B.S.B.I. NEWS

January 1994

Edited by R. Gwynn Ellis

No. 65

Dept. of Botany, National Museum of Wales

Cardiff CF1 3NP

Conyza canadensis × *C. bonariensis*, del. Brian Wurzell © 1993 (see pages 34-38)

ADMINISTRATION

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(Please quote membership number on correspondence concerning membership or subscriptions — your membership number is on the address label of your mailings, in the List of Members in *BSBI Year Book 1993* or for changed addresses and 1993 new members in *Year Book 1994*).

HON. FIELD SECRETARY (Enquiries on Field Meetings). Mrs Elinor Wiltshire
62 Carroll House, Craven Terrace, LONDON W2 3PR

NOTICE TO MEMBERS

COUNCIL NOMINATIONS

Nominations for vacancies on Council, in writing, signed by two members of the Society and accompanied by the written consent of the candidate to serve, if elected, should be sent to the Hon. General Secretary, at the above address to arrive BEFORE FEBRUARY 1st 1994 (see *Yearbook 1994* for the list of present Council members May 1993-1994.

MARY BRIGGS, Hon. General Secretary

CONTRIBUTIONS INTENDED FOR

BSBI NEWS 66

should reach the Editor before

28 FEBRUARY 1994

DIARY

N.B. These dates are supplementary to those in the 1994 Calendar.

1994

FEBRUARY	
16	Deadline for replies to *Educational Facilities* requests (see page 6)
28	Deadline for contributions to *BSBI News* **66**
	Deadline for booking for Taxonomic Workshop, Newcastle (see page 5)
APRIL 14	*Plant and Insect Relationships* Conference, Royal Entomological Society rooms, London (see leaflet with this mailing)
JULY 24-AUG. 5	*International Compositae* Conference, RBG, Kew (see page 47)

See also pages 67-69 for dates of 1994 Botany Tours at home and overseas

EDITOR

EDITORIAL

Best wishes and a speedy return to good health to Brian Wurzell's mother, recovering after a recent heart attack.

Index* to *BSBI News, my request for help with typing the next Index met with a very good response. Thirteen members offered their services and the twelve parts to the *Index* to *BSBI News* and the cumulative *Index* to the *Welsh Bulletin* were duly typed and returned in very good time. George Hutchinson and I are very grateful to all of the 'typists' for doing such professional jobs. There were remarkably few corrections needed, considering the nature of the work, and all indexes have been entered into my computer and sorted into one long file. George is now hard at work contracting the entries and we hope that the *Index* to *BSBI News* **49-60** will be distributed with the next issue of *News* in April.

English names: I have, at last, made some attempt to give the recommended English name as well as the Latin name for most taxa mentioned in this issue. The only time I will definitely not give English names is for long lists of taxa, as on page 33. It will be an enormous help to me if contributors could please give the English name when preparing their notes; it will only take them a few minutes, it takes me several hours!

With all the healthy discussion going on in the pages of *News* regarding English names, perhaps I ought to state my position. I **like** the present recommended English Names, they are not obligatory, you can use them or not as you wish, but in *BSBI News* they **are** obligatory, unless you can convince me that they are unsuitable for some other reason than that you don't like the hyphenation (see John Palmer's comments on page 22). I think it essential that we have a list of recommended English names, just as we need a stable list of Latin names. If the 'outside world' is ever going to take us botanists seriously we must stop bickering over hyphens and apostrophes and the like. Governments, food manufacturers, horticulturists, agriculturists and the general public don't really give a toss what we call the blessed plant, or how we spell it, just so long as they are all given the same name and spelling when they ask for it. Alternative names or local names can, and perhaps should, also be used in local lists and Floras; in *Flora of Glamorgan*, for instance, we give the recommended English name **and** other local names if we thought they were used more frequently in the county.

In my humble opinion we have an excellent list of recommended English names and the next edition should expand on this by including all or most of those used in Stace's *New Flora*, rather than tinker with some of the already established and widely used names.

Now I've got that off my chest (and hope I haven't made too many enemies), there is one other question about English Names that bothers me slightly. When should I use initial capital letters and when lower case? (see also page 26). In this issue you will find a mixture. If the English Name follows the Latin, perhaps in parentheses, I tend to use initial capitals, if the name is used on its own

in the text then I tend to use lower case. Is this acceptable? Should I be following another convention or what? I would appreciate your views.

Perhaps I might be allowed to put one last question to members — in a Latin name, should there be a space between the full stop of a Generic initial and specific name or not? For example should *Bellis perennis* be written *B.perennis* or *B. perennis*? In *Authors of Plant Names*, Brummitt and Powell recommend that there should be no spaces between an authors initials or last name, thus R.K.Brummitt not R.K. Brummitt nor R. K. Brummitt. I have mixed feelings over this, I prefer to see a space in a Latin name but, as editor, have to spend some considerable time making sure that a generic initial is not the last character on a line. What do members think?

Annual Exhibition Meeting: what a splendid time we had at Reading, the first time I've been to one outside London and what a welcome change it was; plenty of room to park the car, see the exhibits, buy books, have tea or coffee, or just sit and talk — and what a buffet at the Conversazione!!. Thank you Stephen, and can we come again — **PLEASE.**

EDITOR

IMPORTANT NOTICES

Duggie Kent **O.B.E.**, congratulations from us all

TAXONOMIC WORKSHOP, UNIVERSITY OF NEWCASTLE UPON TYNE 23-25 SEPTEMBER 1994

This workshop meeting is open to all members (including BSBI v.c. Recorders) who would like to increase their knowledge and skill in identification of difficult plants. Places are limited to 50, and will be allocated on a 'first come first served' basis.

If you hope to attend, please send, as soon as possible, a 16 × 23cm stamped addressed envelope to the address below, and application forms will be forwarded. **The final date for booking RESIDENTIAL and NON-RESIDENTIAL accommodation is 28th February 1994**. Please enclose a fee of £6 payable to A.J. Richards.

Accommodation will be in Henderson Hall. This is pleasantly situated in Longbenton, a suburb of Newcastle, some 3 miles from the University. Accommodation and appropriate meals and refreshments are provided from teatime on Friday September 23rd to (packed) lunch on Sunday, September 25th. The approximate cost for the full weekend will be £60.

Final prices, location map and detailed programmes will be sent after 1 March 1994. There will of course be a bookstall, and a 'free-for-all' slide show.

This is an opportunity to 'get-to-grips' with your backlogs of some critical groups, so do bring some specimens. In particular, do please bring fresh material of roses — and **pressed** dandelions also welcome.

Provisional Programme

Friday	Dinner 8.00 pm. Gwynn Ellis 'How to collect' 9.15 bar
Saturday	9.00 am - 1.00 pm. Shortish presentations on critical groups including *Epipactis*, *Orobanche*, *Erophila*, and hopefully, *Cotoneaster*, *Euphrasia*, *Hieracium*. 2.15 - 5 pm. Demonstrations of critical groups with specimens (and identifications!) including. *Symphytum*, *Arenaria*, *Juncus gerardii/compressus*, *Rosa*. Other suggestions welcome. 6.00 pm onwards (with interval for dinner!). Identification free-for-all, including *Taraxacum*. 8.30 pm. Slides including problems.
Sunday	Two alternative excursions into Northumberland, probably one on duneland, and the other in Roman Wall country (including *Epipactis*). These will be in private cars, arranging to return to Newcastle for those travelling by train by 2 pm.

JOHN RICHARDS, Dept. AES, Ridley Building, University of Newcastle upon Tyne NE1 7RU

LEGACY LEFT TO THE SOCIETY

In her will our remarkable centenarian member Irene Vaughan M.B.E. generously left the Society £1000. This has been added to the Welch Bequest Fund set up following the receipt of a large sum in the early 1980s. The Fund has been immensely valuable: it is used to make awards, to British and Irish amateur or professional botanists for research into systematics and distribution of our flora or to aid the publication of botanical works of particular relevance to the Society's interests and has been the main spring of the BSBI Database at Leicester. Small sums are also given to groups or individual

members towards the costs of publications like local Floras, of enormous importance and interest to our members, which might otherwise never reach our shelves.

Please remember the Society in your will so that we can continue to make these grants. Perhaps, if it is easier, you would prefer to leave us some old Floras or other botanical books: they could be sold to members and the money raised used to support new editions.

FRANKLYN PERRING and MIKE WALPOLE

EDUCATIONAL ACTIVITIES

The Council of The Society have asked me to assume responsibility — on behalf of The Society — for **Education Liaison**. My brief is to promote the role of The Society in:

(a) helping **Members** to improve their botanical expertise within the areas covered by The Society's Constitution;

(b) facilitating training for **young professional ecologists** in botanical field work; and

(c) stimulating the interest of **students** in adult education, higher education, further education, and schools, in botanical matters covered by The Society's Constitution.

The intention is that I should seek to act as a catalyst and facilitator (rather than as a primary provider) — by, for example, discovering what Members have to offer on behalf of The Society, discussing with other organisations ways in which The Society might be able to help them, and bringing ideas to the attention of the relevant committees of The Society.

Initially, the Council have supported a proposal to compile a **calendar/register** of botanical courses/lectures, etc., that are being provided by Members in 1994-5 (from 1 April 1994 onwards) for various organisations, and of other Members who might be prepared to provide botanical courses/lectures for other organisations on request — and to make this document available to Members and to other relevant organisations (including adult-education providers). Many of you will have indicated your interest in such activities in your response to the recent Membership Survey: if, however, you would like to have details of your own involvement in such educational activities included in the proposed calendar/register it would be much appreciated if you would send the information to me at the address below **by 16 February 1994**. I would also greatly welcome the views of Members on **any** aspects of the educational role of The Society.

BRIAN A. GALE, 6 Roker Way, Fair Oak, EASTLEIGH, Hants, SO5 7LD (tel. 0705-693026)

MEMBERSHIP SURVEY - LONG LIVE THE NEWS

The Membership Survey, which was included with the September issue of *BSBI News*, has produced a very good response with over 650 people having sent their pink forms to me at the time of writing (1 November 1993). Analysis is now under way, but clearly many members are happy with the various services provided by the Society and there are lots of useful suggestions for future improvements.

Number crunching will now go on for a few weeks and full results will be available before the New Year. I have, however, done a quick analysis of the response on the questions relating to *BSBI News* specially for this issue.

The publication is rated very highly: 99.4% of members read *News*, 72.9% all of it and 26.4% part of it. Only one third of one percent (0.3%) found it boring and the remaining few did not volunteer an opinion.

The idea of a 'glossy' magazine received a massive thumbs down with 80% not wanting *News* in this format. Indeed many expressed their abhorrence of such a prospect quite vehemently in the margin of the survey form. 11% did not have a view and 9% favoured a 'glossy', most (surprise, surprise) saying it should be paid for by advertising rather than an increased subscription.

On the topic of advertising pamphlets as inserts, most respondents (76%) did not object to these being included with the News, 9% were against and 15% did not express a view.

The lucky winner of the the draw made from those who sent in replies was Mr C.E.K. Scouller from Ullapool in Ross-shire.

PATRICK ROPER, South View, Sedlescombe, BATTLE, East Sussex TN33 0PE

LICHENS FOR VEGETABLE DYING

Following the article on page 58 of *BSBI News* **64** (September 1993), I feel duty-bound to put in a word about the **unsuitability** of lichens for vegetable dying. I appreciate the considerable aesthetic and historical interest in this topic, but it should be stressed that these organisms are under considerable threat from man's activities. Lichen communities throughout the world are being decimated by, for example, industrial and domestic air pollution, habitat destruction and over-application of agricultural fertilizers. The potential dyer should remember that lichens grow by a mere 1-5mm per year, so how many years growth is being destroyed when a lichen is gathered? And, if pollution is present, how long will that lichen take to re-establish, if ever? It is particularly disturbing that the very vulnerable lichens are being promoted when many vegetable alternatives are available, and who's collection poses no environmental threat.

By all means publicise this interesting topic of the use of lichens for dying, but please remember the serious conservation problem and USE ALTERNATIVES INSTEAD. The British Lichen Society has produced a leaflet entitled *Alternatives to lichen dyes* which I should be pleased to supply to any enquirer.

Dr ANTHONY FLETCHER, Conservation Officer, British Lichen Society, Leicestershire Museums Service, 96 New Walk, LEICESTER LE1 6TD (tel. 0533-473034)

ADVANCE NOTICE — ALDERNEY JUNE 1995

Meetings Committee is considering whether to organise a long-week-end field meeting in Alderney, where local resident BSBI member Brian Bonnard offers to lead our excursions and provide a central meeting room. The probable dates would be June 9-12 1995. Either we might try to arrange, as with overseas meetings, a 'package' with Aurigny Airlines, flying from Southampton; or, as with a recent successful meeting in the Isles of Scilly, leave it to participants to make their own arrangements, perhaps combining it with visiting other Channel Islands or France. For a 'package' booking must be made by summer 1994. Members interested are asked to send their names, telephone numbers and preferences to:

JOHN OUNSTED, Apple Tree Cottage, Woodgreen Common, FORDINGBRIDGE, Hants, SP6 2BD.

HON. GENERAL SECRETARY'S NOTES

Congratulations to Dr S. Max Walters and Professor Vernon Heywood — both elected as Honorary & Foreign Members of the Bulgarian Botanical Society at the Optima VII meeting in Bulgaria this year. Stephen Jury reporting these events in the University of Reading Plant Sciences Laboratories *Herbarium News* No.32 Sept. 1993, recalls that Max spent some time working in Bulgaria, and that Prof. Heywood's taxonomy text book (*Plant Taxonomy*) has been translated into Bulgarian and is widely used.

In Memoriam: With regret we report the death of Sir George Taylor, a member of BSBI since 1935, best known to British Botanists for his work with Dandy on pondweeds, and as Keeper of Botany at the British Museum (Natural History) and as Director of Kew.

Also of Eric Edees, an Honorary member of the Society who was author of *Flora of Staffordshire* (1972), and joint author of *Brambles of the British Isles* (1988). Eric was a Referee for *Rubus* and Recorder for v.c. 39 Staffs. for many years.

And of Guy Messenger, who died suddenly a day before the Exhibition Meeting. Members will know of Guy's special interest in *Ulmus*, and he had written to say that he had prepared an exhibit on Coritanian Elm for the meeting — which he was planning to attend. Guy was author of *Flora of Rutland* (1971), to which he had a supplement in preparation, and he was v.c. Recorder for this smallest English county. Obituaries will be published in *Watsonia*.

BSBI Year Book 1994, with this mailing, includes a list of the addresses changed since the complete List of Members published in *Year Book 1993*. Do please check these addresses before posting as, for example, the secretaries of three of the four Permanent Working Committees have moved to new addresses in this past year.

The local botanical societies are not included in *Year Book 1994*, but a list of these will be available for those interested, later in the year.

Who Are You? At the Exhibition meeting a copy of the current List of Members printout was on display and amendments requested. One member recorded a move to 135 Brighton Road, Redhill, Surrey (with an apology for not knowing the membership number) **BUT** forgot to give us his or her NAME. . . ?

Tailpiece: Mail for much of W. Sussex goes to Gatwick for sorting and may be postmarked from there. Although I do spend a significant time at Gatwick (and Heathrow), a letter from me postmarked Gatwick does not always mean that I am just setting off overseas!

MARY BRIGGS, Hon. General Secretary

RECORDERS AND RECORDING

An updated list of recorders is published in *BSBI Year Book 1994* and includes a number of changes of address - do please check.

There are also some changes in v.c. Recorders and we send thanks to the retiring Recorders for good work in their v.c.'s (year of appointment in brackets).

v.c. 3 S. Devon	Chris Riley (1992)
v.c. 92 S. Aberdeen	Heather Salzen (1991)
v.c. 106 E. Ross	Phil Lusby (1984)
v.c. 110 Outer Hebrides	Andrew Currie (1983)
and v.c. 55b Rutland	Guy Messenger (1965) — (see Hon. Gen. Secretary's notes above)

and we extend a warm welcome to the newly appointed Recorders:

v.c. 3 S. Devon	Mr Laurie M. Spalton, B. Pharm., 6 Marine Parade, Budleigh Salterton, Devon. EX9 6NS
v.c. 90 Angus	Mrs Barbara C. Hogarth, 14 Greystone Road, Invergowrie, Dundee, DD2 5JQ
v.c. 92 S. Aberdeen	Mrs Katie M. Fallowfield, Colrach Lodge, Braemar, Aberdeenshire AB35 5YT
v.c. 106 E. Ross	Mr P.C.H. Wortham, Smithy Cottage, Crask of Aigas, Beauly, Inverness-shire, IV4 7AD
v.c.110 Outer Hebrides	Dr Richard J. Pankhurst, 23 Royal Crescent, Edinburgh, EH3 6QA. and Mr Stuart Angus

MARY BRIGGS, Hon. General Secretary

APIUM REPENS AND *ERYNGIUM VIVIPARUM* - UNLIKELY NEIGHBOURS

The true British status of *Apium repens* (Jacq.) Lag. (Creeping Marshwort) has been of interest to botanists for a long time. Believers and unbelievers in a pure native population have kept discussion going. When the second edition of BSBI handbook No.2 (*Umbellifers of the British Isles*) eventually appears it will summarise the situation but, in the meantime, I can confidently say that convincing pieces of '*Apium repens*', taken from Port Meadow, Oxford and grown on, have a discouraging habit of reverting to *A. nodiflorum* (L.) Lag. (Fool's Water-cress).

Rendered sceptical by this reversion experience, I doubted even the assertion that 'good' *A. repens* persisted on the Continent. But in early 1991 Stephen Jury obtained seed for me from Frankfurt-Main University, and this has given rise to a stable and convincing form which occupies about half a square metre in damp grass here, over a high water table. There is an abundance of available material should anyone wish to raise a patch themselves.

A poorly-drained site is obviously needed. My patch is in full sun and the grass etc., is kept down to 10cm. Competitors like *Ranunculus repens* (Creeping Buttercup) no doubt occur in the wild and are not life-threatening. The secret is to dig over small areas at the edge of the patch to promote growth into disturbed ground, and to take out a few buttercups at the same time.

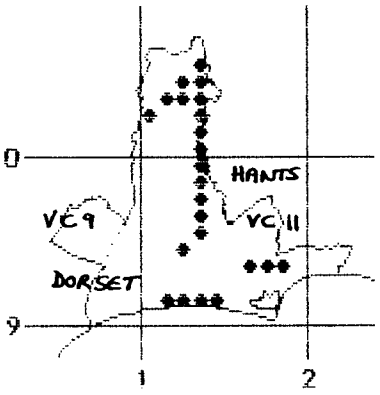
The idea that an *Eryngium* species could share the habitat of *Apium repens* may come as a surprise. However, at least two European species are found in winter-flooded locations and *Eryngium viviparum* Gay occurs as close as south Brittany, though very precariously. (*Apium repens* is also to be found in Brittany). The site that I visited in 1992 was a former cow-field left cow-less at the farmer's retirement and invaded by *Ulex minor* (Dwarf Gorse). Where our Trusts would take a bulldozer to the problem, the French efforts up to 1992 had been limited to a spade. Just a few *Eryngium* plants survive in a small grass-free strip where the herd used to tread several times daily on their way to and from the milking-shed. Still, it has to be said that the berth I've provided for my two plants raised from Breton seed is maintained with a spade, but then I've no gorse to contend with. The pair occupy about a third of a square metre and have 50-60 rooting plantlets borne on the horizontal flowering stems (see illus. pages 10-11). With blue capitula and shiny, dark green leaves, they are attractive curiosities.

The *E. viviparum* plants are located side-by-side with the *Apium*, though I did import some sandy alluvium for them and kept the grass out. The species appears to be hardy and to become profuse under good conditions. It may become a cult plant some day soon. Meanwhile, I feel that it would be better if it were spread round a number of growers and there are plenty of plantlets if any readers feel like taking the species on. It would then be possible to restore the Breton population when the local conservation effort is sufficiently advanced.

MERVYN J. SOUTHAM, 72 Fareham Road, GOSPORT, Hants. PO13 0AG

Apium repens, del. C. Hogg © 1993

Eryngium viviparum, del C. Hogg © 1993



Distribution of *Cochlearia danica* in v.cc. 9 & 11, map produced by DMAP

COCHLEARIA DANICA AROUND CHRISTCHURCH, DORSET

I was very interested to read Trevor Evans' account of *Cochlearia danica* in v.c. 35. I also have noticed a similar distribution pattern in the Christchurch area of Dorset, namely long stretches of densely packed scurvygrass on the central reservations of our dual carriageways, the A338, A31 and A35 (see map page 11). There are also some plants on the A35 central reservation in Poole. In our area I had noticed almost continuous *C. danica* on the central reservations, and virtually no plants at the sides of the roads.

Putting aside the problems of collecting specimens (and I would be fascinated to know how Trevor Evans collected them from the M4!), it is intriguing to speculate on why so many plants are on the central reservation and so few on the verges. Is it the speed of vehicles in the fast lane causing more turbulence, and spreading the plants as Trevor Evans suggests; or is it the greater amount of salt thrown up by those vehicles, or perhaps the lack of disturbance on the central reservation. Considering that on many of our Dorset roads the slow lane traffic is travelling at perhaps only 20 mph slower than that in the fast lane, and that we have relatively little salt used on the roads in winter in our part of the country one can only conjecture. I understand that lorries in the slow lane create at least as much turbulence as faster traffic in the fast lane, so perhaps we need another theory.

Apparently in Christchurch Borough the central reservations are mown at the same time and the same number of times as the verges, and neither are sprayed or have any other treatment. The roads were only salted approximately 20 times last winter, and the salt covers the edges to the same distance on both the sides and centre of the road. I have noticed, however, that there are considerably fewer plants on the Bournemouth section of the A338, which is mown much more frequently than the Christchurch Borough section. Perhaps then the distribution in Christchurch is entirely due to grazing by rabbits on the edge verges, and presumable lack of rabbit grazing on the central reservation?

FELICITY WOODHEAD, 28 Hungerford Road, BOURNEMOUTH BH8 0EH

COCHLEARIA DANICA ON INLAND ROADSIDES - AN UPDATE

Trevor Evans has given a fascinating account of the 'invasion' by *Cochlearia danica* (Danish Scurvygrass) of dual-carriageway and motorway verges in v.c. 35 (*BSBI News* **64**). As members will know, over the last few years I have had a special interest in roadside *C. danica* (see notes in *BSBI News* **52** & **55**), and it may be useful to give here a brief update on the current state of play.

C. danica is continuing to spread along inland roadsides at an astonishing pace. Over the last couple of years it appears to have colonised many sections of road from which it had been recorded as 'absent' in 1989-90, including long stretches of the A30 and A38 in Devon, the A303 in Somerset and Wiltshire, and several trunk roads in South Wales. As Trevor Evans points out, it is abundant along the M4, A449 and A40 in Gwent, and it now extends westwards from there along the M4 and A48 into Glamorgan and Carmarthenshire. Perhaps the most surprising records in 1993 were from Stephen Bungard (now a stalwart of the 'road-verge fraternity'!) and Pete Kinnear, who spotted it — independently of each other — on the central reservation of the A74 in Dumfriesshire: the first sightings of *C. danica* on a trunk road in Scotland.

On many roads the plant appears to be spreading at rates of 10-20kms per year, and within three years of its arrival can form more or less continuous roadside colonies several kilometres in length. Its preference for central reservations is becoming less obvious; indeed, on many motorways it now occurs locally along the outer verges (e.g., the M5 in Devon and Somerset). It has also turned up increasingly alongside single-carriageway roads, including the A38 in Cornwall and the A303 in Wiltshire — these 'outliers' presumably originating from seed being blown in from nearby dual-carriageway colonies.

Thanks largely to the continued interest of BSBI members we now (October 1993) have records of roadside *C. danica* from 320 10km squares across 61 vice-counties (v.cc 1-9, 11-14, 16-26, 28-39, 41, 44, 46, 50, 51, 53-56, 58-60, 62-70, 72, H37-H39). I have recently embarked upon the

mammoth task of collating these records, made all the more 'mammoth' by my toddling son, who seems to get a kick out of 'shuffling' the index cards, or else hiding the shoe-box in which they are stored! Nevertheless, I hope to get them sorted out and passed on to relevant v.c. recorders by the end of March. If anyone needs their records earlier than this, please let me know.

It is anticipated that a full report of this study will appear in a future issue of *Watsonia*.

SIMON J. LEACH, 15 Trinity Street, TAUNTON, Somerset TA1 3JG

MOTORWAY SCURVYGRASS

The occurrence of Danish Scurvygrass (*Cochlearia danica* L.), along the central reservations of motorways and dual-carriageway roads has become a quite widely discussed phenomenon. The plants are in flower during March and April and in many places occur in sufficient abundance to look like hoar frost or a light fall of snow or even, with some stretch of the imagination, an edging of dwarf white alyssum.

The plant's natural habitat is sandy and pebbly beaches around the coasts of Britain. Stace (1991) says that it also occurs 'by railways and salt-treated roads inland'.

For the last three years I have had an annual opportunity to observe the plant along the A21 from Castle Hill, Tonbridge (TQ/601 446) to the North Downs and in various other places. On the dual-carriageway stretch of the A21 it grows intermittently over many miles of the central reservation, sometimes occupying a stretch of up to 50 metres. Apart from one particular type of habitat, it is virtually absent from the outer edges of the road (there is no hard shoulder), though I have seen the occasional plant there. The exceptions are where slip roads exit from, or enter, the main carriageway creating isolated 'islands' of vegetation: the extreme points of these, where the two roads join, often support a colony of *C. danica*.

It has been argued that central reservations receive more salt from spray than the outer sides of a road but I am sceptical about this as the whole explanation for the phenomenon, though it could be a factor. At Sandgate in East Kent, where the A259 runs alongside the beach, the plant grows liberally on the seaward side of the single carriage road (i.e. on the nearside of passing vehicles), but not on the other side and salt distribution would not, I believe, account for this.

My theory is that Danish Scurvygrass has one or more predators that make a clean sweep of seeds, seedlings or older plants under most conditions prevailing inland. Whatever this predator is, it is reluctant to venture out on to beaches, across motorways or dual-carriageways and, if it does, could itself be vulnerable to predation. Mice, or small birds, for example, would be unlikely to survive long in such exposed conditions where there were kestrels or other birds of prey. Alternatively the stress of life on the central reservation might quite simply (and not surprisingly) be too much for them. At the side of the road small birds and animals can live up or down the embankment, or even some distance from the road, and have comparatively comfortable access to the plant. Some support to this theory is given by the fact that where the central reservation of the A21 is wider and bushy no *C. danica* grows.

There may be BSBI members who could put this theory to the test by making part of the outer edge of a dual-carriageway (or anywhere else inland) mouse and bird-proof and sowing *C. danica* seed both within and outside the area. Applications of salt to test plots might also be illuminating.

Reference

Stace, C. (1991). *New Flora of the British Isles*. Cambridge, U.K.

PATRICK ROPER, South View, Sedlescombe, BATTLE, East Sussex TN33 0PE

TRANSLOCATIONS

I was interested in the letter from Mr Robin Walls on Translocations (*BSBI News* **63**) for it is a subject in which I take a great interest.

Firstly I wonder if we are too concerned with rare plants neglecting care of the common ones which give so much colour to our countryside. I realise that the former is probably of more interest to the dedicated botanist.

What is it we look for, beauty of colour of the masses, or the joy of finding a rarity. To me comes delight to see a roadside awash with golden dandelion as far as the eye can see, to be followed by cow parsley (I use the English names deliberately). I think these or similar plants should equally be in the care of the botanist. How many remember the early '60s, with nothing on road verges except coarse grass, nettles, and docks after being sprayed.

When plants disappear it takes decades not years for them to become re-established. I have discovered this by living in one house for over 30 years recording all flora and fauna taking the house as the pivot and recording in circumference of a mile. It is only in this way that you can watch the 'to-and-fro' of nature. I am fortunate enough to be always on the spot, it has taught me a lot in the way of floral growth, how things appear and disappear, not always by the hand of man. Nature develops slowly unlike present day man who is all hurry and scurry. When I take people around I encourage them to 'Stop, look and listen'.

With some annuals, no matter how many times they are sprayed, there will be some that germinate, flower and set seed; brick and cement alone will destroy them all. Translocation I find just does not work in the wild as it does with garden plants. For 'Wildings' you have to have the right location, soil, climate and even then a knowledge of the strengths and weakness' of the surrounding plants is useful. The seed itself may be a limiting factor, perhaps it has to be taken at the exact time that the plant would have shed its seed in the wild.

On a wild and uncut verge fleabane suddenly appeared occupying a very small space the nearest fleabane to my knowledge was two miles away as the crow flies, it grew for a few years then died never having enlarged its original space. It is possible that the surrounding grass was too strong for it, but how did it ever come there?

On another verge I had two plants of nettle-leaved bell-flower but after a few years both died. Was this because they were not in their proper habitat?

Strong growers such as buttercups and dandelions, if sprayed as they were on the verges, take decades to re-establish themselves, the latter more quickly. It has taken 30 years for buttercups, mostly creeping, to grow so that they can be noticed amongst the other vegetation. The same happened with skullcap on local riverbanks, destroyed when the river was deepened. It has taken 25 years to travel 3 miles up river from its original locality, now it is well beyond my survey area.

If I have learnt nothing else since living here it is how opposite nature is to ourselves with our constant hurry, here, there and everywhere. I have been a naturalist from the age of eight (pond dipping), now I'm a nonagenarian, and have botanized worldwide. I'm still observing, still learning, and I certainly never expected to find 20 mammals within my range, plants too numerous to count, no rarities but what beauty to behold. I sometimes wonder whether botanists, when looking for plants, see their beauty in each tiny flower, such colour and markings to see.

Let us not become flower twitchers, let us guard what we have, however ordinary, for a decision one day will have to be made by us, the car to remain supreme or going back to shank's pony (our legs).

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POA INFIRMA — FLOURISHING?....OR FLEEING?

Early Meadow-grass, *Poa infirma* Kunth (*P. annua* subsp. *exilis* (Tomm.) Murb., var. *exilis* Tomm.), is an annual, which is at the extreme northern limit of its range in the British Isles. With a chief centre of distribution in the Mediterranean region it is one of the thirty-eight species which constitute the

Mediterranean Element (Matthews 1955) in the British flora. Before 1989, when it was found at Dawlish Warren and Berry Head, S Devon (v.c. 3) (Margetts 1990), records from the British mainland were sporadic and confined to a few disjunct stations on the north and south coasts of W Cornwall (v.c. 1a) and the north coast of E Cornwall (v.c. 2). However, offshore it was known from, and said to be common in, the Isles of Scilly (v.c. 1b) (Lousley 1971) and the Channel Islands (Hubbard 1984).

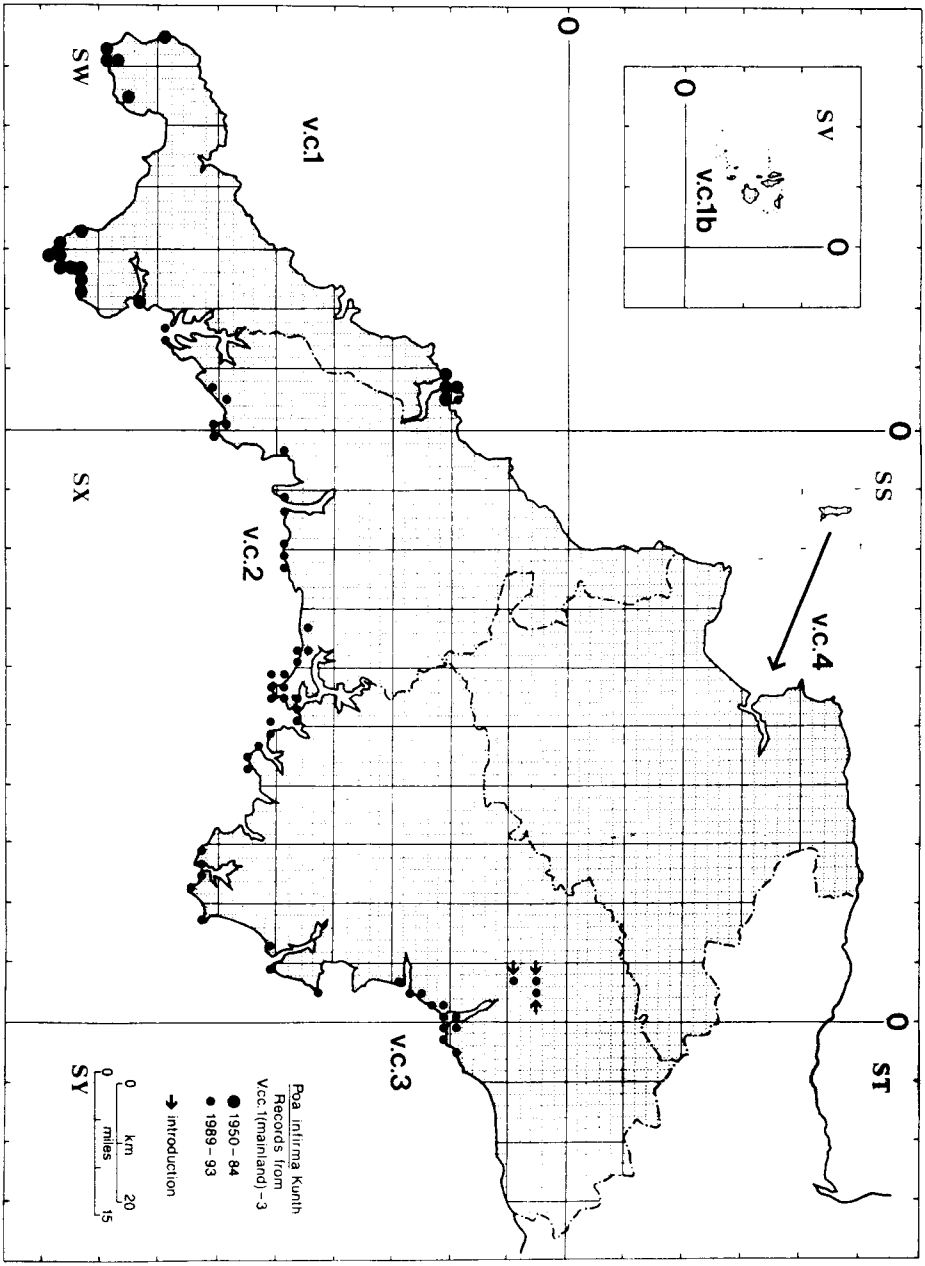
Since the 1989 records from Dawlish Warren and Berry Head, which extended *P. infirma*'s range by ±100km east of the nearest known colonies on the Pentire Peninsula (v.c. 2), many other stations have been found along the coast of S Devon, and records from near the border with E Cornwall initiated successful searches along the length of that vice-county's south coast. In 1993 *P. infirma*'s range was further extended to S Hants (v.c. 11) when it was recorded from Hengistbury Head, after material collected from there in 1987 was confirmed as *P. infirma* by John Edmondson earlier in the year (F. Woodhead, pers. comm.) and from Poole Bay (*BSBI News* **64**). The Hengistbury Head station is ±110km east of the colonies at Budleigh Salterton (v.c. 3) and (I presume) nearer colonies are on the Cap de la Hague, Brittany, NW France.

Also in 1993, *P. infirma* was found at two inland sites (three tetrads) at Exeter (v.c. 3), where it is a well established introduction. David Bolton (**RAMM**) had previously recorded other maritime species from both sites (pers. comm.) and when I visited one site (a car park) to look for these I found *P. infirma* to be abundant. A visit to the other site (a Country Park) the next day proved fruitful as it was found to be scattered along pathways and in bare areas. Other notable maritime species present were: *Cerastium diffusum* (Sea Mouse-ear), *Erodium moschatum* (Musk Stork's-bill), *Medicago polymorpha* (Toothed Medick), *Phleum arenarium* (Sand Cat's-tail), *Trifolium scabrum* (Rough Clover) and *T. suffocatum* (Suffocated Clover). These, together with the *P. infirma* were doubtlessly introduced via 'topsoil' which was brought in 'c.1974...probably from the Exmouth [v.c. 3] area' (*fide* Exeter City Council).

The known distribution of *P. infirma* within the British mainland, based on records since 1950, but not incorporating the S Hants stations mentioned above, is reproduced as Fig. 1 (see page 16). The seventy tetrads (excluding the three where it is an introduction) represent ninety-one different 1 × 1km squares where it has been recorded from at least one station. Although the uninterrupted ±110km range extension into S Hants is not shown, it will be seen that the known distribution of *P. infirma* in v.cc. 1-3 is punctuated by discontinuities, and that those present in its pre-1989 distribution still prevail. Udvardy (1969) suggests that this type of distribution pattern may indicate that a plant, at the extreme limit of its range, is in retreat and utilizing favourable areas. However, apart from extrinsic environmental limiting factors, *P. infirma*'s flowering-period, habitats and habit may 'wrongfoot' botanists and militate against it being found; and it is more probable that the discontinuities are the products of under-recording.

FLOWERING-PERIOD AND HABITATS

Records and field observations of *P. infirma*, made in S Devon during the period 1990-93, have revealed that flowering and senescence can occur much earlier than the March to May period quoted by virtually all the current British Floras and field-guides that give this information. On 6 February 1991, when I began a weekly-survey of a relict dune/grassland system at Exmouth (v.c. 3), I found two small, flowering and fruiting colonies of *P. infirma* in short dense turf. By early-March these, and other colonies in short dense turf had flowered, fruited, senesced and become practically imperceptible. From late-February to early-April, further colonies, this time in ± open-sward and on bare, shallow soils, repeated the cycle. And by mid-May the scattered plants on the loose sand of semi-fixed dunes had 'gone-over'. At the same site in mid-March the previous year I had only found a few plants in the ± open-sward, and after witnessing the sequential flowering in 1991 it occurred to me that if I could not find this species, even where it was abundant . . . then what value negative results elsewhere? In 1992 and 1993 *P. infirma* was found in flower at this site as early as 26 January and early-February visits to other sites in S Devon where it had previously been looked for but deemed to be either absent, or present but sparse, showed that it was both present and abundant. Some finds were rather dramatic, e.g. at Dawlish, on 2 February 1993, Mary de Lemos, Len Margetts and myself found ourselves standing on a summer-trampled amenity-lawn (±50m^2) that was comprised of ±70% *P. infirma* — by early-March the lawn had become bare with patches of *P. annua* (Annual Meadow-grass) and *Lolium perenne* (Perennial Rye-grass).



Distribution of *Poa infirma* in v.cc. 1-3

Considering that at these latitudes the photoperiod lengthens from ±8.5h in late-January to +15h in mid-May, it is not clear why the 'spring' flowering-period of the short-day *P. infirma* is stretched, so to speak, to two-months either side of the vernal-equinox; or why flowering-times appear to vary according to habitat. Various workers (Attridge 1990) report that diurnal temperature-fluctuations can largely or partially replace the light requirement necessary to break dormancy in seeds and initiate flowering. Possibly the optimum-range of temperature-fluctuation needed to replace the light requirement occurs at varying times because it is governed by physical properties of the substratum, e.g. differing specific heat capacities and albedos, and by the density of vegetation cover and its buffering effect on heat absorption/re-radiation. What is clear from the available data is that most of the records for *P. infirma* have been made between mid-March and late-April and 88% of the records are from cliff-paths, tracksides and bare ground. I can only suggest that any early-flowering colonies (? in short turf) and late-flowering colonies (? on blown-sand/dunes) are being overlooked.

HABIT

Qualitative characters of *P. infirma*, e.g. the yellow/green colour, hairiness of lemmas and erect panicles should not be relied on in the field as they can be expressed by the polymorphic *P. annua*. The only reliable character that separates *P. infirma* from *P. annua* is anther size. *P. infirma* has minute anthers 0.2-0.4(0.5)mm, ≤1.5× as long as wide and barely discernible as anthers without the aid of ×≥10 lens. *P. annua* has anthers 0.6-0.8(1.3)mm, ≥2x as long as wide and usually discernible as anthers without the aid of a lens. Other diagnostic details of *P. infirma* are available from the usual sources (e.g. Edmondson 1980, Hubbard 1984, Stace 1991) and the illustration in Lousley (1971) captures its mien very well. I do not recommend the habit illustration in Hubbard (1984) as I have yet to see a single specimen that resembles the illustration, and frankly, on a cold, dark evening I would prefer not to.

Length, habit and number of culms is variable. Plants in short dense turf (and pure stands on shallow impoverished soils) are 1-4cm with 1-2(3) erect culms that are commonly overtopped by the surrounding vegetation and difficult to see. Plants scattered on shallow impoverished soils, blown-sand and dunes are 3-6(10)cm with 2-6(9) erect to procumbent culms. When growing as a 'weed' in the deeper, richer soils of gardens (? and arable) or in areas that have been enriched by animal excreta, plants are more robust, 10-15(18)cm with 12-20 erect to spreading culms. In these richer soils, *P. infirma* retains its pale yellow/green colour whilst *P. annua* becomes a dark, sometimes sub-glaucous green, and if growing juxtaposed there is a marked contrast. The erect, lanceolate to ovate panicles are frequently slightly to markedly falcate, and plants with these not fully-exserted from the flag-leaf sheath are reminiscent of, and may be overlooked for, *Catapodium marinum* (Sea Fern-grass) and *C. rigidum* (Fern-grass).

Areas where *P. infirma* has been carefully, but unsuccessfully, looked for are Lundy, N Devon (v.c. 4), the eastern coast of S Devon and the Lyme Regis and West Bay areas in Dorset (v.c. 9). Coincidentally, the isotherm circumscribing areas with a February mean daily minimum temperature of more than 2.5°C for the period 1941-70 (*cf.* Page 1982) leaves the coast of S Devon just east of *P. infirma*'s most easterly S Devon station (where it is very sparse), and just includes the Portland Bill and Studland areas of Dorset (v.c. 9) before conveniently crossing the coast of S Hants close to Hengistbury Head.

I second Robin Wall's suggestion that the south coast should be thoroughly searched (*BSBI News* **64**) but will further suggest that searches along the south coast of Eire, namely v.cc. H3-H6 & H12, may prove fruitful. In conclusion I will just say that earlier searches for *P. infirma* may provide much needed information on its distribution and ecology in the British Isles — and also for other species — and it would be a great pity if the main factor that militates against this is late dormancy-break in recorders.

I am indebted to Rose Murphy of the Cornish Biological Records Centre for providing me with records, to Devon Wildlife Trust for permission to survey the Warren Golf Club SSSI, to Lorna Gibson for the Lundy searches and to Felicity Woodhead and the other botanists who have contributed records and information. Finally I am most grateful to Len Margetts, not only for allowing me access to his records, but also for his invaluable assistance, encouragement and suggestions.

References

ATTRIDGE, T.H. (1990). *Light and Plant Responses*. Edward Arnold, London.
EDMONDSON, J.R. (1980). *Poa* L., in Tutin *et al.*, eds., *Flora Europaea* **5**: 159-167. Cambridge University Press, Cambridge.
HUBBARD, C.E. (1984). *Grasses*, 3rd ed. (revised by J.C.E. Hubbard. Penguin Books, Harmondsworth.
LOUSLEY, J.E. (1971). *Flora of the Isles of Scilly*. David & Charles, Newton Abbot.
MATTHEWS, J.R. (1955). *Origin and Distribution of the British flora*. Hutchinson's University Library, London.
MARGETTS, L.J. (1990). 82nd report on botany: vascular plants. *Report and Transactions of the Devonshire Association for the Advancement of Science* **122**: 215-222.
PAGE, C.N. (1982). *The ferns of Britain and Ireland*. Cambridge University Press, Cambridge.
STACE, C. (1991). *New flora of the British Isles*. Cambridge University Press, Cambridge.
UDVARDY, M.D.F. (1969). *Dynamic Zoogeography*. Van Nostrand Reinhold, New York.

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'HIGHER PLANT' EPIPHYTES

Ten members of the Wiltshire Botanical Society identified 24 Angiosperm (and 1 Gymnosperm) epiphytes on 6 adjacent crack willow (*Salix fragilis*) pollards by the River Kennet at Marlborough in July 1993 (see table 1, page 19, right hand column). Roughly ¾ of the epiphytes grew on the debris at the top of the pollard, but many also grew on the rough bark. At Avebury, an 8ft high crack willow pollard carries a healthy 10ft ash tree, which must, by now, be rooting towards the ground inside the host (see illustrations page 20).

The 4 commonest host trees around Marlborough appear to be (in order) crack willow, white willow (*Salix alba*), sycamore (*Acer pseudoplatanus*) and osier (*Salix viminalis*). Commonest epiphyte grasses include Yorkshire fog (*Holcus lanatus*), cock's-foot (*Dactylis glomerata*) and rough meadow-grass (*Poa trivialis*). All these disperse seeds from their high vantage points, as does cleavers (*Galium aparine*), the most common epiphyte of all. Also very frequent as an epiphyte dispersing seed from *in situ* is the stinging nettle (*Urtica dioica*).

Epiphytic tree seedlings and saplings are very often found, especially ash (*Fraxinus excelsior*), sycamore and elder (*Sambucus nigra*). Unfortunately the human and bureaucratic urges to tidy up will stop observations on whether any of the tree roots will grow through to the ground and so permit eventual maturation of the (originally epiphytic) trees. However, the table shows those herbaceous and scrambling species which flower or fruit from their perches — 16 out of the total of 33 epiphytes so far. Since the end of July 1993, Nipplewort (*Lapsana communis*) has also been seen flowering and seeding as an epiphyte 6-7ft up at two of the three sites, making 16 truly 'higher plant' species fruiting as epiphytes!

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CERASTIUM BRACHYPETALUM IN DECLINE IN BEDFORDSHIRE

Cerastium brachypetalum Pers. (Grey Mouse-ear), first discovered in Bedfordshire in 1947 by Mr E Milne-Redhead, is now in serious decline. When first seen the plant was 'in large quantity over a considerable distance' (Milne-Redhead, E., *The Naturalist*, July/Sept. 1947). The populations, growing mainly in two colonies on the west-facing banks of railway cuttings in North Bedfordshire, remained fairly constant for many years. However, since the early 1980s there has been a pattern of decline, and the plant now appears in very small numbers.

	AVEBURY	CLATFORD		MARLBOROUGH		
EPIPHYTES	2 crack willows	white willow	sycamore	osier	white willow	6 crack willows
GRASSES						
Anisantha sterilis		+(fr)	+(fr)			
Arrhenatherum elatius						++(fr)
Dactylis glomerata		+++(fr)	+++(fr)		+(fr)	+++(fr)
Holcus lanatus				+(fr)		+++(fr)
Holcus mollis						+
Poa pratensis			+(fr)			
Poa trivialis	++(fr)	+(fr)	++(fr)			+(fr)
Phalaris arundinacea						+
HERBS						
Alliaria petiolata			+			
Angelica sylvestris				+	+	+++(fl)
Anthriscus sylvestris		+				
Chamerion angustifolium						+
Epilobium montanum	++(fr)					
Epilobium obscurum	++(fr)	+(fr)	++			+(fr)
Geranium robertianum				+(fr)		
Heracleum sphondylium						+
Sonchus asper	+(fr)					
Stachys sylvatica						+
Taraxacum officinale	++	++	+			++
Urtica dioica	++(fr)	+		++(fr)	++(fr)	+++(fr)
CLIMBERS, SCRAMBLERS						
Galium aparine	+++(fr)		+(fr)	++(fr)	++(fr)	++(fr)
Hedera helix						+(fr)
Rosa canina				+		++
Rubus fruticosus				+(fl)		++(fr)
Solanum dulcamara					++(fr)	++(fr)
TREES & SHRUBS						
Acer pseudoplatanus	+++	+				
Cotoneaster horizontalis						++
Crataegus monogyna		+				+
Fagus sylvatica						+
Fraxinus excelsior	+++	++	+	+	+	++
Ribes rubrum		++				
Sambucus nigra		++	++			++
Taxus baccata						++

TABLE 1

33 higher plant species, including trees, shrubs, scramblers & climbers, all germinating and growing as epiphytes on 4 host tree species.

(fl), (fr) = flowering or fruiting as epiphytes

+, ++, +++ = 1, 2-5, many specimens of that species

Ash, sycamore, etc., on 8ft crack willow pollard at Avebury, Wilts, photo E. Denman © 1993

Elder, yew, bramble, nettle,, etc , on crack willow pollards, R. Kennet, photo J. Oliver © 1993

Cerastium brachypetalum is an annual which depends upon bare areas of soil for its establishment each year. In the Bedfordshire colonies these bare areas were provided by frequent burning of vegetation on the railway banks, the plant often appearing only within recently burnt areas and not seen to any extent outside these areas. Following the disappearance of steam trains in 1968, fires became much less frequent on the railway banks. The periodic burning of the banks to avoid extensive accidental fires no longer became an integral part of railway maintenance. There seems little doubt that it is the lack of periodic burning of the railway banks that has caused the plant to decline, and, if we are to avoid its extinction in Bedfordshire, an active programme of management including controlled burning of specific areas of the banks is urgently required.

As Warden of the Nature Reserves in this part of North Bedfordshire, I have submitted a detailed report to the Wildlife Trust concerning the decline and conservation of *Cerastium brachypetalum*, and I would welcome any details of recent records of the plant from visiting botanists, such information, of course, being of great value in identifying, perhaps unknown, areas to be managed.

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CERASTIUM BRACHYPETALUM — STATUS IN W. KENT

In Britain, *Cerastium brachypetalum* Pers. has been found in three vice-counties; in order of discovery, Bedfordshire (1947, by E. Milne-Redhead), Northants (1973), and West Kent 1978, by me). Although I visited the Bedfordshire colony some time ago, I am indebted as to information on its current status there to Mr P.C. Horn (Reserves Warden), who has written a report on its severe decline in that county (see also above), where, in the railway cuttings, only a few plants were left in 1993. As he reports also, the Northants. colony was never more than a very limited extension of the 1000 or so plants formerly present in Bedfordshire and the species 'probably no longer exists in Northants.'

With the discovery of the Kent colonies, feelings about the status of the *Cerastium* inevitably changes, since all the seven or so separate sites in which I found it on the west side of Longfield were in old chalk grassland, and, apart from the undiminished threat of the new Channel Tunnel Link line, it appears to be in only slight decline. It has disappeared from one site on an old trackway, (where, after much searching, I had only been able to find three plants) due to disturbance and re-seeding of the grassland.) Also the total number of plants in W. Kent, even in a poor year, is probably greater than were ever present in Bedfordshire.

Experience has told me that it is useless to look for the *Cerastium* in disturbed or recently changed habitats, although there are plenty of these close at hand. The chalk grassland in which it occurs is dominated by *Bromopsis erecta* (*Bromus erectus*, Upright Brome), indeed the *Cerastium* is often most abundant on the top of large clumps of this grass or ant-hills.

The indications are that *Cerastium brachypetalum* has been present in this area for a long time, as its occurrence is confined to almost exactly the same areas (the same square yards) literally within inches, year after year. Thus it is not decreasing, nor increasing, even when suitable areas of chalk grassland for expansion are immediately at hand (as on the slope at Whitehill). There is considerable variation in its **numbers** from one year to another; a 'poor year' as referred to above, is when an early spring or abundant rainfall causes other species to be more luxuriant.

There is one place where the feet of walkers have carried the Mouse-ear on to a flat stony footpath, but even here (where I first found it) it occupies exactly the same few square feet from one year to another.

Having dealt with the Mouse-ear's current status, some historical points can also be made:

a) *Cerastium brachypetalum* can be found in all the accessible pieces of chalk grassland which survive immediately on the W. & N.W. sides of Longfield, even when these are only a few square yards in extent. This infers that it was once much more abundant in the past before the ploughing of chalk grassland, and that it is a relic species in Britain worthy of conservation.

b) Its proximity to railways in W. Kent and Bedfordshire is not necessarily an indication of adventive status, but is significant because, following the construction of railways, narrow strips of calcareous grassland had to be left alongside them when the area was subsequently ploughed. Calcareous grassland close to the Bedfordshire railway cuttings sites had not, until now, been examined for the Mouse-ear as it was considered an alien in that county.

Associated species

No other rarities are associated with *Cerastium brachypetalum* in W. Kent. *Orobanche elatior* (Knapweed Broomrape) seems to have disappeared at Whitehill, leaving only *O. minor* (Common Broomrape). Abundant patches of *Vicia tenuifolia* (Fine-leaved Vetch), in a form verging on *V. dalmatica*, were found by me in the chalk grassland in 1979, and here, as in colonies I found later at Greenhithe and Dartford Heath, it seems to have a status better than the books suggest. The same applies to *Lathyrus hirsutus* (Hairy Vetchling) in chalk grassland not far to the south.

The proximity of Kent to the Continent will always lead to interesting discussion of the status of many of its plants, and species such as *Eryngium campestre* (Field Eryngo), *Pyrola rotundifolia* (Round-leaved Wintergreen) and some of the rarer orchids will continue to be introduced from time to time and perhaps persist.

I feel that *Cerastium brachypetalum* will be found elsewhere in Kent, and in other counties and it seems worthwhile setting out its main distinguishing features:

a) densely tomentose with spreading, shining, non-glandular hairs, with sepals hairy to the tip.
b) petals much shorter than the sepals, and not persisting for long.
c) flowering and fruiting pedicels becoming longer than the sepals.
d) the whole plant totally non-glandular, and, to my eyes, (and those of Mr Horn) of a khaki-brown colour. (I have purposefully not used the recommended English name 'Grey Mouse-ear' in this article).

References

Milne-Redhead, E. (1947). *The Naturalist.*
Dony, Dr J.G. (1953). *Flora of Bedfordshire*
Perring, Dr F.H. *et al.* (1983). *The Red Data Book*
Palmer, J.R. (1979). *Bulletin of Kent Field Club*
Palmer, J.R. (1993). *BSBI News* **64**
Horn, P.C. (1993). *Report on the decline and conservation of* Cerastium brachypetalum *in Bedfordshire.*

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PERSICARIA — TROUBLE WITH GLANDS

Although *Persicaria lapathifolia* (Pale Persicaria) had been recorded in the past from the Scottish Borders I had not come across it, nor had my fellow v.c. Recorders, and we feared that confusion had arisen with white-flowered forms of *P. maculosa* (Redshank). However in 1992, from a gravel spit in the Whiteadder water in Berwickshire, I collected a pale coloured *Persicaria* which I thought could be *P. lapathifolia*. I was indeed in luck, as John Akeroyd later confirmed, and this species has since turned up in a couple of other wetland habitats in lowland Berwickshire.

When I had examined the plant at home, I felt the need for some ordinary *P. maculosa*, for comparison, and I duly collected a pink specimen from the margin of an arable field nearby. To my consternation that also had glands on the peduncle, the key character of *P. lapathifolia*, and that led to an unhappy phase when I grabbed feverishly at any *Persicaria* I came across. At last, a year later, I am happy to have *Persicaria* back in perspective, thanks to patient help from John Akeroyd and Ann Conolly and the acquisition of a stereomicroscope. I find that a small proportion of our *P. maculosa*

does indeed have glandular peduncles, not more than five percent of the population. The glands, like those of *P. lapathifolia*, are what Lousley and Kent describe as 'sub-sessile' in the BSBI handbook *Docks and Knotweeds of the British Isles*, that is to say some are sessile and some have very short stalks. Sometimes there are some whitish non-glandular hairs as well, but less often so than in *P. lapathifolia*. The glands on *P. maculosa* never, in my experience, reach the density typically found in *P. lapathifolia* but some overlap does occur with less typical specimens of that species, nor does *P. maculosa* have the flattened glands on the perianth-segments which occur on *P. lapathifolia*. The two species may moreover be separated on other characters: *P. lapathifolia* has a denser inflorescence and a dirty greenish tinge to the flowers, while only *P. maculosa* is typically clean, pink and pretty. The relative width of the leaves and general sturdiness are also useful field characters, with *P. lapathifolia* the more robust, but these characters vary between specimens from different habitats.

So how does Clive Stace measure up to this in his *New Flora*? I regret I must find him at fault. He describes the glands on *P. lapathifolia* as sessile, which is not strictly true, and this leads to confusion in his key with *P. pensylvanica* (Pinkweed). Similarly, he does not allow for the occasional glandular specimen of *P. maculosa* in his key. So beware!

Clearly I have been helped in my study of glandular specimens of *P. maculosa* by the extreme scarcity of *P. lapathifolia* in the Scottish Borders and I am encouraged to hear from John Akeroyd that similar problems exist in Norfolk where both species are widespread, so we are likely to have a country-wide problem for the inexperienced botanist.

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LYSIMACHIA VULGARIS

It had long puzzled me that a so-called rhizomatous perennial like *Lysimachia vulgaris* (Yellow Loosestrife) frequently existed as single stems and rarely produced clusters of more than two or three together. Recently I have been able to observe what in fact happens.

A plant in my garden (seed raised from wild stock), started off by producing one, then three stems in the two succeeding years. It was in a fairly densely planted mixed border and when, a year or two later, other stems started to appear two or more metres away, I assumed that they were self-sown seedlings. Fortuitously clearing part of the border revealed a very different situation. Trailing along the ground between the closely planted shrubs and perennials were robust stolons up to 2.5m long. The stronger ones had slender branches and at the end of summer all the tips produced roots just like a bramble. Where loose soil from mole activity partly covered the stolon, roots had formed, but apart from this, rooting was confined to the tips. All the new 'plants' were in fact shoots from these stolon tips. Of further interest is the observation that the original plant disappeared after about four years but by then the loosestrife had spread throughout much of the border and continues to do so. It seems likely that this peripatetic nature is a normal mode of growth.

In the wild, yellow loosestrife inhabits fens and similar damp to wet grassy habitats with plenty of fairly dense litter. Examination in the wild revealed the stolons pushing through this and therefore not immediately obvious. So it is possible, though seemingly most unlikely, that the presence of stolons is unsuspected by botanists, and certainly was by Linnaeus who first described it. As far as I can ascertain, stolons are not included with herbarium specimens of this plant in the major herbaria and no mention is made in Floras.

Comments from fellow members would be appreciated, especially if stolons have been observed by them.

KENNETH A. BECKETT, Bramley Cottage, Stanhoe, KING'S LYNN, Norfolk PE31 8QF

SCARCE PLANTS PROJECT

It is almost 3 years since I wrote the first article — no wonder friends' eyes glaze over; will I become like 'Monitoring Tim?' — 'Scarce David'!

The database is long since closed except for really dramatic finds (i.e. by Chris Preston & myself!) and we have produced the final maps. I am not saying too much in case that depresses the response to the mouth-watering pre-publication offer, but for very many species they show a dramatic but not totally unexpected increase in records as compared with the 1962 *Atlas*. Others, particularly arable weeds, show a decline, or at best, roughly the same picture as 1962, which, bearing in mind the comment above, undoubtedly masks a real decline.

But we have also produced additional maps showing density of distribution for the well-recorded species, and some time-series maps where there are long-term declines. These, to me, are one of the most interesting parts. All the texts are written, have been edited by CDP & myself, reviewed by experts and proof-read for style. CDP is writing the introduction.

We are still talking to JNCC about format, layout, date of publication and price. All to play for, as they say.

Alison Stewart finished at the end of March, but has given much time since , mainly voluntarily, but also with the aid of small payments from the Welch Bequest Fund, for which we are most grateful.

I do hope that April and the next *News* sees us in print — I had no idea the last hurdles would be this protracted — it would be much easier if I lived in the Golden Triangle (Cambridge — Peterborough — Oundle to the non-cognoscenti)

DAVID PEARMAN, The Old Rectory, Frome St Quintin, DORCHESTER, Dorset DT2 0HF

NOTES AND ARTICLES

THE FORGOTTEN ISLAND

The two most recent contributions to the *Biological Flora of the British Isles* — *Betula pendula* and *B. pubescens* (*J. Ecol.* **80**: 837-870; 1992) and *Impatiens glandulifera* (*J. Ecol.* **81**: 367-382; 1993) — uphold in most features the best traditions of the series; they contain careful observation and experiment and tell us a lot about the plants in question. But in one respect they fail signally: their coverage of Ireland is sadly inadequate, and verges indeed on the non-existent. Apart from the section on post-glacial history in *Betula*, the word 'Ireland' occurs just once in each account. Nor have any of the accounts of habitats or associated communities any reference to Ireland. Indeed there is no evidence that the authors have seen the plants in Ireland or spoken to anyone who has.

In the case of *Impatiens glandulifera* (Indian Balsam) no great damage is done by these omissions, though it might be of interest to know that in Ireland the plant is often seen in relatively dry waste places and rubbish-tips, and less often on river-banks, which seem to be its favourite habitat in Britain. But in the case of *Betula* spp. the loss is more serious, as the Irish birches present several problems which deserve discussion and investigation. In parts of Ireland, and especially in the West, most specimens of *B. pubescens* (Downy Birch) have twigs with very scanty (in some cases totally absent) pubescence, and an abundance of small, brown resinous glands. These are easy to distinguish from the paler and larger glands on the twigs of *B. pendula* (Silver Birch), but they deceived many of the recorders for the BSBI *Atlas*, and there is no doubt that its map greatly overestimates the abundance of *B. pendula*. It is, in fact, very local as a native in Ireland, and is apparently declining. It is undoubtedly native on some lake-shores and on the margins of raised bogs, but many of its woodland stands seem to be derived from trees in gardens or parks, which have seeded themselves on the far side of the wall.

The *Biological Flora* account mentions *B. pubescens* subsp. *tortuosa* as 'restricted to the upland areas of England and Scotland'. Whether the Irish plant should also be referred here I do not know; in the key provided in the second edition of *Flora Europaea*, vol. 1, it keys out more readily to subsp. *celtiberica*.

The ignoring of Ireland in these accounts is, of course, easy to understand. They were both written from eastern England, and the average Englishman finds Ireland rather a nuisance, not only politically. But although for some economic or demographical generalizations the overlooking of Ireland has only small consequences in generalizing about the British Isles, this is not true in a geographical or biological context. Ireland is a little larger than Scotland, and four times the size of Wales; it constitutes about 27% of the area of the British Isles. It is regrettable, therefore, that many otherwise well-educated Englishmen seem to regard the terms Great Britain, the United Kingdom and the British Isles as synonymous. They are not.

The tendency about which I complain is not, of course, a new one. In the first edition of Clapham, Tutin and Warburg's *Flora of the British Isles* the geographical data for Ireland are, for many species, sadly inadequate. Look, for example, at *Anacamptis pyramidalis* (Pyramidal Orchid). The distribution in Britain occupies nineteen words, including a loving enumeration of the Hebridean islands in which the plant is found (one of them too small to be noticed in *The Times Atlas*!). This is followed by the single word 'Ireland'. One is left wondering whether it is another of the Hebrides.

Moreover, in *Mountains and Moorlands*, one of the early titles in the *New Naturalist* series (1950), W.H. Pearsall publishes a map of Britain (alone) though the caption describes it as a map of moorlands in the British Isles. This is all the more surprising as in the same book a map captioned 'distribution of sheep in the British Isles' does actually include Ireland as well as Britain.

May I then conclude with an appeal to English botanists? Write about Britain if you like, and ignore Ireland, but do not use the phrase 'British Isles' in your title. And if you do use it, please remember that west of Britain there lies a not inconsiderable island whose flora and vegetation may be of some interest to your readers

Prof. DAVID A. WEBB, School of Botany, Trinity College, DUBLIN 2, Ireland

ENGLISH NAMES OF WILD FLOWERS

We are most grateful to those who have written in response to our article about English Names in *BSBI News* **63** and will take these opinions into consideration in editing the next edition.

There are just two points we would like to make at this stage.

First, *English Names* has never advocated the use of only a single name and we support David Welch's view that 'it is important to record what locals call plants' and appreciate Chris Preston's 'unease about the whole concept of a standard set of names'. This was made clear in the Introduction to both first and second editions in the following paragraph:

> 'We hope that some priority may be given to the names recommended here by authors generally, but especially those of local Floras, of articles intended for the general reader, of nature trails and of reports on sites such as nature reserves. At the same time we hope that regional and local names will long continue to be used but in a secondary and supplementary manner. We would much regret their passing and mainly for that reason prefer what is presented here to be a recommended rather than a standard list.'

However we believe the need for a **recommended** list remains and are supported in that belief in the letter from R.J. Cook, Director of the Morley Research Centre, which states that *English Names of Wild Flowers* is now accepted as the standard by most applied botanists and agronomists.

Secondly, there is the concern about the use of hyphens and the creation of 'binomials' to which R.J. Cook has added his voice. We shall certainly review their use critically. We would only say now that we did not invent the system, only tried to rationalise it. The following is a short extract from the

Index to *Flora of the British Isles*, Clapham, Tutin & Warburg, 1952 with, to the right, how the same species appear in English Names :

Bird-Cherry	Cherry, Bird
Bird's-eye Primrose	Primrose, Bird's-eye
Birdsfoot	Bird's-foot
Birdsfoot-trefoil	Bird's-foot-trefoil, Common
Bird's-nest Orchid	Orchid, Bird's-nest

We would be grateful for any ideas as to how these inconsistencies of treatment could have been better dealt with and for any other comments on this subject. Please send them to: Franklyn Perring, Green Acre, Wood Lane, Oundle, Peterborough PE8 5TP

STEPHEN JURY, PHILIP OSWALD & FRANKLYN PERRING, EDITORS

ENGLISH NAMES — 1

I have been fascinated by the correspondence on English Names in the last two issues of *BSBI News*. The general tenor of views is entirely in accordance with my own.

English Names of Wild Flowers is now accepted as the standard by most applied botanists and agronomists. To that extent it is vital that the authors produce a text which can be accepted by, and has the respect of, professional and amateur users. The names become widely used in a range of scientific texts so that the authors hold a great burden of responsibility

I must confess that I dislike the use of hyphens. According to *Fowler's Modern English Usage* they have limited value and are, I infer, a stage in the evolution of compound words; but I will avoid any etymological argument! My only illustration to suggest their redundancy or inconsistent application is why 'ragged-robin' but 'alpine catchfly' or 'sticky catchfly'. The primary concern is that from an editorial standpoint they can cause confusion and lead to inconsistency, no matter how carefully papers are checked. They also involve additional key strokes in typing with an associated time loss.

There is little point in the development of a bi (or even) trinomial system for common names. We have a perfectly good Latin system for that. Common names are by definition in common usage, so that they should be simple and readily consigned to memory and recall. They should also be appropriate to the plant concerned.

The final plea again relates to modern usage. There seems little point in capitalizing the initial letter of names and certainly no point in capitalizing after a hyphen. Edition 2 is consistently inconsistent in the convention it seems to adopt. Many editors will just adopt the decapitalization of initial letters. This is my point. If the volume is to be accepted it must have the respect of its potential users. I sense from the recent correspondence that I am not alone in questioning that respect.

R.J. COOK, Morley Research Centre, Morley, WYMONDHAM, Norfolk NR18 9DB

ENGLISH NAMES — 2

I was delighted to see so many voices raised in protest in *BSBI News* **64** at the regimentation of English names of wild flowers beloved of the authors of *English Names of Wild Flowers* (ENWF).

English names are part of our human inheritance; they exist as such with all their wonderful confusion and variation, adding colour and history to the greyness of their Latin counterparts. The causes of precision and taxonomy are fully served by the Latin, which is now (with the popularity of garden centres, perhaps) a widely understood system. Nothing is added by putting English names in a similar straight jacket, and much of their value is lost if we do so. In any event, the need for

regimentation has been superseded by modern personal computer software, which can easily cross-reference a myriad of English names, heedless of word order and punctuation, to the Latin binomial.

We all put a great deal of time and effort into conserving our natural heritage; our human heritage deserves conservation too.

LORD LUCAS OF CRUDWELL, The Old House, Wonston, WINCHESTER, SO21 3LS

LESS RARE SPECIES AND HABITATS

I would like to follow up a point made by Robin Walls (*BSBI News* **64**) regarding the conservation merits of the less rare species and habitats. It strikes me that the two main threats leading to future destruction of our natural heritage will be lack of site management and increasing development pressure from the need to drive economic growth in this country. Agricultural threats are likely to be less as we have an excess of production, but even here the continuing intensification of land not 'set-aside' and the currently emerging advice to spray wide-spectrum herbicides on set-aside land needs monitoring. I shall briefly focus upon the threat posed by economic development.

There is likely to be an economic recovery which will have opportunistic developers rushing forth with plans for 'cheap' land. By cheap I mean that land which is easily won for planning permission following an application or appeal due to a lack of serious objections. The land with the greatest nature conservation value had historically been notified as part of the Sites of Special Scientific Interest (SSSI) network, usually on criteria which were historically important. English Nature, as the country agency responsible for selecting and notifying SSSIs in England, will appear to be operating on limited resources for the foreseeable future, such resource limits will also limit the area of new land that will be classified as SSSI.

As part of the planning process, committees and inspectors will examine the needs for and against development in an objective way. If we wish to see the special areas of countryside conserved which are not currently classified as SSSI (or SNCI, Local Nature Reserve and so on) then there is a pressing need to bring the value of such areas to the Planning Authorities' attention. This needs to be achieved in a credible, authoritative and objective way.

I wonder what the role of the BSBI should be? It has a comprehensive plant distribution database, a national (even International) standing and a constitutional commitment to conservation. I suspect that if too little is done for active conservation soon then all BSBI members will lament the continuing loss of our Country's flora over the coming years.

JOHN M. PATMORE, 68 Stanley Road, BRIGHTON BN1 4NH

BOTANICAL SIGNPOSTS

John Topp's 'Guide to field meetingship' (*BSBI News* **64**) somehow reminds me of an occasion when I was on Box Hill taking photographs for a set of teaching slides. I wanted a picture of pyramidal orchid which I knew was growing near where I was, but I couldn't find it. I saw a group of boys, probably from the Juniper Hall Field Centre, sitting in the grass collecting beetles or something, so I went up to what I presumed was their schoolmaster, told him what I was doing, and asked: 'Can you tell me where I can find *Anacamptis pyramidalis*?' 'Oh yes,' he said, 'walk up there through the *Brachypodium pinnatum* as far as a clump of *Hypericum montanum*. Turn left there, walk past the *Cocacola emetica* to where there is some *Nasticreechia crawluppia* . . . and so on (as can be seen, I can't remember the rest of the directions). The boys were helpless with laughter at this manner of directing me, but it turned out to be magnificent and led me straight to my orchids.

TONY PRIMAVESI, Ratcliffe College, Fosse Way, Ratcliffe on the Wreake, LEICESTER LE7 4SG

DÉJÀ VU

The discovery of a questionnaire enclosed with the last *BSBI News* provoked a wry smile on the part of this member. For 37 years ago, as a fledgling survey professional, I was rash enough in my innocence to place before the then-existing Development and Rules Committee (forerunner of today's Executive Committee) the draft of an almost identical document, with the same idea of enabling the Society at last to find out which activities were most popular and whether any changes would be welcomed. The majority reaction, however, was so intensely hostile — the choleric Rex Graham, I recall, even hurled the offending papers halfway across the table in a display of furious contempt — that I never dared to suggest anything of the kind again. *Tempora mutantur*!

DAVID ALLEN, Lesney Cottage, Middle Road, WINCHESTER, Hampshire S022 5EJ

THOUGHTS ON A SCANDINAVIAN FLORA

Browsing in the bookshops in Göteborg at the beginning of my study tour to Abisko last summer (which, incidentally, lasted 14 days rather than the improbable 4 suggested in *BSBI News* **62** [oop's!, sorry Ed.]), I came across a new Scandinavian flora which I do not think has been reviewed yet in the BSBI's journals. It is *Den Nordiska Floran*, by Lennart Stenberg, with superb paintings of the species by Bo Mossberg. It is published by Wahlström & Widstrand, and, given the excellent quality of the colour printing, it was not unreasonably priced at 673 Kroner (including tax), about £57 at exchange rates then.

It is one of the best-presented floras I have ever seen, and experience of it in Abisko suggested that it was even better than my first browse had suggested. It became the book that was most regularly passed round the group each evening as we discussed our finds of the day. It was every bit as useful as Marjorie Blamey and Chris Grey-Wilson's excellent *The Illustrated Flora of Britain and Northern Europe*, which I had carried with me (and which I also saw in a Norwegian edition, I think).

Stenberg's book has the text tidily integrated with the illustrations in two-page spreads, which also include small but useful distribution maps for the Nordic counties (including Iceland and the Faroes) of **all** the species involved. I cannot vouch for the (Swedish) text, but it looks informative and the little I could interpret certainly helped with our identification. The artwork is stunning, with really alive paintings of the species, and just the right balance of additional detail showing leaf shape, fruiting bodies, flowers, and general appearance. The scope appears to be comprehensive, covering 2,500 species (including, delightfully, the ferns, sedges and grasses) in 696 pages.

I can certainly commend any botanist visiting the Nordic countries to invest in the book and hope that some British publisher might be tempted into an English-language version.

Reading the book, however, did raise one other interesting thought to contrast with the present debate in *BSBI News* about English names of plants. Every species in the book appears to have a brief Swedish common name, almost invariably a single word, with not a contrived hyphen in sight. Some show their Latin links; *Draba norvegica*, for instance, is **Bergdraba**. Others show a commendably succinct ecological insight; *Antennaria dioica* is **Kattfot**, *A. alpina* is **Fjällkattfot** and *A. lanata* is **Lappkattfot**. Some suggest interesting vernacular roots (*Tofieldia pusilla* is **Björnbrodd**), and almost all are brief and often elegantly poetic; *Leucojum vernum* is **Snöklokka** and *Andromeda polifolia* is **Rosling**.

Most remarkably, 24 *Hieracium* species or aggregates all manage brief and pronounceable names such as **Svartfibblor** or **Skogsfibblor**. And what we are obliged by Dony, Robb & Perring to call narrow-fruited yellow-cress (*Rorippa microphylla*) is a succinct **Bäckfräne**, and *Carex norvegica* is a neat **Fjällstarr** rather than a clumsy (and inaccurate) close-headed alpine-sedge.

Perhaps if Dony, Robb & Perring had come up with some rather more elegant and evocative solutions to their *English Names of Wild Flowers*, then the present correspondence in these pages might not be quite so critical!

MICHAEL M. SCOTT, Strome House, North Strome, LOCHCARRON, Ross-shire IV54 8YJ

REQUESTS FOR INFORMATION — AGAIN

I too have made the mistake of replying **directly** to requests for information (see *BSBI News* **63** page 24), and on two occasions have received no thanks. I was not in the least put out, however, I did realise that the **smart** thing to do was **not** to reply directly to the person requesting information but to reply via the pages of *BSBI News*. Not only do you then reach the person requesting the information, but, more importantly, **your name appears in print** and you become an **instant expert** in the topic under investigation!

JOHN OSLEY, Y Wern, Princes Road, RHUDDLAN, Rhyl, Clwyd LL18 5RA

THE G.W. ROBINSON HERBARIUM: NEWLY ACQUIRED BY LIVERPOOL MUSEUM

A collection of herbarium specimens of British and Irish flowering plants has recently been transferred to the Liverpool Museum, part of the National Museums and Galleries on Merseyside, from Chelsea Physic Garden. It formerly belonged to a previous Curator of the Garden, Gilbert Wooding Robinson, who died in 1942.

The herbarium contains specimens collected by a varied assemblage of mid- to late-19th and early 20th century naturalists, and covers a wide range of localities mainly (but not exclusively) in the southern part of England. Included is a set of G.W. Robinson's own gatherings; other collectors are Charles C. Babington, John Hutton Balfour, Thomas Bentall, Thomas R.A. Briggs, Isaac Brown, William H. Coleman, George E. Dennes, George S. Gibson, Samuel Gibson, John Gilmour, John E. Griffith, James Groves, Frederick J. Hanbury, William J. Hooker, Bolton King, Edwin Lees, Roberts Leyland, C.V.B. Marquand, J.J. Murcott, James T. Powell, Rev William H. Purchas, J. Rasor, Walter W. Reeves, Reginald W. Scully, Henry Searle, William A. Stables, John Storey, Ezekiel G. Varenne, James W. White and Henry J. Wilkinson.

The discovery of the presence of plants from the Pennines around Halifax collected by Roberts Leyland (1784-1847) is notable, as Leyland's own herbarium (presented to the Belle View Museum, Halifax) is known to have been destroyed. They include a specimen of *Meum athamanticum* (Spignel) 'In the 2nd lane after you pass the Booth Wood Inn on the road from Ripponden to Oldham', July 1837. The species is now extinct in this area of the southern Pennines.

JOHN EDMONDSON, Liverpool Museum, William Brown Street, LIVERPOOL L3 8EN

THAT PLANT'S ODD

An occasional newsletter concerning native plant aberrations

The first issue of this newsletter was published in November 1993 and includes several interesting articles on plant oddities. The purpose of the newsletter is to allow space for the recording of native plant aberrations and to enable like minded individuals to keep in informal contact with each other. The scope is to cover any material concerning native plant aberrations, which are defined as growth forms beyond the natural variation of the species.

If anyone would like to receive a copy of the newsletter please send 3 × 1st class stamps to the Editor:

MARTIN CRAGG-BARBER, 1 Station Cottages, HULLAVINGTON, Chippenham, Wilts. SN14 6ET

NEWS FROM THE NATURAL HISTORY MUSEUM

In the autumn a major event at the Museum was the opening of the new Plant Power Gallery, which consists of a series of photographs exploring man's dependence on plants.

It is hoped that work on the General Herbarium roof will be finished early in 1994, after which things will return to normal.

Progress is being made on the re-curation of the British Herbarium, with the families and genera now arranged to follow Kent's list. We are now faced with the major task of bringing the arrangement of species into line with Kent. Some progress has been made, but the work is progressing slowly. The re-curation of a genus provides a good opportunity to understand its taxonomy and distribution, and gain an insight into the Museum's collections. If you feel that you night be able to take responsibility re-curating and/or identifying specimens in a genus, or group of genera, thereby improving both the state of the collections and your knowledge of the group, please contact Alison Paul or Megan Dowlen. No great expertise is necessary.

On Saturday 12 February we shall be holding our annual 'get to know the herbarium' day, when Roy Vickery and Megan Dowlen will be showing people around the flowering plant herbaria. This will also provide participants with an opportunity to use the Museum's facilities to try to identify any puzzling specimens which they may have, or examine material of any group or area which is of particular interest to them. The tour of the herbaria will start at 11.00am. There will be no charge, and all are welcome, but please contact Roy in advance if you intend to come along.

On Saturday 23 April Jenny Moore will be giving her workshop on charophytes, originally planned for last April. Participants are welcome to bring along any (preferably fresh) material that they have collected. This will start at 11.30am and is open to all, but advance booking is required. A fee of £3.60 will be necessary to cover expenses, and should be sent to Roy Vickery, to whom any cheques should be made payable.

The herbaria remain open during the times given in *BSBI News* **61**: 41, and people wanting to visit are encouraged to contact a member of staff in writing before their proposed visit.

ROY VICKERY, Department of Botany, The Natural History Museum, Cromwell Road, LONDON SW7 5BD

F. R. BROWNING'S HERBARIUM LOCATED

I recently found myself on a 200 mile round trip to a smallholding in Swaledale to examine a 'few boxes of dead grass'. I suspected that this might be part of a collection but then discovered a complete herbarium stored in decaying boxes in the corner of a stable-cum-pigsty.

It appears that Mr F.R. Browning was most active in the period 1931-55 and that he was a teacher at Kent College, Pembury, Kent. There are specimens from all over the U.K. but species from Kent and the Home Counties predominate. Much of the material has been checked by referees of the time.

The algae, bryophytes and some of the species most difficult to press and dry have blackened, moulded or otherwise deteriorated. One of the many boxes of *Hieracium* spp. contained a mouse's nest and there is some insect larva damage here and there throughout the collection. I am presently sorting the folders into sequence and trying to rescue whatever material I can. It is in safe hands here and will no doubt provide me with many hours of study until a more fitting *institutional* home is found.

I should be most grateful to receive any information regarding Mr Browning and to establish contact with anyone interested in this 'find'.

PETER J. COOK, 15 Park Avenue, Withernsea, HULL, Humberside HU19 2JX

FLOWER POISONS WOMAN

Members may be interested in the following note that appeared in *The Independent* for September 29th 1993.

> A flower seller was treated for heart palpitations in intensive care after handling bunches of a poisonous flower.
> . . . staff at a flower shop in Salisbury, Wiltshire, suffered shooting pains after poison from monkshood (*Aconitum*), entered their bloodstreams.
> . . . the shop's owner, brought 150 bunches from a wholesaler, who has now withdrawn them. 'I wondered what was wrong — all of a sudden everyone was lethargic and getting pains.'

ANITA JO DUNN, Flat 2, Sandford Mount, CHARLBURY, Oxford OX7 3TL

CORKSCREW RUSH — A NEW TWIST

After reading the short note in *Watsonia* **19**: 275 (1993) on the corkscrew rush, *Juncus effusus* L. forma *spiralis* (J.McNab) Hegi, I was very surprised when visiting a major garden centre on the Staffordshire/Cheshire border, to see the plant offered for sale in the **aquatic** section. Only time will tell if we see an increase in records resulting from garden outcasts or aquarists' dumping.

BRIAN FOWLER, 84 Woodthorn5e Road South, WOLVERHAMPTON WV6 8SL

A HIGH THYME

Special herbs struggle bravely aloft and aloof
Growing up in the world on this proud garage roof.
Yes I love my raised garden unique, lush and green,
Sporting rarities few souls have seen

I acknowledge, however, I'm sad to relate
Yonder Eden shines not in its best pristine state,
For I constantly battle, declare war and strife
Against what we call urban wildlife.

Holly boughs, plastic netting, metaldehyde blue,
Angry shouts, water bombs and a hard stamping shoe,
Daily hullabaloo, Fort Knox ain't gotta clue;
'Tis the truth I'm confiding to you.

Tender roots chewed to nothing by vine weevil grubs,
Juicy young shoots devoured by fat, juicy grey slugs;
Blistered, shrivelled aphids, caterpillars run wild,
Heavy footballs mis-kicked by our neighbour's sweet child.
Splashing birds kill aquatics, dust-bathe midst choice seeds,
For their nests peck to bits my most treasured of weeds
And. . . oh ultimate pain. . . oh expletives profane. . .
'Coz the CAT'S gone and done it again!

BRIAN WURZELL, 47 Rostrevor Avenue, Tottenham, LONDON N15 6LA

RED DATA BOOK PROJECT

RECORDS FOR UPDATING

JNCC was able to provide funding for field survey last year. Surveys were undertaken in Durham, Breckland, and in Scotland. We are hoping to be able to support further survey in 1994. If you feel that the record of a particular species might benefit from field survey in your vice-county, or that individual records need following up, please let me know as soon as possible.

M.J. WIGGINTON, Joint Nature Conservation Committee, Monkstone House, City Road, PETERBOROUGH PE1 1JY, tel. 0733-62626

SPECIES FOR ADOPTION

As mentioned in a previous note in *BSBI News*, we are most keen to encourage wide participation in this project, which will result in a revised *Red Data Book* to be published in 1996. We are aware that many members have a wide knowledge and experience of species and we are, of course, keen to draw on that knowledge. A number of people have already offered to write accounts of species in which they have a particular interest (some 40 species covered so far).

We are seeking more authors, and would be delighted to hear from anyone interested in adopting a species, or more than one. I feel sure many members would be keen to help in this important project.

Species accounts will be similar to those provided for the Scarce Plants Atlas, incorporating paragraphs on habitats and ecology, biology, distribution and status, threats and conservation, normally in that order. However, comments on these aspects will inevitable overlap to some extent. We will have one side of A4 (not more than 800 words) for endangered, vulnerable, and endemic species, and rather less (not more than 400 words) for the rest. However, for obvious reasons, it will only be possible to have the briefest of information on species in the large apomictic genera.

It is hoped that all draft accounts can be completed by December 1994. That will give opportunity in the final year of the project (ends in December 1995) to incorporate the latest distributional data. But, of course, it would be helpful to have the completed accounts as soon as possible!

Species requiring a written account are listed below. IUCN categories E(ndangered) and V(ulnerable) are for the most part those applied to the species in the 2nd edition RDB. However, authors may consider the status of some species to have changed since that time. This list does not include those species which have already been adopted or whose accounts are already written. If, however, you have a special interest in one of these 'missing' species and wish to contribute to the species account, let me know.

If you *are* interested in adopting species, please let me know as soon as possible. I will send further details, including copies of draft species accounts already prepared. The author will, of course, be acknowledged and the name given at the end of each species account! If you have any queries, please telephone, or send a note. I look forward to hearing from you.

M.J. WIGGINTON, Joint Nature Conservation Committee, Monkstone House, City Road, PETERBOROUGH PE1 1JY, tel. 0733-62626.

Centaurium scilloides
Althaea hirsuta E
Anisantha madritensis
Anisantha tectorum
Anthoxanthum puelii E
Anthyllis vulneraria subsp. *corbieri*
Arabis glabra E
Bunium bulbocastanum
Calamagrostis purpurea
Calamagrostis scotica V
Carex atrofusca
Carex depauperata E
Carex filiformis
Carex muricata subsp. *muricata*
Centaurium tenuiflorum V
Cerastium brachypetalum
Cerastium nigrescens
Cicerbita alpina
Cirsium tuberosum
Conyza wrightii
Cotoneaster integerrimus V
Crepis foetida E
Crepis praemorsa
Cynodon dactylon
Cynoglossum germanicum V
Cystopteris dickieana E
Cytisus scoparius subsp. *maritima*
Damasonium alisma V
Dianthus gratianopolitanus V
Dryopteris cristata V
Echium plantagineum V
Eleocharis austriaca
Eleocharis parvula
Epipactis youngiana
Equisetum ramosissimum E
Erica ciliaris
Erica vagans
Erigeron borealis
Eryngium campestre V
Euphorbia hyberna
Euphrasia cambrica
Euphrasia campbelliae
Euphrasia heslop-harrisonii
Euphrasia marshallii
Euphrasia rivularis
Euphrasia rotundifolia
Euphrasia vigursii
Festuca longifolia
Filago lutescens V
Filago pyramidata V
Gagea bohemica V
Galium tricornutum V
Genista pilosa
Genista tinctoria subsp. *littoralis*
Gentiana nivalis V
Helianthemum apenninum
Helianthemum canum subsp. *levigatum*
Herniaria ciliolata
Herniaria glabra V
Hieracium spp.
Hierochloe odorata
Hypericum linarifolium V
Hypochaeris maculata
Isoetes histrix
Juncus capitatus
Juncus filiformis
Juncus pygmaeus
Kobresia simpliciuscula
Koeleria vallesiana
Lavatera cretica
Leersia oryzoides V
Limonium bellidifolium
Linaria supina
Lonicera xylosteum V
Luzula pallescens
Maianthemum bifolium
Matthiola incana
Matthiola sinuata V
Minuartia rubella
Minuartia stricta V
Muscari atlanticum V
Narcissus obvallaris
Neotinea maculata V
Ophioglossum lusitanicum
Ophrys fuciflora V
Ophrys sphegodes V
Ornithopus pinnatus
Orobanche caryophyllacea E
Orobanche purpurea V
Oxytropis campestris
Oxytropis halleri
Petrorhagia prolifera
Peucedanum officinale
Physospermum cornubiense
Phyteuma spicatum V
Pilosella peleteriana subsp. *peleteriana*
Pilosella peleteriana subsp. *tenuiscapa*
Pilosella peleteriana subsp. *subpeleteriana* V
Poa flexuosa
Poa infirma
Polycarpon tetraphyllum
Polygala amarella
Polygonum maritimum E
Potentilla fruticosa
Potentilla rupestris V
Pulicaria vulgaris V
Pyrus cordata E
Ranunculus ophioglossifolius E
Rhinanthus serotinus V
Romulea columnae V
Rosa agrestis
Rumex aquaticus
Rumex rupestris E
Sagina nivalis
Salix lanata
Saxifraga cernua V
Saxifraga cespitosa
Saxifraga rivularis
Schenchzeria palustris V
Scirpoides holoschoenus
Scirpus triqueter E
Scleranthus perennis subsp. *perennis* E
Scorzonera humilis V
Scrophularia scorodonia
Selenia carvifolia V
Senecio cambrensis
Sesili libanotis
Sisymbrium irio
Sorbus anglica
Sorbus arranensis
Sorbus bristoliensis
Sorbus eminens
Sorbus lancastriensis
Sorbus leptophylla
Sorbus levana V
Sorbus minima V
Sorbus pseudofennica
Sorbus subcuneata V
Sorbus vexans V
Sorbus wilmottiana
Spergularia bocconei E
Stachys alpina E
Stachys germanica V
Taraxacum spp.
Tephroseris integrifolia subsp. *maritima*
Tetragonolobus maritimus
Teucrium chamaedrys
Thlaspi perfoliatum V
Trifolium bocconei
Trifolium incarnatum subsp. *molineri*
Trifolium occidentale
Trifolium strictum
Trinia glauca
Valerianella rimosa E
Veronica fruticans
Veronica spicata/spicata V
Viola kitaibeliana
Viola persicifolia E

ALIENS

ALIEN NEWS

A HISTORY OF *CONYZA* IN LONDON

Three species of *Conyza* are now firmly established in central London. This paper outlines their history up to the autumn of 1993

Conyza canadensis (L.) Cronq. (Canadian Fleabane) was first recorded in this city in 1690 by Dr Tancred Robinson. Trimen and Dyer (1869) rate it 'one of the commonest weeds in and about London, especially in the dry, sandy western suburbs extending up the Thames Valley' towards Kew, Hampton and Twickenham. They also note plants at Chelsea, Kensington, Westminster, by Buckingham Palace and along the Thames Embankment, adding that it is 'certainly not native.' De Crespigny (1877) interestingly mentions others occurring around Walthamstow Reservoirs which are but a mile from where I live in South Tottenham. Always an early colonizer of gravelly, stony land as well as bare earth, it rapidly followed Victorian railway developments and, nowadays, vies with *Epilobium ciliatum* Rafin. (American Willowherb) as one of the most abundant New World pioneers of trackside ballast in lowland Britain. We are informed (Salisbury 1964) that, according to 'tradition', (an elegant way of revealing no scientific accuracy!), *C. canadensis* was accidentally introduced into Europe between 1670 and 1690 from a stuffed North American bird. The importer of that avian specimen remains unnamed, nor could he or she ever have foreseen the change made to an entire continental ecology because its skin split and released fluffy pappuses of a weed entirely at home in temperate climes. In its native land, *C. canadensis* grows 'in fields and waste places, a common weed throughout North America except the extreme north' (Britton and Brown 1970). It is also naturalized in South America and the West Indies

Conyza sumatrensis (Retz.) E. Walker (Guernsey Fleabane) was first recorded in London (indeed in England) on September 26th, 1984, by myself. Its behaviour has been closely monitored ever since. In Wurzell (1988) I describe an early stage of its colonization throughout the East End, Docklands and neighbouring boroughs, and in Wurzell (1992) I update its spectacular increase and spread, locally attaining pestilential proportions. I have also observed its quick progress northwards along the Lea Valley to Ware and westwards along the Thames Valley to Kew. In the same article are quoted other people's records where they represent further extensions of range; for example, Ann Boucher has seen it extend north-eastwards to Welwyn and Hertford, and Rodney Burton has seen it extend south-westwards to Richmond and Kingston. In October 1993, I detected two plants by a roadside outside Kempton Park Racecourse, now the most south-westerly occurrence we know of within Greater London. Very surprisingly, David Bevan also found one plant on a stone wall at Portland, Dorset in August 1993, a new county record; we can but guess whether its origin was continental, Sarnian or metropolitan. However, as our urban seedbank builds still more, so our suburban colonization is likely to take place exponentially faster. Seedlings can germinate at any time of year and flowering and fruiting can continue through the winter, therefore the warning needs to be repeated, indeed changed from yellow alert to red, that this invasion of *C. sumatrensis* now seriously threatens the English home counties at large. I have theorised that dramatic increases in London's subtropical weed flora since 1975 may illustrate global warming (*Sunday Times Magazine*, June 2nd, 1991), also stressing that such correlation is not proven. *C. sumatrensis* has already widely distributed itself in tropical and subtropical counties, but, despite its specific name, it is considered native only in South America. Our British plants probably originated from continental seeds blown over the English Channel during a hot summer

Conyza bonariensis (L.) Cronq. (Argentine Fleabane) was first recorded in London on June 20th, 1993, again by myself. Unlike *C. sumatrensis*, its populations are spreading from points north and north-east of Euston station, mostly in the residential area of Somers Town, L.B. Camden. Unlike *C. sumatrensis* again, it **has** been recorded earlier in England, during the 1960s and 1970s, but

Conyza canadensis, del. Brian Wurzell © 1993

I then encountered it only as a rare shoddy adventive in Beds., Hants. and Kent where the cooler rural climate proved unfavourable for permanent residence. Judging from its characteristic appearance on parched Californian roadsides, especially between Los Angeles and the Mexican border (personal observations in June 1984), it may be regarded even more thermophilous than the last species, and could therefore reasonably restrict itself to the more heat-retentive and frost-sheltered concrete and tarmac niches of our own metropolis. That it has found a sustainable habitat here at all is remarkable enough. Astonishing, too, is the widely held belief that it is a difficult plant to distinguish from *C. sumatrensis*, or may not even be specifically distinct. How the two may morphologically adapt or possibly hybridize in South American and Mediterranean countries I don't know, but the key characters given in Wurzell (1988) separate them clearly at Somers Town, mature *C. bonariensis* being immediately recognisable by its delicate spreading growth, overtopping lateral branches, narrow cauline leaves and lax panicles of larger, greyish-violet capitula. At a glance, these plants are rather reminiscent of *C. canadensis* × *Erigeron acer* (= × *Conyzigeron huelsenii* (Vatke) Rauschert) which I used to detect with their parents on young chalky wasteland by Amberley station, Sussex, between 1973 and 1979.

In the early 1980s, *C. bonariensis* was erroneously recorded from London and south-east England before British botanists recognised *C. sumatrensis* as a new introduction. Thus it needs to be understood that the latter species was in fact known to grow here before my 1984 discovery in the East End; however the correct name for it had not yet been applied. True *C. bonariensis* presently occurs in London as follows: St James's Garden, Camden, one plant; Harrington Gardens, near Mornington Crescent, two large plants by roadside hedge; Hampstead Road, one plant by brick wall; Ampthill housing estate, Somers Town, abundant by forecourts and car-parks, locally almost to the exclusion of *C. canadensis* and *C. sumatrensis*; Aldenham Street, Somers Town, plentiful on vacant lot between tall houses, with the other two species also numerous and well-grown; behind Euston station, many small plants on pavements and kerbs; Eversholt, Barnby and Chalton Streets near Euston, a few scattered plants in similar circumstances to the last.

Where did they all come from? Once again, we may forever speculate, but a feasible hypothesis links us back to the days of shoddy. Bales or bags of this South American or New Zealand wool bye-product used to be carried by rail from Bradford in Yorkshire direct to Flitwick, Beds., unloaded in the yard of that station and then transferred to lorries for delivery to local vegetable growers as nitrogen-rich mulch. In 1964, Dr John Dony showed me specimens of *Medicago*, *Xanthium* and *Panicum* arising from seeds accidentally dropped during this laborious operation, and explained that aliens regularly germinated there. If consignments of shoddy were similarly unloaded at St Pancras for road or rail delivery to the once famous Kent and Hampshire fields, it is possible that some alien fruit pappus similarly escaped at the interchange point and got wind-blown into the urban environment. *C. bonariensis* is not deliberately cultivated for any purpose, and no other mode of introduction has been demonstrated. Of course we can also never guess what may come in on the shoes or in the luggage of people travelling here from parts of the world where this plant has long been known as an established weed. Although naturalized in the south-western States and the Mediterranean region, it is considered native only in South America. The epithet '*bonariensis*' is coined from Buenos Aires.

The issue of introgression in the genus *Conyza* has never been satisfactorily dealt with. Mere leaf variants of both *C. canadensis* and *C. sumatrensis* enjoy hybrid speculations which are very doubtfully deserved. Palmer (1993) draws our attention to several Kentish plants which show features of apparent intermediacy between the two species, but I have not seen those plants, nor have I identified similar examples during my own field studies, nor has that particular cross been cytologically confirmed. However, on October 17th 1993, I found, on the vacant lot in Aldenham Street, a robust plant so strikingly intermediate between *C. canadensis* and *C. bonariensis* that I have no hesitation in determining it as a hybrid. Growing 125cm tall, it bore cauline leaves similar to those of *C. bonariensis* but with variably spreading and recurved short marginal hairs. Its main branches were long and stiffly ascending with the top laterals more or less equalling the central one. Its branchlets and even its peduncles showed distinctive tendencies for the outer to overtop the inner. The capitula fell exactly between the parents in size, shape and colour, but their clusters were every bit as numerous and dense as in vigorous *C. canadensis*. Most capitula on lateral branches also demonstrated a high level of sterility by tilting weakly at various angles in senescence and then dropping completely to leave bare peduncles. On normal fertile *Conyza*, most heads remain

Conyza sumatrensis, del. Brian Wurzell © 1993

consistently upright, the pappus disperses neatly when ripe, and the empty involucral bracts shrivel, darken, subsequently reflex, and **remain firmly attached**. I have drawn examples of each of the four taxa thus present in this remarkable population, and *C. canadensis* × *C. bonariensis* is chosen for the front cover. In each case, and especially with this hybrid, I have, for practical reasons, somewhat thinned the inflorescences in order to avoid overcrowded artwork; the distinctive silhouette of each plant is still faithfully depicted.

Conyza canadensis × *C. bonariensis* is a new North × South American hybrid spontaneously arisen on European soil. Viewed thus as an example of successful ecological co-operation and harmony between three continents, I have chosen it to symbolise and motivate international co-operation and harmony between humans. With that vision in mind, the herbarium specimen illustrated on this front cover was affixed to a commemorative card and publicly presented to a great American, Dr K. Bradford Brown, on November 21st. Brad co-founded the Life Training Programme with Roy Whitten in California during the late seventies, he co-facilitated our latest weekend course in central London with David Templer, and he pledges the same passion for the welfare of people as we BSBI members pledge for the welfare of plants. We recognise that the future of both depends upon a phrase much cherished within the Life Training community — love, honour and respect. And we share these qualities in full.

Our Creation Day for the new training team took place in Hampstead Road on October 17th. *Conyza canadensis* × *C. bonariensis* was discovered nearby on the same day. Claire Loewe supervised the team; I supervised the hybrid. Each achievement revealed to the planet something it had never knowingly possessed before. Both achievements will inspire and energise our continuing work.

References

Britton, Lord B., and Brown, A. (1970). *An Illustrated Flora of the Northern United States and Canada*. Dover Publications Inc., New York.

De Crespigny, E.C. (1877). *A New London Flora*. Hardwicke & Bogue, Piccadilly, London.

Palmer, J.R. (1993). *Conyza canadensis/C. sumatrensis* intermediates. *BSBI News* **64**: 22.

Salisbury, Sir E. (1964). *Weeds and Aliens*. New Naturalist series. Collins, St James's Place, London.

Trimen, H. and Dyer, W.T.S. (1869). *Flora of Middlesex*. Hardwicke, Piccadilly, London.

Wurzell, B. (1988). *Conyza sumatrensis* (Retz.) E. Walker established in England. *Watsonia* **17**: 145-148.

Wurzell, B. (1992). Consumer. *BSBI News* **62**: 38-39.

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MORE ON *COTULA CORONOPIFOLIA*

Although a BSBI member of only two day's standing (on 24 October), I should like to join in the discussion about *Cotula coronopifolia* (Buttonweed). In 1992, as a keen, earnest, fast-learning but non-jogging member of the Wild Flower Society (see *BSBI News* **64**: 31, John Topp on Meetingship), I had no difficulty in identifying *Cotula coronopifolia* in profusion around the margins of Ham Pond on Ham Common, Richmond, Surrey on 28 August. Unfortunately I had not learned fast enough to know that the find was of any special interest until Rodney Burton kindly pointed this out to me much later. It was too late to count the number of plants but as far as I remember, there were at least 15-20. In 1993 I paid many anxious visits to the pond until, at the fifth attempt, saw one plant in flower on 17 August, but could find no others. This year I made sure that other botanists went to the location looking for this plant and at least two have been seen, although not by me. I have been told that Ham Pond was cleaned out about two years ago and don't know the status of plants now around the margin. In 1994 I shall be checking Ham Pond again for Buttonweed, but am not very optimistic.

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Conyza bonariensis, del. Brian Wurzell © 1993

A BUTTONWEED BY ANY OTHER NAME . . . .

The reports of the spread of buttonweed (*Cotula coronopifolia* L.) by John Martin, Eric Clement and Brian Wurzell in *BSBI News* **64** to places as far apart as v.c. 11 and v.c. 63 suggest that it may well have been overlooked elsewhere.

In the southern hemisphere in places with a similar climate the plant seems to have had a much less restricted distribution when compared with that previously recorded for the British Isles, i.e. Cheshire and W. Cork only. It is widespread in south-east Australia where it is known as water-buttons (Galbraith 1977). There, it is reported, the leaves are sometimes undivided.

In New Zealand, where it is called bachelor's button or soldier's button, it is found widely in shallow ponds (Hilgendorf 1948). Interestingly, although here it seems to be regarded as being of South African origin, Hilgendorf states that it is native to New Zealand. All of which leaves a number of interesting questions unanswered. Why is buttonweed suddenly spreading in Britain and Europe when it seems to have been much more widely distributed in temperate parts of Australasia a long time ago? And is it a native of South Africa or New Zealand or both?

References

Galbraith, J. (1977). *A Field Guide to the Wild Flowers of South-east Australia*, Sydney, p. 392

Hilgendorf, F.W. (1948). *Weeds of New Zealand*, (4th edn), Christchurch, p. 185

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COTONEASTER NITENS Rehd. & Wils.

This black-fruited species, not often naturalised, has been drawn by Hilli Thompson (see page 41). Leaves ovate, apex obtuse, some rather obovate to truncate; average size when mature 20-25mm; mid-green, glabrous and shining above, paler and shining beneath with scattered appressed white hairs disappearing with maturity. Flowers virtually all grouped in 3's (or 4's), alternate within the group. Petals small, 4mm, obovate, pink with a much deeper pink centre.

There is a good bird-sown specimen of *C. nitens*, two feet high in the natural vegetation of Darenth Wood, W Kent, and, since I only noticed it in April 1993, it is likely that more bushes will be revealed there in due course, since there is a large specimen in a garden not far from the wood.

My previous sightings of *C. nitens* were much earlier and not of such a good status. At Hyde Park Corner, Middx. seedlings can be found on the open parts of the largest traffic island, and sometimes further afield, but their existence is temporary because of the intensity of the scorched earth policy carried out in an area so popular with tourists. However, many of the bushes in the shrubberies which now appear planted, were originally seedlings. Birds take the fruits from these almost before they are ripe, and because of this, when I first found plants in the early 1980s, I misrecorded them, as the black fruits were not present.

Visitors to Hyde Park Corner will have noticed that another black-fruited *Cotoneaster* is extensively naturalised in the SE corner of the Park and on the various traffic islands. It has patent petals and large obovate leaves. I have grown to maturity in my garden, seedlings collected there in 1982, and these are closely referable to *C. bacillaris* Wallich ex Lindley, a much commoner species.

In 1983 I noticed that seedlings and young bushes of *C. nitens* were plentiful in Eaglesfield Park, W Kent on pathways and small patches of waste ground.

On open rough ground on the other side of the road specimens referable to *Crataegus ovalifolia* (Hornemann) DC. occurred from 1983 onwards, with stamens numbering 17-18 and leaves hairy above. (Now much reduced because the area has been 'tidied up'.)

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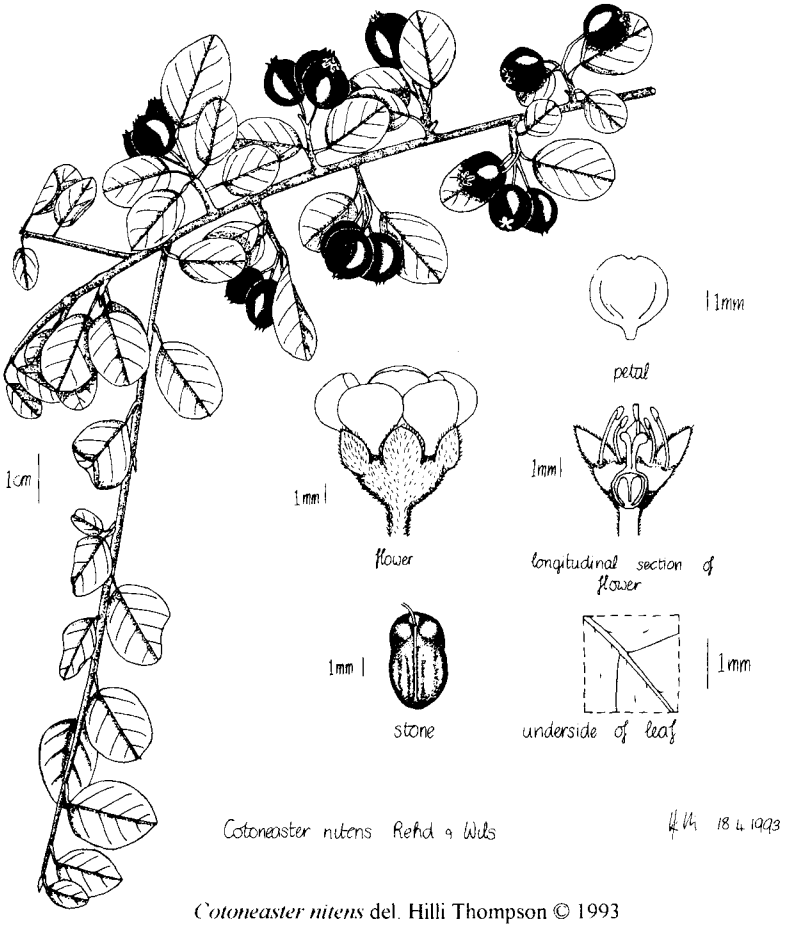

Cotoneaster nitens del. Hilli Thompson © 1993

ALIEN PHARMACEUTICAL PLANTS AT NOTTINGHAM

The discovery that a population of Dittander could have been associated with the activity of a hospital at Chichester (*BSBI News* **58**: 23. (Sept. 1991)) reminded one of us of a comment in *A Flora of Nottinghamshire* (Howitt & Howitt, 1963) which suggests that seed of *Sisymbrium loeselii* (False London-rocket) was probably introduced to the area in a consignment of Liquorice root from Iran imported by The Boots Company. It was first found at Dunkirk in Nottingham in 1960. This prompted us to wonder how many other plant introductions were due to pharmaceutical activity.

Adjacent to The Boots Company is the campus of the University of Nottingham where the Department of Pharmaceutical Sciences (formerly Pharmacy Dept.) has for many years had an active team of phytochemists who have pursued investigations centring on tropane alkaloids from the Solanaceae and Erythroxylaceae and, more recently, antitumour aryltetralin lignans from *Podophyllum* (Berberidaceae) and *Linum*. This has usually involved the cultivation of live plant material for bulk collections, biosynthetic studies and plant breeding.

A search around the campus over the last few years has revealed the presence of many escapes from this cultivation of medicinal plants and their allies. Of the Solanaceae, *Atropa belladonna* (Deadly Nightshade), not locally native, is now naturalised and plants from bird-voided seeds have appeared all over the neighbourhood. The S. American shrub *Acnistus australis* with white or purple campanulate flowers is quite hardy and being self-fertile, freely seeds itself about. Each year a large number of seedlings appear, several of which have now attained maturity. *Hyoscyamus niger* var. *annua* and var. *pallidus* (Henbane) along with *H. albus* var. *albus* have frequently occurred near the Pharmacy garden. Many species of *Solanum* have been examined for steroidal alkaloids. A number of these persist, appearing each year from seed on areas of disturbed ground. These have included *S. campanulatum*, *S. citrullifolium*, *S. physalifolium* var. *nitidibaccatum* and *S. radicans* with its curious bilobed fruit and deeply divided trilobed leaves. *Solanum villosum* is naturalised in places and even survives most winters. Occasional seedlings of the tropical *S. abutiloides* appear, but these are very frost sensitive and never survive for long. *Salpichroa origanifolia* with its enormous rhizome system and pineapple scented fruit is very invasive and capable of smothering surrounding vegetation. It is consequently naturalised. The genus *Datura* has been intensively studied and seedlings of *Datura* (*Brugmansia*) *sanguinea* appear persisting for several years in sheltered locations. The seeds often germinate while still inside the fruit, which may afford some extra protection. The annual *Datura stramonium* (Thornapple) occurs, as vars. *godronii*, *stramonium* and *tatula*. It is common most years and occasionally plants of *D. ferox*, *D. innoxia* and *D. quercifolia* and even a few hybrids of *D. quercifolia* × *D. stramonium* have been found.

An unusual Crucifer which Tim Rich confirmed as *Cochlearia glastifolia* has persisted in small colonies for at least the past 16 years. It overwinters as rosettes of leaves throwing up 1.5m tall stems of white flowers which produce viable seed each summer, resulting in large numbers of seedlings which germinate in the autumn and also overwinter successfully. This plant is an aggressive coloniser and if it were not for the efforts of the campus gardeners would no doubt have spread far by now. It was apparently investigated some time ago for the presence of a tropane ring system.

More recent work at Nottingham has concentrated on the podophyllotoxin type lignans with antitumour and antiviral properties. This has centred on *Podophyllum* and *Linum*. Both *Podophyllum hexandrum* and *P. peltatum* produce self-sown seedlings each year but these have not escaped from the garden as yet.

Linum flavum s.l. has self-seeded freely and produced several large plants some distance from the parents. It looks likely to persist especially in cracks between paving slabs. *L. perenne* (Perennial Flax) and *L.* '*sibiricum*', possibly both forms of *L. austriacum*, also produce self-sown seedlings that appear all over the garden. A sample of *L. usitatissimum* (Flax) seed from eastern Turkey contained aliens that reached maturity, *Lolium temulentum* (Darnel) and *Melilotus officinalis* (Ribbed Melilot) which continues to persist from seed. In another collection of *Linum hirsutum* from near Ankara, there appeared *Anthemis tinctoria* (Yellow Chamomile) and a *Viola*, possibly *V.* × *wittrockiana* (Garden Pansy).

Other plants that appear from past cultivation include *Vicia sativa* var. *sativa* (Common Vetch) which arrived in among seeds of *Lathyrus odorata* (Sweet-pea), and *Medicago sativa* (Lucerne) which is rampant — self-sown individuals at least 12 years old with gnarled woody bases can be seen. *Digitalis lutea* (Straw Foxglove) and *D. officinalis* are both naturalised. Their hybrid occurs spontaneously most years. *Plantago sempervirens* and *Lobelia inflata* are established and seedlings often appear in cracks between paving slabs. There are also the usual bird-voided shrubs; several *Berberis*, including *B. julianae* (Chinese Barberry), *B. thunbergii* (Thunberg's Barberry) and *Mahonia aquifolium* (Oregon-grape) along with *Cotoneaster horizontalis* (Wall Cotoneaster) and at least two others. One other shrub that appears frequently is *Buddleja fallowiana*. Just off the campus *Melilotus albus* (White Melilot) and *Sisymbrium altissimum* (Tall Rocket) can also be found.

The above demonstrates two points. Areas near establishments involved in phytochemical research may yield work-related plant introductions and that plants apparently local or even native may have been introduced from afar.

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CHENOPODIUM CAPITATUM IN WEST SUSSEX

Apropos the recent discovery of *Chenopodium capitatum* (Strawberry-blite) in a farm field in West Sussex, it may be of interest to report that this and several other species of *Chenopodium* were widely used in plant virus research 15-30 years ago. We used these plants in their hundreds at what was then the Glasshouse Crops Research Institute, near Littlehampton, W. Sussex. Many of these species proved extremely susceptible to infection with a wide range of plant viruses, which often reached a high concentration in the plants. This provided a good source of virus for purification for molecular studies, with a minimal amount of plant 'gunk' that we had to remove. In addition, most *Chenopodium* spp. would produce localised and countable sites of infection (known as 'local lesions' in the trade) that we used for quantitative assay. One could get up to a thousand such lesions per inoculated leaf in *C. amaranticolor*. Some *Chenopodium* spp. would develop diagnostic symptoms when infected with a specific virus: thus, *C. capitatum* showed a conspicuous mosaic mottle in the younger leaves when infected with Dahlia mosaic virus.

The bad news is that some viruses are seed-borne in many *Chenopodium* spp., often with symptomless infection. One of the most infuriating of these was a beast called Sowbane mosaic virus, originally affecting sowbane (*C. murale* and *C. hybridum*) in the U.S.A. but subsequently found almost world-wide, and in plants as diverse as carnations and grapevines. Sowbane mosaic virus is not only seed-borne in over 80% of seeds from an infected *Chenopodium*, but is also spread by transmission through pollen. This wretch caused havoc in experimental glasshouses until we discovered what was happening.

All virus-infected plants would be steam-sterilised before being thrown out, unused healthy plants surplus to requirements might have survived on the soil-heap, and it is possible that a few found their way into home gardens. Though most *Chenopodium* spp. are frost-sensitive, they can be extremely difficult to eliminate, if they are allowed to set seed. Over 10 years ago, we grew a few *C. polyspermum* (Many-seeded Goosefoot) plants in our garden to photograph; these seeded, and we are still pulling out seedlings.

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A *CHENOPODIUM* NEW TO WEST SUSSEX

On 15 September 1993 HM and NS were visiting two sites for the oak-leaved goosefoot (*Chenopodium glaucum*) in the Graffham/Coates area of West Sussex (v.c.13). The first of these was along the edge of a sandy footpath only 1.5km from the first county record (Rev. E. S. Marshall 1901) and had been discovered in the presence of NS by Elisabeth Hammond, who seemed to be guided by feminine intuition; the second, in a sandy field gateway, had been found by NS alone and without the advantage of a second X chromosome.

Having inspected this second group of plants, HM and NS ventured into an almost adjacent field of maize. Tall plants of red goosefoot (*Chenopodium rubrum*) afforested the margin, interspersed with its many-seeded relative (*C. polyspermum*) and bugloss (*Anchusa arvensis*). These species had been noted in 1992 when the field had not borne a crop. But on this occasion something bright red caught our attention — the fruiting heads of strawberry-blite, *Chenopodium capitatum*. There were a handful of depauperate plants of about 15cm, some erect, some slumped over, but all bearing startlingly scarlet fruit in globular clusters which formed an interrupted head of some 5cm in length; each cluster was subtended by a bract of distinctive shape — narrowly triangular with a pair of spreading lobes at the base; (Marjorie Blamey does justice to the plant in *The Illustrated Flora of Britain and Northern Europe*). In addition to these small specimens we were able with difficulty to recognise the odd larger plant, its leaves and fruits stripped by rabbits — in preference, it seemed, to

the other goosefoots present. Confirmation of our identification was kindly and speedily provided by Mike Mullin, endorsed with his famous bicycle logo.

Chenopodium capitatum is not often met with in the British Isles. Mike commented that it was the first specimen that had been sent to him in four years, and that had been of Irish provenance. It is an addition to the flora of v.c.13, and reference to available county floras of Southern England has yielded only two records (Dorset and Kent), neither within the last 20 years. According to *CTW*, it has naturalized itself in Fermanagh and Caernarfon; elsewhere, as Stace's *New Flora* agrees, it is a casual of fields and waste places. Where had 'our' colony come from?

Perhaps one should first ask 'Where does any strawberry-blite come from?' Although established in Europe from central Scandinavia south to Switzerland and beyond, its origin is obscure. The RHS dictionary reports that it has become naturalized in North America (where it may have acquired its alternative vernacular name 'Indian paint') and also vouches for its cultivation in the garden. Certainly *C. capitatum* would provide a splash of colour in any border, although it might be a shade too brash for the more refined horticulturalist. Scientists, on the other hand, are looking for completely different qualities: evidently *C. capitatum* has been grown at the Glasshouse Crops Research Institute near Littlehampton (also v.c.13) because it seems to be susceptible to just about any disease going (see article on page 43). Yet neither a garden nor this research establishment is a very likely source for the colony in question — there is no habitation very near and Littlehampton (where measures are taken to prevent the escape of such plants) is at least 15km away as the crow flies — and all good crows, as is well known, entertain serious reservations about the practice of translocating species except in desperate circumstances.

In the absence of any better idea HM and NS guess that the seeds of strawberry-blite were introduced with the maize. It may not be irrelevant to mention that a couple of fields in the immediate vicinity support another exotic which has probably arrived by similar means, *Amsinckia micrantha*; and in 1988 a sandy field of maize in this area yielded a third notable goosefoot, *Chenopodium hybridum* (Maple-leaved Goosefoot).

HM and NS would like to express their thanks to Mary Briggs, George Forster and Mike Mullin for help in the preparation of this note.

HOWARD MATCHAM, 21 Temple Bar, Strettington, CHICHESTER, West Sussex PO18 0LB
NICK STURT, Peacehaven, The Crescent, WEST WITTERING, West Sussex PO20 8EE

ALIEN STUDY GROUP

INTRODUCTION

At a Conference on *The Common Ground of Wild and Cultivated Plants* held at the National Museum of Wales, Cardiff, in July 1992, Gwynn Ellis gave a talk on *A Proposal for an Alien Register*. The main points were as follows:

An alien was accepted as a plant that had arrived in the British Isles directly or indirectly, as a result of human activity. The most recent estimate of the number of species of vascular plants growing outside of cultivation in the British Isles is 3,400 and of these some 40% or about 1,360 were aliens.

Many have become serious pests or noxious weeds but, because an interest in alien plants was unfashionable until comparatively recently, and their identification was often difficult or impossible, their spread into the countryside went largely unrecorded. The *New Flora of the British Isles* and the BSBI's new mapping scheme 'Atlas 2000', will increase our awareness of aliens, and allow their accurate identification, often for the first time. In addition, the possible change in our climate associated with global warming and the greenhouse effect, may not only trigger an increase in the rate of spread of already established although presently quiescent aliens, but may also allow new aliens to invade our countryside, posing further threats to our flora and landscape.

This was followed by a note in *BSBI News* which invited members to support the setting up of an Alien Study Group. The response was sufficiently encouraging for informal meetings to be arranged for the AGM at Lincoln and the Recorders' Conference at York. The meeting at Lincoln had to be cancelled as too few interested parties attended but the inaugural meeting of the BSBI Alien Study Group was held in September 1993 during the Recorders' Conference at York. Over a dozen members took part in informal discussions over a pint or two of ale and the following decisions taken.

A regular newsletter would keep members of the group informed as to what was going on and provide a medium for interchange of ideas, but it was considered vital that at least a summary of each newsletter be published in *BSBI News* so that the whole membership of the BSBI would be kept informed of progress and invited to contribute ideas.

The main aim of the group would be to study those aliens established in Britain and Ireland that appeared to be increasing their rate of spread into the countryside and could pose a threat to our native plants. Aliens already widely established such as *Fallopia japonica* and *Epilobium ciliatum* while not excluded from the list would have lower priority.

A register would be compiled of these aliens and volunteers sought to adopt a species or group of species and monitor their spread.

Simple experiments should be devised to study the rate of increase or competitive ability of aliens compared with native species.

Lists of books useful for the identification of alien plants including sources of illustrations, should be compiled.

Guides to the identification of groups of aliens should be prepared where there was thought to be a need.

PROVISIONAL LIST OF ALIENS WORTHY OF STUDY AND 'ADOPTERS'

This list includes only those aliens which members of the group could think of that evening that were most likely to cause trouble in the near future by invading natural habitats, it does not include (m)any that are already well established. If any member knows of other aliens that appear to have increased their rate of spread into the countryside, or would like to volunteer to 'adopt' a species or group of species, please let me know.

Allium paradoxum	
Campanula portenschlagiana	Mark & Clare Kitchen
Campanula poscharskyana	Mark & Clare Kitchen
Ceratochloa carinata	Paul Harmes
Ceratochloa cathartica	Paul Harmes
Conyza sumatrensis	
Cotula coronopifolia	
Elodea nuttallii	
Galega officinalis	
Hirschfeldia incana	
Hordeum jubatum	
Lamiastrum galeobdolon subsp. *argenteum*	Gwynn Ellis
Lemna minuta	
Lepidium draba	
Myriophyllum aquaticum	
Phacelia tanacetifolia	

Crassula helmsii is being actively studied by Dr H. Dawson and *Lagarosiphon major* by Dr Max Wade.

If you would like to join the Alien Study Group please write to Gwynn Ellis at the address below.

ALIENS IN THE BRITISH FLORA
An account of some of our plant invaders

This booklet, written by Gwynn Ellis and published by the National Museum of Wales, treats forty-four alien species that are naturalized in Britain and Ireland. Arranged in a chronological sequence, the species range from *Acer pseudoplatanus* (Sycamore), introduced in the 14th or 15th centuries to *Lamiastrum galeobdolon* subsp. *argentatum* (Variegated Yellow Archangel), introduced in the 1960s. Each species is illustrated with a colour photograph and maps show its distribution in the British Isles and country of origin.

The booklet costs £3.95 incl. p. & p. and is available from BSBI Books.

ALIEN PLANTS OF THE BRITISH ISLES
A provisional catalogue of vascular plants (excluding grasses)

This comprehensive account of all the alien species and hybrids (excluding grasses) ever recorded from Britain and Ireland, has been written by Eric Clement and Sally Foster. It is anticipated that this 500 page annotated checklist, which includes references to descriptions and illustrations, will be published by the BSBI in 1994. A second volume will deal with alien grasses. A leaflet will be distributed with the next mailing of *News*.

GWYNN ELLIS, Acting Secretary, Alien Study Group, Department of Botany, National Museum of Wales, Cathays Park, CARDIFF CF1 3NP

ALIEN GRASSES

Following the inaugural meeting of the Alien Study Group, I undertook to contact various experts and friends with a view to providing a list of books useful for information on, and identification of, alien grasses.

Since the publication of Clive Stace's *Flora* in 1991, life has certainly become much easier, as he has listed many of the 'oddities' that we are likely to encounter. However, if one requires more detailed information, the following are all recommended by Eric Clement, Dr Tom Cope and Ron Payne, to all of whom I am extremely grateful for perusing my suggestions, and for offering other titles.

I should, perhaps, point out that some of these volumes contain nomenclature which is a trifle dated.

Correa, M.N. (1978). *Flora Patagonia* Vol.8 pt 3 (grasses) Buenos Aires.
Fournier, P. (1961). *Le Quartre Flores De La France*. Paris.
Gibbs, Russell, *et al.* (1990). *Grasses of Southern Africa*. National Botanic Gardens, South Africa.
Hitchcock, A.S. (1950). *Manual of Grasses of the United States*, (reprinted 1971 2nd edition revised by Agnes Chase) 2 vols. London & New York.
Simon, B.K. (1990). *Key to Australian Grasses*. Queensland Dept. of Primary Industries.
Townsend, C.C. *et al.* (1968). *Flora of Iraq*, Vol.9, Gramineae by N.L. Bor. Baghdad.
Tsvelev, N.N. (1984). *Grasses of the Soviet Union*. Rotterdam.
Tutin, T.G. *et al.* (1980). *Flora Europaea*, Vol.5. Cambridge.
Walters, Dr S.M. (1984). *The European Garden Flora*, Vol.2. Cambridge.

PAUL A. HARMES, 10 Hill Croft, Mile Oak Road, PORTSLADE, E. Sussex BN4 2QD

NOTICES (NON BSBI)

INTERNATIONAL COMPOSITAE CONFERENCE
ROYAL BOTANIC GARDENS, KEW
24 July - 5 August 1994

This conference will examine patterns and processes in the plant family Compositae (Asteraceae)

The first week (25th - 30th July, systematics and evolution) will be devoted to the classification and relationships of the family and its major component taxa (tribes, subtribes and major genera). It will consider evidence from various disciplines, discuss the integration of data in classification, and provide for the presentation of tribal and subtribal surveys.

The second week (1st - 5th August, biology and utilization) will be devoted to the ecology and economics of the family. It will consider the internal and external interactions involved in ontogenesis and phylogenesis in the family and their significance and that of their products in the economy of nature and mankind.

In addition, special interest workshops will be devoted to discussion of the following topics in relation to the Compositae: apomixis, genome studies, carpological studies and evolution; taxonomic, chemical and nomenclatural databases and information services; *Vernonia galamensis* crop development; evolution and ecology of insect faunae; geohistorical factors in distribution and taxonomy.

for further details please contact

C. JEFFREY, Herbarium, Royal Botanic Gardens, Kew, RICHMOND, Surrey TW9 3AE

BOTANOSTEPHANE KORNASIANA

A two-volume collection of botanical papers was recently published and presented to Professor Jan Kornaś of the Jagiellonian University, Kraków, Poland in celebration of his 70th birthday. Most of the papers are in English (all have an English abstract) and the majority relate to the taxonomic and phytogeographical problems of ferns, vascular plants, bryophytes and lichens. Four biographical sketches and a bibliography of Professor Kornaś's publications are included. I shall be happy to supply further details to members interested in obtaining copies.

ARTHUR COPPING, The Nook, Brewers Green, Roydon, DISS, Norfolk. IP22 3SD

FIFTH INTERNATIONAL CONGRESS OF SYSTEMATIC AND EVOLUTIONARY BIOLOGY
Education Centre, Budapest, Hungary
August 17-24 1996

For the first time ICSEB moves to Central Europe. The Congress will follow the traditions of the previous meetings in that it is willing to host symposia about any area in evolutionary and systematic biology. Topics will range from molecular to global levels of biological organisation. Traditional and ultramodern, descriptive, experimental, and constructive approaches are all welcome.

The first announcement will be mailed by February 1994, and will include the Programme Committee and the list of Congressional Symposia.

For further information or to request the first announcement, please write to:

IBUSZ, Congress Dept. RCS: 551-003-096 ICSEB V, BUDAPEST, Ferenciek tere 2, H-1053, HUNGARY. Tel: (36-1) 118-3362 or 117-5717, Fax: (36-1) 118-9161

PLANTS AS FOODS AND MEDICINES

A course on plants as foods and medicines will be held at the Natural History Museum, South Kensington, London, on Tuesday evenings for 10 weeks, starting on 11 January 1994. The course, run by Peter James, formerly head of the Lichen Section and Deputy Keeper of Botany at the Museum, will:

> 'survey the use of plants as food and drugs, with particular attention to the role of lower plants such as fungi, lichens and mosses. The need for conservation of natural habitats to maintain the gene pool, and of ancient medical lore in our search for new foods and drugs will be stressed.'

Application forms and further information are available from:

EXECUTIVE OFFICER, Science Desk, Centre for Extra-Mural Studies, Birbeck College, 26 Russell Square, LONDON WC1B 5DQ

REQUESTS

URGENT REQUEST FOR SEEDS OF *LUZULA CAMPESTRIS* (L.) DC.

I am working with Tim Rich on the taxonomy of *Luzula* in Britain and Ireland, and urgently need some seeds of *L. campestris* (Field Wood-rush) for isozyme work this winter. If anyone has any specimens up five or six years old with ripe seeds, could they please send seeds direct to me with details of where they were collected (pad the envelope slightly as seeds may be crushed in the post office sorting machine rollers). All the material I collected in 1992 has immature or nonviable seeds.

RNDr J. KIRSCHNER, Institute of Botany, Czech Academy of Sciences, CS-25243 PRUHONICE 1, Czech Republic

RANUNCULUS SUBGENUS *BATRACHIUM*

I am currently writing a review of the ecology of *Ranunculus* subgenus *Batrachium* for *The Botanical Review*, and would be grateful if any BSBI members who have any information about the ecology of any of the taxa could write to me. *Ranunculus penicillatus* subsp. *pseudofluitans* (*R. calcareus*), is well covered in the scientific literature, but there is relatively little information on the other species.

ANDREW SPINK, Illinois Natural History Survey, LTRMP Havana Field Station, 704 North Schrader Avenue, Havana ILLINOIS, 62644, USA

ERIOCAULON AQUATICUM (PIPEWORT) SEED WANTED

I am working on a project involving the study of embryogeny within the Eriocaulaceae and am anxious to obtain seed of *Eriocaulon aquaticum*. Since the only natural habitat of this species in Europe is the North of the U.K. and Ireland, I am asking for the help of BSBI members to provide seed for my inquiry. I would be very grateful for any seed that you can send to enable me to carry out

cultivation experiments. Furthermore, I would also appreciate any advice that helps me to avoid making mistakes in cultivating this species.

MARKUS BECKER, Institut für Spezielle Botanik und botanischer Garten, Anselm-F.-v.-Bentzel-Weg, 9a+b, 55099, MAINZ, Germany

HORTAX SURVEY ON CULTIVATED PLANTS IN BRITISH HERBARIA

The Horticultural Taxonomy Group (HORTAX) has been carrying out a survey to gather information on any herbarium collections of cultivated plants existing in the British Isles. Last June a total of 322 questionnaires were sent out to all the herbaria in the British Isles. Some 133 replies have been received to date, of which 57 were positive.

We would be grateful if any BSBI members with knowledge of such collections (including aliens and garden escapes) could contact Susyn Andrews at the address below.

HORTAX is a group of horticultural taxonomists supported by a number of botanical and horticultural institutions in the British Isles, including the Royal Horticultural Society and the Botanic Gardens at Kew, Edinburgh and Glasnevin. Formed in 1988, its main aims are to co-ordinate work on the taxonomy of cultivated plants and, in particular, to bring stability to the names of plants in the nursery trade and in our gardens.

SUSYN ANDREWS, Chairman of HORTAX, c/o Royal Botanic Gardens, Kew, RICHMOND, Surrey TW9 3AB

OENANTHE PEUCEDANIFOLIA

Since refinding *Oenanthe peucedanifolia* Pollich in the southern part of Hessen (in the centre of western Germany), I have tried to obtain some information about the historic and actual distribution of this species. Besides searching through the literature, I have discovered that there are specimens from unpublished localities in many herbaria. I hope to get a nearly complete overview of *Oenanthe peucedanifolia* in Germany, but am also interested in records from elsewhere in Europe and would be pleased to hear from anyone with specimens or records of this species. The information I require includes the locality, date and name of collector.

Thank you in advance for your help.

SYLVAIN HODVINA, Fr.-L.-Jahn-Str. 19, D-64572 BÜTTELBORN, Germany

RESEARCH AND TRAVEL GRANTS

THE BOTANICAL RESEARCH FUND

The Botanical Research Fund is a small trust fund which annually, in May, makes modest grants to individuals to support botanical investigations of all types and, more generally, to assist their advancement in the botanical field. It is available to amateurs, professionals, and students who are unable to obtain support from other sources. Where appropriate, grants may be awarded to applicants in successive years to a maximum of three. Applications should be made in writing (there are no forms) to the Hon. Secretary:

Professor KEITH JONES, 57 Marksbury Avenue, RICHMOND, Surrey TW9 4JE

WARBURG MEMORIAL FUND

The Botanical Society of the British Isles and the British Bryological Society have a joint Fund from which an occasional small grant (*c.*£75 - £150) for travel for field work is made to a botanist under the age of 25. Young botanists wishing to be considered for this award should send:

1. Full Name and address
2. Date of Birth
3. Short details of project involving travel, including an estimate of expenses, information, relating to the candidates experience, and other qualifications for carrying out the proposed work
4. Names and addresses of two referees to whom the Trustees can refer, if necessary,

to: The Secretary, Warburg Memorial Fund, c/o BSBI, Dept. of Botany, The Natural History Museum, Cromwell Road, LONDON SW7 5BD.

MARY BRIGGS, Hon. General Secretary

BRITISH ECOLOGICAL SOCIETY SMALL GRANTS SCHEME

These grants are made to amateur and professional scientists undertaking surveys of habitats which are threatened or of special ecological interest, or which have a history of ecological work.

Application forms are available from: BES, Burlington House, Piccadilly, LONDON W1V 0LQ

MARY BRIGGS, Hon General Secretary

PAT BRENAN MEMORIAL FUND

The Pat Brenan Memorial Fund was established in 1985 to award travel scholarships to British botanists wishing to undertake field studies, particularly in Africa and Madagascar.

Applicants should be British nationals, students or professionals without full institutional support or amateurs with proven interest in systematic botany. Preference will be given to projects involving plant exploration, projects showing originality in the investigation of biological problems that would deepen our understanding of plant evolution or projects on plant utilisation. Applications for which partial support has already been raised will be particularly welcome. The successful candidate will be expected to submit a report on the approved project. The candidate will need to obtain permission to undertake the research from the proper authorities in the country chosen and, with that proviso, will have access to appropriate facilities and advice from the Royal Botanic Gardens, Kew.

Applications should consist of a curriculum vitae, a summary of the research proposal not exceeding 4 sides of A4 in length, an indication of other sources of funding and the names of two academic referees.

Applications or enquiries should be sent to the address below. The closing date for receipt of applications is 1 February each year.

Secretary, Bentham-Moxon Trust (Pat Brenan Memorial Fund), Royal Botanic Gardens, Kew, RICHMOND, Surrey TW9 3AB

THE OLEG POLUNIN MEMORIAL FUND

Applications are again invited for awards from The Oleg Polunin Memorial Fund. Full details of the Fund and application details were given in *BSBI News* **58**: 47, Sept. 1991.

Applicants should apply in writing to the Headmaster of Charterhouse at the address below, giving a clear statement about their proposed field studies, where they will be undertaken and when.

Priority will be given to applicants with Charterhouse connections but other persons with strong botanical or biological interests will also be considered. The closing date for applications is 1st February each year.

PETER ATTENBOROUGH, Headmaster, Charterhouse, GODALMING, Surrey GU7 2DJ

BOOK NOTES

NEWS FROM OUNDLE BOOKS

Members may be interested to know that we have moved – complete with over 5000 BSBI Publications — to our third and, we hope, final home in Oundle parish and only 600 yards from our first home, Oundle Lodge. Our telephone number remains 0832-273388 and Fax 0832-274568 whilst the address is now as shown below — but do not worry if you cannot remember the change — letters addressed to Oundle Lodge still reach us though we left over eight years ago!

P.S. The President moved as well! His telephone number with ansaphone is 0832-274892.

P.P.S. A Supplement to BSBI Publications 1993 is now available on request or will be sent when you order books.

MARGARET PERRING, Green Acre, Wood Lane, OUNDLE, Peterborough PE8 5TP

REPORTS OF FIELD MEETINGS — 1993

Reports of Field Meetings are edited by, and should be sent to, Dr B.S. Rushton, Dept. of Biological and Biomedical Sciences, University of Ulster, Coleraine, Co. Londonderry, N. Ireland BT52 1SA.

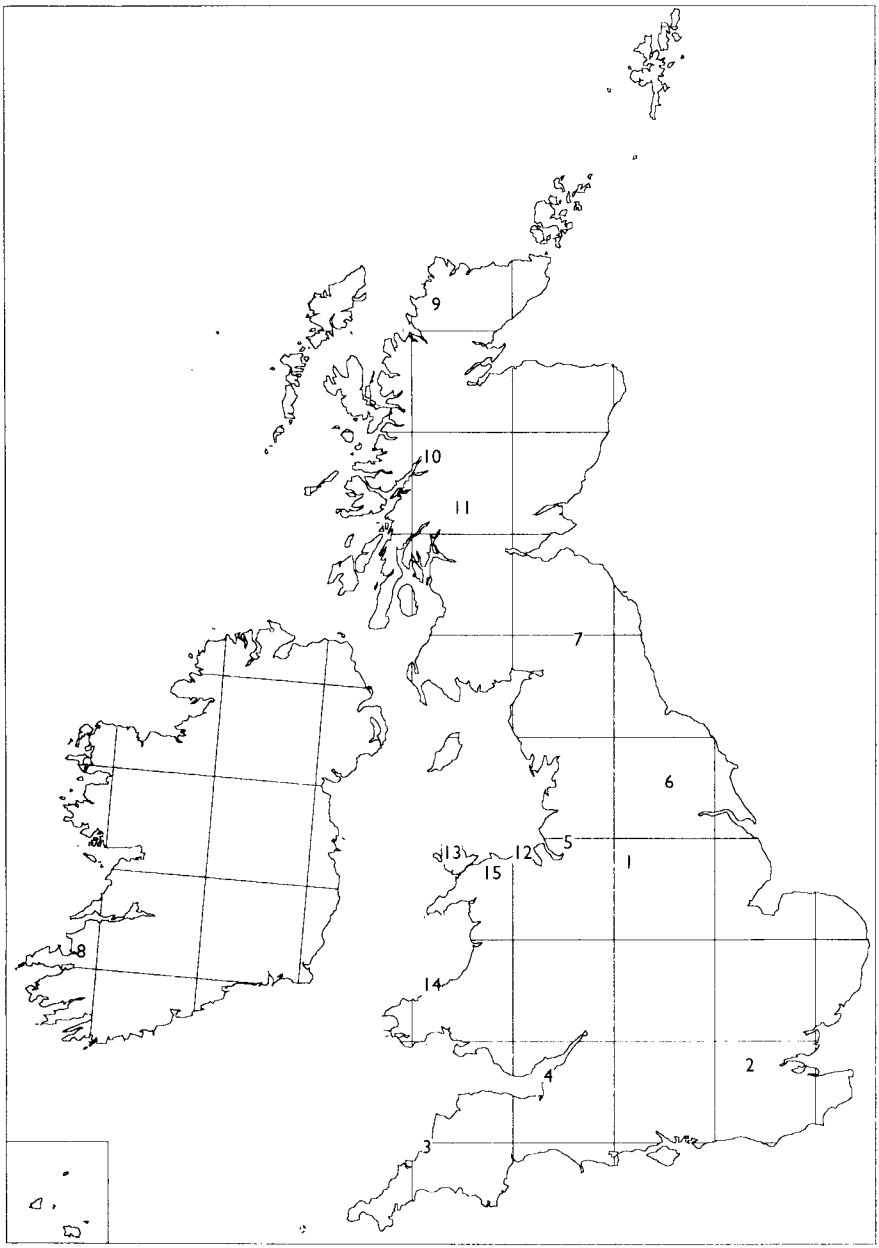
The map on page 52 shows the approximate location of the field meetings reported below.

ENGLAND

MONK'S DALE, DERBYSHIRE (v.c. 57). 22nd MAY [1]

Monk's Dale is one of the less well-known and visited of the Derbyshire dales on the Carboniferous Limestone which has formed part of the Derbyshire Dales National Nature Reserve since 1972. The dale contains a rich variety of habitats which were explored during the day by the 23 members and friends, along with the two leaders.

At the entrance to the dale there are some very nice south-facing outcrops which were a suitable point for Douglas Gilbert, English Nature's reserve warden to spend time outlining the history and management of the dale. The outcrops contained typical thermophilous species such as *Erophila verna* (Common Whitlowgrass), *Veronica arvensis* (Wall Speedwell), *Saxifraga tridactylites* (Rue-leaved Saxifrage), *Sedum acre* (Biting Stonecrop), and *Myosotis ramosissima* (Early Forget-me-not). Here, limestone bedstraw (*Galium sterneri*) was seen in the first of many sightings during the day. From here, the path passed down into the dale proper behind the top of the shallow cliffs which provide the habitat for one of the region's specialities, Mountain Currant (*Ribes alpinum*), which trailed over them forming the characteristic curtain. Both sexes were growing side by side, thus allowing the differences in the flower spikes to be seen.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Leaving the currant behind, the scrubby dale sides showed their spring display of *Orchis mascula* (Early-purple Orchid) and *Primula veris* (Cowslip). Following the path through an area of ash woodland, the open dale sides were reached. Here another speciality of the region, *Gymnocarpium robertianum* (Limestone Fern) was seen growing in bare block scree, unaccompanied except for *Geranium robertianum* (Herb-Robert) and *Arrhenatherum elatius* (False Oat-grass). One of the inspirations for the meeting was the fact that in 1989, *Sesleria caerulea* (Blue Moor-grass) was discovered here in its southernmost English site. The patch, with over 200 flowering spikes, was duly admired, along with associated *Helictotrichon pratense* (Meadow Oat-grass), *Carex flacca* (Glaucous Sedge), *Thymus polytrichus* (Wild Thyme), *Helianthemum nummularium* (Common Rock-rose) and *Teucrium scorodonia* (Wood Sedge). One leader made the mistake of causing a diversion by pointing out *Hieracium britannicum*, causing at least one member to forget about the *Sesleria caerulea*, thus making him go back to see it at lunch.

Some members, having read the information sheet, went up the dale sides to see the 'new' *Potentilla*, only to find that they had not yet realised that *Potentilla neumanniana* (Spring Cinquefoil) was the up-to-date name for the nicer-sounding *Potentilla tabernaemontani*! It was growing well, so they weren't really too disappointed, especially as *Geranium sanguineum* (Bloody Crane's-Bill) was nearby.

After lunch, the party walked through the species-rich grassland en-route to the woodland. This is managed and the effects of clearing a block of land to encourage butterflies were seen. In and around the wood *Trollius europaeus* (Globeflower), *Cardamine impatiens* (Narrow-Leaved Bittercress), *Paris quadrifolia* (Herb Paris), *Silene nutans* (Nottingham Catchfly) and *Epipactis atrorubens* (Dark-red Helleborine) were seen, although the last two were not in flower. The final highlight for both leaders was to see *Potentilla crantzii* (Alpine Cinquefoil), another species at its southernmost English limit.

R. SMITH

BRENT RIVER PARK, MIDDLESEX (v.c. 21), 23rd MAY [2]

About 18 people attended this joint meeting of the BSBI and the London Natural History Society, and it provided a good opportunity for members of the societies to become acquainted. Several of those attending of course belonged to both, and there were some interesting discussions about the nature of the two societies.

The aim of the meeting was to study some of the alien and native plants of the Brent River Park, an area of some 400ha surrounding the Brent River-Grand Union canal a little way north of the junction with the Thames at Brentford. We saw a good range of plants, both natives and naturalized aliens. Our route took us over several bridges, on to an island in the Brent river where a good patch of *Ranunculus auricomus* (Goldilocks Buttercup) was seen, and we had to force our way through some jungle-like vegetation dominated, alarmingly, by *Heracleum mantegazzianum* (Giant Hogweed), to an area of old waste ground which the Warden of the Park told us was being cleared of scrub to allow easier access.

Mike Mullin, our leader, had a number of useful tips for distinguishing closely related taxa such as *Geranium molle* (Dove's-Foot Crane's-bill), *G. pusillum* (Small-flowered Crane's-bill) and *G. pyrenaicum* (Hedgerow Crane's-bill), or the two subspecies of *Tragopogon pratensis* (Goat's-beard) and for quick recognition of common grasses.

In a meadow leading to the canal we saw the Grass Vetchling *Lathyrus nissolia*, also *Carex otrubae* (False Fox-sedge) and *C. divulsa* (Grey Sedge), and Russian comfrey (*Symphytum* × *uplandicum*), then by the canal a dock which Stace calls *Rumex cristatus* (Greek Dock), but which Mike Mullin considers to be in the *R. patientia* (Patience Dock) group. Here we also found *R. obtusifolius* (Broad-leaved Dock), *Acorus calamus* (Sweet-flag) and both red (*Silene dioica*) and white (*S. latifolia*) campions and the hybrid between them, *S.* × *hampeana*. In the overgrown part of the waste area we saw *Spartium junceum* (Spanish Broom), *Euphorbia* × *pseudovirgata* (Twiggy Spurge), and a thriving naturalized patch of the huge *Crambe cordifolia* (Greater Sea-kale), just coming into flower.

The walk ended by the Hanwell flight of locks (scheduled as an Ancient Monument) where we saw *Asplenium ruta-muraria* (Wall-rue), on an old wall, a colony of *Rhus hirta* (Stag's-horn Sumach) next to one of the lock side-pounds (which were used to save half of the water which would otherwise have been lost down-stream every time each lock was used). Also seen here were *Rumex hydrolapathum* (Water Dock), *Angelica archangelica* (Garden Angelica) (which is now quite common along the River Thames), and a plant of *Bidens connata* (London Bur-marigold) growing on a lock gate. As an extra bonus we also heard the song of a nightingale as we gathered along the canal-side at the end. On the whole the weather was kind, so that although the meeting was for the morning only, some were able to enjoy a picnic lunch afterwards sitting on a lock gate in the sun, while others repaired to the nearby pub.

MARY C. SHEAHAN

FRYENT COUNTRY PARK, MIDDLESEX (v.c. 21). 6th JUNE [2]

This was a greater eye-opener than the title 'country park' would suggest. A 100ha of Middlesex countryside which was all in London! Just as impressive was the commitment of the site owners, Brent Council, and the local volunteer groups in restoring the landscape and conserving the flora. Two of the Barn Hill Conservation Group members accompanied us and made the party up to seven in number.

The meadows, all on London Clay, are still cut for hay and some fields had plentiful *Sanguisorba officinalis* (Great Burnet) and *Bromus commutatus* (Meadow Brome). Over 200 plant species have been recorded from the meadows if those of disturbed ground and accidental introductions are included. The hedgerows included a green lane and parish boundary. *Sorbus torminalis* (Wild Service-tree) grew in some hedgerows and the volunteers had succeeded in germinating the seeds in their tree nursery. Also in hedgerows and scrub was *Cardamine impatiens* (Narrow-leaved Bitter-cress), a scarce plant in south-east England. Before its rediscovery in 1985, it had been considered extinct in Middlesex since 1901 when it was recorded from the locality. Annual counts are now undertaken and the 1993 estimate was of 3,800 plants.

The old farm ponds and more recent creations now total 28 in number. Some species were obviously introductions, for example *Ranunculus lingua* (Greater Spearwort) but others were native to the area including *R. sceleratus* (Celery-leaved Buttercup) and *R. peltatus* (Pond Water-crowfoot). On Barn Hill, we passed through woodland landscaped by Humphry Repton in 1793 and on the slopes we inspected *Stachys officinalis* (Betony) and *Ophioglossum vulgatum* (Adder's-tongue). Towards the summit the neutral clay gave way to acid gravels. Elinor Wiltshire who had previously produced a bryophyte list for the site was interested in being shown a small colony of *Polytrichum commune*. This is an unusual species for London owing to the scarcity of its habitat. In return, Elinor re-located some *P. juniperinum* adjacent to some *Aira praecox* (Early Hair-grass) and to *Rumex acetosella* subsp. *acetosella* (Sheep's Sorrel) which was added to the park's list.

On our return we passed by coppiced oak and elm scrub, viewed Wembley Stadium from the summit of the hill and passed through a young plantation of several thousand broad-leaved trees. At Bush Farm the orchard, which had been marked on a map of 1597, was being restored and *Humulus lupulus* (Hop) had reappeared when the horses had been excluded by new fencing.

L.R. WILLIAMS

BOSCASTLE, CORNWALL (v.c. 2) 2nd-4th JULY [3]

On the evening of Friday, 2nd July, a group of 23 — members and friends — including the President of the BSBI, Franklyn Perring and his wife Margaret, gathered at the same place as last year, namely the home of the local member, Tim Dingle. Those who had attended last year's meeting in this part of

Cornwall had much appreciated the welcome and hospitality offered by Tim Dingle and his wife and our thanks are extended to them for making their home available once more.

The main aim of the meeting was to continue the search of under-recorded tetrads and after a preliminary talk and discussion, slides were shown of the more interesting plants that might be seen during the next two days. BSBI publications were much in evidence as were some problem plants and aliens. Among the latter was *Epilobium komarovianum* (Bronzy Willowherb). This had been seen only a few days before on China-clay waste and it was hoped that it would also be found at the rather different man-made habitat of the Delabole Slate Quarry.

Numbers of under-recorded tetrads were searched. Many were coastal and two of these, Compass Point near Bude and Phillips Point further south, were so slight in extent, mostly near-vertical cliff faces, that, at Compass Point only 18 species had been recorded. However, one of these was the scarce *Limonium procerum* subsp. *procerum* var. *medium*, one of the recently described taxa within the *Limonium binervosum* aggregate (Rock Sea-lavender).

Other interesting species recorded were *Callitriche hamulata* (Intermediate Water-starwort) in the Ottery valley, *Petroselinum segetum* (Corn Parsley), uncommon in Cornwall, *Platanthera chlorantha* (Greater Butterfly-orchid), *Poa humilis* (Spreading Meadow-grass), *Rosa stylosa* (Short-styled Field-rose), *Scrophularia scorodonia* (Balm-leaved Figwort), a Red-Data Book species, *Artemisia abrotanum* (Southernwood) and *Nepeta* × *faassenii* (Garden Cat-mint), two examples of the garden escapes that in this County cannot be ignored, and various brambles: *Rubus cornubiensis*, *R. dumnoniensis*, *R. orbus*, *R. polyanthemus*, *R. prolongatus*, *R. riddelsdellii*, *R. rubritinctus* and *R. villicauliformis* as well as the more common *R. ulmifolius*.

On Sunday afternoon all gathered at the immense Delabole Slate Quarry (Upper Devonian). Here, small groups dispersed to record the various plants and were soon lost to view in a dense sea-mist that swept in suddenly to add that authentic Cornish atmosphere. The results of this survey were rewarding indeed. This kind of Cornish habitat had not been considered very extensively before and a total of 183 species was recorded. They included *Euphrasia micrantha*, *E. confusa* × *E. nemorosa* (Eyebrights), *Epilobium lanceolatum* (Spear-leaved Willowherb) in abundance, *E. brunnescens* (New Zealand Willowherb), the hoped-for *E. komarovianum* and a good colony of *Filago vulgaris* (Common Cudweed), as well as *Filago minima* (Small Cudweed) which is so often seen on China-clay. When the results were analysed only 11% of the total number of species had been recorded by all groups. Such a low rate of agreement is evidently not all that surprising as will be seen if reference is made to the recent work by Dr T.C.G. Rich (*BSBI News* **63**: 45-46 (1993)).

After further tetrad recording on Sunday, the meeting ended with much talk and discussion over a good Cornish Cream tea.

R.J. MURPHY

MENDIP HILLS, NORTH SOMERSET (v.c. 6). 24th JULY [4]

A dozen members attended a meeting to study *Rubus* species representative of the area. A number of contrasting sites were visited, providing examples of different bramble habitats on a variety of soils.

Worlebury Hill, Weston-Super-Mare forms a promontory jutting out into the Bristol Channel and as such is a popular stop-off point for migrating birds. The underlying geology is Carboniferous Limestone with associated conglomerate and historically the hill had a vegetation much like neighbouring Brean Down, scrubby grassland with rock outcrops. It is now largely wooded and although Ashcombe Wood on the south side of the hill is considered to be ancient woodland most is the result of extensive planting 100 or so years ago.

Our investigations were limited to the hill top which has naturally developed secondary woodland with wide rides and clearings. Species present were mainly the more glandular ones which are well adapted to survival in woodland. Series Micantes was represented by *R. glareosus* and *R. moylei*, both with their headquarters in Hampshire, and by *R. micans* which is more widespread. Series Anisacanthi was represented by *R. leyanus* and *R. hibernicus*, both frequent in parts of South Wales. Series Rhamnifolii was represented by *R. prolongatus* and *R. rubritinctus*, both widespread in Wales and the West. In contrast, botanists from Plymouth and Cornwall were able to see *R. vestitus*

(Vestiti) and *R. dasyphyllus* (Hystrices), very rare in their area although widespread elsewhere in Britain. Two unnamed forms were seen including a Corylifolian that Mike Porter later recognised as being similar to one widespread in v.c. 36.

Burrington Common above Burrington Coombe is an area of exposed scrubby, heathy grassland developed on Dolomitic Conglomerate. Species here were typical of open ground viz. *R. lindleianus* and *R. pyramidalis* of Series Sylvatici, *R. cardiophyllus*, *R. polyanthemus* and *R. rubritinctus*, all widespread Rhamnifolians and by another, *R. villicauliformis*, which is mainly restricted to the moors of Devon and Cornwall. In a gully nearby was *R. subinermoides* (Rhamnifolii) which is largely confined to South-East England and *R. winteri* (Discolores) which is widely scattered in England but apparently very local. The only glandular species noted were *R. echinatus* and *R. fuscicaulis* of Series Radulae and *R. dasyphyllus*.

The last official stop was Stock Hill Plantation, Priddy. Moorland developed on Dolomitic Conglomerate and Old Red Sandstone with extensive plantations of conifers. There was evidence of recent colonisation along the rides and of a certain amount of hybridization. Two garden escapes, *R. laciniatus* (Sylvatici) and *R. armeniacus* (Discolores) were seen on the roadside, although the location is several kms from the nearest village. The Welsh species *R. bartonii* (Vestiti) was well-established as was *R. raduloides* (Micantes), a speciality of the Bristol and Somerset coalfields. One bush of *R. bercheriensis* (Hystrices) appeared to be a recent arrival for this species of central southern England. *R. pruinosus* and *R. tuberculatus* served to demonstrate the extremes of variation within Series Corylifolii.

For the keener members a couple of extra stops were made. At the nearby Eaker Hill Wood was *R. sciocharis* (Sylvatici), widespread but very local, and *R. surrejanus* (Vestiti), a species of South-East England. Greyfield Wood on the Coal Measures at High Littleton was visited for *R. lanaticaulis* (Vestiti), a species widespread in Wales and Ireland. As a bonus species of two other series were added, *R. nessensis* (Suberecti) and *R. sprengelii* (Sprengeliani).

R.D. RANDALL

MERSEYSIDE, SOUTH LANCASHIRE (v.c. 59). 21st-22nd AUGUST [5]

22 members attended this meeting in South Lancashire. At St Helens an hour was spent along the canal where *Aponogeton distachyos* (Cape-pondweed) and *Egeria densa* (Large-flowered Waterweed) were seen in good flower. *Lagarosiphon major* (Curly Waterweed) also abundant was usefully contrasted with *E. densa*. Later *L. major* was seen in flower in the canal at Liverpool.

We then departed to the Leeds & Liverpool Canal near Aintree Race Course by car. In the bright sunshine dewdrops on the carpets of *Azolla filiculoides* (Water Fern) shone like jewels and the gold sheets of *Nymphoides peltata* (Fringed Water-lily) were duly admired and photographed. Then we went up to the disused railway sidings where *Hirschfeldia incana* (Hoary Mustard) was in flower and more usefully in good fruit. *Illecebrum verticillatum* (Coral-necklace) flowered on bare cinders and further on, a hands and knees search produced tiny plants of *Corrigiola litoralis* (Strapwort) some less than 1cm tall. *Agrostis scabra* (Rough Bent) and *Verbascum densiflorum* (Dense-flowered Mullein) were also here.

Despite the deafening din of the motor cycle racing on the Race Course we were still able to hear each others excited calls when *Potentilla norvegica* (Ternate-leaved Cinquefoil) and the hybrids *Senecio* × *subnebrodensis* (*S. squalidus* × *S. viscosus*), *S.* × *albescens* (*S. cineraria* × *S. jacobaea*) and *Linaria* × *sepium* (*L. vulgaris* × *L. repens*) were found. Here also were fine plants of *Verbascum virgatum* (Twiggy Mullein) in flower and fruit as well as *Euphorbia* × *pseudovirgata* (Twiggy Spurge).

The final site for the day was the Leeds & Liverpool Canal at Sandhills Railway Station in the centre of Liverpool to see *Sisymbrium volgense* (Russian Mustard) and another hybrid, *Typha* × *glauca* (*T. latifolia* × *T. angustifolia*) which is abundant for a long distance in the absence of both parents. Both *Nymphoides peltata* and *Lagarosiphon major* were in good flower and as we had had no time for tea, we enjoyed some blackberries.

Next day at Southport was cloudy though we had clear views of Blackpool Tower and the Lakeland Hills beyond. Masses of Evening Primrose demanded closer inspection revealing few *Oenothera biennis* (Common Evening-primrose) and many *O. glazioviana* (Large-flowered Evening-primrose) and an assortment of their hybrids. In single file along the crest of high dunes we came to a long-established colony (first recorded here in 1903) of *Ambrosia psilostachya* (Perennial Ragweed). Downhill in the slacks was *Juncus balticus* (Baltic Rush) now more widespread than formerly.

After lunch we moved south to Ainsdale. Here was *Fallopia sachalinensis* (Giant Knotweed) and not far away a large and spreading colony of the hybrid *F.* × *bohemica* (*F. japonica* × *F. sachalinensis*) with the locally more widespread parent F. × *japonica* (Japanese Knotweed). *Parentucellia viscosa* (Yellow Bartsia) was still in flower on the Ainsdale Reserve as well as the one plant of *Silene otites* (Spanish Catchfly) still thriving after many years waiting for a male partner! Well established aliens were *Bromopsis inermis* (Hungarian Brome), *Lathyrus tuberosus* (Tuberous Pea) and *L. latifolius* (Broad-leaved Everlasting-pea). On a damper slack, where *Salix repens* subsp. *argentea* (Creeping Willow) was shorter, the abundance of the dune form of *Parnassia palustris* (Grass-of-Parnassus) was a memorable sight.

Finally, a 2km walk was undertaken to see the hybrid *Juncus balticus* × *J. inflexus*. On the way a pool produced *Hippuris vulgaris* (Mare's-tail), *Baldellia ranunculoides* (Lesser Water-plantain), *Potamogeton gramineus* (Various-leaved Pondweed) and *Apium inundatum* (Lesser Marshwort).

Carex disticha (Brown Sedge), *Pyrola rotundifolia* subsp. *maritima* (Round-leaved Wintergreen), *Monotropa hypopitys* (Yellow Bird's-nest) and *Centaurea pulchellum* (Lesser Centaury) were among the more notable species seen during a happy day. No tea again and so Dewberries were enjoyed.

VERA GORDON

'SHODDY' FIELDS, NEAR WAKEFIELD, S.W. YORKSHIRE (v.c. 63). 4th SEPTEMBER [38]

A party of 38 enthusiastic botanists (including the leader and one guest) visited three shoddy fields located in the Outwood/Wrenthorpe area, 2km north-west of Wakefield, West Yorkshire.

The use of 'shoddy' or wool waste as a manure for arable crops was more widespread twenty or thirty years ago in West Yorkshire, but this practice has dwindled in recent years. Today, the areas around Wakefield, Rothwell and Lofthouse are one of the last outposts in the county for the use of wool waste on crop fields. Depending on the various countries of origin of the wool, one can expect almost any type of vascular plant seed to be transported in the shoddy. As with bird seed aliens on waste ground or rubbish tips, shoddy weeds comprise a heterogeneous and bizarre assemblage of species, some of which are not listed even in the most comprehensive British Floras. There tends to be a fairly constant and significant proportion of legumes of various kinds, and some composites are of regular occurrence, together with various alien grasses, but the chance of finding almost anything in this strange agricultural habitat certainly whetted everyone's appetite.

All the fields had well-developed cabbage crops and the first interesting find was a vast and impressive display of *Sisymbrium irio* (London-rocket), together with the common *S. officinale* (Hedge Mustard) and *S. orientale* (Eastern Rocket). The second field produced the most diverse list, including, among the legumes, five medicks — *Medicago arabica* (Spotted Medick), *M. laciniata* (Tattered Medick), *M. minima* (Bur Medick), *M. polymorpha* (Toothed Medick) and *M. truncatula* (Strong-spined Medick). Five clovers — *Trifolium glomeratum* (Clustered Clover), *T. hirtum* (Rose Clover), *T. hybridum* (Alsike Clover), *T. pratense* (Red Clover) and *T. subterraneum* (Subterranean Clover) as well as *Coronilla scorpioides* (Annual Scorpion-vetch), *Melilotus indicus* (Small Melilot), *M. sulcatus* (Furrowed Melilot) and *Scorpiurus muricatus* (Caterpillar-plant) were also found.

Apart from the *Sisymbrium* genus, crucifers were represented by *Brassica juncea* (Chinese Mustard), *B. rapa* (Turnip) and one or two plants of the unusual *Diplotaxis erucoides* (White Wall-rocket), a plant of the Iberian peninsula, southern France and Italy. Typically, several *Erodium* species were seen, including *E. botrys* (Mediterranean Stork's-bill), *E. chium* (Three-lobed

Stork's-bill), *E. cicutarium* (Common Stork's-bill) and *E. moschatum* (Musk Stork's-bill) in association with expected aliens such as *Xanthium spinosum* (Spiny Cocklebur) and *X. strumarium* (Rough Cocklebur). In addition, several native and relatively, widespread crop field plants such as *Lamium amplexicaule* (Henbit Deadnettle), *L. hybridum* (Cut-leaved Dead-nettle) and *Urtica urens* (Small Nettle), the latter growing to an enormous size, were quite widespread in all fields. Towards the end of the afternoon, one of the last highlights was finding one or two plants of *Trifolium tomentosum* (Woolly Clover), while, interestingly, *Rorippa palustris* (Marsh Yellow-cress) was seen happily growing in what seemed a somewhat alien environment.

This excursion was enjoyed enormously by everyone and we would like to record our sincere thanks to John Martin for leading the outing and to the owner of the fields for allowing the party access.

G.T.D. WILMORE

ENGLAND / SCOTLAND

NORTHUMBERLAND AND ROXBURGHSHIRE (v.cc. 68 & 80). 26th-28th JUNE [7]

The main area of this three day field meeting was the huge Kielder and Emblehope Moors SSSI (v.c. 68) in Northumberland and the adjoining Kielderhead Moors SSSI (v.c. 80) in Roxburghshire. These SSSIs cover a huge area of mainly blanket bog above the tree line in the Forest Enterprise Kielder District and Borders District. The area is managed as a conservation area by Forest Enterprise on both sides of the border. The enormous size gives plenty of scope for botanizing.

19 members including several county recorders and the president, Franklyn Perring with his wife Margaret, assembled at Kielder Castle in thick mist on the first day. Plans to head straight for the highest point were quickly altered and we were taken by forestry roads to some ponds at Scaup Farm where the botanizing began and the first species of *Carex* admired. The sun came out brightly, the mist cleared and from then we had the best three days weather of the summer. We then went up William's Cleugh and examined some Scots Pine (*Pinus sylvestris*) which are said to be relict Caledonian pine, the only Northumbrian examples. Following the burn up William's Cleugh we found *Listera cordata* (Lesser Twayblade) and *Trientalis europaea* (Chickweed Wintergreen). Some further rough walking through long heather and bilberry (*Vaccinium myrtillus*) brought us to the site of Northumberland's rarest plant *Diphasiastrum complanatum* morphotype *decipiens* (Issler's Clubmoss) growing beside *D. alpinum* (Alpine Clubmoss) in a dry valley with bare sandstone scree. This site for *D. complanatum* is particularly intriguing because of its association with Caledonian pine in Scotland. In William's Cleugh it is about 1km from the possible Caledonian pines. From there we climbed up to the top of the Cleugh and found a lovely flushed meadow area providing a species-rich oasis in all that moorland. Travelling across to Deadwater Fell visitors to the area were thrilled to see the hectares and hectares of *Rubus chamaemorus* (Cloudberry) flowering. Deadwater Fell top obligingly supplied its *Carex bigelowii* (Stiff Sedge). Here too we noted plants growing on the disturbed areas where masts had been put in, especially *Spergularia rubra* (Sand Spurrey) which must be at its highest British Isles altitude here. We admired panoramic views of south Scotland and Northumberland while we waited for the Forest Enterprise minibus which took us back to Kielder and the tea-room at the Castle.

A subsidiary expedition comprised of Rod Corner, Hugh Lang and Professor and Mrs Swan spent the day travelling to Limestone Knowe and back in search of *Trollius europaeus* (Globeflower), reported to have been found on Limestone Knowe by Derek Ratcliffe. They didn't find it, but did find *Carex bigelowii* (Stiff Sedge) at this new site. *Listera cordata* (Lesser Twayblade) was found by the White Kielder.

The next day we went up to the fell tops from the Scottish side of the border and made for the Black Needle and the Green Needle, the party splitting into two groups. The Black Needle is so-called because the vegetation is heather and the Green Needle because it is grassland, which is species-rich due to the alkaline nature of the substrate. It really is a unique little valley in all that area of Ericaceae. There were little flushes with *Pinguicula vulgaris* (Common Butterwort), wonderful

stands of *Carex* spp. including *C. binervis* (Green-ribbed Sedge), *C. caryophyllea* (Spring Sedge), *C. curta* (White Sedge), *C. disticha* (Brown Sedge), *C. echinata* (Star Sedge), *C. flacca* (Glaucous Sedge), *C. hostiana* (Tawny Sedge) and *C. viridula* subspp. *oedocarpa* and *brachyrrhyncha* (Yellow-sedge). One singular flush had banksides of primroses (*Primula vulgaris*) a long way from their nearest kin, *Fragaria vesca* (Wild Strawberry), *Lysimachia nemorum* (Yellow Pimpernel), *Hypericum pulchrum* (Slender St John's-wort) and *Parnassia palustris* (Grass-of-Parnassus) and many others forming a glorious contrast to the upland blanket bog. The great search that day was for *Galium sterneri* (Limestone Bedstraw), said to grow in the Green Needle. We found plenty of *Galium uliginosum* (Fen Bedstraw) but no *G. sterneri*. However *Diphasiastrum alpinum* (Alpine Clubmoss) was found exactly where Chris Badenoch had told us it would be in the Black Needle. This is the only extant site for *D. alpinum* in v.c. 80. A new vice-county record for Roxburgh was *Hieracium duriceps* found by Allan Stirling. *Carex bigelowii* (Stiff Sedge) occurred locally along the edge of the escarpment between Carlin Tooth and Hartshorn Pike at 540m. We saw the wild goats on the fell and again spectacular views of South Scotland.

Monday was even hotter and a party of ten took a gentler trip to visit some quarries at Thorlieshope and Fairloans where we found an albino *Thymus polytrichus* (Wild Thyme). The old quarries and buildings were interesting and the sheep-cropped sward provided much easier walking than the moorland but no major discoveries were made, though Graham Kay's diligence produced *Ophioglossum vulgatum* (Adder's-tongue) eventually. *Asplenium trichomanes-ramosum* (Green Spleenwort) was found in the sandstone quarry at Fairloans where it must be present as a colonist. It has only been found on natural rocks before in v.c. 80, and then only rarely. Hugh Lang's insistence that most small ferns were *Cystopteris fragilis* (Brittle Bladder-fern) was finally rewarded when we examined the inside of the old lime-kilns at Fairloans and found that walls, floor and ceiling were covered in *Cystopteris* in the peak of perfection and with that wonderful sight we (most of us) decided to end the day and drink yet more tea. We had a good three days and are very grateful to the landowners, Forest Enterprise, and Andrew Douglas, not only for allowing us to visit but also for their help with transport, turning off electric fences and directions.

A.T. PICKERING & R.W.M. CORNER

IRELAND

NORTH AND SOUTH KERRY (v.cc. H1 & H2). 31st JULY-1st AUGUST [8]

22 members and guests, including six from England, met at Tralee railway station where a fine selection of ruderals were seen, including *Senecio viscosus* (Sticky Groundsel) which has been known from there since 1976. Heading north to the vicinity of Ardfert, a visit was paid to Lough Lerrig which earlier this century had provided the only Kerry record for *Ranunculus aquatilis* (Common Water-crowfoot) and an inland record for *Ranunculus baudotii* (Brackish Water-crowfoot) (*Flora of County Kerry*, Scully, R.W., 1916). The lake is now very eutrophic and neither species was found, although a scrap of a Batrachian *Ranunculus*, sadly insufficient for identification, was gathered. The lake is still of significance, however, being one of the very few areas of open water in North Kerry. Although some 5km from the sea, several maritime species were recorded by the lake — *Bolboschoenus maritimus* (Sea Club-rush), *Schoenoplectus tabernaemontani* (Grey Club-rush) and *Tripleurospermum maritimum* (Sea Mayweed). *Salix triandra* (Almond Willow), which was new to North Kerry, *Inula helenium* (Elecampane) and viviparous *Dactylis glomerata* (Cock's-foot) were recorded nearby.

Next stop was at Carrahane Strand near Rahoneen Castle. This is an important site comprising a large area of sand flats fringed by salt marsh and bounded on the west by a sand dune ridge. Investigation of the salt marsh yielded *Blysmus rufus* (Saltmarsh Flat-sedge), *Carex extensa* (Long-bracted Sedge), *Cochlearia officinalis* × *C. anglica*, *C. officinalis* subsp. *scotica* (Common Scurvygrass), *Limonium recurvum* subsp. *portlandicum* var. *kerryense* (Rock Sea-lavender) in its type locality, *Parapholis strigosa* (Hard-grass), *Trifolium fragiferum* (Strawberry Clover) and an odd, as yet unidentified *Puccinellia* (Saltmarsh-grasses) collected by Tom Curtis. *Asperula*

cynanchica (Squinancywort) and a *Lycium* which was somewhat intermediate between *L. chinense* (Chinese Teaplant) and *L. barbarum* (Duke of Argyll's Teaplant) occurred nearby. The party then moved to the sand dune ridge to the north-west of Carrahane Strand, where interesting sand dune taxa such as *Anagallis arvensis* var. *carnea* (Pimpernel), *Arabis hirsuta* (Hairy Rock-cress), *Arrhenatherum elatius* var. *bulbosum* (Onion Couch), *Asperula cynanchica* (Squinancywort), *Bromus hordeaceus* subsp. *thominei* (Soft-brome), *Cerastium fontanum* var. *holosteoides* (Common Mouse-ear), *Cuscuta epithymum* (Dodder), *Epipactis palustris* (Marsh Helleborine), *Rubus caesius* (Dewberry) and *Senecio jacobaea* subsp. *dunensis* (Common Ragwort) were recorded.

The final stop of the day was to the site of the now disused Tralee waterworks, situated on the lower slopes of the Slieve Mish mountains on the Dingle Peninsula, and just within v.c. H2. Here were noted *Chamaemelum nobile* (Chamomile), *Eleocharis quinqueflora* (Few-flowered Spike-rush), *Hypericum humifusum* (Hairy St John's-wort), *Pinguicula grandiflora* (Large-flowered Butterwort), *P. lusitanica* (Pale Butterwort), *Radiola linoides* (Allseed) and *Sibthorpia europaea* (Cornish Moneywort), the latter in its only North Kerry station, at the extreme eastern end of its range.

On the second day the party, which numbered 16, met at Dingle and proceeded to Smerwick Harbour where a coastal complex comprising young sand dunes, a fixed dune plain, dune slacks and extensive freshwater marshes were examined. Many interesting taxa were noted – a curious, dwarf, creeping variant of *Apium nodiflorum* (var. *repens*?) (Fool's Water-cress), *Asperula cynanchica* (Squinancywort), *Atriplex laciniata* (Frosted Orache), *Berula erecta* (Lesser Water-parsnip), *Bidens cernua* (Nodding Bur-marigold), *Callitriche* cf. *hamulata* (Intermediate Water-starwort), *C. obtusangula* (Blunt-fruited Water-starwort), *Calystegia sepium* subsp. *roseata* (Hedge Bindweed), *Cerastium fontanum* var. *holosteoides* (Common Mouse-ear), *Coeloglossum viride* (Frog Orchid), *Eleocharis uniglumis* (Slender Spike-rush), *Epipactis palustris* (Marsh Helleborine) *Juncus subnodulosus* (Blunt-flowered Rush), *Polygonum oxyspermum* subsp. *raii* (Ray's Knotweed), *Potamogeton berchtoldii* (Small Pondweed), *P. pusillus* (Lesser Pondweed), *Trifolium fragiferum* (Strawberry Clover), *Utricularia australis* (Bladderwort), the Charophyte, *Chara vulgaris* forma *longibracteata* (det. N F. Stewart) and a rich array of *Senecio* taxa, including *S. jacobaea* (Common Ragwort), *S. aquaticus* (Marsh Ragwort), their hybrid *S.* × *ostenfeldii* and the rayless *S. jacobaea* subsp. *dunensis*.

The last site visited was the northernmost peak of the Three Sisters range situated in the north-west corner of the Dingle Peninsula. The lower, east-facing slopes of this mountain support a good example of coastal heath while the western side comprises a sheer drop of over 150m to the sea. On reaching the summit the party was rewarded by the sight of several Choughs, a Gannet and magnificent views of the Blasket Islands and Atlantic Ocean. While no particularly notable species were recorded here it was pleasing to see *Asplenium marinum* (Sea Spleenwort), *Empetrum nigrum* (Crowberry) and *Saxifraga spathularis* (St Patrick's-cabbage) on the cliffs and *Pedicularis sylvatica* subsp. *hibernica* (Lousewort) and *Radiola linoides* (Allseed) scattered through the heath. On the journey home a fine stand of *Althaea officinalis* (Marsh-mallow) was noted by the road near Smerwick.

Records noted from the Dingle Peninsula during the meeting will be incorporated into a *Flora of the Dingle Peninsula* which is being prepared by the authors of this report. We wish to thank all those who attended, for making this such a successful meeting.

M.B. & P.S. WYSE JACKSON

SCOTLAND

ASSYNT, WEST SUTHERLAND (v.c. 108). 19th-20th JUNE [9]

The meeting, held over three days in June, was arranged to help with tetrad recording for the projected *Flora of Assynt*. With a total of 13 members attending, plus two leaders, it was possible to survey at least two tetrads each day and, on one occasion, three.

On Saturday, no doubt helped by the sunshine, one party recorded 235 species in a tetrad containing the large Manse Loch and surrounding woodland as well as dry and wet heath, a small but rich roadside loch and, as a bonus, the Lochinver rubbish tip! Although some of the woodland was almost pure birch (*Betula* spp.), there were areas where the presence of *Corylus avellana* (Hazel), *Populus tremula* (Aspen) and *Quercus petraea* (Sessile Oak) promised a richer ground flora. Here *Galium odoratum* (Woodruff) and *Geum urbanum* (Wood Avens), uncommon plants in Assynt, were welcome finds and, backed up by records of *Allium ursinum* (Ramsons), *Luzula pilosa* (Hairy Wood-rush) and *Trollius europaeus* (Globeflower), made this one of Assynt's better woodlands.

Ferns are often a feature of these wet western woodlands and those noted included *Dryopteris aemula* (Hay-scented Buckler-fern), *D. expansa* (Northern Buckler-fern) and *Hymenophyllum wilsonii* (Wilson's Filmy-fern). On dry heath, *Listera cordata* (Lesser Twayblade) was sought and found, growing, as expected, under *Calluna vulgaris* (Heather). More surprisingly, a metre or two away, was a large population of *Ophioglossum vulgatum* (Adder's-tongue) growing in quite deep shade beneath *Pteridium aquilinum* (Bracken) and *Calluna vulgaris*. On dry peaty banks, some of which had been burned during the last year or so, rosettes of *Ajuga pyramidalis* (Pyramidal Bugle) were recorded. This unexpected benefit of 'muirburn' has been noted here before. *A. pyramidalis was* growing in quantities which surprised those not familiar with it in this area. A small roadside loch, partly dominated by *Nymphaea alba* (White Water-lily), had good stands of *Carex lasiocarpa* (Slender Sedge) and *C. limosa* (Bog-sedge) on the margins. A number of 'marsh orchids' were growing on wet ground nearby and the relative merits of *Dactylorhiza purpurella* (Northern Marsh-orchid) and *D. incarnata* subsp. *pulchella* (Early Marsh-orchid) as their correct identity were discussed at length, if not always conclusively!

A second party, subdivided into two groups, recorded from a predictably rich tetrad around Strathan, south of Lochinver, containing coastal woodland, grassland and moor. They mustered 241 species, the highest single day's total so far achieved during the survey, with Juncaceae and Cyperaceae providing 38 species! Crags in the woodlands had locally uncommon species such as *Elymus caninus* (Bearded Couch) and small marshy areas just above high tide level considerably extended the number of stations in Assynt for *Scutellaria galericulata* (Skullcap) and *Oenanthe crocata* (Hemlock Water-dropwort). The moorland group added *Asplenium trichomanes-ramosum* (Green Spleenwort), which is locally uncommon away from limestone and *Eriophorum latifolium* (Broad-leaved Cottongrass), characteristic of base-rich flushes, both indicating the potential of the local gneiss.

On Sunday, members split into three parties, with a small group of experienced hill walkers recording from the south-east slopes of Glas Bheinn. In spite of poor conditions, they noted *Luzula spicata* (Spiked Wood-rush), *Juncus trifidus* (Three-leaved Rush) and *Vaccinium uliginosum* (Bog Bilberry), with *Isoetes lacustris* (Quillwort) in quantity in a loch. Limestone provided the interest for the second party, who took on a tetrad at Achmore, 3km north of Inchnadamph. *Equisetum variegatum* (Variegated Horsetail) was found in several places beside a burn, *Dryas octopetala* (Mountain Avens) and *Polygonum viviparа* (Alpine Bistort) in the limestone grassland and *Asplenium trichomanes-ramosum* (Green Spleenwort) and *Galium sterneri* (Limestone Bedstraw) amongst outcrop rock. Recording was abandoned in the afternoon because of the weather, but some members took the opportunity of a quick trip up the River Traligill to see *Salix myrsinites* (Whortle-leaved Willow).

The third and smallest party (two only!) investigated the Allt Poll an Droighinn, a vigorous tributary of the River Traligill. The gorge through which this was 'boiling' not only had a good limestone flora, but also contained *Ajuga reptans* (Bugle) in its only known station in Assynt. This is a good example of 'its not what you see, its where you see it', since *A. pyramidalis* (Pyramidal Bugle) is by far the commoner representative of the genus locally. The afternoon, spent plodding a further 2km up the burn, on quartzite, yielded little new except a single clump of *Oxyria digyna* (Mountain Sorrel) protected from grazing in the middle of small waterfall.

Monday, still raining, saw two parties working coastal tetrads. The smaller one had quite a long walk in to the virtually tree-less headland of Rubha Rodha, west of Ardroe. This rather dour tetrad was enlivened by a characteristic tall herb community on a sheltered north-facing cliff with *Dryopteris aemula* (Hay-scented Buckler-fern), *Hymenophyllum wilsonii* (Wilson's Filmy-fern) and *Luzula sylvatica* (Great Wood-rush). Given the weather, the 129 species recorded made a very respectable

total and the route out, in places across boulder-strewn intertidal mud on the edge of Loch Roe, was quite challenging.

The larger party walked along the coast to the Old Man of Stoer. The cliffs here are mostly inaccessible and some valuable recording was done through binoculars. In contrast to the rather lax specimens of *Ophioglossum vulgatum* (Adder's-tongue) found on the Saturday, a considerable population of plants found in exposed cliff-top turf were no more than 2cm high. They were subsequently confirmed as *O. azoricum* (Small Adder's-tongue), the first record for Assynt since the 1950s.

'Off watch', two members of the party found a thriving small population of *Astragalus danicus* (Purple Milk-vetch) on a track leading to a car park on some sand dunes. Not only is this new to v.c. 108, but it appears to extend the known range of the species on the west coast by nearly 200km.

P.A. & I.M. EVANS

CREAG MACRANAICH, MID PERTH (v.c. 88). 11th JULY [10]

This was a joint meeting between the BSBI and the Perthshire Society of Natural Science's Botanical section to record on this rarely visited mountain area west of Glen Ogle and wholly within the NN/5.2, north-east quadrant.

Twelve members met near the disused old Killin Railway Station on a fine day which belied its forecast. Our route started along this railway whose rock cuttings and old ballast provided a variety of habitats. Of particular interest was a well-trodden, non-flowering grass tentatively identified as *Poa compressa* (Flattened Meadow-grass), but confirmation of this species, for which there are no post-1970 records in mid-Perthshire, must await a flowering specimen. We then struck steeply uphill past an attractive waterfall, then through very leggy heather with frequent boggy ground: the full range of usual plants of these habitats were seen, including *Trientalis europaea* (Chickweed Wintergreen), *Listera cordata* (Lesser Twayblade) and *Carex pauciflora* (Few-flowered Sedge).

We at last reached the rocks of Meall Sgallachd to the north-west of Creag MacRanaich. Calcium-rich areas proved to be few and very restricted; calcicoles such as *Polystichum lonchitis* (Holly Fern) and *Saxifraga oppositifolia* (Purple Saxifrage) were seen but well scattered and in very small quantity, interspersed with calcifuges such as *Juncus trifidus* (Three-leaved Rush) and *Solidago virgaurea* (Goldenrod).

On the way down, some members visited the well-known Loch Larig Eala finding *Carex limosa* (Bog-sedge) and *Nuphar pumila* (Least Water-lily).

197 species were recorded and there were fine views of several birds of prey and dragonflies.

R.E. THOMAS

AONACH BEAG, WESTERNESS (v.c. 97) AND GLEN ETIVE, MAIN ARGYLL (v.c. 98). 24th-25th JULY [11]

Aonach Beag

The purpose of this meeting was to explore this large and remote mountain to refind old records and perhaps visit less well-known crags and gullies. In the event the wet, cold weather and the unusually large snow patches meant that some determination (and intimate contact with the cold, white stuff!) was necessary from the nine participants, even for a more limited itinerary. Our approach was from the north, up the Allt Coire an Eoin to An Cul Choire and the north-east crags of the mountain.

Interesting plants seen on the crags and in the gullies above An Cul Choire included *Cerastium alpinum* (Alpine Mouse-ear), *C. arcticum* (Arctic Mouse-ear), *C. cerastoides* (Starwort Mouse-ear), *Luzula arcuata* (Curved Wood-rush), *Cystopteris montana* (Bladder Mountain-fern), *Athyrium distentifolium* (Alpine Lady-fern), *Carex atrata* (Black Alpine-sedge), *Tofieldia pusilla* (Scottish Asphodel), *Poa alpina* (Alpine Meadow-grass), *P. flexuosa* (Wavy Meadow-grass), *Sibbaldia procumbens* (Sibbaldia), *Veronica alpina* (Alpine Speedwell), *Saxifraga cernua* (Drooping

Saxifrage) was inspected in its known site. Of particular interest was the occurrence of numerous plants of *Ranunculus auricomus* (Goldilocks Buttercup) on ledges of irrigated crags where the snow lies late, at an altitude of 1090m. The latter is the only new plant for the mountain but, given the conditions, the list represents a respectable achievement. The cloud around the towering crags and the large snow patches created a formidable atmosphere; it didn't feel much like July.

Thanks are due to West Highlands Estates for arranging access.

Glen Etive

The granite hills south of Glen Etive have not received the same attention as the nearby rich mica schist hills or the Glencoe volcanics and the purpose of this meeting was to make a small step towards rectifying this state of affairs. It is probably fair to say that our card for the day gives some indication as to why botanists have tended to concentrate elsewhere! Rainfall precluded our crossing of the Etive by anything other than a bridge, so nine of us crossed at Coiletir and headed north-east with the rain at our backs, to explore the slopes of Stob Dubh where the geological map indicates some mica schist outcrops.

This area proved rather steep and not very productive and so we descended to the Etive opposite Lochan Urr and made our way back to the Coiletir bridge along the south bank. This provided more of interest with scattered plants of *Dactylorhiza incarnata* (Early Marsh-orchid) in flushes, *Dryopteris aemula* (Hay-scented Buckler-fern) in a ravine and *Carum verticillatum* (Whorled Caraway) in wet grassland. My thanks to those who turned out and remained cheerful for a second day in rather grim conditions.

Thanks are due to the factor at Athol Estates for arranging access.

G. ROTHERO

WALES

GRAIG FAWR AND POINT OF AIR, FLINTSHIRE (v.c. 51) 29th MAY [12]

Fourteen people met in Meliden to visit the limestone outcrop, Graig Fawr, a National Trust property. Starting along the old railway track, grasses were just coming into flower, including *Briza media* (Quaking-grass), *Helictotrichon pubescens* (Downy Oat-grass), *Festuca gigantea* (Giant Fescue) and *Melica uniflora* (Wood Melick). The rock walls were covered with *Helianthemum canum* (Hoary Rock-rose) and *H. nummularium* (Common Rock-rose), with *Silene nutans* (Nottingham Catchfly), *Arabis hirsuta* (Hairy Rock-cress), *Veronica spicata* (Spiked Speedwell) and *Scabiosa columbaria* (Small Scabious). *Minuartia verna* (Spring Sandwort) was abundant in gravely places.

Climbing through the woods we reached the open grassland, with the summit at 153 metres. The thin soil on rocky outcrops had *Myosotis ramosissima* (Early Forget-me-not), *Trifolium striatum* (Knotted Clover), *Aphanes arvensis* (Parsley-piert), *Catapodium rigidum* (Fern-grass), *Sherardia arvensis* (Field Madder) and *Koeleria macrantha* (Crested Hair-grass). In grassier places *Geranium pusillum* (Small-flowered Crane's-bill) grew with *G. molle* (Dove's-foot Crane's-bill), and there was a patch of *Carduus tenuiflorus* (Slender Thistle).

This area is surrounded by houses, and there were *Chelidonium majus* (Greater Celandine), *Meconopsis cambrica* (Welsh Poppy) and bird-sown *Cotoneaster* spp. growing near the path. We lunched on a sunny bank near the cars, then spent the afternoon on the dunes and slacks at Point of Air.

Brackish pools had *Triglochin maritima* (Sea Arrowgrass), *Carex extensa* (Long-bracted Sedge), *Juncus gerardii* (Saltmarsh Rush) and *Phragmites australis* (Common Reed), while on the dry grassland were *Trifolium campestre* (Hop Trefoil) and *T. striatum* (Knotted Clover). There were several large patches of *Ophioglossum vulgatum* (Adder's-tongue), with *Listera ovata* (Common Twayblade) and *Leucanthemum* × *superbum* (Shasta Daisy). Part of the area had been a shanty town until the 1950s and many plants of garden origin remain. There are spectacular displays of

Kniphophia uvaria (Red-hot-poker) and *Cerastium tomentosum* (Snow-in-summer), also *Ruscus aculeatus* (Butcher's-broom), *Ulmus procera* (English Elm) and *Syringa vulgaris* (Lilac).

In the salty slacks we found *Sagina maritima* (Sea Pearlwort), *Atriplex portulacoides* (Sea-purslane) and *Salicornia* spp. (Glassworts). On the dunes were *Eryngium maritimum* (Sea-holly), *Rhinanthus minor* (Yellow-rattle) and interesting grasses, *Parapholis strigosa* (Hard-grass), *Vulpia fasciculata* (Dune Fescue), *Catapodium marinum* (Sea Fern-grass) and *Poa humilis* (Spreading Meadow-grass). Orchids were just starting to show colour, and *Dactylorhiza incarnata* (Early Marsh-orchid) and *D. purpurella* (Northern Marsh-orchid) were identified. *Euphorbia paralias* (Sea Spurge) was compared with *E. portlandica* (Portland Spurge) and, on our return, we found *Sisymbrium orientale* (Eastern Rocket) and *Descurainia sophia* (Flixweed). It had been a varied and rewarding day.

JEAN A. GREEN

MARIANDYRYS AND FEDW FAWR, ANGLESEY (v.c. 52) 20th JUNE [13]

22 members assembled in eastern Anglesey on a sunny June morning to explore the limestone grasslands, quarries, coastal cliffs and maritime heath which together form an interesting mosaic of species-rich plant communities. The underlying rocks here are of Carboniferous age and dominated by limestone, but sandstones and conglomerates occur along the coast, and glacial deposits of varying thickness overlie the bedrock in many places.

At Fedw Fawr the National Trust manages a maritime heath which supports good populations of orchids including *Platanthera bifolia* (Lesser Butterfly-orchid), *Gymnadenia conopsea* (Fragrant Orchid), *Orchis morio* (Green-winged Orchid), *O. mascula* (Early-purple Orchid), *Dactylorhiza fuchsii* (Common Spotted-orchid), *D. maculata* subsp. *ericetorum* (Heath Spotted-orchid) and *D. purpurella* (Northern Marsh-orchid), all of which were recorded on the day. There was a particularly fine orchid display in unimproved pasture belonging to Oriel Parker-Rhodes who kindly allowed us access. Fedw Fawr also boasts one of the last remaining colonies of *Huperzia selago* (Fir Clubmoss) on Anglesey, and a brief survey of an area of heath noted over 30 plants, a record number in recent years. We also relocated a few plants of *Antennaria dioica* (Mountain Everlasting) growing with *Helianthemum nummularium* (Common Rock-rose) and *Sanguisorba minor* subsp. *minor* (Salad Burnet) where a small limestone outcrop suddenly punctuates the heath-smothered glacial drift. Base-rich flushes elsewhere on the heath encourage small stands of *Schoenus nigricans* (Black Bog-rush) amongst which we finally found small specimens of *Selaginella selaginoides* (Lesser Clubmoss).

On the sea cliffs the fruiting heads of *Scilla verna* (Spring Squill) were noticeably common along with more familiar calcicoles wherever limestone was exposed. Seepage points supported large numbers of *Pinguicula vulgaris* (Common Butterwort) and in other places dense stands of *Equisetum telmateia* (Great Horsetail), whilst *Allium ursinum* (Ramsons) dominated in slightly more sheltered sections of the cliffs. Just above high tide level there were a number of plants of *Asplenium marinum* (Sea Spleenwort), mainly growing on conglomerate and displaying varying degrees of lushness according to their position. 10 metres above, on a rust tinted sandstone cliff, out of harm's way, sprouted seven specimens of *Osmunda regalis* (Royal Fern) exploiting a moist vertical fissure in the rock. Here, too, was interest for the ornithologist in the shape of Black Guillemots at their southernmost breeding site in Britain, and excellent views were obtained by some members over lunch.

During the afternoon we were expertly guided around the North Wales Wildlife Trust Reserve at Mariandyrys by the volunteer reserve manager, David Evans. The disused limestone quarry supports small populations of *Linum bienne* (Pale Flax) and *Allium vineale* (Wild Onion) as well as abundant *Helianthemum nummularium* (Common Rock-rose), *Scilla verna* (Spring Squill), *Aquilegia vulgaris* (Columbine), *Sanguisorba minor* subsp. *minor* (Salad Burnet), *Plantago maritima* (Sea Plantain), *Aira caryophyllea* (Silver Hair-grass) and *A. praecox* (Early Hair-grass). Elsewhere on the reserve we were shown *Geranium columbinum* (Long-stalked Crane's-bill) which may well have been helped by recent gorse control measures. *Pimpinella saxifraga* (Burnet-saxifrage) has likewise prospered

where controlled burning and grazing have helped maritime open calcareous grassland, with abundant *Koeleria macrantha* (Crested Hair-grass).

Notable roadside verge plants included a magnificent patch of *Symphytum caucasicum* (Caucasian Comfrey) (valuable discussion here about the differences between *S. caucasicum* and *S.* × *uplandicum* (Russian Comfrey)) and scattered plants of *Geranium pyrenaicum* (Hedgerow Crane's-bill) in sheltered spots. Last but not least, a delightful flushed area by the rough car park on Glan-yr-afon, where we had chosen to assemble, displayed seven species of sedge, four species of orchid (including *Listera ovata* (Common Twayblade)), *Serratula tinctoria* (Saw-wort), *Drosera rotundifolia* (Round-leaved Sundew) and *Pinguicula vulgaris* (Common Butterwort) as well as *Genista anglica* (Petty Whin)

NIGEL BROWN

MWNT, CARDIGANSHIRE (v.c. 46) 14th AUGUST [14]

24 members met in the National Trust car park at this popular beauty spot on the Ceredigion coast. The morning was spent in the company of the Warden, Bruce Cardwell, exploring the cliff slopes. *Briza media* (Quaking-grass), a rare plant in this mostly acidic area, was found on *Ammophila arenaria* (Marram) dunes formed where sand had blown up from the beach on to the cliff top, and *Samolus valerandi* (Brookweed) was on the exposed boulder clay. On the dry, south-facing rocky slope of Foel y Mwnt in intensely rabbit-grazed turf *Filago vulgaris* (Common Cudweed) and *Erodium maritimum* (Sea Stork's-bill) were in abundance. The former is now known from nowhere else in Cardiganshire, and the latter from only one other site. On the ridge just north of the summit of the Foel *Koeleria macrantha* (Crested Hair-grass) and *Sagina subulata* (Heath Pearlwort) were found, the latter flowering in bare patches on the path. We searched in vain among *Euphrasia tetraquetra* (an eyebright) for *Spiranthes spiralis* (Autumn Lady's-tresses) which had been seen here several times in recent years. The severe flooding in June had disrupted the marsh and stream to the east, but *Eleocharis quinqueflora* (Few-flowered Spike-rush) and *Juncus gerardii* (Saltmarsh Rush) were both in quantity. On the coastal heath beyond there was a colourful display of *Serratula tinctoria* (Saw-wort) and *Stachys officinalis* (Betony), the latter with many white-flowered plants. *Scilla verna* (Spring Squill) fruits were still visible.

We spent the afternoon in three arable fields between Tygwyn Farm and the sea, by kind permission of the farmer, Martin Evans. A couple of the larger stands of oats and potatoes had been sprayed, but the rest of the area, as in most years here, had been untreated and was under strip cultivation of carrots, beans, peas, potatoes etc. We saw some 70 species of arable weeds, and in places they were so abundant that it was difficult to see what was meant to be growing underneath. There was enormous variation between one strip and the next. Seven taxa of Fumitory were present, *Fumaria bastardii* (Tall Ramping-fumitory) var. *bastardii* and var. *hibernica*, *F. officinalis* (Common Fumitory) subsp. *officinalis* and subsp. *wirtgenii*, *F. muralis* (Common Ramping-fumitory) subsp. *boraei*, *F. capreolata* (White Ramping-fumitory) subsp. *babingtonii*, and one large plant of a hybrid probably between *F. muralis* subsp. *boraei* and *F. officinalis* subsp. *wirtgenii* (awaiting confirmation). *Misopates orontium* (Lesser Snapdragon) was abundant in some of the strips, and other uncommon or decreasing species seen included *Lamium hybridum* (Cut-leaved Deadnettle), *L. amplexicaule* (Henbit Deadnettle), *Stachys arvensis* (Field Woundwort), *Kickxia elatine* (Sharp-leaved Fluellen), *Polygonum rurivagum* (Cornfield Knotgrass), and one plant of *Ranunculus parviflorus* (Small-flowered Buttercup). The characters of *Avena fatua* (Wild-oat) were demonstrated in the hope that this very under-recorded species would be more widely noted (there had been no localised records of it in Cardiganshire until 1992!). At the seaward edge of the fields where the soil was shaley and the plough had run into the coastal heath and scarified the thin, dry earth we saw a vast profusion of *Silene gallica* (Small-flowered Catchfly) and *Scleranthus annuus* (Annual Knawel) and a few plants of *Trifolium subterraneum* (Subterranean Clover).

Conservation of the rich assemblages of arable weeds such as one finds most years at Tygwyn, and to an only slightly lesser extent at other farms along this stretch of coast between Aberporth and Gwbert, depends entirely on the continuance of the sort of unintensive cultivation we saw here. The

crops are grown to a large extent for use on the farm rather than for sale, so the commercial pressures are not so great as elsewhere. Adjacent fields at Tygwyn are used for caravans and for grazing, and the arable fields are occasionally left fallow. Most of the botanists ended the meeting by experiencing yet another example of diversification at Tygwyn by having tea at the farm. We thanked Mr Evans for letting us explore his fields, and wished there was some way of ensuring that the botanical spectacle we had just seen could be guaranteed to reappear annually for the indefinite future. There is clearly a massive seed-bank in these fields, but a few years of more intensive management would probably destroy the whole community.

ARTHUR O. CHATER

CONWY MOUNTAIN, CAERNARFONSHIRE (v.c. 49) 12th SEPTEMBER [15]

The northern outpost of the Snowdonia National Park 3 km west of Conwy is a most attractive heather-clad hillside of Ordovician volcanic rock, overlooking Conwy Bay, and known as Conwy mountain. On a sheltered flank lies Pen-sychnant House, now administered by the North Wales Wildlife Trust and the focal point of the excursion, conveniently situated in the middle of a tetrad, the basic recording unit for the on-going Caernarfonshire Flora Project.

During the morning 20 participants scrutinised a flushed area and shallow pools to the south-east of Pen-sychnant, and were pleased to see *Wahlenbergia hederacea* (Ivy-leaved Bellflower) along with extensive luxuriant carpets of *Hypericum elodes* (Marsh St John's-wort) up to 70cms tall.

After lunching at Pen-sychnant we botanized more rugged terrain at the western end of the Sychnant Pass. Here steep cliffs accommodate a small population of *Asplenium obovatum* subsp. *lanceolatum* (Lanceolate Spleenwort), known from Conwy Mountain since at least the 1860s, and nowadays a very local species in Caernarfonshire. Shortly afterwards on open north-facing scree slopes in the steep valley below these cliffs we located about ten small patches of *Gymnocarpium dryopteris* (Oak Fern), another local fern in the county and much scarcer than *Phegopteris connectilis* (Beech Fern). This colony was first recorded by local botanist Bob Lewis during the Monitoring Scheme in 1987.

Finally we visited two pools on Conwy Mountain, the first of which supported a vigorous colony of *Pilularia globulifera* (Pillwort) with fronds up to 40 cms in length and plenty of sporocarps (the 'pills') nestling among the submerged rhizomes. The second pool, though close by, held no *Pilularia* whatsoever. Instead a lawn of *Littorella uniflora* (Shoreweed) dominated the margin and shallows along with *Eleogiton fluitans* (Floating Club-rush).

Back at Pen-sychnant as the promised frontal system unleashed its rain upon the mountain, a roll-call realised 189 species for the tetrad. Other species of note included *Ceratocapnos claviculata* (Climbing Corydalis), *Drosera rotundifolia* (Round-leaved Sundew), *Eleocharis multicaulis* (Many-stalked Spike-rush), *E. quinqueflora* (Few-flowered Spike-rush), *Epilobium brunnescens* (New Zealand Willowherb), *Filago minima* (Small Cudweed), *Menyanthes trifoliata* (Bogbean), *Oreopteris limbosperma* (Lemon-scented Fern), *Populus nigra* subsp. *betulifolia* (Black Poplar), *Silene uniflora* (Sea Campion) and *Vulpia bromoides* (Squirreltail Fescue).

Thanks are due to Bob Lewis for essential reconnaissance help, and to Julian Thompson and the North Wales Wildlife Trust for their kind hospitality at Pen-sychnant.

NIGEL BROWN

ADVERTISEMENTS

1994 BOTANY TOURS AT HOME AND OVERSEAS

(Led by BSBI Members)

Supplement to the list published in *BSBI News* 64 pp. 64-65

The following botanical tours and courses have been organised by the Scottish Field Studies Association:

10 - 24 April	The Algarve, Portugal	Michael & Sue Scott
21 June - 1 July	Shetland	Michael & Sue Scott

Both are general natural history tours but will have a very strong botanical content.

Further details from: Scottish Field Studies Association, Kindrogan Field Centre, ENOCHDHU, by Blairgowrie, Perthshire PH10 7PG (tel. 0250-881286)

The following botanical tours and courses have been organised by RSNC Wildlife Travel:

March 15-22	Wild Flowers of Tenerife	Brian Gale & Anne Daly
March 15-24	Israel's Birds and Wild Flowers	Franklyn Perring
April 12-19	Flowers and Natural History of Eastern Crete	Brian Gale & Anne Daly
April 19-26	Flowers and Natural History of Western Crete	Brian Gale & Anne Daly
April 20-27 or April 27 - May 4	Wild Flowers and Ancient Sites	Franklyn Perring & Chris Donnelly
Sept. 3-10	Birds, Flowers and Walking in the Pyrenees	Franklyn Perring

Anne, Brian and Franklyn are also running a series of 'Pre-travel' courses on Mediterranean and Mountain plants in Birmingham, Cambridge, Letchworth, Oxford and Wellinborough.

Full details of these and other overseas holidays run by Wildlife Travel are available from:

FRANKLYN PERRING, Green Acre, Wood Lane, OUNDLE, Peterborough PE8 5TP

The following botanical tour has been organised by the Field Studies Council Overseas:

4 - 18 July	Ecology of Iceland	Lynne Farrell and Chris Riley

If you have any questions about the daily activities of the expedition you can ring Chris Riley at Slapton Ley Field Centre on 0548-580685.

Full details of this and other overseas courses run by the Field Studies Council are available from:

FSC Overseas (BSBI), Montford Bridge, SHREWSBURY SY4 1HW (tel. 0743-850164)

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7 - 13 May	Wildflowers of Colonsay	Richard Gulliver

A residential week including illustrated talks, walks, plant identification and associated wildflower topics. details from:

KEVIN BYRNE, The Hotel, Isle of Colonsay, Argyll PA61 7YP

HIGHLAND FIELD STUDIES

Brian Brookes has again put together an interesting and varied programme of courses for 1994. Most are specifically botanical and others, though more general, have a high botanical content. All will be run as small, friendly groups in a relaxed, informal and enjoyable atmosphere.

Specially recommended to BSBI members are the courses on MOUNTAIN FLOWERS (July 2-9) and WILDFLOWERS OF TAYSIDE (July 16-23), both based at Dunkeld Perthshire.

The programme also includes:

April 22-25	Mosses & Liverworts	Dunkeld, Perthshire
May 28 - June 4	Botany in Morvern	Ardtornish, Argyll
August 20-27	Bryophytes	Dunkeld, Perthshire
September 14-21	Natural History Painting & Photography	Ardtornish, Argyll
October 8-15	Autumn in Tayside	Dunkeld, Perthshire

His full programme and details of any particular courses are available from Brian at the address below. All enquiries are welcomed (sae appreciated).

BRIAN BROOKES, Borelick, Trochry, DUNKELD, Perthshire, PH8 0BX. Tel. 0350723-222.

SELF-CATERING COTTAGE TO LET IN SOUTH NORFOLK

Seventeenth-century timber-framed cottage with wood burner and log fire, spacious double and twin bedrooms all fitted to the highest quality standards. Comfortable, quiet and relaxing. Use of 5½ acres of young woodland with about 2000 trees including about 200 species. Good touring base for Norfolk and Suffolk. About 15 miles to Breckland, 20 miles to Broadland, 30 miles to the coast. Further information from:

GEOFFREY WATTS, Barn Meadow, Frost's Lane, Great Moulton, NORWICH, Norfolk, NR15 2HG (Tel: 037977661)

FRITILLARY TOURS

BSBI member, author, photographer and lecturer Dr Bob Gibbons, a Visiting Fellow at Southampton University, is setting up a tour company, Fritillary Tours, to take natural history tours abroad, in conjunction with national orchid expert and photographer Paul Davies. 'After years of leading tours for other organisations, we have decided to organise our own — the way it should be done' Bob said.

For 1994, there are trips to Cyprus, Crete, southern Greece, France and India, as well as some more local weekends and short breaks. All tours, except India, will have a strong botanical bias, visiting many rich localities.

Fritillary Tours are basing their office at the beautiful Kingcombe Centre (home to a wonderful range of local courses itself), in a hidden valley near Toller Porcorum. For further details, contact Fritillary Tours, c/o the Kingcombe Centre, TOLLER PORCORUM, Dorchester DT2 0EQ, tel.: 0300-320684.

BOB GIBBONS, The Limes, Damerham, FORDINGBRIDGE SP6 3EU (tel.: 07253-510)

FIELD COURSE TO SOUTHERN SPAIN
APRIL 1994

The Department of Botany, University of Reading, has taken a field course of third-year students to Spain regularly each spring. For the last five years, they have visited the region of Almeria in the south-east corner of the country, staying partly in the small village of Las Negras and partly in Las Alpujarras, the beautiful valley on the southern slopes of the Sierra Nevada.

The interests of the students and lecturing staff cover all aspects of botany, including systematics, taxonomy, ecology, physiological ecology and conservation. Gastronomy and viticulture are not overlooked.

Accommodation is in modern self-catered holiday flats with well-appointed facilities in Las Negras and small family hotels in the mountains. The village is located in the Parque Natural del Cabo de Gata - Nijar; one of Spain's most famous botanically diverse areas. Outings are organised each day either on foot or by hired coach.

There are places on the trip for a limited number of interested naturalists who wish to learn more of the plants of the area or for those who just feel a springtime walking tour will be beneficial.

The estimated cost at this time will be in the region of £550 which includes air and bus transport, accommodation and picnic lunches in the field.

Anyone interested should contact:

JIM ROSS or STEPHEN JURY, Department of Botany, Plant Science Laboratories, University of Reading, Whiteknights, READING, Berkshire RG6 2AS. Tel. 0734-318167/318169

WALKS AND WILDFLOWERS
in the Cretan Spring

Escorted walks in late March, and through April; intended primarily for those new to the Mediterranean flora.

Further details are available from me at the address below:

JEFF COLLMAN, 21 Beechwood Avenue, Milber, NEWTON ABBOT, Devon TQ12 4LJ

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The Editor Gwynn Ellis can be contacted by phone on 0222-397951 ext. 218 (NMW) or 0222-496042 (home).

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The Hon. General Secretary, c/o Dept. of Botany, The Natural History Museum, Cromwell Road, London SW7 5BD.

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