pill, ST3682. 1st record here this millennium; both T. G. Evans, 2009.


Welsh Plant Records 2009, Monmouthshire

stronghold for this scarce plant; *Lathraea squamaria* also observed in 2 places.

+74/9.2. **Chrysosplenium alternifolium** (Alternate-leaved Golden-saxifrage)(Eglyn Bob yn Eiddail). 50 clumps by Afon Honddu, Penarth Brook Lower, Glyn Farm, SO476043; +By Afon Honddu, Neuadd Bridge, Cwmyoy, SO29552335; +In open woodland, Upper Maerdy Farm, SO370246; +By Afon Honddu, S. of Bugle Bridge, SO293268; +By Afon Honddu, between Maesyberan & Bugle Bridge, SO294266; +By rail bridge, Llanvihangel Crucorney, SO322210; all S. J. Tyler & T. G. Evans, 2009.


‡75/11.2. **Fragaria moschata** (Hautbois Strawberry)(Llwyn Mefus Mawr). Along 20-30m on minor road bank, Ticken Hill, Mounton, ST509932, T. G. Evans, 2009. First good flowering of this male sterile colony this millennium.


103/1.10. **Geranium columbinum** (Long-stalked Crane's-bill)(Pig-yr-aran Hirgoes). In disturbed soil in wide border of cornfield, SE of Rogiet Brake, ST45788848; +2 plants on open bank on edge of long field, S of Burness Castle Quarry, ST46108824; both B. Laney, 2009. 1st records this millennium.


107/26.3. **Bupleurum tenuissimum** (Slender Hare’s-ear)(Paladr Trwyddo Eiddlldaill). 11 plants, where Goldcliff Pill opens out into a wide expanse of saltmarsh, ST363825, T. G. Evans, 2009. This is the only site between St Pierre Pill and Newport where I’ve been able to see this plant this year because of over-grazing by cattle and in one stretch sheep; isn’t the land between the sea wall and the Severn a SSSI?

+108/3.4. **Centaurium pulchellum** (Lesser Centaury)(Y Ganrhi Goch Fach). 200+ plants...
Welsh Plant Records 2009, Monmouthshire

at turn around area of forestry track, Buckholt Wood, SO500163, D. Green, 2009.

113/1.1. **Menyanthes trifoliata** (Bogbean)(Ffeuen y Gors). 30-50 plants in Gaer Pond, Gaer Estate, Newport, ST296865, R. James, 2009. Update to this millennium.

+116/15.9. **Myosotis ramosissima** (Early Forget-me-not)(Sgorpionlllys Cynnar). Several patches on barish entrance off A465, Llangua Church, SO39032568; +3-5 patches in old ash ballast of old shunting yards, Rogiet, ST46038745; both T. G. Evans, 2009.


121/1.1. **Plantago coronopus** (Buck’s-horn Plantain)(Llyriad Corn Carw). Several plants on salted verge of A467, Rogerstone, ST278872, M. Tereva & P. Smith, 2008. 1st inland record not associated with tidal part of river in the v.c.


‡135/43.4. **Erigeron karvinskianus** (Mexican Fleabane)(Amrhydlwyd y Cerrig). In profusion on a garden wall but has strayed on to verges in Wern Road, Sebastopol, ST291952, R. Hewitt, 2009.

+135/49.1. **Artemisia maritima** (Sea Wormwood)(Wermod y Môr). 1 m² at foot of sea wall, E side of New Quay Gout, ST27868064, T. G. Evans, 2009.


138/1.1. **Hydrocharis morsus-ranae** (Frogbit)(Ffugalaw Bach). Filling the surface of Per Coed Reen, Duffryn, ST293844, R. James, 2009. Update to this millennium.


+151/1.25×26. **Juncus diffusus** × (J. effusus × J.) (Diffuse Rush). 4 clumps (both parents in abundance) damp pasture, Whitson, ST39078317; +10 clumps in damp pasture (both parents in abundance), Whitson, ST40168308; both J. P. Woodman, 2009.

152/11.2. **Cyperus eragrostis** (Pale Galingale)(Ysnoden-Fair Welw). 6 plants in Council depot, Cliff Wood, ST505942, H. V. Collins. New tetrad (C); 5 plants on damp neutral grassland next to railway, opposite White Cross Farm, Duffryn, ST300843, K. Roberts, last recorded in this tetrad in Newport Docks in 1973; both 2009. 1st recent records.

152/16.28. **Carex rostrata** (Bottle Sedge)(Hesgen Ylfinfain). Wet Meadow Wood pond,


153/47.3. **Alopecurus bulbosus** (Bulbous Foxtail)(Cynffonwellt Oddfog). 2-3 m² in each of 3 sites on brackish upper saltings, Peterstone Wharf, ST26507963, T. G. Evans, 2009. Also at ST26107944 & ST25977934 making 2 new tetrads.

‡153/52.5. **Anisantha madritensis** (Compact Brome)(Pawrwellt Cryno). c.10 plants on top of low wall topped by low railings, E of Great Tower, Chepstow Castle, ST53329413, T. G. Evans, 2009.

+‡153/70. **Setaria pumila** (Yellow Bristle-grass)(Cibogwellt Melyn). ©1 plant in paving, The Laurels, Drybridge Street, Monmouth, SO504125, H. V. Colls, 2009.


GLAMORGAN, v.c.41 (comm. J.P.Woodman)


+28/13.12. **Ranunculus lingua** (Greater Spearwort)(Llafnlys Mawr). ‡In created pond,
Welsh Plant Records 2009, Glamorgan


+‡47/1.3. Persicaria wallichii (Himalayan Knotweed)(Y Ganwraidd Himalaiaidd). Significant infestation on railway embankment 15m×10m (appears to have originated from nearby garden), New Tredegar, SO13960335, M. Pickard, 2009.


+‡73/1.3. Crassula helmsii (New Zealand Pigmyweed)(Corchwyn Seland Newydd). +In artificial fish pond on station platform, Barry, ST03546646, M. Pickard; +Exit trickle from new pond, Merthyr Tydfil, SO0700077, J. N. Davies; both 2009.

+‡77/2.1. Galega officinalis (Goat’s-rue)(Nuw’r Geifr). Rough ground by new road, Bargoed, ST151999, P. A. Smith & M. Teneva, NMW, det. A. O. Chater; +Growing on railway ballast next to railfreight terminal, ST23887974, M. Pickard; +Rough ground by new road, Bargoed, SO149002, P. A. Smith; all 2009.


+77/19.24. Trifolium squamosum (Sea Clover)(Meillionen y Morfa). Barry Docks,
Welsh Plant Records 2009, Glamorgan


*+124/23.1. **Parentucellia viscosa** (Yellow Bartsia)(Gorudd Melyn). ‡Several hundred plants on restored open cast, Llanilid, SS992819, P. Roberts, 2007. 1st post 1970 record for this hectar; +At least 100 plants along base of tip over 100-200 m at base of fly ash tip, East Aberthaw, ST0327669, M. Pickard, 2009.


*135/25.9.120. **Taraxacum cophocentrum** (Rounded-lobed Dandelion). N side,
Welsh Plant Records 2009, Glamorgan


*135/25.9.195. **Taraxacum sagittipotens** (Smooth Dandelion). Verge by law courts,
Welsh Plant Records 2009, Glamorgan

Welsh Plant Records 2009, Glamorgan - Breconshire


‡153/70.pum. *Setaria pumila* (Yellow Bristle-grass)(Cibogwellt Melyn). ©3 plants on ballast of railway viaduct, Bargoed, SO14990028; +©Over 50 plants in cracks and in ballast at end of station platform, Heath, Cardiff, ST18078030; both M. Pickard, 2009.


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


Wet pasture, edge of Mynydd Epynt, SN858350., R. G. Woods, 2009. 1st record for more than 30 years.


*162/23.3. *Ophrys apifera* (Bee Orchid)(Tegeirian y Wenynen). ©Road verge, Ffrwdgërch Estate, Brecon, SO029279, S. Coates, 2009. 1st authenticated record but only casual; 2 plants photographed.

RADNOR, v.c.43 (comm. Miss E.R. Dean & Mrs S.M. Spencer)


Welsh Plant Records 2009, Carmarthenshire

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


+‡46/18.1. **Lychnis coronaria** (Rose Campion)(Lluglys Gwridog). ©Two rosettes self
+‡62/33.2. Diplotaxis muralis (Annual Wall-rocket)(Roced-y-muriau’r Tywod). On


*62/41.1. **Crambe maritima** (Sea-kale)(Ysgedd Arfor). One plant in full flower 1×0.75m on sandy ground at top of beach near houses, Ferryside, SN3652810344, A. Stevens, 2009, conf. R. D. Pryce.


+69/6.2. **Anagallis arvensis** (Scarlet Pimpernel)(Llysiau’r cryman). Bare ground in car park area to Ty Gwyn Community woodland, Ystradowen, SN74961269, R. D. & K. A. Pryce, 2009. 1st localized hectad record.


+74/5.19. **Saxifraga tridactylites** (Rue-leaved Saxifrage)(Tormaen Tribys). Locally abundant pavement weed, St Clears, SN2825416430; +Outside Harvest Trust charity shop in angle between pavement and shop wall, Newcastle Emlyn, SN30724049; both R. D. & K. A. Pryce, 2009.


+‡75/19.15. **Alchemilla mollis** (Garden Lady’s-mantle)(Mantell-Fair y Gerddi). Maesycrugiau Church, SN473413, I.K. Morgan. 1st record for v.c.44 part of hectad; +Self-sown around fly-tipped rubbish in car park, Ystradowen, Car park area to Ty Gwyn Community woodland, SN74961269, R. D. & K. A. Pryce; both 2009.


*77/19.5. **Trifolium glomeratum** (Clustered Clover)(Meillionen Glystyrog). Several individual plants, covering patch c.1×0.3m, on low Old Red Sandstone knoll, Salthouse, Laugharne, SN30030963, I.K. Morgan, 2009, NMW. 1st record since Motley c.1844.

+79/2.3. **Myriophyllum spicatum** (Spiked Water-milfoil)(Myrdd-ddail Ysbigog). In small pond-dipping pond to W of main pond by car park, Mynydd Mawr Woodland Park, Tumble, SN537125, I.K. Morgan, 2009.


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+84/1.7. Epilobium roseum (Pale Willowherb)(Helyglys Gwelw). Bare ground in car park area to Ty Gwyn Community woodland, Ystradowen, SN74961269, R. D. & K. A. Pryce, 2009. 1st record for v.c.44 part of hectad.


*107/19.7. Oenanthe aquatica (Fine-leaved Water-dropwort)(Cegiden-y-dwr Fanddail). Six plants, five of which were flowering, in tall-fen/reed-swamp, Ffrwd Fen SSSI, Pembrey, SN41940247, BSBI Meeting, 2009, conf. A. O. Chater & G. M. Kay. 1st confirmed record of this species discovered by Sam Bosanquet on 11/6/09. David Stephens tentatively recorded the species from the N of Ffrwd Fen in 1988 but this was never confirmed.


+‡111/3.4. Calystegia silvatica (Large Bindweed)(Taglys Mawr). At edge of planted...


+‡116/8.1. **Pentaglottis sempervirens** (Green Alkanet) (Llysiau ’r-gwrid Gwyrdd).

Pendine, SN234084, I.K. Morgan; +Edge of mature willow scrub on road frontage, Cross Hands, SN56611314, R. D. Pryce; both 2009.


+‡118/6.1. **Galeopsis segetum** (Downy Hemp-nettle) (Y Benboeth Gulddail). ©One self-sown plant in disturbed ground. NW of theatre, National Botanic Garden of Wales, Llanarthne, SN52071828, J. P. Poland, 2009, NMW. 1st recent record but only casual.

+‡124/4.2. **Mimulus guttatus** (Monkeyflower) (Blodyn Mwnci). Tall fen/swamp in overgrown pond to S of farmhouse, Moat Farm Llandyry, SN43310516, Llanelli Naturalists meeting, 2009, det. R. D. Pryce.


+‡133/1.2. **Valerianella carinata** (Keeled-fruited Cornsalad)(Gwylaeth-yr-oen Rhychog). Strange form with globular heads on waste ground behind houses, Garden Lane, Llandovery, SN762534458, M. & J. Iliff, NMW, conf. J. P. Poland; +Roadside masonry weed in angle between wall and road and on grass bank, Ferryside, SN36520995; +In masonry on disused railway bridge, Pencader, SN44603630; the last two R. D. & K. A. Pryce; all 2009.


*©135/81.fer. **Bidens ferulifolia** (Fern-leaved Beggarticks). Pavement weed, one plant by pole at S end of Pont Tyweli, SN4148040293, A.O. Chater, 2009, NMW.


Cyperus eragrostis (Pale Galingale)(Ysnoden-Fair Welw). © One large plant about 0.5 m across, at E end of tall herb area, with last year’s flowering stems retained on clump, verge of track to sports fields E of Denham Avenue, Llanelli, SN49620115, R. D. Pryce, 2009.


Carex ×elytroides (C. acuta × C. nigra) (a hybrid sedge). Linear stand c.20 m × 2 m in tall-fen, Ffrwd Fen SSSI, Pembrey, SN41870253, S. D. S. Bosanquet, 2009, NMW. Confirmed later independently by A. O. Chater, M. Porter & M. Foley. 1st recent record. Previously recorded by Motley pre-1850 but no locality given (reported by Riddelsdell, 1907).

Carex muricata ssp. lamprocarpa (Small-fruited Prickly-sedge)(Hesgen Ysbigog). Gravelly area by entrance to former railway goods yard, Pensarn, Carmarthen, SN4127319531, M. Godfrey & M. Stead, NMW; +Grassy area by small limestone crag, NE of Gilman Point, Pendine, SN22840759, BSBI Meeting; both 2009, det. A. O. Chater.


Puccinellia rupestris (Stiff Saltmarsh-grass)(Gwellt-y-morfa Syth). ‡One large and four or five small trampled plants in non-tidal top saltmarsh/tarmac road interface, below Sir John’s Hill, Laugharne, SN30191050, R. N. Carter, 2009.


Arrhenatherum elatius var. bulbosum (Onion Couch). Bryntirion SSSI,


+153/31.2. **Koeleria macrantha** (Crested Hair-grass)(Cribwellt). Calcareous grassland, NE of Gilman Point, Pendine, SN2284307592, BSBI Meeting, 2009, NMW, det. A. O. Chater & G. M. Kay. Two discrete populations: about 10 clumps on E part of Carboniferous Limestone knoll over area c.3×2m and 6 clumps on W part of knoll covering area c.2×2 m. Also scattered over ranker grassland 15m to W. Presumably rediscovery of record reported in 1905 by T.W. Barker from ‘Pendine Cliffs’.


‡†153/71san. **Digitaria sanguinalis** (Hairy Finger-grass)(Byswellt Blewog). ©1 plant growing in gravel towards eastern end of platform 2, Llanelli Railway Station, SS5070399427, NMW. 3rd v.c. record, 1st since 1992 and new hectad record; ©1 plant in angle between pavement and retaining wall N of Aldi store, Prospect Place, Llanelli, SN50870067, NMW, ex bird seed, 4th v.c. record; both R. D. Pryce, 2009.


‡†158/33.5.b. **Narcissus pseudonarcissus** ssp. obvallaris (Tenby Daffodil)(Cenhinen-


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

+4/1.4×5. Equisetum ×litorale (E. fluviatile × E. arvense) (Shore Horsetail) (Marchrawnwen y Glennydd). Wet edge of willow scrub bordering the open ground of the scrap metal yard, disused Johnston Scrappyard, SM93401107; +Soligenous flush, Waun Fawr Common, Puncheston, SN015302; both S. B. Evans, 2009.

+9/1.1. Pilularia globulifera (Pillwort)(Pelenllys Gronynnog). Spread along 25 paces of the flooded northern extremity of Ian’s shallow ditch which was set in grazed wet heath and had been created in about 2003, Ramsey, SM6997823580; +Extending over a tape measured 110×135 inches of a hollow – probably an ex deer wallow, Middle of Ian’s ditch, Ramsey, SM6996023533; both S. B. Evans, 2009.


+‡30/1.5.a. Papaver dubium ssp. dubium (Long-headed Poppy)(Pabi Hirben). Heaps of sandy topsoil from the large Lydstep Holiday Park dumped in the top NE corner of the sandy arable/fallow field over a number of years and supporting classic disturbed ground plants, SE of entrance to Lydstep Caravan Park, SS0950498825, S. B. & A. E. Evans, 2009.

+‡30/1.5.b. Papaver dubium ssp. lecoqii (Yellow-juiced Poppy)(Pabi Hirben). Flowering plant with yellow sap on the lower slopes of a steel netted limestone bank, NE end of Castle Square, Tenby, SN1366800546, S. B. & A. E. Evans, 2009. It was also behind Castle Court on Castle Hill at SN1368400513.


+‡46/22.1. **Saponaria officinalis** (Soapwort)(Sebonlllys). Tall herbs on margin of S side of old farmhouse ruins, Skomer, SM7264309532, S. B. Evans, 2009.


+†62/11.4. **Barbarea verna** (American Winter-cress)(Berwr-y-gaeaf cynnar). Dog dropping enriched vegetation on the edges of the inner breakwater path, Goodwick,
Welsh Plant Records 2009, Pembrokeshire

SM9512438050, S. B. & A. E. Evans, 2009. The central path had been resurfaced/regraded in the last 12 months.


+69/4.3. Lysimachia vulgaris (Yellow Loosestrife)(Trewyn). Stand 8×11 paces just N of old haul road through floor of old sand quarry which is now a dune slack complex, Broomhill Burrows, SM88990016, S. B. & A. E. Evans, 2009.


+75/13.1×2. Geum ×intermedium (G. rivale × G. urbanum) (Hybrid Avens)(Mapgoll Groesryw). Patch on the left bank of the stream above the road bridge where an old hedge-bank meets the stream, Pont yr Ochrau, Manorowen, Goodwick, SM93943698, S. B. Evans, 2009. Also on the right bank at SM93923697 and SM93933698.


‡75/32.26. Cotoneaster divaricatus (Spreading Cotoneaster)(Cotoneaster Ymledol). A single bush spreading over the concrete hard standing by a garage. 1st VC record, Bryn Road, St Davids, SM75522523, M. Wilcox, 2009.


+81/1.3. Lythrum portula (Water-purslane)(Troed y Gywen). Pond in floor of disused sand dune quarry, Square Pond, old sand quarry, Brownslade Burrows, SR89829840; In a wet clay hollow by the gateway at the NW end of the grazed wet heathland growing with Ranunculus tripartitus, Keeston Moor, Keeston, SM8944418802; both S. B. Evans, 2009.

+‡84/1.8. Epilobium ciliatum (American Willowherb)(Helyglys America). Graded/disturbed ground S of the road with numerous short ruderal species, Brynawelon
Welsh Plant Records 2009, Pembrokeshire


+‡85/3.1. *Griselinia littoralis* (New Zealand Broadleaf)(Griselinia). Saplings growing on the outer wall top slabs of the entrance drive to Treforfan, Fishguard, SM95873733, S. B., A. E., W., C. & O. Evans, 2009. 1st record as a neophyte. The parent tree was just on the SW side of the entrance just inside the garden.


*‡91/2.5. *Euphorbia dulcis* (Sweet Spurge)(Llaethlys Pêr). Wall, Nun Street, St David’s, SM753254, P. Abbot, 2009. 1st record.


+‡102/1.3. *Oxalis corniculata* var. *atropurpurea* (Procumbent Yellow-sorrel)(Suran Orweddel). Bare ground, W side of Farmers Arms, Goat Street, St David’s, SM7519825294, M. Wilcox, 2009.


+107/43.3. *Torilis nodosa* (Knotted Hedge-parsley)(Troed-y-cyw Clymog). Inside the gatepost stop at the entrance to the main farmyard, Portheddy Farmyard, Llanrhian, SM8035531010, J. Hudson, 2009.


+‡116/4.1×2. *Symphytum × uplandicum* (S. officinale × S. asperum) (Russian Comfrey)(Cyfardwf Rwsia). Abundant clumps all along the verge near the corner, Trerhos Common, Hayscastle, SM92362686. Long established at this spot – at least 30 years – and originating from old spoil dumping; +Patches on northern edge of old road S of the smaller road drainage pool, SW of Carew roundabout, SN04560311; both S. B. Evans, 2009.


+120/1.5. *Callitriche obtusangula* (Blunt-fruit Water-starwort)(Brigwlydd Ffrwythau)
Blaendwn). In the stream that bisects the Churchyard, St Ishmaels, SM830067, S. B. & A. E. Evans, 2009.


+121/2.1. **Littorella uniflora** (Shoreweed)(Beistonnell Ferllyn). Numerous stands in the flushed open areas of this grazed heath, Southern heath, Ramsey, SM6999423380, S. B. Evans, 2009.

+†124/12.1. **Kickxia elatine** (Sharp-leaved Fluellen)(Llysiau-Llywelyn). In the mix of sea-cliff and disturbed ground plants such as *Petroselinum crispum* & *Brassica oleracea*, S side of First Point, North Beach, Tenby, SN1345701286, S. B. Evans, 2009.


+124/16.11. **Veronica anagallis-aquatica** (Blue Water-speedwell)(Graeanllys y Dwr). In small lake/large pond on the floor of the old sand quarry, Broomhill Burrows, SM8907200118, S. B. & A. E. Evans, 2009. Also in a hollow on the dune slack/old quarry floor at SM8897700115 with *Carex elata*.

+©129/7.2. **Lobelia erinus** (Garden Lobelia)(Bidoglys yr Ardd). Field, Penygraig, Templeton, SN112118, C. Flynn, 2009. Previous owners of the property had at one time been involved with a hanging basket business with poly tunnels. In 2008 the field was left uncut until September and the cuttings raked off. It had been mown short by the previous owner. A pond had been dug not too far from the Lobelia.

+130/3.1. **Sherardia arvensis** (Field Madder)(Mandon Las yr Yd). In herbicide sprayed strip at the base of the church just E of the porch, Lampeter Velfrey Churchyard, SN1552114432, S. B. & A. E. Evans, 2009.

+‡131/5.1. **Leycesteria formosa** (Himalayan Honeysuckle)(Bachgen Llwm). Seeded into the low wall around the chapel, Longstone Chapel, Ludchurch, SN143100; Seeded and grown into a small plant on the restored Medieval Cross, Lampeter Velfrey Churchyard, SN15521442; both S. B. & A. E. Evans, 2009. Much older bushes present along the W side of the approach to the Rectory outwith the CY. These could have been the seed source carried by birds? This plant is becoming a regular coloniser in the towns and villages of Pembrokeshire.

‡133/3.1. **Centranthus ruber** (Red Valerian)(Triaglog Goch). Walls, ruins of John the Baptist’s Church, Slebech House, SN03201392, S. B. Evans, 2009.

*‡135/6.9×1. **Cirsium ×celakovskianum** (*C. arvense × C. palustre*) (a hybrid thistle). With both parents about 30 m E of the old Jordanston Mountain building, Redberth, SN09000355, M. Sutton, 2009. 1st record.

*‡135/44.2. **Conyza sumatrensis** (Guernsey Fleabane)(Amrhydlwyd Guernsey). Widespread by the deserted garage forecourt windows by the old petrol pumps and on the apron nearest the highway, derelict Garage of Silcox Motors, Pembroke Dock, SM97790350, S. B. Evans, 2009.

+‡135/58.lac×max. **Leucanthemum ×superbum** (*L. lacustre × L. maximum*) (Shasta Daisy)(Y Llygad-Ilo Mwyaf). Sand dune, slipway at S end of Freshwater East Beach,


+142/1.3. *Potamogeton coloratus* (Fen Pondweed)(Dyfrllys y Gors Galchog). Large stand in this small lake/large pond on the floor of the old sand quarry, spread over a 80 paces length but much narrower in width, Broomhill Burrows, SM8907200118, S. B. & A. E. Evans, 2009.


+‡148/2.4. *Lemma minuta* (Least Duckweed)(Llinad Bach). Abundant in a ditch in the reedbed with *Lemma minor* alongside the boardwalk, Goodwick Moor, SM9464437582; +Shallow pool created on the quarry floor about 7-8 years ago in main Bryn Banc Quarry, Lampeter Velfrey, SN14141446; both S. B. & A. E. Evans, 2009.


Welsh Plant Records 2009, Pembrokeshire


152/16.23. **Carex hirta** (Hairy Sedge)(Hesgen Flewog). Grazed fen behind a small shingle bar, Gwadn, Solva, SM8031523853, S. B. & A. E. Evans, 2009. Also at SM8032223909 in the same grazed fen a little further inland along the valley.


+153/17.1. **Briza media** (Quaking-grass)(Crydwellt). Scattered in tufts at a low density over about 12×12 paces in a **Juncus acutiflorus**/**Carex hostiana** sward in an area of wet sedge-rich heath with low **Molinia** hummocks, Trefeiddan Moor, St David’s, SM7326725302, S. B. Evans, 2009. There have been old records from the moor.

‡153/17.3. **Briza maxima** (Greater Quaking-grass)(Crydwellt Mawr). Bare ground, entrance to Gwynfan, Llwyncelyn, Cilgerran, SN20374241, S. B. & A. E. Evans, 2009.


‡153/52.1. **Anisantha diandra** (Great Brome)(Pawrwellt Mawr). Grassy edge to the scrub NW of the old limekilns on the E side of Porthclais Harbour, St David’s, SM74112418, M. Wilcox; +Bare sandy edge of a planted **Escallonia** hedge around the seating W of the coloured tile mosaic to celebrate the failed French Invasion of Fishguard, The Parrog, Goodwick, SM9484937813, S. B. & A. E. Evans; both 2009. 2nd records.


+160/3.1. **Cordyline australis** (Cabbage-palm)(Palmwydden Fresych). Abundant tiny seedlings growing in the paving crevices around the feet of the two 12-15 feet high *C. australis* at the front of the Grove Hotel, St David’s, SM756252575, J. Tregale, 2009. They had fruited in 2008. Two grown on by SBE.  
+162/18.2×4. **Dactylorhiza × hallii** (**D. maculata × D. praetermissa**). (a hybrid orchid).  
+162/18.3. **Dactylorhiza incarnata** (Early Marsh-orchid)(Tegeirian-y-gors Cynnar).  
Flushed sedge-rich slope in lower part of Botany Bank, Somerton Farm, Hundleton, SM9299500260, S. B. Evans, 2009. *D. incarnata* was also seen at SM9299700254 on the same slope.  

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


+53/2.3. **Lavatera × clementii** (**L. olbia × L. thuringiaca**). (Garden Tree-mallow) (Hocyswydden yr Ardd). One plant on sand dunes, E of road, Ynys-las dunes, SN611939, A. O. Chater; +One plant on sand dunes, Penybergyd, Gwbert, SN161486, A. O. Chater & F. Newbery; both 2009.  
+57/1.4×7. **Viola riviniana × V. lactea** (a hybrid dog-violet). With parents in area of wet heath where scrub was cleared, Rhos Cwmsaes, Oakford, SN461586, A. O. Chater & R. A. Jones; +Coastal heath, by coast path, Penpeleis, SN21815227, S. P. Chambers; both 2009.  
+61/2.6. **Salix daphnoides** (European Violet-willow)(Helygen Borffor). Self-sown bush on roadside cliff, 800m W of Bwlch Nantyryan, SN71168101, A. O. Chater & J. P.
Welsh Plant Records 2009, Cardiganshire

Poland, 2009. 1st record as a neophyte.


+62/42.1.b. Raphanus raphanistrum ssp. maritimus (Sea Radish)(Rhuddygl Arfor).


+‡73/1.3. Crassula helmsii (New Zealand Pigmyweed)(Corchwyn Seland Newydd).


+‡75/12.1. Duchesnea indica (Yellow-flowered Strawberry)(Llwyn Mefus Melyn).


A most unusual habitat for this normally sand or shingle species.

+‡116/4.4. Symphytum grandiflorum (Creeping Comfrey)(Cyfardwf Lusg). Colony 3.5×0.5m on streamside, Cwmyrolchfa bridge, Bronnant, SN4067880, S. P. Chambers, 2009.


*152/16.34. Carex striogosa (Thin-spiked Wood-sedge)(Hesgen-y-coed Benfain). c.1000 plants on boulder clay in damp Salix cinerea/Fraxinus woodland, 300m WSW of Llain,Llanfairorllwyn, SN366411, A.O.Chater & WWBIC field meeting, 2009, NMW.
Welsh Plant Records 2009, Cardiganshire - Montgomeryshire

+152/16.46.a-b. Carex viridula ssp. brachyrhyncha/oedocarpa intermediate (Yellow-sedge)(Hesgen Felen). In several places in base-rich heathy Molinia flush, W of Cam Penrhiewllwydog, 8km ESE of Llanddewi Brefi, SN73355259, S. P. Chambers, 2009.


+153/70.1. Setaria viridis (Green Bristle-grass)(Cibogwellt Gwyrddlas). ©Disturbed edge of playing field, Lower Regent St, Aberaeron, SN45826310, A. O. Chater, 2009, NMW.


*162/18.1×2. Dactylorhiza × transiens (D. fuchsi × D. maculata). (a hybrid spotted-orchid). One plant in rough pasture, above Plas Cwmcyifen, SN603832, S. P. Chambers, 1994. Thought likely to be this hybrid by R. H. Roberts from photos in 1997, later considered by SPC to be at least as distinct as a v.c.43 plant confirmed by R.H.R.


MONTGOMERY, v.c.47 (comm. Dr A.K. Thorne)


Welsh Plant Records 2009, Montgomeryshire


*77/19.5. Trifolium glomeratum (Clustered Clover)(Meillionen Glystyrog). ‡0.5×0.5m patch on main trackside bank, Breidden Hill SSSI, SJ28841373, A. O. Chater, 2009, det. A. O. Chater, J. P. Poland & C. D. Preston.


+84/1.5. Epilobium tetragonum (Square-stalked Willowherb)(Helyglys Pedronglog). By stream, Cwm Melangell, SJ028263, A. P. Daly, 2009.


+107/19.7. Oenanthe aquatica (Fine-leaved Water-dropwort)(Cegiden-y-dwr Fanddai).


*121/1.4. *Plantago media* (Hoary Plantain)(Llyriad Llwyd). ‡Old lead mine spoil, Y Fan Leadmines, SN94258761, I. Griffith & A. Hotchkiss, 2009. 1st recent record. Thought to be planted when area was landscaped.


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


15/2.5.b×5.a. *Asplenium trichomanes* nothosspp. ×*lusaticum* (A. trichomanes ssp.

BSBI Welsh Bulletin No. 86 May 2010 47
quadrivalens × ssp. trichomanes) (a hybrid spleenwort). Roadside wall with ssp. trichomanes and probably ssp. quadrivalens at Llanfachreth, SH72, P. M. Benoit, 2009. Robust and with intermediate characters and sterile spores. Confirms earlier record for the hectad.


+‡73/1.3. *Crassula helmsii* (New Zealand Pigmyweed)(Corchwyn Seland Newywy). In quantity as a flowering terrestrial plant in turf in draw-down zone, Llyn Cynwych Reservoir, SH72, J. M. Maynard, 2009. Recorded when the water-level was low.


118/23.4. *Mentha suaveolens* (Round-leaved Mint)(Mintys Deilgrwn). ‡The Harlech plant in SH53 was a single patch on roadside waste ground, and was surely an escape or throw-out not a native as in the *New Atlas*. Needs refinding. P.M. Benoit.


CAERNARFON, v.c.49 (comm. Mrs W. McCarthy)

+4/1.4×5. *Equisetum ×litorale (E. fluviatile × E. arvense)* (Shore Horsetail)
Welsh Plant Records 2009, Caernarvonshire


+‡043/1.8. Chenopodium polyspermum (Many-seeded Goosefoot)(Troed-yr-wydd Amlhadog). Disturbed ground by new hospital, Porthmadog, SH5540, W. McCarthy & M. Stead; +Maize field, Llangwstenin, SH8179, W. McCarthy; both 2009.


+61/2.1. Salix pentandra (Bay Willow)(Helygen Bêr). Marshy ground by river, Llanaelhaearn, SH3843, Caerns. recording group; +Stream side by road, Llanaelhaearn, SH4043, W. McCarthy & M. Stead; both 2009, status unknown. 1st recent records.

+†062/7.1. Erysimum cheiranthoides (Treacle-mustard)(Triagl Arfog). Arable field,
Welsh Plant Records 2009, Caernarfonshire


+62/41.1. *Crambe maritima* (Sea-kale) (Ysgedd Arfor). Shingle at foot of slope, top of beach, Gyrn Goch, SH3948, I. Edgar, 2009. **NB** This is native in v.c.49 not a neophyte as in VCCC.

+62/42.1.b. *Raphanus raphanistrum* ssp. *maritimus* (Sea Radish) (Rhuddygl Arfor). Among stones on the beach, Gyrn Goch, SH3948, I. Edgar, 2009. **NB** This is native in v.c.49 not a neophyte as in VCCC.


+75/20.2. *Aphanes australis* (Slender Parsley-piert) (Troed-y-dryw Main). Rocky outcrops, Abererch, SH4036; +Track along hillside, Llanllyfni, SH4541; both W. McCarthy, 2009.


+107/22.1. **Siliaum silaus** (Pepper-saxifrage)(Ffenigl yr Hwch). Damp meadow at edge Salix carr, Dolgarrog, SH7767, W. McCarthy, 2009. 1st record for at least 30 years and only extant site.


+133/2.3. **Valeriana dioica** (Marsh Valerian)(Triaglog y Gors). Along streamside near...
Welsh Plant Records 2009, Caernarvonshire

+‡135/43.4. **Erigeron karvinskianus** (Mexican Fleabane)(Amrhylwyd y Cerrig). High roadside wall, Bangor, SH5862, E. Phenna, 2009.
†135/55.3. **Anthemis cotula** (Stinking Chamomile)(Camri'r Cwn). Disturbed ground by new car-park, Great Orme, Llandudno, SH7683, W. McCarthy, 2009.
+151/2.3. **Luzula sylvatica** (Great Wood-rush)(Coedfrwynen Fawr). Cliffs above the sea, Uwchmynydd, SH1426; +Hill pasture, Moel Dyrnogyd, Dolwyddelan, SH6948; both W. McCarthy, 2009.
+152/10.2. **Blysmus rufus** (Saltmarsh Flat-sedge)(Corsfrwynen y Morfa). Top of saltmarsh for c.20m, Dinas Dinlle, SH4558, W. McCarthy, 2009. 1st record for over 60 years, previously presumed extinct, contrary to entry in VCCC.


ANGLESEY, v.c.52 (comm. N.H. Brown & I.R. Bonner)


1st confirmed Welsh record. See *BSBI News* 113.


Presumably introduced with pony feed and close to site of 1st record.


Welsh Plant Records 2009, Anglesey


Invasive aliens in Wales
As readers of British Wildlife magazine will be aware, there has recently been some lively discussion, stimulated by the BSBI, on the scale of the impact of invasive alien plants in Britain. At the heart of the debate is the apparent rarity of many invasive aliens in the wider landscape compared to the impact they are thought to be having on our biodiversity and the scale of the response in terms of cost of control. The debate has in fact been most useful in helping to identify areas of agreement, namely that only a very small proportion of aliens are invasive, that these species are relatively infrequent in the wild in terms of sites (but many are still expanding and consolidating their ranges), that some botanically rich sites are very threatened by the impact of invasive aliens, that invasive native species currently pose a bigger problem in the grand scale of the landscape, and that the key to controlling both invasive aliens and natives on any one site is correct habitat management.

In order to actually get some hard evidence to back up the various arguments, Plantlife and the BSBI Wales Committee have been working together to assess the impact invasive aliens are having on sites in Wales. This work took the form of a questionnaire that basically asked for hard evidence of a decline in native species because of the impact of an alien invasive, and an assessment of sites where priority native species occur with alien invasives. This latter is important as it allows us to identify sites were species of conservation concern occur and therefore prioritise sites for action if appropriate.

Currently, of the 13 vice-counties in Wales, full data has been submitted for just five counties (Caernarfonshire, Carmarthenshire, Cardiganshire, Montgomeryshire and Pembrokeshire), with some additional data for Anglesey, Flintshire, Glamorganshire, Merionethshire and Monmouthshire. While the results can therefore only be taken as preliminary, they reveal some very interesting results and it is hoped that publication of these will stimulate more records and observations to be submitted.

How were sites identified?
If we aimed to identify all sites where aliens occur, we'd never finish the job. We therefore had to limit the list of sites to those fulfilling two criteria. Firstly were those where there was direct evidence that a threatened species had declined because of an
alien invasive species. Threatened species were any listed as Critically Endangered (CR), Endangered (EN), Vulnerable (VU) or Near Threatened (NT) in either the GB Red Data List (Cheffings & Farrell, 2005) or the Wales Red Data List (Dines, 2008). In these cases, we wanted cases where the population of the threatened species had declined in size or extent, or even been eliminated from the site. In other words, this would provide evidence of the direct impact of the alien on the threatened native species.

Secondly, we asked for details of sites where any invasive alien occurred on the same site as a Section 42 priority species (the new list of 75 species of conservation importance in Wales). For terrestrial species this meant within 10 metres of the Section 42 species, while for (the more mobile) aquatic species this meant within 50 metres within the same water body. In this case, we were looking for the coincidence of priority species and alien invasives, and looking for sites where control work has either already been undertaken (and the threat from the alien has been reduced) or where work might need to be undertaken in the future.

**Which alien species are invasive in Wales?**

In the responses, Recorders identified sites where thirty different alien species could be regarded as invasive at sites in Wales (see table 1 below). These include some interesting species, including four that are native elsewhere in Britain.

As can be seen from table 1, aquatic

<table>
<thead>
<tr>
<th>Species</th>
<th>Common Name</th>
<th>Number of sites where invasive alien present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artemisia campestris subsp. maritima</td>
<td>Sea Wormwood</td>
<td>1</td>
</tr>
<tr>
<td>Cephalanthera longifolia</td>
<td>Sword-leaved Helleborine</td>
<td>3</td>
</tr>
<tr>
<td>Cicendia filiformis</td>
<td>Yellow Centaury</td>
<td>1</td>
</tr>
<tr>
<td>Clinopodium acinos</td>
<td>Basil Thyme</td>
<td>1</td>
</tr>
<tr>
<td>Dianthus armeria</td>
<td>Deptford Pink</td>
<td>1</td>
</tr>
<tr>
<td>Gentianella campestris</td>
<td>Field Gentian</td>
<td>2</td>
</tr>
<tr>
<td>Gentianella uliginosa</td>
<td>Dune Gentian</td>
<td>2</td>
</tr>
<tr>
<td>Juniperus communis</td>
<td>Juniper</td>
<td>2</td>
</tr>
<tr>
<td>Liparis loesellii</td>
<td>Fen Orchid</td>
<td>2</td>
</tr>
<tr>
<td>Luronium natans</td>
<td>Floating Water-plantain</td>
<td>4</td>
</tr>
<tr>
<td>Oenanthe fistulosa</td>
<td>Tubular Water-dropwort</td>
<td>1</td>
</tr>
<tr>
<td>Pilularia globulifera</td>
<td>Pilwort</td>
<td>3</td>
</tr>
<tr>
<td>Potamogeton compressus</td>
<td>Grass-wrack Pondweed</td>
<td>2</td>
</tr>
<tr>
<td>Ranunculus tripartitus</td>
<td>Three-lobed Water-crowfoot</td>
<td>2</td>
</tr>
<tr>
<td>Salsola kali</td>
<td>Prickly Saltwort</td>
<td>2</td>
</tr>
</tbody>
</table>

**Table 1**
species such as *Luronium natans* (Floating Water-plantain) and *Pilularia globulifera* (Pilwort) seem especially likely to occur with invasive aliens, along with other aquatics like *Potamogeton compressus* (Grass-wrack Pondweed) and *Ranunculus tripartitus* (Three-lobed Water-crowfoot). This is not surprising given the ease with which aquatic invasives can spread and the number of invasive aquatic species. The *L. natans* (Floating Water-plantain) sites, for example, all occur with *Elodea canadensis* (Canadian Waterweed) and sometimes *E. nuttallii* (Nuttall's Waterweed) as well. Heathland species also feature, mainly through the infestation of heathland pools with *Crassula helmsii* (New Zealand Pigmyweed). Dune species are also notable, especially the Critically Endangered *Liparis loeselii* (Fen Orchid), and *Hippophae rhamnoides* (Sea Buckthorn) is the major invasive species in this habitat.

<table>
<thead>
<tr>
<th>Species</th>
<th>Common Name</th>
<th>Number of SSSIs affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhododendron ponticum</td>
<td>Rhododendron</td>
<td>45</td>
</tr>
<tr>
<td>Conifer species</td>
<td>Conifers</td>
<td>44</td>
</tr>
<tr>
<td>Fallopia japonica</td>
<td>Japanese Knotweed</td>
<td>25</td>
</tr>
<tr>
<td>Impatiens glandulifera</td>
<td>Indian Balsam</td>
<td>22</td>
</tr>
<tr>
<td>Acer pseudoplatanus</td>
<td>Sycamore</td>
<td>16</td>
</tr>
<tr>
<td>Prunus laurocerasus</td>
<td>Cherry Laurel</td>
<td>13</td>
</tr>
<tr>
<td>Cotoneaster species</td>
<td>Cotoneasters</td>
<td>8</td>
</tr>
<tr>
<td>Crassula helmsii</td>
<td>New Zealand Pigmyweed</td>
<td>6</td>
</tr>
<tr>
<td>Quercus ilex</td>
<td>Evergreen Oak</td>
<td>5</td>
</tr>
<tr>
<td>Heracleum mantegazzianum</td>
<td>Giant Hogweed</td>
<td>3</td>
</tr>
</tbody>
</table>

**Table 2**

Of the twenty-two sites, the invasive alien species and the priority native species were regarded as co-existing at 7 sites (32%). At 15 sites (68%) control of the alien invasive was either needed (10 sites) or was already underway and was alleviating the impact on the priority species (5 sites). Again, it would be best to reserve judgement for when all the data are in, but it appears that more work is needed at sites where invasive species are occurring with priority Section 42 species. This exercise has certainly proved helpful in identifying such sites and prioritising them for action.

**Invasive aliens on SSSIs in Wales**

As part of a separate exercise, we have been given access to the CCW SSSI Actions Database. This lists issues that potentially affect the favourable condition of SSSIs and gives the actions that are needed to resolve them. In the case of invasive non-native species, sites are listed when the...
presence of such a species is judged to be significant enough to threaten a notified SSSI feature and render it in unfavourable condition – the presence of an invasive species on a SSSI is, in itself, not enough to warrant inclusion in the database.

An analysis of the database shows that invasive non-native plants threaten the favourable status of 123 terrestrial and freshwater SSSIs in Wales (12% of all 1019 SSSIs). Thirty alien species are regarded as invasive enough to warrant action, and the top ten are listed in table 2 on page 3.

The fact that different species appear here compared to our list indicates that more work is needed to properly quantify the impact invasive aliens are having on our flora. It might be argued that invasive aliens are rare on sites where threatened species grow and on Welsh SSSIs, but the important point is that they are having a detrimental impact on some of our most significant sites and are greatly compounding existing problems posed by the threat from invasive native species such as *Pteridium aquilinum* (Bracken), *Ulex* species (Gorse) and *Hedera helix* (Ivy).

But these relatively few cases of direct and measurable impact on populations of threatened plants mask two very important points. First, early intervention is the most effective and resource efficient way of dealing with non-native invasive species once they are present at a site and so conservationists and Statutory Agencies do not wait for a threatened species to be damaged by non-native invasive plants before initiating management. If a large patch of *R. ponticum* is visibly spreading and encroaching on a population of *Cephalanthera longifolia* (Narrow-leaved Helleborine), as it is at two sites in north-west Wales, pre-emptive action is taken before the Helleborine declines.

Secondly, a focus on the impact of non-native invasive plants on threatened plant species masks the much more important impact on the phytosociology of habitats and communities. The same list of plants may be recorded from a wetland before and after it has been invaded by a non-native invasive plant such as *Impatiens glandulifera* (Indian Balsam). But this stark assessment of a habitat belies the extraordinary change in community structure, proportion of different species and the character of the habitat that may take place. Such changes may, for example, diminish a habitat’s heterogeneity, reduce light and heat reaching the herb layer/sub-surface waters, alter rates of nutrient cycling, or (in freshwater systems) cause large fluctuations in oxygen availability. The ramifications of these impacts will be felt right across the plant kingdom as well as beyond it.

If anyone would like to contribute their records and observations to this work, please contact Trevor Dines for a copy of the appropriate forms to complete.
Above: Crambe maritima (Sea-kale). On sandy ground at top of beach near houses, Ferryside, A. Stevens, 2009. 1st record for v.c.44. (see page 30). © R. D. & K. A. Pryce

Below: Parapholis incurva (Curved Hard-grass). Festuca rubra dominated top saltmarsh, Ginst Point, 2009. 1st record for v.c.44. (see page 34). © R. D. & K. A. Pryce
Above: *Stellaria nemorum* ssp. *montana* (Welsh Wood Stichwort) showing the abrupt reduction in bract size (see page 13-15). © R.A. Jones