

# BSBI News

September 2007

No. 106



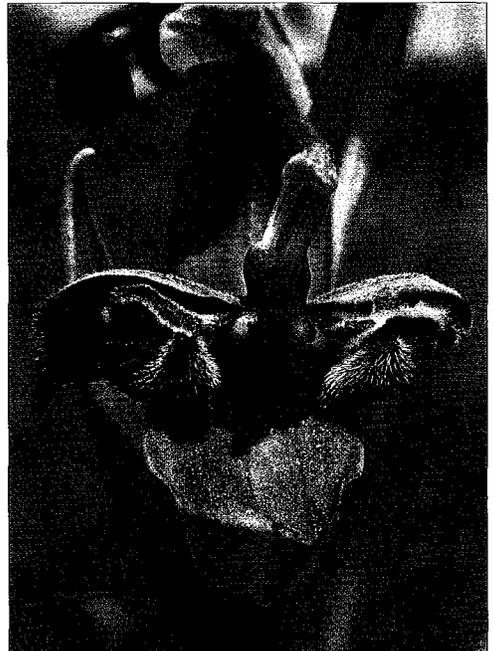
Edited by Gwynn Ellis



*Ajuga x pseudopyramidalis*, Torr Achilty (v.c. 106) showing detail of stem pubescence.  
Photo B.R. Ballinger © 2007 (see p. 6).



*Ophrys apifera*, showing normal and mutant flowers on the same plant



Somatic mutation in *Ophrys apifera*

Both photos Ludwell Valley Park, Exeter, A. Galton © 2007 (see p. 3)

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**Cover picture** – *Ajuga ×pseudopyramidalis*, Torr Achilty (v.c. 106) showing general appearance of flowering spike. Photo B.R. Ballinger © 2007 (see page 6)

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## Editorial

GWYNN ELLIS, General Editor

**Congratulations:** to Ann Conolly on reaching 90 (see page 47); to Elaine Bullard on being awarded an honorary Doctor of Science degree (see page 46); and to Phil Crib on being awarded the 2007 Linnean Medal for Botany by the Linnean Society (see page 45).

**Global Warming?** I am indebted to Michael O’Sullivan from Co. Kerry, Ireland who sent the following observations: *Viola riviniana* (Common Dog-violet) in flower on January 6<sup>th</sup>; a Red Admiral on the wing on February 2<sup>nd</sup>; and *Rubus fruticosus* (Blackberry) with ripe fruit on February 23<sup>rd</sup> and these were not leftovers from the previous autumn, pre-ripe red and green fruits were also seen.

There was also a letter in the *Guardian* that mentioned that *Sambucus nigra* (Elder) was in flower again in the southern counties of England – good news for the makers of elder-flower champagne!

**Bluebell convictions** I am also indebted to Charles Nelson for pages from the *Wisbech Standard* which headlined the conviction of a local man and a North Wales farmer for harvesting 200,000 wild bluebell bulbs. They were fined a total of £7000 after admitting breaching the Wildlife and Countryside Act.

It as stated in court that: ‘While anyone is allowed to pick endangered bluebells to display at home or collect bluebell bulbs to plant in their garden they cannot be sold.’ Is this correct? I thought it was an offence to uproot any plant in the wild without the landowners permission!

### Colour pictures in News

The colour centre spread this issue is devoted to a series of photographs illustrating Philip Oswald’s article on *Lactuca* and this is something I would like to see more of in future issues. With the advent of relatively cheap high definition digital cameras it is easy and costs nothing to take a whole range of photographs of a subject from different angles and magnification, which can add immeasurably to your story. I am often frustrated by the lack of photos accompanying articles, even when it cries out for some form of illustration.

I am therefor very grateful to two members (Geoff Toone & Phill Brown) who responded to my request in the last issue and sent me CDs containing a whole range of their photos which I was able to scan through, and one from each is included on plate 4.

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## New BSBI News Receiving Editor

GWYNN ELLIS, General Editor

I am delighted to announce that Trevor James (Vice-county Recorder for Herts (v.c. 20)) has agreed to take over from Leander as Receiving Editor from September 2007.

So will potential contributors please remember that **ALL** must be sent to Trevor and not to me (any that I receive direct will be forwarded to Trevor). His details are: Mr T.J. James, 56 Back Street, Ashwell, Baldock, Herts., SG7 5PE; 01462 742684; trevorjames@btinternet.com

He will then acknowledge receipt, perhaps ask if any photos are available, and eventually send them to me for formatting. I will send out proofs as usual.

Having just produced this issue single-handed, I must again pay tribute to all the work Leander put in and I must confess that I found it so much easier to deal with computer generated notes, sent by email or post. But don’t forget we are delighted to receive contributions in any form, computer generated, typewritten or handwritten.

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## IMPORTANT NOTICE

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### Could you be the next BSBI Treasurer?

Michael Braithwaite plans to step down as BSBI Treasurer in May 2008, so the Society is looking for a replacement. We would like to make an appointment as soon as possible so that the incoming Treasurer can be co-opted onto Council in the autumn of 2007 to have a chance to get to know people before taking over.

The Treasurer works with the other officers and staff and to a lesser extent with most people on Council and many of those on Committees, so it is a great chance to get to know some of the Society's leading botanists.

The Treasurer is responsible for the books, so financial experience is needed, but not necessarily that of a qualified accountant. Having kept the books of a club or charity, such as a church, or of a small business would be suitable.

Some professional help from a firm of accountants is likely to be required, but

exactly what would depend much on the Treasurer's individual wishes and skills. Other officers do some of the financial administration, in particular the membership subscriptions and some of the grant administration.

Michael has not taken an honorarium as he has preferred that the Society pay a firm of accountants to do some of the chores and to provide office facilities, but an honorarium would normally be expected. Travel and office expenses are reimbursed.

More information is available from Michael Braithwaite, home phone 01450 372129. Correspondence and applications (with a C.V.) should be sent by email to [mebraithwaite@btinternet.com](mailto:mebraithwaite@btinternet.com) Further background on BSBI is available at [www.bsbi.org.uk](http://www.bsbi.org.uk)

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## NOTES

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### Somatic mutation in *Ophrys apifera*

ANTONY GALTON, 34 Prospect Park, Exeter EX4 6NA

In Ludwell Valley Park, Exeter (at SX948.908) there has been for a number of years a colony of Bee Orchids (*Ophrys apifera*). I first saw them in 1999, and have seen them every year since; I do not know anything about their previous history. As is usual with this species, the numbers have fluctuated markedly from year to year; 2007 has been a relatively good year, with at least 70 flowering spikes. Amongst them, I found on June 10<sup>th</sup>, a specimen in which one of the flowers displayed a remarkable somatic mutation, as shown in the photo inside front cover. As I initially interpreted it, the lip has

assumed the form of a normal outer perianth segment, while two side segments have each assumed the form of half a lip, two other segments being apparently missing. On looking closer, however, it seems that the 'half-lip' structures are actually extensions of the base of the column; in which case *four* of the perianth segments are missing. Whatever may be the correct interpretation, the fact that the other open flower on the spike is normal, as shown in the photo, indicates that it is a somatic mutation, rather than a genetic one.

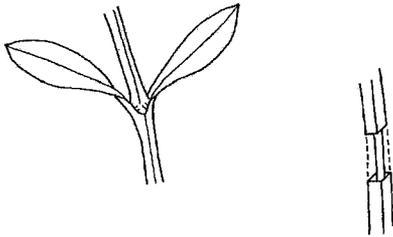
## Maddening Mimics: a belated reply

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

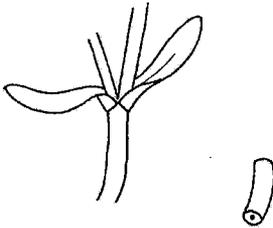
A recent browse through the fascinating back issues of *BSBI News* made me aware of a tongue-in-cheek article written in 1998 entitled 'Maddening Mimics' by James Iliff (79:43). Amongst other observations, James poses the serious problem of how to differentiate young plants of *Stellaria uliginosa* (Bog Stitchwort) from *Montia fontana* (Blinks). Sadly, no-one appears to have replied! At last, I offer a rejoinder to his challenging note.

*Montia fontana* (Portulacaceae) and *Stellaria uliginosa* (Caryophyllaceae) are both (sub)glabrous herbs of wet places with opposite entire leaves; however in the impending *Vegetative Key to the British Flora* they are easily separated!

The easiest method is to feel the stem; it is round in *Montia* but square in *Stellaria*. Breaking the stem of any *Stellaria* species reveals yet another character – an elastic **stele** which stretches when pulled taut. A stele is just a cylinder of vascular tissue, the type of which may indicate particular taxa, such as the distinct plectostele of clubmosses.



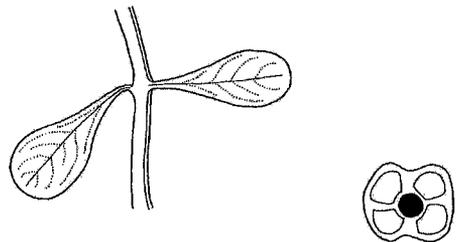
*Stellaria uliginosa*



*Montia fontana*

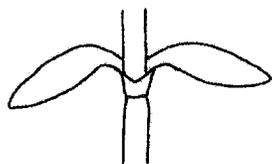
connate, i.e. the petioles are joined around the stem. In contrast, the totally glabrous *Montia* has free or subconnate leaves. The two commonest subspecies of *Montia*, normally separated on the presence or shape of seed tubercles, can be largely distinguished by life-form, habitat and phenology. *M. fontana* ssp. *chondrosperma* is an autumn-germinating annual of winter-damp places, visible only between October and June (indeed this taxon is known at species-rank in Europe as *Montia verna*). In contrast, *M. fontana* ssp. *amporitana* is generally an aquatic perennial visible throughout the year.

An additional confusing species to *Montia fontana*, at least to my eyes, is *Lythrum portula* (Water-purslane). However, the squarish stems have four large air hollows (lacunae) in cross-section. *L. portula* may also be confused with *Crassula helmsii* (New Zealand Pigmyweed), as reported in the highly readable *Shropshire Botanical Society Newsletter* (Autumn 2004) and may even be eradicated in error! Unlike *L. portula*, the stems of *C. helmsii* are completely round and lack lacunae. Admittedly, I have occasionally haphazardly mistaken underwater forms of *C. helmsii* for *Callitriche* species (Water-starworts) but the presence of a dark reddish horizontal line below the node is a simple diagnostic character (also mentioned in Rose & O'Reilly's updated *Wild Flower Key* (2006)). *Callitriche*, in addition to an often notched leaf apex, may have minute peltate scales on the stem should microscopic confirmation of the genus be required.

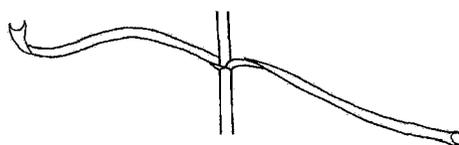


*Lythrum portula*

Additionally, the leaves of *Stellaria* are minutely and sparsely ciliate near their base and are

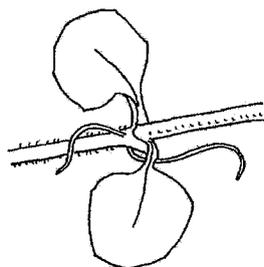


*Crassula helmsii*

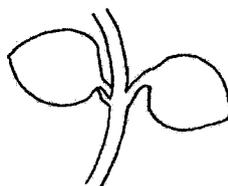


*Callitriche* sp.

brown spots along the underside margin, particularly from July onwards. These spots are actually oil glands and are a familiar feature of other Primulaceae, namely *Lysimachia* and *Glaux* (which perhaps should belong in the clade *Lysimachia*). Bizarrely, the foliage of *A. tenella* also has a noticeable antiseptic odour when crushed; Primulaceae are usually odourless.



*Epilobium brunnescens*



*Anagallis tenella*



Recorders problems do not stop here. Botanists trudging along boggy habitats in northern and western districts may frequently encounter *Epilobium brunnescens* (New Zealand Willowherb) – a plant strongly resembling *Anagallis tenella* (Bog Pimpernel). The leaves of *E. brunnescens* usually have a few indistinct teeth (occasionally only visible as **hydathodes**), and are typically purplish on the lower side. Furthermore, the stems are hairy in two longitudinal lines. In contrast, the untoothed leaves of *A. tenella* are never purplish below but may develop red-

To summarise, a short key to the species mentioned above could read:

Low weak herbs with opposite (usu entire) leaves, appearing glabrous to the naked eye. All species may root at stem nodes, except *Stellaria uliginosa* which is rhizomatous.

Stem sharply 4-angled, with elastic stele; lvs ciliate nr base . . . . . *Stellaria uliginosa*

Stem round or weakly angled, stele (if present) not elastic; lvs totally glabrous

Stem with 4 hollows . . . . . *Lythrum portula*

Stem solid (or pithy with aerenchyma)

Stem with hairs in 1-2 lines; lf margin usu toothed . . . . . *Epilobium brunnescens*

Stems glabrous (minute peltate scales may be present in *Callitriche*); lf margin always entire

Lvs connate

Stems with red line below node; lf apex entire . . . . . *Crassula helmsii*

Stems without red line below node; lf apex often notched . . . . . *Callitriche* spp.

Lvs free or subconnate

Lvs with red-black spots below, antiseptic smell when crushed . . . . . *Anagallis tenella*

Lvs without red-black spots below, odourless when crushed

Plant ann, winter-damp habs. Lvs visible Oct-Jun . . . . . *Montia fontana* ssp. *chondrosperma*

Plant usu per, aquatic habs. Lvs visible all yr . . . . . *Montia fontana* ssp. *amporitana*

Any observations and criticisms, not just on this article but on all vegetative characters, are always warmly received. Without your help, the final *Vegetative Key* will be much the poorer.

Special thanks to Rosalind Bucknall for preparing such estimable illustrations and to Eric Clement for worthy comments of the final draft.

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## *Ajuga ×pseudopyramidalis* in Easter Ross

C.B. & B.R. BALLINGER, 5 Shaftesbury Park, Dundee, DD2 1LB

*Ajuga pyramidalis* (Pyramidal Bugle) is mainly restricted to the Highlands of Scotland with a few Irish and English locations and often favours rocky slopes. *Ajuga reptans* (Bugle) is a very widespread species of deciduous woods and unimproved grassland. The hybrid between them, *Ajuga ×pseudopyramidalis* Schur (*A. ×hampeana* Braun and Vatke) has only been noted from 3 vice-counties in the Vice-County Census Catalogue (E. Ross, W. Sutherland and Orkney). None was marked as being recorded post-1970.

However an entry in Ursula Duncan's personal copy of her *Flora of East Ross-shire* (1980), written in after its publication, reports an unconfirmed finding of this hybrid from Torr Achilty by Fremlin and Norman in 1982. In 1999 Dines and Preston (Dines, T.D., pers. comm. 2007) described a plant from this site that fitted the description of *A. ×pseudopyramidalis* with pollen that showed 57% fertility on staining with a saffranin stain in alcohol compared with 95% fertility for pure *Ajuga reptans*.

In 2006 along with other vice-county recorders we were asked to check various hybrid records to assist with the revision of

Stace's hybrids publication, and our list included *A. ×pseudopyramidalis*. Torr Achilty has a scattered population of *A. pyramidalis* on rocky outcrops adjacent to woodland with a large population of *Ajuga reptans*. After a prolonged search of rocky slopes in 2006 we came across 4 flowering spikes by the track at the bottom of the hill at NH447.545 that showed intermediate characteristics between *A. reptans* and *A. pyramidalis*, fitting the description of *Ajuga ×pseudopyramidalis* (see photo on front cover). In 2007 11 flowering spikes were present and the main group was approximately 50 meters from *A. pyramidalis* on the slopes and 25 meters from *A. reptans* in the woodland edge. The bracts were long, the stems were particularly hairy on 2 sides with sparse hairs on the other two and the leaves were intermediate in crenation and pubescence between the parents (see photo inside front cover). The anther filaments were more pubescent than those of *Ajuga reptans* and an examination of the pollen showed that approximately 75% of the grains were deformed.

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## More on Rayless Daisies

JOHN M. GRIMSHAW, *Sycamore Cottage, Colesbourne, Nr Cheltenham, Gloucestershire, GL53 9NP*; j.grimshaw@virgin.net

I read Jeanne Webb's note about the rayless daisies in *BSBI News* 105: 19, thought 'how curious', and passed on. A few days later I was transplanting snowdrops in the garden at Colesbourne Park (where I am garden manager) and found a patch of exactly the same type of rayless daisy as she described and illustrated.

A close examination could find no traces of reproductive organs, just what seems to be a series of small foliose 'parts' (I can't think of

a better term for them). It is certainly not just a rayless daisy in the strict sense that would imply, and although it could be a mutation that occurs occasionally in *Bellis perennis* I wonder if it is not an effect caused by a pathogen of some sort.

Like Jeanne Webb I dug up most of the patch and potted-up the pieces. They have done very well and I have given some away to others who like a freaky plant.

## Lettuces don't read the Floras!

PHILIP H. OSWALD, 33 Panton Street, Cambridge, CB2 1HL

There are three wild species of lettuces (*Lactuca* spp.) in Britain. The heights given for them in Clapham, Tutin & Moore's (1987), Stace's (1997) and Sell & Murrell's (2006) Floras are respectively:

*L. serriola* (Prickly Lettuce): '(15–)30–200 cm'; 'often 1–2m' (in key), 'to 2m' (in description); '(15–)30–210 cm'.

*L. virosa* (Great Lettuce): '60–250 cm'; 'often 1–2m' (in key), 'to 2m' (in description); '60–250 cm'.

*L. saligna* (Least Lettuce): '30–100 cm'; '<1m' (in key), 'to 75(100)cm' (in description); '30–100 cm'.

The differences between *L. serriola* and *L. virosa* and the two forms of each are clearly presented in *Plant Crib 1998* (pp. 292–3). Early in the year some plants are distinct (see Colour Section, Plate 2, Figs 1–2), but others can be difficult to place; later the key characters become clearer, the most reliable being the size and colour of the achenes (Figs 3–4). Not many people are familiar with *L. saligna*, which is now confined in the wild in Britain to Fobbing in Essex and Rye Harbour in Sussex, and, though it is quite distinctive, its 'jizz' is difficult to describe to someone who has never seen it. Keys mention the glabrous or sparsely hispid midribs under the leaves and the lack of bristles on the achenes, but it is the strong contrast between the narrow blue-green blades and relatively broad white midribs of the stiff, waxy-looking leaves, somewhat reminiscent of *Euphorbia lathyris* (Caper Spurge), that strike the eye (Fig. 5) and make it look different from even the slightest plants of *L. serriola* (Fig. 6).

Living as I do within a short distance of Cambridge railway station and the University Botanic Garden (hereafter CUBG), I frequently see plants of all three species: *L. serriola* has long been common – all forma *integrifolia* (Fig. 7) until August 2007, when I found a single plant of forma *serriola* on imported gravel in the CUBG staff car park

(Fig. 8); *L. virosa* (all forma *virosa*) has spread into local streets from the railway in the last decade; *L. saligna* was grown in CUBG in the 1970s from wild Essex stock as part of the NCC-funded project to investigate the ecology of rare British species and reappeared spontaneously two years ago.

Over the years I have often noticed dwarf plants of *L. serriola*, especially in street gutters and other sites with little soil or as a result of secondary growth at the end of the summer after plants have been cut down or broken off; the figures given for this species in the Floras suggest that their authors have seen such small plants also. Contrariwise, when *L. saligna* reappeared in gravel along the edge of CUBG's Dry Garden in 2005 (see Colour Section, Plate 3, Fig. 9), I was surprised at the height of some of the plants by the time they flowered – about 1.25 metres – but they were spindly plants poking out of the top of a hedge and I took this to be the reason for their being drawn up to the light. *L. saligna* did not reappear at this site last year, but to my astonishment a clump of a dozen or more enormous branched plants appeared on waste ground in a different part of CUBG close to the area where rare British plants were grown in the 1970s; these grew to reach a height of about 1.5 metres (Figs 10, 11, 12). There are plants in both localities this year but fewer and of more normal proportions.

This year I have for the first time found dwarf plants of *L. virosa*. At the foot of the wall of a car park near here in Coronation Street there is a line of normal tall plants, in seed by 3 August, and, until the whole area was weedkilled a few days later, there were well-developed young plants that would have flowered next year (Fig. 13) but also a crop of seedlings coming up like mustard and cress (Fig. 14), perhaps as a result of the wet summer. Even more remarkably, there were a few plants under 45 cm tall but in bud or flower; these had several stems, with the upper

stem-leaves small and rounded like those that can occur on 'bolted' *L. sativa* (Garden Lettuce) plants (Fig. 15). On my next visit I was disappointed to find all of these shrivelled up, but on 28 August I went in search of a similar locality and found one in the railway station yard, where there were seeding plants (up to 2.5 metres tall), well grown seedlings and a few dwarf plants like those I had seen in the car park, one with a flowering stem less than 6 cm high (Fig. 16).

In July at least, I can usually easily distinguish between *L. serriola* and *L. virosa* (often clearly forma *lactucarii*, with the central stem-leaves

pinnatisect, unlike in Cambridge) growing by a motorway when driving at 70 m.p.h., but I find it hard to say how one could categorically distinguish dwarf plants of *L. virosa* and *L. serriola* unless they produced mature fruits, since most of the helpful characters (normalized inflorescences, fully developed leaves, etc.) are missing. How then am I so sure in these two cases? I cannot prove that I am right, but in neither site were there any normal plants of *L. serriola*, the flowering plants were growing among what were definitely *L. virosa* seedlings, and some of these dwarf plants did show some purplish coloration.

### *Viola ×bavarica*: the punctual Dog-violet?

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Despite the frequent co-habitation of its parents, and their overlapping flowering-times, the hybrid between the Common and the Early Dog-violets, *Viola ×bavarica* (*V. riviniana* × *V. reichenbachiana*), is only sparsely scattered in England, Wales and Ireland (C.A. Stace, *New Flora of the British Isles*, 1997). It is currently recorded in 43 of the 113 Vice-counties in the Vice-County Census Catalogue (2003).

In 2007 I found it twice in my home town, where both parent species grow moderately and equally commonly in those anonymous micro-habitats (familiar to the urban botanist), the fissures between the pavements and either the garden-walls or the house frontages. The very early spring weather encouraged the Early Dog-violet (*Viola reichenbachiana*) to flower from January to April, and the (later) Common Dog-violet (*Viola riviniana*) from March to May. I found the hybrid in flower from February to April. It had not been reported for Warwickshire (v.c. 38) since 1960.

I hope that the following comments, and the beautiful colour photographs by John and Val Roberts, may help others to discover this hybrid, which may be over-looked.

**Flower colour, size and shape** (see photos 1 and 2, inside back cover)

I am one of those botanists with weak colour-sensitivity (*BSBI News* 103, 104) who finds

references to 'purple' and 'violet' difficult, but I can distinguish the larger, bright blue flowers of the Common Dog-violet from the smaller, dull dark blue (or 'violet'?) flowers of the Early one. Their flower-shape (which is also lost in herbarium preparations) is also distinctive, the narrow, upper petals of the 'Early' are erect, those of the 'Common' are broad, reflexed and over-lapping.

**Spur** (see photos 3 and 4, inside back cover)

This is the most useful feature: tapering, slender and un-notched, and as dark blue as the petals, in the Early, and blunt, broad and notched or furrowed, and white, or much paler than the petals, in the Common Dog-violet.

**Sepal appendages** (see photo 1 inside back cover)

I find these problematic: tricky to measure and photograph, varying in size within a calyx, between flowers in a plant and with the age of the fruit. Though some sepal appendages in some Common Dog-violets followed the textbooks, and were prominent (though >1.5mm hardly qualifies as 'prominent'), others were not. Those of the Early were sometimes almost invisible, but they too were variable, though never exceeding 1.5 mm.

**Petal venation** (see photos 2 and 3 inside back cover)

I did not use the differences in the dark veins on the lowest petal, which are longer and more

branched in the Common Dog-violet, but Mike Hardman, BSBI *Viola* Referee, points out these differences in his comments in photos 2 and 3.

**The hybrid** (see photos 1, 2, 3, 4 & 5, inside back cover)

The first colony of about 10 plants grew alongside the shaded front-garden path of a Leamington Spa house (visited while delivering council election leaflets). I was alerted by the abundance of their flowers, there was also a small colony of Early Dog-violets. When I took some flowers for John and Val Roberts to photograph, I noticed that their back-garden lawn grew abundant Common, and sporadic Early Dog-violets, but also two plants of the hybrid.

The most useful starting point in identification is that this hybrid invariably has the dark spur of the Early species (Stace, *op. cit.*). But it is notched or furrowed, as in the Common one. The flowers are usually twisted and distorted, and closer (to my eyes) in colour and size to the Early Dog-violet. Sepal appendages were extremely variable within the same hybrid plant, but never exceeded 1.5 mm. Two fruits had formed on the dozen or so hybrid

plants that I examined; the hybrid is highly but not fully sterile (Stace, *op. cit.*).

**Introgression?** (see photo 5 inside back cover) I found elsewhere in Leamington Spa some otherwise typical Common Dog-violets with spurs darker than the petals. It is not uncommon for this species to have a blotchy blue spur, but in these plants the colour was uniform and intense, suggesting that in the past introgression from hybrid material might have happened.

In summary, this punctual *Viola*, arriving neither early nor late, can be detected at a distance by its abundant, twisted flowers, and the identification confirmed by close examination of the dark, notched spur. But I do not know where the ‘Dog’ comes from, as in Dog-daisies, Dog-roses, Dogwood and Dog’s Mercury. ‘Dog’ seems a slightly derogatory epithet, used about some creature tiresomely ever-present, dogging one’s footsteps, so to speak?

Thanks to John and Val Roberts for the photographs, and to Mike Hardman, BSBI *Viola* referee, who confirmed the identifications and provided the caption notes to the photographs.

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## Evidence of pollination and seed set in Scottish populations of *Spiranthes romanzoffiana*

### News from Aberdeen University and Plantlife Scotland

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The nationally scarce orchid *Spiranthes romanzoffiana* (Irish Lady’s-tresses) is restricted in Europe to only a few places in Ireland and the Western fringes of Scotland, and to one isolated population in Devon (see Preston *et al.* 2002), but is widespread in North America (Arft & Ranker, 1998) (see Colour Section, Plate 1). A complete lack of seed set has been reported from Scottish populations (Gulliver, 2005) and the cause of this reproductive failure is unknown. Vegetative reproduction in the form of twin lateral bud formation has been proposed as a means of reproduction for *S. romanzoffiana* in

Scotland (Gulliver *et al.* 2006) and studies carried out in the West of Scotland have highlighted the importance of maintaining the correct levels of grazing to conserve vegetative plants and allow flowering to take place (Gulliver *et al.* 2003 & 2007). Both the Irish and Colonsay populations have been shown to have limited or zero genetic diversity with higher diversity reported from Coll, Barra and Vatersay populations (Forrest *et al.* 2004). However, without seed set, the potential for long term maintenance and recovery of this species is severely limited.

In a study for SNH in 2002, Dr Chris Wilcock reported that pollen fertility and pollen tube formation following pollination were not the cause of the observed seed set failure in Scottish plants of *S. romanzoffiana*. However, in his pollen tube studies he did not observe any ovule penetration even after 10 days following inter-island cross-pollination. He concluded from this that fertilisation, if it occurs, is considerably delayed compared to the 2 days that Catling (1982) reported for North American plants, and suggested that fertilisation failure could be due to environmental conditions, low nutrient status or genetic incompatibility.

A detailed examination of Scottish populations of *S. romanzoffiana* is currently being undertaken at Aberdeen University in association with Plantlife Scotland and aims to provide knowledge and understanding on the reproductive biology of the species, identifying the limiting factors and the potential for improvement in the current situation. Knowledge from this work will be incorporated into protocols for management plans for the future conservation of this UK Biodiversity Action Plan and Scottish Biodiversity List species.

Two populations of *S. romanzoffiana* on Colonsay (Inner Hebrides, Scotland) were selected for study where plants are protected from grazing during the flowering period by exclosures erected by SNH in 2001 (see Gulliver *et al.* 2007). Two seasons of fieldwork were carried out in 2005 & 2006 and a third is planned for 2007.

On a first trip to Colonsay accompanied by Dr Chris Wilcock in 2005, during a visit to two populations of *S. romanzoffiana* near Kiloran Bay, we observed on the 1<sup>st</sup> of August two *Bombus* spp. visiting inflorescences of *S. romanzoffiana*. These bumblebee visitors probed the lower flowers on several nearby inflorescences before leaving the site but no other visitors were observed over the next two days spent with the plants. Clearly pollinator visits to flowers of *S. romanzoffiana* during our time on Colonsay were infrequent. Dr Richard Gulliver has spent a total of 73 days in the vicinity of *S. romanzoffiana* on five

different Scottish islands and only ever observed one fleeting visit by a *Bombus* spp. to a single flower of *S. romanzoffiana* (Gulliver, 1999-2001) – it would seem that we were very lucky to observe two bumblebee visitors on our first day with the plants. This information has given rise to the hypothesis that lack of pollination in the field is the principal cause of reproductive failure in *S. romanzoffiana*.

To investigate whether pollination was taking place on Colonsay one lower flower from each inflorescence in the Kiloran Bay populations was sampled and examined upon return to Aberdeen University. Very much to our surprise, they revealed high levels of pollination with around 40% of the flowers having pollinia removed and 70% with pollen on their stigmas. Subsequently, Richard Gulliver kindly collected withered *S. romanzoffiana* inflorescences at the end of the flowering season on Colonsay for examination in Aberdeen. They too revealed high levels of pollination very similar to those recorded from the lower flowers sampled during the flowering period.

These findings showed that although observations (or lack of them) suggest that pollinator visits to flowers of *S. romanzoffiana* are infrequent, pollination is taking place and at high levels in Colonsay populations. Low visitation rates by insect pollinators are typical of many European orchids and, since flowers can remain open for several weeks, pollination levels may be quite high (Neiland & Wilcock, 1995). In his detailed studies of North American *Spiranthes* Catling (1982) reported that the column structure of *S. romanzoffiana* prevented automatic self-pollination, and so the high levels of pollination recorded in flowers on Colonsay must therefore be the result of pollen movement carried out by insects.

Whilst working through the withered flower material from 2005 a rather interesting and unexpected discovery was made, some of the ovaries of *S. romanzoffiana* had expanded and split, and there was some seed inside (see Colour Section, Plate 1). This is the first time that mature capsule development has ever been

recorded in Scottish populations of *S. romanzoffiana*. The capsules were small and contained only a limited number of seeds (see Colour Section, Plate 1), and the percentage capsule set was very low compared to the number of pollinated stigmas. As the capsules were already split the number of seeds per capsule could not be accurately determined though the presence of many empty testa (seed coats) suggested that seed set was low. Further examination of withered inflorescences sampled from Colonsay in 2003 and 2004 sent to us by Richard Gulliver revealed levels of pollination and capsule set consistent to those recorded in the 2005 material. This confirmed that high levels of pollination and a very low, but consistent, level of seed production had been taking place in the populations on Colonsay every year since 2003. Due to the very small size of the capsules it is possible that this phenomenon has been overlooked in previous years.

The second field season, in 2006, focused on investigating and quantifying the levels of seed set on Colonsay and field experimental crosses were carried out as well as a more detailed examination of open pollinated inflorescences. A first look at pollen tubes in open pollinated flowers revealed high levels of pollen germination and pollen tube growth down the style, as well as some ovule penetration. This suggests that seed production is the result of sexual fertilisation as opposed to agamospermy – a trait which has been recorded in several members of the *Spiranthes* genus in North America (Catling, 1982). Open pollinated seeds tested with fluorescein diacetate showed that some of them were viable. Germination trials on agar and in soil, currently underway, are expected to give a clearer idea of the germinability of the seed.

The low levels of genetic diversity in Colonsay populations of *S. romanzoffiana* suggest that seed production on Colonsay may be limited due to self-incompatibility or inbreeding depression, a problem previously reported to occur in North American plants of *S. romanzoffiana* by Catling in 1982.

Plans for 2007 include a survey of other Scottish populations of *S. romanzoffiana* to

check for evidence of seed production. Intra- and inter-island crosses combined with pollen tube studies will be carried out to assess the extent of the limitations on sexual reproduction in *S. romanzoffiana*. Time will be spent trying to observe and identify the species of bumblebee and any other insect species pollinating *S. romanzoffiana* on Colonsay as this may be essential for future management of the species.

### Acknowledgements

Many thanks go to Dr Chris Wilcock for his expertise and supervision of the work, and to Dr Deborah Long (Plantlife Scotland) for her support and enthusiasm for the project. Additional thanks go to Dr Richard Gulliver for sharing his knowledge of the species and for assistance with field collection work. This project is part funded by Plantlife Scotland, and the Carnegie Trust for the Universities of Scotland provided support with fieldwork costs.

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## Minuscule flowering plantlets within Cock's-foot inflorescences

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Definitions of vivipary in botany are varied and contradictory, and Stace uses the term 'proliferating' for inflorescences bearing plantlets instead of flowers or fruits (e.g. *Festuca vivipara* and *Poa alpina*). There are five reasons for writing about this phenomenon here:

1 The first 10 Floras and specialist books on grasses I checked fail to mention this phenomenon in Cock's-foot (*Dactylis glomerata*).

2 I have found proliferating Cock's-foot inflorescences every consecutive year over the past 12 from July to October at various sites west of Savernake Forest and north of the Vale of Pewsey (Wiltshire).

3 Such proliferating Cock's-foot inflorescences have been seen in dry months as well as damp months.

4 Proliferating Cock's-foot inflorescences can be vigorous when collapsed September culms are situated on damp ground or in damp vegetation. However the two inflorescences shown in fig. 1 were on vertical (early July) culms 70cm high, fully aerial, and not touching other vegetation.

5 The arrows show six spikelets with florets on 3(or4) plantlets still firmly attached to the wholly green culm and parent inflorescence.

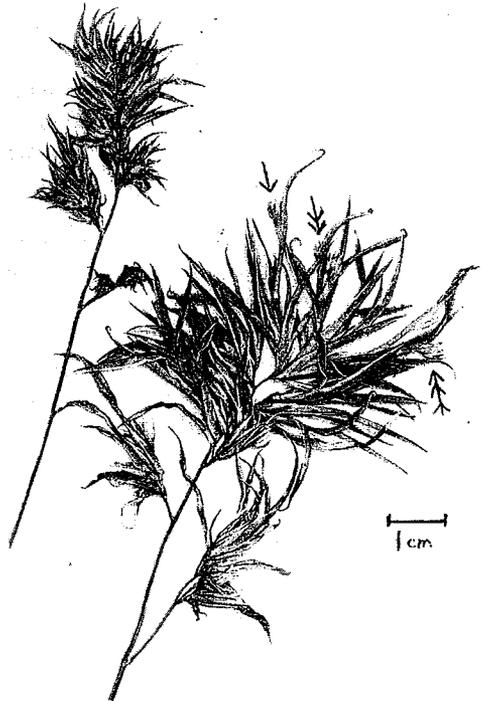


Fig 1. Proliferating Cock's-foot inflorescences. Arrows show the 6 flowering spikelets on the attached aerial plantlet progeny.

## Joseph Norman Frankland (1904-1995): a tribute

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We are prompted to write this note by Richard M. Bateman's 'Identity and longevity of the 'Mystery Orchid'....' (*BSBI News* 102). We enjoyed this entertaining and informative article, but we must attempt to correct the impression it gives of that collector of *Dactylorhiza traunsteinerioides* dismissed by the author as 'a J. N. Frankland'.

Norman Frankland was well known to several generations of British botanists, both amateur and professional. Frankland lived all his long life in the Craven district of Yorkshire, and his acquaintance with that area, based on fieldwork over more than fifty years, was probably unrivalled in his day except by the late Dr W.A. Sledge; he also botanised assiduously elsewhere in the former West Riding, in Lancashire, and in the Lake District. He acted as Botanical Recorder for the Craven Naturalists' Society and as Honorary Warden of Colt Park Wood NNR; was an active member of the Yorkshire Naturalists' Union; contributed many records and observations to *The Naturalist*; and left not just the orchid specimens discussed by Bateman but a considerable herbarium in SKN and LIV (brief details in Hartley 1994).

Frankland published little, apart from records in *The Naturalist*, but a Google search reveals some items of interest, most of them listed in Simpson's *Bibliographical index*. A note on 'The juniper association of Upper Teesdale', written when he was only 21, shows him – characteristically – using his first-hand knowledge of farming to rebut claims that sheep-grazing did not affect *Juniperus* regeneration; recent work by Dearnley & Duckett (1999) suggests that he was right.

Ironically, one of his papers is 'The palmate orchids of Craven', which, though short, demonstrates well his careful observation and clear reasoning. He shows a 'healthy degree of scepticism', as recommended by Bateman, in dealing with the current literature

(conveniently summarised in Gilson 1930), and his views are mostly in line with those which came to be accepted later. For example, his conclusions on plants then named *Orchis latifolia* anticipate Summerhayes' summary (1951, p.279). His wholesale rejection of '*Orchis O'Kellyi*' seems to throw the baby out with the bathwater, but in fact it relates to the broader concept of the taxon as eventually embraced by Druce, to whom Frankland sent specimens. So applied, his verdict is supported by Summerhayes (1951, p.271), and by Bateman & Denholm (1989, p.344). There is no evidence that Frankland knew of the 'Mystery Orchid' in Craven at that time, but it is listed (as *Orchis majalis* ssp. *traunsteinerioides*) in *A flora of Craven*, dating mainly from before 1960, which was published posthumously by the North Craven Heritage Trust in 2001 and has recently been reprinted with corrections. (Copies are available, price £10.00 incl. p&p, from Mr D.S. Johnson, 1 The Hollies, Stainforth, Settle, North Yorkshire, BD24 9QD, cheques payable to 'NCHT'.)

Despite Richard Bateman's quips ('two specimens consigned to a premature death between sheets of newspaper', 'five individuals so generously left *in situ* by Mr Frankland'), Frankland's collecting cannot be considered irresponsible by the standards of 1951. (The specimen illustrated by Bateman seems to lack tubers; did the other have them?) Modern photographic techniques and DNA tests were not available to him; and, to be fair, his more fortunate successor's righteous indignation has not prevented him from using Frankland's gatherings as part of his data.

In marked contrast to Bateman's comments about Norman Frankland is his admiring reference to 'the late, great Ted Lousley', another collector of *D. traunsteinerioides*, whose fame apparently protects him from criticism. There is a further irony here, for

Norman Frankland and Ted Lousley were friends. As Frankland's diaries, now in the possession of Mrs Elizabeth Shorrocks of Settle, reveal, they botanised together (see photo, p. 15) and exchanged information and specimens. Frankland collaborated to a greater or lesser degree with other well-known workers such as C.A. Cheetham, T.W. Edmondson, T.J. and Gertrude Foggitt, W.A. Sledge, E.C. Wallace and T.W. Woodhead. He also delighted to share his knowledge and expertise with less distinguished visitors and with local naturalists, by leading excursions and on informal days in the field. Both of us were beneficiaries of his kindness and wisdom, and such contribution as either of us may have made to the study and recording of wild plants owes much to his help and encouragement. We can see Norman now, in Colt Park, white-haired, bespectacled, slightly shrunken but amazingly agile, springing from clint to clint while we, forty years younger, clast about warily for footholds; and hear him: '*Dryas?* Every schoolchild in Arncliffe knows where *Dryas* is!'

Norman Frankland was the best kind of amateur naturalist. Through his enthusiasm and generosity he made a large contribution to the British botanical community, and directly and indirectly helped to conserve a number of important sites. His achievements demanded a good deal of dedication. Brought up on a farm, he was apprenticed to a woodworker and became a skilled carpenter and joiner. (He told MES that, being unable to afford the education for a career in the scientific study of living plants, he had opted for second best: working with the dead tissues of woody species.) Some jobs in remote locations brought an incidental advantage: they involved temporary residence, with opportunities for incidental botanising in unfamiliar places. But for most of the time he must have stretched his leisure and resources to the limit in order to acquire his knowledge of the subject and his skills on the ground. He was thus one of the last representatives of the great line of 'thorough working-men naturalists', as a 1930 obituary (M[osley] 1930)

called them, a tradition summarised in David Allen's *The naturalist in Britain* (Allen 1976, pp. 159–160, 277–278). Such were, among many, John Horsefield, 'president and chief stay of the Prestwich Botanical Society' to 1830, who 'earned his livelihood as a handloom weaver, following that occupation in a cottage at Besses-o'-th'-Barn' (Grindon 1882, p.192); or, later in the century, S.A. Stewart, 'trunk-maker, botanist and geologist' (Praeger 1939, p.9), or J.E. Bagnall, whose exemplary *The Flora of Warwickshire* was the product of 'the scant leisure of a manufactory clerk' (Bagnall 1891, p.v).

In Grindon's words, 'Science owes more to them than has ever been confessed, and ... the lives of the modest, unassuming votaries of science ... are never so much as inquired for' (Grindon 1882, p.207). Thanks to Elizabeth Shorrocks and the North Craven Heritage Trust, that cannot be said of Norman Frankland. Nevertheless, his achievements are evidently less well known than they should be, and we should be highly gratified if others were to publish their memories of him, or other material relating to this admirable and delightful man.

#### Acknowledgement

We are very grateful to Mrs Elizabeth Shorrocks for sharing her reminiscences of Norman Frankland, for providing photographs of him and information from his diaries, and for her interest and encouragement.

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J.N. Frankland (r) and J.E. Lousley with *Aira* (= *Corynephorus*) *canescens* on dunes near Ainsdale, S. Lancs., 1 August 1937.

Photo F. Holder, © Mrs E. Shorrocks

## English names of plants revisited

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Edward Pratt, (*BSBI News* **105**: 21), looks for a new English name for *Melittis melissophyllum* and puts forward the name Bee-balm as a replacement for the less pleasant name Bastard Balm.

The problem here is that the name Bee balm is one of the names of *Melissa officinalis*; a plant that has the recommended name of Balm, but is better known as Lemon Balm.

To make matters worse, I note that the name Bee balm is also sometimes applied to Wild Bergamot, *Monarda didyma*. I think therefore that, with or without the hyphen, applying the name Bee balm to *Melittis melissophyllum* would not be a good idea if we want to avoid potential confusion of identification.

## Successful translocation of *Coincya monensis* ssp. *monensis* on the Sefton Coast, Merseyside

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### Introduction:

Isle of Man Cabbage (*Coincya monensis* ssp. *monensis*) is a nationally scarce, annual or short-lived perennial, mainly found by the sea on open sand-dunes in north-west England, south-west Scotland and south Wales. The *New Atlas* shows it as native in 34 post-1986 hectads (Preston *et al.* 2002). One of few British endemics, this is a Priority Species in the UK Biodiversity Action Plan and the subject of a Species Action Plan in the North Merseyside BAP.

On the Sefton Coast (v.c. 59, S. Lancs.), the Isle-of-Man Cabbage has always been extremely localised. For many decades, it was restricted to coastal sand-dunes at Crosby and Blundellsands (Savidge *et al.* 1963) but its habitat was progressively destroyed by housing development (V. Gordon *in litt.*). By 1989, the plant was confined to a sandy footpath about 60m long and 4m wide on the north side of Park Drive, Blundellsands at SD302.999. A total of 35 plants in flower was counted, together with a larger number of small, non-flowering rosettes (Smith & Hall 1991). In 1992, this relict colony was lost when the footpath was top-soiled and turfed over but, before this happened, in July of that year, a rescue operation organised by the Lancashire Wildlife Trust and the Sefton Ranger Service led to 385 young plants being translocated to six ostensibly suitable dune sites nearby at Hall Road (SD300.006) and Crosby Marine Park (SJ305.993). The results of subsequent monitoring are the subject of this article (see photos back cover).

### Methods:

#### Translocation:

One-year-old plants were heavily watered before being dug up with as much of the tap-root as possible and transported in large plastic fish-boxes. They were planted out on the same day about 15cm apart and were watered-in thoroughly. Each of the transplan-

tation sites chosen was on the leeward side of semi-fixed dunes within about 100m of the sea, characterised by an open plant community, including Kidney Vetch (*Anthyllis vulneraria*), Sand Sedge (*Carex arenaria*), Sand Couch (*Elytrigia juncea*) and Lyme-grass (*Leymus arenarius*) and an intermittent rain of blown sand from the west (Rooney 1992, Smith 1994).

#### Monitoring:

The translocation sites were searched in June at one or two-year intervals. All *C. m. monensis* plants were counted and from 1998 onwards, areas occupied by the plants were estimated by pacing. Notes were made on the condition of the habitat and apparent health of the plants.

#### Results:

The first monitoring exercise took place in 1994, two years after the introduction. Only 30 Isle-of-Man Cabbage plants were found, 14 at Hall Road and 16 at Crosby. All were mature rosettes, 30 to 100cm in diameter, with plenty of flowers and fruits, and were probably some of the original transplants. The poor survival rate of 7.8% may have been due to root-damage during translocation and drought conditions in late summer 1992 (Smith 1994).

Subsequent visits usually revealed an increase in the populations, though numbers fell in 1998 and 2001 (Fig. 1). By 2007, there were 1323 plants, representing a 34% increase on the total in 2005. Hall Road held 701 plants, while the number counted at Crosby was 622. Each population included a wide size range of individuals from large, mature plants 150cm or more in diameter, with abundant inflorescences, to small first-year rosettes.

The area of duneland occupied by Isle-of-Man Cabbage plants increased fourteen-fold during the monitoring period from about 960m<sup>2</sup> in 1998 to over 13,600m<sup>2</sup> in 2007 (Fig. 2). At both

localities, the boundaries between the original introduction sites became indistinct, while plants spread from the semi-fixed back-slope of the dune ridges to the western, more mobile, side and also colonised blow-outs.

Since 1992, habitat conditions at Crosby and Hall Road have remained relatively unchanged with thinly vegetated areas and bare sand suitable for colonisation at all sites. It seems clear that moderate levels of human disturbance, by pedestrian trampling, at both localities have maintained suitable conditions for this species. Also, there appears to be plenty of suitable habitat at both locations for future spread.

No evidence of insect or fungal attack or drought stress in *C. m. monensis* was recorded throughout the study. Indeed, in high summer, plants invariably appeared vigorous and healthy even when surrounding vegetation was suffering from drought. Some plants adjacent to informal footpaths were damaged by trampling but, overall, this had little adverse impact.

#### Discussion:

The only other extant population of Isle-of-Man Cabbage on the Sefton Coast is one discovered by R.A. Hall and D.E. Nissenbaum in 1989 on dunes west of Southport Marine Lake (SD338.186). At least 347 plants were then present (Smith & Hall 1991), rising to 874 in 1997 (Brummage 1997). By 2004, for reasons which were not apparent, this colony had declined to a total of 281 individuals (Smith 2004). The only other Sefton site recorded for this species in recent years was at Birkdale Sandhills (SD319.160), where 55 plants were found in July 1983 (Smith & Hall 1991). This increased to 168 plants in 1986, followed by a steady decline to extinction in about 1993 as the habitat changed to a closed plant community with much Sea Buckthorn (*Hippophae rhamnoides*).

Vascular plant associates of *C. m. monensis* at the translocation sites and at Southport Marine Lake were recorded in 1994 and 2004 respectively (Smith 1994, 2004). Table 1 shows that the lists are quite similar, contain-

ing characteristic species of mobile and semi-fixed dunes on the Sefton Coast, the most constant being Kidney Vetch (*Anthyllis vulneraria*), Smooth Hawk's-beard (*Crepis capillaris*), Sand Couch (*Elytrigia juncea*), Field Horsetail (*Equisetum arvense*), Cat's-ear (*Hypochaeris radicata*), Lyme-grass (*Leymus arenarius*) and Dandelion (*Taraxacum* sect. *Ruderalia*).

The original objective of this conservation project was to save from extinction a historically important population of Isle-of-Man Cabbage in north Merseyside. Rooney (1992) emphasised the importance of recording the circumstances of the translocation and of subsequent monitoring. Pearman & Walker (2004) state that plant translocations should only be used as a last resort, pointing out that many have failed due to lack of understanding of the requirements of the species concerned. They also stress the need for monitoring and state that scarce resources are best spent on reintroducing native species to a native site. The current project seems to have fulfilled all these recommendations and has largely been achieved by volunteers. Its future success will depend on habitat protection (both localities lie within Sites of Local Biological Interest designated under Sefton Council's Unitary Development Plan) and appropriate management – in this case moderate levels of pedestrian activity to maintain the open sward and bare patches of sand that this species seems to require.

#### Acknowledgements:

I am grateful to Mike Wilcox for constructive comments on an early draft of the manuscript.

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Table 1. Vascular taxa associated with Isle-of-Man Cabbage at the two translocation sites and Southport Marine Lake.

Taxon	Hall Road	Crosby	Southport
<i>Agrostis capillaris</i>		+	+
<i>Agrostis stolonifera</i>		+	+
<i>Ammophila arenaria</i>	+		+
<i>Anthyllis vulneraria</i>	+	+	+
<i>Cakile maritima</i>			+
<i>Carex arenaria</i>		+	
<i>Cirsium arvense</i>		+	+
<i>Crepis capillaris</i>	+	+	+
<i>Diplotaxis muralis</i>			+
<i>Elytrigia juncea</i>	+	+	+
<i>Equisetum arvense</i>	+	+	+
<i>Eryngium maritimum</i>			+
<i>Euphorbia portlandica</i>			+
<i>Festuca rubra</i>	+		+
<i>Hypochaeris radicata</i>	+	+	+
<i>Leymus arenarius</i>	+	+	+
<i>Lolium perenne</i>		+	+
<i>Medicago lupulina</i>		+	
<i>Oenothera ×fallax</i>			+
<i>Phleum arenarium</i>	+		+
<i>Plantago coronopus</i>	+	+	
<i>Plantago lanceolata</i>	+	+	
<i>Poa pratensis</i> agg.	+	+	
<i>Raphanus raphanistrum</i> ssp. <i>maritimum</i>			+
<i>Rumex acetosella</i>		+	
<i>Sedum acre</i>	+		
<i>Senecio jacobaea</i>			+
<i>Senecio squalidus</i>			+
<i>Taraxacum</i> sect. <i>Ruderalia</i>	+	+	+
<i>Tragopogon pratensis</i>	+		
<i>Vulpia fasciculata</i>			+
<b>Total</b> 31	15	17	23

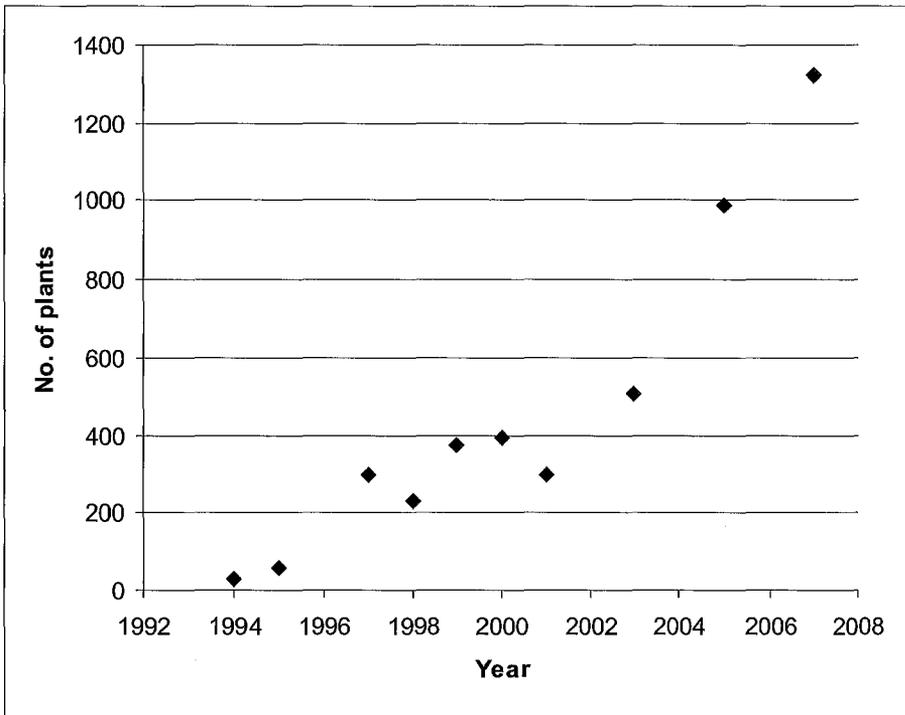


Fig 1 Total number of Isle of Man Cabbage plants at translocation sites from 1994 to 2007

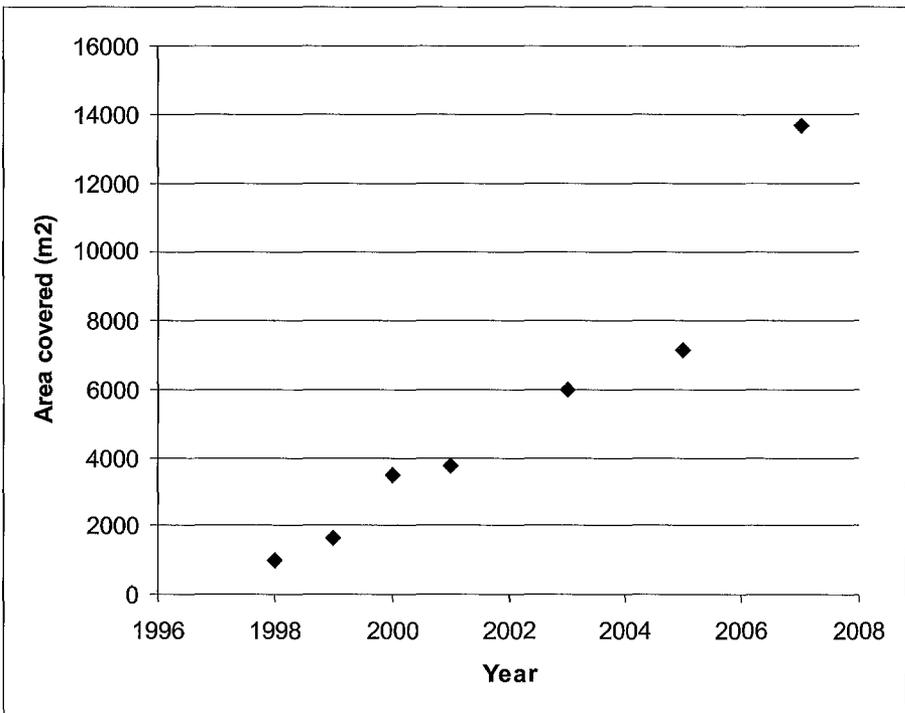


Fig 2 Area occupied by Isle of Man Cabbage plants at both translocation sites, 1998 to 2007

## Sycamore variability, and progeny of a mutant tree

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Forty separate tree books, Floras, internet accounts and specialist articles gave the following descriptions of Sycamore (*Acer pseudoplatanus*) inflorescences:

Pendent racemes	12
Pendent panicles	13
Pendent spikes	3 [clearly wrong]
Clusters	3
Undescribed	9

Flower descriptions also were unreliable, some accounts repeating verbatim faulty previous sources. e.g. ‘... separate clusters of male and female flowers’ (wrong in two ways). Stace (1997) gives a cautious and succinct précis for the genus and species ‘... sepals (4-)5, petals ) or (4-)5 ... functionally monoecious ... raceme-like panicles.’

Sycamores initially develop a few flowering panicles on some branches, but racemes are much commoner. Branched pedicels are usually, but not invariably, proximal on the inflorescence. Such arrangements vary considerably by tree (genetic variability), but are influenced by year, subtending branch vigour, shading, month of year, wind and salt spray. It can be seen from the top colour photo of samaras (Colour Section, Plate 4) that any male flowers had been neither concentrated ‘at the inflorescence tip’, nor ‘at the base’ as different books claim. Most flowers look bisexual to various degrees, but many have anthers that do not develop well, or produce no pollen (functionally ♀); others have ovaries which do not develop (functionally ♂). The majority of flowers drop off early (functionally sterile, some ♂). Because of gradations of androecium and gynoecium developments, I would favour the two accounts of Sycamore as a polygamous rather than a simply andromonoecious tree.

By May, road edges can be 1cm deep in fallen entire Sycamore flowers. Early May inflorescences with 30-120 flowers (lengths 4-12cm) elongate in June to 6-24cm, but with only 3-15 fruiting double samaras. Usually the few branched pedicels are lost, so the few

(say 10%) *flowering panicle inflorescences* become *fruiting racemes*, leaving only 1% of infructescences as panicles. Some semi-isolated Atlantic populations of small (3-9m) Sycamores can retain a higher proportion of fruiting panicles, as in the Scillies. Some of these trees have branched peduncles as well as branched pedicels, and bunches of triple samaras (compare Stephenson 1988). Possibly fierce salt-laden Westerlies initiate divisions of growing points.

Much more extreme variations can occur. A local embankment Sycamore only 120cm tall had in July 2007 three infructescences with 8, 10 & 11 healthy double samaras, before hedge-trimming. It *might* have derived from a scoured living root of a dead parent tree. Barber (2007) reported a wall-top Sycamore 30cm high with a 15cm inflorescence, suggesting this as a record for any tree species anywhere! Unless Bonsai experts know comparable phenomena, Barber’s treelet looks like an example of potential tree to herb evolution.

All books examined to date give Sycamore leaf *shapes* as characteristic and constant but with colour variants. More & White (2003) illustrate 9 popular cultivars with variegated leaf patterns. First year juvenile leaves which immediately follow the epigeal cotyledons usually have palmate venation at the leaf base, albeit less markedly so than in Norway Maple (*Acer platanoides*), see fig. 1 p. 21. However More & White’s illustration on p. 632 shows the first pair of Sycamore juvenile leaves with wholly pinnate venation.

### The Mutant Tree

This is a vigorous tree, competing well with closely adjacent Hazels (*Corylus avellana*), Beech (*Fagus sylvatica*), Ash (*Fraxinus excelsior*) and Horse-chestnut (*Aesculus hippocastanum*). It is about 27 years old, has a girth of nearly 1m and a height of over 22m. There are numerous normal Sycamores in the vicinity, but this one might be derived from Sark (Channel Isles) ancestry. From its 15<sup>th</sup>

year onwards, it was noticed to be throwing out a range of unusually-shaped leaves, but all green. About 1/3 were normal, about 1/3 were rather similar in shape to Sweet Chestnut (*Castanea sativa*) leaves, and 1/3 were either intermediate or chaotically formed (Oliver 2003). I now would prefer to call it 'Heterophyllous' rather than 'Chestnut-leaved'. See Colour Section, Plate 4 and figs 2 A-E, p. 23.

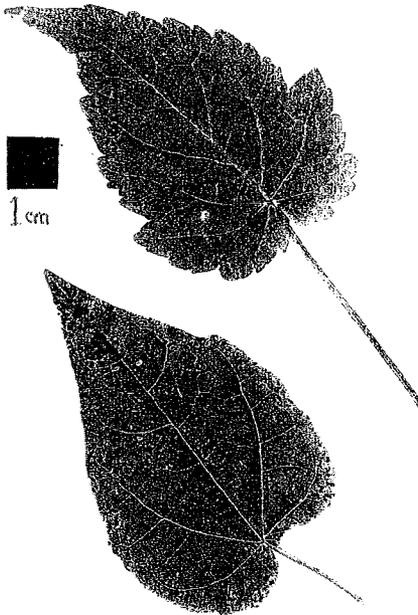


Fig. 1. 1st year juvenile leaves of Sycamore showing palmate venation

For 2007 at least, the inflorescences were pendent *racemes* with the pedicels mostly in *whorls*, often 2cm long or more. The racemes averaged 15cm long and 5cm wide, often with 100-130 flowers. The infructescences developed as irregular racemes (having lost most pedicels), averaging 20cm long with 13 double samaras, strongly pink. These measurements were in excess of the other local Sycamores with general green infructescences. The pink colouration shown in the colour plate is **not** the same pigment discussed under the next heading. Pollen grains averaged  $64 \times 28 \mu$ , larger than those of other local Sycamores, although probably not

of statistical significance, as the Sycamore pollen grains illustrated in Kessler & Harley (2004) seem varied in size, especially length.

### The Progeny

Notwithstanding quantities of pollen from 30 or so normal (and flowering) Sycamores within 250m (some closer than 30m, *all green*), over 5 years, seed from the mutant tree has produced even more surprises. For a start, some naturally seeded saplings have developed the intense and beautiful purple pigmentation on leaf undersurfaces, typical of the Jersey (or Berlin) Sycamore (cv. 'Atropurpureum').

Apart from natural seedings, I have grown on 67 plants from seed from the mutant tree over the last 3 years, with bewildering results. The main problem has been that the parent tree seemed to take 15 years before anomalies were obvious. Some 3<sup>rd</sup> year progeny were neglected and disregarded, awaiting uprooting. Months passed until I summoned up the energy, only to find that some of these supposedly run-of-the-mill normal Sycamores had produced at least some odd or highly abnormal leaves. The photo (Colour Section, Plate 4) shows a 2<sup>nd</sup> year plant (May 2007) which looks more like a *Persicaria* or *Polygonum* than an *Acer*. By July the lead shoot, instead of producing more of the same or reverting to palmate-veined leaves created new-forms, sub-ternate with a long slender mid-lobe. New clusters of 'Redshank-like' leaves appeared in the lower leaf axils. Other, *initially less* abnormal 2<sup>nd</sup> year treelets, by contrast produced Redshank-like leaves from their lead shoots in July!

The main photocopy (fig. 2 p. 23) shows 10 outlines of the 5 main leaf shapes of the heterophyllous parent tree, as a template for describing more extreme abnormalities seen in some progeny in unpredictable flushes of foliage. The 7 main categories of seedlings and saplings from the mutant tree were as follows:

- I Normal Typical Sycamores; 45%
- II Variegated seedlings, mostly sectorized cream, pink, pale green, or all three; 6%.

- One seedling was identical to the cv. 'Simon Louis Frères'. The only one to survive well was identical to cv. 'Nizetii'.
- III Young trees identical to cv. 'Atropurpureum' (Jersey Sycamores); 12%
- IV Young trees with  $\frac{1}{3}$  to  $\frac{2}{3}$  (or more) alien leaf shapes comprising the following types, (see the photocopy outlines, fig. 2, p. 23):
- A Residual palmate venation at base but large, broad pinnately veined terminal lobe. Others much more extreme than this outline.
- B Large shallowly cut leaves, like large versions of some Whitbeam and Service-tree (*Sorbus*) leaves, but often much less regularly incised.
- C Ovate or even strap-shaped leaves, some hardly incised, others serrate.
- D Asymmetrical leaves. The single lateral lobe, in some of the progeny, can be larger than the terminal lobe.
- E Smaller versions of A. On one treelet, each of one pair of leaves had become fully trifoliate, like *Acer cis-sifolium* (Vineleaf Maple). More common was narrowing of the waist with 2 small side lobes and a long terminal lobe, like *Acer ginnala* (Amur Maple), or 3 long thin lobes. Some treelets had 4 or all these variants. For whole group, 12%
- V As IV, but only one sixth of foliage with abnormally shaped leaves; 16%
- VI As III and IV together; 6%
- VII As III and V together; 3%
- (VIII) Some of the variants within groups V to VII had some leaf outlines similar to leaves of *Acer davidii* cultivars and hy-

brids, *A. carpinifolium*, *A. pycnanthum*, *A. tegmentosum*, *A. pensylvanicum*, *A. tataricum*, *A. grosseri* var. *hersii*, *A. capillipes*, *A. rufinerve* and *A. rubrum* var. *trilobum*.

### Summary

The European Sycamore can show interesting and extreme variations in many ways, but seldom in leaf shape. A mutant tree however seems, perhaps uniquely, to have much reduced genetic control over leaf venation, colour and form. A quarter of the seed from this green tree developed four different colour variants. One third of the progeny have the propensity to produce, spasmodically, pairs or flushes of leaves of wildly different venation and shape, mimicking leaf outlines of 15 or so diverse *Acer* species, Service trees, Whitebeams, Hornbeams, Chestnuts and others. This heterophylly seems to be more disparate than found in other plants, and more unpredictable.

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## The restoration of Howitt's Willow collection: an update

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This article is an update to an earlier article (*BSBI News* 96: 16), which described a project to restore the Howitt's Willow Collection at Farndon Willow Holt Nature Reserve

in Nottinghamshire. As a consequence of generous funding from Landfill Tax Credits distributed by WREN and an enormous effort by staff at Nottinghamshire Wildlife Trust



Fig 2. Outlines of Sycamore leaves from heterophyllous parent tree, see text for details

(NWT) with the help of volunteer groups, including the Friends of Farndon Village group and NWT local groups, the Howitt's Willow Collection is now re-established. The collection is laid out in a formal manner within a former pasture next to Farndon Willow Holt (the original location of the Howitt's collection). Each specimen in the collection is labelled and site information boards provide further information.

From the evidence available (Howitt's diaries and notes), it is considered that the majority of the specimens originally planted in Farndon Willow Holt by the Howitts are included within the new collection, particularly the British lowland willows. However, the Howitts probably collected many more specimens during field trips. These specimens may have been planted in the Holt, but to date records of their location and source have not been found and searches in recent years have not found any further unidentified specimens. David Allen's article (*BSBI News* 97: 22) for which I am most grateful,

confirmed that the Howitts collected possible triple hybrids during BSBI field trips. If the cuttings of possible triple hybrids were planted into the Holt, then the location and number were either not recorded (which seems unlikely), or lost, or else remain somewhere awaiting discovery (any help would be appreciated). Extracts from Howitt's diaries (dated April, 1957) only record the presence of two triple hybrids in the collection including Holme willow *Salix* × *calodendron* (*S. viminalis* × *S. caprea* × *S. cinerea*) and Forbe's willow *Salix* × *forbyana* (*S. purpurea* × *S. viminalis* × *S. cinerea*).

The restored collection currently stands at 55 willow types, including species, sub-species, hybrids, variants and nothovariants (see Table 1), with some types represented by specimens of both sexes. A decision was made to include some of the more familiar ornamental and non-native willows in order to provide additional taxonomic and aesthetic interest to the collection.



Willow rods made ready for planting into the Farndon collection. Photo J. Black © 2006

Table 1 Willows and Poplars in the Howitt’s Willow Collection (F = Female; M = Male)

Trees		
<i>Populus tremula</i>	<i>S. ×meyeriana</i> (M)	<i>S. ×rubens</i> nothovar. <i>basford</i> . f. <i>basford</i> . (F)
<i>P. nigra</i> ssp. <i>betulifolia</i>	<i>S. alba</i> var. <i>alba</i>	<i>S. ×rubens</i> (aka <i>viridis</i> ‘ <i>elyensis</i> ’)
<i>Salix pentandra</i>	<i>S. alba</i> var. <i>vitellana</i> (F)	<i>S. ×sepulcralis</i> nothovar. <i>chrysocoma</i>
<i>S. fragilis</i> var. <i>fragilis</i> (F)	<i>S. alba</i> ‘ <i>Britzensis</i> ’ (M)	<i>S. ×pendulina</i> var. <i>elegantissima</i>
<i>S. fragilis</i> var. <i>furcata</i> (M)	<i>S. alba</i> ‘ <i>Cardinalis</i> ’ (F)	<i>S. daphnoides</i> (M & F)
<i>S. fragilis</i> var. <i>russelliana</i> (F)	<i>S. alba</i> var. <i>caerulea</i>	<i>S. acutifolia</i> (M)
<i>S. fragilis</i> var. <i>decipiens</i> (M)	<i>S. ×rubens</i> sens. lat. (F)	<i>S. tortuosa</i>
Basket willows		
<i>S. americana</i>	<i>S. triandra</i> ‘Whissenders’	<i>S. ×mollissima</i> var. <i>hippophaiifolia</i>
<i>S. purpurea</i> ssp. <i>lambertiana</i>	<i>S. viminalis</i> (M & F)	<i>S. ×mollissima</i> var. <i>undulata</i> (F)
<i>S. purpurea</i> ssp. <i>purpurea</i> (F)	<i>S. ×calodendron</i> (F)	<i>S. ×rubra</i>
<i>S. triandra</i> (F)	<i>S. ×forbyana</i> (M & F)	<i>S. ×sericans</i> (M & F)
<i>S. triandra</i> var. <i>hoffmanniana</i>	<i>S. ×fruticosa</i> (F)	<i>S. ×smithiana</i> (M & F)
Shrub willows		
<i>S. caprea</i>	<i>S. gracilistyla</i> var. <i>melanos-tachys</i>	<i>S. schraderiana</i>
<i>S. aurita</i>	<i>S. magnifica</i>	<i>S. cinerea</i> ssp. <i>oleifolia</i>
<i>S. caesia</i>	<i>S. myrsinifolia</i>	<i>S. ×erythroflexuosa</i>
<i>S. candida</i>	<i>S. phylicifolia</i> (F)	<i>S. ×latifolia</i> (M)
<i>S. cantabrica</i>	<i>S. purpurea</i> var. <i>amplexicaulis</i>	<i>S. ×multinervis</i> (M)
<i>S. cinerea</i> ssp. <i>cinerea</i>	<i>S. purpurea</i> var. <i>helix</i> (F)	
<i>S. eleagnos</i>	<i>S. purpurea</i> var. <i>nana</i> (F)	
<i>S. gracilistyla</i> (F)	<i>S. sachalinensis</i> ‘sekka’	

Spaces are left within the collection as there are several willow types that would be desirable additions, including *S. fragilis* var. *decipiens* (female), *S. ×ehrhartiana* (either sex), *S. ×fruticosa* (male), *S. ×meyeriana* (female) and *S. ×rubens* nothovar. *basfordiana* f. *sanguinea* (either sex). Additional space have been allocated to include more hybrids / rare varieties and it is hoped that with the co-operation of readers and land-owners further specimens, including those mentioned above can be sourced and added to the collection.

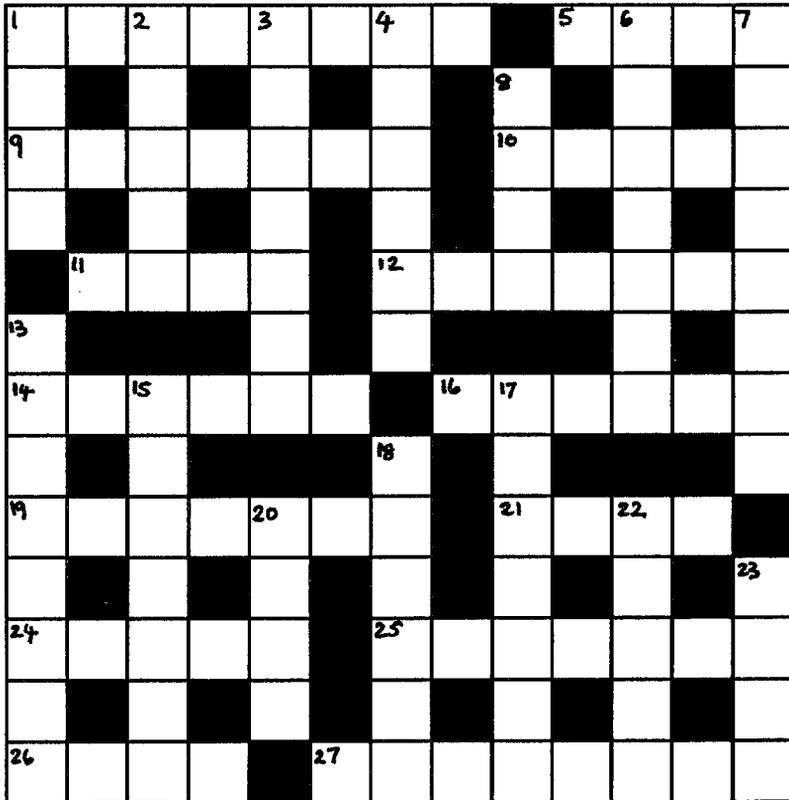
The Farndon Willow Collection and Willow Holt is open to the public throughout the year (river levels permitting) and visitors are invited

to view the collection. NWT would welcome enquiries regarding the use of the collection for research and study. In addition, NWT is also willing to exchange cuttings with fellow collectors, or allow cuttings of specimens to be taken, providing they are informed beforehand.

For general enquiries regarding the collection and access contact NWT (0115 9588242) or visit their web-site (<http://www.wildlifetrust.org.uk/nottinghamshire/reserves/Farndon.htm>) for details of the site. For enquiries regarding taxonomy or aspects relating to the activities of the Howitt’s, my contact details are supplied above.

## Botanical Crossword No. 9

BY CRUCIADA



### Across

1. Distressed if sultan is found floating (8)
8. Buried under shoots of Crocus or Romulea, Montbretia (4)
9. I am involved with grass round about (7)
10. Less fattening close to home (5)
11. Conspiracy in a small area (4)
12. Like skinny model? (7)
14. Get-out clause enables one to go over the wall (6)
16. Plant of a more flaming red (6)
19. Rate ten over three in one (7)
21. Motley dished (4)
24. When caught, placed soundly in extended family (5)
25. Can cervid scratch back on spiky plant? (3-4)
26. Roll (4)
27. Heavy weight of timber drifting in the sea (8)

### Down

1. Iris to wilt (4)
2. Get no credit for a snippet of the Spanish flower arrangement (5)
3. Negotiate, we hear, over work at highest level (7)
4. Innocent takes time to be original (6)
6. You'll get your desserts if you own one (7)
7. In cheerful mood, bachelor from capital university needed to get silk (8)
8. Shortage of puff - result of trying to botanise from a fast car? (4)
13. Tell nice yarn about little lump (8)
15. Useful grains gleaned from listening to soaps (7)
17. Take it for the pain, sir (7)
18. Repair carried out round Royal Botanic's plant book (6)
20. Unknown primate at the top (4)
22. Casualty in America etc groggy but upright (5)
23. English study producing ecology project (4)

## Botany in Literature – 45

### Sir Arthur Conan Doyle – Botany and Botanists in (1) *The Hound of the Baskervilles* and (2) *The Lost World and Other Stories* – Naturalism and Doyle's oscillation between Botany, Zoölogy (and Entomology)

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I established in the previous issue of *BSBI News* (105: 22-24) that Sherlock Holmes, despite apparent nil knowledge of certain subjects in Doyle's first Holmes story, often acquired, as his character developed, an interest in them in later adventures. It can also be seen that if he did not acquire the interest personally then another character was suffused with it which at least, in the course of his investigations, Holmes acquired a smattering thereof.

However, it might be truer to say that Doyle (1859-1930) Victorian (1837-1901) and Edwardian (1901-10) gentleman that he was, in an age of immense scientific development, already knew his topics and simply introduced them where appropriate.

This would appear to be the case with botany (although the tag 'variable' would still seem to apply), zoölogy and entomology in the Edwardian Sherlock Holmes adventure *The Hound of the Baskervilles* (1902) and Doyle's science fiction stories: *The Lost World* (1912), *The Poison Belt* (1913), *The Land of Mist* (1926) (which is more of an autobiographical account via the protagonist Malone of Doyle's conversion to spiritualism), *The Disintegration Machine*, and *When the World Screamed*. The quintet deal with the adventures of the insufferably rude, impossible, egocentric, large-headed and fifty-four inch torsoed Professor George Edward Challenger (G.E.C.), as recorded, Watson-like by that 'foul feeder' and 'carrion eater, like all of his kind – *porcus ex grege diaboli* – a swine from the devil's herd' of a journalist, Malone (Doyle was once a newspaper correspondent), who via shared endeavours, and as long as he is dependent on the intolerable scientist, is Challenger's friend.

Doyle was a contemporary of H.G Wells (1866-1946) (see Souchier, *BSBI News* 104: 29-31), who was greatly influenced by Jules Verne (1828-1905), and one need only compare Verne's *Journey to the Centre of the Earth* of 1864 with Doyle's *When the World Screamed* to see a similar influence, and one which, at least as far as humour in *The Lost World* is concerned (e.g. Doyle, 1995 pp. 26-29), is also Wellsian. (Although, apropos of the Holmes stories, and according to Symons (1993), Doyle was influenced by Edgar Allan Poe (1809-1849) and the French writer of detective fiction, Emile Gaboriau (c.1835-73), to the extent that 'at times [they] were "copied so faithfully that he appeared to be quoting from them"').

Science and the use of a veritable amanuensis being parts of the glue that bind the Holmes and Challenger stories, the following two extracts, the first from *The Hound of the Baskervilles* (Doyle, 1999 pp. 61-62), the second from *The Lost World* (Doyle, 1995 pp. 98-99) provide examples of Doyle's interest in the subject:

(1) [Stapleton] '... And yet, if it were not for the loss of the charming companionship of the boys, I could rejoice over my own misfortune, for with my strong tastes for botany and zoology,<sup>1</sup> I find an unlimited field of work here, and my sister is as devoted to nature as I am. All this, Dr Watson, has been brought upon your head by your expression as you surveyed the moor out of your window.'

(2) [Malone] Hardly had we started when we came across signs that there were indeed wonders awaiting us. After

a few hundred yards of thick forest, containing many trees which were quite unknown to me, but which Summerlee, who was the botanist of the party, recognised as forms of conifera and of cycadaceous plants which have long passed away in the world below, we entered a region where the stream widened out and formed a considerable bog. High reeds of a peculiar type grew thickly before us, which were pronounced to be equisetacea, or mare's-tails,<sup>2</sup> with tree-ferns scattered amongst them, all of them swaying in a brisk wind.

Suddenly Lord John, who was walking first, halted with uplifted hand. .

#### NOTES

1. *botany and zoology*: Stapleton is previously seen with a 'tin box of botanical specimens hung over his shoulder' (p. 55), but after this, with his mention of Cyclopides [sic; genus not in current use] (p. 59), and Lepidoptera (p. 62), his role is more one of entomologist ('zoölogist') as perceived by Holmes with his mention that the man was 'devoted to entomology' (p. 109) and Watson's recording that 'The room had been fashioned into a small museum, and the walls were lined by a number of glass-topped cases full of that collection of butterflies and moths the formation of which had been the relaxation of this complex and dangerous man'. (pp. 132-3). Holmes also learns from 'the British Museum that he [Stapleton, formerly Vandeleur] was a recognised authority upon the subject, and that the name of Vandeleur [fictitious, possibly derived from the Lepidopteran genus *Vindula* or Van de Leur] has been permanently attached to a certain moth which he had, in his Yorkshire days, been first to describe.' (p. 138).

The demarcation between Doyle's Victorian, and decidedly unbotanical/zoölogical concerns, and his twentieth century writing is here clearly evident, and it has been pointed out to me by Peter Owen

(personal communication, 2007) that in 'The Adventure of Wisteria Lodge' in *His Last Bow* (1917) (my previous *News* comment upon which should perhaps have been more correctly attributed to Ed Glinert), that Doyle, perhaps not content with his secondary characters being scientists, actually makes Holmes turn botanist himself, but I will leave Peter to quote the relevant passage from the above adventure. 2. *equisetacea, or mare's-tails*: c.f. *The Hound of the Baskervilles* (p. 60) ['Miss' Stapleton to Dr Watson]

'... Would you mind getting that orchid for me among the mare's-tails yonder? We are very rich in orchids on the moor [Dartmoor], though, of course, you are rather late to see the beauties of the place.'

Later, in *The Lost World* (p. 74) occurs, via Malone, the following comment: 'The vegetation had again changed, and only the vegetable ivory tree remained with a great profusion of wonderful orchids, among which I learned to recognise the rare *Nuttonia* [not a current Orchidaceæ genus, unlike *Notylia*] *Vexillaria* [sic] and the glorious pink and scarlet blossoms of *Cattleya* [sic] and *odontoglossum* [sic].', evidence of the interest in orchids at the time (c.f. too H.G. Wells' *The Flowering of the Strange Orchid* (Souhier, *BSBI News* 104: 29-31) and also, as with the mare's-tails, a certain recycling of material on Doyle's part.

There is however, a certain predominance in *The Lost World*, as there is in *The Hound of the Baskervilles* with zoölogy in its broadest sense (i.e. encompassing entomology, as already seen in the character of Stapleton), and it is thus that Doyle oscillates between botany and zoölogy, coming to rest more so on the latter. Even Summerlee, the botanist, becomes 'absorbed in the insect and bird life of the plateau and spent his whole time ... in cleaning and mounting specimens.' (p. 161), although whether botanical or entomological is not entirely clear.

Obviously, though, under the umbrella of naturalism, botany, zoölogy, and entomology were more closely intertwined than they are today, although the only specific reference in *The Lost World* to the Lepidoptera is via ‘Baxter’s *Moths and Butterflies*’ (p. 32).

Amidst several rather sedate references (e.g pp. 19, 113, 169, 174) to the Zoological Institute of London (which Doyle places in Regent Street), are many astute observations about science, albeit often presented humorously, such as the incidence of the ‘purplish grape’ on Malone’s leg which turns out to be, an enormous unclassified blood-tick and nothing more than ‘Filthy vermin!’ to the undetached and unscientific mind of its discoverer. However, the faculties of detachment and analysis, so highly cultivated in the admonishing Professor Challenger suddenly disappear when a tick lands on him and he springs into the air ‘bellowing like a bull’ and tearing frantically at his clothes.

While Carey (2007), reviewing Lycett (see endnote), maintains that Doyle and Holmes were ‘opposites in virtually every respect’, this is to deny the very real infusion of Doyle’s interests, professional knowledge, and experiences into the character of Holmes (as there is with that of Challenger, and, of course, those of Watson and Malone). So that while, for examples, Holmes played the violin (and Doyle the banjo), and (Symons, 1993) ‘knew his London because ADC did not’, it is only through Doyle, as a failed doctor, that Holmes was ‘Well up in belladonna, opium, and poisons generally’ in *A Study in Scarlet*, and that the great Professor is similarly versed in ‘vegetable nerve poisons’, to wit, ‘the poisoned arrows of the natives, dipped in the juice of strophanthus [sic] and steeped afterwards in decayed

carrion’ (p. 157, *The Lost World*), and *Datura* [sic]: ‘It would make for scientific precision if we named our toxic agent daturon...’ (p. 206, *The Poison Belt*), although strictly this latter should be the tropane alkaloid daturamine (anisodine), found, however, as such in *Scopolia* (Solanaceæ) and only broadly in *Datura*, where the main alkaloids or active (toxic) principles are hyoscyamine and hyoscyne (extrapolated from Evans, 1996).

Finally, in *The Land of Mist*, Doyle’s conversion to zoölogy, as well as spiritualism, is complete by mention of the zoölogist Wilson’s paper ‘The Reproductive System of the Dung-Beetle’ (p. 299), yet in the same story on page 382, there is a return to botany, but with a hint at naturalism: ‘All Nature is the field of our study, Mr Malone. It is not for us to choose. Shall we classify the flowers but neglect the fungi?’

NOTE: For those interested in Sir Arthur Conan Doyle, complex man that he was, a new biography *Conan Doyle: The Man Who Created Sherlock Holmes* by Andrew Lycett (Weidenfeld) has very recently been published.

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Answers to Crossword (see p. 26)  
 Across - 1. Filitans; 8. Corn; 9. Ambient; 10. Local; 11. Plot; 12. Virgate; 14. Escape; 16. Down - 1. Flag; 2. Umbel; 3. Treetop; 4. Native; 6. Orchard; 7. Mulberry; 8. Blur; 13. Lentice; 15. Cereals; 17. Asprin; 18. Herba; 20. Apex; 22. Erect; 23. Eden

## Alien v. native plants

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The article by David Pearman (*Watsonia*, 26(3): 271–290) in which he reviews the status of 16 species grabbed my attention, not least because he concluded that *Euphorbia serrulata* (Upright Spurge) is a neophyte. Living as I do within the very small range of ‘Tintern Spurge’, and never having had the slightest doubt that it is native, I naturally asked myself whether he had a case.

The issues raised were sharpened for me some years ago by the claims that the populations of *Lilium martagon* (Martagon Lily) in the Tintern woods might be native and by the converse claim that the *Fritillaria meleagris* (Fritillary) up-Wye at Hereford might be an introduction. I was aware that these two species had been debated by Philip Oswald and J.H. Harvey and could not help noticing that the protagonists reached judgements that reinforced their respective interests as a naturalist/conservationist and a garden historian. This led to the thought that, since we don’t know whether these species are native or alien, we believe what best fits our predictions.

As it happens, the Fritillary is one of the less contentious species in the Lower Wye Valley. It was not mentioned by Purchas and Ley’s (1889) *Flora of Herefordshire*, which, given the quality of their work, does strongly imply that it was introduced, and it has recently appeared mysteriously in another wet meadow upstream.

Generally, however, ‘first records’ strike me as most uninformative. If we take my three local Floras together and consider the species on Pearman’s list that have been regarded as native locally, *Aconitum napellus* (Monk’s-hood) was first recorded in 1786, *Euphorbia serrulata* in 1773, and *Fritillaria meleagris* in 1841, and my view is that this tells us nothing at all about their status, since, to take some related species, the first records for *Caltha palustris* (Marsh-marigold, 1803), *Trollius europaeus* (Globeflower, 1852),

*Helleborus foetidus* (Stinking Hellebore, 1796), *Anemone nemorosa* (Wood Anemone, 1803), *Aquilegia vulgaris* (Columbine, 1789), *Euphorbia amygdaloides* (Wood Spurge, 1835), *Colchicum autumnale* (Meadow Saffron, 1570), *Hyacinthoides non-scripta* (Bluebell, 1840), *Allium ursinum* (Ramsons, 1840) and *Narcissus pseudonarcissus* (Daffodil, 1779) are all, save for one previously serious agricultural pest, within much the same range of years, and surely no one is arguing that Bluebells might have been introduced to the three counties because they were not recorded before 1840.

Presence in semi-natural habitats seems more acceptable as a criterion. It enabled Pearman to accept *Valerianella eriocarpa* (Hairy-fruited Cornsalad) as a native, albeit tentatively, but it was not good enough for *Euphorbia serrulata*. Tintern Spurge is a straightforward member of the gap-phase flora of ancient woods on limestone in and around the Lower Wye Valley which appears to have considerable endurance as dormant seed buried in the soil, and it does not readily spread to secondary woods, though it does well enough when introduced to gardens. However, *Fritillaria meleagris* is also at home in semi-natural habitats. At best, this too seems to be an uncertain yardstick.

The Lower Wye Valley population of Tintern Spurge is evidently a long way from *Euphorbia serrulata* elsewhere, and that seems to bring its status as a native species under suspicion. However, many other plants with disjunct distributions are accepted as native, including, to take two fairly local examples, *Helianthemum apenninum* (White Rock-rose) and *Koeleria vallesiana* (Somerset Hair-grass). Moreover, we have only a limited understanding of how species moved around the original, natural landscape and particularly how they achieved the long-distance movements that are necessary to

explain the return of species here after the last glaciation.

The verdict on the late, lamented *Euphorbia villosa* (Hairy Spurge) strikes me as telling. Even more restricted than *E. serrulata*, it was evidently in a coppice wood and along a lane far from any house, may have been recorded in 1576, and was not known to have been cultivated locally. On this basis ‘the evidence for native status seems extraordinarily sketchy’. But surely Pearman could have said, with equal justification, ‘the evidence for *introduced* status is extraordinarily sketchy’. Is this perhaps a case of glass half-full v. glass half-empty, with the current prejudice being against native status? That would certainly have resonance with wider political sentiment.

I mentioned *Lilium martagon* earlier. The population near Tintern has often been accepted as probably native, but there have always been doubters and the *New Atlas* duly brands it an alien. However, it does grow in ancient woods far from habitation, and I freely confess to wishing it were native.

Judging by recorded locations and opinions all over Britain, there seems little doubt that the great majority of its appearances arise from introduced stock, but I still wonder whether the scatter of substantial and persistent populations in ancient woods across the southern counties could be native. How would we know when a small and widely dispersed native population has been masked by numerous introductions and escapes?

I think there are two general points. The first is that the status of many species is very uncertain, and that in such cases it would be better to reach a ‘not known’ verdict where the rationale and evidence can reasonably be argued either way. Personally, I’d be far happier living with uncertainty than with accepting what seem to be arbitrary judgements. Secondly, I do not understand why it is necessary to reach a simple native or alien verdict at all, especially for those species where a native presence might have been greatly augmented by popularity as a cultivated plant.

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## ALIENS

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### *Helenium* × *clementii* – a new name

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*Helenium* species (Sneezeweeds) are popular garden plants) perhaps less so in recent times), and have often been recorded as aliens in Britain, usually as *Helenium autumnale* L. hybrids (e.g. Leslie, 1987), since no valid epithet appeared to exist. The pure species is clearly too ‘weedy’ to grow, and there is no proof that it has arrived in Britain as an accidental impurity. Stace (1997) does not comment on the complexity.

The garden plant has characters suggestive of *H. bigelovii* A. Gray and probably *H. flexuosum* Raf., too: one, or both, must be a parent in the ancestry. This problem has recently been addressed in *Syst. Geogr. Pl.* **76**: 217–220 (2006), after some advice was given by EJC! The new name *Helenium* × *clementii*

Verloove et Lambinon was validly created to cover the swarm of cultivars, replacing *H. ×hybridum* hort. and *H. superbum* hort., both judged as *nomen nudum*. The holotype (held in **BR**) is a garden escape recorded in Belgium; true *H. autumnale* is not known as an alien plant in Belgium (Verloove, 2007).

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## Some unusual finds in Fife

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St Andrews has long been known as the home of golf and as such attracts a large number of visitors. But the lure of the Old Course in the 1950/60s for those inclined to score botanical holes-in-one was not to play a round but to visit the local coup. It is hard to believe now but then the local Council used a site at the West Sands, immediately adjacent to the world famous golf links, as its rubbish tip – and this drew the Scottish alien-spotters of the day (such as Betty Beattie and Ursula Duncan) to record many throw-outs, e.g. *Saponaria ocymoides* (Rock Soapwort) and *Nonea rosea* (Pink Nonea); even now, the odd Sweet-William (*Dianthus barbatus*), Oriental Poppy (*Papaver pseudoorientale*) or Red-hot-poker (*Kniphofia* sp.) may be glimpsed lurking incongruously among the Marram (*Ammophila arenaria*) and Lyme-grass (*Leymus arenarius*), while there was almost a forest of *Lupinus arboreus* (Tree Lupin) in parts of the rough before being rooted out.

Nowadays the nearby Lade Braes, a wooded walk by the local burn, has been the spot to visit. Before and after WWII the owner introduced many plants, a practice that continued intermittently after his death about 1960, and a stroll there reveals, quite naturalised, such Scottish rarities as *Campanula trachelium* (Nettle-leaved Bellflower) and *Allium triquetrum* (Three-cornered Leek). In May 2005 I noted several plants of an unfamiliar crane's-bill that proved to be the cultivar 'Kashmir Blue' of *Geranium clarkei*, not dissimilar to *G. pratense* and apparently not recorded before in the wild. Some miles to the west in the Cupar area, in June 2006 Bill Hay came across *Gypsophila viscosa*, near a garden but not in it: it does not appear to be a hortical species. Elsewhere, this year he espied an attractive annual on 'made-up' ground, as the older writers termed soil brought in from elsewhere, that turned out to be *Collinsia heterophylla* (*C. bicolor*),

quaintly named 'Chinese-houses' (although it is from California). Although in Clement & Foster (1994), neither of these appears at all in the *VC Census Catalogue* (2003).

Closer to my home in south Fife, the place to go for aliens is the harbour, where grain has long been imported. The latest unusual plant is *Ranunculus parviflorus* (Small-flowered Buttercup) the first Scottish record for some 125 years; brought to our garden, a clump flowered freely this spring and summer. It is a long time since ballast featured as a vector but Fife became well known during the 19<sup>th</sup> century for its imports (see Ballantyne (1970)). A surprise reminder of those heady collecting days occurred late in 2006 when near the harbour at Aberdour I noticed a large expanse of what turned out to be *Medicago arabica* (Spotted Medick) on what had been the ballast bank. Recent disturbance had resulted in the re-emergence of much seed – after some 100 years, so it is here to stay! *Allium paradoxum* (Few-flowered Garlic) has been an increasing spring pest in parts of Scotland – certainly in v.c. 85 – so it was a welcome change in 2007 to discover a congener, *A. roseum* var. *bulbiferum* (Rosy Garlic in its white, bulbiferous form) taking over a shady bank; it seems to have been recorded in Scotland only once before, in 1996. All these are southern plants and climate change may well be an influence in their appearance here. My thanks to Eric Clement for some pertinent observations.

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## ***Cortaderia* Information**

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In a previous issue of the BSBI News, Eric Clement (EJC) reported *Cortaderia selloana* as self-sown and information on *C. richardii* and allies, (*BSBI News* 99). This note, encouraged by EJC, gives leaf illustrations (see Colour Section, Plate 1) and a simplified key below; (Htl = Held up to the light, and note that occasionally the midrib in *C. selloana* gives a little resistance):

Leaves easily torn off (sideways) = *C. selloana*

Additional: Htl – pale lines (spaces) between the green ribs each narrower than the width of a green rib.

Leaves not able to be torn off (need cutting) = *C. richardii*

Additional: Htl – pale broad lines (thick ribs) spaced between the green ribs (green ones as above) each much broader than a green rib (diminishing laterally)

Please be wary of identifying Pampas-grasses by the colour of the flowering plumes, as there are a number of cultivars, particularly in *C. selloana*, clearly a leaf is more diagnostic. However, as reported previously (EJC) there appears to be little herbarium material of these species and there may be (though less likely) one or two other taxa involved. Please

collect a voucher; leaf sheath from the base with a few leaves (make sure they are stuck down as they fold as in *C. selloana* or curl as in *C. richardii* as reported by EJC), culms only need a section with an internode and if possible a flowering plume.

I would be grateful to receive specimens of Pampas-grasses, even if it is just a 5cm piece of leaf (to see if any vary in cross-section and therefore may potentially be a different species). Also for a study into the anatomical aspects of grass leaves please collect any species particularly non-natives, fresh if possible, and send to the address below. Many are quite different as can be seen by the illustrations (see Colour Section, Plate 1). I would also appreciate specimen/s of *Juncus subnodulosus* fresh or pressed - postage paid if required; send to Mike Wilcox at the above address.

**Acknowledgements:** Thanks to Eric Clement for encouragement to produce this article.

### **References**

CLEMENT, E.J. (2005) *Cortaderia* Does Self-Sow Abundantly in Britain; *Cortaderia richardii* (Endl.) Zotov And Allies. *BSBI News* 99: 47, 48 and pp. 48-50, (respectively).

## ***Ferula communis* and its kin**

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When a serious interest is taken in the Apiaceae, still known in my house as the Umbelliferae, it soon becomes apparent that the UK species total (c.70) is modest compared to that of Europe (c.430) and that, of this latter total, most can be found in the mountains and in thoroughly Mediterranean locations.

Eyes were opened when overseas holidays became standard and one of the revelations was *Ferula communis* (Giant Fennel) the 2-metre sentinel of waste places and roadsides (fig. 1 p. 35), usually dominating its surroundings but occasion-

ally felled by envious youths, like several other tall Umbelliferae or Apiaceae.

*Ferula communis* is now seen occasionally in the UK, having arrived by various means, intentional and accidental, from the Continent. The best known early occurrence was in the Cambridge area, when a supporter moved it for safety from an urban location to a rural roadside, but a tramp lit his night fire on the very spot in innocent compliance with the laws of perversity. Shifting the larger Apiaceae requires care, in order not to damage or sever the substantial accumulation of

stores beneath the surface. These must not be detached from the crown and are sometimes only connected by slender links.

When I asked a botanical friend (c.1975) about the identity of Umbellifer spp. appearing after *Anthriscus sylvestris* (Cow Parsley), and he could not help me, the direction of my life was considerably altered. First the British spp. then western Europe, the Mediterranean, the Aegean and Turkey, adjoining regions and the Canaries. Various other directions too but I must confess my inability to name reliably plants taken on 35mm slides in Tajikistan and Uzbekistan by a friend in Sweden. He also collected seed from a number of species, from which I have raised perennial plants, but at the two-year point flowering looks unlikely. I must get to grips with *Flora USSR 17* and *Flora Tajikistan 7* (ex I.C. Hedge via a bookseller) and sort some of them out. Postponement must end!

*Flora Europaea* vol. 2 lists just 8 species of *Ferula*, with nothing extraordinary to cope with but *Flora Turkey* vol. 4 gives 18, including the little-known *F. parva*, of which I have two living examples. *Flora USSR* vol. 17 gives 96 spp.! which, despite suggestions of over-splitting, is a very big total from a very big land. I have 16 species, in greenhouse and on the limestone rockery, randomly accumulated, and am not minded to lump any two of them.

*Ferula elaeochytris* (fig. 2 p. 35), *F. lycia* and *F. huber-morathii* are among the Turkish species that announce themselves overpoweringly in gorges. I have the first two species in cultivation today, plants about three years old and looking as though an inflorescence might soon appear. As for *F. huber-morathii*, a native of NE Turkey, my plant exceeded 200cm and yielded a lot of 'good' fruit before showing itself to be monocarpic. Not a single fruit germinated to sustain

itself here. But I do have a reasonable specimen.

*Ferula parva* – 30cm high, in contrast to most of its relatives, only requiring one year to form a root system able to sustain an inflorescence, and is not monocarpic (fig. 3 p. 36). *F. kuhistanica* breaks away from the generic norm of multi-pinnate leaves and somewhat resembles a soft thistle in its early years. Some species use their earlier leaves simply for resource-production and surprise their keeper by producing an inflorescence when the leaves are obviously going over.

As for chemical properties of *Ferula* spp., they are numerous and very varied. *Flora USSR 17* gives uses ranging from fodder to much more specialised provision. It also lists some very weighty rootstocks, such as *Ferula pseudooreoselinum* at 35kg, presumably taking many years to assemble, in total contrast to *F. parva*. The species offering the most potent stimulant between ladies and gentlemen is said to have been gathered to extinction in late Roman times but *Ferula hermonis* remains with us and I have one plant, seemingly uncertain about flowering this year. Had the species been Russian, rather than Arab/Israeli, the chemical characters would be in print. As it is, the most stimulating parts of the plant, and to which partner it should be applied, are unknown to me.

Of my 16 species, some are in large pots, others on a limestone rockery. Where I have more than one plant, they are in mixed situations, in the hope that limited root systems will produce flowering more rapidly than unlimited scope outdoors. There is a 120cm flowering *F. anatolica* in a very large pot, which has four living grey-green leaves and two gone over. The early umbels are in yellow flower (17<sup>th</sup> May).

I am trying to establish some rules, and advantageous practices, in growing these things. It seems that I have quite a lot left to do.



Fig. 1. Pressed specimen of *Ferula communis* hort. at Ware, Herts. by G. Hanson, coll. May 6<sup>th</sup> 1989



Fig. 2. Pressed specimen of *Ferula elaeochytris* numerous on gorge walls, Demir, Kazik, coll. June 2<sup>nd</sup> 1995. The specimen took 10-12 days to dry on hot radiator!



Fig 3. Pressed specimen of *Ferula parva* hort. Twyford 2006

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### ***Helichrysum italicum* at Dungeness E. Kent**

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While botanizing at Dungeness during August 2007 I noticed a couple of small plants of *Helichrysum italicum* (Curryplant) closest to ssp. *serotinum* growing on the landward side of the road adjacent to gardens at TR093.183. The identity was confirmed by (Eric J. Clement).

I mentioned the plants to D. Walker the warden of Dungeness Bird Observatory who showed me a mature plant on the other side of the road, the seaward side, growing on shingle.

This species from the Mediterranean is unmentioned in Stace's *New Flora of the British Isles* 2nd edition (1997) but

maybe it is just beginning to find a natural home here.

I notice that Peter Lawson found it in 2006 as a pavement weed in Wenhaston Suffolk, and reported it in *The Wild Flower Magazine* No 496 (summer 2006) page 24 but perhaps wisely no subspecies was mentioned.

The English name originates from the intense curry aroma given off when fresh by the grayish, linear, downy leaves, which separates it from its close allies. I am indebted to EJC for help in writing this short note.

## Cathedral Point or ‘Bradford Forest’

B.A. [JESSE] TREGALE, 24 Ashbourne Drive, Bradford BD2 4AQ

Just below the Cathedral on Bolton Road of Forster Square in the middle of Bradford is a small area of waste ground fronted by a large billboard. The billboard reads ‘Cathedral Point Luxury Offices’, with an artist’s impression of a multi-story office block. The building which previously occupied this site was knocked down in about 1990 and after seventeen years the Luxury Offices are yet to arrive (see photo inside back cover).

After the building was knocked down the site was fenced off leaving just a steep bank of rubble, with little sign of plant life. Weeds soon started arriving and, on the steep rubble, tree seedlings, but it was not until 1998 when Michael Wilcox found the fence broken and investigated the site, by which time the tree seedlings had grown into saplings and small trees many several metres tall and formed a dense mini-forest right in the middle of Bradford. The trees and saplings are mainly Willows and Birches but there are also some interesting alien trees, all self-seeded. On his first investigation Michael found several small trees of the alien *Alnus incana* (Grey Alder) amongst the Willows and Birches and since then we have found another nine alien tree species *Acer platanoides* (Norway Maple), *Acer pseudoplatanus* (Sycamore), *Aesculus hippocastanum* (Horse-chestnut), *Alnus cordata* (Italian Alder), *Laburnum alpinum* (Scottish Laburnum), *Prunus cerasifera* (Cherry Plum), *Sorbus croceocarpa* (Orange-berried Whitebeam), *Sorbus intermedia* (Swedish Whitebeam), *Sorbus latifolia* (Broad-leaved Whitebeam) as well as native trees including *Prunus padus* (Bird Cherry), *Prunus avium* (Wild Cherry) and *Ulmus glabra* (Wych Elm). The site now has a total of twenty-four tree species

varying in size from small saplings to tall mature trees.

Amongst the shrubby under-story of mainly *Rosa canina* (Dog-rose) and *Rubus* ssp. (Bramble) are a great many alien shrubs including *Amelanchier lamarckii* (Juneberry), *Aucuba japonica* (Spotted-laurel), *Berberis darwinii* (Darwin’s Barberry), *Mahonia aquifolium* (Oregon-grape), *Lonicera nitida* (Wilson’s Honeysuckle), *Lonicera pileata* (Box-leaved Honeysuckle), *Prunus laurocerasus* (Cherry Laurel), *Prunus lusitanica* (Portugese Laurel) and twelve species of *Cotoneaster*, again nearly all self-seeded, the only exception is a small bush of *Euonymus fortunei* ‘Silver Queen’ (named by Eric Clement) which has grown from a throw out branch.

So we now have ‘Bradford Forest’ a rather small but still natural woodland, with no planted trees, right in the middle of Bradford. It cannot in any way be considered a native woodland as the majority of tree and shrub species are alien, coming in as wind or bird sown seed from gardens, shrubberies, street planting, etc. But even so it is rather exciting for us botanists to be able to find alien trees and shrubs growing truly wild; some rather impressive such as the *Laburnum alpinum* and *Alnus incana* trees which now flower and fruit; and others rarely seen growing wild such as *Sorbus latifolia* and *Sorbus croceocarpa*.

Still in Bradford but some distance away, nine plants of *Muscari latifolium* were found on a soil heap on waste ground at Four Lane Ends, (SE134.375), see photo inside back cover. The waste ground is a vast area where mills have been demolished. According to Eric Clement this is the first record for Britain as an escape.

## Is *Fraxinus angustifolia* naturalised in Britain?

MARY J.P. SCANNELL (formerly of the National Herbarium, National Botanic Gardens, Dublin.)

Issue No. 17 of the *Irish Botanical News* (edited by Brian Rushton) was published in March 2007. One of the papers therein entitled, – Is *Fraxinus angustifolia* (Narrow-leaved Ash) naturalised in Ireland? – poses the question why a recognised introduction, with winged fruits had not spread from Parks to become established in the wild. The question is now posed for Britain. Standard reference works do not describe the differences between *F. excelsior* (Ash) and *F. angustifolia* although Stace (1997) does provide an abbreviated description. A full account is given by Augustine Henry in *Trees of Great Britain and Ireland* (1906). Alan Mitchell in his *Trees of Britain, a field guide (includes the trees of Northern Europe)*. Collins, London. (1976) suggests the date of introduction to Great Britain as 1800. The author of this note however considers that the date may be much earlier – was the species introduced in the course of the Norman Invasion?

In the year 1066 William, Duke of Normandy defeated Harold at the Battle of Hastings. It was ‘an old method of warfare.’ The ‘Arms’ used – arrows, lancets, hatchets, javelins (metal) were all mounted on wooden handles. Transport on land was by wooden carts and on sea by wooden boats. Preparations for the invasion involved the felling of thousands of trees in northern France. The wood of the Ash has long been valued by craftworkers. Ash-wood with its long solid fibres is an exceptionally versatile material – plastic, elastic and strong, and the best for handles, sports goods, wheel felloes, etc., and it also works well with most tools. Both *F. excelsior* and *F. angustifolia* occur in France. If Norman carpenters used the best timber for handles and shafts then ash-wood would have been the timber chosen for the Invasion. At that time no workman would have differentiated between the species. In the mayhem of battle – a bloody hand-to-hand conflict – the wooden shafts would have been

splintered and the fragments trampled into the soil, there to possibly root and grow? Two experts on trees, Herbert Edlin and Oliver Rackham in their several works, state that the ash coppices well and they also refer to pollarding. Fragments (fresh wood felled a few months earlier) could have sprouted and become established in southern England. Rackham notes ‘our park tradition derives from the Norman’s interest in deer-husbandry’. They established deer-parks and such have to be fenced, possibly with ash-wood. It is reasonable to infer that the timber items brought in from France – the debris left behind – took root and that trees became established. Some of the fragments must have been of *F. angustifolia*.

A pictorial account of the Invasion may be seen in a textile – the Bayeux Tapestry – described as ‘a remarkable social document’. The embroidery on bleached linen, sewn in stem-stitch with coloured wools, measures c.70m × 50cm. It hangs in the Bishop’s Palace in Bayeux near Caen on the north coast of France. It narrates the story of the invasion of England by William, Duke of Normandy and the death of Harold at the Battle of Hastings in 1066. A full description of the Invasion is found in Thorpe, L. (*The Bayeux Tapestry and the Norman Invasion*, with an Introduction and a translation from the contemporary account of William of Poitiers. London. The Folio Society, 1973). In this publication the (numbered) reproductions of panels in the PLATE section (coloured) are explained by the author. Panel (37) the ‘chopping down of the trees and the smoothing of the planks, ... with planes, augurs, and adzes’; (38) ‘the launching of the vessels; (38-39) ‘the launching of the vessels and the carrying on board of arms, armour ...’ There follows the fighting scenes ‘showing the military tactics of the time’. The Folio Society publication is a remarkable book which botanists may wish to consult. For the whole operation thousands of trees must have

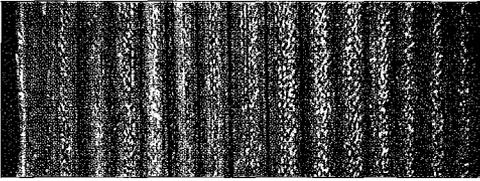


Fig. a) *Cortaderia selloana* – leaf surface

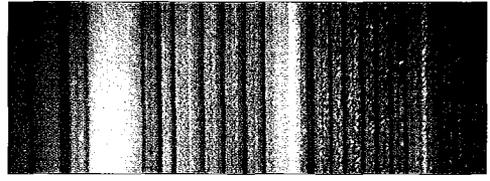


Fig. c) *C. richardii* – leaf surface showing the pale broad thickened ribs with the usual green ribs between, left rib is the central adaxial rib but these ribs show up abaxially as well.

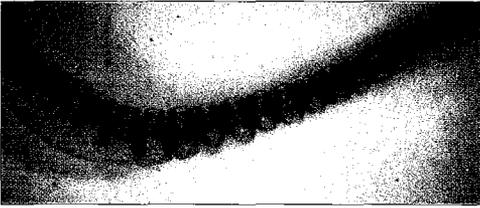


Fig. b) *C. selloana* – leaf section, the broad abaxial midrib to the left. Note the stained areas (normally green in life) look like ‘X’ chromosomes and all ribs even.

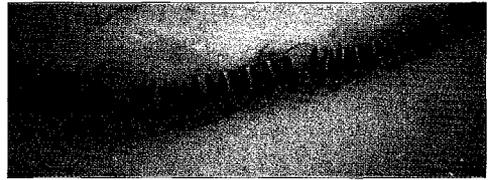


Fig. d) *C. richardii* showing the central (largest) rib both adaxially/abaxially and two other enlarged ribs laterally. Note the stained areas like ‘molar teeth with roots.’

All photos M. Wilcox © 2000 (see p. 33)



*Spiranthes romanzoffiana* (Irish Lady’s-tresses) in early flower on Colonsay [above]. Part of an *S. romanzoffiana* inflorescence showing a split capsule, pictured on Colonsay [above right]. A seed of *S. romanzoffiana* sampled from a Colonsay plant showing the embryo (dark) and surrounding testa [bottom right].

All photos Andrew Scobie © 2005, 2006 (see p. 9-12)

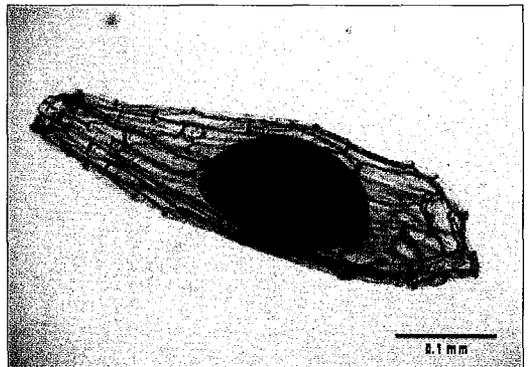




Fig. 1: *Lactuca serriola* f. *integrifolia* (Prickly Lettuce), 6 May 2005.



Fig. 2: *Lactuca virosa* f. *virosa* (Great Lettuce), 12 May 2005.



Fig. 3: *Lactuca serriola* pappi and achenes (olive-grey), 28 August 2007.



Fig. 4: *Lactuca virosa* pappi and achenes (dark maroon), 3 September 2007.



Fig. 5: *Lactuca saligna* (Least Lettuce), 13 July 2006.



Fig. 6: *Lactuca saligna* (in front) and *L. serriola* (behind), 4 July 2007.



Fig. 7: *Lactuca serriola* f. *integrifolia*, 13 July 2006.



Fig. 8: *Lactuca serriola* f. *serriola*, 24 August, 2007.

All photos © Philip Oswald (see p. 7-8)



Fig. 9: *Lactuca saligna* on gravel, 16 June 2005.

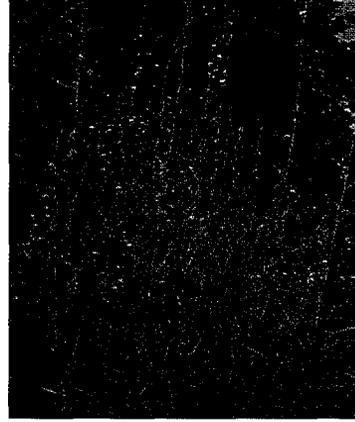


Fig. 10: Giant branched plants of *Lactuca saligna*, 27 July 2006.



Fig. 11: Giant plants of *Lactuca saligna* with *L. serriola*, 27 July 2006.



Fig. 12: Seedling *Lactuca saligna*, 27 July 2006.



Fig. 13: *Lactuca virosa* f. *virosa*, 3 August 2007.



Fig. 14: *Lactuca virosa* seedlings, 3 August 2007.



Fig. 15: Dwarf plant of *Lactuca virosa* f. *virosa*, 3 August 2007.



Fig. 16: Flowering stem on dwarf plant of *Lactuca virosa* f. *virosa*, 29 August 2007.

All photos © Philip Oswald (see p. 7-8)



Mutant Sycamore parent tree; note leaf shapes  
Both Sycamore photos Jack Oliver © 2007  
(see p. 20-22)



Second year Sycamore plant derived from seed  
of mutant tree



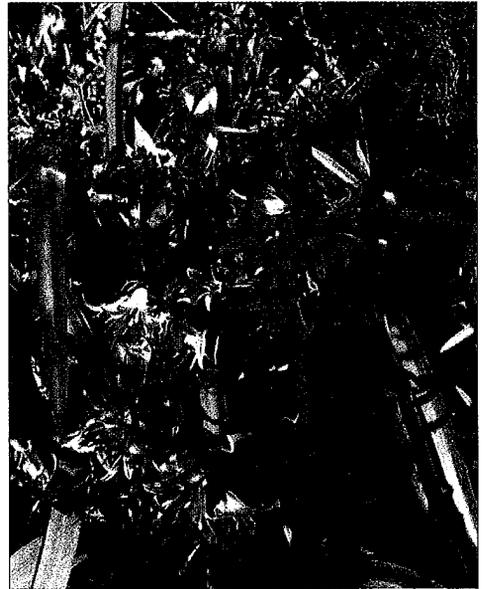
*Rubus chamaemorus* fruit, Cold Fell, Cumbria.  
Photo Phill Brown © 2006 (see p. 2 & 58)



*Medicago praecox* or *polymorpha*? A debate on  
the beach at Browdown (v.c. 11).  
Photo Ambrose Baker © 2007 (see p. 51)



*Melampyrum arvense*, St Lawrence (v.c. 10).  
Photo Geoff Toone © 2006 (see p. 2 & 42)



*Hyacinthoides hispanicus*, La Rana, Spain.  
Photo Teresa Farino © 2007 (see p. 62)

been wasted in northern France and the fall-out from the conflict needs further consideration. The literature notes that the animals, fallow deer and rabbits were introduced by the Normans but there is nothing on the possible introduction of plants and the Invasion.

The report on the possible occurrence of *F. angustifolia* in the wild in Ireland is set out in the paper in *Irish Botanical News*. Most probably a copy of the Issue would be available from the editor.

In the field, when approaching an ash tree, if sparingly branched with light green foliage, and with the top-most leaves showing a fretted pattern against the sky, then *F. angustifolia* is indicated. In contrast, *F. excelsior* is more branched, bears dark green foliage (somewhat glaucous) with the leaflet lamina limp and not forming a pattern against the

sky, the leaflets hang rather limp. For further information see Appendix 1 below or seek out the features as given in a detailed description.

Work is underway in Europe. A paper has been published by Myriam Heuertz (Heuertz, M. (2003) *Population genetic structure in common ash: a focus on southeastern European genetic resources*. Public Research Centre. Gabriel Lippman. Free University of Brussels (Brussels)). She notes that the two species have been reported to commonly hybridise in south-eastern France.

The illustration of leaflets and the guide to some field characters in Appendix 1 that appear below are reproduced from *Irish Botanical News* 17 by kind permission of the Editor Brain Rushton.

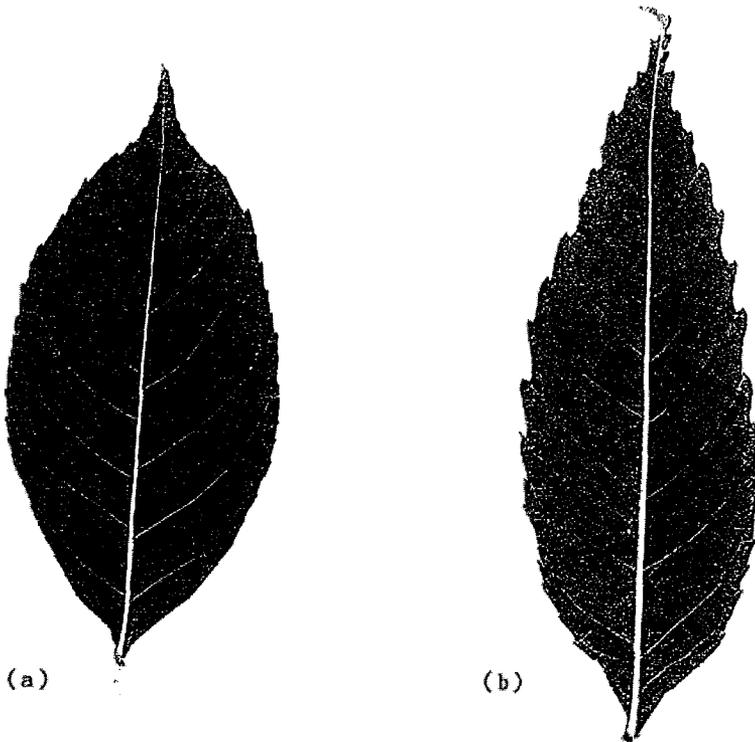


Figure 1. Silhouettes of leaves of: a. *Fraxinus excelsior* (leaflet with crenate margin, teeth more numerous than the lateral veins); and b. *Fraxinus angustifolia* (leaflet with serrate margin, teeth prominent, each lateral vein matches a marginal tooth). Both specimens taken from trees on Clyde Road, Dublin. Photocopies courtesy Herbarium, National Botanic Garden.

## APPENDIX 1

A guide to some field characters to help distinguish *F. angustifolia* (FA) and *F. excelsior* (FE).

FA: Tree, irregular dome, sparsely branched.  
FE: Tree domed, many branched.

FA: Winter buds, brown.  
FE: Winter buds, dark brown (blackish).

FA: At venation, the tightly packed leaves bear a rust-brown tomentum that is thrown off as growth proceeds.  
FE: At venation, a rust-brown tomentum was not observed.

FA: Leaves compound, leaflets 7-13 (generally nine in this survey).  
FE: Leaves compound, leaflets 9-13.

FA: Leaflets, lanceolate, coarsely to sharply serrate, acuminate, slightly coriaceous, shining above, stiffly attached.  
FE: Leaflets, ovate, margin crenate, lamina thinner, drooping.

FA: Lateral veins match the number of marginal teeth.  
FE: Lateral veins less in number than marginal teeth.

FA: Leaflets beneath, glabrous but with a fringe of hairs (light orange in colour) at base of midrib.

FE: Leaflets beneath, glabrous but with white hairs at base of midrib and on lamina and lesser veins.

FA: Leaf-axis with two wings forming a groove, open except where leaflets attached.  
FE: Leaf-axis furrowed.

FA: Young fruits borne upright, shiny, green.  
FE: Young fruits dull, borne pendant.

FA: Beneath the tree the view upwards shows much sky, and the leaves present a pectinate pattern.  
FE: Beneath the tree the view upwards shows little sky.

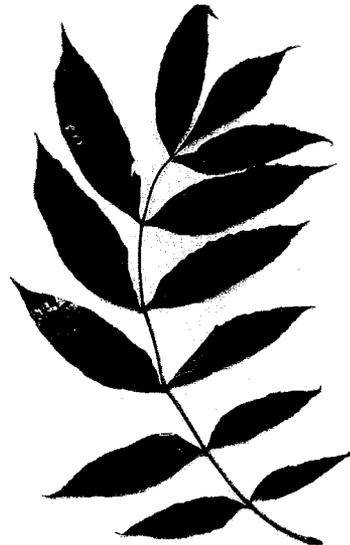
FA: Fruits, “graines occupant toujours plus de la moitié de la longueur de la samara” (des Abbayes, 1971) – translation: seeds occupy more than half the length of the samara.

FE: Fruits, “graines occupant moins de la moitié de la longueur de la samara” (des Abbayes, 1971) – translation: seeds occupy less than half the length of the samara.

DES ABBAYES, H. ed. (1971). *Flores et végétation du Massif Armoricain*. Presses Universitaires de Bretagne, Saint-Brieuc.



Pressed leaves of *Fraxinus angustifolia*,  
Clyde Road, Dublin



Pressed leaf of *Fraxinus excelsior*, Clyde  
Road, Dublin

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## REQUESTS & OFFERS

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### Mistletoe Survey – help needed for final analysis

JONATHAN BRIGGS, *46 Arrowsmith Drive, Stonehouse, Gloucestershire, GL10 2QR*

It has been over a decade since the BSBI and Plantlife Mistletoe Survey of 1994-6. Despite producing an overview report ‘Kissing Goodbye to Mistletoe?’ (Briggs 1999) I have not, yet, produced a more rigorous analysis or made the data available to BRCs or County Recorders. This short note is intended to explain the situation and request help, from about January onwards, to check some records on the ground. The intention is to produce a full report for *Watsonia*.

This situation has arisen largely because of the time needed to sort out the many inconsistencies in the data. Most of these require a return to the paper records (representing some 12000 sightings) followed up by site visits to check uncertainties. Having recently become self-employed I might now be able to make the time to address this – and intend to try to do so over the winter of 07/08.

Without beating around the bush, the main issues are differences between the BSBI-gathered and the Plantlife-gathered (mostly non-botanist) data. Not only were differing forms and questions asked but there were apparent differences in the quality of the data gathered and in data entry onto computer. Data quality issues show up most often in host preference, place-name and grid-references information, with many questionable/challenging entries in the public-gathered data. For example these data suggest many more mistletoe-oaks than the BSBI member data. This probably reflects poor winter tree identification by non-botanists – but cannot be dismissed as such without some proper ground-truthing. There are many other host identification queries. Also many grid-references are clearly incorrect – but most cannot be corrected without site visits.

Database structures and consistency also vary – the BSBI tetrad information was input to an Access database but the rest was entered onto an Excel spreadsheet. This allowed freeform input with much variation in place-name, county and

grid-reference formats and spellings. For the 1999 Report it was possible to use a ‘rough and ready’ combination of the data sets to plot distribution and host trends, but a fuller, more scientific analysis requires more thorough cleaning and combination of the data. A formal comparison of the two data types may also yield some interesting results.

I should perhaps stress here that I am not being critical of the volunteers who collected the data, or those who entered it (there would be no data at all without them!). I am merely reflecting on the difficulties in detailed analysis that arise from such surveys – difficulties that probably occur in most public-participation data-gathering projects.

Comparison with the BSBI-run 1970s mistletoe survey was a key driver for the 1990s project, largely with the intention of assessing population change, if any. This is another area that needs further analysis, building on the discussion of the difficulties of this comparison begun by Tim Rich in 2000 (Rich 2000).

The immediate plan is to review all the data entries against the paper records during the autumn, with a view to producing a master-list of all the remaining inconsistencies by about Christmas. I’d like to send this to the relevant (and willing) Vice-county Recorders or other volunteers, with a view to solving all the problems (allowing for change since 1997!) before mistletoe vanishes under the host canopy again in the spring. What better way can there be to spend your days from January to March? Expressions of interest of help can be sent direct to [jonathanbriggs@mistletoe.org.uk](mailto:jonathanbriggs@mistletoe.org.uk).

#### References

- BRIGGS, J. (1999) *Kissing Goodbye to Mistletoe?* A Joint Report from Plantlife and BSBI  
 RICH, T.C.G., 2000, A reanalysis of the Mistletoe (*Viscum album* L.: Loranthaceae) survey data from the 1970s and 1990s, *Watsonia* **23**, 338-339

## **Plea for help on habitat management for Rare and Scarce Species**

BRIAN LANEY, 5 *South Close, Long Buckby, Northants, NN6 7PX*; brian.laney@gmail.com

I am involved in a number of habitat management projects for a number of rare and scarce species during the Autumn and Winter months. On some of them I am on my own, cutting scrub and cutting and raking off grass and rank vegetation over various weekends to help these species. I would be delighted to hear from anyone who would like to join me with any of the projects during the 2007/2008 season even if it is only for an hour or so. I must thank those of you who have helped me over the past few years or so. Below is a list of all the current projects I am involved in, and I am sure more projects will be added in the future.

Lizard Orchid (*Himantoglossum hircinum*) near Bristol in Gloucestershire

Field Garlic (*Allium oleraceum*) at its only site in Warwickshire

Man Orchid (*Orchis anthropophorum*) at its only site in Warwickshire

Bicolor Bee Orchid (*Ophrys apifera* var. *bicolor*) in Warwickshire

Wasp Orchid (*Ophrys apifera* var. *trollii*) in Warwickshire

Mudwort (*Limosella aquatica*),

Golden Dock (*Rumex maritimus*),

Marsh Dock (*Rumex palustris*) all three at Daventry in Northamptonshire

Shepherd's-needle (*Scandix pecten-veneris*) in Northamptonshire

Field Cow-wheat (*Melampyrum arvense*) in Bedfordshire (see Colour Section, Plate 4)

I can be contacted via email or by telephone on 01327 843 847.

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## **Saving Lizard Village Greens**

BRIAN LANEY, 5 *South Close, Long Buckby, Northants, NN6 7PX*; brian.laney@gmail.com

A few years ago while botanising on the greens in Lizard village in Cornwall with fellow botanist Dave Shute a lady who watches over the greens Zena Browning told us the greens were under threat from being tarmaced over and proper paying parking bays made there. I have kept in contact with Zena since and helped out sending her letters of why these greens are important and famous amongst botanists over the years. The village greens support a number of interesting species including Early Meadow Grass (*Poa infirma*), Musk Stalk's-bill (*Erodium moschatum*), Pink Shepherd's-purse (*Capsella rubella*) and the

rarest of them all, Fringed Rupurewort (*Herniaria ciliolata*). At the time of writing the greens are still there but Zena has told me this is going to be a constant battle if the greens are to stay as they are for future generations.

If any of you can send letters of support saying why the greens are so special then please contact her via: Zena Browning, Caerthillian House, Pentreath Road, The Lizard, Cornwall, TR12 7NX; Tel 01326 290321.

She has also asked what management can be done so the greens look tidy BUT without damaging the special plants that grow there.

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## ***Watsonia* back numbers**

AUDREY LOCKSLEY, 8 *Kirklands, Sale, M33 3SG*; locksley@connectfree.co.uk

I have the following volumes of *Watsonia* that I wish to dispose of, free, to anyone who wants them.

*Watsonia* 1992 index only; vol. 20 1994-95; vol. 21; vol. 22; vol. 23; vol. 24; vol. 25 2002-03 (all including index).

Collect or postage: each vol. c.2.5 kg; all vols 15-20kg – Standard Parcel Post for 20kg £13.33.

## NOTICES

### BSBI Postcards

Due to the change in postal charges, revised pricing for sending packs of cards within the UK will be as follows after August 1<sup>st</sup> 2007:

- 1 pack £3.60
- 2 packs £6.10
- 3 packs £9.40

Prices for posting abroad on request.

We still have a large stock of these beautiful cards: I hope everyone is not replacing them with E-mails all the time! Cheques should be made payable to 'Margot Godfrey' and orders sent to her at – 3 Castleton Avenue, Barnehurst, Bexleyheath, Kent. DA7 6QT

### BSBI Field visit to Isles of Scilly 17-23 May 2008

ROSEMARY PARSLOW, 17 St Michael's Road, Ponsanooth, Truro, TR3 7ED;  
rparslow@cix.co.uk

A field meeting to the Isles of Scilly is planned for next spring. The Isles of Scilly are an archipelago of c.150 islands some thirty miles off the coast of Cornwall. Most of the islands are very small, with the five largest inhabited. We will stay on the main island of St Mary's, in Hugh Town, where we will stay close to the harbour from where we can take launches to visit the other islands.

The Isles of Scilly are all granite; strangely weathered tors and rocks are a great feature of the islands. Brilliantly coloured lichens are evidence of the clarity of the air. Nowhere is far from the sea, so habitats are mainly coastal, maritime heath, rocky shores, sand dunes and brilliant white beaches. Inland there are wetlands, fields with granite walls, pine and elm shelterbelts, green hedges of exotic shrubs around the bulb fields (we should be able to get access to a bulb farm to see some of the wonderful arable weeds). A visit to the famous 'sub-tropical' Abbey Gardens on Treco is an option.

Although the flora of the islands has similarities and links with both Cornwall and the Channel Islands they are unique. Because of the mild winters many plants are species that are of more southerly distribution. The climate has also enabled many alien plants to flourish and become established. Some of the specialities we hope to see include *Viola kitaibeliana* (Dwarf Pansy), *Ophioglossum azoricum* (Small Adder's-tongue), *Ornithopus pinnatus* (Orange Bird's-foot), *Briza minor* (Lesser Quaking-grass), *Silene gallica* (Small-flowered Catchfly) and *Fumaria occidentalis* (Western Ramping-fumitory).

The visit will be guided by Rosemary Parslow (v.c. recorder & author of the *New Naturalist* on the Isles of Scilly published on 6<sup>th</sup> August) but participants will be expected to book their own accommodation. As this is limited it is suggested you contact Rosemary to receive information on guest houses and travel details ASAP.

### Excursion to Benasque, Aragonese Pyrenees – June 2008

TERESA FARINO, Apartado de Correos 59, 39570 Potes, Cantabria, Spain; tel.: 00 34 942 735154; teresa@iberianwildlife.com

A one-week field meeting in the spectacular Pyrenean valley of Benasque, to explore the Posets-Maladeta Natural Park, is proposed for the summer of 2008, to run from Tuesday 24 June to Tuesday 1 July.

At the foot of the highest peak in the Spanish Pyrenees (Aneto, 3,408 m), the Benasque valley is enclosed by snow-clad peaks plunging abruptly to rushing mountain streams, a sprinkling of small glacial lakes

known as *ibones*, extensive forests of beech, European silver-fir and mountain pine, flower-rich ‘alpine’ rockgardens on both granite and limestone, and some simply glorious haymeadows.

Swathes of *Gentiana lutea* (Great Yellow Gentian), *Gentiana burseri*, *Iris latifolia* (English Iris), *Lilium martagon* (Martagon Lily) and *Paradisea liliastrum* (St Bruno’s Lily) decorate the drier meadows, with wet flushes hosting *Primula farinosa* (Bird’s-eye Primrose), *Tofieldia calyculata* (Tofield’s Asphodel) and *Veratrum album* (White False Helleborine). A stunningly diverse rupicolous flora includes such gems as *Saponaria caespitosa* (Tufted Soapwort), *Anemone narcissiflora* (Narcissus-flowered Anemone), *Adonis pyrenaica* (Pyrenean Pheasant’s-eye), *Ranunculus thora* (Thore’s Buttercup), *Mecanopsis cambrica* (Welsh Poppy), *Saxifraga longifolia* (Pyrenean Saxifrage), *S. caesia* (Blue Saxifrage), *Gentiana nivalis* (Snow Gentian), *Soldanella alpina* (Alpine Snowbell) and *Leontopodium alpinum* (Edelweiss).

Small streams cascading through the grasslands harbour Pyrenean Brook Newt, while birds of note include Lammergeier and

Griffon Vulture sailing overhead. Butterflies to watch out for are Large, Eros and Amanda’s Blues, Scarce and Purple-edged Coppers, and ‘saucer-sized’ Apollos. Alpine Marmots and Isard are the most abundant mammals.

We stay in the comfortable, family-run Hotel Avenida, in the picturesque mountain village of Benasque, where all rooms are en suite and the restaurant has an excellent reputation. Wines from the nearby Somontano region of Huesca are served with the evening meal. The cost will be £720 per person, plus a single-room supplement of £95, to cover half-board accommodation, picnic lunches, transport by hired minibus throughout, all entry fees and the services of the leaders (principal leader Teresa Farino), but excluding flights to Barcelona and travel insurance (obligatory). Participants must be fit for mountain walking.

An early indication of your interest is necessary in order to secure the appropriate accommodation, particularly if you are travelling alone, as single rooms are limited.

For further details, please contact Teresa at the address given above.

## Institute for Analytical Plant Illustration

PETER MITCHELL, 22 Redcar Road, Sheffield S10 1EX

The main aim of the Institute for Analytical Plant Illustration (IAPI) is to promote the scientific illustration of flowering and non-flowering plants. The institute was founded in December 2004 by the late Michael Hickey. Members of the BSBI may well be familiar with Michael Hickey’s work in his collaborations with Clive King in books on families of flowering plants and an illustrated glossary. Sadly, Michael died in June 2005 but founder members of IAPI and others are determined to carry on his vision for an organization that will encourage botanists and illustrators to work together, to spread the message about the diversity, fascination and usefulness of plants.

Analytical plant illustrations are accurate artworks made with scientific understanding. They can be of value in several ways.

- 1 Assisting in the identification of species, especially clarifying the differences between closely related species. This is familiar usage in floras, including the specialist floras on difficult groups produced by the BSBI.
- 2 Showing how structure relates to function, for example how different flower structures can have the same function in attracting pollinators, or how a function such as attachment of climbing plants can be achieved by a variety of structures. There is much that could be carried out here to demonstrate the variety and resourcefulness of plant life.

3 Recording sequences of growth and development. Beatrix Potter, apparently an excellent botanical illustrator before her later fame as author and farmer, made drawings at short intervals to capture rapid changes in plant form.

4 Displaying the diversity and intricacy of plant structures that are not visible to the naked eye, through dissection or magnification or both. This was a particular interest of Michael Hickey.

Of course, photography has a part to play in recording plant structure and function but photographs cannot replace the skill of the botanical illustrator in interpreting what is seen and recording details selectively. This is where the interplay occurs of artistic skill and botanical understanding. The institute brings together botanists and illustrators so that sound botany and good illustrations will complement each other wherever they are needed to record the diversity of plants and promote interest in plants generally. Illustrators sometimes lack botanical knowledge that would enable them to use their skills to portray the details required. Correspondingly, botanists are not always aware of what botanical illustrators can offer. The meetings of IAPI provide a forum for exchange of knowledge and experience.

The institute holds meetings six times a year, usually on the third Saturday in January, March, May, July, September and November. One meeting a year is held in the field; others are often run as workshops with an invited speaker. The most recent field meeting was held in May 2007 at Cranham Common, Gloucestershire, where the county recorders pointed out the many species and their critical features in the woodland and calcareous

grassland. Another recent meeting was a workshop on pen and ink technique and dissection of flowers, run by Rosemary Wise who is the herbarium illustrator at the University of Oxford. Given the current distribution of members, it has been convenient to hold most meetings at Winterbourne Botanic Garden (University of Birmingham) but other venues will be used, especially as membership expands geographically. For example, a meeting projected for 2008 will be in Cambridge, making use of the university's herbarium and botanic garden.

One way of achieving the institute's aims of collaboration between botanists and illustrators, and of developing botanical knowledge and skills in scientific illustration, is through projects. Currently IAPI is working on British climbing plants: the diversity of species and the range of their climbing methods. The output of projects will be suitable to exhibit, for example at the BSBI autumn meeting, and at Art in the Gardens at Sheffield. Ultimately, educational publications as posters or booklets would spread the word further. The institute also produces a journal, *Eryngium*, in which members can exchange views, provide information on relevant topics, and present their work.

Membership is open to all botanists and illustrators, amateur or professional, who share the aims of IAPI. Further information can be obtained from Peter Mitchell on 0114 268 0738 (or P.L.Mitchell@Sheffield.ac.UK) or from Jo Edwards on 01630 647570 (or J.Edwards946@BTInternet.com). We can also help botanists seeking illustrators to work on floras or other projects, since IAPI members, and their contacts, cover a wide range of interests and illustrative methods.

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### **Dr Phillip Cribb awarded Linnean Medal for Botany 2007**

SANDRA KNAPP, *Department of Botany, The Natural History Museum, Cromwell Road, London SW7 5BD*; s.knapp@nhm.ac.uk

On the Anniversary Meeting of the Linnean Society of London, 24<sup>th</sup> May 2007, Dr Phillip Cribb, recently retired from the Royal Botanic Gardens, Kew, was awarded the

Linnean Medal for Botany. The award was presented by the President of the Linnean Society, Professor David Cutler, and the following citation was read by Dr Sandra

Knapp, Botanical Secretary of the Linnean Society. Its text was taken from the nomination letter sent to the Society. Details of the other awards presented at the Anniversary Meeting in this Tercentenary year can be found on the Linnean Society's website <http://www.linnean.org>

'Dr Phillip Cribb retired from the Royal Botanic Gardens Kew in March 2006 after completing 32 years' service. Phil is very well known and respected in both plant systematics and horticultural communities. He has had an outstandingly productive research career resulting in 30 books and over 350 papers, with more on the way. His principal focus has been the systematics of Old World orchids, particularly from tropical Africa and Asia. His monographic work has concentrated on genera of importance to horticulture

and conservation and the classification of the family as a whole through the *Genera Orchidacearum* project. At a broader level Phil led the development of the *World Checklist of Monocots* which is now available on the web. This is a monumental achievement, providing the accepted names and synonyms of all known monocots with information about their distribution and life-form. He is the recipient of many awards and prizes and serves the botanical community in a wide range of capacities, from the IUCN to local societies. Phil has been instrumental in developing orchid research at Kew and beyond. In view of the exceptional service that Phil has given to systematics and natural history, and the fact that he is actively continuing his research, we should like to nominate him for the 2007 Linnean Medal for Botany.'



Phil receiving his Gold Medal from David Cutler. Photo © 2007 copyright The Linnean Society of London

## Elaine Bullard MBE, DSc

GWYNN ELLIS (General Editor)

Elaine Bullard, now in her 92<sup>nd</sup> year, a member of BSBI for almost 60 years and Vice-county Recorder for Orkney (v.c. 111) for 44 years has become the first person to be awarded an honorary degree by Heriot-Watt

University through the University's Orkney campus. She was presented with the honorary degree of Doctor of Science at a ceremony in May and part of the citation reads: 'Elaine's has been a lifetime's work

devoted to the acquisition and recording of Orkney's Plants and associated vegetation ... The award of an honorary degree by Heriot-Watt University underlines the significance of the extraordinary scholarship and sheer

intellectual endeavour which has underpinned Elaine's unique contribution.'

I am sure all members will join with me in adding our congratulations on a remarkable achievement by a very remarkable lady.



Elaine receives her honorary Doctorate Photo Ken Amer © 2007 Orkney Photographic, reproduced by permission

## **Ann Conolly – 90 years and counting!**

JOHN BAILEY, *Biology Dept, University of Leicester, LE1 7RH*

Ann Conolly celebrated her 90<sup>th</sup> Birthday in her own home in Leicester on 23<sup>rd</sup> July. Although now in rather frail physical health – Ann remains alert and interested – and still

has a recall of past names and events that would put many a younger memory to shame!

Ann extends her best wishes to her many friends in the BSBI whom, though she is no longer able to meet, are often in her thoughts.



Ann celebrates her 90<sup>th</sup> Birthday in her own home in Leicester. Photo J.P. Bailey © 2007

## A new Flora group for Dorset

JONATHAN CREWE, 31 Hankinson Road, Bournemouth, BH9 1HW, 01202 549377, crewie3@btinternet.com

Botany in Dorset has been served by some distinguished individuals over the years. Professor Ronald Good, Humphrey Bowen, author of the most recent flora, and the current county recorders David Pearman and Bryan Edwards are among many who have studied the rich flora of this geologically diverse county. However, those of us with less knowledge, and less time to learn have felt the lack of a focus for our recording efforts and attempts to improve. The inclusive conservation groups such as Dorset Wildlife Trust do provide a few botanical meetings but these are mainly aimed at beginners.

A growing need for a county-based specialist plants group resulted in a scoping meeting for such a group, which was held in Bere Regis in February 2007. Over 30 people turned up from an invited list of about 60 interested botanists, among them representatives of Bournemouth Natural Sciences Society, The Dorset Natural History and Archaeological Society, DWT and Plantlife. Martin Rand (BSBI recorder for South Hampshire) told us about the activities of the highly successful Hampshire Flora group.

This first meeting led to the formation of a steering group (in the pub afterwards, not surprisingly) and subsequently to a plan for four field meetings in 2007. The first three of these have now occurred and a very brief account of the first two follows below.

**28<sup>th</sup> April – Powerstock Common Nature Reserve** by kind permission of Dorset Wildlife Trust.

A dozen members enjoyed a walk around the reserve, focusing on populations of *Viola canina* (Heath Dog-violet) and regeneration in recently cleared areas of this site. Once ancient woodland/wood pasture, the site had been replanted with conifers from the 1950's until acquired by DWT, which is slowly restoring biodiversity by clearance and grazing. This is a beautiful and remote part of Dorset and the weather was extremely kind. Thanks to Bryan

Edwards who led the group and chose a superb location for lunch, with magnificent views of Eggardon Hill, before taking us to the far point of the reserve to see *Paris quadrifolia* (Herb-Paris) flowering in the woods.

**16<sup>th</sup> June – Corfe Common.**

Ted Pratt led us in an exploration of the western side of this superb grassland site; it seemed that every few metres walked led us into a new micro habitat with a subtly different plant community. The work of completing a record card has never been more arduous. Highlights included frequent orchid hybrids, a first view of *Pedicularis palustris* (Marsh Lousewort) for those of us that have been trying without success to re-find old Dorset records, a first record of *Juncus foliosus* (Leafy Rush) for the site and *Isolepis cernua* (Slender Club-rush). We ate lunch overlooking the fenced square surrounding the only Corfe site for *Scorzonera humilis* (Viper's-grass); the swifter walkers having to wait until the leader arrived before the few green leaves showing were positively identified. Many thanks to Ted Pratt for giving us such an enjoyable day and to Robin Walls for transcribing the dog eared recording card onto MapMate.

The group visited Down Farm on 28<sup>th</sup> July, and has one further meeting in 2007 with free places. Interested persons from Dorset or beyond are invited to join us. Andrew Branson will lead an exploration of Duncliffe Wood (Woodland Trust) ST826.222 on 29<sup>th</sup> September where we hope to focus on ferns and bryophytes. Bookings requested on 01747 838223 or email: [andrew@britishwildlife.com](mailto:andrew@britishwildlife.com). Those who are unable to attend but wish to join the mailing list can contact the writer who is acting as secretary until a full committee is formed. Some information is also available on the web at <http://uk.groups.yahoo.com/group/dorsetfloragroup/>. Those wishing to view the site or add their names will have to register with Yahoo groups, a process taking about two minutes.

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## R.H. [Dick] Roberts – Field Notebooks

IAN BONNER, *Cae Trefor, Tyn y Gongl, Anglesey, LL74 8SD*

The family of the late Dick Roberts have decided to deposit his field notebooks with the National Library of Wales in Aberystwyth.

These contain species lists from site visits on Anglesey, Caernarfonshire and elsewhere, including the Evesham area. There are also

references to some of the taxonomic groups that interested him, for example *Dactylorhiza* and *Polypodium*.

In due course it will be possible to view the notebooks at the National Library, Aberystwyth, SY23 3 BU (Tel. 01970 632800).

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## X<sup>th</sup> Symposium of the International Organization of Plant Biosystematists

Vysoke Tatry Mountains, Slovakia 2-4<sup>th</sup> July 2008

The X<sup>th</sup> Symposium of the International Organization of Plant Biosystematists will be devoted to the Evolution of Plants in Mountains and Alpine Habitats. The Symposium will cover a wide span of topics ranging from the traditional biosystematic studies to the application of the most advanced molecular techniques addressing evolutionary, phylogenetic, phylogeographic, ecological and other questions. The idea is to present the results of studies of the mountain and alpine flora from different parts of the world.

All those who are interested are invited to take part in this meeting, which will be an excellent opportunity to become aware of the most recent developments in the study of the mountain flora, but also to see interesting examples of the Carpathian flora just few metres from the symposium venue.

Registration and Accommodation forms will be available on-line from October 2007.

For further details please see [www.guarant.cz/iopb2008](http://www.guarant.cz/iopb2008).

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## British Wildlife and Climate Change

### What is happening? Can we do anything?

Free Public Lecture Series, Autumn 2007

Birkbeck, University of London with the Ecology and Conservation Studies Society

Climate change is causing a significant and increasing impact on UK wildlife. Some species are under stress, while others are expanding their range. What new species will arrive in Britain? This must have profound consequences for conservation and management. Appropriate actions need to be discussed and developed now.

This lecture series will inform this debate. National experts will discuss topics such as phenology – the timing of natural events, and will examine the way that climate change is currently impacting on British plants and animals, and on terrestrial and aquatic habitats. Adaptation and mitigation actions to

maintain maximum biodiversity in open spaces and the environment will be debated.

The lectures will be held in Birkbeck, University of London, WC1. For free tickets and venue details, contact tel: 020 7679 1069, or e-mail: [environment@fce.bbk.ac.uk](mailto:environment@fce.bbk.ac.uk)

All lectures are from 6.30 to 8.30pm on the following Fridays. Doors open at 6.00pm.

**12 October** ‘Harmless Pastime or Serious Science? What does phenology tell us about the impacts of a changing climate?’

Dr Tim Sparks, Centre for Ecology and Hydrology

**19 October** ‘Climate Warming and Species’ Ranges: who will be winners or losers?’

Dr Jane Hill, University of York

- 26 October** ‘The British Flora: effects of habitat modification and climate change’  
 Dr Chris Preston, Centre for Ecology and Hydrology
- 2 November** ‘Can Birds Fly from Climate Change?’  
 Dr Humphrey Crick, British Trust for Ornithology
- 9 November** ‘Adaptation for High Biodiversity under Climate Change’  
 Dr John Hopkins, Natural England
- 16 November** Case Studies of Adaptation and Mitigation Measures on Specific Sites

‘Burnham Beeches’ – Andy Barnard, City of London Corporation  
 ‘River Restoration, London’ – Dave Webb, Environment Agency  
 ‘Landscape Scale Projects and Ecological Networks’ – Dr Tony Whitbread, Sussex WLT

These case studies will be followed by a panel question and answer session chaired by Richard Clarke, Course Director of the Ecology and Conservation Programme, Birkbeck.

### Botanical Research Fund

MARK CARINE, *Hon. Secretary, The Botanical Research Fund, c/o Department of Botany, The Natural History Museum, Cromwell Road, London, SW7 5BD; m.carine@nhm.ac.uk*

The Botanical Research Fund is a small trust fund which makes modest grants (typically up to £1000) to individuals to support botanical investigations of all types and, more generally, to assist their advancement in the botanical field. Grants are available to amateurs, professionals and students of

British and Irish nationality. Where appropriate, grants may be awarded to applicants in successive years to a maximum of three.

The next deadline for applications is January 31<sup>st</sup>, 2008.

Further details may be obtained from Mark Carine at the address above.

## FIELD MEETING REPORTS – 2007

Reports of Field Meetings are edited by, and should be sent to: Dr Alan Showler, 12 Wedgwood Drive, Hughenden Valley, High Wycombe, Bucks, HP14 4PA, Tel.: 01494 562082. Potential authors of reports should

note that they should not be much longer than 500 words (half a page of *News*) for a one day meeting and 1000 words (1 page of *News*) for a weekend.

### Browndown & Gilkicker, S. Hants. (v.c. 11), 2<sup>nd</sup> June

MARTIN RAND

Perfect June weather greeted the 25 leaders, members and guests who assembled on the south-east Hampshire coast. The party came from far and wide in England, not to mention Switzerland and Spain, many of them intrigued to discover that there were important botanical sites hidden away in the suburban sprawl. In fact Browndown has some of the finest vegetated shingle in southern Britain, with a range of communities from open shingle ridge through mosaic-heath to

closed heathland and acid grassland, while Gilkicker preserves remnants of the once superb coastal marshes and mires of the lower Alver valley. Browndown owes its survival to its use as an army training range; Gilkicker is heavily used for recreation but remains full of interest.

At one point in the spring the leaders feared they might have nothing to show but shrivelled remains, but the May rain had brought many of the spring annuals on for a second flush. We

made straight for the fossil sea-cliff at the western end of the range where *Trifolium stellatum* (Starry Clover) has been known for nearly ten years and continues to thrive. Other clovers were less in evidence here, and we soon proceeded to the exposed coastal shingle ridge, with its characteristic flora. From here we worked our way across zones of increasing vegetation cover, onto heathland of *Calluna vulgaris* (Ling) and *Erica tetralix / cinerea* (Cross-leaved Heath / Bell Heather) interspersed with *Agrostis curtisii* (Bristle Bent) and *Festuca filiformis* (Fine-leaved Sheep's-fescue). People unfamiliar with the area were impressed by the abundance of *Silene nutans* (Nottingham Catchfly), flowering well at this time. We were able to show off the strong population of *Hypochaeris glabra* (Smooth Cat's-ear) rediscovered on the range during the previous week's reconnoitre, and the dead but very recognisable remains of *Teesdalia nudicaulis* (Shepherd's Cress). This area also proved good for clovers, and we recorded *Trifolium striatum* (Knotted Clover), *T. ornithopodioides* (Bird's-foot Fenugreek Clover), *T. subterraneum* (Subterranean Clover) and *T. suffocatum* (Suffocated Clover). One of the party also spotted *Vicia lathyroides* (Spring Vetch), encouraged by the rain into a second flowering.

We headed back to the beach for our lunch break, where the botanical counter-attractions soon drew people away from their sandwiches. Novices could compare *Trifolium micranthum* (Slender Trefoil) with *T. dubium* (Lesser Trefoil), growing side by side in the mown grass. There was lively debate about whether we were looking at *Medicago praecox* (Early Medick) or *M. polymorpha* (Toothed Medick) (see Colour Section, Plate 4); fortunately Eric Clement was on hand to demonstrate the differences from good flowering and fruiting material of both. Farther along the beach we were able to hunt for diminutive *Parapholis incurva* (Curved Hard-grass) amongst the abundant *Catapodium marimum* (Sea Fern-grass), and admire a single tuft of *Gaudinia fragilis* (French Oat-grass).

The party now drove to the Battery at the eastern end of the ranges, where the main

attraction was *Geranium purpureum* (Little-Robin) looking at its best on the unconsolidated shingle. With the aid of John Poland and the latest revision of his vegetative key, we were able to determine a Mullein rosette as *Verbascum blattaria* (Moth Mullein) – known here previously. One surprise was a scattering of *Epilobium lanceolatum* (Spear-leaved Willowherb), new to the area and rare in Hampshire generally. Here too there was standing water with quantities of *Samolus valerandi* (Brookweed) at the margins. A large and floriferous patch of *Potentilla* growing on stones across the wet / dry boundary proved on morphology, and later pollen inspection, to contain both *Potentilla anglica* (Trailing Tormentil) and the hybrid *P. ×mixta* (Hybrid Cinquefoil). The car park here also gave us our first sightings of *Sagina maritima* (Sea Pearlwort) growing as a pavement weed in damp shaded spots.

Our last stop, at Gilkicker, started with a range of ruderals on beds and earth banks. Here were *Lepidium ruderales* (Narrow-leaved Pepperwort), *Hirschfeldia incana* (Hoary Mustard), and *Erodium moschatum* (Musk Stork's-bill). The last, once a rare and mostly casual plant in Hampshire, is now spreading widely as an urban weed of amenity grasslands.

Along the shingle beach there was a fine display of *Sagina subulata* (Heath Pearlwort) in flower, and we had our first sighting of *Trifolium scabrum* (Rough Clover); while amongst bushes behind, *Linaria repens* (Pale Toadflax) was already in flower. Brackish grassland with pools and runnels behind the beach supported a good flora of upper saltmarsh, including quantities of *Carex distans* (Distant Sedge), a little *Carex extensa* (Long-bracted Sedge), *Schoenoplectus tabernaemontani* (Grey Club-rush) and some non-flowering *Trifolium fragiferum* (Strawberry Clover). The party was intrigued to see a single clump of *Cladium mariscus* (Great Fen-sedge), a scattered relic of the former Alver valley fens.

Passing the nineteenth-century Gilkicker Fort, we paused to admire our last area of acid

coastal grassland, where quantities of *Trifolium striatum* and *T. scabrum* grew not far from *T. arvense* (Hare's-foot Clover), not yet in flower, and *Jasione montana* (Sheep's-bit).

Heading a little inland on the return, we crossed more brackish grassland with *Eleocharis uniglumis* (Slender Spike-rush) in a damp spot and dense swards of *Carex divisa* (Divided Sedge). Here it was possible to compare *Carex distans*, already going into fruit, with the rather similar *C. punctata* (Dotted Sedge), just coming into flower alongside. A short detour into a thicket yielded up *Ophioglossum vulgatum* (Adder's-tongue) and the naturalised *Lathyrus tuberosus* (Tuberous Pea), while the surrounding grassland held *Linum bienne* (Pale Flax), *Lathyrus nissolia* (Grass Vetchling) and *Bromopsis inermis* (Hungarian Brome), the

last an introduction that seems to be spreading quite aggressively in this area.

The formal meeting came to an end just after 6pm, around a large plant of *Reseda alba* (White Mignonette) pointed out by Eric Clement & John Norton. Still there were a few sun-baked stalwarts ready to take up the offer from a local naturalist to visit a private field nearby, lured by the promise of *Callitriche brutia* (Pedunculate Water-starwort) and *Ranunculus baudotii* (Brackish Water-crowfoot). Thanks are due to the Camp Commandant at Browndown Ranges, and to the local botanists who attended and shared their knowledge with visitors; both students from the Continent expressed their pleasure at being able to learn in the field in such a friendly and supportive environment.

## Downe Bank, W. Kent (v.c. 16), 10<sup>th</sup> June

CAROLINE BATEMAN

Downe Bank is a small reserve in the London Borough of Bromley which is owned and managed by Kent Wildlife Trust. The reserve has SSSI status and forms a crucial part of the area included in the nomination to UNESCO for inscription as a World Heritage Site. It was here, through long observation of the many species of orchid, that Darwin gained his understanding of the co-evolution between orchids and their insect pollinators. Despite close proximity to London, Downe and the surrounding area have changed little since Darwin's time. Orchids still grow in abundance at Downe Bank and there is strong evidence to suggest that his '*tangled bank, clothed with many plants of many kinds*' in the final chapter of *The Origin of Species* is in fact his Orchis Bank or as we now know it, Downe Bank.

We met at St Mary's Church, Downe (or Down as it used to be spelt) leaving a note pinned to a tree encircled by a tree-seat so that some very latecomers would know that we had set off to the reserve on foot. This we did, having first paid homage to the Darwin family tomb in the churchyard.

The reserve itself is an ancient terraced site of about 15 hectares comprising a cross section of habitats typical of a dry valley in the North Downs of Kent. Approaching from the north-west through Hangrove Wood, one enters the upper terrace of mixed woodland on heavy clay-with-flints supporting an acid-loving flora. We concentrated on grasses as we made our way down Hangover Track, ironing out some problems for those less confident at identifying them. All present should now be able to recognize with ease *Poa trivialis* (Rough Meadow-grass), *P. nemoralis* (Early Meadow-grass), *Bromus racemosus* (Smooth Broom), *Brachypodium sylvaticum* (False Brome), *Arrhenatherum elatius* (False Oat-grass) and *Holcus mollis* (Creeping Soft-grass). Those of us still with problems can derive consolation from Darwin himself who on first identifying *Anthoxanthum odoratum* (Sweet Vernal-grass) wrote, 'I have just made out my first grass ... I never expected to make out a grass in all my life'.

'Orchis Bank' is in the heart of the reserve, a woodland clearing with relict chalk grassland and associated calcicoles. Making our way to the southern end, good indicators of

unimproved grassland were noted, including *Rhinanthus minor* (Yellow-rattle) and *Plantago media* (Hoary Plantain). Before long, a pair of very sharp eyes had spotted a rather late *Ophrys insectifera* (Fly Orchid) and in this section alone we had soon found six more of the eight species of orchid that flower here in summer: *Dactylorhiza fuchsii* (Common Spotted-orchid); *Gymnadenia conopsea* (Fragrant Orchid); *Listera ovata* (Common Twayblade); *Anacamptis pyramidalis* (Pyramidal Orchid), *Ophrys apifera* (Bee Orchid) and unopened spikes of *Epipactis helleborine* (Broad-leaved Helleborine). As privileged visitors to the reserve, we were permitted to continue through the lower terrace of coppiced Hazel with *Ulmus glabra* (Wych Elm); *Crataegus laevigata* (Midland Hawthorn) and *Euonymus europaeus* (Spindle) through to Hang Grove, a small beech hanger. It was in this section that we found a very late *Lathraea squamaria* (Toothwort), possibly having a second attempt at flowering having been thwarted by the very dry spring. Retracing our steps we headed to the other side of Orchis Bank and lunch under a shady Wild Cherry.

The northern end is more open and more species-rich than the southern end (and is now open to all visitors.) Here many more species were added to the site list, including *Juniperus communis* (Juniper) which is increasingly rare in Kent through erosion of its cliff-top habitat. We had some more useful instruction on the identification of calcareous grassland species including *Koeleria cristata* (Crested

Hair-grass); *Trisetum flavescens* (Yellow Oat-grass); and *Bromopsis erecta* (Upright Brome). Because the topsoil is very thin here, it has been used for pasture since ancient times as indicated by the presence of ant-hills, topped with *Festuca ovina* (Sheep's-fescue), and *Ophioglossum vulgatum* (Adder's-tongue) which was spotted by another pair of sharp eyes. A large patch of *Helleborus foetidus* (Stinking Hellebore) had us wondering about its status in the reserve but, however it got there, it was certainly flourishing. By the time we reached the southern boundary, we still hadn't found *Aceras anthropophorum* (Man Orchid) but had managed to see all the other summer-flowering orchids known at the reserve.

Before returning to Downe we had the option of visiting two fields adjacent to the reserve, in the first of which *Herminium monorchis* (Musk Orchid) had formerly been recorded. We found some more Adder's-tongue but no trace of the Musk Orchid possibly owing to too much competition from the surrounding vegetation. In the second of the fields, the *Poa trivialis* was waist high so we didn't spend too much time there but we did admire the splendid hedgerow containing, *inter alia*, *Acer campestre* (Field Maple); *Rosa micrantha* (Small-flowered Sweet-briar); *Cornus sanguinea* (Dogwood) and *Ligustrum vulgare* (Wild Privet).

Many thanks to Eric Philp for stepping in to lead this meeting, especially as it wasn't on his patch, and for a enjoyable and informative day.

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## Winsford, Cheshire (v.c. 58), 16<sup>th</sup> June

GRAEME KAY & PRISCILLA TOLFEE

Despite clashing with a large fishing competition, 12 members managed to park where a large area of old industrial land is now a country park. We 'admired' the large rafts of *Hydrocotyle ranunculoides* (Floating Pennywort), which line the River Weaver and have spread for several miles. A large fishing pool where 12 days before, a few scattered plants of *Azolla filiculoides* (Water Fern) were seen

was now virtually covered in it and *Lemna minuta* (Least Duckweed) was struggling! An extraordinary growth rate. *Ceratophyllum demersum* (Rigid Hornwort) was only visible where fishermen had pulled it out. Along the riverbank, the first of the halophytes we had promised, *Sagina maritima* (Sea Pearlwort), was abundant in bare areas and *Aster tripolium* (Sea Aster)

grew on the edge. Saline flushes had *Puccinellia distans* (Reflexed Saltmarsh-grass), *Spergularia marina* (Lesser Sea-spurrey) and slightly surprisingly, *Triglochin palustre* (Marsh Arrowgrass) though this does occur in coastal flushes. *Rumex crispus* ssp. *littoreus* (Curled Dock) was just showing its three tubercles. A highlight here was a large colony of *Vicia sylvatica* (Wood Vetch) along with much *Brassica nigra* (Black Mustard). *Hippophae rhamnoides* (Sea-buckthorn), *Rosa rugosa* (Japanese Rose) and, perhaps, *Tamarix gallica* (Tamarisk), were naturalising. The leaves of *Trifolium fragiferum* (Strawberry Clover) were seen in several places and *Carex spicata* (Spiked Sedge) was compared with *C. otrubae* (False Fox-sedge). A brief shower was a small bother but cleared and we lunched with a view of huge mounds of sand and salt from the local salt mines. *Cerastium semidecandrum* (Little Mouse-ear) was rather past its best and very soggy!

After climbing a small incline (this was Cheshire!), we found *Crepis vesicaria*

(Beaked Hawk's-beard) showing the slender beaked achenes beautifully. Along a track, a fine clump of *Bromopsis inermis* (Hungarian Brome), paradoxically with awns, was seen. Luck was with us as one inflorescence of *Lathyrus tuberosus* (Tuberous Pea) had opened to show the lovely flowers. A few plants of *Myosoton aquaticum* (Water Chickweed) pleased us as we made our way slowly back with panoramic views of the salt works. *Ophrys apifera* (Bee Orchid) obligingly grew right by the path on a steep bank. At the foot of this bank, back at river level, was a large wet area fed by a brine spring halfway up the bank. Here *Schoenoplectus tabernaemontani* (Grey Club-rush) mingled with *Samolus valerandi* (Brookweed) and *Juncus ambiguus* (Frog Rush) showed its characters well. At the source of the spring, where the salt keeps *Eupatorium cannabinum* (Hemp-agrimony) and *Equisetum telmateia* (Great Horsetail) at bay, *Glaux maritima* (Sea-milkwort) was abundant in one of a very few inland sites. After this we strolled back to the cars and dispersed like seeds in the wind.

## Isle of Cumbrae (v.c. 100), 29<sup>th</sup> June – 2<sup>nd</sup> July

ANGUS HANNAH

The main purpose of this meeting was to verify the presence of a number of reported species prior to the publication of a check-list by the v.c. recorder. Great Cumbrae has an area equal to three tetrads, and a surprisingly rich flora for its size. Student groups and their leaders visiting the Marine Station from Newcastle, York and Hull universities have helped with recording over the years, and in all 550 species have been noted in the past decade. However, unfamiliarity with the local flora can lead to confusion, and some records needed confirmation. We were fortunate to have the expertise of Richard Pankhurst and David Dupree to assist in this task, and remained focused on it despite the distraction of some splendid displays of orchids. Richard also named the common bramble of the island as *Rubus polyanthemus*, and found specimens of *R. lindleyanus* and *R. nemoralis*.

A sunny Friday afternoon saw 5 members recording a 500m section of raised beach near the SW corner of the island. Here we were able to find two species recorded by Newcastle (A.J. Richards), *Helictotrichon pratense* (Meadow Oat-grass) and *Potentilla reptans* (Creeping Cinquefoil), both new hectad records near the edge of their ranges. Both *Calystegia pulchra* (Hairy Bindweed) and *Calystegia sepium* ssp. *roseata* (a hedge bindweed) were also confirmed, and a 2m patch of *Anagallis tenella* (Bog Pimpernel) in flower was admired and photographed. A total of 190 spp were recorded in this area, including 14 sedges. Visitors expressed their surprise at the abundance of *Empetrum nigrum* (Crowberry) at sea-level, and that *Carum verticillatum* (Whorled Caraway) and *Oenanthe lachenalii* (Parsley Water-dropwort) were the commonest umbellifers.

An evening stroll around Millport resulted in *Selaginella kraussiana* (Krauss's Clubmoss) being found in the lawns behind Garrison House, currently being restored after years of dereliction, where it has no doubt been present for a long time. This is a first v.c. record, and perhaps the fifth Scottish locality for this greenhouse escapee.

On Saturday, six members met at the Marine Station to explore the raised beaches on the south east of the island. Between the Station and the Lion Rock, *Parnassia palustris* (Grass-of-Parnassus) and *Gymnadenia conopsea* (Fragrant Orchid) were confirmed, but *Briza media* (Quaking-grass), *Hypericum humifusum* (Trailing St John's-wort) and *Polygala vulgaris* (Common Milkwort), all reported by John Richards, could not be found. Despite the wet season, this fen seemed abnormally dry. However, there was compensation a little further on, where a recently created area of hard standing associated with road works yielded *Galinsoga quadriradiata* (Shaggy-soldier), a new v.c. record, and *Sisymbrium orientale* (Eastern Rocket), a 2<sup>nd</sup> v.c. record, both presumably imported by contractors' vehicles. About 10m away, we inspected the only known specimen of *Osmunda regalis* (Royal Fern) on Cumbrae, a large and impressive plant so well concealed by 2m high bracken that we nearly missed it, even though our leader knew where it was!

Our afternoon visit to the Farland promontory was marred by a deluge of rain and cold wind, but we managed to find two small populations of *Platanthera bifolia* (Lesser Butterfly-orchid) and a good colony of *Dactylorhiza incarnata* ssp. *coccinea* (an Early Marsh-orchid). Specimens of *Carex caryophyllea* (Spring-sedge) and *C. pilulifera* (Pill Sedge) growing in proximity were compared. Along the shore were patches of *Carex extensa* (Long-bracted Sedge), *Carex distans* (Distant Sedge) and *Eleocharis quinqueflora* (Few-flowered Spike-rush), but *Eleocharis uniglumis* (Slender Spike-rush) and *Carex viridula* ssp. *viridula* (Small-fruited Yellow-sedge) were sought in vain. Afterwards, a brief visit to the top of the

island enabled us to confirm *Listera cordata* (Lesser Twayblade) abundant in places beneath the long heather, but *Vaccinium oxycoccos* (Cranberry), also recorded by Hull (R. Goulder) at the same spot, eluded us.

Seven members met on Sunday at the ferry slip, and proceeded to explore the west side of the island, where uncut verges offered a superb display of orchids, mostly *Dactylorhiza fuchsii* (Common Spotted-orchid), *D. purpurella* (Northern Marsh-orchid) and *D. maculata* (Heath Spotted-orchid), with occasional *Listera ovata* (Common Twayblade). A foray into the marsh on the inland side of the road disclosed a splendid population of *Lysimachia vulgaris* (Yellow Loosestrife), 3<sup>rd</sup> v.c. record, and a little *Eleogiton fluitans* (Floating Club-rush), spotted by David in its only known Cumbrae locality. *Carex arenaria* (Sand Sedge) in this habitat was hard to distinguish from *C. disticha* (Brown Sedge), observed in abundance in similar places on the previous days. Fintry Bay tearoom afforded a welcome lunch break, and here *Potentilla anglica* (Trailing Tormentil) and *Aira caryophyllea* (Silver Hair-grass) were growing on the verge, and *Humulus lupulus* (Hop) on the sea-wall opposite. A short detour was made to view *Dryopteris aemula* (Hay-scented Buckler-fern), less familiar to some members of the party. A bush of *Lathyrus grandiflorus* (Two-flowered Everlasting-pea) was conspicuous on the seaward side of the road. A final stop at a small former-quarry pond confirmed John Richard's record of *Alisma lanceolata* (Narrow-leaved Water-plantain), an unusual species in Scotland, otherwise unknown in Clyde Isles. *Zantedeschia aethiopica* (Altar-lily), first noted last year, was observed to be spreading in the adjacent marsh.

On Monday morning, those who remained visited the reservoirs, to continue the search for the frequently recorded *Myosotis scorpioides* (Water Forget-me-not). However, as throughout the meeting, only *M. laxa* (Tufted Forget-me-not) and *M. secunda* (Creeping Forget-me-not) were observed, so we concluded that if *M. scorpioides* occurs at all on Cumbrae it is certainly rare. A patch of bare ground by the

lower reservoir had *Viola tricolor* (Wild Pansy), *V. arvensis* (Field Pansy), *Papaver dubium* (Long-headed Poppy) and *P. somniferum* (Opium Poppy), all rare on the island. The Golf Club car-park yielded a few last surprises, including *Silene latifolia* (White Campion), new to Cumbrae, *Echium vulgare* (Viper's-bugloss) and *Anchusa arvensis* (Bugloss).

12 taxa reported by recent visitors were searched for without success, and a question

mark must remain over their continued occurrence. Altogether 387 species were recorded during the weekend, without any particular effort being made to note every common plant. This was a satisfactory outcome, and comfortably exceeds the number on the last published list (Rhind, 1988). Four entirely new species were added to the island list, and 17 reported species were confirmed. Many thanks to all who attended.

## Arne Moors, Dorset (v.c. 9), 7<sup>th</sup> July

EDWARD PRATT

Eighteen members of BSBI and WFS assembled for this joint meeting on a mild but largely dry day, a contrast to the showery ones prevailing at that season. The fields were very wet, and the leader's emphasis on the need for Wellingtons had not been heeded by four present; however he was able to fit them out with old pairs he had brought along from his collection!

The first excitement was entirely unexpected. On the bramble blossom on the way in there was an unusual butterfly. The leader could hardly believe it, so it was Barry Goater who spoke first – 'That's a Large Tortoiseshell!' Sadly it flew off before all those behind could see it.

Before lunch the party pushed through lush vegetation to visit the small field famous for its population of *Scorzonera humilis* (Viper's-grass). At one time this was the only known British colony. A small amount was also found in the edge of the field to the west. Also in both fields is much *Carum verticillatum* (Whorled Caraway) with its distinctive leaves. The field is getting overgrown with *Phragmites australis* (Common Reed) and the RSPB will be grazing it early in the next season, so 2008 will not be good for visits.

After lunch back at the roadside, some members who finished their's first went off exploring and soon found *Epipactis palustris* (Marsh Helleborine) and *Erica ciliaris* (Dorset Heath). When the leader caught up he showed the differences between *E. ciliaris* and *E. tetralix* (Cross-leaved Heath) and their hybrid *E.*

*×watsonii*. Then the party set off along the road to the second entrance to 'The Moors'. In doing so they passed a colony of *Trifolium medium* (Zigzag Clover).

The south-eastern part of the Moors is partly in private ownership and partly RSPB reserve; it is the richest area, especially for the flora of its ditches. These are cleaned out from time to time, and show varying stages of recolonisation. *Carex pseudocyperus* (Cyperus Sedge), *Sparganium emersum* (Unbranched Bur-reed) and *Myosotis laxa* (Tufted Forget-me-not) were among those species seen by or in several ditches. *Baldellia ranunculooides* (Lesser Water-plantain) was in at least two, and nearby in one of them *Elodea canadensis* (Canadian Waterweed) and *E. nuttallii* (Nuttall's Waterweed) were growing close to each other; the former was in flower and one member of the party drew our attention to the beauty of the flowers under a lens. *Groenlandia densa* (Opposite-leaved Pondweed) and *Potamogeton berchtoldii* (Small Pondweed) were in a ditch not far away.

Access to a small wood to see *Thelypteris palustris* (Marsh Fern) proved very difficult through waterlogged ground, but most of the party rose to the challenge with good spirits. Nearby is the fen dominated by *Cladium mariscus* (Great Fen-sedge). Sadly the ditch in front of it which holds a small population of *Carex diandra* (Lesser Tussock-sedge) had recently been dug out, but *C. paniculata* (Greater Tussock-sedge) and *C. viridula* ssp. *brachyrhyncha* (Long-stalked Yellow-sedge) were still

present nearby. Compensation was at hand however, in that *Sparganium natans* (Least Bur-reed) had put in an appearance in another ditch – it only appears in the Moors sporadically.

The meeting was heavily oversubscribed, so it was a pity that two people who had booked

had failed to say that they were not coming; a profuse apology was however forthcoming afterwards. All those who could not be accommodated will be told of a similar meeting under RSPB auspices in 2008.

## Harlestone Firs, Northants. (v.c. 32), 29<sup>th</sup> July

BRIAN LANEY

Firstly I must thank David Broughton for coming from Peterborough; he was the only person who turned up! Nevertheless, it was still a very productive botanical day. First stop was the footpath between Upper and Lower Harlestone. We checked on a bank where three plants of *Trifolium striatum* (Knotted Clover) were well in seed; thanks to cattle poaching the ground the clover has been helped here. Further along the path there was a small population of *Rumex pulcher* (Fiddle Dock) with *R. obtusifolius* (Broad-leaved Dock) growing nearby. No hybrids were found on this occasion but with both parents growing so close together I am sure the hybrid will turn up in the near future. We then wandered back into Upper Harlestone and checked the old walls by the roadside; species found included a white form of *Cymbalaria muralis* (Ivy-leaved Toadflax), *Geranium rotundifolium* (Round-leaved Crane's-bill) and abundant *Poa compressa* (Flattened Meadow-grass).

Next stop was Bradlaugh Fields, a nature reserve run by the Northants. Wildlife Trust. We managed to track down two gone over spikes of *Orobanchae elatior* (Knapweed Broomrape) in the flower rich meadows and, at long last, a plant I had always wanted to see at this site, *Petroselinum segetum* (Corn Parsley). It was here in small quantity, just coming into flower and hugging the hedges of

these meadows. At the time of writing I have contacted the Wildlife Trust to ask if I can disturb the soil round the plants to build up numbers here. This species is very rare in Northamptonshire; the only other site where I have seen it was in the grounds of a warehouse in Irthlingborough, where it was wiped out deliberately by my old boss! Luckily I got seed in the nick of time and it is now safe with friends in four places.

By the tarmac footpath were a few clumps of *Astragalus glycyphyllos* (Wild Liquorice) in flower but getting a bit smothered by bindweed. Near the start of the path two fine plants of the alien *Salvia sclarea* (Clary) were in flower. This was an unexpected find and quite a way from nearby gardens. We then went on to Clipston churchyard, where, on one section of the inner walls, in perfect condition was *Asarina procumbens* (Trailing Snapdragon), in full flower thanks to the wet season. Our last port of call was just outside Guilsborough village. In one piece of hedgerow were 8 clumps of *Helleborus viridis* (Green Hellebore). The farmer who owns the land here knows about the Hellebore and this part of the hedge is fenced off from grazing animals, while the shade of the hedge keeps the nettles and other rank vegetation from swamping them. So ended an excellent day with excellent weather. I hope by the next meeting that I lead I might have a few more customers!

## Shunner Fell, Wensleydale (v.c. 65), August 10<sup>th</sup> & 11<sup>th</sup>

DEBORAH MILLWARD

The meeting, which was a joint event with the Yorkshire Naturalists' Union's Botanical Section, became over-booked very quickly so a second day was organised to accommodate

disappointed applicants. Fortunately both days were blessed with good weather in a thoroughly wet season. Ironically a planned

trial run in the gloriously hot 2006 season was called off because of torrential rain.

Wandering up hill on the first day members spent time familiarising themselves with the shrubby species, so *Vaccinium vitis-idaea* (Cowberry), *Empetrum nigrum* (Crowberry), *Rubus chamaemorus* (Cloudberry) (see Colour Section, Plate 4), *Vaccinium oxycoccos* (Cranberry) and *V. myrtillus* (Bilberry) were sorted and *Erica tetralix* (Cross-leaved Heath) separated from the sparse *Calluna vulgaris* (Heather). Conversely on the second day it was the grasses, sedges and rushes which drew people's attention. Everyone enjoyed the sheets of flowering *Narthecium ossifragum* (Bog Asphodel).

The first flush examined brought a little relief from the uphill trudge through very acid-loving vegetation. Here *Equisetum sylvaticum* (Wood Horsetail), *Achillea ptarmica* (Sneezewort), *Caltha palustris* (Marsh-marigold) and *Oxalis acetosella* (Wood-sorrel) formed an unusual association. Bare stony ground supported tufts of *Huperzia selago* (Fir Clubmoss) and towards the summit *Carex bigelowii* (Stiff Sedge) became increasingly dominant.

It had been hoped that this meeting would attract botanists familiar with the rare *Carex vaginata* (Sheathed Sedge) and equally rare *Alopecurus borealis* (Alpine Foxtail) as these

two species have been recently reported at several new sites in the north since grazing pressure was relieved post-foot and mouth disease. This hope was somewhat pre-empted when a week before Linda Robinson found both species in the area to be searched. So it was really helpful that Linda could come along on the first day and show her finds. The foxtail is thought to be at its most southerly site globally here on Shunner Fell. The other highlights of the day were a particularly good flush of flowering *Saxifraga hirculus* (Marsh Saxifrage) growing through mounds of *S. hypnoides* (Mossy Saxifrage), and a runnel pink with *Epilobium alsinifolium* (Chickweed Willowherb). A putative (*Carex aquatilis* (Water Sedge), which would have been another great record, was rejected on reflection.

On the way down Phyl Abbott identified *Euphrasia confusa* (an eyebright). *Melampyrum pratense* (Cow-wheat) growing at 2107 ft (650m) was a surprise to several botanists on the trail back, but the altitude record breaker of the day was *Lolium perenne* (Rye-grass) growing under the summit seat at 2349 ft (716m).

Many thanks to Linda Robinson for sharing her finds, to Julie Clarke for keeping the records sheet and of course to the landowner, Michael Cannon.

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## REPORT OF OVERSEAS FIELD MEETING – 2007

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### Sierra de Grazalema, Andalucía, Spain, 20<sup>th</sup> to 27<sup>th</sup> April

TERESA FARINO and various members of the group

Twelve members joined leaders Teresa Farino and Jon Cox for a week to explore the Grazalema Natural Park and surrounding area in Andalucía. Despite – or maybe because of – the occasional rain, we found the flora of the area to be extremely diverse, incorporating a large number of Afro-Iberian elements, and many species unique to southern Spain.

#### 20 April – Churriana

Members of the group arrived at Málaga Airport during the course of the morning, and once all were assembled, we were keen to get

away from the city and find somewhere to have a late lunch. We had only travelled a short distance to the outskirts of the city when a suitable area of open ground was spotted at a location known as Churriana. While some of us gave in to appetite and started lunch, others were motivated to begin botanising straight away.

The site could be broadly called *garrigue*, but was somewhat disturbed by its 'urban-fringe' location. What was immediately impressive was the scattering of sizeable

Olive trees (*Olea europaea*) in full flower. Everyone said they had never seen Olives in the flowering condition before, or at least not as profusely as the specimens before us. Among the low-growing clumps of *Chamaerops humilis* (Dwarf Fan Palm), the strongly aromatic *Thymus capitatus* and more faintly scented *Lavandula multifida* (Cut-leaved Lavender) were patches of the very conspicuous orange-yellow flowers of the composite *Cladanthus arabicus* (Cladanthus), along with scattered *Chrysanthemum coronarium* (Crown Daisy), and stands of the lemon-yellow-flowered labiate *Phlomis lychnitis* and *Asphodelus fistulosus* (Hollow-stemmed Asphodel).

Grasses were also a very conspicuous element of the vegetation and included the attractive *Lagurus ovatus* (Hare's-tail) and *Lamarckia aurea* (Golden Dog's-tail), along with the less obvious *Cynodon dactylon* (Bermuda-grass). In total, Arthur Copping noted 15 members of the Gramineae here, the others being *Stipa capensis* (Mediterranean Needle-grass), *Trachynia distachya*, *Anisantha diandra* (Great Brome), *A. madritensis* (Compact Brome), *Bromus hordeaceus* (Soft-brome), *Polypogon monspeliensis* (Annual Beard-grass), *Oryzopsis miliacea* (Smilo-grass), *Aegilops* sp. (probably *A. geniculata*), *Hordeum murinum* (Wall Barley; probably ssp. *leporinum*), *Rostraria cristata* (Mediterranean Hair-grass), *Avena barbata* (Slender Oat) and *Hyparrhenia hirta*.

Clovers and plantains were also well-represented, with *Trifolium stellatum* (Starry Clover), *T. tomentosum* (Woolly Trefoil), *T. angustifolium* (Narrow-leaved Crimson Clover), *Plantago afra* (Glandular Plantain) and *P. lagopus* being seen. A diverse array of other eye-catching plants was noted amongst the sward, including *Silene colorata*, *Paronychia argentea*, *Emex spinosa* (Emex), *Oxalis pes-caprae* (Bermuda-buttercup), *Lobularia maritima* (Sweet Alison), *Tripodion tetraphyllum* (= *Anthyllis tetraphylla*) (Bladder Vetch), *Lathyrus cicera*, *Bituminaria* (*Psoralea*) *bituminosa* (Pitch Trefoil), *Erodium malacoides* (Soft Stork's-bill),

*Lavatera cretica* (Small Tree-mallow, considered Vulnerable in the UK), *Teucrium pseudochamaepitys* (Ground-pine Germander), *T. polium* (Feltly Germander), *Cynoglossum creticum* (Blue Hound's-tongue), *Bellardia trixago* (Bellardia), *Cuscuta epithymum* (Dodder), *Convolvulus althaeoides* (Mallow-leaved Bindweed), *Pallenis spinosa*, *Galactites tomentosa* (Galactites), *Silybum marianum* (Milk Thistle), *Allium roseum* (Rosy Garlic) and *Colchicum lusitanum* (in fruit).

With everyone suitably refreshed, we set off on the journey to Grazalema, with a bit of plant spotting from the minibuses en route. Species seen included *Spartium junceum* (Spanish Broom), *Genista hirsuta*, *Ricinus communis* (Castor-oil-plant), *Cistus ladanifer* (Gum Cistus), *C. populifolius* (Poplar-leaved Cistus) and the naturalised *Arundo donax* (Giant Reed). Not far from Grazalema itself we stopped beside the road where another brief bout of botanising ensued, this time producing *Mercurialis tomentosa*, *Anagyris foetida* (Bean Trefoil), *Stachys ocymastrum*, *Centaurea pullata*, *C. calcitrapa* (Red Star-thistle, very rare in the UK), *Muscari comosum* (Tassel Hyacinth), *Ornithogalum narbonense*, *Gynandriris sisyrinchium* (Barbary-nut) and *Ophrys lutea* (Yellow Ophrys).

#### 21 April – Around Grazalema

Grazalema is a tightly packed *pueblo blanco* in the Parque Natural de la Sierra de Grazalema, lying on the eastern side of the highest peaks, which rise to 1,654 metres. The park mostly comprises well-eroded limestone, alternating with smaller areas of acidic rock. These mountains are only separated from the Atlantic by a low-lying coastal plain, such that moisture laden winds drop most of their precipitation here, giving Grazalema the dubious reputation of having the highest rainfall in Spain, with around 2,230 mm per annum. Some of this rain fell on our first day, but with such interesting plants to see and with umbrellas up, we hardly noticed the dampness. Even before we had left the village, we had seen *Sedum mucizonia*,

*Centranthus macrosiphon* and *Veronica cymbalaria* (Cymbalaria-leaved Speedwell) growing in cracks in the walls around the market-place viewpoint.

Grazalema is perched on a high cliff and the old road winds round to the base of this. Our route out of the village led us past vegetable plots and sheds containing chickens, and so on to this ancient cobbled route. Here we found our first *Scandix pecten-veneris* (Shepherd's-needle) in profusion: a species that we saw on all subsequent days. We also saw *Saxifraga granulata* (Meadow Saxifrage) growing in pockets of soil in the rocks and looking slightly different from our British plants. Other attractive species seen were the deep-yellow toadflax *Linaria platycalyx*, which is unique to the Serranía de Ronda, the bright-pink-flowered *Antirrhinum majus* (Snapdragon), which most members initially thought to be a garden escape, and the Afro-Iberian endemic *Scrophularia sambucifolia* (Elder-leaved Figwort), with large, orange-red flowers.

The rocks and walls edging the path provided comfortable eye-level botanising. Ferns taking advantage of the shelter in the crevices included *Cheilanthes acrostica*, *Polypodium cambricum* (Southern Polypody) and *Anogramma leptophylla* (Jersey Fern). Other highlights, as we made our slow way down, included the little mauve *Arabis verna* (Spring Rock-cress), *Vinca difformis* (Intermediate Periwinkle), *Geranium purpureum* (Little-Robin), *G. rotundifolium* (Round-leaved Crane's-bill), *Eryngium campestre* (Field Eryngo), *Campanula erinus* (Annual Bellflower), *Delphinium staphisagria* (Licebane) and the controversial *Hyacinthoides hispanica* (Spanish Bluebell).

The loose rocks near the bottom of the cliff provide a habitat for *Clematis flammula* (the autumn-flowering Fragrant Clematis), *Euphorbia characias* (Mediterranean Spurge), the broom-like *Osyris alba* (Osyris) and *Phlomis purpurea*. The more agile members of our party were able to scramble up a little to find *Hesperis laciniata* (Cut-leaved Dame's-violet) and three Afro-Iberian

endemics: the frothy yellow masses of flowers of *Biscutella frutescens*, the purple-flowered birthwort *Aristolochia baetica* and the red-berried mistletoe *Viscum cruciatum*, here growing on Ivy (*Hedera* sp.). Overhead, Crag Martins and Choughs were wheeling and calling. Lower down we found little *Fedia cornucopiae* (Fedia) and *Parentucellia latifolia* (Southern Red Bartsia), both deep-red flowered. Grasses seen on the way down included *Poa infirma* (Early Meadow-grass), *P. bulbosa* (Bulbous Meadow-grass), *Cynosurus echinatus* (Rough Dog's-tail) and *Melica minuta*.

We enjoyed lunch at the base of the cliffs, listening to Nightingales and watching Rock Thrushes and Black Wheatears flitting around the crags. Competing for our attention with the delicious food were such botanical delights as the yellow-flowered Spanish endemic knapweed *Centaurea clementei*, the Afro-Iberian endemic labiate *Ballota hirsuta* and *Stachys circinata*, and the unmistakable composites *Rhagadiolus stellatus* (Star Hawkbit) and *Hyoseris radiata*. Here too we found more *Ophrys lutea*, and also *O. tenthredinifera* (Sawfly Ophrys).

In the afternoon we climbed up to a small reservoir above the village. The soil here was rather more acid and amid the bushes of *Bupleurum fruticosum* (Shrubby Hare's-ear) we encountered a number of Afro-Iberian endemics: the yellow-flowered leguminous shrub *Retama sphaerocarpa* (Lygos), the tall-but-delicate white-flowered crucifer *Crambe filiformis*, *Linaria tristis*, a toadflax with brownish flowers, and the fern *Pleurosorus hispanicus*, distinctively covered with hairs, the latter the highlight of the week for John Edgington.

Other plants discovered along the way were three species unique to southern Spain: the gorse *Ulex baeticus*, whose specific name derives from the Arabic word for this part of Spain, the beautiful *Echium albicans*, and *Ptilostemon hispanicus*: one of the many spiny composites we would see during the week. The rocks around the reservoir itself turned up a compact clump of the Afro-Ibe-

rian endemic saxifrage *Saxifraga globulifera*, while in the surrounding pinewoods, amid an understorey of *Cistus crispus* and *Lavandula stoechas* (French Lavender), John found a few plants of *Tulipa sylvestris* ssp. *australis* (Wild Tulip), Louise encountered the sand-crocus *Romulea bulbocodium*, and Caroline spotted both *Orchis (Anacamptis) morio* (Green-winged Orchid) and *Cephalanthera longifolia* (Sword-leaved Helleborine).

As a complete contrast to the rock-gardens of the morning, our route back to Grazalema passed a wet, peaty hollow containing a number of species considered Vulnerable in the UK – *Mentha pulegium* (Pennyroyal), *Scirpoides holoschoenus* (Round-headed Club-rush) and *Carex divisa* (Divided Sedge) – plus *Oenanthe globulosa* (Mediterranean Water-dropwort), the woolly-leaved St John's-wort *Hypericum tomentosum*, and *Molineriella minuta* ssp. *australis*: a delightful grass similar to *Aira*. This rather damp, soggy habitat summed up the day for us really: 'wet but very interesting'!

## 22 April – Embalse de Bornos & Lagunas de Espera

After that rainy first day around Grazalema we decided to go in search of some sunshine in the lowlands to the west. First we had to take a winding road over the rugged limestone *sierra* and descend through woodland, where the fresh unfolding leaves of *Quercus faginea* (Lusitanian Oak) enlivened the sombre greens of *Q. ilex* ssp. *ballota* (Western Holm Oak), and further splashes of colour were provided by the pink-flowered *Cistus albidus* (Grey-leaved Cistus) and yellow *Ulex baeticus* ssp. *baeticus*.

What was meant to be a brief stop at the tail-end of the Embalse de Bornos (reservoir) turned into an hour's botanising in fields that were formerly flooded, now dry through water abstraction. The grasslands were yellow with *Ranunculus trilobus* (Three-lobed Buttercup) and *R. muricatus* (Rough-fruited Buttercup), and it was good to see a large patch of *Silene gallica* (Small-flowered Catchfly), in view of its major decline in Britain. Many of the species here were those

seen at Churriana, but among the more notable additions were *Anchusa azurea* ((Large Blue Alkanet), *Convolvulus meoanthus*, with delicate blue flowers, *Tragopogon hybridus* (Slender Salsify) and *Notobasis syriaca* (Syrian Thistle). European Bee-eaters hawked overhead, Cattle Egrets flounced through the fields after grasshoppers and a Woodchat Shrike perched obligingly on a notice board.

Our main destination for the day was the Lagunas de Espera, a nature reserve with three lagoons which have no outlets and are therefore brackish, due to evaporation. A roadside stop overlooking the reserve enabled a comparison of three blue-flowered pimpernels: *Anagallis arvensis* ssp. *arvensis* (Scarlet Pimpernel, although often blue-flowered in this region), *A. foemina* (= *A. arvensis* ssp. *caerulea*) (Blue Pimpernel) and the handsome perennial *A. monelli* (Shrubby Pimpernel). Here too we encountered *Centranthus calcitrapae* (Annual Valerian), *Asteriscus aquaticus*, *Arum italicum* (Italian Lords-and Ladies), *Serapias parviflora* (Small-flowered Serapias) and *Ophrys bombyliflora* (Bumble-bee Ophrys).

Beside the tracks through the reserve, the plants that caught our eyes – other than the dazzling stands of *Echium plantagineum* (Purple Viper's-bugloss) – were *Lythrum hyssopifolia* (Grass-poly; a protected plant in Britain) and *L. junceum* (False Grass-poly), *Bellardia trixago* and the more familiar *Parentucellia viscosa* (Yellow Bartsia), as well as the pheasant's-eye *Adonis microcarpa* ssp. *microcarpa*, much *Ecballium elaterium* (Squirting Cucumber) and mats of two pinkish-purple flowered vetches: *Astragalus echinatus* and *Hedysarum glomeratum*. Here too was *Chamaerops humilis* in flower, as well as two birthworts – *Aristolochia baetica* and *A. paucinervis* – and a striking, almost orchid-like broomrape, *Orobanche crenata*, parasitic on legumes. *Ranunculus baudotii* (Brackish Water-crowfoot), a species of *Frankenia* (Sea Heath) and *Spergularia marina* (Lesser Sea-spurrey) were indicators of the saline conditions, while Arthur

Copping's discerning eye spotted *Gaudinia fragilis* (French Oat-grass), *Avellinia michelii* and *Carex distans* (Distant Sedge).

The lagoons, fringed with reeds and willows, produced some notable birds: the globally threatened White-headed Duck, as well as Red-crested Pochard, Black-necked Grebe and Purple Gallinule, but diligent scanning failed to identify a Crested Coot among the many Common ones. The reedbed resounded with the guttural croaking song of Great Reed Warblers, and a Short-toed Eagle presented good views as it escorted an intruder from its territory.

### 23 April – La Rana & Benaocaz

La Rana is an area of unfenced damp pasture south-west of Grazalema on the road to Ubrique and, at the end of April, is usually the place to find a host of orchid species. With the lateness of the season and recent rains, however, there were rather more caramel-coloured, pork-sausage-sized Iberian Slugs (*Lehmannia valentiana*) than orchids. Nevertheless, amongst the lush green vegetation studded with early spring flowers, and to the constant accompaniment of an enthusiastic Cuckoo, we did manage to find some orchids not already seen: *Serapias lingua* (Tongue Orchid) and *Ophrys fusca* ssp. *fusca* and ssp. *dyris*, (Dull Ophrys).

On drier ground, there was the delicate *Romulea bulbocodium* and a few tardy blooms of the exquisite *Narcissus papyraceus* (Paper-white Daffodil), as well as the Afro-Iberian endemic *Biscutella baetica*, and the shrubby *Daphne gnidium*, whose berries are much favoured by warblers. On the reptile front, several Western Three-toed Skinks were seen wriggling through the longer grass, Jon spotted a rather hefty male Ocellated Lizard, with a characteristically robust head and the distinction of being the largest species of lizard in Europe, and Karl photographed a Spanish Psammmodromus.

Heading down a few contour lines past Villaluenga del Rosario, through a magnificent towering gorge, spring was much more in evidence and the spot we chose to continue botanising was truly glorious. Sheets of lime-

green *Euphorbia* draped the lower cliffs of the defile, and the roadside rockgardens were radiant with a profusion of bright flowers, including the stunning *Scilla peruviana* (Portuguese Squill), the intensely reddish-pink *Lathyrus tingitanus* (Tangier Pea) and *Hyacinthoides hispanica*, whose leaves seemed much narrower than the dimensions given in British Floras (see Colour Section, Plate 4).

We picnicked among several species of *Ophrys*, including *O. speculum* ssp. *speculum* (Mirror Ophrys), *O. bombyliflora* and *O. fusca* ssp. *bilunulata*. *Orchis* species abounded too, including *O. langei* and *O. mascula* (Lange's and Early Purple Orchid, respectively), the latter in a range of colours from pale pink to intense purple. A splendid, if less exquisite, *Barlia robertiana* (Giant Orchid) towered up over the surrounding vegetation, while *Anemone palmata* (Palmate Anemone) and *Tetragonolobus purpureus* (Asparagus Pea) were also recorded here.

Our first sighting of the lovely Afro-Iberian endemic *Ornithogalum reverchonii*, with its one-sided spike of white nodding bells, was thanks to Jane and Maurice, who had walked ahead and spotted it on the roadside. The ornithologists among us were rewarded with the sight and sounds of Blue Rock Thrush, Black-eared Wheatear, Melodious Warbler, Stonechat, Cirl and Rock Buntings and Rock Sparrow.

We finished off the day near the attractive village of Benaocaz where, after recording *Cerintho major* (Honeywort) and *Scrophularia canina* (French Figwort), we made our way down another ancient paved mule track (which we shared with a party of noisy schoolchildren and a small herd of very cute black pigs), over a photogenic stone bridge to a lush meadow where, among a carpet of orchids, we at last found a single spike of *Orchis laxiflora* (Lax-flowered Orchid). The weather in Grazalema again lived up to its reputation by dumping several clouds' worth of heavy rain on us just as we were making our way back to the vehicles.

**24 April – Sierra del Endrinal**

Today was market day in the white village of Grazalema; a good opportunity to stock up on provisions for the excellent lunches to which we had now become accustomed. Teresa bought large boxes of strawberries and delicious loquats, the smooth, yellow, pear-shaped fruits of *Eriobotrya japonica*. Most of the other stalls were laden with cheap clothing where some of us found many-pocketed *gilets*: the perfect garment for botanising!

Our aim today was to explore the limestone hillsides and plateaux to the south of the village: the Sierra del Endrinal. We took the woodland path above the car-park and climbed up under pines and cypresses to the Monumento del Sagrado Corazón, at the base of which the villagers had placed their votive flowers. Not distracted by these garish bouquets, we found three saxifrages amongst the limestone rocks: *Saxifraga granulata*, *S. globulifera*, and *S. tridactylites* (Rue-leaved Saxifrage), the latter seemingly reluctant to display its 3-fingered leaves here.

Up here in bright sunlight we spotted a Scarce Swallowtail, a Spanish Festoon and a Small Copper, whilst Griffon Vultures soared above us and Bonelli's Warblers sang to us from the pines. In the shady margin of the path were several pale, creamy spikes of *Neotinea maculata* (Dense-flowered Orchid). As we reached the ruins of an old chapel – the Ermita del Calvario – a Large Psammomachus lizard was spotted on one of the sun-baked stone walls, and as we descended once more to the village, a small clump of *Orchis italica* (Naked Man Orchid) was encountered by the roadside.

We lunched to the west of the village, at the Puerto del Boyar, where we enjoyed wonderful views to the south before the rain started once more. Undeterred, we climbed up through the pine forest to the rocky Sierra del Endrinal, past *Bellis sylvestris* (Southern Daisy), *Helleborus foetidus* (Stinking Hellebore) and *Iris foetidissima* (Stinking Iris). As we approached the tall, fissured crags, we spotted the dainty bright yellow *Narcissus assoanus* ssp. *praelongus* (= *N. requienii*)

(Rush-leaved Jonquil), *Hornungia petraea* (Hutchinsia) and, nestling in the crevices, our fourth Saxifrage of the day, the slightly sticky leaved, white-flowered *Saxifraga bourgeana*, endemic to the Serranía de Ronda and included in the Spanish Red List as Vulnerable. An investigation of the most sheltered hollows here also revealed some superb specimens of that curious Afro-Iberian endemic fern *Pleurosorus hispanicus*, here growing amid the characteristic umbrella-shaped fruiting bodies of *Marchantia* liverworts.

As we gained height, eventually reaching the Puerto de las Presillas at around 1,300m, we noticed the vegetation becoming sparser and more closely grazed by sheep and probably Spanish Ibex. Bushes of the prickly-leaved *Quercus coccifera* (Holly Oak) and *Rhamnus alaternus* (Mediterranean Buckthorn) were reduced to prostrate branches clinging to the rocks, whereas large cushions of *Erimacea anthyllis* (Hedgehog Broom) were furnished with extremely sharp spines to protect the young fresh leaves and newly opening lilac-blue flowers from browsers. Scattered amongst these bushes were a few plants of *Asphodelus albus* (White Asphodel) and *Euphorbia characias* which we supposed were poisonous to grazing mammals, and so had successfully survived.

**25 April – Sierra del Pinar and the pinsapar**

From a car park lined with *Retama monosperma* (White Broom), we set off on our longest walk of the week: 12km to the village of Benamahoma across a limestone sierra. En route we traversed the *pinsapar*: a great stand of *Abies pinsapo* (Spanish Fir) on the north flank of Grazalema's highest peak, Torreün (1648m). An Ice Age relict species confined to three sierras in Andalucía, *Abies pinsapo* flourishes here thanks to strict control of livestock and access, which is by permit only. A busload of noisy teenagers who overtook us soon after the start seemed unaware of this, though fortunately they were soon out of earshot, replaced by the pleasanter song of Crested Tit, Firecrest and Bonelli's Warbler among *Pinus pinaster*

(Maritime Pine) and *P. halepensis* (Aleppo Pine).

The rush-like *Aphyllanthes monspeliensis* (Blue Aphyllanthes), evil-smelling *Putoria calabrica* (Putoria) and the attractive *Lithodora fruticosa* (Shrubby Gromwell) were accompanied by other species new to us such as *Ranunculus gramineus* (Grass-leaved Buttercup) and the Grazalema endemic *Phlomis × margaritae*, not yet in flower.

Two butterflies – Black-eyed Blue and Moroccan Orange-tip – appeared as the light rain ceased and we approached a col with a view of the *pinsapar*. Interesting plants of the limestone pavement here included a prostrate buckthorn *Rhamnus saxatilis*, and no fewer than seven Iberian and North African endemics: the crucifers *Jonopsidium prolongoi* and *Brassica repanda* ssp. *confusa*, *Berberis hispanica*, the charmingly diminutive *Viola demetria*, *Saxifraga globulifera* and *Anarrhinum laxiflorum*, as well as the handsome, yellow-flowered *Draba hispanica* ssp. *hispanica*, the latter spotted by eagle-cyod James after some of us had dismissed it as ‘just another *Alyssum*’. Teresa pointed out *Dactylorhiza insularis* (Barton’s Orchid), while a much-photographed rock stork’s-bill was almost certainly *Erodium recoderi*: a species with an extremely localised distribution, being confined to the Grazalema park.

The daffodils too were of interest. In addition to the abundant *Narcissus assoanus* ssp. *praelongus*, we noticed plants with wider, glaucous, keeled leaves, which John has subsequently identified as the extremely local *N. cuatrecasasii* (= *N. rupicola* ssp. *pedunculatus*), first found at Grazalema by Stocken in the 1960s, and unique to southern Spain, as is the saxifrage – the fifth of the trip – *Saxifraga haenseleri*.

The party split after lunch, some returning to the starting point, others continuing the longer traverse to Benamahoma through the floristically rather dull Spanish Fir forest where the peonies *Paeonia broteroi* (Western Peony) and *P. coriacea* were abundant but tantalisingly a week or two away from flowering. Two ferns, *Asplenium onopteris* (Irish

Spleenwort) and *Cystopteris fragilis* (Brittle Bladder-fern), and later *Selaginella denticulata* (Mediterranean Selaginella), provided some compensation.

As we emerged into an open forest of *Quercus faginea*, many of these being giant pollards of great age, the flora became more varied. *Arbutus unedo* (Strawberry-tree), *Pistachio lentiscus* (Lentisc), *Phillyrea latifolia* and *Teucrium fruticans* (Tree Germander) grew in the understorey, while in areas recently cleared of scrub, *Cephalanthera longifolia* and *C. rubra* (Red Helleborine) were conspicuous, with *Neotinea maculata* somewhat more retiring. Herbs new to us included *Geum sylvaticum* and *Arabis planisiliqua*, with its tightly-appressed stem leaves, while brilliant splashes of orange and scarlet signalled the parasites *Orobanche rapumgenistae* (Greater Broomrape), and the curious little *Cytinus ruber*, respectively.

We entered Benamahoma through a pasture rich in orchids, including *Serapias parviflora*, *Aceras anthropophorum* (Man Orchid) and half-a-dozen *Ophrys* species, including *O. scolopax* (Woodcock Ophrys), while the walls of a shady stream hosted *Adiantum capillus-veneris* (Maidenhair Fern) and *Anogramma leptophylla*, signalling the end to a long day, but an immensely satisfying one.

#### 26 April – Cueva de la Pileta

Today we were lucky to have the chance of visiting this remarkable prehistoric cave. It was discovered in 1905 by a farmer, José Bullón, who descended a nearby pothole to collect bat guano for manure. To his amazement, he found himself in a vast chamber, with galleries leading to others, whose walls were covered with schematic paintings.

During the next hundred years, family members gradually explored the huge cave system, finding not only many extraordinary geological formations, but also pottery, bones and a remarkable variety of cave paintings. Horses, goats, reindeer and bulls are depicted, including a most realistic pregnant mare, as well as a monk seal and a marine fish fully two metres long, indicating some past link with the sea. The diversity of cave paintings

and engravings, in black, red and yellow, show that the Pileta cave was occupied from the Palaeolithic era through to the Bronze Age.

Pileta is one of the few remaining caves where one is permitted to visit the original, rather than a replica, and the number of visitors strictly limited. It was altogether a magical experience to examine these relics of long-ago cultures, secreted in a labyrinth of narrow passages and spherical chambers, our way lighted only by small paraffin lanterns.

Back on a botanical note, on the rocks around the cave entrance we found a splendid specimen of *Asplenium petrarchae*, as well as the white-flowered *Omphalodes commutata*, a plant whose world distribution is confined to the Serranía de Ronda. Also here were *Nigella damascena* (Love-in-a-Mist), *Calicotome villosa* (Hairy Thorny Broom), the small-flowered *Astragalus epiglottis*, *Medicago orbicularis* (Button Medick), *Jasminum fruticans* (Wild Jasmine), *Salvia viridis* (Annual Clary), the handsome *Scorzonera hispanica*, and *Gladiolus communis* ssp. *byzantinus*, while Arthur Copping pointed out several grasses: *Anisantha rubens* (Foxtail Brome), *Vulpia unilateralis* and the annual *Lolium rigidum* (Mediterranean Rye-grass).

#### **27 April – Fuente de Piedra & the Torcal de Antequera**

After sadly leaving the charming town of Grazalema we returned to Málaga via the extensive shallow saline lagoon of Fuente de Piedra. The shore vegetation was dominated by halophytes such as *Suaeda vera* (Shrubby Sea-blite), *Frankenia pulverulenta* (Sea Heath) and *Parapholis incurva* (Curved Hard-grass). Two members of the Boraginaceae were noteworthy: diminutive *Neotostema apulum* (Yellow Gromwell) and the almost black-flowered *Nonea vesicaria*.

It was, however, largely the birds that caught our attention: a huge colony of Greater Flamingos on an island far out in the lake, and breeding Avocets, Black-winged Stilts and Kentish Plovers, together with many passage waders such as Little Stint and Curlew Sandpiper, still en route to their breeding

grounds in Arctic Siberia. Parties of Gull-billed Terns and several Whiskered Terns hawked for insects over the saltmarsh and pools, while an elegant pratincole had all the features of a Black-winged: an eastern species that shouldn't have been here.

We drove on through Antequera and up onto the Torcal de Antequera, crowned by spectacular limestone formations. Here we had the last of the memorable picnics which Teresa had magically managed to produce each day. We just had time for some last-minute botanising, turning up a flowering clump of *Paeonia broteri* at last, *Muscari neglectum* (Grape-hyacinth), *Iris lutescens* ssp. *subbiflora*, with deep violet flowers, and *Barlia robertiana* in full bloom. Growing together on a shady rock, John and James encountered *Ranunculus rupestris*, exhibiting its large shiny yellow flowers, sprawling *Linaria anticaria* (originally described from here, and endemic to southern Spain) and much *Saxifraga biternata* (not yet in flower), only found elsewhere on one nearby mountain. Several Rock Buntings and Blue Rock Thrushes used the rock pinnacles as song-posts.

Having left most of the group at the airport, Teresa, Karl and Louise had time for one last foray into the nearby Desembocadura del Guadalhorce, where the beach harboured *Otanthus maritimus* (Cottonweed) and *Cakile maritima* (Sea Rocket). On the inland pools, we managed to get close-up views of Little Egret, White-headed Duck, a pair of Gadwall with two young, Shoveler, Pochard, Dunlin, Little Ringed and Grey Plovers, and Common Sandpiper, with other birds feeding over the marshes including Red-rumped Swallow, Fan-tailed Warbler, Bee-eater and Yellow Wagtail.

**This report was written by Caroline Bateman, Joy and James Cadbury, Arthur Copping, Jane and Maurice Croft, Karl Crowther, John Edgington, Louise Redgrave, Ann Sankey and Mary Clare Sheahan, and was edited by Teresa Farino.**

## BOOK NOTES

### A checklist of alien plants in Belgium

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Alien-plant enthusiasts will be very pleased to learn that the long-awaited work (some 15 years in gestation), Filip Verloove's *Catalogue of neophytes in Belgium (1800–2005)*, 89 pp, was published early in 2007 ('2006'). It appears as *Scripta Botanica Belgica*, vol. 39, and is available from National Botanic Garden, Domein van Bouchout, B-1860 Meise, Belgium for just €9, plus €5.5 p.& p. in Europe; alternatively, visit [www.br.fgov.be](http://www.br.fgov.be)

This soft-backed volume is in A4 landscape-mode format and consists of an interesting introduction, all in English, followed by a single, alphabetical list of the species. There are 1969 taxa in total (a few appear as varieties or cultivars), covering 139 families. Each entry consists of 11 columns, viz. the scientific name and authority (entered in **bold** font when the taxon is 'new' to Belgium, deliberation of introduction (accidental or deliberate), date of first and last records, degree of persistence, continent of origin, presence (or not) in three political divisions of Belgium, degree of naturalisation (from casual to high-impact invasive), vector, plant family, important synonyms and remarks. Abbreviations used are all listed on a most convenient, loose card.

The catalogue is based on voucher specimens existing in various herbaria that have been verified either by F. Verloove or by specialists world-wide. Literature records are ruthlessly rejected (=unmentioned!), so that a very high standard of accuracy is achieved. The nomenclature is impressively up-to-date (with help from Professor J. Lambinon), but herein lies a minor problem. There is, alas, no concluding list of recent generic changes, so in order to find, e.g., Stace's (1997) *Chenopodium ambrosioides*, one must look up *Dysphania ambrosioides* (L.) Mosyakin et Clemants.

A neophyte is defined herein as a taxon that has appeared spontaneously in the wild since c.1500 (the post-Columbian era); the earlier archaeophytes are all omitted. R. Dodoen's

*Crujideboeck* (1554) proved very useful here. The bibliography (pp. 87–89) gives many useful references, several little-known in Britain.

The great value of this publication to BSBI members is the ability it provides to compare the names that we use with those used on the Continent. What taxa are we perhaps overlooking? Which names should we update? In general, the agreement is remarkably close (confessedly, EJC may be responsible for a few examples!). To quote just one entry: *Agrostis exarata* appeared only in 1990; in Britain we have only one sighting, in 1981. I should add that greenhouse weeds are included, in contrast to Britain where we have mostly ignored them. I cannot trace an article on these in the last 105 issues of *BSBI News*!

In conclusion I will list a few examples that may interest BSBI members (some references have been added by EJC):

*Aster novi-belgii* (and N. American allies) have not been segregated into the unwelcome *Symphytotrichum novi-belgii*, etc., in spite of widespread uptake in USA and elsewhere.

*Bromus* spp. – covers, once again, *Anisantha*, *Bromopsis* and *Ceratochloa*. Dr T. Cope (Kew) will, doubtless, cheer!

*Chamaemelum nobile* reverts to *Anthemis nobilis*.

*Echinochloa muricata* ssp. *microstachys* is 'naturalised'. Stace (1997) does not mention this split of *E. crus-galli*, whereas the late C.E. Hubbard recognised it. See *Sida* **20(2)**: 525–548 (2002).

*Galactites elegans* [correct when published] should now be changed back to *Galactites tomentosus* (misspelt in Stace, etc.) See *Taxon* **56(2)**: 590 (May 2007). Why should we alter the gender after some 200 years of acceptance? – because the *Botanic Code* (ICBN) ordains that! Is this stability?

*Lemna turionifera* – found naturalised in 2005.  
*Mentha spicata* ssp. *glabrata* (Lej. et Court.)

Lebeau – a subspecies unmentioned by  
Stace (p.575).

*Minuartia mediterranea* – found naturalised  
[in city of Ghent] in 2004. See *Dumortiera* 90: 15–18 (2006).

*Oenothera* spp. – 25 taxa are listed!!

*Oxalis ×uittienii* J. Jansen (*O. corniculata* × *O.*  
*fontana*) – found in 1973.

*Philadelphus pubescens* (and *P. coronarius*)  
appear – but not *P. ×virginalis*.

*Pimpinella peregrina* – ‘?naturalised’ since 2000.

*Potentilla rivalis* – naturalised since 2001.

*Weigela floribunda* appears (as ‘*Weigelia*’) –  
whereas Stace names only *W. florida*.

Readers must remember that some aliens in  
Britain are true natives in Belgium – hence the  
blatant absence of *Acer platanoides*, *Digitalis*  
*lutea*, etc.

This work is a most fascinating, useful and  
accurate summary of current knowledge about  
aliens in a country close to Britain. Even more  
exciting news is the announcement that F.  
Verloove ‘is currently preparing the publica-  
tion of an illustrated flora of the non-native  
vascular plants in Belgium.’ We eagerly await  
this.

#### Reference

Stace, C.A. 1997. *New Flora of the British  
Isles*, 2<sup>nd</sup> ed. Cambridge University Press,  
Cambridge.

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## *Botanic Gardens: A Living History* – a competition

GWYNN ELLIS, General Editor

To celebrate the publication of *Botanic  
Gardens: A Living History*, Black Dog  
Publishing is offering three free copies of this  
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‘Which modern British garden was de-  
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Further information is available at:  
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## Correction to *Taraxacum* paper in *Watsonia* 26(4)

LEN MARGETTS, 16 Ashleigh Road, Honiton, Devon EX14 1TD

In my paper ‘A new species of *Taraxacum*  
Wigg. (Asteraceae) from south-west England  
and Ireland’ (*Watsonia* 26: 481–484, 2007)  
there is a mistake on p. 484 in the right-hand  
column where ‘(Fig. 1)’ is inserted in the text

in the wrong place, where I am referring to *T.*  
*drucei*. It should have appeared further on  
where the new species is described. The illus-  
tration is of *Taraxacum rona*.

## *The Botanists and Mountain Guides of Snowdonia* by D. Jones

GWYNN ELLIS, General Editor

The 2<sup>nd</sup> edition of this authoritative and detailed account of *The Botanists and Mountain Guides of Snowdonia* by Dewi Jones has just been published by Llygad Gwalch of Pwllheli. A notice of the 1<sup>st</sup> edition was given in *BSBI News* 73: 4 (1996).

This second edition has been considerably enlarged as outlined in the Foreword (by GE) from which I quote:

‘[The author] has painstakingly continued his researches into the history of botanical collecting and botanical guides in north Wales and has skilfully and seamlessly inserted the results into this second edition. Most of the additions occur in the chapters on *John Roberts Penclip*, *The great Victorian Fern Craze* and *The Golden Age*

*of the Mountain Guide*, whilst two new chapters on John Lloyd Williams and William Williams greatly expand on the accounts ... given previously.’

Incidentally, in 2005 Dewi was awarded the honorary degree of Master of Arts by the University of Wales ‘in recognition of his contribution to the history of botany and literary studies in Wales’.

*The Botanists and Mountain Guides of Snowdonia* (263pp; plus 8 pages of colour & 8 pages of b/w photos (ISBN 1-84524-064-2) softback) costs £9.95 (plus p&p) and is available from Llygad Gwalch, Ysgubor Plas, Llwyndyrys, Pwllheli, Gwynedd LL53 6NG ([www.carreg-gwalch.co.uk](http://www.carreg-gwalch.co.uk))

## OBITUARY NOTES

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

\*: An Obituary will be published in *Watsonia*.

With regret we report the death in April 2007 of **David P. Stevens\*** from Anglesey. He had been a member since 1980. Trained under Clive Stace at Leicester, and gaining a PhD on *Saxifraga granulata* under John Richards at Newcastle, David was active on a major survey of floristic composition of Welsh grasslands until his illness and death. We are sad to hear also of the recent death of **Dr F. Eva Crackles\*** MBE BSc MSc FLS, of Hull. Eva was an Hon. Member who joined in 1950, and was later BSBI Recorder for v.c. 61 (S.E. Yorks) from 1969–1996. In 1990 her *Flora of the East Riding of Yorkshire*, Ed. By Roger Arnett, was co-published by Hull University Press and Humberside County Council.

We are also sorry to hear of the death of **Ann C. Powell** of Hereford. Stephanie Thomson writes: ‘Ann Powell, who has recently died at the age of 98, was a stalwart of the Herefordshire Botanical Society almost from its formation in 1951 and for which she

acted as Secretary for 21 years. She was fully involved in recording for the *Atlas of the British Flora* (1962) and only increasing immobility meant a position on the sidelines for the *New Atlas*, but her expertise was always available. She was a member of the BSBI for almost 40 years and had been persuaded to take over as v.c. Recorder for Radnorshire (v.c. 43), living as she did close to the border, three years before she became a member.

Ann was no mean botanical artist and indeed her interest in plants, particularly water plants (gumboots and grapnel always at the ready), stayed with her to the end. *Campanula patula* was another speciality; she had gathered seed from a local source and scattered in her garden at Eardisley where it reappeared most years in the gravel paths.

She was a mine of local botanical information and it is hard to realise that we can no longer “ask Ann” or remark “Ann will remember”.

We also regret to report the deaths of **Prof. Sir John Burnett** (joined 1946, v.c. Recorder

for Oxon (v.c 23) in 1950) and founding Chairman of the National Biodiversity Network Trust (2000-2005); **Mr Raymond Piper** of Belfast (joined in 1972), whose skilled pencil and brushes produced portraits of botanists as well as botanical paintings; **Alan Radcliffe-Smith** (former Head of Euphorbiaceae Section, Herbarium RBG Kew) who was BSBI referee for *Euphorbia*

*esula* agg. And *E. Cyparissias* for some years until he retired as referee in 2001; **Mrs Eileen M. Howard** of Newhaven, East Sussex (joined 1966); **Mrs Bridget J. Ozanne** (joined in 1992, v.c. Recorder for Guernsey from 1996 to 2007); ; **Mr C.A. Robinson** of Towcester, Northamptonshire (joined in 1954) and **Mr B.J. Whiteway** of Redruth, Cornwall (joined in 2001).

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## RECORDERS AND RECORDING

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### Panel of Referees and Specialists

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

Jeff Wood has said that he would like to retire as referee for orchids in general; in future specimens from Wales and southern and central England should be sent to Ian Denholm, and from all other parts to Richard Bateman. Their addresses are already in the Referees Section of Yearbook 2007. The relevant passage in the Yearbook will now be as follows:

#### ORCHIDACEAE

*General* (including *Dactylorhiza* and *Gymnadenia*): Dr I. Denholm (S. and Central England and Wales) and Prof. R.M. Bateman (N. England, Scotland and Ireland).

No whole plants; fresh material encouraged. A single fully open flower and the subtending bract in an airtight vial or similar (do not include moss or cotton wool), plus the longest sheathing leaf preferably

packed flat. Pickled flowers supported by colour notes are less satisfactory. Images of whole plants plus close-up of inflorescence are also desirable, ideally with scale, supported by notes on size, locality, habitat and other dactylorchid taxa present (essential if hybridisation is suspected). Identification will be attempted from images alone if necessary; this is essential for species protected by Schedule 8 of the Wildlife and Countryside Act, for which living material cannot legally be collected.

*Epipactis*: Prof. A.J. Richards, photo of whole plant and close-up photo of upper open flowers, two uppermost flowers of spike, fresh or pickled in 65% ethyl alcohol, neat gin or vodka, and lowermost leaf (often very small).

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### Panel of Vice-county recorders

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

#### Changes of Recorders

**V.c. 113 (Guernsey)**. We are very sorry to announce the death of Bridget Ozanne, who had been our recorder since 1996.

#### Changes of Address

**V.c. 90 (Angus)**. Mrs Barbara Hogarth to 12 Moyness Park Drive, Blairgowrie, Perthshire, PH10 6 LX

**V.c. 104 (Mid Ebudes)**. Miss Lynne Farrell to 41 High Street, Hemingford Grey, Cambs. PE28 9BJ

**V.c. H9 (Co. Clare)**. Dr Sharon Parr to 14 Ballyvaughan Cottages, Green Road, Ballyvaughan, Co. Clare

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## NOTES FROM THE OFFICERS

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### From the Hon. General Secretary – *DAVID PEARMAN*

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

The summer has slipped by, Kevin Walker is in post, and there are lots of plans for the autumn, which will be dominated by the worsening rail service from Cornwall to the outside world!

The Society urgently requires a new Treasurer, so that Michael Braithwaite can devote himself to his term as President. Please see the note on page 3, but I would like to add that

though the BSBI is miles bigger than when he took office, ten years ago, the financial side is so well-organised, with the bulk capable of being performed by a third party, that the prospective Treasurer is free for a broad-brush approach. It has been a pleasure working with him and he has been an enormous help to me.

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### From the Head of Research and Development – *KEVIN WALKER*

*c/o Centre for Ecology and Hydrology Monks Wood, Abbots Ripton, Huntingdon, Cambs. PE28 2LS; Tel.: 01487 772446; kwal@ceh.ac.uk or kevinwalker@bsbi.org.uk*

#### ‘News and views’

By the time you read this I will have been in post, as the BSBI’s Head of Research and Development, for just over three months. It has been a busy period, with most of my time spent attending meetings, drafting proposals and discussing our plans and aspirations with other members of the ‘BSBI team’. I am eternally grateful to them, particularly David Pearman and Michael Braithwaite, for their patience and guidance over this interim period. The first few months have been both exhilarating and rewarding; I have learnt a great deal about the workings and aspirations of the society, as well as meeting many of the BSBI’s leading lights.



It is far too early to talk about plans and projects, so I propose in this my first ‘news and views’, to provide a brief botanical history.

Despite the accent, or lack of it, I hail from Harrogate in Mid-West Yorkshire. Serious botany therefore began in the Yorkshire Dales and included a blissful summer as warden of the infamous *Cypripedium calceolus* site. The only cloud was the near destruction of the sole surviving clump by a mammoth boulder I dislodged from a nearby crag. A fortuitous bounce saved the day – if it hadn’t I doubt I’d be writing this today! In 1995 I joined the Centre for Ecology and Hydrology (then the Institute of Terrestrial Ecology) just as Terry Wells, vice-county recorder for Huntingdonshire (v.c. 31), was retiring after a long and distinguished career. On the plus side I took over some of his grassland research and became involved in plant recording in Huntingdonshire. As a botanist I have always been happiest in the field and memorable days include surveying on Salisbury Plain and monitoring rarities such as *Pulsatilla vulgaris* and *Cirsium tuberosum*. CEH work has also fostered in me a fondness for grasses and sedges and an interest in the causes of vegetation change. This in turn has led to research on plant extinctions and floristic change. I have a

weakness for mountain flowers and have probably spent far too many hours hunting out rarities on Scottish hills. I am currently undecided as to my favourite botanical site – Rum or Ingleborough?

I look forward to meeting as many of you as possible over the coming months, and

explaining something of our plans and aspirations for the development of the BSBI. There will be a more considered (and serious) account of these plans in the next issue of *News* – watch this space.

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## From the Volunteers Officer – **BOB ELLIS**

*BSBI Volunteers Officer, 11 Havelock Road, Norwich, NR2 3HQ; 01603 662260;  
VolunteersOfficer@bsbi.org.uk*

### County Rare Plant Registers – An Update

#### A very brief history.

Nearly 20 years ago Franklyn Perring suggested that all BSBI vice-county recorders should produce lists of locally rare species. This concept has evolved into one of BSBI's major objectives, namely the production of county rare plant registers. In *BSBI News*, in 1997, Cameron Crook proposed specific criteria and standards for such registers and these guidelines have since been further refined, the latest being in May 2005 after the release of the new *Red List* (Cheffings & Farrell).

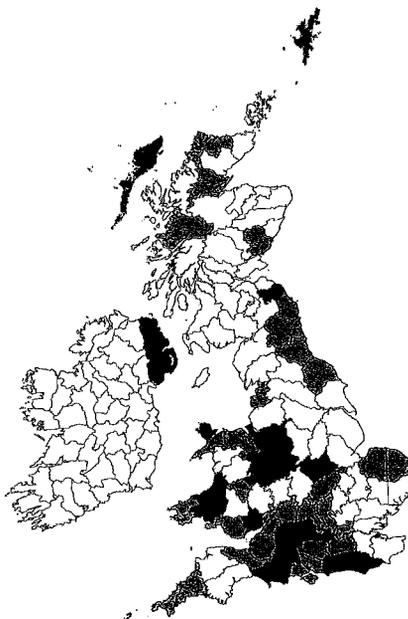
#### Where are we now?

The accompanying map is intended to show a view of the current state of play. Vice-counties shown in black have produced rare plant registers, either published or otherwise available (see the BSBI web site for more details). This year has seen the addition of Wiltshire and Monmouthshire; and all being well, Flintshire will join shortly.

Vice-counties shown in grey are known to be making good progress and there are strong possibilities that they will become available in the next year or two. Here I must apologise to those that I have left out and to those that I have erroneously included. In either case I would be very grateful to hear about it!

It is, of course, quite possible that the map paints too rosy a picture (albeit in monochrome). Firstly, several of the published registers don't really meet the full criteria of the guidelines, though they are still an extremely valuable resource. Secondly, because compiling a register is such a

Herculean task, I won't be too surprised if some of the grey counties fail to mature to black fruition within the next two years.



#### And the future...

Obviously one aspiration is that at some point in the (not too distant) future all our vice-counties will have rare plant registers. In many ways that is just a start. New sites for rare and scarce species are continually being discovered, indeed some species do so well that they can be dropped from the register entirely, and sadly, sites are still being destroyed and some species are still declining – therefore rare plant registers are in need of regular updating. Our first registers are really

just a basis upon which our knowledge can build and be refined and hopefully their very existence will encourage more and more botanists to contribute data.

One of the main purposes of rare plant registers is to provide reliable data in a concise and accessible format to conservation bodies, to be used as a tool in protecting our botanical heritage. It is therefore pleasing that significant support for the production of registers, both financial and otherwise, has come from the Countryside Agencies. It is to be hoped that this co-operation will continue and increase in the future and that the county registers will provide a solid platform for monitoring the status of our rare plants.

County rare plant registers not only list data for nationally rare species but also include a 'locally rare or scarce' category holding data on species that might be in trouble at the local level. For instance, species such as *Carex limosa*, *Gentianella campestris* and *Botrychium lunaria* are still widespread in Scotland and upland areas of England but in the lowland counties they appear to be in severe decline. Rare plant registers tell us that in Wiltshire, *Botrychium lunaria* has recently been found at only two sites; in Dorset at only

four (and at one of these it cannot be re-found); in Norfolk at only two (the latest in 1996) and it is thought to be extinct in Dorset, having been last seen in 1965. It now is possible to envisage amalgamated regional registers of rare, scarce and threatened plants with some realistic expectation that they will materialise. It is fascinating to speculate on the wealth of information these might produce about this tier of locally rare species, particularly those at the edges of their range where they may be most at risk.

#### References:

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### From the Scottish Officer – JIM MCINTOSH

*BSBI Scottish Officer, c/o Royal Botanic Garden, Inverleith Row, Edinburgh, EH3 5LR;*  
Tel: 0131 2482894; j.mcintosh@rbge.ac.uk

#### Loss of a *Moneses uniflora* population

It is very sad to report that one of the few populations of the Nationally Rare *Moneses uniflora* (One-flowered Wintergreen) has apparently been lost. The loss occurred in urgie Wood, Moray, v.c. 95 this summer due to forestry work. It was well known to botanists, but unfortunately not to the site managers. I am working with Forest Enterprise to make sure this sort of thing doesn't happen again. (The site is not Forest Enterprise owned.)

However this is another clear example of why we must make our records available to site managers and conservationists. After all we don't want our records to be gathering

dust: we want them to be actively used for conservation. And this is just one of the reasons for the current computerisation work in Scotland which will make our records more widely available.

Of course, the main beneficiaries of computerising records are the Vice-county Record-ers' themselves. It is an important first step in projects such as checklists, Rare Plant Registers and Floras, and it allows VCRs to map and analyse their records and respond to queries more easily. The data contributes to the Atlas Updating Project and you can already see the computerised data from the Computerisation project on the BSBI Maps Scheme webpages.

This is why I have devoted so much time and effort to a series of computerisation projects. The first of which is now complete, the second is at the final step, and a third will commence imminently.

### 1<sup>st</sup> BSBI Scottish Computerisation Project

104,000 vascular plant paper records from four Scottish VCRs have been computerised by BSBI contractors and handed back to the VCRs in MapMate format. The data has now been uploaded onto the BSBI Vascular Plant DataBase (VPDB) and the NBN Gateway where it can be seen ([www.searchnbn.net](http://www.searchnbn.net)). The BSBI is very grateful to SNH for its support for the project.

### 2<sup>nd</sup> BSBI Scottish Computerisation Project

The second computerisation project has just completed the digitisation of a further 145,000 records, this time thanks to the help of Esmée Fairbairn Foundation. Like the first it uses contractors drawn from amongst the membership. Records from East Ross (v.c. 106), North Ebuades (v.c. 104), Westernness (v.c. 97), Easternness (v.c. 96) and Moray (v.c. 95) were computerised and will be put on the VPDB and NBN shortly.

### 3<sup>rd</sup> BSBI Scottish Computerisation Project

As if that wasn't enough, SNH have generously offered us a further £82,000 funding package for a much bigger three year project to computerise some 450,000 paper records. This will begin shortly. Generally these records will be those in the VCR's main dataset. Again, like the previous projects a considerable volunteer effort will be required by participating recorders to prepare record cards for computerisation, and to check records once computerised against the original paperwork.

### Species Action Framework

SNH's recently launched *A Five Year Species Action Framework* aims to make a real difference in its 5 year term to the following vascular plant and charophyte species:

- *Melampyrum sylvaticum* (Small Cow-wheat),
- *Platanthera bifolia* (Lesser Butterfly-orchid),
- *Pyrola media* (Intermediate Wintergreen),

- *Salix lanata* (Woolly Willow) and
- *Tolypella nidifica* (Bird's nest stone-wort).

We have a much better understanding of the conservation issues for some of these species than others. There has already been a significant amount of work done on *Melampyrum sylvaticum* and *Salix lanata*, for example. For others, notably *Pyrola media* our understanding of its apparent decline, and the underlying factors involved is much poorer. And there is little time to get a better idea of what is going on and implement any remediation.

But that is where you can help – even this late in the year. Fruiting *Pyrola media* can be identified long after flowering – sometimes even in the following year – from its dried-up fruiting spike, with a long (5mm) straight stigma. If you re-visit or chance upon any Scottish populations *please* make a detailed record of them. The record should include, if possible, a population count, a GPS reference and a note of any threats or damage to the population. Photographs are also very useful. Send your records to the local Vice-county Recorder.

As a separate exercise, over this winter we will be asking Scottish Recorders to collate details of all their *Pyrola media* records and send them to me.

### Scottish BSBI WebPages

For more information about what the BSBI Scottish Officer and the BSBI are doing in Scotland check out the BSBI Scottish WebPages. Follow the link from the main website, or just type [www.bsbiscotland.org.uk](http://www.bsbiscotland.org.uk) **Scottish Annual Meeting in Edinburgh – again!**

Just a quick reminder that the Scottish Annual Meeting is back in Edinburgh again, after we failed to find suitable accommodation in Glasgow for the second year running. The date remains Saturday 3 November 2007. If you haven't been before, I'm sure you will find the event very welcoming and enjoyable. Please see the enclosed flier for more information and to book.

## Coordinator's Corner

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

Every now and then ideas comes along which challenge the way we think, and scientists have proved themselves no better at dealing with this than anyone else, although science itself has a way of moving forward regardless of the recalcitrance of any individuals. The secret of success, of course, is to spot the new ideas that will stand the test of time, and to reject those that won't. But how do you tell which is which?

Several interesting changes in the way the BSBI works have been testing our preconceived ideas recently. Perhaps the most challenging has been the Maps Scheme Online. In the past we were used to having Atlases published on paper every few decades, and these were taken to be the definitive, 'true' accounts of the distribution of species. The fact that they were carefully scrutinised for errors before publication gave them an air of authority and a certain level of dependability. Looking back, we now know that they weren't as accurate as we might have thought and – more importantly – they were far from complete. There were just too few people working on them to have much of a chance of achieving comprehensive coverage.

Now we have the Maps Scheme, which is a much more uncontrolled compilation of data by many people. It is updated almost daily and it often contains errors. To give an example, Rose Murphy recently emailed me to enquire about a dot for '*Fumaria agragia*' on the AUP (Atlas Updating Project). Now, *Fumaria agragia* doesn't exist as a species – it was a typo for *F. agraria* – and Rose, despite being an expert on fumitories, had never heard of any records of either the spurious *agravia* nor the valid *agraria* in Britain. So we checked it out and found that there was indeed a perfectly good record of *F. agraria* from 1939, and eventually we traced the original reference, with help from Rodney Burton and David Pearman.

This is a curious course of events. A record that was totally duff in every way turned out

to reveal a valuable item of information that you really would have had no chance of discovering otherwise. So does this justify the creation of the Maps Scheme? We will have to accept that errors will creep in constantly, but if we implement a system for correcting them then the database will, over time, get better and better. I suppose it could also get worse, if the rate of accumulation of errors exceeds the rate at which we deal with them, but can a system simultaneously get better at the same time as it is getting worse? I suppose it can, if you define those terms carefully.

As far as I can see there is no turning back. The advantages of having lots of people – county recorders, local records centres, referees, etc., – contributing to the Maps Scheme is so much greater than the disadvantages it brings. What we need to do is get used to the idea of questioning and correcting the data set as an ongoing process, rather than imagining that the printed maps we use are somehow perfect; which they never were in the first place.

### Herbaria at Home

A similar situation occurs with the Herbaria at Home project, run by Tom Humphrey and Leander Wolstenholme at Manchester Museum. This is an on-line collaboration for documenting herbarium specimens that draws on the inexpert (and expert) knowledge of the botanical public. I have found that it costs, astonishingly, just a few percent of the price of using traditional herbarium curators to document collections. Although it is also prone to error, it is still much better and more useful than anything else. Being able to see the specimens yourself is extremely welcome; but the ability to feed your own knowledge and information into it creates another one of those feedback loops that make it another 'next generation' system that will, surely, replace what has gone before.

The problem with Herbaria at Home at the moment is that it has no funding. I've phoned

round some of the obvious funding organisations and found that it falls awkwardly between the remit of most of them, and it is too imaginative and innovatory for the rest. So I'd like to appeal for help from the membership: we need sponsors. If you know of any obscure (or less obscure) charities who might support it; or wise museum managers who would like to get their collections online, then please get in touch.

### FISQs

At the beginning of August, the Training & Education committee ran its first full Field Identification Skills Qualification, or FISQ. This is another novel idea that, now that we have it, strikes me as completely natural and obvious.

For a FISQ, candidates are given a range of fresh plant specimens from around Britain to

identify under laboratory conditions. They are then sent out into the field to undertake a couple of standard recording tasks: a quadrat and a site list. They don't have to get everything right – they are evaluated against a botanist with a known level of competence and given a score on the skills pyramid from 1 to 6 (it doesn't test for level 7, the top level).

It is a fabulous improvement on the exams that were available to consultants, surveyors and students of botany, because it tests the skills that are needed to work or volunteer successfully in the sector. No-one can fail, but they are given advice on how good they really are, what they can competently do, and what more they need to do to make progress. Everyone seemed to enjoy taking part, and there are plans to run more next year. Details on the web site.

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## DIARY

N.B. These dates are often supplementary to those in the 2007 Calendar in *BSBI Year Book 2007* and include provisional dates of the BSBI's Permanent Working Committees.

10 Oct	Records Committee, London	3 Nov	Scottish AEM, Edinburgh
13 Oct	Committee for Wales, Aberystwyth	14 Nov	Council Meeting, London
18 Oct	Publications Committee, London	24 Nov	AEM, London
30 Oct	Executive Committee, London (note change of date)		

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### CONTRIBUTIONS INTENDED FOR *BSBI NEWS* 107 should reach the Receiving Editor before December 1<sup>st</sup>

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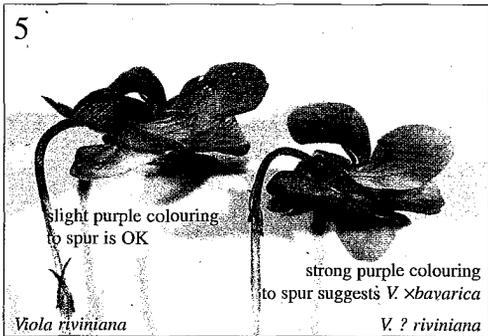
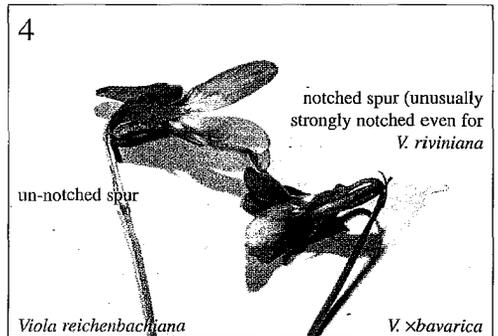
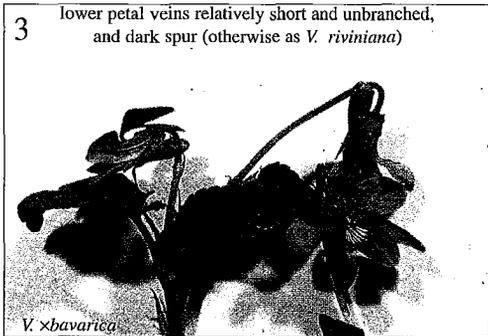
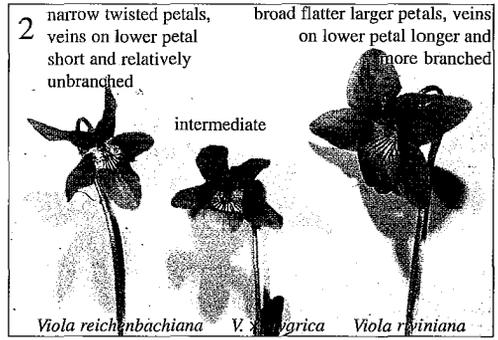
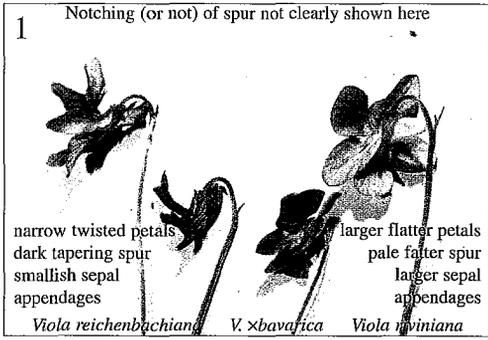
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(see p. 8-9)



Cathedral Point or 'Bradford Forest'.  
Photo Jesse Tregale © 2007 (see p. 37)



*Muscari latifolium* on a soil heap on waste ground, Bradford. Photo Jesse Tregale © 2007  
(see p. 37)



*Coincya monensis* ssp. *monensis* established on Crosby dunes in June 2007



Translocated plants of *Coincya monensis* ssp. *monensis* colonising a blow-out on Hall Road dunes in June 1999



*Coincya monensis* ssp. *monensis* being removed from relict colony at Blundellsands in July 1992 just before development