

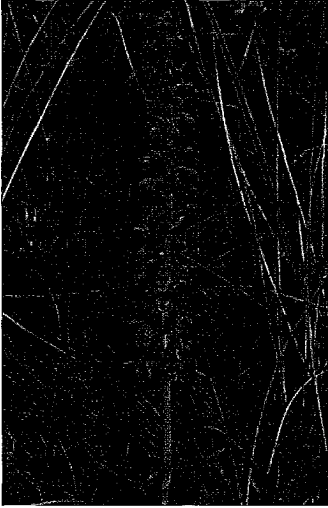
BSBI News

January 2009

No. 110



Edited by Trevor James & Gwynn Ellis



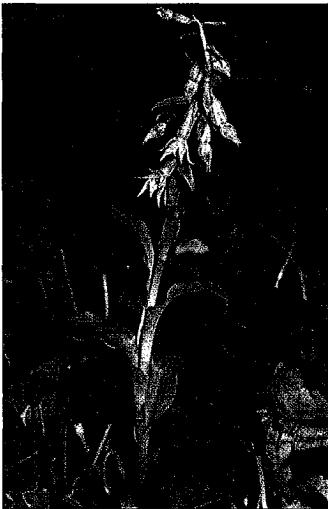
1.



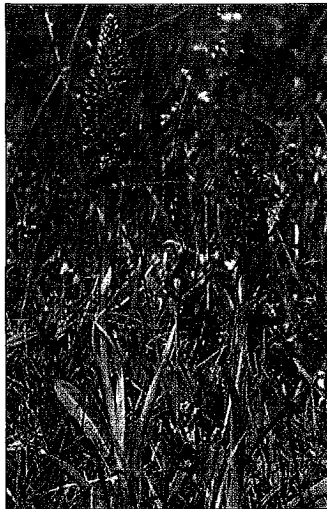
2.



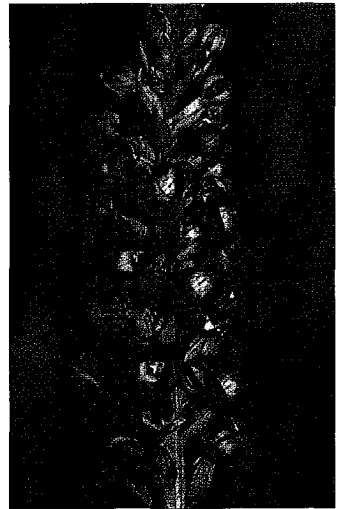
3.



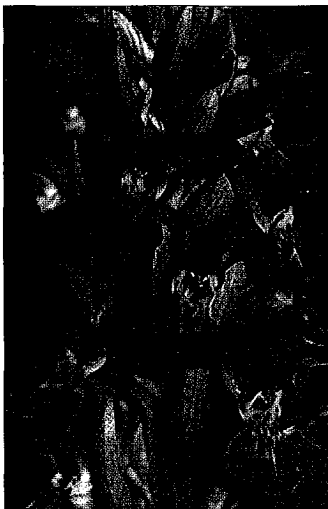
4.



5.



6.



7.

- 1: *Epipactis helleborine* ssp. *neerlandica* (larger form)
(previously *E. helleborine* aff. *neerlandica*), 31 July 2008.
- 2: *Epipactis helleborine* ssp. *neerlandica* (dwarf form)
(previously *E. helleborine* aff. *youngiana*), 1 August 2005.
- 3: *Epipactis phyllanthes* var. *cambrensis*, 25 July 2005.
- 4: *Epipactis phyllanthes* var. *vectensis*, 4 September 2007.
- 5: *Gymnadenia conopsea* var. '*friesica*', 1 July 2007.
- 6: *Gymnadenia conopsea* var. '*friesica*', 2 July 2008.
- 7: *Dactylorhiza* aff. *purpurella*, 28 June 2007.

All photos taken at Kenfig NNR (v.c.41) © M.J. Clark (see p. 7)

CONTENTS

BSBI Plant Unit News	2	Requests & Offers	
Editorial	6 & 51	<i>Juncus</i> and other taxa required.....	<i>M. Wilcox</i> 49
Notes		New Naturalist Books for sale.....	<i>D. Pigott</i> 49
An update on the orchid flora at Kenfig		<i>Watsonia</i> and <i>BSBI News</i> for disposal	.....<i>R. Hemming</i> 49
NNR.....	<i>L. Lewis, M. Clark & E. Spencer</i> 7	Seeds from Ware – 2008 collections	.....
<i>Oenanthe pimpinelloides</i> in Bucks.		.....	<i>G. Hanson</i> 50
.....	<i>A. & V. Marshall</i> 12	Gofynne seed list 2009.....	<i>A. Shaw</i> 50
Garden weeds.....	<i>M. O'Sullivan</i> 16	Notices	
Great oaks with long, straight trunks – why		Excursion to the Páramos of Northern	
have they gone?		Castille (Spain) – May 2009....	<i>T. Farino</i> 51
.....	<i>J.E. Oliver & J.M. Davies</i> 17	Ashmolean Nat. Hist. Soc. Identification	
How safe is Jacob's Ladder (<i>Polemonium</i>		Courses, 2009.....	<i>F. Watkins</i> 51
<i>caeruleum</i>)?.....	<i>D. Pigott</i> 23	Diary	51
More on white <i>Centaurea</i> ... <i>J. Wynne-Jones</i>	24	Field meeting reports : 2008	
White <i>Centaurea scabiosa</i>	<i>E. Pratt</i> 24	Aran Mountains,, Merioneth.....	<i>S. Stille</i> 52
Fringed Gentian flowering again in Bucks.		Training day, Deptford, W. Kent	.....
.....	<i>B. Laney</i> 25	.....	<i>S. Burton</i> 53
Vegetative ID Quiz.....	<i>J. Poland</i> 25	Carmarthenshire recording week	
Height maxima for <i>Rubia peregrina</i>		(v.c.44).....	<i>K. Pryce</i> 54
.....	<i>S.J. Leach</i> 26	Isle of Islay (v.c.102).....	<i>M. Ogilvie</i> 58
Heights of grasses and a sedge.....	<i>E. Pratt</i> 26	Clatford Arboretum (v.c.7).....	<i>J. Oliver</i> 60
<i>Rumex rupestris</i> at Soar Mill Cove,		Burlish Top (v.c. 37).....	<i>B. Reid</i> 61
S. Devon.....	<i>S.J. Leach et al.</i> 27	Ballyhoura and Galty Mountains (v.c.H8)	.....
Rye Brome in Fryent Country Park		.....	<i>S. & J. Reynolds</i> 62
.....	<i>L. Williams</i> 30	Amberley Wild Brooks (v.c.13)	.....
Always verify your references – <i>Illecebrum</i>		.....	<i>F. Abraham & A Knapp</i> 62
<i>verticillatum</i> on Eriskay.....	<i>C.D. Preston</i> 35	Book notes	<i>J. Edmondson</i> 64
<i>Illecebrum</i> in <i>Flora Nordica</i>		<i>Flora News</i> for Hampshire available	
.....	<i>D.A. Pearman</i> 35	online.....	<i>M. Rand</i> 65
Extreme crab apples and badgers in		John Ounsted's botanical library, notebooks	
Savernake Forest.....	<i>J.E. Oliver</i> 36	and correspondence.....	<i>S.J. Leach</i> 66
Cattle and trees.....	<i>C.J. Lowe</i> 37	Obituary Notices	<i>M. Briggs</i> 67
The 'County Records' scheme of the		Recorders and Recording	
Wild Flower Society.....	<i>M. Braithwaite</i> 38	Panel of Referees and Specialists	.....
To the disappointed botanis.....	<i>K. Spurgin</i> 39	.....	<i>M.C. Sheahan</i> 68
Botany in Literature – 49		Panel of Vice-county recorders	.....
Plantain and Scabious à la Ruskin –		.....	<i>D. Pearman</i> 68
morphological affinities..	<i>M.É. Souchier</i> 40	Scottish Vice-county Recorder	
Botanical Crossword 12	<i>Cruciada</i> 42	Vacancies.....	<i>J. McIntosh</i> 69
Aliens		BSBI v.c. Recorder for Orkney, E. Bullard	
Another speedwell is escaping: <i>Veronica</i>		retires.....	<i>D. Pearman & J. McIntosh</i> 69
<i>umbrosa</i>	<i>E.J. Clement</i> 43	Notes from the Officers	
Continental brambles used for luring birds		From the Hon. General Secretary	.....
to a Hampshire reservoir.....	<i>D.E. Allen</i> 44	.....	<i>D. Pearman</i> 70
Diverse routes to Glastonbury... <i>H.J. Crouch</i>	45	Coordinator's Corner.....	<i>A. Lockton</i> 71
Update on the identity of the Norfolk		Stop Press – Death of Margaret Baecker.....	75
comfrey.....	<i>C. O'Reilly & R. Leaney</i> 47	Deadline for contributions to News 111	75
<i>Lopezia coronata</i> in Guernsey... <i>R.D. Rabey</i>	48	Administration and Important Addresses ..	76
Solution to Crossword.....	48		
<i>Acacia dealbata</i> self-seeded in Britain –			
a correction.....	<i>G. Toone</i> 49		

BSBI PLANT UNIT NEWS

A progress report from the Head of R&D – December 2008

KEVIN WALKER, *BSBI Head of Research & Development, BSBI Plant Unit, c/o 97 Dragon Parade, Harrogate, North Yorkshire HG1 5DG*

Tel: 01423 544902 (Mon–Tues) 01904 328805 (Wed–Fri), email: kevinwalker@bsbi.org.uk

Recording issues

County Rare Plant Registers

Through the Head of Research & Development grant, the BSBI is committed to publishing RPRs for all 13 Welsh vice-counties by 2010. Six are already published (Anglesey, Monmouthshire, Flints, Caernarfon, Cymarthen and Ceredigion) and Kate Thorne has just completed a draft for Montgomeryshire which will hopefully be published in the New Year. Four others have very nearly complete datasets (Pemb, Brecon, Glamorgan, Rads). This leaves only two outstanding. Delyth Williams is working up the data for Denbighshire whereas Merioneth probably requires a lot more work and we may only be able to produce a skeleton for v.c.48 by 2010.

Less work has been carried out in Scotland although Jim McIntosh, our Scottish Officer, is planning a major push on RPRs next year and has organized a workshop for next April to which most BSBI staff will be contributing.

Bob Ellis continues to rationalize completed RPRs into one consolidated database (parallel work is ongoing in Wales) which will make data extraction and manipulation much more efficient.

Regional officers

We have so far declined the offer of 50% funding for a Welsh Officer from the Country-side Council for Wales (CCW) on financial grounds. Diana Reynolds (the Minister responsible for Biodiversity in the Welsh Assembly Government) suggested that they might be able to remove the 50% cap on funding for this post if it was deemed essential. Other possibilities include securing other 50% from elsewhere, a joint Plantlife/BSBI Welsh Officer or a secondment from CCW.

The possibility of an Irish Officer funded by the Irish Government has also been raised

recently, although we have heard no definite plans from the Irish yet. As part of the Natural England MoA (see below) there have also been discussions on the possibility of regional officers in England (at least 4 would be needed) but given current financial constraints it is unlikely that either the Irish or English ROs will be appointed for some time yet.

Recording guidelines and priorities

Because of the many demands we place on our VCRs we need to have a clear set of priorities and guidelines (for example on succession). This was an issue raised at a recent Welsh Committee meeting and we therefore intend to produce a paper for all VCRs in the next issue of Recorder (or as a separate document next year). Bob Ellis plans to organise a recorder's workshop for Welsh VCRs in 2009 (possibly after the AGM) along the lines of Jim's workshop in Scotland. The Scottish approach is the model – to discuss targets individually with each VCR on a 5 year cycle – starting with the difficult ones first. However, this is heavily reliant on having a RO in post.

Using BSBI occurrence data to understand and interpret changes in the British and Irish flora

The BSBI now has a growing corpus of projects, all of which address the central question – how do we use our data more effectively to understand and interpret changes in the British and Irish flora? Here are a few examples of the work we are doing:

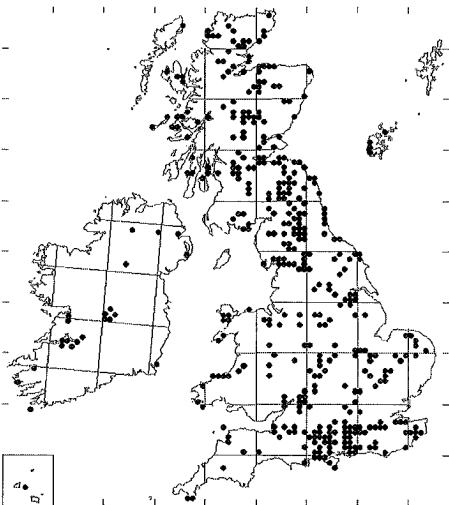
Threatened Plants Project (TPP)

The pilot for this project has been very successful. To date (11th December) we have received nearly 700 completed site-population survey forms (see table below) and 1000s of new or amended records for the 10 species

covered this year. With the exception of *Campanula patula* (for which many records are still yet to be returned) both the number of samples and geographical coverage (see map below) has been excellent.

Species	Site populations surveyed			
	Total	Extant	Null	% null
<i>Gentianella campestris</i>	140	94	46	33
<i>Scleranthus annuus</i>	89	37	52	58
<i>Astragalus danicus</i>	86	61	25	29
<i>Ophrys insectifera</i>	75	49	26	35
<i>Monotropa hypopitys</i>	66	35	31	47
<i>Blysmus compressus</i>	64	49	15	23
<i>Pyrola media</i>	58	42	16	28
<i>Stellaria palustris</i>	49	25	24	49
<i>Crepis mollis</i>	41	28	13	32
<i>Campanula patula</i>	18	7	11	61
Total	686	427	259	38

We are employing Ian Bernallick to enter the survey data over the winter and myself, David Pearman and Alex Lockton are collating the miscellaneous records and corrections sent in by VCRs. We then hope to produce updated maps and analyse this year's survey data in the spring.

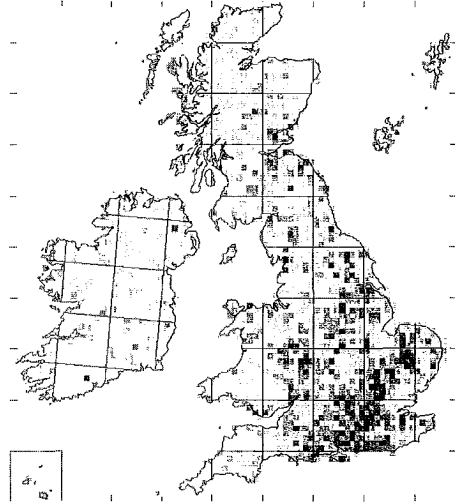


A newsletter was sent to all VCRs at the start of December providing feedback on this year's survey and the plans for 2009, including the list of species to be covered. In 2009 these will be:

- | | |
|---------------------------------|------------------------------|
| <i>Carex ericetorum</i> | <i>Gnaphalium sylvaticum</i> |
| <i>Cephalanthera longifolia</i> | <i>Groenlandia densa</i> |
| <i>Coeloglossum viride</i> | <i>Melampyrum cristatum</i> |

- | | |
|---------------------------|---------------------------|
| <i>Dianthus deltoides</i> | <i>Oenanthe fistulosa</i> |
| <i>Fallopia dumetorum</i> | <i>Vicia orobus</i> |

A coincidence map showing the hectad distribution of these species is given below:



During the winter we have been collating all our records for these species and selecting the sample populations for survey. We hope to send these lists to VCRs by the end of January.

The long term aim for this project is to cover c.10 species per year for the next five years and then produce a book on threatened species around 2013.

Plans for rare & scarce species

Developing our approaches to recording rare and scarce species is a major project for the Plant Unit and the TPP is helping us to get to grips with some of the issues. We held a 'recording workshop' at the Recorder's Conference in September to discuss some of these. We also plan to run a two-day workshop for staff in the New Year followed by a 'retreat' on recording methodologies in the autumn.

Surveillance

BSBI were involved in the development of JNCC's UK *Terrestrial Biodiversity Surveillance Strategy* earlier this year. Our main involvement in this in the future will be in (a) surveillance and monitoring of BAP species and (b) modifying our own scheme, *Local Change*, to help better understand drivers of change in the British flora.

The latter will require a lot more thought but one possible approach is to use indicator species (both positive and negative) that are responsive to major drivers such as climate change, eutrophication, etc. Ideally these would need to be widespread enough to be recorded in the Local Change network but local enough in the wider countryside to indicate where and why changes are taking place. To do this we might envisage monitoring populations in small, fixed areas of semi-natural habitat. This method would be similar to both the *Countryside Survey* and Plantlife's *Common Plants Survey* but would differ in targeting only species likely to give us a powerful signal of change.

Using other BSBI datasets to monitor environmental change

This is what the BSBI does best – using and interpreting high quality data in order to understand environmental changes. To date this has included analyses of county extinctions, but in future we hope to analyse changes at the population/plot/site/ tetrad level as part of repeat surveys. Such approaches could be applied in any county (or region) where there are sufficient historic data to warrant a statistically robust comparison.

One way to stimulate further work in this area would be to hold a conference on 'Using botanical data to measure environmental change'. To this could be invited a range of speakers to address topics such as the impacts of habitat loss, climate change, invasive aliens, etc. as well as methodological issues and approaches – with the central message of using high quality data to analyse and interpret environmental changes. Such an event would be high profile and aim to produce a publication.

Climate change

If successful BSBI will be supporting a NERC PhD studentship with Chris Thomas at York University to work on the potential impacts of climate change on British plants. This will apply modelling approaches first used for butterflies to a range of plant species. BSBI will contribute £1K pa for three years.

Invasive species

As part of the contract to provide Defra with information on alien species (see below) BSBI are looking into ways to best measure the rate of spread of species. BSBI are also working with Warwick University, the RHS and CEH on a grant application to Esmee Fairburn to investigate the establishment and spread of aliens from gardens into the wider countryside.

Ecology of scarce lowland grassland species

This is a joint CEH/BSBI contract for CCW in which we are analysing the traits of scarce lowland grassland species. This is due to be completed in March and we will be employing a casual (Richard Comont) for three months over the winter to complete a literature review for the project. This will lead to a JNCC book of species accounts and management recommendations. CCW will lead on this but the final publication will be a joint CCW/BSBI venture.

Data management

The way we currently manage our data is very cheap but not efficient when we need to undertake data collation or manipulation. This is not a criticism, just the way the system has evolved in response to ever increasing amounts of electronic data. At the moment we maintain a series of separate 'databases': the most important of which are the Vascular Plants Database (VPDB; managed for us by BRC), the MapMate Hub (the means by which we receive the bulk of our VCR data), the Threatened Plants Database (TPDB; to include the TPP data once entered) and CRPRs (now being amalgamated). We also have a 'data store' which includes a wide variety of other, smaller datasets that we have collated from various sources and in a variety of formats (e.g. county floras, *Watsonia* records, etc.). From these disparate sources we extract hectad and tetrad records, which we display as maps on the AUP on the website.

Some of our data can also be viewed on the NBN Gateway which includes everything in the VPDB to which we add new datasets (via BRC) each year.

Because the number of records and datasets that we hold has rapidly increased there is an urgent need for us to rationalize our data holdings. The most sensible and cost-effective way to do this is to develop centralized large BSBI database. We are considering two options to enable us to do this. First, we intend to trial the NBN's recommended data management software – Recorder6 – to see how easy it is to (a) import data and (b) query it in different ways. We hope to commission an LRC to carry out this import for us and then carry out tests internally. Second, we have commissioned Tom Humphreys, who designed Herbaria@Home, to develop a large database specifically designed for our own requirements. This is likely to have many advantages over R6 in that a variety of other functions will hopefully be built into the system from the start (e.g. on line editing and reporting of changes, etc.).

Data provision

The BSBI continues to receive daily requests for access to its data either through the NBN Gateway or directly from a wide variety of sources. Recent examples are as diverse as the Million Ponds Project, an EIA for a new nuclear power station and even Chris Evan's Drive-time radio show! A few of the most important are listed below:

Aliens

Niall Moore, the chair of the Non-native Species Secretariat (NNSS), has asked BSBI for information on the 200 fastest spreading aliens to be used on their 'Species Portal' due to be launched next year. Defra are commissioning us to do this work (see below) in which we will be (a) identifying the 200 most rapidly spreading aliens, and (b) providing hectad maps for their portal.

NBN Gateway

The BSBI's president, Michael Braithwaite and myself met Jim Munford and the new chair of the NBN Trust, Sir Neil Chalmers, in September to discuss relations between BSBI and NBN. Central to the discussions was our need, as a voluntary society, for strategic support for the Plant Unit and how, in the long

term, that would be the most effective way to ensure improved dataflow to the NBN.

Subsequently there has been much discussion between the BSBI, JNCC and NBN about how we intend to develop our data management in a more strategic way and this has led to the plans outlined above to take our data management activities forward. It is likely that funding will be made available to help us take these developments forward once they are up and running in the spring.

Biodiversity Action Plan (BAP) species

Following the BSBI's involvement in the BAP species 'signposting' exercise last winter we were asked to take part in a workshop to identify immediate one-off survey and research actions for all BAP species. This took place in December and it is likely we will be asked to write proposals to go forward to Defra for funding in 2009. There are a number of potential projects including a BSBI handbook on *Euphrasia* with additional information on habitat, management, ecology, genetics, etc.

Monitoring and surveillance actions will be taken forward in a separate exercise being led by JNCC although no plans have been released as yet.

Species accounts

The species accounts on the website have been a great success. As a parallel project we hope to develop a separate 'resource' page with CEH to house links to species information including accounts, traits, maps, taxonomic sources, literature.

BRC

The new data manager at BRC (Stephanie Ames) has agreed to update us monthly with progress on loading BSBI datasets onto the VPDB. We have also agreed a standard format for future updates of the VPDB. Mark Hill has also produced a standard format for recorder's names which he would like to circulate to VCRs to make data entry simpler (he will produce a short note for Recorder and then make the database available to VCRs on the website).

External relations & funding

Natural England

Following negotiations this spring Natural England have agreed to provide £20K to fund the 'botanical services' that BSBI provides. This is a formal agreement detailing the services we provide, most of which are ongoing – others will be more dependent on developments over the coming years. In addition to this, we are entering into a three-way Plantlife, NE and BSBI agreement to improve working relations between the three organisations.

Strategic support from CCW

David Parker, the Chief Scientist for CCW and Andy Jones are keen that BSBI be treated as a key partner in recognition of how important our work is for the delivery of their plant conservation work in Wales. To this end they are aiming to provide continued, strategic funding for us in the longer term and not just for the duration of the Head of R&D grant.

The SNH/BSBI Scottish Officer project continues

This autumn funding for the next 3 years of Jim McIntosh's Scottish Officer post was confirmed by SNH. SNH will support 50% of the costs – largely based on our continuing involvement with rare and scarce plant monitoring work. RGBE are also very kindly providing an in-kind contribution (by the way of a free office). In addition, SNH continue to fund the computerization of VCR records which Jim manages for them.

Invasive species

Following an approach from the Non-native Species Secretariat Defra are paying the BSBI £9K for information (data and maps) on the 200 most rapidly spreading aliens for a new Non-native Species Portal due to be launched in 2009.

A Plant Unit journal?

The PU really needs a 'shop window' to advertise the excellent work the Society does. A third journal would be an excellent way to do this. The target audience would be botanists, conservationists, ecologists and policy-makers who find *News* too inward-looking and *Watsonia* too scientific. A possible model (cf *Kew Scientist*) would be a short 5–6 page glossy leaflet. Issues could be themed with short reports, papers, reviews, species accounts, results of recording projects and news on BSBI activities. It would need a commissioning editor with a budget and we may need to consider paying for contributions if it is to work. We hope produce a plan for this in 2009 possibly using the next few issues of BSBI Recorder to trial content.

Other matters

Head of Research and Development office

From November 1st I have been based three days a week in Chris Thomas' Ecology and Evolution group, at the Department of Biology, York University. York are waiving bench fees in exchange for access to our data for research purposes (see above). I intend to keep my home office as the main contact address.

Editorial

GWYNN ELLIS & TREVOR JAMES

Our thanks, as always, to all our contributors. Do keep sending in articles and photographs.

Members wishing to contact the General Editor or Membership Secretary (RGE) by phone should note that because of the large number of 'spam' messages received the phone is operated as an 'answer phone'. I dislike answer phones myself and often just put the phone down, but please 'do as I say not as I do'. I rarely answer the BSBI phone until I know what the call is about even if I'm in the office

when the phone rings. So please just say something like 'BSBI member calling' and if I'm there I'll pick up the phone. If you get no reply just leave a short message giving your phone number clearly and slowly and I'll phone you back.

Lynne Farrell has asked that members wishing to email her use only this address 'farrell104@btinternet.com' from now on.

[continued on page 51]

NOTES

An update on the orchid flora at Kenfig National Nature Reserve

LESLIE LEWIS, 4 Orchid Meadow, Pwllmeyric, Chepstow, NP16 6HP;
MICHAEL J. CLARK, 1 Heol Pont George, Hazelgrove, Pyle, CF33 6JB &
E. JOHN SPENCER, 4A Orchard Close, Longford, Gloucester GL2 9BB

In *Watsonia* 25 (2005), two of us (LL and EJS) reported the re-discovery in 2004 of Charles Thomas' *Epipactis phyllanthes* var. *cambrensis* (The Kenfig *Epipactis*) at Kenfig National Nature Reserve, together with the presence there of other unusual *Epipactis*. Since the publication of that paper, there have been various developments concerning the orchid flora on the reserve.

Epipactis helleborine: dune forms

As reported in 2005, two forms of *Epipactis helleborine* grow in open dunes with *Salix repens* (Creeping Willow). One of these forms (photo 1, see inside Front Cover) is dark green in colour with dark purplish-pink flowers and closely resembles the continental *E. helleborine* ssp. *neerlandica* (Dutch Helleborine) (syn. *E. helleborine* var. *neerlandica*) which similarly grows with *S. repens* on coastal dunes in the Netherlands and neighbouring countries. In view of this resemblance, and following consultation with Prof. A.J. Richards, it was provisionally named *E. helleborine* aff. *neerlandica*, pending further study of its taxonomy (Lewis & Spencer, 2005).

The other form is yellowish-green with pale pink flowers. Since *Epipactis youngiana* (Young's Helleborine) (syn. *E. helleborine* var. *youngiana*) also possesses these characteristics, D.M. Turner Ettliger (1997, 1998) tentatively identified it as that taxon. However, in view of the doubt as to whether this tentative identification was correct, it was provisionally re-named as *E. helleborine* aff. *youngiana* pending further study of its taxonomy, again following consultation with Prof. A.J. Richards (Lewis & Spencer, 2005).

Extensive field work by MJC from 2005 to 2008 has revealed several further populations of these open-dune forms of *E. helleborine* at Kenfig. As a result, these forms are less rare –

and far less threatened – than had been previously thought. Of particular interest is a newly-found dwarf form of yellowish-green aff. *youngiana* (photo 2, see inside Front Cover) having a creamy white epichile, sometimes partly stained pink, with brown, brownish-purple or pink bosses. The smallest flowering plant recorded was only 5cm high. Up until autumn 2006, this population, which appears to be confined to a single dune slack, was regularly cropped by sheep during its flowering season. However, as the result of a welcome change in the grazing regime by the reserve management, the number of plants has now increased significantly.

The opinions of the several experts on *E. helleborine* ssp. *neerlandica* were invited regarding the identity of the Kenfig plants. C.A.J. Kreutz, a well-known Dutch author of several books on European orchids, including '*De orchideeën van Nederland*' (2000), examined the Kenfig plants during visits in 2006 and 2007 to take photos for his forthcoming book '*The Orchids of Europe, North Africa and Asia Minor*'. He concluded that both aff. *neerlandica* and aff. *youngiana* (including the 'dwarf' form referred to above) were the same as the continental ssp. *neerlandica*, with which he is very familiar. The two other experts consulted were also each of the same opinion (J. Reinhardt and D.W. Kapteyn den Boumeester, pers. comm., 2008).

In support of his opinion, D.W. Kapteyn den Boumeester referred to photographs showing yellowish-green *E. helleborine* ssp. *neerlandica* from the Netherlands closely resembling the aff. *youngiana* found at Kenfig. In addition, continental plants closely resembling the dark green aff. *neerlandica* at Kenfig are illustrated in a paper published by D.W. Kapteyn den Boumeester (1989), subsequently updated on his website

<http://kdb.fol.nl/orch-onderz>). That paper also summarises various characteristics described in botanical literature which have been used to distinguish *E. helleborine* ssp. *neerlandica* from *E. helleborine* s. str.. However, as both of these taxa are morphologically rather variable, it concludes that only the following characteristics of ssp. *neerlandica* are usable for this purpose.

1. leaves stiffly crowded together on top of each other;
2. leaves directed upwards, generally embracing the stem (amplexicaul) and longitudinally grooved (canaliculate);
3. leaf margin papillae small, closely spaced, mostly isosceles triangle-shaped and pointing outwards (whereas *helleborine* s.str. has larger, more widely spaced, often hook-shaped (uncinate) papillae pointing towards the leaf apex)
4. raceme with soft hairy (pubescent) stem and frequently closely-flowered.

Detailed observations have established that both aff. *neerlandica* and aff. *youngiana* at Kenfig possess all of these characteristics of ssp. *neerlandica*, whereas the woodland

E. helleborine s. str. plants there possess none of them. D.M. Turner Ettlinger (1997) similarly reported: ‘The leaves [of *neerlandica*] are ...usually bunched near the base of the stem; through a magnifier, distinctive irregular toothing can be seen at leaf margins.’ In fact, although ssp. *neerlandica* does indeed have distinctive toothing (see characteristic 3, above), it looks more regular than that of *E. helleborine* s. str. (D.W. Kapteyn den Boumeester, pers. com, 2008). Also, only plants growing on a bare sandy base at Kenfig have the bunched leaves at the base – on plants growing in *Salix repens* and (especially) thick turf, the bunched leaves are higher up, presumably to reach more light.

In line with these observations and consultations, it is concluded that the provisionally named *E. helleborine* aff. *neerlandica* and aff. *youngiana* from Kenfig NNR should both be considered to be *E. helleborine* ssp. *neerlandica*.

Certain measurements of 100 *E. helleborine* ssp. *neerlandica* plants were compared with those of 100 woodland *E. helleborine* s.str. plants at Birdlip, Gloucs by EJS in August 2008. These are summarized in Table 1.

Table 1.: *Epipactis helleborine*: comparative measurements

	<i>E. helleborine</i> ssp. <i>neerlandica</i> , dunes, Kenfig	<i>E. helleborine</i> s.str., woodland, Birdlip, Gloucs.
av. plant height (cm)	24.8	51.7
av. height of top leaf axil (cm) ¹	9.8	no measurement ²
av. height of first flower (cm)	15.3	36.9
no. of flowers	19	21
av. raceme length (cm)	9.5	14.8
av. stem length per flower (cm)	0.5	0.7

¹ Narrow bract-like leaves excluded.

² Measurement not made because of the difficulty of identifying the top leaf due to the gradation from rounded lower leaves to narrow bract-like upper leaves.

***Epipactis helleborine*: woodland forms**

Several small populations of the ‘normal’ *E. helleborine* (Broad-leaved Helleborine)

have now been located growing in small copses and woodland. Although not of great significance *per se*, these plants have been useful for comparison with the open dune *E. helleborine* ssp. *neerlandica*. In 2006, a single plant of the pink chlorophyll-deficient (rather inappropriately named) *E. helleborine* var. *albifolia* (see Front Cover) was found, but it has not re-appeared since.

***Epipactis phyllanthes* (Green-flowered Helleborine): dune forms**

In 1941 and 1942, Charles Thomas found yellowish-green plants with greenish-white flowers and a long, narrow, smooth, flattened ovary growing on the sides of steep sand heaps at Kenfig and the adjacent Margam Burrows, but the discovery of these plants, which he named *Epipactis cambrensis* (the Kenfig *Epipactis*), subsequently re-named *E. phyllanthes* var. *cambrensis*, was not reported until 1950. Subsequently, no-one had been able to re-find this taxon with certainty until 2004, when four flowering plants precisely matching Thomas' description were discovered, again growing on the sides of steep sand heaps (Lewis & Spencer, 2005). It is to be noted that, in view of the risk of confusion with small *E. helleborine* ssp. *neerlandica* plants, which are occasionally found in the same habitat, it is only possible to identify *E. phyllanthes* var. *cambrensis* with complete certainty when it is in flower (most significantly, *E. phyllanthes* var. *cambrensis* has a pale green hypochile whereas that of *E. helleborine* ssp. *neerlandica* is reddish-brown).

Two of the four plants discovered in 2004 re-appeared in 2005 but none has been seen since at their original locations. In 2006, no flowering plants were found (all candidates withered before flowering due to lack of rain). However, further flowering plants (photo 3, see inside Front Cover) were subsequently found by MJC elsewhere on the reserve in 2007 (6 plants) and 2008 (22 plants). The greater number of these sand heap plants located in 2007 and 2008 have shown a wider range of characteristics than the four plants found in 2004. In ideal conditions, they can be robust plants with broad leaves and up to twelve flowers. In all cases, the plants were growing on the sides of steep sand heaps in shady conditions (normally on the north or east facing side of the heap). They are always well-camouflaged by surrounding vegetation, making them very difficult to spot, even from only a metre or so away. Frequent associates are *S. repens* (Creeping Willow), *Pyrola rotundifolia* (Round-leaved Wintergreen) and

Fragaria vesca (Wild Strawberry). Seed set is high, with 18 of the 22 flowering plants in 2008 producing seed capsules. This compensates for dry summers when no seed is produced.

The small number of plants growing in this unusual habitat do not appear to be under any immediate threat since the steep, stabilised sand heaps provide adequate physical protection. However, it is clear that growing in a relatively open, well drained habitat, the plants are vulnerable to drought, as in 2006, but benefit from high summer rainfall as in 2007 and 2008.

As previously noted (Lewis & Spencer, 2005), further investigation is necessary to establish whether *E. phyllanthes* var. *cambrensis* is sufficiently distinct from other subsidiary taxa of *E. phyllanthes* to justify a separate varietal rank. Despite its specialised sand heap habitat and distinctive ovaries, which led to C. Thomas to consider it to be a distinct taxon, var. *cambrensis* (especially several larger plants found in 2008) appears to have much in common with the woodland var. *vectensis*. A detailed morphological comparison of these two varieties has not yet been carried out since the Wildlife and Countryside Act (1981), protecting the plants, prevents samples being taken for that purpose. However, it is hoped that molecular analysis of samples (legally collected specifically for that different purpose) may clarify its status in due course (see below).

As a further complication, a few *E. phyllanthes* not attributable to var. *cambrensis* but very similar to the woodland var. *pendula/vectensis* referred to below were found growing in the open dunes away from the sides of steep sand heaps by MJC in 2005 (3 plants) and 2007 (1 plant).

***Epipactis phyllanthes*: woodland forms**

Since 2005 MJC has recorded on the reserve eight separate populations of *E. phyllanthes* (photo 4, see inside Front Cover) growing in small woods and copses of *Betula pendula* (Silver Birch), either alone or mixed with *Salix caprea* (Goat Willow), and in one *Populus tremula* (Aspen) wood. This species

had not, to our knowledge, previously been recorded in a woodland habitat on the Reserve. Unusually, on some of these sites, the plants grow in deep shade within the woodland, not in partial shade on the edges, which is normally the species' preferred habitat. The plants in deep shade did much better in the very dry summer of 2006, whereas those in more lightly-shaded areas seem to have benefited from the wet summers of 2007 and 2008.

The lips of these woodland *E. phyllanthes* at Kenfig are rather variable: some are attributable to var. *vectensis* while others are closer to var. *pendula*. (As noted by D.P. Young (1962): 'There is ... no material dividing line, either geographical or morphological, between var. *pendula* and var. *vectensis*. The

names are retained ... only for convenience of description.'))

The number of plants fluctuates significantly from year-to-year. Although such variation is normal for *E. phyllanthes*, this is aggravated at Kenfig by significant damage from rabbits, slugs and, in some cases, cattle sheltering (and browsing) in the woods. A trial caging of plants in one birch wood site unfortunately provided little benefit. With various threats, the proportion of flowering plants producing seed capsules is very low for this self-pollinating species. The numbers of mature plants and of plants producing seed pods recorded by MJC at each site in 2008 are set out in Table 2. (Because of the difficulty and risk of damage, no attempt was made to count the number of young, non-flowering plants.)

Table 2.: *Epipactis phyllanthes* (woodland plants): no. of mature plants and seed-set, 2008.

Habitat	No. mature plants	No. of plants producing seed capsules
1. Silver Birch wood	13	3
2. Single Silver Birch tree	11	9
3. Goat Willow/Silver Birch copse	19	3
4. Goat Willow/Silver Birch copse	62	32
5. Goat Willow/Silver Birch copse	29	5
6. Goat Willow/Silver Birch scrub	11	9
7. Goat Willow/Silver Birch wood	30	1
8. Aspen wood	1	1

Dactylorhiza aff. *purpurella*

D. purpurella (Northern Marsh-orchid) was recorded by D. Lang in 1990 (Curtis, J.P. & Kay, Q.O.N., 1992). The species was also observed in the same location in 1993 (P. Jones, unpublished report, year not known). In 1999 and again in 2006, MJC found, in the same dune slack location, a small *Dactylorhiza* population closely resembling *D. purpurella* (photo 7, see inside Front Cover) with bright reddish-purple, diamond shaped labella, leaves which are generally unspotted but occasionally marked with small spots and, sometimes, a flat-

topped raceme. This population re-appeared in 2007 and 2008 and, although small, would not appear threatened. Since accurate morphological identification is problematic, it is hoped that molecular analysis (see below) will establish whether these plants are indeed *D. purpurella*, – or perhaps the closely similar *D. majalis* ssp. *cambrensis* (Western Marsh-orchid) (syn. *D. purpurella* var. *cambrensis*) – or merely a hybrid swarm; (most probably *D. praetermissa* × *incarnata*. s. l. = *D. wintoni* (Southern Marsh-orchid × Early Marsh-orchid), as these two species are found nearby).

***Gymnadenia conopsea* (Fragrant Orchid)**

While visiting the reserve in 2007, C.A.J. Kreutz identified a population of *Gymnadenia conopsea* as var. *friesica* (photos 5 & 6, see inside Front Cover), a variety described by Schlechter (1919) and previously known only from the North Sea coast and islands of the Netherlands and Germany. As explained by Kreutz (2008): ‘In appearance, it is intermediate between *Gymnadenia conopsea* var. *densiflora* and *Gymnadenia* var. *borealis*, although frequently identified as the former. However, *Gymnadenia conopsea* var. *densiflora* is not to be confused with that variety [var. *friesica*]. Thus *Gymnadenia conopsea* var. *friesica* is a slender plant with a dense, thin, cylindrical inflorescence of relatively small flowers coloured intense purple with a white fleck at the base of the lip.’

Nevertheless, the status of var. *friesica* as a distinct variety is not generally recognised. The only modern literature reference would appear to be in ‘*De orchideeën van Nederland*’ (Kreutz, 2000). It is also to be noted that *G. conopsea* has recently been split into three separate species *G. conopsea* s.l. (Chalk Fragrant-orchid), *G. densiflora* (Marsh Fragrant-orchid) and *G. borealis* (Heath Fragrant-orchid). Since var. *friesica* has a broad lip which resembles that of *G. densiflora* much more closely than the narrower lip of *G. conopsea* s. str., it would seem more appropriate to consider it as a variety of *G. densiflora*. However, in view of the very limited recognition of var. *friesica*, and the fact that *G. densiflora* is not yet universally recognised as a separate species, the new combination *G. densiflora* var. *friesica* is not proposed here.

Future molecular analysis

In 2006, after having obtained the legally required permission, Prof. R.M. Bateman collected samples of each of the above orchids for future molecular analysis when the necessary resources are available. It is

hoped that such analysis will establish whether the Kenfig *Epipactis helleborine* ssp. *neerlandica* is the same as the continental taxon and will help determine the precise identity of *E. phyllanthes* var. *camprensis* and *Dactylorhiza* aff. *purpurella*.

Acknowledgements:

We are grateful to Jürgen Reinhardt, Karel Kreutz and Dirk Kapteyn den Boumeester for their expert advice on the identification of *Epipactis helleborine* ssp. *neerlandica*, and to Prof. A.J. Richards and Prof. R.M. Bateman for advice on the text.

References:

- CURTIS, J.P. & KAY, Q.O.N. (1992). Welsh Plant Records – 1990 – Glamorgan. *Welsh Bulletin* **53**: 33–36.
- ETTLINGER, D.M. TURNER. (1997). *Notes on British and Irish Orchids*. Published by the author, Dorking.
- ETTLINGER, D.M. TURNER. (1998). *Illustrations of British and Irish Orchids*. Published by the author, Dorking.
- KAPTEYN DEN BOUMEESTER, D.W. (1989). *Epipactis helleborine* var. *neerlandica* Vermeulen – problematiek, veldwaarmeningen, bestuivers. *Eurorchis* **1**: 93–112.
- KREUTZ, C.A.J. & DEKKER, H. (1999). *De orchideeën van Nederland*. Kreutz, Landgraaf.
- KREUTZ, C.A.J. (2008). Update on British orchids. *Journal of the Hardy Orchid Society* **5**: 11–16.
- LEWIS, L. & SPENCER, E.J. (2005). *Epipactis phyllanthes* var. *camprensis* (C.A. Thomas) P.D. Sell and other unusual *Epipactis* at Kenfig National Nature Reserve. *Watsonia* **25**: 290–295.
- SCHLECHTER, R. (1919). *Spec. Nov. Regni Veg*: **16**: 279.
- THOMAS, C. (1950). The Kenfig *Epipactis*. *Watsonia* **1**: 283–288.
- YOUNG, D.P. (1962). Studies in the British *Epipactis*: VI – some further notes on *E. phyllanthes*. *Watsonia* **5**: 136–139.

Corky-fruited Water-dropwort (*Oenanthe pimpinelloides*) in Buckinghamshire

TONY & VAL MARSHALL, 49 Lodge Lane, Prestwood, Bucks HP16 0QG
(ecorocker@gmail.com)

Distribution

Corky-fruited Water-dropwort (CFWD) (Colour Section, Plate 3 (1)) is a central and southern European perennial, extending south and east from Belgium to the Mediterranean and Asia Minor. Within this area it is commoner away from the Mediterranean coast (where it is a plant of damp mountain pasture), towards western and central Europe. It is classified as Mediterranean-Atlantic in *PLANTATT* (Hill *et al.*, 2004). In the British Isles, it appears almost entirely in southern England (Gloucestershire to Essex southwards) and extreme south-west and south-east of Ireland (see Fig. 1, below).

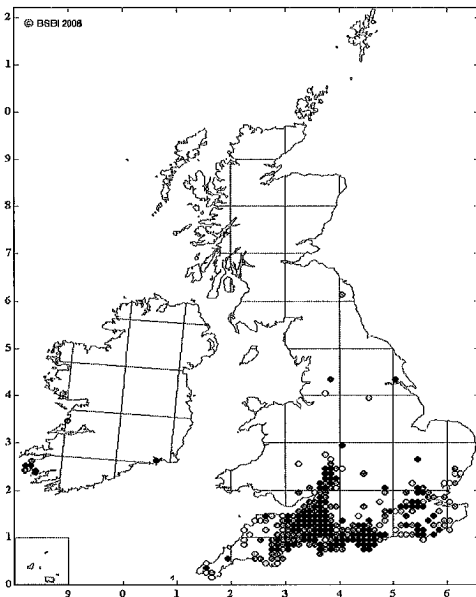


Figure 1: Hectad distribution map of *Oenanthe pimpinelloides* (Corky-fruited Water-dropwort) in Britain and Ireland (BSBI)

In England and Wales (recorded from 241 1km squares) it is quite frequent in South Hampshire, Isle of Wight, Dorset, East Somer-

set, East Devon and up the Severn Valley into Gloucestershire. There are a few sites in Sussex, Kent, Surrey and South London. It becomes very rare north of these regions, with isolated sites in Hull, Lancashire, Essex, Cambridgeshire and the Buckinghamshire Chilterns (Collings Hanger Farm, Prestwood, SU873999). Strangely, for a Mediterranean-Atlantic plant, it is rare in the far south-west and even included on the Cornwall Rare Plant Register. There are no extant records from counties neighbouring Buckinghamshire, and no old records for Buckinghamshire in Druce (1926). There is one herbarium specimen from south Bucks. in 1945. It is native in its heartland, but there are obviously question-marks over its status in the more outlying sites, although Middleton (1998) says that seeds ascribed to CFWD were reported from an archaeological excavation in York.

Even where it is more prevalent it is far from evenly distributed. For instance, in the Bristol region it is described as 'scarce' and 'scattered' (Green *et al.*, 2000), whereas it is described as 'abundant' in Purbeck, Dorset (Pratt, 2008). The Somerset 'Flora' gives it as 'common to rare' (Green, *et al.*, 1997). At the sites where it does grow, however, it can be very numerous and often dominant (Colour Section, Plate 3 (2)).

An outlying northern population of CFWD was discovered in 1996 in the northern part of Hull and described in Middleton (1998). There were two populations of around 70 plants. Middleton argues that this site may be a surviving relic of old permanent grassland and the plants therefore could be native, but there is no conclusive evidence either way.

The Buckinghamshire population was discovered in 1998 (Marshall, 1999), confirmed by Roy Maycock, County Recorder, and clearly contained thousands of plants. While it might appear unlikely that such a large population could have been missed for

very long, almost all of it is confined to private farmland with no public access, and it was only discovered because a few outlying plants were seen beside a footpath in a field neighbouring the main population. This outlying site is unreliable and plants cannot always be found there. While the occupying farmer did not realise that the plants were distinct from more common umbellifers, he does remember the colony being there for a long time. It appears, therefore, that the plant has existed in large numbers during many decades and is quite possibly native there.

Habitat

PLANTATT states that CFWD inhabits neutral grassland (including *Arrhenatherum elatius* (False-oat) grasslands) on moist, but not wet, fairly infertile, soil and avoids shaded conditions. Preston *et al.* (2002) give 'hay meadows and pastures, especially those which are horse-grazed, and on roadsides. It grows in damp and dry grassland, being the only *Oenanthe* which grows in dry habitats in our area... this species is still present in very large numbers on some roadsides and in unimproved fields.' Braithwaite *et al.* (2006) say '... it is a specialist of poached grassland subject to the sort of disturbance provided by grazing horses.' Green *et al.* (1997) says that the typical habitats in Somerset are damp meadows, dry grassland, road verges and lawns, while in intensively farmed areas it is restricted to field borders. In Purbeck it is found on road verges and undisturbed non-acid grassland (Pratt, 2008). For the Bristol area, Green *et al.* (2000) cite neutral grassland on clay or alluvium, and sometimes disturbed ground, roads and lawns. At some sites it is known to grow in MG5 grasslands (*Cynosurus cristatus* (Crested Dog's-tail) – *Centaurea nigra* (Common Knapweed)), including some where it often occurs with *Gaudinia fragilis* (French Oat-grass). Leach and Pearman (2003) discuss the frequent association of CFWD with *Gaudinia* (another 'Mediterranean' species) and their closely similar national distributions, arguing that, previously assumed to be introduced, the grass may actually be native. In this article they note the association of the two species on three widely separated sites comprising, respectively,

'species-rich semi-improved calcareous grassland', 'meadow on poorly draining neutral clay soils' (unimproved), and 'high quality neutral grassland' on Tertiary deposits (also unimproved).

There are some common elements here, but also distinct variations that seem to indicate that CFWD is capable of surviving (at least for a time) in a range of conditions. The common elements seem to be light open conditions, avoidance of both acid and very basic soils, and (generally) unimproved grazed meadows. Examination of some of the outlying sites shows that they include some that are quite distinct – most notably the lawns of certain council flats in Southwark. Although Middleton (1998) argues that the Hull sites could be surviving ancient grassland, they do comprise a roadside and the edge of a sports field. In Bromley it has suddenly increased across commons, parks and a golf course. It may be that the plant has recently exhibited a tendency to expand from its traditional unimproved meadows (probably grazed by cows or horses) to a wider range of artificial grasslands.

In Prestwood, Buckinghamshire, CFWD grows in semi-improved grassland, regularly poached by cattle, on 'pebbly clay with sand' overlying chalk. In one field the distribution of plants strikingly ends where the underlying geology changes to Upper Chalk, although a few impermanent outlying plants in the field to the south do grow on chalk. These grasslands have been relatively unchanged for at least a hundred years, and have been farmed by the same family since 1925, but in 1840 most of the fields in Prestwood were cultivated. Only the Orchard, which appears to be the epicentre of the colony, with a very high density of CFWD, has always been pasture, and it would seem to be here that the plant survived, although it may also have continued to inhabit uncultivated edges of ploughed land. The pebbly clay with sand generates a relatively infertile soil, tending to be slightly acidic, with low plant diversity. Although the bulk of the population grows in two fields, a small number also grows in a roadside verge, having spread through the boundary hedges.

Survey

On 20th July 2008 a survey of the current population at the Prestwood site was carried out by the authors. The colony in one field could not be counted because the grass had recently been topped, but the Orchard had simply been grazed and had a mixture of short and medium grass, with tall herbage in small enclosures protecting newly-planted fruit-trees. Where the grass was taller the CFWD was flowering freely and fruiting. In the short grass the bases of the CFWD could be distinguished fairly easily after a little study of their basal leaves. The orchard covers 4,800 sq. m. Here 15 widely distributed but randomly sited 1 metre-square quadrats were taken. Having reached 15 samples, it was found that the average number of plants had stabilised at 30, although the range of counts was from 2 to 100. This gives an estimate of 144,000 plants across the whole orchard. Other herbaceous plants in the quadrats were small in number, mostly *Ranunculus acris* (Meadow Buttercup) and *Trifolium repens* (White Clover), along with a number of common grasses. Other species present (in open turf, excluding plants in the shade of the hedgerows) were:

Grasses

Agrostis capillaris (Common Bent)
Agrostis stolonifera (Creeping Bent)
Alopecurus pratensis (Meadow Foxtail)
Cynosurus cristatus (Crested Dog's-tail)*
Dactylis glomerata (Cock's-foot)
Festuca pratensis (Meadow Fescue)
Festuca rubra (Red Fescue)
Holcus lanatus (Yorkshire-fog)
Lolium perenne (Perennial Rye-grass)
Phleum bertolonii (Small Cat's-tail)
Poa annua (Annual Meadow-grass)
Poa trivialis (Rough Meadow-grass)

Forbs

Anthriscus sylvestris (Cow Parsley)
Bellis perennis (Daisy)
Centaurea nigra (Common Knapweed)*
Cirsium arvense (Creeping Thistle)
Plantago lanceolata (Ribwort Plantain)
Prunella vulgaris (Self-heal)
Rumex acetosa (Common Sorrel)
Trifolium pratense (Red Clover)
Urtica dioica (Common Nettle)

Those asterisked are the dominant constituents of MG5 grassland typical of 'old meadows' (Rodwell, 1992), mentioned above as a typical associate of CFWD (Colour Section, Plate 3 (3)). Most of the other species are commonly associated with MG5, although relatively impoverished in diversity. (At one of its sites in Bromley it similarly grows in 'low diversity rough grassland' east of Darrick Wood, according to www.London.gov.uk/wildweb.)

There were abundant CFWD along one edge of the field that had been topped, where it had been left uncut, and along the northern hedge dividing it from the Orchard, but plants became increasingly infrequent as the search continued south, and no evidence at all of CFWD was found in the western third of the field traversed by a shallow dry valley. The upper part of this field had been dense with CFWD before cutting, however (Colour Section, Plate 3 (2)), and the authors had seen this field with abundant CFWD in past years. One could estimate a minimum of a further 300,000 plants here. A third field, which borders both the Orchard and Fryer's Field, and, at least in the upper parts, is also on the pebbly clay with sand, had only 8 plants in the hedge separating it from the orchard. Plants had been seen in a previous year under the hedge at the north side of this field, but no evidence of any could be seen during this survey.

The field where the plant had first been recognised, which is south of the main population, contained just three vigorous plants in long grass in an enclosure for newly planted trees. No other plants were found in the surrounding short grass.

The final site was the roadside on the other side of the hedges bordering the two main fields. The verge became narrow and overgrown with *Aegopodium podagraria* (Ground-elder) and *Heracleum sphondylium* (Hogweed) in part, but 22 plants of CFWD were counted in rough vegetation up to the point where a householder regularly mowed the verge. In previous years, small plants had also been seen in the grass verges across the road, but these are regularly mown, and plants

not allowed to seed. None were found in these verges in this survey.

In conclusion, one can estimate that this single population of CFWD, the only one extant in the county, contains something like 450,000 plants and is therefore thriving. The only potential threat to this population is its confinement, by and large, to two single fields, where any radical change of management or land-use could be catastrophic. There is no current threat, but one may need to be prepared for the effects of any change of ownership that might occur at any time in the future.

Change

Nationally, the distribution of CFWD appears to have increased slightly in the last 30 years or so, with a number of new sites outside the normal range having been discovered. Most of these are nowhere near the size of the Prestwood population, which would appear to be an original site, but indicate the possibility that the plant may be able to use disturbed land to spread beyond its traditional limits. Whether it can survive in these new sites is another question, as observations of the Prestwood population indicate that outlying plants tend to be ephemeral. The plant does not spread vegetatively, so any expansion would have to be from seed. The seeds do not travel far from the parent plant and would therefore need other agents to be transported elsewhere.

Nevertheless, most of the local 'Floras' indicate a tendency for new sites to be found quite regularly, often far from known ones. Thus, in Essex, there has been a recent rapid expansion, thought to have been expedited by cutting machinery and green hay spreading. In Bristol, it is said to be 'spreading in grasslands' (Green *et al.*, 2000). In Havering, it has been found in a closely-grazed horse field. A small colony has been found at a Surrey Wildlife Trust reserve (Howell Hill), on what had recently been chalk rubble, and thought to have arrived via cattle used to graze other reserves, such as Epsom Common, where there is an established colony of CFWD. An 'enormous' expansion in Bromley is assigned to mowing contractors moving around the area (Burton, 2006). Braithwaite *et al.* (2006)

considered that CFWD was 'a rather improbable benefactor of the popularity of horse culture and the amenity paddocks associated with it.' They calculated a weighted change factor of +29% from 1987 to 2004.

CFWD can survive for many years without being permitted to flower, so that it may be able to survive inconvenient mowing regimes. Taking advantage of the odd window of opportunity, it gets to seed and expand its population. Although there seems to be no direct evidence of the seeds being carried by the feet of cattle or horses, or by man in some way, it seems reasonable that this might happen. What is not established is whether CFWD can survive in sub-optimal grassland for a significant period of time, or whether it is dependent for its long-term survival on the old meadows that were its traditional haunt.

There is much suitable land on the same Prestwood farm as the main site that has, as far as we know, never been colonised, despite cows being regularly transported there from the fields with CFWD. Why has the plant never established itself in these fields, especially if it has been on the farm for centuries? The reason why it has not spread southwards may be because it seems to be averse to calcareous soils and these predominate on the farm in that direction. There are a few other surviving old meadows within a kilometre of the Orchard on similar soils and at none of these has CFWD been seen. This is despite its propensity to spread to road verges and along these if it gets the chance to survive the Highways Maintenance culture of regular devastation.

Character

The genus *Oenanthe* is generally associated with toxicity because of the chemical myristicine, but Pieronii *et al.* (2006) state that there seem to have been no scientific studies of CFWD and there is no evidence that it is poisonous. In fact they found that in Italy CFWD is used as a fodder plant and thought to heal swollen stomachs in poultry. Moreover, the roots of CFWD have swollen starchy tubers at their ends, like *Conopodium majus* (Pignut), and these were reputedly eaten at one time by country folk, having, again like

Pignut, a nutty flavour. The farmer at Collings Hanger cuts the CFWD as silage and the cattle do not appear to suffer any problems.

Nomenclature

Both the common and scientific names of CFWD are cumbersome to use, especially in a lay context. Most local people we deal with in connection with CFWD have great difficulty in remembering the name correctly. ‘Water-dropwort’ is also misleading because the plant is generally associated with relatively dry sites. A more ‘user-friendly’ name would be useful (although ‘Corky-fruited Water-dropwort’ was recently voted as a favourite plant-name by one member of an internet chat group!). An alternative in some botanical texts is ‘Callous-fruited Water-dropwort’, which is really no advance. Both refer to an obscure fruit character that is not particularly helpful. One ‘herbal medicine’ website refers to it as ‘Meadow Parsley’, which is not inappropriate, because most people would see it as a parsley-like plant, even if it is botanically vague (although no worse than the accepted ‘Hedge Parsley’). Due to its similar root-tubers to Pignut, and a general similarity of that plant, it might be referred to as ‘Stiff Pignut’, referring to the easiest and most obvious recognition feature, the much-thickened pedicels in fruit (Colour Section, Plate 3 (4)), although botanical purists may object to an association with the wrong genus. The authors are currently divided over whether a different name should be adopted for popular use – others’ views would be welcome.

Acknowledgements:

We are grateful for the assistance of Roger Kemp in carrying out the quadrat survey, and

comments on a draft of this article by Roy Maycock.

References:

- BRAITHWAITE, M.E., ELLIS, R.W., PRESTON C.D. (2006). *Change in the British Flora 1987–2004*. BSBI.
- BURTON, R. (2006). www.gardenerscorner.org/036/subject036610.htm
- DRUCE, G.C. 1926. *The Flora of Buckinghamshire*. T. Buncle & Co., Arbroath.
- GREEN, P. R., GREEN, I. P., & CROUCH, G. A. (1997). *The atlas flora of Somerset*. Published by the authors.
- GREEN, I.P., HIGGINS, R.J., KITCHEN, C., & KITCHEN, M.A.R. (2000). *The Flora of the Bristol Region*. Pisces, Newbury.
- HILL, M.O., PRESTON, C.D., & ROY, D.B. (2004) *PLANTATT: Attributes of British and Irish plants*. Centre for Ecology & Hydrology, Huntingdon.
- MARSHALL, T.F. (1999). Prestwood Park – place of trees. *Trinity Herald*, Summer.
- MIDDLETON, R. (1998). *Oenanthe pimpinelloides*, a new plant for northern England? *BSBI News* 78: 36–38.
- PIERONII, A. *et al.* (2006). Circum-Mediterranean cultural heritage and medicinal plant uses in traditional animal healthcare: a field survey in 8 selected areas within the RUBIA project. *J. Ethnobiology & Ethnomedicine* 2: 16
- PRATT, E.A. (2008). *The Wild Flowers of the Isle of Purbeck, Brownsea and Sandbanks*. Brambleby Books, Luton.
- RODWELL, J.S. (1992). *British Plant Communities. Volume 3: Grasslands and montane communities*. Cambridge University Press, Cambridge.

Garden weeds

MICHAEL O’SULLIVAN, *Knockavota, Milltown, Co. Kerry, Ireland*

As my garden consists almost entirely of wild flowers, there is a constant battle for space and light between the various species. However, the most invasive and prolific of the plants I have encountered is *Allium triquetrum* (Three-cornered Garlic). It was shown to spring up through emerging dense tufts of more robust

species like *Libertia formosa* (Chilean Iris) and *Lysimachia vulgaris* (Yellow Loosestrife). It also invaded a dense tangle of *Silene dioica* (Red Campion), and even a forest of the quick-growing *Chamerion angustifolium* (Rosebay Willowherb). Damp or dry, full light or deep shade, this invader prospered.

Great oaks with long, straight trunks - why have they gone?

JACK E. OLIVER, *High View, Rhyls Lane, Lockeridge, Marlborough, Wilts., SN8 4ED*

JOAN M. DAVIES, *Ballards Piece, Marlborough, Wilts., SN8 3HN*

Mrs Page:

‘There is an old tale that goes, that Herne the Hunter,

Sometime a keeper here in Windsor Forest,
Doth all the winter time, at still midnight,
Walk round an oak, with great ragged horns,
And there he blasts a tree.’

William Shakespeare, *The Merry Wives of Windsor*, Act IV, Scene IV.

‘I fear those old men of Moccas, those grey gnarled, low browed, knock-kneed, bowed, bent, huge, strange, long-armed, deformed, hunchbacked misshapen oak men that stand waiting and watching century after century.’

Revd. Francis Kilvert, 22nd April 1876, Moccas Park, Herefordshire.

The stag-headed and contorted oaks of Windsor Great Park and Herefordshire are entirely comparable with those in Savernake Forest, where all three of the common native oak taxa (*Quercus robur* (Pedunculate Oak), *Q. petraea* (Sessile Oak) and *Q. ×rosacea* (hybrid Oak) are to be found. Few mature oaks indeed in the rest of Wiltshire have uninterrupted straight boles extending beyond 4-5m. The same goes for the rest of the British Isles & Western Europe. This assertion is also supported by photos and accounts in thirty specialist and popular books so far scanned. The photo (p. 22) shows a typical open-grown Wiltshire *Q. robur*, with a straight length of bole to the lowest bough only 2.7m, girth (at 1.5m) 230cm, but with the characteristic kneed and convoluted branches and contorted

trunk above this level. In England, before the Battle of Trafalgar (1805), and back to the Tudors, trees with these angled boughs were ‘carefully chosen, and served as the timber for the shipbuilding industry to join the deck and the bilge. In the past an oak tree with curved branches was of incomparable value’ (Smit & Hartog, 1995). When not at sea, Admiral Collingwood was said always to carry selected acorns for planting at any sites he visited. Surveyors for the Admiralty earmarked oaks with the required strong angles and bends, and aimed to secure an ongoing succession of suitable trees.

Ancient great straight oaks

In the East Anglian Fenland, oaks have been found in buried forests. They were killed and entombed by the Fen Clay marine transgression and are often of huge dimensions. The photograph of the trunk of a bog-oak which grew in the Neolithic period on the Jurassic clay of the Fenland near Ely in Cambridgeshire is shown in a BSBI publication: *The British Oak* (Morris & Perring, 1974). This trunk has a very long unbranched bole and its radiocarbon age was estimated at 4,500 years.

In the Bronze and Iron Ages the boles of the very tall oaks were used to construct log-boats and flat bottomed boats. Log-boats were made from a single trunk, whereas flat bottomed boats were constructed from planks split and carved out from boles of trees. The following tables, recently updated by Prof. Sean McGrail, give the dimensions of these excavated craft. (See also McGrail, 1978, 1981, 1998, 2008; Millet & McGrail, 1987).

Log-boats – Sean McGrail, updated March 2008

Site of find	Approx. construction date	Length of log (m)	Estimated max. girth of tree (m)	Bronze Age (2300BC – 700BC) Iron Age (700BC – 100AD)
Brigg 1	1000 BC	> 14.78	5.4 at 13.5m	Bronze Age
Poole	300 BC	> 10	3.77 at 9m	Iron Age
Hasholme	300 BC	>12.58	5.22 at 11m	Iron Age

Plank boats – Sean McGrail, updated March 2008

Site of find	Approx. construction date	Length of plank (m)	Estimated max. girth of tree (m)	Bronze Age (2300BC – 700BC) Iron Age (700BC – 100AD)
Ferriby 1	1780 BC	> 7.5		Bronze Age
Ferriby 2	1830 BC	> 6.38		Bronze Age
Brigg 2	800 BC	>12.2	2.97	Bronze Age

Dimensions of the Dover Boat (see below).

Site of find	Approx. date	Length (m)	Age
Dover Boat	1550 BC	12m; possibly, but unlikely: 14–18m	Bronze Age

The Hasholme log came from a tree with a girth of c.5.4m at 1.5m and an estimated age of the tree when felled of between 810 to 1020 years. These Bronze and Iron Age log-boats and sewn-plank boats were made from tree boles greater than 5m in length, with a substantial girth; they were straight grained with few knots and these knots were insignificant.

Another very significant find of a boat was made during excavations in Dover. This boat, which was constructed from planks cut from three tall straight trunks, has been preserved and is on view in the Dover Museum. It is estimated that the trees were 350 years old when felled. The table above gives the dimensions of the boat.

Similar types of log-boats have been found from the medieval period. These boats were constructed from boles of trees to give boats 2.57 – 4.65m in length, which is shorter than the boats used in the prehistoric period.

Timbers found in large medieval buildings give another source of information about the size of trees growing in this period. The Octagon at Ely Cathedral shows evidence of a building being adapted to use smaller timbers than in the original design. The carpenter expected sixteen oak timbers 12.5m (40ft) long and 34cm (13.5 inches) square, but had to make do with getting the utmost out of the trees some of which were not quite big enough. Norwich Cathedral was constructed from beams up to 8.5m (28ft) in length.

Oliver Rackham has surveyed many buildings from this period and found that the medieval craftsmen used the minimum size of tree possible to do the work required. Oaks were felled from 25 to 70 years of age and worked as green oak, that is they were worked after felling and before the timber had time to dry out.

This method of using green oak timber was repeated at Windsor Castle in the rebuilding of the roof of St George's Hall following the fire in 1992 (Nicolson, 1997). The country was scoured to find oaks of sufficient size for the work. They were found in Sarnesfield Wood, which is on the Hereford – Shropshire border. These trees, which grew on deep loam, had straight boles for 18.3m (60 feet) or more from the ground. Only the bottom part of the boles had sufficient girth for the required large roof beams, which are up to 5m long, with a cross-section of 63cm (25 inches).

Some rare surviving European great straight oaks

The tallest and most upright oak in the Irish republic is the Tullynally oak known as 'The Squires Walking Stick'. It is, surprisingly, indexed as a *Q. robur* (Pakenham, 1996). The author's comment (in the context of this article) is revealing: 'Height (109ft) is not its most remarkable feature. It is its eerie uprightness that makes it a prodigy'. International Dendrology Society illustrations

published since 1999 show a large *Q. petraea* from the Forêt de Tronçais, specially selected and nurtured for its straight long bole (International Dendrology Society, 2005). Another straight, long-bole giant was the 600 year old *Q. robur* 'fastigiata' at Harreshausen in Bavaria (International Dendrology Society, 1999, Van Hoey-Smith, 2002). Most relevant to this article are the four magnificent Forest of Reno (Brittany) *Q. petraea* oaks, planted in 1680 (International Dendrology Society, 2007). They reach 46m, girths to 4.3m, with straight trunks reaching 30m before the first branch.

Searching for long straight giants

Penistan (1974) refers to the post-war British oakwoods being combed for good quality timber: 'Large scale re-forestation of the [Forest of] Dean from 1820 – 1850 to produce naval oak misfired in the face of iron ships, and since then production of a longer (straight) bole and less crooked limb has been favoured. These are the trees sought . . . as seed sources . . . the tendency to greater height growth, longer bole and simpler more straight-branched crown in *Q. petraea* makes it preferable in current [1960s – 1970s] conditions'. Nevertheless, despite the favouring of longer, straighter oaks since the Napoleonic era, together with expert seed selection and skilled forestry, today's oaks do not compare (in combined long, unbranched straight boles plus great girth) with those of the Fenland basin near Ely (2500 BC). Nor do today's oaks match those given on the tables; the preserved representatives of presumably many thousands more. 'It appears that nowadays few, if any, oaks combine great girth with length of bole . . . oak logs which combined great length with great girth were more readily available in the past than today' (McGrail 1978). Ancient boat builders would have been pushed to build even a small boat from current Savernake Forest oaks. The best four or five contenders for sub-optimal lengths would mostly be *Q. ×rosacea* trees.

Postulated causes, 1-5 (mainly biological variables)

1. Variations between oak taxa

The four native oak taxa considered are *Q. robur*, *Q. robur* f. *fastigiata*, *Q. ×rosacea* and *Q. petraea*. Most foresters and publications consider *Q. petraea* the best for long straight trunks, but in Savernake forest *Q. ×rosacea* trees are no worse in this respect. More noticeably, it is the pure *Q. robur* trees that suffer damage, dieback, stunting and stag's-head dead-branching (see 2 below). Even in the absence of disease the characteristic outlines of maiden *Q. robur* compared with *Q. petraea* (Lewington & Streeter, 1993) would tend to make the latter species a better candidate for an ancient long log-boat. *Q. robur* 'fastigiata' is best of all, but now almost unknown in the wild.

2. Oak diseases and defoliators

These are considered in *The British Oak* (Gradwell, 1974; Murray, 1974). Oak adapts well to leaf-stripping, but the precipitants, enhancements, persistence and effects of fungal pathogens are still incompletely understood. 'A wealth of evidence suggests that most pathogens on oak have become serious only after the trees have been predisposed to infection following environmental upset or insect attack' (Murray, 1974). Closely packed stands of *Q. robur* in Savernake Forest grown from imported acorns seem to be especially vulnerable to (presumed) waves of more virulent strains of *Phytophthora* than hitherto, whereas the local *Q. ×rosacea* and *Q. petraea* trees seem more immune. The complex multifactorial condition 'Oak dieback disease' ('Oak dieback decline') would seem to have *Phytophthora* at its root, both literally and metaphorically. (For this condition, see Gibbs & Greig, 1997 and Gibbs, 1999).

3. Weather changes over the millennia and recent centuries.

Would there have been fewer storms with less wind-throw and snapping or avulsions of trunks and branches before Roman times?

Even an indirect factor, such as the spread of ivy in response to warmer recent winters, could be important. Smothering aside, the voluminous festoons of ivy make trees, including oaks, vulnerable to winter gales.

4. Overall numbers and choice, pre-Roman era.

Were there once vast areas of oaks, from whose tens of thousands a few straight, tall, thick, healthy trees could be found? This picture is more complex than once thought, with reassessments of the old pollen charts in relation to (a) quantities of pollen, wind v. insect-pollinated trees; (b) pollen preservation variability in relation to the species of tree; (c) pollen deposition; (d) pollen data interpretations. Variability within the native oak taxa, as opposed to between them would mean that our ancestors could have found, amongst the many, a tiny proportion of exceptionally tall straight oaks even from *Q. robur* stands. These might, or might not fit the exact *Q. robur* '*fastigiata*' designation (see also: 5. and 7. below).

5. Density of stands.

'Its [Neolithic 'bog-oak', Cambridgeshire] long, unbranched [straight] bole [suggests] that it developed in high forest', 5,000 years ago (Morris & Perring, 1974). Again, more recent studies show the situation to be much more complex (Butler *et al.*, 2001; Green, 2003; Vera, 2002). Oak is light demanding, unlike shade tolerant trees such as Lime, Beech, Ash, Elm and Hornbeam. Oak does not compete well with these closed canopy species, but grows up in mantle and fringe vegetation and in advancing thorn scrub as part of shifting mosaics and non-linear successions: 'the cyclical turnover of vegetation'. Furthermore, neglected ancient oak pollards and maiden oaks in Savernake Forest, when surrounded by dense high canopy, still send up angled, irregular, gnarled, bent, twisted, burred, slanted semi-verticals towards the sky, often with several jagged main limbs. Probably well under 0.1% of mature oaks in the forest have even a moderately straight main trunk which

continues vertically to the canopy. Avulsion of heavy boughs, often tearing off segments of trunk, is also a common feature. Despite these reservations, the four great straight Reno Valdieu *Q. petraea* oaks 'were carefully drawn up by surrounding Beeches, a tribute to many generations of French foresters'.

Postulated causes, 6-7 (mainly human influences)

6. Coppicing, pollarding, lopping, topping.

In the past, these procedures had in mind stock, renewable resources, and commercial/rural raw materials. Nowadays oak pollards are valued for longevity and biological diversity (see: Green, 1996; Read, 2000).

7. Searches, choices, centuries of forestry.

In pre-Roman times local tribal leaders must either have had big, long, straight-boled oaks growing on their lands, or the ability to trade with confidence with other chieftains whose territories included such trees. By Tudor times most were gone, but the need for straight timbers remained, whatever the additional requirements for the oak crucks and angled boughs for shipbuilding (see also: 8 and 9, below).

Postulated causes, 8-9 (interactions of human and biological factors)

8. Soil

Good oaks, especially *Q. robur*, do best on deep loamy soils (Miles, 1999). Over the centuries, most such land (e.g. Lincolnshire, from where some great oaks were taken for the long log-boats) has subsequently been used for agriculture.

9. Genetic impoverishment.

Surviving teaks and mahoganies in Asia and S. America are said to be inferior in height, girth and straightness to those of past centuries, because of relentless preferential removal of the best specimens, always leaving only the runts to seed. Nearer home, the 10+m Spindle trees (girths: 140cm) and almost comparably large Dogwood trees from Forfarshire were used for barrels and

other goods (Boulger, 1890; Oliver, 2006). We are now left only with shrubby, multi-stem growths (Dogwood) or spindly little Spindle trees. The same process seems to have happened with oaks (*Q. robur*, *Q. ×rosacea*, *Q. petraea*) in Britain and W. Europe. Rackham (1974) alludes to the very considerably variability in oaks, especially their trunks and branches, and attributes most of this variation to genetic differences. We are told that forestry researchers in France have been trying to reverse the currently prevailing tendency toward squat, contorted, irregular trunks with plantations of long straight-bole oaks from selected acorn sources.

Conclusion

Long straight-boled, great girth oaks are now rare enough to be given special names, and/or to be considered as exceptional prodigies! ‘The Squires Walking Stick’ (Westmeath, Eire); ‘The Dukes’ Walking Stick’ (Welbeck, Nottingham, but long gone); ‘The Harreshausen Oak’; ‘The Tronçais Straight Oak’; The Reno Valdieu oaks. There may be a few more, but a mere handful compared with the past. The above gives nine possible reasons for the change in shape of oaks over the centuries and millennia.

Acknowledgements:

Appreciation is given to Prof. Sean McGrail, Rob Guest (Forestry Commission), Ted Green and Jill Butler (Ancient Tree Forum)

References:

BOULGER, G.S. (1890). *Familiar trees*, series 2. Cassell and Co. Ltd., London, Paris and Melbourne.

BUTLER, J.E., ROSE, F., GREEN, T.E. (2001). Ancient trees: icons of our most important wooded landscapes in Europe; in: READ, H., FORFANG, A.S., MARCIAU, R., PALTTO, H., ANDERSSON, L., TARDY, B. (eds.) *Tools for preserving woodland biodiversity*. Textbook 2. NACONEX Program Pro Natura, Göteborg, pp 20–26.

GIBBS, J. (1999). *Dieback of pedunculate oak*. Forestry Commission, Edinburgh. Forestry Commission Information Note, 22.

GIBBS, J.N. & GREIG, J.W. (1997). Biotic and abiotic factors affecting the dying back of *Quercus robur*. *Forestry* **70**(4): 400–405.

GRADWELL, G.R. (1974). The effect of defoliators on tree growth; in: *The British oak*, ed. M.G. MORRIS & F.H. PERRING. E.W. Classey Ltd., for BSBI.

GREEN, T. (1996). Pollarding – origins and some practical advice. *British Wildlife*, **8**(2): 100–105.

GREEN, T. (1996). Pollarding – should ancient trees be designated SSSI?. *British Wildlife*, **12**(3): 164–166.

GREEN, T. (2002). The role of invisible biodiversity in pasture landscapes; in: *International workshop on pasture - landscapes and nature conservation 26 – 31 March 2001*. Lüneburg, Germany.

INTERNATIONAL DENDROLOGY SOCIETY. (1999). *Yearbook*. (pp. 61 & 63). I.D.S., Herefordshire.

INTERNATIONAL DENDROLOGY SOCIETY. (2005). *Yearbook*. (p.76). I.D.S., Herefordshire.

INTERNATIONAL DENDROLOGY SOCIETY. (2007). *Yearbook* (pp. 116 & 118). I.D.S., Herefordshire.

LEWINGTON, R. & STREETER, D. (1993) *The natural history of the oak tree*. National Trust & Dorling Kindersley, New York (pp. 8–9 & 12–15).

MCGRAIL, S. (1978). Logboats of England & Wales. *British Archaeological Reports*, **51**(1): 119, 120, 309.

MCGRAIL, S. (1981). The Brigg ‘Raft’ and her prehistoric environment. *British Archaeological Reports* **89**: 84, 98.

MCGRAIL, S. (1998). *Ancient boats in North-West Europe*. Longman, London & New York. (p.40).

MCGRAIL, S. (2008). [Updated measurements] (unpublished personal communications).

- MILES, A. (1999). *Silva: the tree in Britain*. Felix Dennis & Ebury Press, London (p.67).
- MILLET, M. & MCGRAIL, S. (1987). The archaeology of the Hasholme Logboat. *Archaeol. J.* **144**: 103–107.
- MORRIS, M.G. & PERRING, F.H. (eds.). (1974). *The British oak*. E.W. Classey Ltd., for BSBI.
- MURRAY, J.S. (1974). The fungal patterns of oak; in: *The British oak*, ed. M.G. MORRIS & F.H. PERRING. E.W. Classey Ltd., for BSBI.
- NICOLSON, A. (1997). *Restoration – the rebuilding of Windsor Castle*. Michael Joseph Ltd., with The Royal Collection, London.
- OLIVER, J.E. (2006). Spindles and dogwood trees. *BSBI News* **101**: 13–14.
- PAKENHAM, T. (1997). *Remarkable trees*. Phoenix Illustrated, London.
- PENISTAN, M.J. (1974). Growing oak; in: *The British oak*, ed. M.G. MORRIS & F.H. PERRING. E.W. Classey Ltd., for BSBI.
- RACKHAM, O. (1974). The oak tree in historic times; in: *The British oak*, ed. M.G. MORRIS & F.H. PERRING. E.W. Classey Ltd., for BSBI. (p.76 and Plate III)
- VAN HOEY-SMITH, J. R. V. (2002). *International Dendrology Society, 1952–2002*. I.D.S., Rotterdam. (p.158).
- READ, H. (2000). *Veteran Trees*. English Nature, English Heritage, Countryside Agency.
- SMIT, D. & DEN HARTOG, N. (1996). *Trees and Their Shapes*. Tiger Books International. (p.69).
- VERA, F.W.M. (2002). The dynamic European forest. *Arboricultural Journal* **26**: 179–211.



Typical open-grown Wiltshire *Q. robur*. Photo J.E. Oliver © 2008

How safe is Jacob’s Ladder (*Polemonium caeruleum*)?

DONALD PIGOTT, *Greenbank, Cartmel, Grange-over-Sands, Cumbria LA11 7ST*

It is 50 years ago that I published a Biological Flora of *Polemonium caeruleum* (Pigott, 1958). My study of native habitats in England had shown them to be almost always on steep, north-facing, often rather unstable slopes, with seepage of water and such associates as nettles and other tall herbs.

I wished to compare these sites with those in the Alps and, although by 1958, after four visits to the Swiss Alps, I had acquired a working knowledge of the mountain flora of the Valais and Bernese Oberland, I had never seen *Polemonium*, which is native in Switzerland only in Graubünden. I wrote to the distinguished Swiss Botanist, Professor W. Lüdi, who generously replied with two long letters, from which a description of a locality in the Rosegtal was quoted in my account. In 2006 we at last explored this wonderful valley and discovered several localities that were exactly as Lüdi had described them, and even the associated species were almost the same, in spite of some, like *Urtica dioica* (Common Nettle), being regarded as ruderal.

Several localities are on steep slopes facing both east and west, of an extensive river terrace at 2030m on both sides of the broad flood plain of the Ova da Roseg. They are where water seeps through the silty gravel to form springs at their base, marked by *Carex nigra* (Common Sedge) and *Saxifraga stellaris* (Starry Saxifrage). Above the springs the dominant grass is *Deschampsia caespitosa* (Tufted Hair-grass), which forms large tussocks that tend to collapse when trodden on, either by cows or human beings, and water trickles through the intervening hollows. The associated tall herbs include nettles, *Aconitum napellus* (Monkshood), *Alchemilla glabra* (Lady’s-mantle), *Cardamine amara* (Large Bitter-cress), *Epilobium alpestre* (Whorled-leaved Willow-herb), *Geranium sylvaticum* (Wood Crane’s-bill), *Geum rivale* (Water Avens), *Peucedanum ostruthium* (Master-wort) and *Veratrum album* (White False-helleborine). Like some habitats on

ledges in Derbyshire, the sites are essentially unstable, sloping marshes.

Fifty years ago there was great interest in *Polemonium* because its distinctive pollen grains were being found in deposits laid down in the almost treeless Late Glacial Period, over 10,000 years ago, following the retreat of the ice of the last (Weichselian or Devensian) glaciation. Godwin (1973) shows 23 such localities from that period, scattered over England and Wales, and one in Scotland.

As we looked across this treeless waste of silt, sand and gravel with its long terrace, I realised that we were looking at what is essentially a late-glacial landscape (see inside Back Cover). Just above it are the snouts of two great glaciers, fed by the snows of the Bernina, but now in rapid retreat. About a century ago the confluence of these glaciers still covered this fluvio-glacial flat valley bottom and *Polemonium* must have spread from lower down the valley, now largely covered by dense woodland of spruce on acid, humus-rich soils. In due course trees will spread further up the valley to its head. To judge from the neighbouring valley below the great Morteratsch glacier, where the stages of retreat are marked by dated stones, this will happen within a lifetime.

On a visit to Derbyshire later in the summer, we picked up a copy of *Peak District News* (2008), published by the National Trust. In it was a photograph of Jacob’s Ladder and an appeal for funds for nature conservation in Dovedale. This will include measures to control grazing by sheep to protect its localities on steep slopes and cliffs in the upper part of the dale.

References:

- GODWIN, H. (1975). *The history of the British flora*. 2nd ed. Cambridge University Press, Cambridge.
- PIGOTT, C.D. (1958). Biological Flora of the British Isles: *Polemonium caeruleum* L. *J. Ecol.* **46**: 507–525.

More on white *Centaurea*

JEAN WYNNE-JONES, Gatchapen Cottage, Rushall, Ledbury, Herefordshire, HR8 2PE
jwynnejones@yahoo.co.uk

I was interested to read the article on ‘White *Centaurea scabiosa*’ in *BSBI News* 109. A few years ago, I found a white-flowering plant of *Centaurea nigra* (Common Knapweed), growing in a hay meadow in Herefordshire. It was particularly beautiful, as it was sparkling white and of rayed form (see Colour Section, Plate 1).

I weeded out a *Heracleum sphondylium* that had seeded in rather too close for comfort and, just before the hay was cut, I looked for seed. I only found six seeds but perhaps I had left it too late. I gave three to a friend and sowed three myself. I was disappointed when my two resulting plants flowered (see Colour Section, Plate 1) and I think my friend was too, as he emailed me to complain that not only were the flowers not white they were a boring shade of mauve and shaped like shaving-brushes!

Soon after receiving the email I was walking over an area of old workings in Gloucestershire with the owner of the Herefordshire hay meadow. He suddenly cried out ‘Oh look there’s my plant again’. In fact the plant was *Centaurea scabiosa*, Greater Knapweed, and not nearly as nice as his plant, being off-white (see Colour Section, Plate 1). On hearing of the failure of the seed from his plant to produce any

white-flowered plants, he presented me with a small piece of turf containing a slice of the plant. This I duly planted in a large pot. Over the next few years it got rather swamped by its companions, so I imitated the action of a sheep and trimmed some of the *Holcus* and *Festuca* and added a little dollop of sheep manure. Occasionally I gave the whole pot a severe trim. However, it has still not flowered and I think the plant is getting smaller. I may have to separate it from the other plants in the pot to give it a better chance. Meanwhile the plant in the field is still there but no other white-flowered plants have occurred.

Old meadows in Herefordshire often have several forms of *Centaurea nigra* growing close to each other. They vary in shape from ‘shaving-brush’ to well-rayed, and in colour from pale grey-mauve to deep purple and pink. The area around Leominster has a preponderance of dark, well-rayed specimens. Areas which have been seeded with wild flower mixes often have only one type.

The RHS plant finder lists three nurseries as stocking a white-flowered *Centaurea nigra* but I have never seen the plant in cultivation. Neither have I seen any white *Centaurea* other than those described in this article.

White *Centaurea scabiosa*

EDWARD PRATT, 7 Bay Close, Swanage, Dorset, BH19 1RE

In reply to Michael Arthern and Jill Graves (*BSBI News* 109: 7), white *Centaurea scabiosa* are very uncommon but not the rarest of albinos. I have seen albinos of this species in two former quarries near Birdlip in the Cotswolds, near the Camera Obscura on the Downs in Bristol, at Longwood

Warren east of Winchester, and in Durlston Country Park here at Swanage. I have also heard of it on Portsdown, Hampshire. Identification books tend to mention white forms only when they are frequent. Albino *Centaurea scabiosa* is, however, one of the most beautiful and striking albinos.

Fringed Gentian flowering again in Buckinghamshire

BRIAN LANEY, 5 South Close, Long Buckby, Northamptonshire, NN6 7PX
(brian.laney@gmail.com)

In September 2007 I visited the *Gentianella ciliata* (Fringed Gentian) site in Bucks. to see if any flowering plants were up that year. The vegetation was long and thick and also the scrub was encroaching onto the site and no flowering plants were located (none had been seen for several years although 76 flowering specimens were counted in 1987). So urgent action was needed. I immediately contacted the National Trust, who then put me on to Jerry Page, the National Trust Warden for the site. The good news was that I got permission to do a day of grass cutting and scrub bashing on the site for the species in November 2007. I managed to call up fellow botanist Dave Shute and naturalist Chris Hazel who joined up with me and the warden to help out. However I got permission to do two more days of grass cutting on my own in the week, which involved getting the grass really short, using the brush cutter blade at an angle close to the ground to expose bare patches of earth. All grass cuttings were raked off and

placed at the edge of the site for attracting reptile species. Thanks to a tip off from Graham Giles in 2008, a single flowering plant was located on August 30th. Then another single flowering plant was located on September 26th (see photos Back Cover). I am really pleased the habitat management has already paid off. Another grass cutting session was done on the 14th December 2008 and six of us in total turned up to help out. Two brush cutters were in use on the day. 200 sheep have been grazing the site for a three month period in the winter months which are also doing a great job. I must thank Dave Shute and Chris Hazel for their help in 2007, and also again Dave Shute in 2008 but also Bill Clarke, Sean Cole and Graham Giles for their help on December 14th. Many thanks also go to Jerry Page for giving me permission to do the habitat management and for his help on the day and again Graham Giles for letting me know flowering plants had appeared this year.

Vegetative ID Quiz

JOHN POLAND, 91 Ethelbert Ave., Southampton, Hants SO16 3DF
(jpp197@alumni.soton.ac.uk)

Thanks to everyone who took part in my quiz at the Annual Exhibition Meeting in Leeds last November. The prize was simply a mention of the top five highest scoring entries. Congratulations to Martin Collins for a respectable 12 out of 15 correct identifications of what was an exceedingly difficult test.

Other similarly high scores came from Uta Hamzaoui, Brian Laney, John Swindells and Roy Vickery (names arranged alphabetically).

The specimens were: (1) *Ruscus aculeatus* (Butcher's-broom), (2) *Santolina chamaecyparissus* (Lavender-cotton), (3) *Euonymus japonicus* (Evergreen Spindle), (4) *Senecio cineraria* (Silver Ragwort), (5) *Hebe* cf.

×franciscana (Hedge Veronica), (6) *Tamarix gallica* (Tamarisk), (7) *Lysimachia nummularia* (Creeping-Jenny), (8) *Brachyglottis ×jubar* (Shrub Ragwort), (9) *Escallonia macrantha* (Escallonia), (10) *Limonium latifolium* (Florist's Sea-lavender), (11) *Hippophae rhamnoides* (Sea-buckthorn), (12) *Sedum album* (White Stonecrop), (13) *Silene uniflora* (Sea Champion), (14) *Elaeagnus* cf. *macrophylla* (Broad-leaved Oleaster), (15) *Hypericum androsaemum* (Tutsan).

Please note that all the taxa key out easily in the forthcoming *Vegetative Key to the British Flora* (see enclosed flyer for pre-publication offer)

Height maxima for *Rubia peregrina* (Wild Madder)

SIMON J. LEACH, *Natural England, Riverside Chambers, Taunton, Somerset, TA1 4AP*
(simon.j.leach@naturalengland.org.uk)

I have never been much interested in the heights to which plants grow. Until now, this question of size has, in more senses than one, gone over my head. But following a few observations on *Rubia peregrina* I have succumbed to the ‘height bug’ and have no alternative but to share the excitement.

Stem lengths or height maxima for *R. peregrina* in the standard ‘Floras’ all seem to agree that this species rarely exceeds 150cm. CTW talks about ‘...trailing or scrambling-ascending stems 30–120 cm’; *Flora Europaea* also states stem length to be 30–120 cm, while Stace (2nd ed.) and Sell & Murrell opt for a slightly taller maximum of 1.5 m.

In the Taunton area *Rubia peregrina* is a common species of hedgerows and wood-borders on calcareous (Liassic) clays along the northern edge of the Blackdown Hills. Given a dense tangle of hedgerow *Rubia*, it is impossible to measure stem length without literally pulling the plant apart, and even then one usually ends up with lots of part-stems as they tend to snap off well above ground level. On the whole, however, 1.5 m seems like a reasonable estimate of the plant’s size in hedge-banks, where the height of the madder is effectively limited by the height of the plants through which it is trailing.

In woodland *Rubia peregrina* can be found scrambling through the lower branches of trees, with climbers like *Hedera helix* (Ivy), *Clematis vitalba* (Traveller’s-joy), *Lonicera periclymenum* (Honeysuckle) and *Rubus fruticosus* agg. (Bramble) providing additional support. Around Taunton, this is especially the case in plantations of *Picea abies* (Norway Spruce), where great festoons of climbing plants, *Rubia* included, are able to gain extra height by clambering up through the dense ‘scaffolding’ of thin, twig-like branches covering the spruce trunks. In early October in Thurlbear Wood (ST2619) I measured the heights of 20 *Rubia* plants on Norway Spruce; even the lowest was 2.4m; 11 of them exceeded 4 metres and the tallest was 6.1m (see Colour Section, Plate 1).

These are measurements of plant height, of course, which is not quite the same thing as stem length, since *Rubia* stems are neither straight nor consistently vertical. Thus, a stem removed from a plant attaining 3.2m in height measured 3.75m when stretched out (more or less) straight, while another from a plant 4.4m tall measured 4.87m. Whether these lengths are ‘typical’ I really don’t know. Has anyone else taken a tape to this species, I wonder?

Heights of *Echinochloa crus-galli*, *Setaria pumila* and *Carex sylvatica*

EDWARD PRATT, 7 Bay Close, Swanage, Dorset, BH19 1RE

The wet summer has led to taller growth. I have six books which include *Echinochloa crus-galli* (Cockspur). Two of them give its maximum culm height as 1m, and four give it as 1.2m. This year I have found many specimens around 2m high. The tallest was 2.07m!

Likewise I have four books which give maximum height for *Setaria pumila* (Yellow Bristle-grass). One gives 40cm, two 75cm

and one 130m. This year some have topped that - the highest I have found is 165cm.

Thirdly most books give 60cm for the maximum height of *Carex sylvatica* (Wood Sedge), though as its culms are usually not vertical they will be longer than that. One book gives culm length to 150cm. I have found one which reached 163cm, growing almost vertically through a bush.

***Rumex rupestris* Le Gall at Soar Mill Cove, S. Devon**

S.J. LEACH, E.J. MCDONNELL, AND S.J. PARKER, *Natural England, Riverside Chambers, Taunton, Somerset, TA1 4AP*

P.J. REAY, *10 Devon House, Bovey Tracey, Devon, TQ13 9HB*

Rumex rupestris (Shore Dock) is listed as Endangered in *The Red Data List* (Cheffings & Farrell, 2005), is specially protected on Schedule 8 of the Wildlife & Countryside Act (1981), and is one of eight British species appearing on Annexes II and IV of the EU Habitats & Species Directive. A European endemic, Britain possibly holds >25% of the world population (Pearman & Preston, 2003), mainly in S.W. England (Devon, Cornwall and the Isles of Scilly), but with significant outliers in S. Wales and Anglesey. It is also a UKBAP Priority species.

R. rupestris is strictly coastal in its distribution, occurring in a relatively narrow zone above High Water Mark, on sand or shingle beaches (rarely in winter-flooded dune slacks), boulder-strewn wave-cut platforms, and on ledges and the lower slopes of sea-cliffs, always in close proximity to streams or freshwater seepages.

Following extensive surveys by Plantlife, recent estimates of the total English *R. rupestris* population have been in the range of 500-600 plants across about 36 sites (McDonnell & King, 2006). Most colonies are small, supporting fewer than a dozen plants, and many seem to comprise just one or two individuals.

Soar Mill Cove (SX697375) is a popular 'off the beaten track' tourist beach on Devon's spectacular and rugged south coast, with two streams and numerous freshwater seepages irrigating the top of the beach. The site lies within the Bolt Head to Bolt Tail SSSI, and forms part of the South Devon Shore Dock Special Area of Conservation, SAC EU Code No. UK0030060. Soar Mill Cove is a long-standing stronghold of *Rumex rupestris* in S.W. England. First recorded here in 1894, population size over

the last 25 years has typically been within the range 5–20 plants. In September 2005, for example, a monitoring visit turned up 15 plants or 'clumps', of which six were flowering or fruiting (Dominic Price, *pers. comm.*). The main colonies have generally occurred in two parts of the site: one adjoining the more westerly of the two streams, the other within an area of freshwater seepages on low cliffs at the eastern side of the cove.

Imagine our surprise, then, when Ilona Weir (Penny Anderson Associates), visiting the site in September 2006 in connection with a sewage discharge licence application, reported 77 plants, including 51 with flowering or fruiting stems! Two of us (S.J.L. and E.J.McD.) visited the cove in November 2006, wondering whether some of her '*rupestris*' would turn out to be the coastal form of Curled Dock (*R. crispus* subsp. *littoreus*). Separating these two can be problematical, especially when not in fruit. But she clearly knew her docks well, as all the fruiting plants and clumps still readily identifiable proved to be *R. rupestris*. In our experience, *R. rupestris* plants do not normally flower until at least their second year, suggesting that the 2005 survey overlooked a number of non-flowering young plants, or possibly seedlings, which proceeded to flower for the first time in 2006.

The four of us visited Soar Mill Cove again in September 2007. The number of fruiting plants/clumps was 64, a slight increase on the previous year, while there had been an 'explosion' of non-flowering plants, the total count, fruiting and non-fruiting, having risen to 310. In addition, we found at least 100 seedlings believed to be of this species. Remarkably, large

numbers of these seedlings and new vegetative plants had appeared along the top of the beach in an area that on previous visits had held no plants at all. Across the site as a whole, 20.6% of plants (excluding seedlings) had fruiting stems, with a total fruiting-stem count of 280 and an average of 4.4 stems per fruiting plant.

Since then we have kept the cove under close surveillance: P.J.R. visited there in December, January, February, March, May and July 2008, S.J.L., E.J.McD. and P.J.R. visited in April 2008, S.J.L. made a flying visit in August, while the four of us undertook a full re-survey in early October (see Colour Section, Plate 4). These repeat visits have been highly informative, and we have observed how changes in beach level, minor landslips and erosion of sand- or soil-filled rock fissures after heavy rain, have led to (sometimes repeated) exposure and/or burial of individual plants. Yet, on the whole, while some seedlings and young plants have undoubtedly succumbed to these changes, most with well-developed root systems seem to have survived.

In late March, P.J.R. discovered that mechanical beach-cleaning had been carried out, with heaps of seaweed and drift litter being ‘bulldozed’ across the beach and piled up against the cliff on the western side of the cove. This work had evidently included the section of beach in which we had recorded large numbers of plants the previous autumn. Fortunately, there had been fresh accumulations of sand in this area, and it was conceivable that many *R. rupestris* plants had survived by being safely buried under a blanket of sand. In April numerous clumps of leaves were already beginning to break through the sand, and observations during the summer confirmed the continued presence of a large number of plants in this area: S.J.L. counted 67+ fruiting plants/clumps in the ‘beach colony’ in late August and we recorded 111 plants (58 with fruiting stems) in October, many of them,

once again, partially buried in sand. Our ‘total count’ in this area was slightly down on 2007, but the beach level in October was probably 30–40cm higher than in September 2007 and 10–25cm higher than in April, and some ‘missing’ plants may still have been present (but not visible) at the time of our survey, buried under beach sand. Across the site as a whole, we recorded 255 plants, 119 (46.7%) had fruiting stems, with a total fruiting-stem count of 690 and an average of 5.8 stems per fruiting plant.

Our counts are in marked contrast to those made prior to 2005 (see fig. 1 p. 29) and, as far as we know, this is the first time a population surge of this sort has been recorded for *Rumex rupestris* in the UK. These observations run counter to the usual pattern of tiny populations, and often declining numbers, witnessed at so many other sites. The species generally occurs as relatively isolated colonies occupying small patches of suitable habitat liable to sudden and sometimes catastrophic change. Recruitment of new plants is normally low, and seedling mortality invariably high, with winter storms, heavy spring rains and summer drought all likely to be contributory factors. Plants may be removed by storm surges or freshwater torrents, or buried under slumping cliffs or accumulations of rotting seaweed. In addition, visitor pressure (trampling, disturbance, etc.) has been suggested as a potential limiting factor on some sites.

So, why the sudden increase at Soar Mill Cove? Could it have something to do with the weather? Have the last two years been less stormy, perhaps? Or could the area of suitable habitat have increased? One possibility is that a temporary lowering of the upper beach level brought some of the underlying rock platform and freshwater seepages from the cliff-base to within reach of the roots of colonising seedlings, and that, once established, a large number of these ‘beach’ plants have been able to

withstand subsequent periods of burial and exposure. Yet *all* colonies at the site seem to have done well, not just those on the beach, and we wonder whether the mild springs and wet summers of the last two years have provided especially favourable growing conditions, both for seed germination and, more importantly, for the swift development through to flowering of a large cohort of seedlings originally appearing, undetected, at some time between 2004 and 2006. We think it may be highly significant that the increase in numbers at Soar Mill Cove has coincided with a marked reduction in visitor pressure, not only as a direct result of the wet summer weather in 2007 and 2008, but also due to the closure in 2005 of a nearby caravan and camping site, which is now in the process of being re-developed as a (much lower density) chalet park.

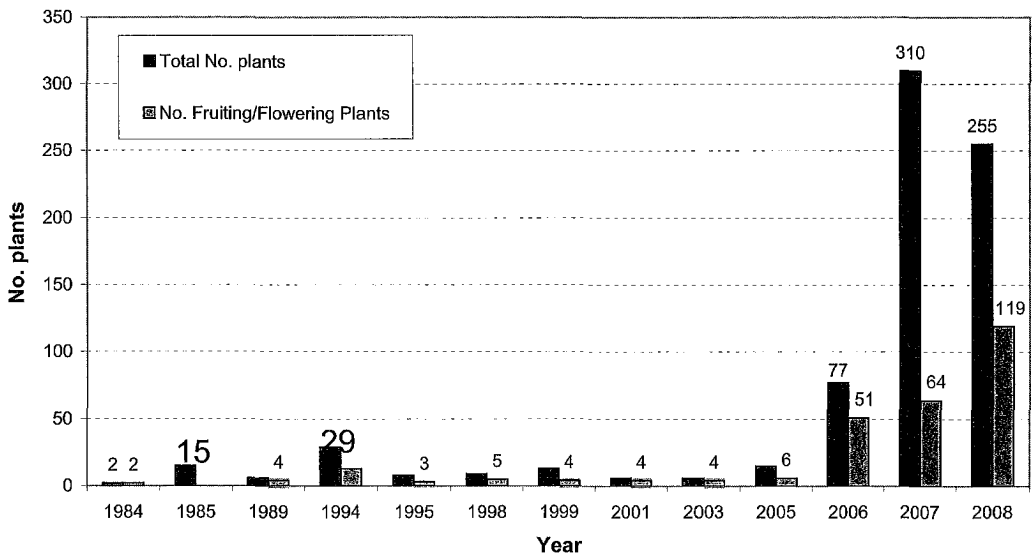
Of course, we cannot be certain what has caused or permitted the sudden and dramatic increase; and who knows what the effects will be of this winter's storms, further changes in beach levels or next summer's returning holiday-makers? We also have little idea how populations have been faring

elsewhere in S.W. England over the last two years, the most recent series of monitoring visits by Plantlife having been undertaken in 2005 (Dominic Price, *pers. comm.*). It is reassuring, however, to know that colonies of *R. rupestris*, even quite small ones, are capable of rapid expansion when conditions allow.

References:

- CHEFFINGS, C.M. & FARRELL, L. (eds) (2005). The Vascular Plant Red Data List for Great Britain. *Species Status 7*: 1–116. Joint Nature Conservation Committee, Peterborough.
- MCDONNELL, E.J. & KING, M.P. (2006). *Rumex rupestris* Le Gall (Shore Dock) in S.W. England: review of recent surveys and assessment of current status, in LEACH S.J., PAGE, C.N., PEYTOUREAU, Y. & SANFORD, M.N. (eds.) *Botanical Links in the Atlantic Arc*. BSBI, London. (pp 201–209).
- PEARMAN D.A. & PRESTON, C.D. (2003). *International conservation status of British plants. Species with British populations of European or world importance*. Unpublished report to English Nature and Countryside Council for Wales.

Figure 1. Shore Dock (*Rumex rupestris*) population counts Soar Mill Cove, S. Devon 1984–2008



Rye Brome in Fryent Country Park

LESLIE WILLIAMS, 34 Christchurch Avenue, Kenton, Harrow, Middlesex HA3 8NJ
(leslie.williams1597@btinternet.com)

The appearance of *Bromus secalinus* (Rye Brome) after the apparent absence of any previous records at a park in West Yorkshire and possible vectors of the source of the seed was commented upon by John P. Marshall (*BSBI News* 109: 25).

The appearance of Rye Brome where it had not previously been recorded, has also been noted in hay meadows at Fryent Country Park, Middlesex. Plants were noted in adjacent areas of two hay meadows in 2004 and were determined as *B. secalinus* L. var. *secalinus* by Laurie Spalton. There have been no subsequent records. Annual monitoring of the meadows, which total about 58 hectares, had been undertaken annually since 1985, generally using 10 one-metre square quadrats in each of the 23 meadows together with other records. The other *Bromus* species that had occurred in the meadows were *B. commutatus* var. *commutatus* (Meadow Brome), low frequencies of *B. racemosus* (Smooth Brome) and declining quantities of *B. hordeaceus* (Soft-Brome).

The source of the Rye Brome is not known. There were no near geographic or historic records of *Bromus secalinus* in the vicinity of Fryent Country Park. The meadows are on London Clay and there was no history of ground disturbance in these two meadows

during recent years (records commenced in 1983). A buried seed-bank, from a time when the meadows could have been in arable use, is possible. Another possibility is that seed could have fallen from hay harvesting machinery that had been used in other areas of the country. The hay from the meadows at Fryent Country Park is certified as organic under the Soil Association Organic Standards. The Organic Standards require the cleaning of vehicles or machinery used in the hay harvesting operation, before they access the organic site. This is to prevent, or reduce, the introduction of e.g. GM-contaminated seed or non-organic crop residues. However it could be debatable whether total cleaning of harvesting machinery and vehicles is practicable or is achieved. In the years prior to 2004, the hay harvesting farming and contractor equipment used at Fryent Country Park came from areas including Wiltshire (in 2002) and Buckinghamshire (2001, 1993–1999) but some machinery may have been contracted from other areas. The meadows were not harvested in 2000 and 2003.

Reference:

WILLIAMS, L.R. & MERCER, S. (2006). Changes in the flora of meadow grasslands on London Clay soils at Fryent Country Park. *London Naturalist* 85: 77–92.

‘Always verify your references’ – an assessment of the record of *Illecebrum verticillatum* on Eriskay, Outer Hebrides

C.D. PRESTON, *Biological Records Centre, CEH Monks Wood, Abbots Ripton, Huntingdon, Cambs PE28 2LS* (cdpr@ceh.ac.uk)¹

There are two botanical records of *Illecebrum verticillatum* from the Outer Hebrides. The first, from Eriskay, was published in a book *Outer Isles* written by Goodrich-Freer (1902). The second is from the nearby island of Barra, where Heslop Harrison (1941) recorded it as ‘very rare in a limited sandy and gravelly area in S.W. Barra’. Pankhurst & Mullin (1991), in *Flora of the Outer Hebrides*, rejected both as requiring confirmation. The Barra record is supported by herbarium specimens but was doubtless rejected as one of many implausible records made by Heslop Harrison’s team in the Hebrides. Pankhurst & Mullin (1941) say that ‘the habitat in Barra is now quite unsuitable’.

The discovery of two fossil pollen grains of *Illecebrum* dating from 4620 ± 130 years BP at a machair site at Kallin on Grimsay by Whittington & Edwards (2000) placed these records in an altered perspective. Grimsay is an island between Benbecula and North Uist, 45km north of Eriskay. Whittington & Edwards concluded that ‘the palynological evidence provides a compelling case for the likelihood of the recording of *Illecebrum* in the earlier twentieth century by Goodrich-Freer (1902) and Heslop Harrison (1941) as having been correct’. As one of the editors of the *New atlas* (Preston *et al.*, 2002), I accepted this argument and we mapped both records. In his recent paper, my fellow editor David Pearman (2008) cites these historic records without further comment.

Goodrich-Freer’s record in its published context

Recently, when preparing a paper on Heslop Harrison’s plant records, I checked Goodrich-Freer’s book *Outer Isles* to see if her record had been confirmed by any more noted authority. Her list of plants from Eriskay (pp.

200–202) was provided to counter those writers who ‘have dwelt upon the bareness, the colourlessness of the Outer Islands’. The list ‘was made late in August, not a very good month for flowers, where there are no cornfields, but it will be seen that we have included some not then in season, but of the existence of which we had sufficient evidence, either by the remains of leaves or roots, or from dried specimens kindly preserved for us by Father Allan’ [Rev. Fr Allan McDonald, Catholic priest on Eriskay, of whom more later]. The list of English names of plants recorded from the island does indeed include ‘*Illecebrum*’. However, on seeing the list I began to worry. It is too long to cite in full, but the following extract (for letters P to T) gives its flavour:

‘*Persicaria* (1) common, (2) amphibious; Pennywort; Poppy, long-headed (the common poppy of the English cornfields, rare in the Highlands); Parsnip, cow; Pearlwort (1) procumbens, (2) alpine; Primrose; Pimpernel (1) scarlet (poor man’s weatherglass), (2) bog; Parsley, (fool’s); Pond-weeds, various; Plantain (1) maritima, (2) buickthorn, (3) greater, (4) ribwort; Purselane, sea (caryophyllaceae); *Potentilla* (1) hoary, (2) marsh; Red-rattle (1) common, (2) dwarf; Rose-bay; Ragged robin; Rag-wort (1) common, (2) water; Rose, wild; Rue (meadow) (1) thalictrum, yellow, (2) lesser; Ransoms; Spurge (sun); Self-heal; Sorrel (dock); Sorrel (1) wood, (2) sheep; Stone crop (1) yellow, (2) white; Scabious (1) small, (2) devil’s bit; Silverweed; Sand-wort; Shepherd’s-purse; Sundew (1) round-leaved, (2) spoon-shaped; Speedwell; Spurry (1) sand, (2) corn; Sea rocket; Snakeweed (bistort);

¹ Now at: Biological Records Centre, CEH, Maclean Building, Benson Lane, Crowmarsh Gifford, Wallingford, Oxfordshire OX10 8BB.

Scurvy grass (1) common, (2) Danish; Squill, vernal; Saltwort; Sneezewort; Thistle (1) spear plume, (2) sow, (3) plume, (4) corn sow; Tormentil; Thalictrum (1) common, (2) meadow; Thyme (1) white, (2) red; Thrift (sea); Thale (cress); Tansy ...’

The interpretation of this list is more difficult than it might appear, especially as Miss Freer does not give the source of her English names, ‘given for the benefit of the non-specialist reader’. Firstly, some of these are ambiguous and this explains the apparently random insertion of Caryophyllaceae (with its disturbing lower-case ‘c’) after ‘Purselane, sea’, for Sea Purslane is given in ‘Bentham & Hooker’ (Bentham, 1887) as an English name for both *Atriplex portulacoides* (Chenopodiaceae) and *Arenaria peploides*, now *Honckenyia peploides* (Caryophyllaceae). Secondly, it is easy to forget how broad a species concept was adopted in some of the more popular Victorian Floras. ‘Pearl-wort ... (2) alpine’ at first appears to be an obviously erroneous record of *Sagina saginoides*, but Bentham (1887) includes the frequent Hebridean species *S. subulata* under *S. linnaei*, his name for *S. saginoides*.

Despite the difficulties of interpretation, one has to conclude that the list includes some very unlikely species. The most bizarre is ‘Butter-wort, ... (2) alpine’, which was then, as now, the English name for the extinct Scottish species *Pinguicula alpina*. Names in the above extract that also appear to refer to species not known from the Outer Hebrides include ‘Potentilla (1) hoary’, which is presumably *Potentilla argentea* as Bentham’s (1887) English name for this species is ‘Hoary Potentil’; and ‘Scabious (1) small’, which matches Bentham’s name (and that of most of his contemporaries) for *Scabiosa columbaria*. Despite the inclusion of these

species, Freer states in her preamble to the list that ‘the only flowers of special interest are the *convolvulus maritimus* [*Calystegia soldanella*], the history of which is told in another chapter, and the somewhat rare ‘midsummer men,’ *sedum rhodiola* [*Sedum rosea*], sometimes called rose-root’. Why did she think that these other species, and ‘Illecebrum’, were of no special interest? Did she intend the names to indicate different species from the ones I have suggested? Presumably, if she saw two *Pinguicula* species, these must have been *P. lusitanica* and *P. vulgaris* and perhaps ‘Butter-wort, ... (2) alpine’ is a slip for the former. Other features of the list show that it was not compiled very carefully. *Heracleum sphondylium* appears three times, as ‘Cow-parsnip’, ‘Hogweed (cow parsnip)’ and ‘Parsnip, cow’. Note also the confusion over ‘Rue (meadow)’ and ‘Thalictrum’ in the above extract. Incidentally *T. flavum*, for which Bentham (1887) gives the English names ‘Yellow Thalictrum, Meadow Rue’, is another species which is not known from the Outer Isles. The colour variants of ‘Milk-wort (1) white; (2) blue, (3) pink;’ are listed earlier in the list, treated like those of Thyme as if they were species.

Who was Ada Goodrich Freer?

Intrigued by the fact that the preface of *Outer Isles* is dated ‘Jerusalem, May 1902’, I decided to find out more about Ada Goodrich Freer.² The concise entry in the *Oxford Dictionary of National Biography* (Campbell, 2004) made it abundantly clear that she is one of the more remarkable people to have made significant botanical records. It is based on the accounts published by J. Lorne Campbell (1906–1996), the scholarly owner of Canna, and his colleague Trevor Hall (Campbell, 1958; Campbell & Hall, 1968; Hall, 1980). I summarise it from these publications, neces-

² Goodrich Freer is hyphenated on the title page (but not the cover) of *Outer Isles*, but her birth certificate, reproduced by Campbell & Hall (1968), shows that her name was registered as Ada Goodrich Freer, daughter of George and Mary Freer. She began to hyphenate Goodrich Freer in 1893 and continued to add to her name subsequently, changing Ada to Adela and adding after it M. or Monica (Campbell & Hall, 1968, pp. 102-103).

sarily omitting much material which I (for one) was fascinated to read.

Ada Goodrich Freer (1857-1931) came from a Rutland family, but throughout her career she concealed her origins, and when travelling in Scotland she claimed Scottish or Highland antecedents. She ‘enjoyed the advantage, apparently throughout her adult life, of appearing to be at least ten years younger than her actual age, with personal attractions which seem to have been almost hypnotic in their effect, and which she used irresistibly and ruthlessly upon those whom she thought could be of use to her. These qualities were combined with remarkable energy and a formidable intelligence’ (Campbell & Hall, 1968, p. 97). Her first patron was F.W.H. Myers of the Society for Psychical Research, and initially anonymously and subsequently as ‘Miss X’ she contributed papers to the Society’s Proceedings on topics such as crystal[-ball]-gazing and telepathy. In 1894 she took charge of the Society’s enquiry into ‘second sight’ in the Highlands, and for the next three years she visited the Hebrides to pursue this enquiry at the expense of the 3rd Marquess of Bute, a Vice President of the Society and another man who had fallen under her spell. This was an enterprise for which she had ‘no particular qualifications’ (Campbell & Hall, 1968, p. 91) and, in her lack of knowledge of Gaelic, one almost insuperable handicap. Despite her frequent optimistic reports to Lord Bute, her enquiries produced no results and no final report on the investigation ever appeared. In August 1898 she returned to Eriskay with her normal travelling companions, Miss Constance Moore (with whom she probably had a long-lasting affair) and her dog ‘Scamp’. A photograph of the party on Eriskay is reproduced by Campbell & Hall (1968, Plate 3). This is the only visit she is known to have made to the island in August, and therefore probably the occasion on which the plant list was drawn up.

In *Outer Isles* Freer does not mention the second sight enquiry, the reason for most of her visits to the Hebrides, for by the time of

its publication she had given up her psychical research. She fell out with Myers personally in 1897 (following his association with a certain Miss Chaston) and later that year she had been made the Society’s scapegoat for the criticism it received in *The Times* over its covert investigation of an allegedly haunted house at Ballechin near Dunkeld. She had maintained her credibility in these circles when claiming to have seen apparitions here and at Clandon Park, another controversial investigation into a haunted property, and in her earlier reports of the images seen in her crystal ball, the sounds detected by ‘shell-hearing’ and her claims to have received messages for the aged and ill Lady Isabel Burton from her late husband Sir Richard. However, she appears to have been detected acting fraudulently as a medium in 1901 and, although the incident was not publicised, it was reported that ‘one society after another, and one man after another, have thrown her off’ (Campbell & Hall, 1968, p. 211).

However, by then she had another career as a folklorist. In 1895 she had met Allan McDonald, the Catholic parish priest on Eriskay and a charismatic figure universally known as ‘Father Allan’. His holy orders did not protect him from Miss Freer’s charms and he made available to her his extensive collection of Gaelic lore. She drew extensively from this from 1897 onwards for lectures, for papers in *Folklore* and other journals and then for the book *Outer Isles*. There is no doubt that Fr Allan made the material available to her, and helped her with her lectures and articles, and that she in turn acknowledged his generous assistance. However, she concealed her ‘almost total dependence on [his] notebooks as the source of her information’ (Campbell & Hall, 1968, p. 234). I have only read one of her other publications, and had I not known better I would certainly have assumed that this article on Eriskay (Goodrich-Freer, 1901), which does not mention Fr Allan, was the result of her own research and reflected a detailed personal knowledge of the island. Such

works gained her a reputation as a folklorist which survived until her death in 1931 and led to a laudatory obituary in *Folk-lore* (Wright ‘1930’). There is evidence that Fr Allan was disappointed by the use she had made of his collection, but her methods were only exposed when Campbell (1958) managed to retrieve most of McDonald’s materials and compare them with Miss Freer’s published work.

There is a suggestion in Campbell & Hall’s book (p. 232) that Miss Freer was also indebted to her friends for her plant list from Eriskay. Commenting on her claim, in an article which preceded the *Outer Isles* book (Goodrich-Freer 1901), to have classified the flora of Eriskay, they comment ‘this Fr Allan and Miss Constance Moore had done’. Unfortunately no reference is given at this point in the text, but the remark is in a section of the book written by Campbell and is presumably derived from Fr Allan’s manuscripts, with which he was very familiar.

In 1901, before Miss Freer was discredited in her activities as a psychical researcher, she appears to have undergone a period of ill-health and depression, perhaps precipitated by Myers’ death in January that year. By August she had also parted from Miss Moore and the house they shared had been sold. In December, faced with the wreck of her life in England, she left for Jerusalem. In 1905 she married a German-American, Dr H.H. Spoer, who, like so many men, appears to have thought she was considerably younger than she was. After years spent at various places in the East, and a brief period back in England in 1909–11, they moved to America in 1923. As Mrs Spoer, she published numerous books and articles on the East before she died in New York in 1931. Her age on her death certificate was given as 56 rather than 73. Her later life has not been the subject of any detailed research but it is assumed that her reputation as a student of Arabic folklore rests on no very firm foundation.

Conclusion

Now that the background has been fully explored, what is to be made of the *Illecebrum* record? We know that Miss Freer had an interest in botany, as Campbell traced a lady who remembered hearing her lecture to the pupils of Heylipol school on the botany of Tiree (Campbell & Hall, 1968, pp. xiv & 86). Whether or not she or her friends drew up the Eriskay list is not particularly relevant, although one can see that errors would be more likely to be introduced into it if she relied on Miss Moore for help in compiling it but was unable to ask her to check the final version. The publishers may have played a part in dictating the format of the list, and there may have been difficulties in checking proofs once Miss Freer left for Jerusalem. It is possible that there was some confusion over English names, as Johns (1889, 1899) gives Knot-grass as his English name for the genus *Illecebrum*, Whorled Knot-grass for its only British species, *I. verticillatum* and Common Knot-grass for *Polygonum aviculare*. However, other authors (e.g. Plues 1892, Step 1895) use Knotgrass as the name for *Polygonum aviculare* so the potential for confusion with *Illecebrum* is obvious. Whatever the story behind the publication of the Eriskay list, it is all too obviously not the work of an experienced botanist, and in my opinion the record in it of a species as unexpected as *Illecebrum* should not be accepted. There is clearly no reason to suspect that any of the records were intentionally fraudulent – indeed, Miss Freer’s suggestion that only two of them were of special interest constitutes one of the strongest reasons for doubting some of the others. While we cannot rule out the possibility that *Illecebrum* was seen on Eriskay in the late 19th century, the evidence is surely too flimsy to be accepted. Curiously, none of the other doubtful records published in the list appear to have found their way into the mainstream botanical literature. I suspect that few authors have felt the need to look up the original ‘*Illecebrum*’ record, and perhaps those that have done so have ignored the other records which were published as English names.

References:

- BENTHAM, G. (1887). *Handbook of the British flora*, ed. 5, revised by Sir J. D. Hooker. L. Reeve & Co., London.
- CAMPBELL, J.L. (1958). The late Fr. Allan McDonald, Miss Goodrich Freer and Hebridean folklore. *Scottish Studies* 2: 175–188.
- CAMPBELL, J.L. (2004). Freer, Ada Goodrich (1857–1931), in MATTHEW, H. C. G. & HARRISON, B. (eds) *Oxford Dictionary of National Biography. Volume 20: Flattisbury-Freston*, p. 941. Oxford University Press, Oxford.
- CAMPBELL, J.L. & HALL, T.H. (1968). *Strange things*. Routledge & Kegan Paul, London.
- GOODRICH-FREER, A. (1901). Eriskay and Prince Charles: some unwritten memories of the '45. *Blackwood's Magazine* 169: 232–241.
- GOODRICH-FREER, A. (1902). *Outer Isles*. Archibald Constable & Co., Westminster.
- HALL, T.H. (1980). *The strange story of Ada Goodrich Freer*. Gerald Duckworth & Co., London.
- HESLOP HARRISON, J.W., ed. (1941c). A preliminary flora of the Outer Hebrides. *Proceedings of the University of Durham Philosophical Society* 10: 228–273.
- JOHNS, C.A. (1889). *Flowers of the field*, ed. 26. Society for Promoting Christian Knowledge, London.
- JOHNS, C.A. (1899). *Flowers of the field*, ed. 29, revised by G.S. Boulger. Society for Promoting Christian Knowledge, London.
- PANKHURST, R.J. & MULLIN, J.M. (1991). *Flora of the Outer Hebrides*. Natural History Museum Publications, London.
- PEARMAN, D.A. (2008). The status of coral-necklace *Illecebrum verticillatum* L. (Caryophyllaceae) in Great Britain. *Watsonia* 27: 141–146.
- PLUES, M. (1892). *Rambles in search of wild flowers*, ed. 4. George Bell & Sons, London.
- PRESTON, C.D., PEARMAN, D.A. & DINES, T.D. (2002). *New atlas of the British & Irish flora*. Oxford University Press, Oxford.
- STEP, E. (1895). *Wayside and woodland blossoms*. Frederick Warne & Co., London.
- WHITTINGTON, G. & EDWARDS, K.J. (2000). *Illecebrum verticillatum* L. in the Outer Hebrides. *Botanical Journal of Scotland* 52: 101–104.
- WRIGHT, A.R. ('1930'). In Memoriam: [Mrs.] Adela Monica Goodrich-Freer Sporer, (1870–1931). *Folk-lore* 91: 299–301. [On the Contents page of this volume all four parts of this volume were dated on the last day of the relevant quarter, this obituary being in that dated 30 September 1930, but this must have concealed a delay in publication. The Cambridge University Library copy of the volume is date-stamped 13 January 1932.]

Illecebrum in *Flora Nordica*

DAVID PEARMAN, *Algiers, Feock, Truro, Cornwall TR3 6RA*

Not long after the latest *Watsonia* arrived Kevin Walker drew my attention to the account of this species in *Flora Nordica*, vol 2. It is so helpful, that I am quoting it below.

Habitat. Bare, damp, slightly humus-enriched, nutrient-poor sand. Margins of pools that dry out in summer, damp grazed grassland, gravel-pits, ditches, sandy arable fields, forest roads. Very sensitive to eutrophication and drainage. A plant of early successional stages; usually erratic.

Biology. The seeds can probably survive a long time in the ground. The number of individuals in a given locality fluctuates much from year to year.

The distribution account gives, as here, a number of sites on forest roads and on ballast.

Reference:

- PEARMAN, D.A. (2008). The status of Coral-necklace *Illecebrum verticillatum* L. (Caryophyllaceae) in Great Britain. *Watsonia* 27: 143–148.

Extreme crab apples and badgers in Savernake Forest

JACK E. OLIVER, *High View, Rhyls Lane, Lockeridge, Marlborough, Wilts., SN8 4ED*

The crab apple tree (*Malus sylvestris*) is ‘much over-recorded for *M. domestica*... intermediates are frequent and may be hybrids’ (Stace, 1997). Whilst I was looking at some ancient crab apple trees in Savernake Forest, two separate members of the public made observations like ‘you’ll only find cherry-sized apples from trees around here’. The oldest trees (Colour Section, Plate2, (1)) had girths (at 5ft) of 170, 250 and 280cm (the last, 360cm at 3ft). For some, standardised trunk measurements were almost impossible, on account of intense thorniness (always), or forking (sometimes). Photos 1-3 (Colour Section, Plate2) were from different trees. The ancient bole of the tree in photo 1 had lost most of its thorns below 3ft, but nos. 2 and 3 were armed throughout. These and others of varying ages were always thorny, some impenetrably so, with small, glabrous and often rounded leaves. The thorniness was of two types, albeit with intermediates. Some fast-growing cauline shoots had hard, straight, simple 0.5–5cm spines, which penetrate clothing and skin (photo 3). More common were brittle compound twigs with branched spines, sometimes dead, or the twigs sometimes carrying a few leaves, forming a defensive zarea around the branches (photo 2). Detached fragments could also hurt when lodged inside one’s collar.

Fruits and seeds

The late October crab apples shown in photo 4 (Colour Section, Plate2), were collected from the ground, but with a bias in favour of the larger, more obvious specimens. This made the average diameter of 2.5cm not much inferior to the dimensions given in Stace (1997). The average weight of 7gm should be compared with the 300gm for a reasonable sized cooking apple. These crab apples were mid-green, not yellow-green, giving the appearance of unripeness, but the pips were always plump and dark brown. Eventually the crab apples go patchily coffee-brown, never red or yellow, even in unshaded areas. Even by November, these hard, unappetising fruits are unforgivably acidic, drying any saliva flow.

I did gather a few of the cherry and pea-sized apples to dissect, expecting them to be infertile, but even these contained one or two plump seeds. Overall, the range was (1)2 – 8(9) plump pips per fruit, with far fewer duds than occur in most *M. domestica* (or *M. domestica* × *M. sylvestris*) apples. Consequently, the (poisonous) pip to pulp ratio in these crab apples is very much higher than found in other apples. Assuming five plump pips per crab apple, and four plump pips per cooking apple, a mammal ingesting (totally) equivalent weights of each fruit would, for the crab apple diet, take in more than 50 times the poisonous amygdalin in comparison with the cooker diet.

Mammalian, especially badger influences

Cores of *M. domestica* discarded by humans have resulted in pockets of trees with intermediate fruits springing up in and around a few areas of the Forest, especially in one locality just south of the A4 road, and alongside the abandoned railway. All apple pips are rich in the cyanogenic glycoside amygdalin, which releases HCN (the deadly hydrocyanic or prussic acid favoured in detective stories). Mammalian digestive detoxification mechanisms usually cope with small quantities of amygdalin (Frohne & Pfänder, 1984), but human health fanatics and men who attribute aphrodisiac qualities to apple pips have been killed after taking a cupful of accumulated seeds. In October and November, grey squirrels, mice and voles eat apple flesh, but tend to leave the pips to the birds. Horses can gorge on apples, and can make themselves very ill. None of these mammals, not even muntjac, seem to go for the little hard, green crab apples, at least in the autumn months. My Labradors (photo 1), with powerful digestive systems, certainly ingest and digest windfalls, but pass pips only when they have eaten very many (or fermented) apples. They also are uncharacteristically unenthusiastic about the crab apples shown in photo 4.

Two mature crab apple trees were next to active badger setts. Around these (mid-October) there were no apples on the ground, just a

small number caught in the thorny zerebas of the lower branches, or impaled on thorns. Badgers are known to devour crab apples in quantity in the autumn, and to pass the pips. By not crunching (too many) pips, badgers may avoid too great a release of HCN from the relatively very high amygdalin-to-pulp ratios. Alternatively, like the Labradors, following the rise in intestinal poisons, increased peristalsis speeds the passage and voiding of further undigested pips. Either way, fertilised seed is spread abroad.

Summary

Many or most familiar ‘crab apple trees’ may contain *Malus domestica* genes. Excessively thorny trees in and around Savernake Forest could be true ancestral *Malus sylvestris* (Crab

Apple). The small, hard, green, hyperacidic apples are surprisingly rich in plump, fertile pips. Badgers would seem to be a main agent of seed-dispersal, via fruits unfavoured by other mammals in autumn.

Acknowledgements:

My thanks to Malcolm Clark (Wilts County Recorder for badgers) and to Katy J. Cena.

References:

- FROHNE, D. & PFÄNDER, H.J. (1984). *Poisonous plants*. Wolfe Science Books, Stuttgart and London.
- STACE, C.A. (1997). *New flora of the British Isles*. 2nd ed. Cambridge University Press, Cambridge.

Cattle and trees

CHRISTOPHER J. LOWE, 25 North End, Hutton Rudby, Yarm, TS15 0DG

The spate of items concerning the use of tree-foliage by cattle (*BSBI News*, 108 & 109) can be augmented, albeit with reference to a different species and times long ago. Pollen records point to a large reduction in elms (*Ulmus* spp.) about 5000 years BP. This was a widespread phenomenon across north-western Europe. At first, the conventional explanation for this so-called ‘Elm Decline’ rested on climatic factors, but this was never wholly satisfactory, partly because, in Britain, compared to Scandinavia, other vegetational responses were not as clearly indicative of a general cooling as would be expected.

Half-a-century ago, an alternative hypothesis was put forward. Neolithic peoples moving into north-western Europe encountered very few open grassy spaces for their animals. These early pastoralists therefore lopped branches off trees to provide foliage as fodder. Elm was evidently the preferred choice. This process, recurrently over years, necessarily removed flowering parts as well as leaves, such that the pollen-counts from elm-trees dramatically dropped. Thus, it seemed that the elm-population had suffered a major reduction, but this was not strictly the case.

This anthropogenic causation for the ‘Elm Decline’ may not be the complete answer, and

I have to add, in cautionary fashion, that my information stems from post-graduate studies nearly 30 years ago. Science may have again moved on in the interim. BSBI readers will no doubt put me right. However, the book I checked (Pennington, 1974) adduces two pieces of supportive circumstance: the use of elm for fodder is still practised – a point made in previous notes to BSBI; and the fall in elm-pollen is matched by a marked increase in pollen from ‘cultural weeds’ such as *Plantago lanceolata* (Ribwort Plantain) and *Urtica dioica* (Common Nettle), suggestive of a fundamental change in land-use.

Why did the *Fraxinus excelsior* (Ash) population not suffer similarly? It would seem that it is as nutritious as elm, and favoured by stock these days, so the question is justified. Pennington’s comment is that ‘... before the elm decline, ash seems to have been rare’. Ash, being light-demanding, probably benefited from the lesser canopy and open spaces resulting from prehistoric settlement and farming.

Reference:

- PENNINGTON, W. (1974). *The History of British Vegetation*. 2nd edn. Hodder & Stoughton, London.

The ‘County Records’ scheme of the Wild Flower Society

MICHAEL BRAITHWAITE, *Clarilaw, Hawick, TD9 8PT*

In November 2008 a package dropped through my letterbox which I was amazed to find contained a faded booklet entitled the *Berwickshire County Botanical Record*. This proved to contain a list of plants found in Berwickshire over the period from 1920 to 1957 annotated with dates and localities but not with the finders’ names or the author of the *Record*. The localities of many of the scarcer plants were familiar to me, but by no means all. This article relates what I have been able to learn about the circumstances in which such *County Records* were compiled.

The booklet had been sent to me as BSBI Recorder for Berwickshire v.c.81 by CEH Monks Wood just before their move to Wallingford near Oxford. While preparing for the move a number of copies of the green *Field Botanist’s Diary* used by the Wild Flower Society came to light and the Berwickshire booklet was one of these.

Such a *Diary* was designed to be used to record all the species found by a member in a particular year and was pre-printed with a list of species. At the end of the year the diaries were sent in to branch secretaries who marked them, counting the number of acceptable species recorded. So the *Berwickshire County Botanical Record* is something different from the norm. It is a master copy of first records for the county. The magazine of the WFS tells the story. In 1930 a scheme for County Collections, started in 1924 by five members, was regularised into County Records with a statement that ‘We are trying to have a County Recorder in each County, so that when members find a rare flower, they can always refer to the Recorder, who will tell them if it has been found in the county before, and if not, have it properly identified and added to the county list’. Eventually 42 counties took up the challenge with Mrs E.K. Swinton volunteering for Berwickshire

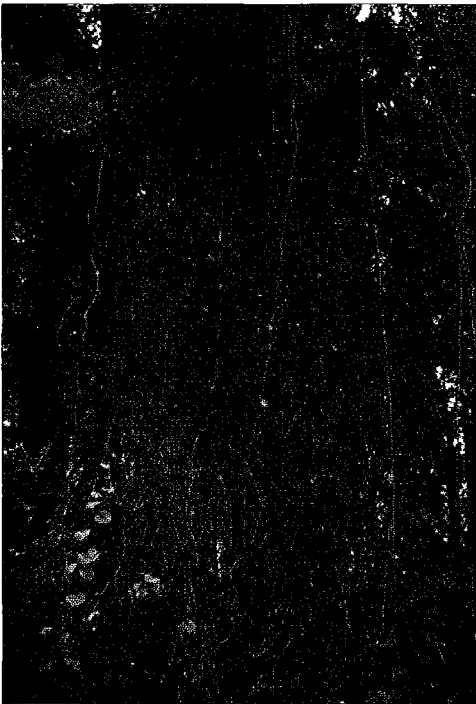
in 1949 and soon after for Northumberland as well. The counties covered were mainly in England and Wales but there were also a few in Scotland and Ireland.

The scheme was wound up in 1959 when the WFS *Diaries* were reprinted using Dandy’s *List* rather than Bentham and Hooker, as it would have been necessary to rewrite all the records and reassess them in relation to the current taxonomy. A statement records that ‘now the general wish is in fact of giving them up. Scientifically they are of little value, but they are most interesting, and where recorders would like to keep them and add to them they can do so. The rest Miss Kit Rob has kindly said she will keep for the time being and if anyone visiting a county wants to borrow the old records they can do so’. In fact it was Miss E. Joan Gibbons in Lincolnshire who collected together about seventeen of the county *Diaries* to lend out: the others were kept by their compilers who lent them to people writing county floras. It seems that Miss Gibbons soon passed them to Monks Wood. There is no reference to the BSBI *Atlas* project or to the increasingly comprehensive BSBI Vice-county Recorder network, but there is a tacit acceptance that the WFS ethos with its emphasis on the pleasures of botany and the company of similar-minded enthusiasts to the exclusion of any planned programme of field study was unsuited to the business of *County Records*.

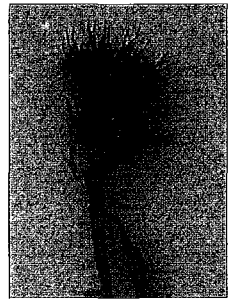
That then is the story of the making of the *County Records* as far as I can make it out. So what of their botanical value? Some found their way to Monks Wood where Dr Franklyn Perring was coordinating the BSBI *Atlas* project. Here some use may have been made of them. Although the localities in the *County Records* have no associated National Grid References it would not have been too much work to have matched most of the



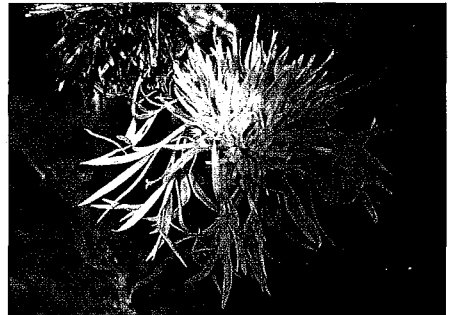
White *Centaurea nigra*, Herefordshire. Photos J. Wynne Jones © 2003 (see p. 24)



Rubia peregrina scrambling over Norway Spruce in Thurlbear Wood (v.c.5).
Photo S.J. Leach © 2008 (see p. 26)



Flowers of plants grown from seed of white-flowered *Centaurea nigra*. Photos J. Wynne Jones © 2005 (see p. 24)



White-flowered *Centaurea scabiosa*, Gloucestershire. Photo J. Wynne Jones © 2005 (see p. 24)



1. Ancient *Malus sylvestris* tree base

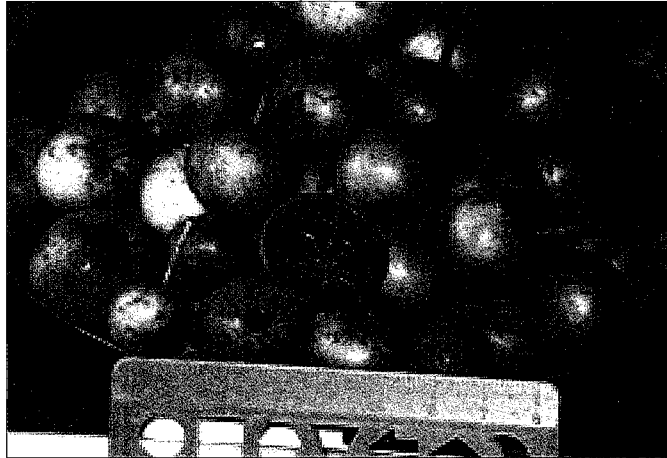


2. *Malus sylvestris*; impenetrably dense thorniness

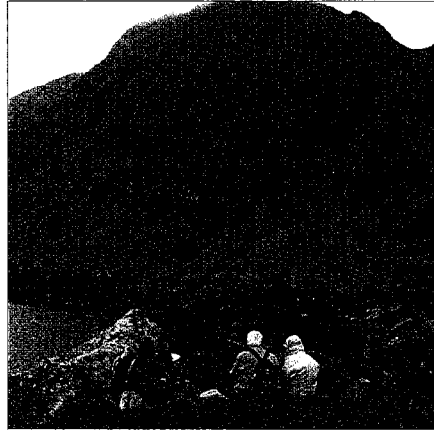


3. *Malus sylvestris*; ferocious thorns on trunk

All *Malus* photos from Savernake Forest, Wilts. J.E. Oliver © 2008 (see p. 36)



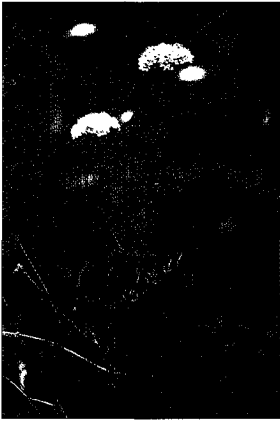
4. Very small ripe, but very acid crabapples (blue ruler only 8.5cm long)



Lunch above Llyn Lliwbran, Arans (v.c.48).
Photo M. Rand © 2008 (see p. 52)



Viola lutea on the Arans (v.c.48).
Photo J. Crellin © 2008 (see p. 52)



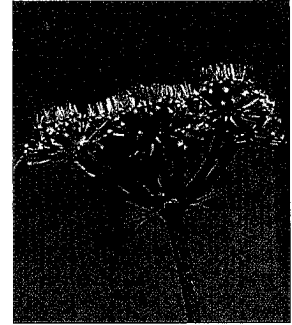
1. Single plant with upper leaves. Photo T.F. Marshall © 1999



2. Typical dense colony. Photo V. Deradour © 2008



3. With Common Knapweed. Photo: T.F. Marshall © 1999



4. Showing fruiting umbel with thickened pedicels
Photo: T.F. Marshall © 1999

All Photos *Oenanthe pimpinelloides* at Collings Hanger Farm, Prestwood (v.c.24) (see p. 12)



Medicago minima.
Photo F.J. Rumsey



Medicago polymorpha
Photo H.J. Crouch



Polypogon monspeliensis
Photo H.J. Crouch

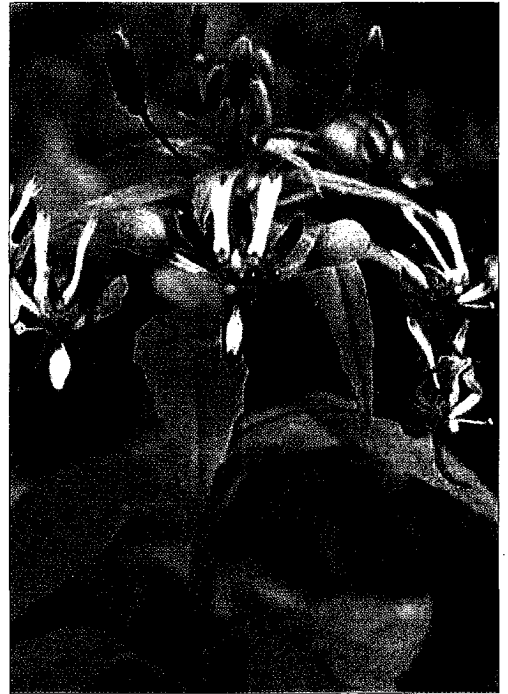


Lotus subbiflorus
Photo H.J. Crouch

All photos taken at Glastonbury (v.c.6) © 2008 (see p. 45)



Monitoring *Rumex rupestris*, Soar Mill Cove, Devon. Photo S.J. Leach, © 2008 (see p. 27)



Lopezia coronata on bank outside Forest Stores, Guernsey. Photos T. Wills © 2007 (see p. 48)

records to 10km grid squares with a map and then ticked them of on the master 10km grid squares lists kept for the project. Certainly the Berwickshire *County Record* enables a few extra *Atlas* ‘dots’ to be localised, but other entries in the *County Record* did not find their way to the *Atlas*, so any such use must have been limited.

I have now studied the Berwickshire *County Record* in detail and have come up with something of a treasure trove of ‘new’ records. These include interesting late records for species now extinct or nearly so, such as *Centaurea cyanus* (Cornflower) and *Lithospermum officinale* (Common Gromwell), and a couple of new v.c. records, *Salvia verbenaca* (Wild Clary) and *Suaeda maritima* (Annual Sea-blite). Mrs Swinton seems to have taken little trouble to collect records from other WFS members as even some of her sister’s finds are missing, but David Pearman tells me that the Dorset *County Record* is annotated with finders’ initials, so practice seems to have varied across the country.

Encouraged by what I discovered in researching the *County Record*, I have now

studied WFS *Diaries* and other notes passed to me over the years relating to two other WFS members in Berwickshire. They too have yielded records of value.

I hope that my experience may encourage others to pursue similar lines of enquiry.

Acknowledgements:

Thanks are due to Peter Brown and Dr Chris Preston at CEH Monks Wood for salvaging the manuscript of the *County Record*, to John Swindells, Chairman of the Wild Flower Society, and to the library of the Royal Botanic Garden Edinburgh for help in researching the history of the WFS.

References:

- BENTHAM, G., revised by HOOKER, SIR J.D., 1908, *Handbook of the British Flora*, 6th edition. Lovell Reeve & Co Ltd, London.
- DANDY, J.E., 1958. *List of British Vascular Plants*. British Museum (Natural History) and the Botanical Society of the British Isles, London.
- PERRING, F.H. & WALTERS, S.M., eds. 1962. *Atlas of the British flora*, Thomas Nelson & Sons Ltd., for the Botanical Society of the British Isles, London.

To the disappointed botanist

KEITH SPURGIN, 4 Carclew Terrace, Truro, Cornwall, TR1 2EF; silene@talktalk.com

If the poor weather of 2008 cast a pall over your fieldwork at least you didn’t have to face problems like those of plant collectors in the ‘Wild West’. One report is headed by this (under)statement:

‘The following plants were collected by Prof. Donaldson while connected with Gen. Custer’s expedition to the Black Hills during the season of 1874. The collection was necessarily very hasty...’¹

One theory is that Donaldson was really there as a journalist and another that he was

part of a scientific team searching for gold. Its discovery sparked the Black Hills war, in which Custer so memorably met his end, the year after Donaldson’s brief list was published. If you have no field records of your own to write up this winter, you could order a copy of: Donaldson, A.B. The Black Hills Expedition. *South Dakota Historical Collections* 7 (1914): 554–580.

¹ *The botanical bulletin*. 1(1): 4 (Nov. 1875).

BOTANY IN LITERATURE—49

Plantain and Scabious à la Ruskin – morphological affinities

MARGOT É. SOUCHIER, 26A Dryden Avenue, London, W7 1ES

‘We never see anything clearly’, maintained John Ruskin (1819-1900), about whom I have written previously, in *BSBI News* **100**: 29–30 (2005); **107**: 29–30 (2008), and who therefore needs no introduction. What appears distinct at first sight means that one is only seeing enough of it to make out what it is. When one attempts to analyse it, such as the ground beneath one’s feet, it becomes, as is the case with the ground, so many numberless grains of dust, and thus ‘full of confusion and doubtful form’.

The following extract is from Ruskin’s *Modern Painters* (Vol. IV, Part V, Ch. iv, §4-6) (*apud* his *Selected Writings*, pp. 172–4)) and echoes the above point inasmuch as what is observed at close distance is seen clearly, or at least until one wants further and more precise details.

The other day, as I was lying down to rest on the side of the hill around which the Rhone sweeps in its main angle, opposite Martigny, and looking carefully across the valley to the ridge of the hill which lies above Martigny itself, then distant about four miles, a plantain¹ seed-vessel about an inch long, and a withered head of a scabious² half an inch broad, happened to be seen rising up, out of the grass near me, across the outline of the distant hill, so as seemingly to set themselves closely beside the large pines and chestnuts which fringed that distant ridge. The plantain was eight yards from me, and the scabious seven; and to my sight, at these distances, the plantain and the far-away pines were equally clear (it being a clear day, and the sun stooping to the west). The pines, four miles off, showed their branches, but I could not count them: and two or three young and old Spanish chestnuts beside them showed their broken masses distinctly; but I could not count those masses, only I knew the trees to be chestnuts by their general look. The plantain and scabious in like manner I knew to be plantain and scabious by

their general look. I saw the plantain seed-vessel to be, somehow rough,³ and that there were two little projections at the bottom of the scabious head which I knew to mean the leaves of the calyx;⁴ but I could no more count distinctly the seeds of the plantain, or the group of leaves forming the calyx of the scabious, than I could count the branches of the far-away pines.

Notes

1. *plantain*: this is probably *Plantago lanceolata* (Ribwort Plantain, Ribgrass), which grows in grassy and waste places and is one of the commonest European plants. It belongs to the dicotyledonous Plantaginaceae (Plantain Family) (Order Plantaginales, Subclass Asteridae (Cronquist 1981); CF. Order Lamiales, Euasterids I (Lamids) (*s.r.*) (APG II *apud* Heywood *et al.*). A low to medium height perennial, it is usually hairless or downy, has simple lanceolate leaves which are slightly dentate and strongly and parallel-veined or ribbed. They occur, as they do in most members of the family, in a basal rosette, from the centre of which arises the leafless furrowed or striated flowering stalks surmounted by brown, four-petalled flowers in short blackish spikes with pale yellow anthers protruding from about half way up the spike.

There are several well-known members in the genus, including the species most commonly found in gardens and waste places, *Plantago major* (Greater Plantain), also called Rat’s-tail, especially in the antipodes.

The name *Plantago* is derived from the Latin *planta* for sole of the foot, alluding to the broad flat leaves of *P. major*, which are pressed to the ground. Thus it can be aligned with Latin *planus*, meaning flat as found in planarian, a flatworm of the Class Turbellaria in the Phylum Platyhelminthes (Flat-worms). The word plantain is also used for the fruit of *Musa ×paradisica* of the monocotyledonous family

Musaceae (Order Zingiberales, Subclass Zingiberidae; cf. Order Zingiberales, Commelinids (*s.r.*) (APG II apud Heywood et al.)), as used in Caribbean cuisine. It is also found as a vernacular name in the Plantain Lily (genus *Hosta*), Wild Plantain (genus *Heliconia*), and in Water Plantain (*Alisma plantago-aquatica*), where the epithet *plantago* refers to its ribbed leaves; like *Musa*, it is a monocot. *Plantago lanceolata* (and *P. major*) has been used medicinally as a styptic (*i.e.* to stop bleeding), the leaves being first chewed in the mouth and the resulting pulp applied to the wound.

2. *scabious*: the plant most commonly referred to as Scabious in Europe is *Scabiosa atropurpurea* (Pincushion Flower, Sweet Scabious, Mournful Widow, Egyptian Rose), but this is usually grown as an ornamental and, unlike *Knautia arvensis*, (Field Scabious), is not necessarily found in dry grassy places, unless perhaps as an escape. It is introduced in this country.

It must be remembered that Ruskin is looking at a withered flower head, which, at 'half an inch' or 1 cm or 10 mm broad, would probably be considerably less in dimension than a fresh one. The flower head of *S. atropurpurea* is 50 mm (2 inches) in diameter, that of *S. columbaria* (Small Scabious), which grows in dry grassland in southern Europe (and in the British Isles) is 15–25 mm (c. 3/4–1 inch) wide, while the bluish-lilac flowered *Knautia arvensis* is 30–40 mm (c. 1 1/4–1 3/4 inches). Apart from *S. atropurpurea* and *S. columbaria*, there are four other species of scabious found in Europe: *S. caucasica* (Caucasus), *S. graminifolia* (southern), *S. lucida* (central), and *S. ochroleuca* (also in west Asia).

The genus name *Scabiosa* is derived from the Latin *scabies*, meaning the itch, or even more prosaically 'the scab' or 'the mange', and refers to the use of the plant to cure skin complaints.

As a genus, *Scabiosa* belongs to the same family as *Dipsacus fullonum* (Teasel), the Dipsacaceae (Teasel Family), Order Dipsacales (In the same order in the Angiosperm Phylogeny Group II (APG II)

classification, but under the Wuasterids II (Campanulids)), interestingly enough of the same Subclass Asteridae as *Plantago*, which is allied to the Scrophulariaceae (Displaced from the Scrophulariales of Cronquist (the order being dropped), and re-assigned, like the Plantaginaceae, to the Lamiales, where only two families separate them), of which *Digitalis purpurea* (Foxglove), which has rough leaves, is a member.

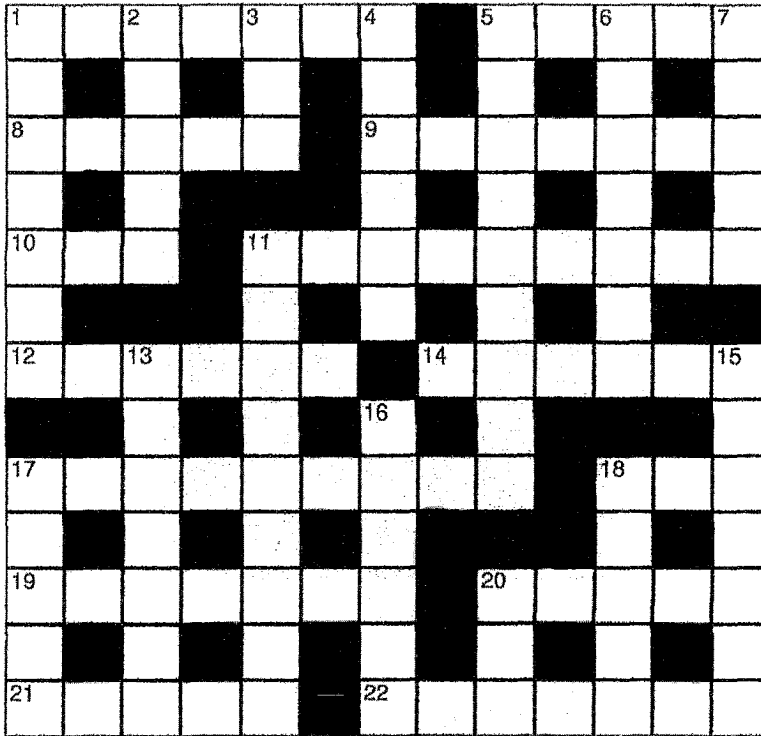
3. *rough*: *Plantago* and *Scabiosa* are allied to each other *pro parte* by their roughness. The word *scabies*, by transference, can also mean either 'somewhat rough' (*scabridus*), 'rough' (*scabrosus*), or 'rough, gritty' (*scabrus*), while *scabrifolius* means 'with rough leaves'.
4. *two little projections ... the leaves of the calyx*: because Ruskin is only looking at one side of the scabious, he does not see clearly the projections on the other side, and thus the whole epicalyx extension which acts as an umbrella in the wind-dispersal of the plant.

References:

- BARNARD, L., DOGGETT, D., DOIG, F., & ETHERINGTON, K. (eds.) (2003). *Flora's Plant Names*. Timber Press, Portland, Oregon.
- COOMBES, A.J. (1992). *The Hamlyn guide to Plant Names*. Hamlyn, London.
- FITTER, R., FITTER, A., & BLAMEY, M. (1996). *Collins Pocket Guide to Wild Flowers of Britain and Northern Europe*. 5th ed. HarperCollins Publishers, London.
- GRIFFITHS, M. (ed.) (1994). *The New Royal Horticultural Society Dictionary: Index of Garden Plants*. MacMillan, London.
- HEYWOOD, V.H., BRUMMITT, R.K., CULHAM, A & SEBERG, O. (2007). *Flowering Plant Families of the World*. (2nd ed.). Kew Publishing, Richmond, Surrey.
- HYAM, R. & PANKHURST, R. (1995). *Plants and their Names: a Concise Dictionary*. Oxford University Press, Oxford.
- MABBERLEY, D.J. (1987; reprint: 1989). *The Plant-book*. Cambridge University Press, Cambridge.
- RUSKIN, J. (1964). *Selected Writings*. (ed. Clarke, K.). Penguin Books, London.
- VICKERY, R. (1995). *A Dictionary of Plant-lore*. Oxford University Press, Oxford.

Botanical crossword 12

by CRUCIADA



Across

1. Botanist on hands and knees in Virginia? (7)
5. Discipline outside the lab (5)
8. Ms Scott and German interpret discoid (5)
9. Harkness woman puts a stop to part of speech concerning scented plant (7)
10. E.g. gorse: furze, whin (3)
11. American car dealer whose name, we hear, is mud! (9)
12. In winter, eternally smooth (6)
14. Good French is written back, introducing a dwarf tree (6)
17. See in Defra the heartless end to blooming (9)
18. The lily-white holly and mistletoe, some say (3)
19. Aftermath of mist covering Mr Green's plum (7)
20. Go and see wandering grape-vine (5)
21. Size of this modified leaf? Very small (5)
22. Started getting muddled in recording areas (7)

Down

1. Dog to raise hell? Yes, raisin' it (7)
2. Queen gives University College a rocket! (5)
3. Point of delivery for legume seeds? (3)
4. Minister has power to order an overhaul (6)
5. Game warning to support thrifty environment, perhaps (9)
6. Short sword added to minor's night of the long knives (1,6)
7. Doctor - a graduate - may be white and low, but certainly not a grass (5)
11. Trial lot 'E' is replanted above 5 down (9)
13. If soundly you rage, could rebuild places left high and dry (7)
15. I find setback to wartime sabotage may be good for pen-pushers (7)
16. Open practical copyright (6)
17. Science fiction craze makes a comeback with golden trumpets (5)
18. Examine a seed coat (5)
20. Check soundness of Vicia that's been cut down (3)

ALIENS

Another speedwell is escaping: *Veronica umbrosa* Bieb.

ERIC J. CLEMENT, 54 Anglesey Road, Gosport, Hampshire, PO12 2EQ

In early spring, and then sporadically through the summer and into September, a brilliant splash of blue colour covering a low, creeping plant can be seen in many gardens in the UK. It is a fine speedwell that was collected in N.W. Georgia (Abkhazia) in August 1979 by the well-known plantsman, Roy Lancaster. All (surviving) material appears to constitute a single clone. Roy describes (and illustrates) it in the Royal Horticultural Society's *The Garden* (116: 646–647 (1991)) as *Veronica peduncularis* 'Georgia Blue'. This name is now in widespread use, as no one has queried the taxonomy until recently, when Dick Albach discovered an 'error' whilst working with live plants on his PhD thesis (on the genus *Veronica*): two distinct Caucasian species are clearly 'lumped' under this one name. See the R.H.S. *The Plantsman*, n.s. 5: 165–167 (2006) for full details, including coloured photographs of the two segregates. The 'true' *V. peduncularis* Bieb. scarcely seems worthy of cultivation.

Briefly, *V. umbrosa* has flowers bright blue, with a white eye (*vs.* white to pinkish in *V. peduncularis*), pedicel 2–3× longer than the calyx (*vs.* 4–5×) and leaves oblong to obovate (*vs.* broadly ovate). The colour difference is not obvious on old herbarium sheets at K, etc.

Both species are similar to our native *V. chamaedrys* (Germander Speedwell) and would key out there in Stace's *New Flora* ed. 2 (1997). They differ in having very long pedicels (flower stalks) of at least 1cm (*vs.* 4–8mm in *V. chamaedrys*). Vegetatively, all three are remarkably similar, but *V. umbrosa*, uniquely, usually has the stems and leaves partly suffused with a bronze colour. All spread by underground rhizomes and can form very large, loose mats of quite wiry stems.

V. umbrosa occurs as a native from Crimea to Georgia, hence the description in *Flora*

Europaea, 3: 247 (1972), where it is treated as '*V. peduncularis* (incl. *V. umbrosa*)'. True *V. peduncularis* is restricted to E. Anatolia and Caucasia – see *Flora of Turkey*, 6: 751–752 (1978).

So far, I have heard of only two short flights for freedom in Britain (both confirmed E.J.C.):

V.c.11 (Dorset). Highcliffe, 29 April 2008.

David Leadbetter; 'growing in some profusion by fence adjoining garden, at SZ200937.'

V.c.12 (N. Hants). Crawley, near Winchester, 5 March 2008. Dr Mike Shaw; 'covering 1–2 square metres, in copse adjacent to St Mary's Church, at ST42453484.' Probably a garden relict, with other hortals, including *Cyclamen coum* and *Anemone blanda*. Conf.: A.C. Mundell (see photo, Back Cover).

There is much doubt as to whether the cultivar name should be upheld. It probably represents merely the normal wild plant. I propose that we should ignore the *cv.*, and coin an English vernacular name that reminds us of its history: 'Georgia-blue Speedwell' sounds apt to me.

In (and out of) cultivation this single-clone (?) plant is clearly fully self-sterile. No capsules are set. The same is true of *V. filiformis* (Slender Speedwell), but this is no obstacle to its spreading, so long as Man continues to cart fragments around the environment. (Please note that *V. chamaedrys* is also self-sterile, and many large colonies produce no fruits at all; do not suspect a hybrid!)

No threat to our native flora is envisaged from this gay newcomer – but an alert eye should be maintained on every ergasiophyte. Enjoy the spreading blue sea next April...

Continental brambles used for luring birds to a Hampshire reservoir

DAVID ALLEN, *Lesney Cottage, Middle Road, Winchester, Hampshire, SO22 5EJ*

In July 2003, a first-ever walk down the lower part of the Test Valley in South Hampshire (v.c.11) brought me out at the larger of the two Testwood Lakes, a smallish body of water created since the Second World War by flooding some low-lying fields to serve as a reservoir. To my surprise and perplexity, among the shrubs and, as-yet, small trees bordering the lake was a profusion of several kinds of brambles that, after thirty years of combing the county for *Rubus* species, I could not recall having encountered previously, or indeed anywhere else in the British Isles that I had visited. That season happened to be an exceptionally advanced one, and most of the bramble bushes had already passed completely into fruit, so returning the next year at an earlier date was an obvious priority.

In the event, it was only after two further, more extended visits that it dawned on me that, in addition to a developing fringe of native vegetation, an outer ring of berry-bearing 'wild' plants, most conspicuously *Viburnum opulus* (Guelder-rose), but also a seemingly innocuous assemblage of such other familiar countryside shrubs as roses and brambles had been planted deliberately, with the aim of increasing and diversifying the avifauna. Although the lake is now managed by the county wildlife trust, it has transpired that it was its predecessor in that capacity, the regional water board, that must have been responsible for this clearly well-intentioned initiative. Unfortunately, the water board has not retained records of purchases made in that connection, so the provenance of the plants concerned has to be a matter of guesswork. On the evidence of the brambles, that seems most likely to have been a nursery or nurseries somewhere in the Low Countries (from where Northern Ireland is known to have been supplied in recent years with many of its hawthorns for hedging, so Paul Hackney informs me). Lending support to that idea is the presence beside the lake of *Rubus campaniensis*, a bramble known in Britain

from just a handful of commons in the extreme south-east of England, but one very widespread in western Belgium and adjacent parts of the Netherlands. Two of the other bramble constituents of this apparent commercial 'reservoir mix' have, however, proved to be species with more distant ranges: *R. bifrons*, found right across the central belt of Europe from the Netherlands to Hungary; and *R. constrictus* var. *roseiflorus* (the particular form of this wide-European species), allegedly confined to Bavaria and Austria. A third species, tentatively identified as *R. stercanθος*, has a disjunct distribution that includes both Belgium and the Netherlands, but extends over a wide part of the west of the Continent. None of these has won an accepted place on the British Isles' *Rubus* list up till now, even as an escape from cultivation.

Unfortunately the alien brambles are all fruiting copiously in the Testwood site, and it must be only a matter of time before they are disseminated by birds into other habitats in the vicinity, and possibly much more widely. In view of that, it is particularly regrettable that another of the species chosen for planting round the lake is an apparent British Isles endemic that could very well occur in Hampshire as a native – for its extensive range in that putative status comes as close to the county as the middle of Dorset (v.c.9), its immediate neighbour to the west. This is *R. bartonii*. Some years ago its comparatively heavy early fruiting led it to be taken into cultivation from the wild (presumably in the West Country or Wales) and offered widely commercially under the name 'Ashton Cross', with the result that it is now spilling out of gardens into natural habitats on a scale sufficient in some places to render the task of establishing its native distribution increasingly unfeasible.

Until now, *R. bartonii* has been the only instance of status ambiguity with which *Rubus* specialists have been confronted in these islands. The profusion and diversity of our

native bramble flora, amply provided with vigorous and ultra-rapid colonising species, hardly leads one to expect amenity planters to go to the trouble and expense of importing additions. In so far as there is an alien element in our *Rubus* flora already, that has consisted solely of obvious escapes of well-known cultivated species. But that this element is now being supplemented with species whose native

ranges extend, in some cases, up to just the other side of the English Channel, species therefore which are presumably all too capable of flourishing in the wild over here as well, is a worrying new development. The study of our critical groups is difficult enough as it is without such a recklessly added complication to have to cope with on top.

Diverse routes to Glastonbury

HELENA J. CROUCH, *Bronwen, Farrington Road, Paulton, Bristol, BS39 7LP*

The periodic mass influx of assorted aliens to Glastonbury is not a modern phenomenon. There has been a wool industry and tannery in Glastonbury since mediaeval times and botanists have roamed the associated wool tip before. A list of species seen in the 1970s is given by Clement (1979), who noted that by 1979 the alien interest of this site had diminished because of changes in the treatment of hides and because by then only English fleeces were used at Glastonbury. In the 1980s, the vast Morlands sheepskin factory closed down, standing derelict and forlorn for some years, but in 2003 the whole area was levelled in preparation for the construction of Morlands Enterprise Park. Roads have been laid out but no buildings have sprung up yet – only weeds.

Driving past the site one day, my passenger pointed out *Polypogon monspeliensis* (Annual Beard-grass), so of course we stopped. In a brief visit, under the watchful eye of a security guard, we soon found *Medicago polymorpha* (Toothed Medick) and *Medicago minima* (Bur Medick) too, and realised that this site was worthy of a return visit (see Colour Section, Plate 3). *Polypogon monspeliensis* and *Medicago polymorpha* have both been recorded here before, but *Medicago minima* was formally considered extinct in the county, having last been seen in Somerset in 1977, at Wookey (Green, Green and Crouch, 1997). All three species feature in the Somerset Rare Plant Register.

Two return visits have been made and 217 species have now been recorded on the site,

with aliens clearly having arrived by a variety of routes. *Medicago minima*, *Medicago polymorpha* and *Polypogon monspeliensis* are all recognised wool aliens (Salisbury, 1964). A number of other wool aliens are present too. *Echinochloa crus-galli* (Cockspur) is increasingly found along roadsides now, but was listed by Salisbury as a wool alien, as was *Medicago arabica* (Spotted Medick). More exciting finds were *Cyperus eragrostis* (Pale Galingale), *Trifolium resupinatum* (Reversed Clover), *Trifolium angustifolium* (Narrow Clover) and *Trifolium subterraneum* (Subterranean Clover). The last is native but rare in North Somerset (v.c.6).

Another source of aliens is clearly imported soil. Bunds of spoil line the roads and this is where we found *Trifolium arvense* (Hare's-foot Clover), away from its main area of distribution in Somerset, which is mainly along the coast. Many plants of *Apium graveolens* (Wild Celery) were also seen on these bunds, again a largely coastal species, although it does occur infrequently on the Levels. Around a small reservoir, *Verbena bonariensis* (Argentinian Vervain), *Lobelia erinus* (Garden Lobelia) and *Silene armeria* (Sweet-William Catchfly) were found, all of which most likely arrived with imported garden soil.

Many species are clearly opportunists, which have seized the chance to colonise this vast tract of disturbed ground. These include ubiquitous species such as *Chenopodium album* (Fat-hen), *Chenopodium polyspermum*

(Many-seeded Goosefoot), *Atriplex prostrata* (Spear-leaved Orache), *Tripleurospermum inodorum* (Scentless Mayweed) and *Aethusa cynapium* (Fool's Parsley), and also some neophytes which are currently spreading in Somerset: *Conyza canadensis* (Canadian Fleabane), *Conyza sumatrensis* (Guernsey Fleabane), *Conyza bilbaoana* and *Polypogon viridis* (Water Bent).

Beside the Enterprise Park is a sewage works, which was undoubtedly the source of the *Lycopersicon esculentum* (Tomato) and *Solanum tuberosum* (Potato) we found. The approach road to the sewage works has recently been refurbished, with a new fence surrounding the works. Along the fence line is a 1m wide strip of grass, which looks as if it has been seeded, perhaps a year or two ago. It was here that we found our most exciting and puzzling species: *Lotus subbiflorus* (Hairy Bird's-foot-trefoil), new to Somerset and at a remarkable distance from its accepted native range (see Colour Section, Plate 3).

Lotus subbiflorus is native to dry grassy places by the sea, with a southwest distribution in England, stretching around the coast from North Devon to Hampshire (Stace, 1997; Preston, Pearman and Dines, 2002). It was recently reported in Sussex, where its arrival was attributed to an imported mixture of chicken manure and garden compost from Hampshire (Abraham and Knapp, 2008). In Glastonbury, the few plants seen were growing in short turf either side of the sewage works fence, and on an adjacent patch of grass. I have found no mention of *Lotus subbiflorus* in lists of wool aliens and indeed the smooth seeds in smooth cylindrical pods are not adapted to this mode of transport. Nor can I find mention of it being associated with a sewage works before and it is surely unlikely to have arrived in imported soil. *Lotus corniculatus* (Common Bird's-foot-trefoil), *Trifolium pratense* (Red Clover) and *T. repens* (White Clover) were also present, and it is reasonable to surmise that these were components of the grassland seed mix, but this was initially dismissed as a means of arrival for *L. subbiflorus*. A search of the Internet,

however, has revealed that *Lotus subbiflorus* was introduced to New Zealand as part of a seed mixture of grasses and legumes used for artificial stabilisation of sand at Whatipu Beach (Esler, 1974) and it is now established in that country. More recently, this species has been the subject of much research in Uruguay, where cultivar 'El Rincón' is widely used for improvement of the campos (natural pasture). *L. subbiflorus* is thus not unknown as a component of grassland seed mix, but is surely an unusual one in this country. Introduction with grass seed does, however, seem at the moment to be the most likely possible explanation for the arrival of this species in Somerset.

Botanising on waste ground in Glastonbury certainly made a change from perusing basements in Bath. Instead of disdainful glances from passers-by, there was genuine interest every time I explained that we were only looking at weeds!

Acknowledgements:

I am very grateful to Liz McDonnell for her company and expertise in the field and to Fred Rumsey for his photograph and for helpful comments on this article.

References:

- ABRAHAM, F. & KNAPP, A. (2008). *Lotus angustissimus* & *L. subbiflorus* in Sussex. *BSBI News* **107**: 22–23.
- CLEMENT, E.J. (1979). Wool aliens in Somerset. *BSBI News* **23**: 14.
- ESLER, A.E. (1974). Vegetation of the sand country bordering the Waitakere range, Auckland: the southern beaches. *Proceedings of the New Zealand Ecological Society* **21**: 72–77.
- GREEN, P.R., GREEN, I.P. & CROUCH, G.A. (1997). *The atlas flora of Somerset*. Published by the authors.
- PRESTON, C.D., PEARMAN, D.A. & DINES, T.D. (2002). *New atlas of the British & Irish flora*. Oxford University Press, Oxford.
- SALISBURY, E. (1964). *Weeds & aliens*. 2nd ed. Collins, London.
- STACE, C.A. (1997). *New flora of the British Isles*. 2nd ed. Cambridge University Press, Cambridge.

Update on the identity of the Norfolk comfrey

CLARE O'REILLY, 3 Railway Cottages, Lambley, Northumberland CA8 7LL

BOB LEANEY, 122 Norwich Road, Wroxham, Norfolk NR12 8SA

An apparently unknown *Symphytum* taxon was first recorded from Intwood, Norfolk v.c.28 in 1999 by Bob Leaney and described in Leaney (2007). It was postulated to be a naturally-occurring hybrid between *Symphytum* \times *uplandicum* and *S. orientale*. However, although morphological intermediacy was persuasive, further evidence was considered important (O'Reilly 2007) and sought from chromosome counts. Two separate sets of counts have produced $2n=48$, which negates the proposed parentage. In addition, pollen analysis and examination of fruiting material shows that the plant is highly fertile, which would not be expected from a triple hybrid.

Three further colonies have been found since April 2007, eight in total, including the largest known colony in a garden at Sustead, the owner confirming that the comfrey was bought at a garden centre many years ago. This suggests a horticultural origin and mitigates against a naturally occurring hybrid involving *S. uplandicum*. To address the possibility that the plant is a species from Eastern Europe, which has somehow reached a Norfolk nursery, we examined 213 herbarium specimens from **E** and **BM**, including 8 *Symphytum* species reported in Sandbrick *et al* (1990) with pink buds and intense blue corollas. None were found to be morphologically close to the Norfolk comfrey. The Norfolk comfrey was also compared with *Symphytum savvalense*, a Turkish species with a similar leaf shape. The description of *S. savvalense* in the *Flora of Turkey* (Davis *et al.* 1988) and holotype from **BM** were examined and the following differences were noted (Norfolk comfrey characters in parentheses): corolla at anthesis mauvish or pink (bright sky blue); calyx length 2.8–3.7mm (5–7.8mm); calyx dissection 3/5 to 2/3 (2/5 to 3/5); calyx lobes lingulate with obtuse apices (fairly broadly triangular with subacute to acute apices); indumentum of 'thin' hairs and long narrow

bristles (fine, bristle-based and hook-tipped hairs); and height c.35cm (c.150cm).

Dr Theo Gadella, an extremely experienced Dutch *Symphytum* taxonomist, has now examined pressed material of the Norfolk comfrey, descriptions and photographs and feels that the most likely explanation is a cross between *S. asperum* and *S. orientale*. However, he advises that experimental synthesis of the hybrid plant is needed to be certain, especially as this parentage depends on unreduced gametes during meiosis to explain the chromosome number. Dr Gadella also suggests that the Cambridge comfrey, another possible *S. orientale* hybrid (see Leaney 2007) which is highly sterile, is probably *S. orientale* \times *S. uplandicum*. Chromosome counts for the latter taxon are underway. We are also arranging for experimental work to be conducted at the John Innes Institute, comprising reciprocal crosses between *S. orientale* and *S. uplandicum* cytotypes $2n=36$ and $2n=40$ as well as *S. asperum*. Artificial crossing will take another two years, but in the meantime, we intend to check whether *S. asperum* \times *S. orientale* is a taxon new to science and, if so, publish a scientific name. Although a full scientific paper cannot be produced until we have sufficient evidence to confirm the Norfolk comfrey's parentage, naming an entity is a separate matter; the name can stand irrespective of whether future evidence alters its putative parentage, and providing a name would allow for full treatment in Clive Stace's forthcoming third edition of the *New Flora of the British Isles*.

Acknowledgements

Grateful thanks to Martin Godfey and Dr John Bailey who carried out the cytological work; to Dr Theo Gadella for his determination; and Professor Clive Stace for advice on nomenclatural issues.

References:

DAVIS, P.H., MILL, R.R. & KIT TAN 1988. *Symphytum* L. In: *Flora of Turkey and the East Aegean Islands* (Supplement) 10: 186–189. University of Edinburgh Press.
 LEANEY, B. (2007). Probable hybrid between *Symphytum* × *uplandicum* and *S. orientale* in Norfolk. *BSBI News* 105: 6–9.

O'REILLY, C.L. (2007). Challenges when determining a putative interspecific hybrid. *BSBI News* 105: 9–11.
 SANDBRICK, J.M., VAN BREDERODE, J. AND GADELLA, T.W.J. (1990). Phylogenetic relationships in the genus *Symphytum* L. (Boraginaceae). *Proc. Kon. Ned. Akad. v. Wetensch.* 93(3): 295–334.

***Lopezia coronata* (Mosquito Flower) in Guernsey**

RACHEL D. RABEY, *Coin Colin Cottage, St Martin, Guernsey, GY4 6AQ*

The car park for our local grocery store was extended in 2006 because business was booming. An old, grassy, earth bank was disturbed in the process. When it was re-built, it was left as bare earth, so was re-planted with *Hebe* × *franciscana* (Hedge Veronica), *Ilex aquifolium* (Holly), *Pittosporum* sp., and *Elaeagnus* sp. (Oleaster), all from a garden centre. The bank was soon covered with annual weeds, which included *Anagallis arvensis* (Scarlet Pimpernel), *Mercurialis annua* (Annual Mercury), *Sisymbrium officinale* (Hedge Mustard), *Fumaria muralis* (Common Ramping-fumitory) and *Conyza sumatrensis* (Guernsey Fleabane). Later in the summer, at the bottom of the bank, appeared several single-stemmed plants about 10cm high, with simple, alternate leaves, topped by pink and magenta, zygomorphic flowers about

1cm across. Single round fruits developed on thin stalks (see Colour Section, Plate 4).

I could not find these plants in any book of wild or garden flowers. I showed it to local botanists, who hunted through their books without success. Visiting botanists did not recognise it either. I tried to press specimens, but the flowers disappeared into the newspaper. Last year, 2007, there were dozens of plants, all over the bank, bushy and branched, and reaching about 30cm high. I made a drawing, pressed a specimen successfully, and sent them to Eric Clement. He determined the plant as *Lopezia coronata* Andr. (Onagraceae) (Mosquito Flower), from central Mexico. Eric writes: 'Look at the leaves and fruits – so like Fuchsia'. It is listed in *Alien plants of the British Isles* by Clement & Foster (1994).

Solution: Botanical crossword 12

Down
 1. CURRANT; 2. ERUCA; 3. POD;
 4. REVAMP; 5. FORESHORE;
 6. E. PEPLUS; 7. DRABA; 11. LITTORALE;
 13. REFUGIA; 15. ISOETES; 16. PATENT;
 17. DAFS; 18. TESTA; 20. VET
Crib
 1. CURRANT; 2. ERUCA; 3. Point of
 Delivery (& hit); 4. REVAMP (just couldn't
 make it sound botanical, alas); 5. FORE/
 SHORE; 6. EP(e)(e)/PLUS, Petty's purge;
 7. DR/A/BA; 11. anagram TRIAL LOT E; 13.
 anagram IF U RAGE; 15. I/SOE/reverse SET;
 16. double definition; 17. reverse SF/FAD; 18.
 TEST/A; 20. VETch

Across
 1. Pun; 2. double definition; 8. RO (Scott) +
 German for 'and'; 9. VERB + ENA (Harkness);
 10. straightforward really; 11. Limo seller,
 mudwort; 12. winter ETernally; 14. BON +
 rev I<A>S; 17. DEF<LO>RA/T(H)E; 18. some
 say 'Two, two, the lily-white boys' refers to
 FOG/ (Green)GAGE; 20. anagram of VITTS;
 21. double definition; 22. anagram of STARTED

Across
 1. CREEPER; 5. FIELD; 8. ROUND;
 9. VERBENA; 10. AKA; 11. LIMOSELLA;
 12. TERETE; 14. BONSAI;
 17. DEFLORATE; 18. TWO; 19. FOGGAGE;
 20. VISIT; 21. SCALP; 22. TETRADS
Crib

***Acacia dealbata* self-seeded in Britain – a correction**

GEOFF TOONE, 46 Downsview, Sandown, Isle of Wight, PO36 9NY

Since my note with the above title was published in the September issue of *News*, I have discovered a previous record in *BSBI News* 78: 55 under Alien Records :-
Established in open areas in woodland above gardens on Tresco, SV/89.14, Scilly

(v.c.1b). Oct, 1995, April & Oct 1996.
A.J.Underhill.

This must obviously be regarded as the 'first' record of *Acacia dealbata* as an established alien in Britain.

REQUESTS & OFFERS

***Juncus* and other taxa required**

MIKE WILCOX, 32 Shawbridge St. Clitheroe, BB7 1LZ (michaelpw22@hotmail.com)

The hybrid *Juncus* ×*kern-reichgeltii* has been studied and an article will be published in 2009 on its identification. Requests were made in *BSBI News* but very little material was received and only two plants from Ireland. I would be grateful for any specimens (individuals or populations) for determination in order to build up a picture of distribution. This would also apply to the rush *J.* ×*surrejanus* and *J. acutiflorus* (but not before end of July, i.e. plants at the fruiting stage only).

Also any *Epilobium* species required particularly in flower (with a few fruits to make sure it is not a hybrid, though will be acceptable).

Smaller plants from the base, though *E. hirsutum* can be just the top part with flowers and a few fruits. The two sub-alpine species and *E. lanceolatum* are particularly welcome and any in the *E. tetragonum* group; fresh if possible or pressed – if pressing the plants, they can be saved up and sent at a later date in one envelope.

Additionally, I would be interested in receiving *Elytrigia repens* with none or very short awns and those with the very long awns up to 18mm (var. *aristata*) in flower/fruiting stage; pressed or semi-pressed or even fresh would be useful. Any other *Elytrigia* would be welcome.

Three New Naturalist Books for sale

DONALD PIGOTT, Greenbank, Cartmel, Grange-over-Sands, Cumbria LA11 7ST

In aid of the National Trust's Appeal for Nature Conservation in Dovedale, Derbyshire, I should like to sell Lousley *Wild Flowers of Chalk and Limestone* (£10), Summerhayes *Wild Orchids of Britain* (£10) and Raven and Walters *Mountain Flowers* (£25) (with a

written dedication by the authors on the fly sheet). All have complete but used and worn-at-the-corners dust covers. The figures in brackets are up-to-date valuations but higher offers would be welcome. All will go to the appeal. Please add £2 per book for postage.

***Watsonia* and *BSBI News* for disposal**

RACHEL HEMMING, The Anchorage, South Woodchester, Stroud, Gloucestershire, GL5 5EL
(Tel.: 01453 873297)

I have the following available for the cost of postage:

Watsonia: vol. 15, nos. 2 and 3; vol. 16, index; vol. 17, nos. 3 and 4; vol. 18, nos. 1, 2 and 4;

vol. 19, nos. 1, 2, 3 and 4; vol. 20, nos. 1, 2, 3 and 4; vol. 21, no. 1.

BSBI News: nos. 27, 30, 41, 48, 56, 62, 65, 68.

Seeds from Ware – 2008 collections

GORDON HANSON, 1 Coltsfoot Road, Ware, Herts., SH12 7NW

Please enclose suitable labelled small packets and S.A.E. for anything required.

Aconitum lycoctonum – cult.
Althaea cannabina – Turkey
Amaranthus blitum – Slovakia
Anomatheca laxa – cult.
Beckmannia syzigachne – USA
Chenopodium glaucum – Herts.
Chenopodium giganteum – birdseed
Datura discolor – cult.
Digitalis parviflora – cult.
Echium angustifolium – Turkey
Erodium daucoides – cult.
Euphorbia maculata – Spain
Ferulago syriaca – Turkey
Festuca californica – USA
Festuca idahoensis – USA
Hieracium pannosus – Turkey
Hieracium lasiochaetum – Turkey
Hieracium plumbeum – cult.
Isatis glauca – Turkey
Johrenia dichotoma – Turkey
Lavatera bryonifolia – Turkey
Ligusticum hutunii – Russia
Melica californica – USA
Onopordum bracteatum – Turkey
Opopanax hispidus – Turkey
Paraserianthes lophantha – Madeira
Paspalum dilatatum – N. Zealand
Pavonia urens – wool alien
Physospermum cornubiense – Bucks.
Phytolacca polyandra – cult.
Rheum maximowiczii – Uzbekistan
Salvia sclarea – Turkey
Salvia virgata – Turkey
Seseli elatum – Slovakia
Setaria verticillata – wool alien
Solanum opacum – Australia
Stachys nubicola – cult.
Tinantia erecta – cult.
Verbascum thapsus – Turkey
Xanthium strumarium – Canada

Gofynne seed list 2009

ANDREW SHAW, Gofynne, Llanynis, Builth Wells, Powys. LD2 3HN
 (andrewgshaw@hotmail.com)

A small quantity of seed from any of the following species is sent free upon receipt of a SAE.

Alisma gramineum
Arabis alpina
Arabis glabra
Arabis scabra
Bromus interruptus
Carum verticillatum
Chenopodium vulvaria
Crepis foetida
Cyperus fuscus
Damasonium alisma
Epilobium lanceolatum
Euphorbia serrulata
Galium tricornerutum
Gastroidium ventricosum
Hypericum montanum
Juncus pygmaeus
Lactuca saligna
Leomurus cardiaca
Limosella aquatica
Misopates orontium
Potentilla rupestris
Ranunculus ophioglossifolius
Ranunculus parviflorus
Rumex rupestris
Rumex maritimus
Rumex palustris
Saxifraga rivularis
Senecio paludosus
Silene gallica
Silene gallica var. *quinquevulnera*
Sonchus palustris
Trifolium scabrum
Trifolium strictum
Trollius europaeus
Verbascum blattaria
Verbascum lychnitis
Vicia orobus

NOTICES

Excursion to the Páramos of Northern Castille (Spain) – May 2009

TERESA FARINO, *Apartado de Correos 59, 39570 Potes, Cantabria, Spain*; tel.: 00 34 942 735154; (e-mail: teresa@iberianwildlife.com)

There are still a few places available for the spring field meeting in the spectacular limestone plateaux and gorges of Palencia and

Burgos. Dates are from Wednesday 13th May to Wednesday 20th May. For further details, please contact me at the address above.

Ashmolean Natural History Society of Oxfordshire Education Group Identification Courses, 2009

The Ashmolean Natural History Society of Oxfordshire has been providing plant identification courses through its Education Group for seven years now and has acquired a national reputation for the rigour and accessibility of its teaching.

In 2009, in addition to the basic course, which aims to teach the use of a dichotomous key, the continuation courses (for those who have attended the basic course or have a similar level of experience) include Aquatic

Plants, Sedges, Ferns and a new course, All About Keys, examining the ways in which botanical keys work. Courses on Botanical Latin and Botanical Painting are also available. Tutors for all courses are active botanists or experts in the particular botanical group that the course is covering.

For further information on all courses phone: FRANCES WATKINS: 01865 863660
or email: frances@oxfordrareplants.org.uk

DIARY

N.B. These dates are often supplementary to those in the 2009 Calendar in *BSBI Year Book 2009* and include provisional dates of the BSBI's Permanent Working Committees.

28 Jan	Records Committee, London	4 Mar	Science & Research Committee
5 Feb	Publications Committee, London	14 Mar	Committee for Scotland
7 Feb?	Committee for Wales, Aberystwyth	18 Mar	Council, London
17 Feb	Training & Education Committee	8-10 May	Spring Conference, Berwick
25 Feb	Executive Committee, London		

Editorial [continued from p. 6]

Trump golf resort gets go ahead.

On the 3rd of November 2008 the following message appeared on the Scottish Government website:

'The Scottish Government has decided to grant outline planning permission for the application by Trump International Golf Links Scotland to develop a golf resort at Balmedie, Aberdeen-shire, subject to satisfactory conclusion of legal agreements between the applicant and Aberdeenshire Council'.

This may well sound the death knell for over 100ha of prime duneland habitat, as outlined by David Welch in *The Trump Inquiry*, *BSBI News 109*: 47–48, unless 'the powers that be' can be persuaded to provide adequate safeguards.

List of Members

It is unfortunate that the 'List of Members' in the *BSBI Year Book* has to be compiled in mid-December before all subscription renewals have been received, hence the supplement on pages 74–75 which includes all changes notified by January 4th.

FIELD MEETING REPORTS: 2008

Reports of field meetings are collated by Dr Alan Showler, and copy for these should be sent to him direct, not to the editors of *BSBI News*. His address is: 12 Wedgwood Drive, Hughenden

Valley, High Wycombe, Bucks., HP14 4PA (tel.: 01494 562082). Copy for day meetings should generally be up to 500 words, and for weekend meetings, up to 1000 words.

Aran Mountains, Llanuwchllyn, Merioneth (v.c.48), 28th June

SARAH STILLE

The party of 13 people gathered promptly at 10 a.m. at the appointed car park in Llanuwchllyn and transferred into fewer cars for the short journey to Nant y Barcut Farm (*The Stream of the Kite*). Fortunately for the superstitious among us, Mark Lawley chose to bryologise rather than walk the ridge with the main party although he did meet us for lunch and for the return journey. It was a grey overcast day with the cloud base down to about 600m, though the forecast promised it would lift by the afternoon.

The first part of the walk, up to Llyn Lliwbran (*the crow-coloured lake*) splashed through a nice, though typically acid mire with *Eriophorum vaginatum* (Hare's-tail Cotton-grass), *E. angustifolium* (Common Cotton-grass) and *Narthecium ossifragum* (Bog Asphodel). *Drosera rotundifolia* (Round-leaved Sundew), *Dactylorhiza maculata* (Heath Spotted-orchid) and *Melampyrum pratense* (Common Cow-wheat) added further interest. The lake proved to be quite a lot deeper than on the 'reccy' visit but we manage to retrieve bits of *Isoetes lacustris* (Quillwort) and *Littorella uniflora* (Shoreweed) for people to compare, before tackling the steep climb to the summit ridge itself. Near here we also found perhaps the best plant of the day, a small amount of *Viola lutea* (Mountain Pansy), which is much scarcer than formerly due to increased grazing pressures (Colour Section, Plate 2). It appears to be an update from pre-1969 for the hectad.

We had lunch (Colour Section, Plate 2) before tackling the summit of Aran Benllyn (885m), but the cloud refused to lift, so it was rather a subdued trudge along the rocky ridge. Spirits were lifted by finding superb, copious spreads of *Diphasiastrum alpinum* (Alpine

Clubmoss), but sadly *Carex bigelowii* (Stiff Sedge), although plentiful along the path, was not found in flower. There was a lot of *Huperzia selago* (Fir Clubmoss) too, but though we looked in likely places we were not able to update Arthur Chater's 1962 record of *Salix herbacea* (Dwarf Willow) near the distant summit of Aran Fawddwy.

Eventually we turned south-west off the ridge down the steep grass of Yr Erw y Ddafad ddu (*The Acre of the Black Sheep*), and had that extraordinarily happy feeling of coming down out of the mist into unknown country. The whole of the southern part of the range was in our view, with Craig Llyn Dyfi, the source of the River Dyfi, lying black before us and the extensive rolling hill country beyond. The party spread out in all directions down to the lip of the lake, but we only added *Solidago virgaurea* (Golden-rod), *Festuca vivipara* (Viviparous Sheep's-fescue) and *Saxifraga stellaris* (Starry Saxifrage) as species of note – the lake appeared to be entirely barren of plants from our vantage point. A long trudge back to the farm added a few lowland plants and a tired but content group was grateful to return to Llanuwchllyn and the cars.

Post script: Mark Lawley, while bryologising the lower cliffs, found some calcicolous higher plants including *Pimpinella saxifraga* (Burnet Saxifrage) (? subspecies *alpestris*) and *Selaginella selaginoides* (Lesser Clubmoss). As a result, a smaller group (Martin and Clare Rand, Sarah Stille and John Hughes) went back in August to re-find those and several others including *Cystopteris fragilis* (Brittle Bladder-fern). There are plans to return again and work the area more thoroughly, as it is clearly not as acidic as it was thought.

Brownfield and urban plant identification training day: Creekside Centre, Deptford, West Kent (v.c.16), 12th July

SHIRLEY BURTON

A very warm welcome greeted us from Mark Spencer, our leader and Nick Betrand, the manager of the Creekside Centre. A huge array of flowering plant specimens also welcomed us in, the majority being non-native species from urban and brownfield habitats. There was excellent rapport between Mark, Nick and the eleven participants all through the day, and the time just flew. It just shows what happens when you are enjoying yourselves!

The first part of the day was spent indoors examining plant specimens and using different identification keys (with interesting revelations about design of keys!). Mark elaborated on some of the specimens and then we did some detailed work on fleabanes and yellow-flowered crucifers.

In fine weather during the afternoon, we visited two nearby brownfield sites. The first site was in the grounds of the Creekside Centre itself, alongside Deptford Creek, which runs north into the River Thames (which is now the cleanest major urban river in Europe). The second site was a short walking distance away, the Sue Godfrey Nature Park. Over many years, both sites have been managed with great understanding by Nick and others. This second site was contaminated with toxic, industrial waste. It was Nick who suggested that decontamination should be done in two stages – half the site at a time, so that plants left in the first half were able to establish in the other half, and so on.

Some of the species examined indoors included *Paulownia tomentosa* (Foxglove-tree), *Koeleruteria paniculata* (Pride-of-India) and a superb specimen of *Solanum laciniatum* (Kangaroo-apple), all increasingly escaping in Greater London. Apparently, there are around 1600 species of *Solanum* worldwide! Then came the serious stuff – fleabanes. The genera *Erigeron* and *Conyza* are very closely related. We examined *Erigeron karvinskianus* (Mexican Fleabane), which is becoming

increasingly naturalised on walls, banks & stony ground (Mark's comment 'the seeds like to be cooked in walls'). We then keyed out two specimens of *Conyza*. The result was: the first specimen was possibly a hybrid of *C. canadensis* × *C. sumatrensis* (note added by Mark: I am guilty of having lost the material so it will have to remain a supposition!) and the second specimen was *C. sumatrensis* (Guernsey Fleabane). It was suggested by Mark that maybe *C. sumatrensis* is allelopathic to other species. It is certainly more frequent than *C. canadensis* (Canadian Fleabane) in central London nowadays. Fresh specimens of *Cyperus eragrostis* (Pale Galingale), *C. longus* (Galingale) and *Polypogon viridis* (Water Bent) were examined. The latter was uncommon in London ten years ago, now it is quite common.

More serious stuff again, now on yellow-flowered crucifers. We studied the following species: *Hirschfeldia incana* (Hoary Mustard), with its wire-netting habit, *Diplotaxis tenuifolia* (Perennial Wall-rocket), *Sisymbrium irio* (London Rocket), *S. loeselii* (False London Rocket) and *S. officinale* (Hedge Mustard). A small selection of some of the species found in the grounds of Creekside Centre – *Anthemis austriaca* (Austrian Chamomile), a delicate plant with leaves like comb teeth and increasingly planted in 'wildflower' seed mixes, *Senecio inaequidens* (Narrow-leaved Ragwort), and *Angelica archangelica* (Garden Angelica). We were by the river now – very thick, wet mud!! Here we found *Ranunculus repens* (Creeping Buttercup) with huge leaves, *Callitriche* sp. (Water-starwort) masses eaten by swans (note added by Mark: this proved to be *C. obtusangula* (Blunt-fruited Water-starwort)). Away from the river, we saw *Lactuca serriola* (Prickly Lettuce), and near the gate more *Polypogon viridis* and a seedling of *Catalpa bignonioides* (Indian Bean Tree).

At the Sue Godfrey Nature Park, we identified *Conyza canadensis*, and then had great

fun clarifying the range of *Medicago sativa* (Lucerne) subspecies and hybrids, showing continuous variation with flower colour (yellow-purple) and fruit coiling. Other species included *Lepidium draba* (Hoary Cress) and some superb, mature specimens of *Rumex cristatus* (Greek Dock).

The message that the non-native flora of urban and brownfield habitats is a dynamic and important aspect of Britain's flora was well brought home – very many thanks to Mark and Nick for an excellent study day.

Carmarthenshire recording week (v.c.44), 19th – 26th July

KATH PRYCE

Saturday 19th July

The event began as usual with lunch at Glynhir, the usual relaxed affair, made interesting by the other group staying at Glynhir, who were experts on horses hooves (!), resulting in some unusual non-botanical conversations.

The party spent the afternoon at Llyn Llech Owain, near Gorslas (SN5614), firstly visiting the adjacent Caeau Rhyd-y-Gwiall SSSI, which was disappointingly under-grazed, with encroaching scrub and dominant rushes and *Molinia caerulea* (Purple Moor-grass). Here a Palmate Newt was found, but the diverse vegetation was confined to the small area of U4a and MG5c grassland at the top of the field. After leaving the SSSI, a bush of *Salix pentandra* (Bay Willow) was seen along the lane towards the lake. A warden passing by car, seeing plant specimens being carried stopped to ask what the group was doing, but was assured that no threat was posed by BSBI members.

Sunday 20th July

The group travelled down to Pembrey, where the morning was spent on the RAF range at Tywyn Burrows, as the planned visit to MoD ranges at Pendine was cancelled at the last moment (it had been hoped to monitor the site where *Liparis loeselii* (Fen Orchid) was last seen in the county). We were joined by a contingent from the Llanelli Naturalists, including Ian Morgan and Andrew Stevens. Firstly, Ian demonstrated several alien plants found locally, and Andrew had brought a specimen of the hybrid sedge *Carex ×pseudoaxillaris*, spotted on a roadside by his farm (SN4408), which Arthur Chater duly

confirmed, the first record of the hybrid for Carmarthenshire.

After driving through Pembrey Forest, the first stop was to examine the helipad (SN3605), now probably the last site in the county where *Gentianella uliginosa* (Dune Gentian) and *Spiranthes spiralis* (Autumn Lady's-tresses) are to be found, although we were too early in the season to see either in flower. The RAF Officer-in-Command had particularly asked that we examine what had been assumed from his description to be *Listera ovata* (Common Twayblade). This was confirmed, although the plants were well passed flowering. *Carex punctata* (Dotted Sedge) was re-found nearby, but there was no sign of the hybrid sedge *Carex ×binderi* (*C. distans* × *C. viridula*) discovered by the BSBI group in 2006.

Having had our picnic by the new ponds, the party returned to the forest. Where a stop was made to examine 'The Scrape' (SN3703), which was found to be very overgrown with *Phragmites australis* (Common Reed) and relatively dry, despite the recent weeks of wet weather. However, many plants of *Baldellia ranunculoides* ssp. *ranunculoides* (Lesser Water-plantain) were found in full flower at the foot of the reeds. A search was also made for *Juncus subnodulosus* (Blunt-flowered Rush), but the dense reed growth and willow encroachment has reduced the formerly healthy population and only five flowering stems were seen.

The main purpose of the day was to attempt to re-find *Monotropa hypopitys* (Yellow Bird's-nest), about 20 plants of which had been found growing under *Salix repens* (Creeping Willow) in a damp dune-slack by

Ian Morgan in 1991 along the ‘Bee Orchid Ride’ (SN3604). This is one of the *Monotropa* sites selected for the BSBI Threatened Plants Project. A plant of *Vicia sativa* ssp. *nigra* was found and confirmed by John Killick, whilst *Clinopodium vulgare* (Wild Basil) was abundant in some areas. A single plant of *Sisyrinchium bermudiana* (Blue-eyed Grass) with 14 shoots, but only one flower, was much admired and photographed. Ian Morgan was able to take us to the place where he had found the *Monotropa*, but despite extensive searching, it was not found.

After returning to the cars, a few members took the opportunity to walk the extra 200m to the site where *Scirpoides holoschoenus* (Round-headed Club-rush) grew for a few years after its discovery in 2003, but the verge of the ride has not been maintained by the Forestry Commission in recent years, and the plant appears to have been lost to scrub colonisation. The nearby *Eleocharis quinqueflora* (Few-flowered Spike-rush) population is also much reduced.

Monday 21st July

After breakfast, the group met at the National Botanic Garden of Wales (SN5218). Firstly, Natasha De Vere, Head of Science at the Garden, gave a talk about her work, particularly the Welsh Plants DNA Fingerprinting Project, for which she was seeking assistance from the Glynhir group to find the species to complete her list of plants to be analysed. This was followed by a tour of the Great Glasshouse, led by Jessica Gould, the enthusiastic Keeper, and visits to the taxonomic beds and the area where ‘Welsh habitats’ will be developed.

After lunch. On the way to visit the organically farmed ‘estate’ newly declared a National Nature Reserve, the party paused to examine ‘steppe’ plantings. These include an incongruous mix of American and African species (including an abundantly naturalised sunflower subsequently determined by Eric Clement as *Helianthus clementii*), accompanied by British natives (but not necessarily native to this part of Wales!), such as *Filipendula vulgaris* (Dropwort) and *Geranium*

pratense (Meadow Crane’s-bill), although several local species are also colonising, such as *Sanguisorba officinalis* (Greater Burnet) and *Knautia arvensis* (Field Scabious). Several whole fields of the ‘estate’ were white with *Carum verticillatum* (Whorled Caraway), these having been left ungrazed since spring, allowing the plants to flower unimpeded. They were very pleasing to see, and all agreed that the site was a spectacle that the public would appreciate. These fields have been subjected to some agricultural improvement and are relatively species-poor, but demonstrate that *Carum* is capable of tolerating (even exploiting?) a degree of nutrient enrichment. Later, we were taken to the ‘Snipe Field’, where a few plants of *Cirsium dissectum* (Meadow Thistle) survive amongst the dominant, tussocky *Molinia caerulea*. *Cirsium* × *forsteri* (the hybrid between *C. dissectum* and *C. palustre*) was also identified, and a few plants of *Serratula tinctoria* (Saw-wort) were seen, but a resumption of more intensive grazing will be required to bring this area into favourable condition.

Tuesday 22nd July

The weather was fine, with some sun, ideal to visit the Twrch valley, on the southern slope of Black Mountain (c.SN7513–7614), to search for *Hammarbya paludosa* (Bog Orchid). The party was joined by Sam Smith later. The first part of the walk in was along the Breconshire bank of Afon Twrch, where the abundance of egg-yolk yellow flowers of *Melampyrum pratense* ssp. *pratense* var. *hians* received favourable comment. After crossing to the Carmarthenshire bank, the limestone walls and outcrops around Cwm Clyd lime kilns were examined, where characteristic calcicolous species were seen, contrasting with nearby acid grassland and flushes, with *Drosera rotundifolia* (Round-leaved Sundew) and several patches of *Wahlenbergia hederacea* (Ivy-leaved Bellflower). The party continued over acid grassland, blanket bog, flushes and grit-scrub until the *Hammarbya* flush was reached. Although the previous *Hammarbya* records were quite precise, the party was impressed by Sam’s ability to find

plants almost immediately, the first being tiny, non-flowering specimens. They were pale green and reasonably easy to spot, once you got your eye in. He marked each one with a small square of paper in order to count them and protect them from accidental damage by the party's feet. Thirty-three (22 flowering) were counted before the paper markers were removed. Interestingly they grew in only one flush, which it was concluded must be slightly more acid than adjacent, physically similar flushes, as there was an absence of *Rhynchospora alba* (White Beak-sedge) and *Pinguicula vulgaris* (Common Butterwort), which both occur in the others. Other plants admired during the day were carpets of *Anagallis tenella* (Bog Pimpernel) and turf dotted with the pretty blue flowers of *Wahlenbergia hederacea*, whilst on the walls of the ruins of Sarn fan, several plants of *Cystopteris fragilis* (Brittle Bladder-fern) were growing.

Wednesday 23rd July

The party split into smaller groups today. One went off in search of limestone flora in disused quarries in the Carmel area. The first stop was at the Garn quarries (SN5916), now in Coedydd Carmel National Nature Reserve, a second *Monotropa* monitoring site. A few plants of *Alchemilla xanthochlora* (a Lady's Mantle) and *Geranium columbinum* (Long-stalked Crane's-bill) were in flower in the short turf, and several convincing plants of *G. robertianum* ssp. *celticum* (the pale, limestone form of Herb Robert) were growing under nearby *Corylus avellana* (Hazel) scrub. These quarries have been colonised by large swathes of originally bird-sown *Cotoneaster integrifolius* (Small-leaved Cotoneaster), which are a threat to the native plants growing in rock clefts. Needless to say we didn't re-find the *Monotropa*, the only previous record of which at the site is of a single plant seen during the Llanelli Naturalists meeting in 1986.

We asked the owner's permission to record the plants when we arrived at the next site, Capel Quarry (SN5515), but he wasn't happy, warning us of vicious donkeys that he kept there. Eventually, it was considered prudent

to beat a retreat, but not before we had recorded *Carex spicata* (Spiked Sedge) and *Rorippa islandica* (Northern Yellow-cress), together with a good range of weeds, including three species of *Polygonum*, shortly to be published in Sell & Murrell, vol. 3.

The group concluded the day's fieldwork by visiting Dyllgoed Quarry (SN5715). *Helictotrichon pubescens* (Downy Oat-grass) is uncommon in Carmarthenshire, but here is a frequent component of the roadside verges and banks, and about 30 plants of *Listera ovata* were seen in a small spinney nearby. The quarry floor comprised a sparsely vegetated, level rock surface, but large dried-up puddles were dense with *Rorippa islandica*. Also noted were *Sherardia arvensis* (Field Madder), *Geranium robertianum celticum*, and many other characteristic calcicoles.

Graeme Kay and Helen Proctor spent the day in the old limestone quarries at Carreg Dwf and Dan-y-Cyncoed (SN6417; 6517), not far from Glynhir. Not surprisingly they found similar calcicolous vegetation to the Carmel group. *Helianthemum nummularium* (Common Rock-rose) is confined to about five sites in the county, and they were successful in re-finding the small population here, last seen ten years previously by Jean Green and Wendy McCarthy. There was, however, no sign of *Spiranthes spiralis*, the single record of which dates from 1985.

Another party spent the day hunting for weeds in Ammanford, and found ten plants of *Lactuca serriola* (Prickly Lettuce) growing on the verge of the new link road (SN6312). This has been noticed on disturbed ground, spreading north and west through the county in recent years, and this record is the first for the hectad. Other species along the new verges included a seedling of *Ribes odorata* (Buffalo Currant), a new v.c. record; *Diplotaxis muralis* (Annual Wall-rocket) and *Crocsmia paniculata* (Aunt Eliza), both new hectad records; *Poa compressa* (Flattened Meadow-grass) and *Iberis umbellata* (Garden Candytuft).

Andy Jones was keen to try to re-find *Scleranthus annuus* (Annual Knawel) at Garreg Wen, Trelech (SN2831), once reported in

1971, and a site selected for visiting in conjunction with the Threatened Plants Monitoring Scheme. There was no sign of any suitable habitat in the area, let alone any plants. The tetrad is dominated by very improved pasture, and Andy managed to find *Juncus foliosus* (Leafy Rush) in a trampled flush, and *Wahlenbergia* was growing in a damp, neglected, rushy field-corner above a stream.

Thursday 24th July

After breakfast, the whole group travelled to Blaen Tir, near Llandovery (SN7936) to marvel at hay meadows that had been delayed being cut until after our visit. Just after the owners had moved to Blaen Tir, some 15 years previously, they had asked the best way to manage them to promote flora diversity. At that time the vegetation was quite diverse, but by taking an annual hay-cut in July or August, followed by aftermath grazing, the number and abundance of species has steadily increased. In recent years *Platanthera chlorantha* (Greater Butterfly-orchid), *Gymnadenia conopsea* (Fragrant Orchid), *Genista tinctoria* (Dyer's Greenweed) and *G. anglica* (Petty Whin) have all appeared, and, with the exception of *Gymnadenia*, increased. Furthermore, the previously existing species, such as *Carum verticillatum*, *Campanula rotundifolia* (Harebell), *Cirsium dissectum* and various sedges have increased, while aggressive grasses, such as *Molinia* have been prevented from becoming too dominant. The *Platanthera* plants, although the flowers were past their best, were systematically examined by Arthur Chater, searching for the hybrid with *P. bifolia* (Lesser Butterfly-orchid), but he found none.

After lunch, most of the party walked up to the summit of Mwmffri (SN8036), attracted by the promise of a refreshing breeze at the top. The path went via the head of an extensive valley mire, where both *Dryopteris carthusiana* (Narrow Buckler-fern) and the hybrid *D. ×deweveri* were found. The summit vegetation was heavily sheep-grazed and disappointing, but the view and cool breeze were more than adequate compensation!

Friday 25th July

The day started dull, with heavy rain spreading during the morning, necessitating changing plans for the day. Eventually the party met at the Welsh Wetland Centre, Penclacwydd, east of Llanelli (SS5398) and sat out the worst of the rain. As the weather improved, we walked from the car park to the nearby verges of the recently opened Morfa-Berwick link road, where the weed community proved to be particularly rich. Species recorded included *Solanum physalifolium* (Green Nightshade), a new v.c. record; *Datura stramonium* (Thorn-apple), *Chenopodium rubrum* (Red Goosefoot), *C. polyspermum* (Many-seeded Goosefoot), *C. ficifolium* (Fig-leaved Goosefoot), *Myosoton aquaticum* (Water Chickweed), *Stachys arvensis* (Field Woundwort) and *Echinochloa crus-galli* (Cockspar). Lunch was eaten in the car park, and Izzie Griffith kindly supplied cake to everyone, as it was her birthday. The weather by then was fine and sunny, and the group travelled to Pond-y-Pelican, near Kidwelly, at the landward end of the sea wall of the Banc-y-Lord (SN4104). Arthur was keen to see *Zannichellia palustris* (Horned Pondweed), which was soon found in abundance, and which he determined as ssp. *pedicellata*, the first v.c. record for the subspecies. *Potamogeton pectinatus* (Fennel Pondweed) was also in the pond, and *Alopecurus bulbosus* (Bulbous Foxtail) and *Apium graveolens* (Wild Celery) grew in the adjacent wet, poached area at the foot of the bank. The nearby grazing marsh had recently been agriculturally improved, but a few plants of *Bromus commutatus* (Meadow Brome) were seen.

Saturday 26th July

The last morning was spent packing up and saying goodbye. We had chosen the only dry week of the summer, a marked contrast to Glynhir 2006, when it poured almost every day!

Finally, a plea to anyone planning a group event to consider Glynhir as a venue. It has been very suitable for our week for a number of years, but they do need more group bookings.

Isle of Islay (v.c.102), 26th July – 2nd August

MALCOLM OGILVIE

A small group of members and partners arrived on Islay on Saturday, 26th July, and we all met the next morning in the Natural History Visitor Centre (conveniently on the ground floor of the Port Charlotte Youth Hostel, where most of the participants were staying). We were at our maximum of seven that day, two having to leave on the Monday.

The field meeting had as its main objective the surveying of wetlands on the RSPB's Loch Gruinart reserve. This reserve was purchased in 1983 and a botanical survey was carried out soon afterwards. Since then, however, a number of low-lying fields have had bunds put round them to raise water levels and encourage breeding waders, such as lapwing, redshank and snipe. These areas had not been re-surveyed since, and the reserve manager was keen to have new plant lists.

Sunday 27th July – Gruinart Flats

A very hot, sunny day, but fortunately with just enough cooling breeze. A considerable part of the reserve, approximately 275ha and known as the Gruinart Flats was reclaimed from the sea in the 1830s, prior to which a small river was diverted. The old channel, up to 10m wide in places, is still apparent, much silted up and vegetated, meandering through the flat fields and criss-crossing the main drainage ditch (2-3m wide), dug at the same time. This ditch could not be crossed, though the river could be in places, so we started on the west side and worked our way slowly along the ditch and the meandering river course, covering less than a couple of kilometres in a straight line, but a good deal more than that following the old river. The reserve manager had asked that we compile separate lists for each field that we went through, two in this instance, so we concentrated on identifying every plant (well, as many as we could) through the first field and then started all over again as we entered the second one. The wetter parts contained some large stands of

Schoenoplectus lacustris (Common Club-rush) and *Phragmites australis* (Common Reed), with, in the more open areas, much *Hippuris vulgaris* (Mare's-tail) and quantities of *Potamogeton berchtoldii* (Small Pondweed). We neither expected, nor found, any plants of great note, but were reasonably pleased with a total list of 80-90 species, as well as a good list of butterflies and dragonflies.

Monday 28th July – Gruinart Flats

An even hotter day than Sunday and without the relief of a breeze. Today, we covered the east side of the drainage ditch and river complex again, creating plant lists for two different fields, though a wide and deep cross-drain necessitated quite a diversion to find a crossing point. The plant list was, unsurprisingly, very similar to Sunday's, though there were some additional finds, including *Eleogiton fluitans* (Floating Club-rush). Did we miss it the day before? Unusually for Islay, the heat with no breeze became decidedly oppressive, and soon after lunch we decided to call it a day. When one is reduced to fanning oneself with a clipboard while standing in water to cool one's feet (necessarily clad in wellingtons), this classifies as too hot to comfortably botanise; at least it does on Islay.

Tuesday 29th July – Coul Farm

A cooler day, during which the leader was regrettably otherwise engaged, attending a meeting on the island, and so, while some participants became tourists for the day, two others took themselves off to the west coast, where they continued their survey of the bits of five monads which together comprise the total area of land in one of Islay's fourteen 10km squares. They had shown excellent initiative by starting this survey on the Saturday after their arrival on the island. This 10km square has been included in the atlases, but is definitely under-recorded.

Wednesday 30th July – Killinallan

On a day that was dry (just) and with a strong southerly wind blowing, and with the leader restored to his rightful place, it was time to ignore the wetlands and go for a walk round Killinallan Point, an extensive area of dunes, some mobile, some stable and well-vegetated, and the whole noted for its orchids, a particular passion of the leader! We started in an area of well-grazed short turf, carpeted with *Thymus polytrichus* (Wild Thyme) *Euphrasia* sp. (Eyebrights) and *Lotus corniculatus* (Bird's-foot Trefoil), plus *Centaureum erythraea* (Centaury) and *Gentianella campestris* (Field Gentian), where the *Coeloglossum viride* (Frog Orchid) were so abundant that it was impossible to walk around without treading on them. In the same area were perhaps 100 or more spikes (mostly over, but some still in flower) of *Anacamptis pyramidalis* (Pyramidal Orchid). We then moved a short distance, past a large stand of *Schoenus nigricans* (Black Bog-rush), to one of two colonies of *Epipactis palustris* (Marsh Helleborine), a rare plant in Scotland and restricted to just four 10km squares in the 'Atlas'. The first colony, found in 1988, growing in a damp area among the dunes, has up to now been the smaller of the two, with a maximum count of 30-40 flowering spikes, though the number of plants runs into hundreds. This year was the best ever, with about 150 in flower, as well as a scattering of *Dactylorhiza incarnata* (Early Marsh-orchid), *D. fuchsia* (Common Spotted-orchid) and *Listera ovata* (Twayblade). Unusually, the second site, discovered in 1994, was doing much less well. There have been over 60 flowering spikes here, but a careful search revealed just 13. We then moved down to the beach, walked round the Point and along the 2km strand, before turning back inland and immediately finding a small area of grassland containing at least another 100 flowering *Anacamptis pyramidalis*. We then followed a burn back to the cars, having enjoyed an invigorating walk of several kilometres and some excellent plant finding, all good prepara-

tion for an evening at Malcolm's house and a nice meal cooked by Malcolm's wife, Carol. The participants were also able to admire Malcolm's lawn, a good part of which has been colonised by *Pratia pedunculata* (Blue Star Creeper), attractive, but definitely an alien invader!

Thursday 31st July – Gruinart Flats

On a mostly overcast but fine day, we returned to the Gruinart Flats and compiled plant lists for three fields which had been banded during the mid-1990s. Standing water existed in two of them, while the others had filled ditches and occasional hollows. We also looked at some of the drier parts of the fields and notched up several plants not seen on the first two days.

Friday 1st August – Coul Farm

This was the last day of the meeting, and one during which we planned to complete the remaining bits of the monad not covered on Tuesday. However, as earlier in the week, the weather dictated otherwise, and although we started out in almost dry weather, by lunch-time we were experiencing driving rain with no sign of a break. As we were right out on the coast and so very exposed to the elements, we gave up and beat a squelchy retreat to the cars. We had done pretty well in the morning, despite the deteriorating conditions, with a good list of plants from coastal turf, rocky outcrops and numerous shallow ditches, the latter containing the charming *Baldellia ranunculoides* (Lesser Water-plantain), not previously found away from three or four lochs, the nearest 11km distant; as well as plenty of *Anagallis tenella* (Bog Pimpernel), a plant always guaranteed to raise the spirits. On the way back to the cars, we managed a new site for *Juniperus communis* (Juniper), a plant on which grazing stock has had a serious effect.

Despite having to curtail activities because we were too hot one day and too wet just four days later, I would like to thank the participants for their company and botanising skills in all weathers; and the RSPB reserve manager is delighted with his new plant lists.

Clatford Arboretum N. Wiltshire (v.c.7) 27th July

JACK OLIVER

There were 12 attendees and a full span of ages, with three students, to study mainly willows and poplars, but with asides to other tree species. The full possible Salicaceae count totalled 28 *Salix* and 24 *Populus* taxa, some occurring naturally near the banks of the River Kennet, but others introduced.

Two willow diseases, scab and black canker, have been influencing the Kennet willows west of Marlborough over the past 60 years. In general, the susceptible *S. fragilis* (Crack Willow) trees have been limited or even suppressed in favour of the more beautiful and resistant *S. alba* (White Willow). Other common *Salix* taxa included *S. ×sericans* (Broad-leaved Osier), *S. viminalis* (Osier), *S. caprea* (Goat Willow), *S. purpurea* (Purple Willow) and *S. triandra* (Almond Willow). The two osiers, especially *S. ×sericans*, are two of the five willow taxa in the arboretum which can be used for biomass production. Broad-leaved Osier is of special interest as one of the very few plants that can thrive year-round in water or equally well on thin, dry, dusty chalk soils in Wiltshire. I fully concurred with John Burnell, who proffered *Solanum dulcamara* (Woody Nightshade) as the other woody plant with this double capability.

The one veteran White Willow had fallen decades since, with secondary and tertiary re-rooting. However, the biggest, most vigorous and perhaps most attractive willow was *S. alba caerulea* (Cricket-bat Willow), originating from Norfolk, now world-wide, with upright trunk, silvery-blue foliage and very rapid growth. Some members of the group would have given the prize to the Chinese *S. babylonica* (True Weeping Willow), even more graceful than the derived familiar hybrid *S. ×sepulcralis chrysocoma* (Golden Weeping Willow); the two easily compared in the arboretum.

The weather on these Marlborough Downs is too harsh for *Eucalyptus viminalis* (Ribbon Gum) and *E. globulus* (Southern Blue-gum),

but the arboretum had representatives of the other broad-leaved tree taxa ultimately capable of the greatest heights in the British Isles (over 40–45m): *Tilia ×europaea* (Lime), *Platanus ×hispanica* (London Plane) and four *Populus* taxa – *P. ×canadensis* (Hybrid Black Poplar), *P. ×canescens* (Grey Poplar), *P. ×generosa* (Generous Poplar) and *P. trichocarpa* ‘Fritz Pauley’ (‘Mount Baker Poplar’, a variant of Western Balsam-poplar) – were all thriving, the last in particular starting to rocket skywards, its huge leaves with their silvery undersides highly conspicuous.

We spent some time discriminating young *Populus nigra betulifolia* (native Black Poplar) from some *P. ×canadensis* hybrids – not easy. Complex compound triple or quadruple hybrids like *P. ×canadensis* ‘Eugenii’ (Carolina or Eugene’s Poplar), after all, may contain only 3/16th or less American ancestry.

As well as the Cricket-bat Willow, of Norfolk ancestry, the arboretum held young specimens of other trees especially associated with the British Isles, including most of the endemic *Sorbus* (Rowans and Whitebeams). The two original surviving bi-pinnate mutants of *Pterocarya stenoptera* (Chinese Wingnut), the fern-leaf variant from Mount Pleasant in Gloucestershire, are near the west entrance, with their huge, unique and beautiful ferny leaves, the leaflets symmetrically organised and parallel in two planes. We saw a young *Quercus robur* ‘Cristata’ (Cluster Oak), endemic to Savernake Forest, an extreme form of Pedunculate Oak. I exercised my opinions in favour of *×Cupressocyparis leylandii* (Leyland Cypress), the extraordinary inter-generic hybrid which had arisen naturally in four different parts of the British Isles, including Wales, Dorset and Ulster, and nowhere else in the world. This is the best anti-pollution plant, trapping carbon particulates, sulphur dioxide and the different nitrogen oxides, as well as very effectively damping noise, all the year

round, unlike London Plane, which was held up as the anti-pollution tree *par excellence*.

Apart from the Wiltshire endemic *Prunus ×fruticans* (a hybrid sloe-damson with ferocious thorns), we spent little time on the

Rosaceae trees. Attention was mainly focused on 30 or more Salicaceae taxa, including very difficult hybrids, most of the group maintaining animation from 10 a.m. to 5.30 p.m.!

Burlish Top, Worcestershire (v.c.37), 2nd August

BERT REID

Eight members attended this field meeting to look at the plants of Burlish Top, one of a series of heathland areas between Bewdley and Kidderminster. The site lies on Triassic sandstones, creating a landscape and flora unusual for Worcestershire. Burlish Top was used during the second world war as a military hospital site, and the remains of concrete paths and hut bases are still visible. The site is mainly grass heath, with smaller areas of dwarf shrub heath and significant areas of secondary woodland. It is a local nature reserve, managed by Wyre Forest District Council, which has done considerable work in clearing scrub to maintain and improve the botanical importance of the site.

We met at Blackstone picnic place and walked about 1km to Burlish Top, stopping on the way at a field of barley stubble with a good population of *Echium plantagineum* (Purple Viper's-bugloss), abundant *Spergula arvensis* (Corn Spurrey) and a small patch of *Scleranthus annuus* (Annual Knawel). The *Echium* is new to the area, with three recent records of strong populations in arable. Earlier records were all casuals from waste ground, dumped rubble and gravel pits.

Once on the site, *Ornithopus perpusillus* (Bird's-foot) was common and widespread in typical acid grassland, with plants such as *Rumex acetosella* (Sheep's Sorrel), *Galium saxatile* (Heath Bedstraw) and *Deschampsia flexuosa* (Wavy Hair-grass). The old hospital remains have some local rarities, and we found good examples of *Filago minima* (Small Cudweed), *F. vulgaris*

(Common Cudweed), *Potentilla argentea* (Hoary Cinquefoil), *Spergularia rubra* (Sand Spurrey) and more *Scleranthus annuus*. An interesting feature here is the persistence of many long-standing populations of garden plants, such as *Sedum album* (White Stonecrop), *Cerastium tomentosum* (Snow-in-summer) and *Lathyrus latifolius* (Broad-leaved Everlasting-pea).

The grassland merges into heathland, with much *Ulex gallii* (Western Gorse) and *Calluna vulgaris* (Heather). On the eastern side of the site is an area of very dry, loose sand, with an interesting xerophytic flora. We lunched here among a large population of *Corynephorus canescens* (Grey Hair-grass) and *Jasione montana* (Sheep's-bit). The *Corynephorus* is rare inland and of uncertain provenance here, but is known from several sites resembling coastal sand dunes in a group of seven 1km squares. A new plant for the site was *Agrostis vinealis* (Brown Bent), surprisingly scarce in Worcestershire.

The afternoon was spent in a number of marginal habitats, including ruderal edges and a small pond. Returning through the old hospital site, we found the hybrid *Cerastium arvense* (Field Mouse-ear) × *C. tomentosum*, long known here, although the *C. arvense* parent has not been seen since 1989. Finally, we returned to the cars, taking a short detour to see *Allium oleraceum* (Field Garlic) and *Anisantha diandra* (Great Brome on a trackside bank). The day produced well over 200 taxa, including several nationally declining and locally scarce species.

Ballyhoura and Galty Mountains, Co. Limerick (v.c.H8), 16th and 17th August

SYLVIA & JULIAN REYNOLDS

The Limerick field meeting was prefaced by a severe weather alert for the weekend! Nevertheless, three members joined the leaders in a downpour on Saturday for the long wet walk up to Black Rock (516m) at the east end of the Ballyhoura Mountains. Patches of *Pinguicula grandiflora* (Large-flowered Butterwort) were seen at the edge of the forestry roads, probably an introduction in this part of the county. To everyone's surprise, the rain stopped as we reached Black Rock.

The main aim of the meeting on the first day was to record the flora of the conglomerate tors on the summit. *Luzula sylvatica* (Great Wood-rush) grows densely around the tors and many of the same species grow on the tors as occur in the surrounding degraded blanket bog/wet heath, e.g. *Calluna vulgaris* (Heather), *Vaccinium myrtillus* (Bilberry), *Deschampsia flexuosa* (Wavy Hair-grass), *Carex binervis* (Green-ribbed Sedge) and *Galium saxatile* (Heath Bedstraw). Other species on the tors included *Polypodium vulgare* s.s. (Polypody), *Rumex acetosella* (Sheep's Sorrel), *Festuca ovina* (Sheep's-fescue) and, more sparingly, *Melampyrum pratense* (Common Cow-wheat) and *Solidago virgaurea* (Goldenrod).

Particular attention was paid to the crevices and damp shaded places beneath overhangs. Some *Hymenophyllum tunbrigense* (Tunbridge Filmy-fern) had been found here previously, but this time it was *H. wilsonii* (Wilson's Filmy-fern) which appeared more frequent. Both species intermingled in one place. *Cystopteris fragilis* (Brittle Bladder-fern) was seen again in

a deep horizontal crevice, also *Dryopteris aemula* (Hay-scented Buckler-fern) in another crevice. Altogether 26 species were recorded on the tors, including nine ferns and *Huperzia selago* (Fir Clubmoss). One small plant of *Osmunda regalis* (Royal Fern) was unexpected among dense *Calluna* away from the tors.

The following day, a further three members arrived. The aim was to record in Pigeonrock Glen on the south side of the Galty Mountains and to explore extensive north-facing bluffs at about 450m in the valley. As this area is heavily grazed by sheep, we concentrated on the less accessible places. A good find early on was *Meconopsis cambrica* (Welsh Poppy) by the stream. Then the group split up to explore the bluffs. The second good find of the day, again by John Conaghan, was *Saxifraga hypnoides* (Mossy Saxifrage) on a dripping rock face with *Chrysosplenium oppositifolium* (Opposite-leaved Golden-saxifrage) and some *Valeriana officinalis* (Common Valerian). Also seen were dense patches of *Hymenophyllum wilsonii*, scattered *Huperzia selago* and some *Umbilicus rupestris* (Navelwort).

After only two hours out it became very wet and we had to retreat to The Three Counties pub in Kilbeheny where the management treated bedraggled members to a free second pot of tea! Another unexpected bonus was to see first copies of Paul Green's *Flora of County Waterford*; and it was Paul on his way to the field meeting who found the grass *Lolium ×boucheanum* (*L. perenne* × *L. multiflorum*) on a new motorway bank – an addition to the Limerick flora.

Amberley Wild Brooks, West Sussex (v.c.13) 23rd August

FRANCES ABRAHAM & ALAN KNAPP

On one of the few sunny mornings in August, 19 members gathered on the track leading north from Amberley village onto Amberley Wild Brooks. The Wild Brooks is an area of water meadows and ditches to the east of the River Arun in West Sussex, with the South Downs on the southern side. The site is an SSSI, and much

of it is nature reserve owned by the Sussex Wildlife Trust and the RSPB.

The meeting started with Frances Abraham and Alan Knapp giving a brief history of the Brooks and a short description of the day's programme. We then moved on to our first stopping place beside the drainage ditches,

which are the habitat for the majority of the interesting species in the area. This first stop revealed a variety of common aquatics including *Elodea nuttallii* (Nuttall's Pondweed), *Glyceria maxima* (Reed Sweet-grass), *Lemna gibba* (Fat Duckweed), *Lythrum salicaria* (Purple Loosetrife), *Spirodela polyrhiza* (Greater Duckweed), *Sagittaria sagittifolia* (Arrowhead), *Stachys palustris* (Marsh Woundwort) and *Veronica catenata* (Pink Water-speedwell). We were especially pleased to find *Lemna gibba* as, although known from this area in the past, it had not been seen for some time. Further along an increasingly wet and slippery track we reached a side channel with a dense mass of *Sagittaria sagittifolia*. David Streeter demonstrated the key distinguishing features of the leaves of *Berula erecta* (Lesser Water-parsnip). A little further on, an area of open water by a sluice produced the first sighting of *Potamogeton acutifolius* (Sharp-leaved Pondweed), which, although described as critically endangered in the Red Data List, is plentiful in many of the ditches in this area. The characteristic features of a very flattened stem and strongly acuminate leaf tip were shown. In the same place we were pleased to find a good patch of *Groenlandia densa* (Opposite-leaved Pondweed), a species which has recently declined significantly in Sussex.

A detour toward the bank of the River Arun produced *Potamogeton natans* (Broad-leaved Pondweed), *P. pectinatus* (Fennel Pondweed), *Rorippa sylvestris* (Creeping Yellow-cress) and *Sium latifolium* (Greater Water-parsnip), but of most interest were a number of plants of *Schoenoplectus ×kuekenhalianus* (*S. triqueter* × *S. tabernaemontani*) (Triangular Club-rush × Grey Club-rush) growing on the very edge of the river amongst *Schoenoplectus lacustris* (Common Club-rush). Unfortunately *S. triqueter* has long gone from the Arun valley but *S. tabernaemontani* is still present, although not in this area. On returning to the main track, Frances Abraham was soon able to point out plants of *Leersia oryzoides* (Cut-grass), which is not uncommon on ditch edges on the Brooks. As is typical with this species the inflorescence was hidden within the upper leaf sheath, but opening this up revealed the florets. We were also able to feel the leaves and understand why

the English name is so appropriate. Nearby we got our first view of flowering *Hydrocharis morsus-ranae* (Frog-bit), previously seen only as floating leaves. As we moved on, other species in and beside the ditches included *Carex pseudocyperus* (Cyperus Sedge), *Elodea canadensis* (Canadian Pondweed) and *Epilobium palustre* (Marsh Willowherb), the last being very rare in Sussex.

We retraced our steps southwards to Amberley village, noting two large patches of *Lathyrus sylvestris* (Narrow-leaved Everlasting-pea) beside the track, and returned to our cars for a short drive to the eastern end of the site, known as Rackham Brooks. After lunch at Rackham, a short walk took us to another area of damp grassland criss-crossed with ditches. One of the wider ditches contained masses of *Potamogeton acutifolius* and, after many attempts with the grapnel, a few tiny plants of *Potamogeton trichoides* (Hairlike Pondweed) were also found. *Leersia oryzoides* was scattered along the ditch edge, and one plant had the inflorescence exerted from the leaf sheath. Other finds of interest were a few small patches of *Stellaria palustris* (Marsh Stitchwort), which is normally more frequent in this area, and several small colonies of *Persicaria minor* (Least Water-pepper). In addition, a number of commoner species typical of wetlands, such as *Bidens cernua* (Nodding Bur-marigold), *B. tripartita* (Trifid Bur-marigold), *Eleocharis palustris* (Common Spike-rush), *Mentha ×verticillata* (Whorled Mint) and *Rorippa palustris* (Marsh Yellow-cress) were seen. In several places the leaves of *Oenanthe aquatica* (Fine-leaved Water-dropwort) were present, but no flowering plants could be found. As we returned along another ditch we saw the leaves of *Potentilla palustris* (Marsh Cinquefoil) and, in the adjacent grassland, there were a few plants of *Carex disticha* (Brown Sedge), with the remnants of their flowering spikes still present. Unfortunately the ditches where *Baldellia ranunculoides* (Lesser Water-plantain) has its only West Sussex site were choked with vegetation and there was no hope of re-finding it this year.

The leaders would like to thank the Sussex Wildlife Trust and the RSPB for permission to visit reserve areas, and David Streeter for his invaluable help.

BOOK NOTES

DR JOHN EDMONDSON, 243 Pensby Road, Heswall, Wirral, CH61 5UA

Tel: 0151 342 8287; a.books@mac.com

The following titles are to be reviewed in the next issue of *Watsonia*. Also included are brief notices of books that are not being given a full review (marked *).

*CLARKE, PHILIP A. *Aboriginal plant collectors: botanists and Australian aboriginal people in the nineteenth century*. H/b. New South Wales: Rosenberg, 2008. ISBN: 978 187705 868 4.

A refreshingly different view of 19th century botanical exploration in Australia, this book studies the impact of indigenous people on the process by which settlers and explorers gained knowledge of the economic uses of Australia's natural plant resources. Often portrayed as silent partners, the natives who accompanied Australian plant explorers are shown to have provided vital local support and expertise. The deaths of the explorers Burke and Wills is shown to have been caused by ignorance of the poisonous quality of the green nardoo (a small arid-zone fern), whereas indigenous people were aware of the need to process the plant to reduce the levels of thiaminase.

*COX, PETER & HUTCHISON, PETER: *Seeds of adventure; in search of plants*. Garden Art Press, Woodbridge, 2008. ISBN: 978 1 870673 58 7.

*LANCASTER, ROY: *Plantsman's paradise; travels in China*. Garden Art Press, Woodbridge, 2008. ISBN: 978 1 85149 515 3.

Two books published almost simultaneously, and with very similar wrappers, have together cornered the market in botanical travelogues of the Himalayas and China. The first includes a chapter on an early expedition to Turkey by the 'two Peters', but otherwise features expeditions to India, Tibet and China proper, while the second is a revised edition of the book originally published as *Travels in China: a plantsman's paradise* in 1989, reissued with an addendum in 1993.

Seeds of adventure has alternate chapters written by each of the two authors; these are very well illustrated with a mix of scenery, human interest and plant close-ups, and the quality of the photography would not disgrace a professional. Both authors have private Scottish estates where

the fruits of their efforts are being grown, and a thoughtful epilogue by Peter Hutchison reminds us that plants unknown to science can be well known to local people, but need foreign expertise to bring into cultivation.

Roy's *Travels in China* is already well known to many readers, but the colour photographs (and very occasional monochromes) which now complement the text add hugely to the book's desirability. His book is a little more descriptive of the plants, and less anecdotal, than the Peters', and puts his new introductions into an historical context. Both books are well indexed; the first has a gazetteer of place names, and the second includes a useful biographical appendix of botanists, plant explorers and authors.

DELFORGE, PIERRE *Orchids of Europe, North Africa and the Middle East*. 3rd edition, 2006. London: A. & C. Black. ISBN 0-7136-7525-X.

*HANNAH, ANGUS C. *Flowers and ferns of Great Cumbrae: a check-list with notes*. Rothesay: Buteshire Natural History Society, 2008. ISBN: 0 905812 17 4.

This 40-page booklet summarises two hundred years of botanical observations on this, the smallest of the three main islands in the Firth of Clyde. Compiled by the BSBI Vice-county Recorder for Clyde Islands, it provides notes on 684 species, of which 558 have been seen since 1996. Each entry includes an assessment of frequency, notes on habitat preferences, and a figure indicating the number of 1 km squares (or parts of squares) in which the plant has been recorded. A similar booklet was published earlier by the same author on the Flora of the Isle of Bute, and work continues on the Threatened Plants of these islands.

*HARRAP, SIMON *Flowers of the Norfolk coast*. Norfolk Nature, Melton Constable, 2008. P/b. ISBN: 978 0 9558579 0 4.

This is a fine little book, aimed at the general naturalist and interested visitor to the Norfolk coast. It is printed throughout on high quality gloss paper, giving a crisp and colourful look to the copious illustrations. It covers some 77 species of plant that occur in various specific coastal habitats. He includes all the sea-lavenders (*Limonium* species), and in doing so has allowed them to be compared,

resulting in a very useful adjunct to identification. He also includes the oraches (*Atriplex* species) and the maritime couch grasses (*Elytrigia* species). Each full species account covers identification, habitat and distribution, while some related or similar species are given briefer accounts alongside. The photographs provided are specially useful. The booklet is rounded off with an introductory section on the habitats covered, a brief piece on conservation, and finally a glossary and index. I only came across one evident error – the scientific name for Tamarisk is given as ‘*Tamarisk*’, not *Tamarix*. Overall, the booklet is both attractive to its intended audience, and also useful, even for experienced botanists. T. JAMES LAMBINON, J., DELVOSALLE, L. & DUVIGNEAUD, J. *Nouvelle Flore de la Belgique, du Grand-Duché de Luxembourg, du Nord de la France et des régions voisines (Ptéridophytes et Spermatophytes)*. 5th edition. Meise: Jardin Botanique National de Belgique, 2004. Hardback. ISBN: 90 72619 58 7.

*PORLEY, RON *Arable bryophytes: a field guide to the mosses, liverworts and hornworts of cultivated land in Britain and Ireland*. P/b. Old Basing: Wild Guides, 2008. ISBN: 978 1 903657 21 8.

Although the BSBI’s scope doesn’t normally extend to cover bryology, an exception must be made for this exceptionally user-friendly and comprehensive guide to the mosses (etc.) of arable land in these islands. The author is Natural England’s principal bryologist, and was the instigator of the national survey of bryophytes of arable land inspired by the late Harold Whitehouse. He is perhaps best known as the author of the *New Naturalist* volume on Bryophytes (2005). The present book, soft-bound in a loose plastic cover, is extremely well illustrated with macro-photographs, distribution maps and occasional line drawings, with

taxonomically significant features such as rhizoidal tubers given special emphasis. An at-a-glance table is provided listing each species and including its conservation status. English names are given in addition to the scientific names; the critically endangered Many-fruited Beardless moss, for example, is now known worldwide from only two sites in Cornwall, though its distribution once included France as well as other sites in S.E. England.

PRATT, EDWARD A. *The wild flowers of the Isle of Purbeck, Brownsea and Sandbanks*. P/b. Luton: Brambleby Books, 2008. ISBN 978 0 9553928 4 9.

*PYAK, A.I. *et plur. al. Endemic plants of the Altai mountain country*. H/b. Old Basing: Wild Guides, 2008. ISBN 978 1 903657 22 5.

This almost pocket-sized flora packs a great deal of information into its 368 pages. Merely to describe the contents would take a couple of paragraphs, and to name the 11 authors a couple of lines. It is the first book I’ve seen with forewords in English, Russian, Kazakh and Mongolian. This trans-national World Heritage Site covers over 600,000 square kilometres and extends from Russia in the north and Kazakhstan in the west into Xinjiang Province, China in the south and Mongolia to the east. In common with the Iran-Turkmen border, political instability and security concerns have limited the human impact, encouraging the retention of a high level of plant diversity. With good descriptions and habitat data, almost full-page colour photographs, simplified distribution maps and statements of conservation status, this book fulfils all the requirements for the visitor who wishes to appreciate the Altai’s extraordinary endemic vascular flora.

TENNANT, DAVID & RICH, TIM *British alpine Hawkweeds*. London: BSBI, p/b. 2008. ISBN: 978 0 901158 39 0.

***Flora News* for Hampshire available online**

MARTIN RAND, 21 Pine Road, Chandlers Ford, Hampshire SO53 1LH
(vc1recorder@hantsplants.net)

Readers may like to know that all back copies of *Flora News*, the newsletter of the Hampshire Flora Group, are available online as Acrobat (PDF) files under the menu item ‘Flora Group Newsletters’ at <http://hantsplants.net>. As well as meeting reports and many interesting articles, they include notable vascular plant records for v.c.11 and v.c.12,

compiled by the vice-county recorders. An index of all issues up to Spring 2008 is also available. This includes all species noted, and a gazetteer of all place names used (with a grid reference).

New issues of *Flora News* normally appear in January and August each year, and become available on the web site a few days after publication.

John Ounsted's botanical library, notebooks and correspondence

SIMON J. LEACH, 15 Trinity Street, Taunton, Somerset, TA1 3JG
(simonleach@phonecoop.coop)

It was John Ounsted's wish that his botanical library should be left to the BSBI. Members will, I hope, be pleased to learn that the bulk of the collection has now been passed to the Society and is being added to the growing number of volumes housed in its library in Shrewsbury (contact Alex Lockton for details). My thanks to Mike and Rosie Ounsted for their considerable help in sorting, listing and packing up these books, and then transporting them from the New Forest to Taunton.

About two years ago John asked me to look after two folders of pressed specimens and a box of botanical correspondence, including field notebooks relating to several trips organised by the BSBI's Junior Activities Committee. The specimens – many of them, it has to be admitted, not in the best of condition – were collected mainly between about 1942 and 1955. There are quite a few rare and scarce taxa but, as far as can be judged from the labels, they were mostly gathered from well-known localities. I have kept hold of these, for now, along with John's botanical 'journal' which comprises seven volumes – hardback exercise books – spanning 57 years of plant recording, from February 1942 to May 1999. These notebooks are full of illuminating (and often humorous) tales, liberally dosed with mouth-watering details of the more interesting plants he came across in his travels. Many records include population counts, lists of associated species, grid references and sketch maps. John, it seems, had a particular fondness for sketch maps as a means of recording, and communicating, the whereabouts of (usually rare) species; and these would be drawn not just in the notebooks but on any scrap of paper that came to hand: the backs of envelopes, an address label, a membership card, a till receipt, a paper napkin! My intention (this winter...?) is to catalogue some of the more interesting records, then get them checked to see to what extent they are already 'in the system'.

One of the unexpected joys of writing John's obituary has been the way that members have written to me about their own memories. A recent email from John Hodgson I found especially interesting. In 1957, aged 12, he met J.O. when attending Quaker Meeting with his mother. He had begun to show an interest in botany, and J.O. invited him along on a school trip to Frensham Ponds, an extensive area of sandy heathland and open water close to the Hants/Surrey border.

'At the time my interest in plants was akin to stamp-collecting. I was mainly interested in seeing new species, and still remember being put outside my comfort zone by having to read out the scientific text of Bentham & Hooker, as we tried to identify some plant or other... At one stage I wandered off and found *Poa bulbosa* – a new vice-county record for Surrey! Unfortunately, I never went on another Leighton Park outing. J.O. invited me, but... my headmaster felt I would benefit more from remaining in the classroom.'

Even so, that outing with J.O. clearly had the desired effect: later that year he joined the BSBI, and has been a member ever since!

There is no mention of the visit to Frensham Ponds in J.O.'s journal, but young John had evidently made quite an impression on 'John the Elder'. On 27 October 1957, '...a hint from John Hodgson...sent me over to Reigate Rubbish Tip where [in the company of Miss Morgan and David McClintock] we saw *Lolium temulentum*, *Chenopodium murale* and *Sisymbrium irio*.' A sign of the times, I guess, but how many of us these days would find ourselves heading off to visit a new site on the strength of a tip-off from a twelve-year-old? The mind boggles...

Members wishing to find out more about John Ounsted's journals and notebooks can get in touch at the email address above; and if anyone has ideas about what we ought to be doing with either these or the pressed specimens in the long term, please do let me know.

OBITUARY NOTES

MARY BRIGGS, 9 Arun Prospect, Pulborough, West Sussex, RH20 1AL

With regret we report the death of **Pat Hill-Cottingham** and we are grateful to Simon Leach for the following note:

We are very sorry to learn of Pat's death on 26 November 2008, aged 78. She was a renowned Somerset naturalist and a member of the BSBI since 1982. By profession a zoologist and teacher, she was a knowledgeable all-rounder with a keen interest in Somerset's wild plants. In the 1980s she became fascinated by ferns, in 1989 publishing *Somerset Ferns - A Field Guide*. She contributed to *The Atlas Flora of Somerset* (Green, Green & Crouch, 1997), was a passionate and determined conservationist, and was actively involved with both the Somerset Wildlife Trust and the Somerset Archaeological and Natural History Society; for the latter society she had been chair, for many years, of its Natural History Committee. She was well known on the 'lecture circuit', giving talks to local groups on such diverse topics as ferns, the Galapagos islands, giant tortoises, invertebrates, nature conservation, and climate change.

In the 1990s she discovered a rare water snail *Segmentina nitida* in a ditch on the Somerset Levels. There followed several years of meticulous ecological research, culminating in the award of a PhD from the Open University. Pat was senior editor of *Somerset's Wetlands: An Ever Changing Environment* (2006), a colourful and wide-ranging account of the wildlife and archaeology of the Somerset Levels and Moors. The volume quickly went out of print, but, to her evident delight, was recently reprinted. Pat was, as many will testify, a force to be reckoned with, and will be greatly missed by her family and by her numerous friends and colleagues in Somerset.

Also with regret we report the recent death of **Mr Stan Heyward**, and **Mrs Vera**

Heyward in 2007. Through a long membership they were quietly competent and reliable field recorders in West Sussex and together they contributed many records to the *Sussex Plant Atlas* (P.C. Hall 1980). In the Amberley Wild Brooks area they refound a number of plants thought at the time to be extinct in W. Sussex. Stan and Vera were part of a group still meeting from Oliver Buckle's original Botany classes. They will be sadly missed by their many friends.

It is also with much regret that we report the following deaths since the last issue: **Mr E Batten** of Halesworth, Suffolk, a member since 2002; **Dr P R Brough** of Basingstoke, Hampshire, a member since 1991; **Mr F N Haynes** of Hambledon, Hants, a member since 1954; **Mrs S J Heyward** of Worthing, W. Sussex, a member since 1972; **Mr P C Jowsey** of Midmar Aberdeen, a member since 2007; **Dr A Lawalree** from Belgium, an honorary member since 1955; and **Mr T Russell** of the Shetland Isles, a member since 1997.

Although not a member, we regret having to report the death of **Ruud van der Meijden**, and David Pearman writes:

We are very sorry to have to report the death, in 2007 at the age of 62, of Ruud van der Meijden, who was the leading expert on the European flora and was based at the University Herbarium at Leiden in the Netherlands. He was the collaborator with Clive Stace on the latter's *Interactive Flora of the British Isles*, and editor of four editions and two interactive versions of Heukels' *Flora van Nederland*. He was one of our few active European contacts, and we understand a number of *Gorteria* will shortly commemorate him. He is very badly missed in Holland, and by us.

RECORDERS AND RECORDING

Panel of Referees and Specialists

MARY CLARE SHEAHAN, 61 Westmoreland Road, Barnes, London SW13 9RZ;
mc_sheahan@hotmail.com

We have three new referees: Nigel Blackstock, who will referee the *Carex flava* group, Chris Davis Malvaceae and Richard Jinks *Populus*.

In addition Michael Foley is adding *Oenanthe* to his other taxa, and Cameron Crook is adding *Acer*.

Mary Briggs is retiring from giving advice on foreign floras, and we thank her for her help to members over many years.

As usual there have been several changes of address, and also to instructions for sending in specimens, so please check the entries in *BSBI Year Book 2009* carefully before submitting material for identification.

Panel of Vice-county Recorders

DAVID PEARMAN, *Algiers, Feock, Truro, Cornwall, TR3 6RA*; 01872 863388

New Recorders

V.c.47 (Monts.). Dr A.K. Thorne, Churton House, Church Pulverbatch, Shropshire, SY5 8BZ. Mrs M. Wainwright, recorder since 1985, retires.

V.c.64 (Mid-W. Yorks). Vacant. Mrs P.P. Abbott, recorder since 1987, retires.

V.c.68 (N. Northumb.). Mr C. Metherell, to be sole recorder. Prof. G.A. Swan, recorder since 1961, retires.

V.c.75 (Ayr.). Ms G.J. Smart to be joint recorder (*all correspondence to Mr Lang*).

V.c.92 (S. Aberdeen). Vacant. Dr R.J. Mitchell, recorder since 2003, retires.

V.c.105 (W. Ross) Mr D.R. Donald, 16 Midtown of of Inverasdale, Poolewe, Ross-shire, IV22 2LW. Dr J.H.C. Fenton, recorder since 2005, retires.

V.c.111 (Orkney). Mr J. Crossley, North Flaws, South Ronaldsay, Orkney, KW17 2RW. Miss E.R. Bullard, recorder since 1963, retires.

V.c.H30 (Co. Cavan). Vacant. Mr P. Reilly, recorder since 1984, retires.

V.c.H32 (Co. Monaghan). Vacant. Mr A.G. Hill, recorder since 2001, retires.

I would like to thank all those retiring for their sterling efforts over so many years. I try not to single out specific recorders, but I cannot pass over the service of Professor George Swan and Miss Elaine Bullard for their wonderful help over so many years.

Changes of address

V.c.71 (Man). Ms L. Moore, Gloucestershire Centre for Environmental Records, Church House, Standish, nr Stonehouse, Glos, GL10 3EU.

V.c.13 (Co. Carlow). Mrs B. Hickey, Cushinstown, Foulksmills, Co. Wexford, Ireland.

Change of email

V.c. 36 (Herefs.). Mr P. Garner, Lea Cottage, 233 West Malvern Rd, West Malvern, Worcs, WR14 4BE (*petergarner@live.co.uk*)

Scottish Vice-county Recorder Vacancies

JIM MCINTOSH, BSBI Scottish Officer, *RBGE, 20A Inverleith Row, Edinburgh EH3 5LR*;
j.mcintosh@rbge.ac.uk

We are looking for keen, fit and reasonably competent botanists to fill a number of existing and forthcoming Vice-county Recorder vacancies, which will arise when the present recorders retire. We are also looking for people to either work singly or jointly, long-term or temporarily, to provide a handover with a retiring recorder. Working in such partnerships has many advantages such as mutual support, sharing the workload, learning from each other, etc. Living in or near the vice-county is an advantage, but is not essential. Some VCRs live remotely and operate very successfully, but you would have to be able to spend significant time in the Vice-county each year.

The principal VCR task is the collection, validation and maintenance of vascular plant records in the Vice-county on behalf of the BSBI. Being a reasonable competent botanist is important, but knowing one's limits is even more important. No one can be an expert in all aspects of a county's flora, especially when just starting out as a recorder, and our referees are on hand to support and help on identifications and confirmations. BSBI staff and neighbouring and retiring VCRs will be happy to provide general advice and support. Competency with computers, particularly e-mail, the internet and MapMate,

would be highly desirable (although some training can be provided).

Vice-county Recorder Vacancy in South Aberdeenshire, v.c.92

The existing vacancy mentioned above is for South Aberdeenshire, v.c.92 where the present Vice-county Recorder, Ruth Mitchell, has tendered her resignation, for personal reasons. We would like to thank Ruth for her contribution to the BSBI.

This is one of the biggest, most interesting and diverse vice-counties in Scotland. It includes much of the catchments of the Dee and the Don from the east coast right up to some of our highest mountains in the west. It has important sand dune habitats (some soon to be built on), important remnants of Caledonian pine forest and extensive upland and montane habitats in the Cairngorm National Park. The last flora was published in Victorian times, and the vice-county will present a fantastic challenge to an enthusiastic recorder.

For further details of what a Vice-county Recorder's job entails, or if you are interested in this or similar vacancies, please contact me, by email or by post (addresses above). Please indicate which areas of Scotland you would be most interested in.

BSBI Vice-county Recorder for Orkney, Elaine Bullard retires

DAVID PEARMAN, Chairman BSBI Records Committee
JIM MCINTOSH, BSBI Scottish Officer

Elaine Bullard took on the vice-county recordership of Orkney in 1963, 45 years ago. She is one of the longest serving VCRs in Scotland and, at the age of 93, our most senior. Elaine's contribution to Orkney botany has been widely recognised, both locally and further afield. She was awarded an MBE in 1981 for services rendered to nature conservation in Orkney. In 2007 Heriot Watt University awarded her an honorary doctorate in recognition of her contribution to botany. She has always been keen to encourage others with recording. She was a founder member of the

Orkney Field Club, and has been its President for as long as its members can remember.

We are pleased to announce that John Crossley, one of the local botanists whom Elaine has encouraged, has agreed to take over the VCR role. We hope that the local recording group which Elaine built up over the years will continue to support the new recorder.

Members from across Scotland and beyond will want to join us in thanking Elaine and wishing her a long and happy retirement from her Vice-county Recorder duties.

NOTES FROM THE OFFICERS

From the Hon. General Secretary – *DAVID PEARMAN*

Algiers, Feock, Truro, Cornwall, TR3 6RA; Tel: 01872 863388; DPearman4@aol.com

Notice of resignation and appeal for a successor

I volunteered for this post just as I moved to Cornwall, which is a five hour journey from London. Because of the tremendous support from Gwynn Ellis and Peter Fry (and help too from John Swindells) the actual mechanics of the job are, I dare to say, not onerous, though the time one could put in is, of course, elastic!

If that was all I chose to involve myself in within the BSBI then I could continue, but this post, coupled with the Records Committee and working with the team of Kevin Walker, Alex Lockton, Bob Ellis and Jim McIntosh means that the number of meetings and the distance from here is just more than I want to do.

I say that the mechanics of the HGS post are not onerous, and that is true. I think I spend about a week or two a year on everything connected with the post, which works out at about an hour a week. In addition to the actual assistance from others my ability to do the job (and to do it in so little time) is aided by the fact that I know so many of the active members of the Society (including almost all of the Vice-county Recorders). A newcomer might not have that advantage, but that, after a learning curve, would be the bonus too!

For that is the fun of the post that one cannot quantify – knowing and meeting the people, and being one of the three key people at the heart of the Society (along with the President and the Treasurer). I cannot approach the industry and devotion that Mary Briggs put into the post, but even my modest efforts have brought personal rewards. There are, of course, meetings of Council and Executive to attend, but I feel somebody who wanted to be involved would think of those as part of the treat of being involved rather than a chore!

Would any member tempted by this please approach me. I have a little schedule of what

I do for this, and who helps to bring each part to fruition.

Members of long standing

Gwynn Ellis has kindly extracted a list of those who had been members for 60 years or more. Leaving aside Societies (whose numbers have shrunk alarmingly in recent years), there are 14 who joined in 1949 or before:

Mr R. Lewis, Dr C.D. Pigott MA PhD, Mr P. Taylor, Mr C.C. Townsend, Mrs G.M. Gent, Mr R.D. Meikle, Mr R.M. Payne, Miss A.P. Conolly, Mr D.J. Harberd, Prof J.K. Morton PhD, Dr D.E. Allen, MA FLS, Mr B.W. Ribbons BSc FLS, Mr C.A. Sinker and Dr L.H. Williams.

I trust they will not mind being so singled out. When I started thinking about this I was intending to list those who had been members for 50 years or more, since that seemed a long time knowing I have been one for a paltry 38 years. But I found there were another 106 in that category, so I wish them all well and many years of botanising!

Archives

As HGS I have in my temporary custody the Society's current Minute book, which commences in 1969, neatly spanning my membership. It is salutary to see many of the same problems exercising minds then (making our records and expertise available, agonising over whether we get involved in hands-on conservation issues, including work on the Lady's Slipper Orchid, as ever, or whether our Journals were too *recherché*). Others have gone away. It is one of the most surprising social changes of my generation that today nobody, really, picks flowers, whereas reams of minutes, booklets (including the Code of Conduct) and even the Wildlife & Countryside Act of 1982 were obsessed by this. I always feel the pendulum has gone too far the other way, and one of the reasons for giving up

taking courses (other than that I'm sure I wasn't any good at it) was the preciousness of being told I should not pick when I wanted to demonstrate.

One I do regret, as my predecessors did in 1970, is the lack of contact with European botanical societies. At Council last November we were discussing making our new and excellent *Callitriche* Handbook available to a wider audience. None of us present knew other than the odd name connected with any overseas Society, and it turned out that my best contact had, unbeknown to me, died, very young, 18 months ago. I note too, that with the death of Dr A. Lawalree we have only the estimable Bengt Jonsell as an honorary member from outside Britain and Ireland.

It is interesting too to see as Council members then, names that are still involved, 40 years on – Keith Ferguson (as HGS), Mary Briggs (as Meetings Secretary), Rodney Burton, Peter Green, Eric Greenwood, Geoffrey Halliday, Vernon Heywood, Alan

Newton, Tony Primavesi, Michael Proctor, John Richards and Norman Robson. Membership was 1800 (today almost 3000).

My eye was caught by an entry from when I was very new on Council (in 1992). Reporting on the Scarce Plants Project, the minutes state 'the good response...was largely due to DAP's unremitting coaxing and persuasion of laggards..'. Well, there is an epitaph with which many will have empathy and might even be tempted to substitute other verbs!!

And finally

I saw last week in some glossy Agency Nature Conservation report (the sort that goes on and on about people and has little about nature), a photo of *Drosera intermedia*, entitled 'Love-nest Sundew'! I thought this must be a seasonal typo, and idly wondered how it had passed the thought police, but a visit to Google revealed 145 references. Where did this gem come from, and why that taxon – I'd have thought that if you had to choose one then *D. rotundifolia* would be a far better candidate!

Coordinator's Corner

ALEX LOCKTON, 66 North Street, Shrewsbury, Shropshire, SY1 2JL; coordinator@bsbi.org.uk

Biodiversity Reporting

The Biodiversity Action Plan was supposed to be about action, but when it was launched some of the more sceptical ecologists speculated that it was the extra research into the chosen species, rather than work on the ground, that might prove to be the real benefit. With the latest reporting round under way, it would be interesting to see an analysis not of how the species are doing, but how the BAP itself is performing.

I can offer some anecdotal insights into its effect on the species I cover on the Threatened Plants Database. Chris John, of British Waterways, recently asked for the latest data on *Luronium natans* (Floating Water-plantain). It surprised me to discover that nobody was collecting data systematically, which is probably the simplest form of research there could be. Fortunately, lots of individuals around the

country are keeping detailed records, and several people were willing to pop out to sites to check on it, so it was not hard to get an up-to-date account.

It turns out that there has been some conservation success, mostly by British Waterways. They have delayed the restoration of some canals, and changed the way they restore others, to ensure the survival of this species. In fact there has been an increase in the canal populations over the last decade – an increase that can be largely attributed to the BAP and other legislation. There has also been a bit more survey work, especially in Wales. In England and Scotland the attitude is more ambiguous, as it seems the plant often occurs as short-lived metapopulations with the ability to disperse widely. This can make conservation very difficult, and even lead people to the mistaken conclusion that the plant is not

native in many of its sites, but no-one seems to have investigated this most important aspect of its ecology.

It was surprising to me, therefore, to conclude that while scientific research has not advanced much under the BAP, conservation action and serendipity have led to this species doing rather well. One-nil to the legislators; but I am not sure that other species will necessarily have a similar outcome.

The last year of Date Class 4

When we introduced the idea of recording in fixed date classes of one decade each, the year 2010 seemed a very long way off. Now, five years later, we are soon to be facing the prospect of starting a new recording period. Are we getting close to success with the current one, or is the level of recording just too low to warrant such an approach?

Looking at the map below, of *Plantago lanceolata* (Ribwort Plantain), we can see that most of England & Wales are now re-recorded in DC4 (post-2000), with Scotland and Ireland perhaps a little more patchy. The gaps are often places where there had been a recent flora, such as Cumbria. The proximity of DC5 (2010-2019) makes one appreciate that the Maps Scheme cannot be viewed in the same light as a one-in-a-century Atlas. You clearly cannot be expected to work incredibly hard for decade after decade. Instead we are looking for a steady programme of survey and monitoring that will lead to roughly equivalent data sets for each date class, so please see if you can get out to a few under-recorded hectads this year and make the maps as good as they reasonably can be. One of the main benefits of the Maps Scheme is the way it has improved our data flow and handling procedures – although there is still much progress to be made and there are always obstacles to be overcome. If any county recorders are finding this process completely impossible, they should contact Records Committee and ask for

help. We have had an excellent intake of new County Recorders in recent years, most of whom are highly computer literate, and good progress is being made in many counties.

FISCs again

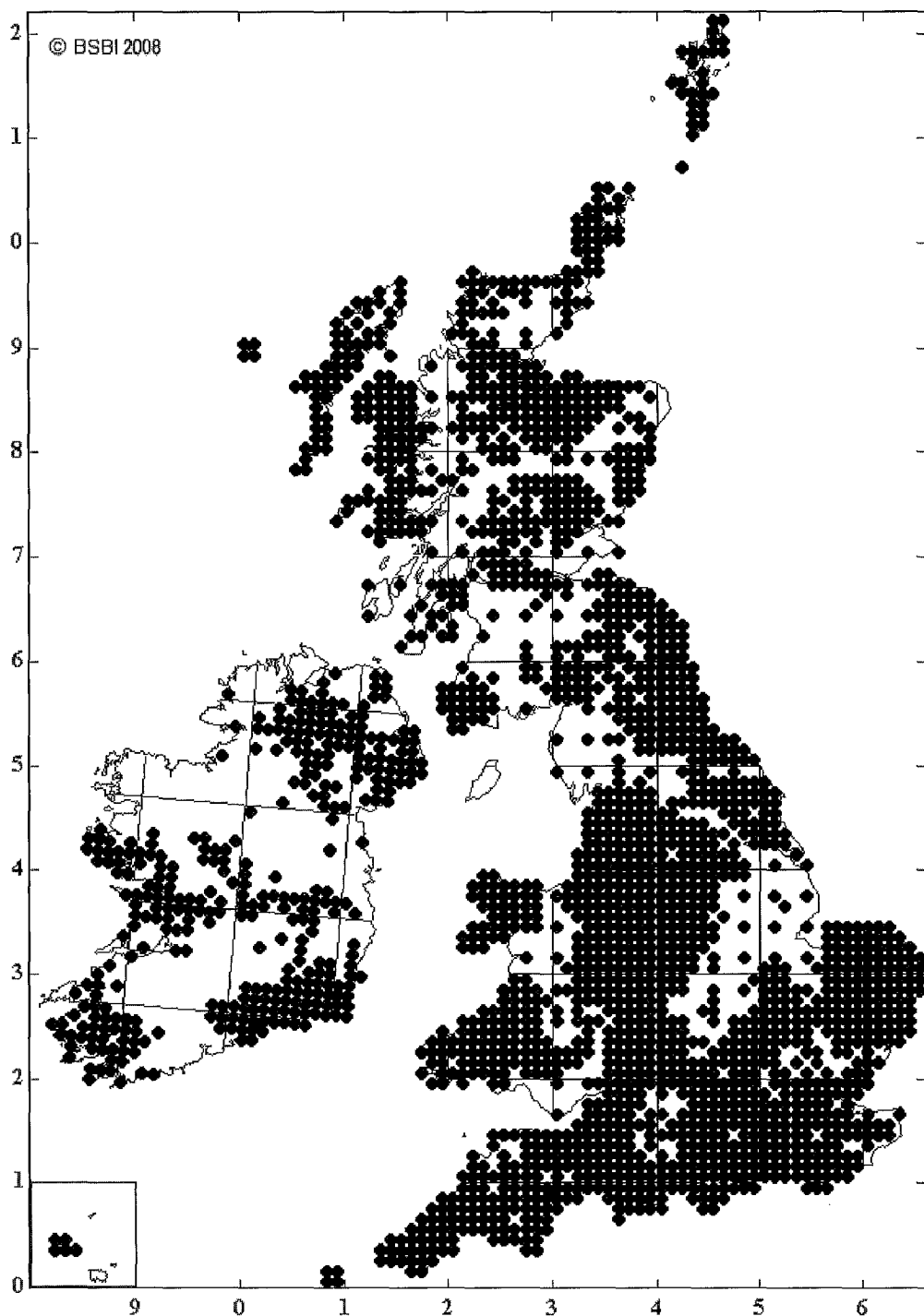
We ran a Field Identification Skills Certificate test for county recorders at the conference last September. It was well subscribed, and much enjoyed by all. For a County Recorder, most of all, it must be a nerve-racking experience, as your reputation and credibility are on the line. The results are confidential, though, and the outcome is not a pass or fail, but an assessment of your relative field skills – which is not the only criterion for a County Recorder anyway. I am used as the level 5 guinea pig against which to measure other people, but that only works if I am close to my home ground. If I were to travel to the coast, say, I am sure my rating would sink to something quite dismal.

This year we had two Level 6 surveyors who got more plants than I did in a site I know like the back of my hand. There was even a first county record. Humbling, isn't it? Even more interesting is the fact that nobody is flawless – there is no such thing as a surveyor who finds every single species in a site and makes no mistakes. All botanical surveys are a shade of grey.

Herbaria at Home

(<http://herbariaunited.org/atHome/>)

If anyone reading this has any spare time this winter, they might like to log on to Herbaria at Home and digitise a few specimens. It is a good way of improving your own knowledge of historical botanists and their activities, as well as testing your identification skills. The resulting records are much appreciated. It yields many interesting finds and even a steady flow of first county records. With almost the whole of the University of Birmingham herbarium now available, there is material from almost every county in the British Isles. Come and lend a hand to the world's biggest, most ambitious, and best herbarium digitisation programme.



Recording of *Plantago lanceolata* – an almost ubiquitous species at hectad level –
in Date Class 4 (2000+)

CHANGES TO LIST OF MEMBERS IN BSBI YEAR BOOK 2009

The following changes have been notified since the List of Members in *BSBI Year Book 2009* went to press.

New Members

108110	2008	O	Browne, Mrs L K, 40 Princess Street, Leamington Spa, Warks, CV32 4TZ, lois@loisandandy.com	38
108153	2008	O	Churchill, Ms M, 4 Highgrove Close, Bridgewater, Somerset, TA6 6UF	5
108171	2009	O	Doody, Miss A, 23(B) Rothsay Road, Bedford, MK40 3PT	30
108137	2008	O	Horth, Mr G G, 5 Sutton Close, Sutton Poyntz, Weymouth, Dorset, DT3 6LJ	9
108064	2008	J	Jones, Miss P J, 20 Faryfield Avenue, Great Barr, Birmingham, West Midlands	38
108072	2008	O	Marrs, Prof R H, Applied Vegetation Dynamics Lab, School of Biological Sciences, University of Liverpool, Liverpool, L69 7ZB, calluna@liv.ac.uk	59
107742	2008	O	Medlicott, Miss A L, 9 Trevor Road, Beeston, Nottingham, NG9 1GR	56
108161	2009	O	Middleton, Mr J R, Flat8, 30 Albermarle Crescent, Scarborough, North Yorkshire, YO11 1XX, jimthetall@hotmail.com	62
108056	2008	O	Moxey, Mrs P A, Chase House, Greensted Road, Chipping Ongar, Essex, CM5 9LA, tricia_moxey@yahoo.co.uk	18
108099	2008	F	Pearce, Dr T G, 44 Green Lane, Lancaster, LA1 2EZ	60
108145	2008	F	Read, Ms J, 5 Sutton Close, Sutton Poyntz, Weymouth, Dorset, DT3 6LJ	9
108129	2008	O	Shackleton FRGS, Mr J, Lakeview, Mullagm, Co. Cavan, Ireland, jshack@indigo.ie	H30
108102	2008	J	Walsh, Miss A, Station Road, Manulla, Castlebar, C. Mayo, Ireland	H26

Address & other changes

104468	2007	O	Baker, Mr A G, 58 Foxhill Road, Reading, Berkshire, RG1 5QS, sbu06ab@reading.ac.uk	22
035865	1975	O	Baxter, Dr C F, Waratah, High Road, Horndon-on-the-hill, Essex, SS17 8LL	18
079218	1996	S	CEH Wallingford, The Librarian, Maclean Building, Crowmarsh Gifford, Wallingford, Oxfordshire, OX10 8BB, apsm@ceh.ac.uk	23
086435	1999	O	Dale, Ms K M, Strathweltie, Tarland, Aboyne, Aberdeenshire, AB34 4YS, kdale@envirocentre.co.uk	92
105413	2007	O	Daly, Mr R J, 17 Park Avenue, Swinton, Manchester, M27 4TZ	59
093598	2003	O	Drewett, Mr J, Castlerigg, Redmire, Leyburn, DL08 4EL	65
101582	2006	O	Ellson, Mr M E, 80 Pengwern, Llangollen, Denbs., LL20 8AS, max.ellson@hotmail.com	50
093555	2003	O	Hall, Dr H N, 20 The Parklands, Finchfield, Wolverhampton, WV3 9DG	39
094020	2003	O	Lovelady, Mrs J E, 34 Bellhouse Lane, Grappenhall, Warrington, WA4 2SG	58
90394	2002	O	Lush, Mr M J, 9 Fosse Way, Bronllys, Brecon, Powys, LD3 0HX	42
095604	2003	O	Moore, Ms L, 19 Central Road, Stroud, Glous., GL5 4HQ	33
078491	1996	P	Nicholson, Mrs R A, Kirkland Cottage, Caldbeck, Wigton, Cumbria, CA7 8DZ	70
069581	1991	P	Pedlow, Mrs J S, 30 Madden Road, Plymouth, PL1 4NE	3
069590	1991	F	Pedlow, Miss A Pedlow, 30 Madden Road, Plymouth, PL1 4NE	3
087440	2000	O	Vaughan, Dr I, Cardiff School of Biosciences (BIOS, Cardiff University, Cardiff, Cardiff, CF10 3AX, vaughanip@cardiff.ac.uk	41
108080	2008	O	Webb, Mr S T, 1 Church Close, Levens, Kendal, Cumbria, LA8 8QE, jeanandsimon@btinternet.com	69

Deceased

010692	1977	Baecker, Mrs M, Blue Hills, Hollins Lane, Arnside, Carnforth, Lancashire, LA5 0EQ	60
046255	1982	Hill-Cottingham, Dr M P, Mill House, 18 High Lane, Shapwick, Bridgwater, Somerset, TA7 9NB	6

Moved Away

036683	1961	O Gray, Dr A J, CEH Dorset, Winfrith Technology Centre, Winfrith Newburgh, Dorchester, Dorset, DT2 8ZD	9
099057	2005	O Nuttall, Mr P, CEH Monks Wood, Abbots Ripton, Huntingdon, Cambs, PE28 2LS	31
081646	1997	O Potter, Dr J Ar, Dept of Biology, University College Chester, Cheyney Road, Chester, CH1 4BJ	58
031584	1976	P Stoddart, Miss J M, 51 High Street, Hurstpierpoint, West Sussex, BN6 9TT	13

Resigned

092109	2003	Baldock, Dr B M, 24 Martel Close, Broadmayne, Dorchester, Dorset, DT2 8PL	9
074267	1993	Fairey, Mr A, Elder Cottage, Cart Lane, Grange-over-Sands, Cumbria, LA11 7AF	69
062773	1988	Herlihy, Mrs D J, 2 Court Lodge Cottage, Church Road, Mersham, Ashford, Kent, TN25 6NS	15
106789	2008	Millar, Mr R B, 52 Allison Drive, Carnwath, Lanarkshire, ML11 8HF	77
097844	2004	Whitaker, Mr R, The Hollies, Middle Hill, Egham, Surrey, TW20 0JG	17
097852	2004	Whitaker, Mrs E, The Hollies, Middle Hill, Egham, Surrey, TW20 0JB	17

STOP PRESS

Margaret Baecker, a BSBI member of Arnside, Cumbria, died on Christmas Day at the age of 106. She was probably the oldest

member of the Society and Michael Foley wrote a short article about her in *BSBI News* 107: 26–28, January 2008.

CONTRIBUTIONS INTENDED FOR
***BSBI NEWS* 111 should reach the Receiving Editor before**
March 1st

The General Editor Gwynn Ellis can be contacted by answer phone or fax on 02920 496042
email: rgellis@ntlworld.com

The Receiving Editor Trevor James can be contacted by phone on 01462 742684 or email
trevorjames@btinternet.com

All text and illustrations appearing in *BSBI News* and its Supplements are copyright and no reproduction in any form may be made without written permission from the General Editor. Offers and special terms apply only to members of the Society and copies are not available on an exchange basis.

BSBI News (ISSN 0309-930X) is published by the Botanical Society of the British Isles. Enquiries concerning the Society's activities and membership should be addressed to: The Hon. General Secretary, c/o Dept. of Botany, The Natural History Museum, Cromwell Road, London SW7 5BD. Tel: 0207 942 5002.

Camera ready copy produced by Gwynn Ellis and printed by J. & P. Davison, 3 James Place, Treforest, Pontypridd, Mid Glamorgan CF37 1SQ (Tel. 01443-400585; email: davison.litho@ukf.net)

ADMINISTRATION and IMPORTANT ADDRESSES

PRESIDENT	Mr Michael Braithwaite Clarilaw, Hawick, Roxburghshire, TD9 8PT Tel. 01450 372129
HON. GENERAL SECRETARY (General Enquiries)	Mr David Pearman Algiers, Feock, Truro, Cornwall, TR3 6RA Tel.: 01872 863388; DPearman4@aol.com
HON. TREASURER (All financial matters except Membership)	Mr Anthony Nixon The Warwick Partnership, 1 Stonecross, St Albans, Hertfordshire, AL1 4AA Tel 01727 846194, Fax 01727 810885
MEMBERSHIP SECRETARY (Payment of Subs and changes of address)	Mr Gwynn Ellis 41 Marlborough Road, Roath, Cardiff, CF23 5BU Answerphone: 02920 496042; rgellis@ntlworld.com
(Please quote membership number on all correspondence; see address label on post, or Members List in <i>Year Book 2009</i>)	
HON. FIELD SECRETARY (Including enquiries about Field Meetings)	Mrs Jane Croft 12 Spaldwick Road, Stow Longa, Huntingdon, Cambs., PE28 0TL Tel.: 01480 860561; stowlonga@tiscali.co.uk
HON. ASSISTANT SECRETARY (General enquiries)	Mr Peter Fry c/o Dept. of Botany, The Natural History Museum, Cromwell Road, London, SW7 5BD Answerphone only: 0207 942 5002
BSBI VICE-COUNTY RECORDERS (Comments and/or changes of address)	Mr David Pearman Algiers, Feock, Truro, Cornwall, TR3 6RA Tel.: 01872 863388; DPearman4@aol.com
PANEL OF REFEREES & SPECIALISTS (Comments and/or changes of address)	Dr Mary Clare Sheahan 61 Westmoreland Road, Barnes, London, SW13 9RZ Tel.: 020 8748 4365; m.sheahan@rbgkew.org.uk
WATSONIA RECEIVING EDITOR	Mr Martin Sanford c/o SBRC, Ipswich Museum, High Street, Ipswich, Suffolk, IP1 3QH Tel.: 01473 433547; fax: 01473 433558; sbrc@globalnet.co.uk
WATSONIA BOOK REVIEWS EDITOR	Dr John Edmondson 243 Pensby Road, Heswall, Wirral, CH61 5UA Tel: 0151 342 8287; a.books@mac.com
BSBI NEWS RECEIVING EDITOR	Mr Trevor J James 56 Back Street, Ashwell, Baldock, Herts., SG7 5PE Tel.: 01462 742684; trevorjames@btinternet.com
BSBI NEWS GENERAL EDITOR	Mr Gwynn Ellis 41 Marlborough Road, Roath, Cardiff, CF23 5BU Tel. 02920 496042; rgellis@ntlworld.com
BSBI HEAD OF RESEARCH & DEVELOPMENT	Mr Kevin J Walker 97 Dragon Parade, Harrogate, North Yorkshire, HG1 5DG Tel 01423 544902; kevinwalker@bsbi.org.uk
BSBI COORDINATOR	Mr Alex Lockton 66 North Street, Shrewsbury, Shropshire, SY1 2JL Tel. & Fax: 01743 343789; coordinator@bsbi.org.uk
BSBI VOLUNTEERS OFFICER	Mr Bob Ellis 11 Havelock Road, Norwich, NR2 3HQ Tel.: 01603 662260; bob@elymus.demon.co.uk
BSBI SCOTTISH OFFICER	Mr Jim McIntosh c/o Royal Botanic Garden, Inverleith Row, Edinburgh, EH3 5LR Tel. 0131 248 2894 (w); 0791 7152580 (mob); j.mcintosh@rbge.ac.uk
RESEARCH FUND APPLICATIONS	Dr Pete Hollingsworth Royal Botanic Garden, Edinburgh, EH3 5LR p.hollingsworth@rbge.ac.uk
BSBI PUBLICATIONS	Mr Paul O'Hara Summerfield Books 2007 Ltd, 3 Phoenix Park, Skelton, Penrith, Cumbria, CA11 9SD Tel.: 01768 484910; Fax: 01768 484909; info@summerfieldbooks.com
BSBI WEB SITE ADDRESS	www.bsbi.org.uk

Registered Charity Number in England & Wales: 212560 and in Scotland: SC038675



The 'late-glacial' habitat for *Polemonium caeruleum* at the head of the Rosegtal, Switzerland.
Photo S. Pigott © 2008 (see p. 23)



Polemonium caeruleum at the head of the Rosegtal, Switzerland. Photo S. Pigott © 2008 (see p. 23)



Gentianella ciliata, (v.c.24). Left – damaged August flower, right – September flower
Both photos G. Giles © 2008 (see p. 25)



Veronica umbrosa, Crawley, Hampshire. Photo M. Shaw © 2008 (see p. 43)