BSBI NEWS

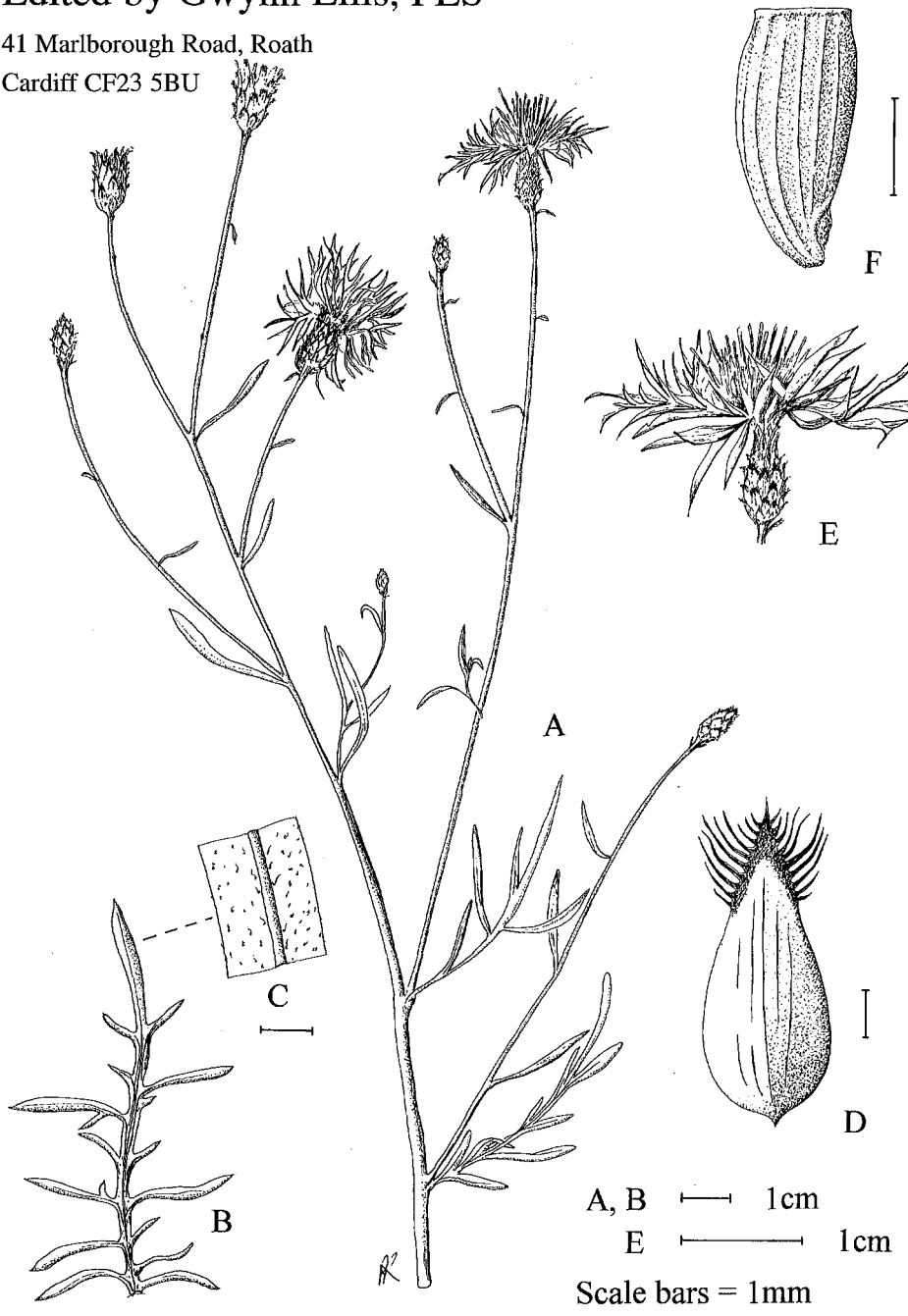
January 2002

No. 89

Edited by Gwynn Ellis, FLS

41 Marlborough Road, Roath

Cardiff CF23 5BU



Centaurea rhenana del. Phil Rye © 2001 (see p. 33)

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www.rbge.org.uk/BSBI

CONTRIBUTIONS INTENDED FOR

BSBI NEWS 90

should reach the Editor before

MARCH 1st 2002

IMPORTANT NOTICES

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 3 Rosliston Road, Stapenhill, Burton-upon-Trent, Staffordshire DE15 9RJ, to arrive **before February 19th 2002** (see *Year Book 2002* for the list of present Council members May 2001–2002).

Members are reminded that Officers are also elected or re-elected at the AGM, and Committee members are appointed by Council at the meeting following the AGM. The Hon. Gen. Sec. will be pleased to receive nominations for consideration by the Executive Committee which meets next on February 27th 2002.

AILSA BURNS, Hon. General Secretary

ATLAS 2000 UPDATE

My apologies for not including anything in the last *News*, but with all the extra work in completing the maps and text on the extra 950 odd rare aliens, the *News* deadline went by the board.

The Book: The final text and maps for 2412 species went to OUP at the end of May. The published title will be *New Atlas of the British and Irish Flora*.

The CD ROM: This will be distributed with the book and will not be available separately. It will contain all the contents of the book plus maps and slightly briefer text on another 942 alien species too rare to include there. This means that all the alien species covered in Stace ed. 2 will be here.

Publication: This has been provisionally arranged for 23/5/2002, with a launch, possibly at Kew.

Price: The probable retail price will be £65, to include the CD ROM. We hope to offer it to BSBI members for £55 or less, to include P. & P. There will also be an offer to other Societies, probably at a higher price.

Interpretation: The *Atlas* contains introductory chapters giving some details and maps of coverage and developments since the last (1962) *Atlas*. It also contains an indication of whether each species has increased or decreased by comparing the records for 1930–1969 with those for 1987–1999 using a statistical method that measures change in relation to that of an 'average' species. DEFRA, with the County Agencies, is commissioning extra research from CEH, assisted by ourselves, to aid interpretation of the *Atlas* results, and it is hoped that a synopsis of this will be available for the launch.

Other matters: Trevor Dines finished his contract with us at the end of last February, although he has worked quite a few days over the summer completing and amending the text for the CD ROM aliens. If for no other reason, I jolly well should have put something in the last two issues of *News*, so may I apologize and say that it has been a real pleasure for Chris Preston and I to have worked with him over the past 5½ years. He was always cheerful and enthusiastic (after 9.30 am) and has developed into an outstanding field botanist. It must have been less than ideal, for the project anyway, to work from home, hundreds of kilometres from Monks Wood and Frome St Quintin, but thanks to his computing skills (and the help of CEH at Bangor), it all worked in the end. Thank you very much indeed, Trevor, for all your work, and the very best in your next post — the new Plantlife Officer for Wales.

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

THE PRESIDENTS' PRIZE

As many readers will know this prize is awarded annually by the Presidents of the Wild Flower Society and BSBI, alternately, for the publication in the preceding calendar year which has most advanced our knowledge of the flora of the British Isles. Last year it was the turn of the BSBI and at the November Exhibition Meeting the prize was awarded to Dr John Rodwell in recognition of the completion in 2000 of the truly groundbreaking five-volume *British Plant Communities*. John was co-ordinator and editor of this widely acclaimed project, of enormous value not just to ecologists but to the wider botanical public as well. It is significant that most of the team assisting him in its compilation were members of the BSBI, including the late Dr Andrew Malloch who had a major input into the last volume on coastal and weed communities.

GEOFFREY HALLIDAY
President BSBI

RICHARD FITTER
President WFS

CONFIDENTIALITY OF RECORDS

Recently the Science and Research Committee discussed the sensitive subject of confidentiality of records. This has again came to light as a result of two recent grant recipients declining to pass on records they judged to be sensitive. In one case this was at the request of the person who had originally supplied the records for use in the grant recipient's research, his own records were duly passed on.

The outcome of the discussion was that, with a few notable exceptions, the threat to rare plants from collectors is generally now a thing of the past and can no longer be considered as a major concern. It would appear that there is far greater threat from habitat loss and developers/consultants not being aware of sites which support rare plants. Such sites are at far greater risk of being inadvertently destroyed if those who need to know, don't know and, in these circumstances, it is surely better to be open in supplying relevant data. The goodwill of those in control of the land, including developers and landowners should not be underestimated: it is often the case that they take pride in protecting a rare species or habitat. There are always exceptions but there is always recourse to pointing out (or threatening?) the position as regards:

- the current legislation under the Wildlife and Countryside Act,
- the implicit protection given to Biodiversity Action Plan habitats by the Countryside and Rights of Way Act and
- Local Development Plan environmental policies,

all of which reinforce the message. There is also the possibility of grant aid for site protection.

Conversely, as a matter of course, the Vice-county Recorder should receive records from researchers (including developers and consultants) who might be working in his/her patch, notwithstanding, in some cases, the issue of commercial confidentiality. These data would contribute to the overall picture and be of use to future researchers.

Mechanisms are in place in both national and local databases for retaining the confidentiality of the great rarities such as *Cypripedium calceolus* and *Trichomanes speciosum* (Killarney Fern) and it is acknowledged that there may be a case for keeping the locations of these species secret.

On balance it is thought that openness is preferable to secrecy but SRC are very keen to receive your observations if you have strong feelings on the subject. Please address your comments to the Hon. Gen. Sec.

RICHARD PRYCE, President-elect

BSBI CONFERENCE: LOCAL FLORAS – PAST, PRESENT AND FUTURE

This will be held at Liverpool Museum (County Sessions House) from Thursday 11th to Saturday 13th April, 2002.

This non-residential conference, located in a region rich in local Floras, has been designed to appeal to a wide cross-section of the membership of the BSBI as well as to Flora-writers. It begins with a Thursday evening lecture by past-President David Allen at the impressively restored Sefton Park Palm House before moving on Friday to the County Sessions House, the Museum's education centre next door to the Walker Art Gallery.

The first full day's programme starts with a session demonstrating that Floras serve as records of change. The second morning session covers how Floras treat critical groups, hybrids, and ecological requirements, together with past-President David Pearman's recipe for the Ideal Flora. The afternoon session focuses on sampling strategies and recording units, and concludes with an address from Professor Bengt Jonsell who will speak about the Local Flora tradition in Scandinavia.

The Saturday morning programme begins with a discussion of modern approaches to flora writing, led by *Watsonia*'s receiving editor Martin Sanford, followed by a talk on the economics of book publishing. We then plan to have a number of short progress reports describing current Flora projects in the UK and Ireland. The last talk before lunch will explain how Floras facilitate conservation action. The conference concludes with a session on how Flora data can be exploited by researchers.

Full details of booking procedures will be found on the flier enclosed with this issue of *News*. Further copies of the booking form can be found on the BSBI Web site. On receipt of your booking, a confirmation letter will be accompanied by a free Accommodation Guide; participants will be responsible for finding their own accommodation. Note that space at the conference venue, the Rex Makin Lecture Theatre, is limited to a maximum of 89 delegates — you are advised to book early, **and by 28th February 2002 at the latest**, to secure a place.

Anyone wishing to display a poster or exhibit (maximum size $1m^2$) is invited to contact the local organiser. We also hope to arrange a display of new and second hand Floras, other botanical books and BSBI publications for sale during the conference.

JOHN EDMONDSON (local organiser), Liverpool Museum, William Brown Street, Liverpool L3 8EN
E-mail: JohnE@nmgm.org; Tel: 0151 207 0001

PLANT RECORDS IN *WATSONIA*

Contrary to what I wrote in the last issue, vice-county recorders should continue to send their records for publication in *Watsonia* to Dr Chris Preston at BRC Monks Wood and not to me. Chris will photocopy the records before forwarding them to me.

GWYNN ELLIS, 41 Marlborough Road, Roath, Cardiff CF23 5BU

MAILING DATES FOR *BSBI NEWS*

My Apologies to all members for the late arrival of this issue of *BSBI News*; this was due to personal circumstances. Please note that *BSBI News* is normally mailed to members in the middle of January, April and September, although this can vary by a week either way—so please don't write enquiring letters too soon.

EDITOR

EXTRA FIELD MEETING

LA BRENNE, FRANCE — 8TH –12TH JULY 2002

Plans are being made to arrange a visit to the Parc Naturel Regional de la Brenne from the 8th to the 12th July 2002. The Brenne is a wetland area of international importance with numerous lakes and an exceedingly rich flora as well as being important for birds. More information can be found from the website www.parc-naturel-brenne.fr The meeting will be led by Richard Lansdown and Francois Pinet and will include visits to sites not normally open to the public.

Numbers will be limited to ten.

For further information please contact:

RICHARD V. LANSDOWN, Floral Cottage, Upper Springfield Rd, Stroud, Glos. GL5 1TF.
e-mail: rlansdown@ardeola.demon.co.uk

DIARY

N.B. These dates are supplementary to those in the 2002 Calendar in *BSBI Year Book 2002* and include for the first time dates of the BSBI's Permanent Working Committees.

2002

January 21	Science & Research Virtual Committee Meeting (week beginning)
30	Records Committee
February 6	Meetings Committee
11	Education Group
14	Publications Committee
20	Database Subcommittee
27	Executive Committee
March 19	Council
April 4	Joint BSBI/Linn. Soc. meeting on training field botanists, London (see page 72 last issue and leaflet enclosed with this mailing)
April 11–13	Flora writer's Conference, Liverpool (see page 5 and leaflet enclosed with this mailing)
May 11	Council (at AGM)
June 15	Francis Rose 80th Birthday Conference, Cardiff (see page 78)
June 21–28	*Spotlight on Plants*, free course for young persons at Preston Montford (see page 72 last issue)
July 8-12	Extra field meeting, La Brenne, France, (see above)
November 14	Council

2003

May 8–12	Anglo-French meeting in Cornwall (see page 71 last issue)

EDITOR

EDITORIAL

My apologies to all members if this issue of *BSBI News* contains more than the usual number of errors, and to contributors if their proof corrections have not been fully incorporated. The final editing and preparation of the camera-ready copy took place under very difficult circumstances, following the death of my mother over the Christmas period, and things got very rushed at the end in order to get copy to the printers.

Apologies also to David Lang for two of his orchid illustrations appearing upside down in the last issue (pp. 39 & 42 no. 8); I must accept responsibility for the coloured photo but can blame the printer for the drawing.

Also to Eileen Taylor for giving the wrong attribution to the colour photos of *Himantoglossum hircinum* on page 44, they were taken by her not Roy Sherlock.

Congratulations to David Pearman our projects manager for having bestowed on him *The Plantlife Award*, their premier award of our Sister Society, for his 'Outstanding contribution to plant conservation'. A sentiment I am sure we all share. It is perhaps fortunate that David has already received the highest honour which the BSBI can bestow on him, 'Honorary Membership'; it would be very difficult to put into one succinct phrase all the very many 'outstanding contributions . . .' that he has made to the continued success of this Society. And long may he continue to do as. See colour photo, page 42 for a glimpse of David working on *Atlas 2000*.

And to Mrs Joan Duncan from Ilkley, Yorkshire, who has been awarded the MBE for sevices to nature conservation.

Inserts – *BSBI Year Book 2002*, notices and booking forms for the *Annual General Meeting*, the BSBI Conference *Local Floras – Past, Present and Future* and the joint BSBI/Linnean Society Conference *How do we find and train the next generation of field botanists?*, a *Summerfield Book up-date*, a *Botanical Journal of Scotland* leaflet; and a Ray Society leaflet on D.H. Kent's *The Flora of Middlesex*.

Since I took over as Editor of *BSBI News* in 1986, like Topsy it has just grown and grown; its size has gradually increased from 32 pages to 3× that on one occasion and it now averages well over 80 pages. With the cost of printing continually on the increase, the time has come to set a limit on the number of pages in each *News* and it has been suggested that 72 would be a reasonable compromise. I intend taking this on board from the next issue; but it will mean, unfortunately, that some of the less 'botanical' or more 'esoteric' items will have to be rejected.

In order to keep this issue of *News* down to 80 pages I have had to hold over several interesting papers until the next issue and I apologise to the authors involved; theirs will be the first papers in the queue for the next issue.

EDITOR

HONORARY GENERAL SECRETARY'S NOTES

The Exhibition meeting, at Baden Powell House on November 24th was overshadowed by the sad news that, the previous day, David MCClintock, a former president and long term member and friend to the Society, had died. [see Obituary Notes, p. 57]

The Exhibition meeting was attended by 188 members and 23 guests and visitors. Great thanks are due to Roy Vickery for organising this enjoyable occasion.

There have been concerns that this is an ageing society; in an effort to investigate the truth of this each member attending the AEM was asked to write their age, in secret, on a piece of paper and post it in a box. The results, which will be presented in detail in a subsequent issue of *News*, were :
20–29 years — 3 members, 30–39 — 16, 40–49 — 20, 50–59 — 42, 60–69 — 46, 70–79 —27, 80–89 — 7, 90–99 — 1. Total Responding 162.

Does this support the idea that the society is getting older or is it simply the case that the recently or soon to be retired are the ones who, on the whole and with honourable exceptions, have the time and energy to come to meetings?

In this *News* there is the formal request for nominations to Council (p. 8), I should like to direct members' attention to this and also to ask that any member who feels able to offer assistance to the Society in any way — with ideas for conferences, field and indoor meetings, lectures, special skills, etc., to please get in touch with me.

Also in this *News*, in the Diary section, we give for the first time dates of all Permanent Working Committees for the Spring round of meetings. This is to enable members who wish to have a point raised at Committee to write to the Secretary of that Committee in plenty of time.

AILSA BURNS, Hon. General Secretary. **NB** My new e-mail address is — BSBIHonGenSec@aol.com

CO-ORDINATOR'S CORNER

Dianthus deltoides

Many thanks to everyone who wrote or e-mailed with information about Maiden Pink. This had the best response yet to an appeal for information, and included several new 10k squares for the national map. I have not had any definitive answers about its NVC communities, though, or anything concrete about its geological requirements.

A Pennyroyal Question

In the meantime, may I engage your minds on another interesting species? I have been looking into the distribution and ecology of Pennyroyal, *Mentha pulegium*, in the last year or so and found out some interesting things about it [see also p. 18–19]. For example, when you look at the old records, it was very often recorded along the sides of roads. I assume these roadsides were grazed grasslands, trampled and muddied by the passing horses, oxen, and whatever. In some parts of the country there were once extensive linear commons along the sides of roads, although where I live, in the west, these appear to have been more informal — unenclosed land, rather than defined commons.

Away from the south coast of Britain, it seems there are very few examples of sites for Pennyroyal that are not on the side of a major road. Culpeper, Turner and Ray all gave examples of wild sites that just happen to be on road sides — quite often Roman roads, in fact. The obvious conclusion is that these roadside commons provided the most suitable habitat, and presumably the animals moving up and down the roads provided the mode of dispersal: a sort of Roman and Middle Ages equivalent of Oxford Ragwort (*Senecio squalidus*). This fits entirely with its known ecology, as it is a plant that likes

trampling and grazing. It is common around the Mediterranean, in places like Corsica and Turkey where, I am told by Graeme Kay and David Pearman, it grows on the side of tracks that are muddy in the winter and baked hard in the summer.

In Britain the road connection is very strong, but perhaps not universal. Tim Rich says there are sites on the Isle of Man that have no association with roads at all, and where the plants are presumably native. Then, of course, there are the New Forest populations, and a few other sites along the south coast as far west as Cornwall where it is traditionally considered native. But I would appeal to all vice-county recorders to look again at their historical records to see if there is any link with ancient trunk roads. Here in Shropshire there is a fairly strong link between all the old localities and the network of roads radiating from the Roman city of Viriconium. It is a link that is somewhat obscured by so many new roads, but look at an old map and it is much clearer.

There are two forms of Pennyroyal — the upright and the prostrate form. These do not deserve taxonomic status of any sort, according to all the taxonomists (see, for example, Stace's *New Flora* or *Flora Europaea*). But the herbalists all agree that there are indeed two forms, and I cannot find out whether these breed true or not. Does anyone know? Certainly, the herbalists prefer the upright form because it is easier to harvest, and it would naturally be this form that would have been taken to the New World with the early settlers. Pennyroyal was an extremely valuable herb, grown everywhere for its preservative, insect-repellent, and abortifacient properties; I understand that it is barely edible as a culinary herb, though.

If indeed it was the upright form that was taken to America, and if it grows true, then this would explain why imported seed invariably produces erect plants (see Briggs, Leach and Kay in *BSBI News* **72**:46, **73**:23–25 & **74**: 50). But what it does not do is distinguish between native and non-native plants. Both have been collected in Britain since the earliest records, and there is nothing to suggest that one form is more native than the other. Pete Selby has been investigating Pennyroyal in the New Forest, and reports that it is not easy to distinguish the two.

As with the Maiden Pink, there does not seem to be a very convincing account of the ecology of Pennyroyal anywhere. Astonishingly, perhaps, it does not seem to be listed as a component of any vegetation community in the NVC. I find that strange, for a supposedly native plant of southern grasslands. Any native species must surely have a semi-natural vegetation type in which it occurs. There is an opportunity here for someone to describe its ecology in scientific terms, which I would have thought would be a helpful step towards devising a plan to conserve it.

Unfortunately, it turns out that a lot of the current sites for Pennyroyal are not ancient ones. It tends to crop up in disturbed places such as arable fields that have been turned into grasslands; or on spoil heaps. Even in the New Forest it generally occurs in ditches or on former airfields. How is it getting there? Is someone sowing seed deliberately or accidentally; or is there a persistent and widely distributed seed bank?

There are many unanswered questions here. If we can resolve them, it might have a huge impact on our understanding of this plant. It is currently listed as a biodiversity species, and money is spent conserving it. Bear in mind that this is a plant that is considered a notifiable weed in many parts of the world. If it turns out to be a mere introduction, a plant that had a niche in pre-industrial Britain but no natural habitat at all, would that make a difference to how we manage it? And what would it say about these American introductions? If it has always been an introduction, then what does it matter if people go on planting it every now and then? I think this is a fascinating plant, whatever the answers to these questions turn out to be.

Perth Herbarium

The web site of the Perthshire Museum Herbarium is now on line: www.pkc.gov.uk/herbarium. This is a first for Scotland, and it is very impressive. It contains details of about 12,000 sheets, giving all the usual details: who, what, where, when. The collection is well curated, with hawkweeds and charophytes, for example, properly identified and determined.

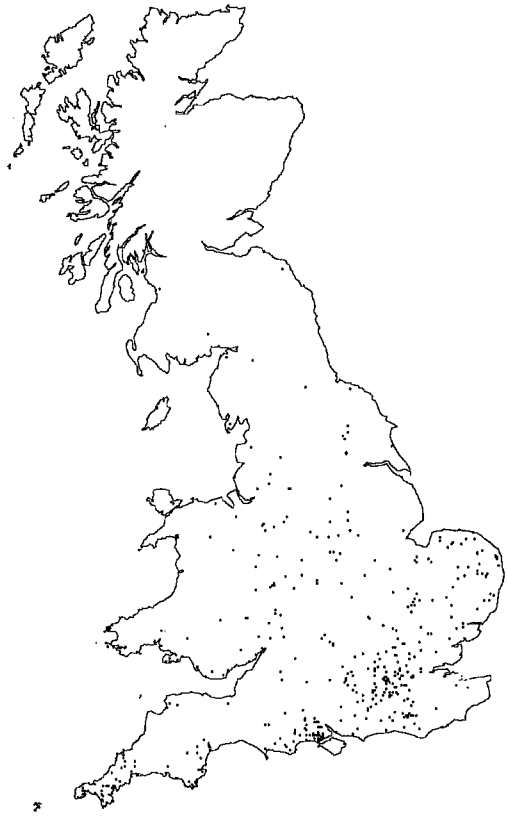
The site does have certain shortcomings. You cannot download the full details of records, for instance, except one at a time. I expect the reasoning behind this is to prevent mass plagiarism, which is

both an important and a worthwhile objective. The botanical community has to prove that it can stamp out plagiarism before it can expect anyone to be completely free with their data. Happily, the curator, Mark Simmons, will provide the full data set on disk to someone with a legitimate cause.

At the moment only the Perthshire specimens are listed. This is a shame, because the collection includes material from all over Britain, and I imagine that most of the potential users would be more interested in records for their own counties. But there is time. Perth is, as far as I know, the first museum in the entire world to publish their catalogue on the web, in the true sense of a 'publication.' There are a few others who have granted access to half-finished databases, but this is something more than that. You've got to wonder why it is that Perthshire, of all places, is ahead of the pack; but all credit to them for that.

For any other museum that might like to enter the modern world of information technology, can I draw your attention to something that will save you a small fortune in time and money? Richard Middleton, whose Hull University Herbarium web site (www.hull.ac.uk/geog/html/herbarium.html) has the most powerful search engine I've yet seen, is offering to provide his software, for free, to other museums who would like to do something similar either on CD or on the internet.

ALEX LOCKTON, 66 North Street, Shrewsbury, SY12LG Tel.: 01743 343789; E-mail: coordinator@bsbi.org.uk



Tetrad map of *Mentha pulegium*

RECORDERS AND RECORDING

PANEL OF REFEREES AND SPECIALISTS

There are a number of alterations to the Panel of Referees this year — see *BSBI Yearbook 2002* for details. Please note that several referees now have email addresses which members are encouraged to use.

Sadly the deaths of William Stearn, Humphry Bowen and David McClintock have deprived us of referees for several taxa. Mr A. Radcliffe-Smith is resigning from *Euphorbia cyparissias* and the *E. esula* group (though he will still be able to help members in the early part of the year), and Mr B. Ryves wishes to retire from refereeing *Amaranthus* this year; we are grateful to them for all the help they have given to members.

Dr F. Rumsey is adding *Asplenium*, *Pyrola* and *Monotropa* to the Orobanche he already does, Cameron Crook is going to carry on once more with Introduced and cultivated trees, and Mr A. Bull is adding v.cc. 20, 29, 30 & 31 to the vice-counties he already covers for Rubus.

We are glad to welcome some new referees: Dr A. Culham is going to identify *Drosera*, Prof. B. Jonsell *Rorippa* and Dr C.D. Preston will undertake *Myriophyllum* and Aizoaceae. In addition we have three new referees who hold NCCPG collections: *Verbascum*: Mr V. Johnstone; *Sedum*: Mr Ray Stephenson; *Euphorbia* generally: Mr Timothy Walker. Mr M.S. Porter is working on *Carex* hybrids and *Calamagrostis* and will be pleased to receive specimens for identification. **Please note** that he is Mr M.S. Porter with an address in Cumbria, and should not be confused with Mr M. Porter who helps with *Rubus* identification and lives in Powys.

Wanted

There are a few vacancies in the Referees list which need filling. Is there anyone with a good knowledge of Malvaceae who would like to act as a Referee for the family? We would also be pleased to know of someone who would like to take on *Allium* or *Galium*. If you think you could give expert advice on any of these please contact Mary Clare Sheahan (020 8748 4365).

Help needed

Is there anyone living within easy reach of Exmouth who would be prepared to spend some time helping our overworked general Referee for *Rubus*? — the kind of help needed is mainly in recording, mounting and filing specimens, and he would be very grateful for assistance. It would be a very good opportunity for someone with a little spare time who would like to learn more about the identification of this problematic genus. If you think you could help please contact Mary Clare Sheahan or Alan Newton (01395 279 973).

MARY CLARE SHEAHAN

PANEL OF VICE-COUNTY RECORDERS

Changes in vice-county recorders

Members will receive the current lists with their *Year Book for 2002*, but it may be of assistance to list below the changes since *BSBI News* **88**.

Appointments

V.c. 4	N. Devon	Dr R.M.H. Hodgson, Gorselands, Axtown, Yelverton, Devon PL28 6BU
V.c. 9	Dorset	Mr D.A. Pearman, The Old Rectory, Frome St Quintin, Dorchester, Dorset, DT2 0HF
V.c. 29	Cambs.	Mr N.P. Millar to be joint recorder (all correspondence to him at 16 Gainsborough Drive, St Ives, PE27 3HH
V.c. 54	N. Lincs	Mr P.R. Kirby, The Old Vicarage, Fulstow, Louth, Lincs. LN11 0XS
V.c. 66	Co Durham	Mr A. Coles, 6 Springwell Avenue, North End, Durham City, Co Durham, DH1 4LY
V.c. 94	Banffs.	Mr A.G. Amphlett, 72 Strathspey Drive, Grantown on Spey, Moray, PH26 3EJ
V.c. H9	Co Clare	Mrs F. Devery, Emmet St. Birr, Co Offaly, Ireland
V.c. H16	W. Galway	Dr J. Conaghan is now sole recorder.
V.c. H20	Co Wicklow	Miss C. Brady, 30 Brooklands, Marlton Road, Wicklow, Ireland
V.c. H24	Co Longford	Miss R. Goode (joint recorder), 36 Rathgar Road, Dublin 6, Ireland
V.c. H32	Co Monaghan	Mr A.G. Hill, 2 Woodgrange, Holywood, Co Down, N. Ireland BT18 0PQ

Resignations

V.c. 4	N. Devon	Mr W.H. Tucker Bill Tucker has been recorder since 1983
V.c. 54	N. Lincs.	Mrs I. Weston Rene Weston, who continues as recorder for S. Lincs., was joint recorder from 1982 to 1985, and then sole recorder.
V.c. 66	Co Durham	Revd G.G. Graham Gordon Graham was recorder from 1976, author of the monumental *Flora of Durham* and joint author of the BSBI *Rosa* Handbook
V.c. 94	Banffs.	Mr J.R. Edelston John Edelston has been recorder since 1986
V.c. 100	Clyde Islands	Mr A.R. Church Mr Church has been recorder since 1986
V.c. H6	Co. Waterford	Dr I.K. Ferguson Keith Furguson has been recorder since 1967
V.c. H20	Co Wicklow	Dr T.G. Curtis Tom Curtis has been recorder since 1979
V.c. H35	W. Donegal	Dr T.G. Curtis Tom Curtis has been recorder since 1976

We are grateful to all the above for all their work for botany and the BSBI over so many years.

Deaths

V.c. 29	Cambs.	Mr D.A. Wells We are very sorry to report the death of Derek Wells, referred to in *BSBI News* **88**: 80.

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NOTES AND ARTICLES

LYSIMACHIA THYRSIFLORA — NEW TO WALES

Lysimachia thyrsiflora L. (Tufted Loosestrife) is a Nationally Scarce plant of fens and swamps. Its native distribution in Britain is highly localised but disjunct: the bulk of records are centred in the Stirling/Fife and Angus areas of central Scotland, but there is also a separate cluster of records in Yorkshire. The species used to occur more widely in north-eastern England, with native records as far south as north Lincolnshire, but it seems to have retreated northwards from eastern England in recent years (Stewart *et al.* 1994). Scattered records have occurred in central and southern England but these are all regarded by Stewart *et al* (1994) as introductions, and it has also been quite recently recorded as new to Ireland from a site in East Donegal (Northridge & Northridge 1987). It does not appear to have been recorded in Wales to date and there is no material present in the Welsh National Herbarium (Tim Rich, *pers. comm.*). [But see Ellis (1974) for a fruitless attempt to find this species in Anglesey in 1727. Ed.].

During survey work for a proposed development in the Rhondda Cynon Taff area of Glamorgan, a large and thriving population of Tufted Loosestrife was found growing amongst tall marshland vegetation at the edge of *Alnus glutinosa* (Alder) scrub adjacent to an area of tall, species-rich swamp associated with a small pool, about 2–3m away from the water's edge (see photos p. 39). The swamp is dominated by *Typha latifolia* (Bulrush) and *Lythrum salicaria* (Purple-loosestrife), but also contains an abundance of *Ranunculus lingua* (Greater Spearwort) and patches of *Geum rivale* (Water Avens), both of which are very local species in south Wales.

Searching around a second, similar pond lying about 100m away and across a minor road yielded a second population, again thriving at the alder scrub/swamp interface about 3m away from the pond edge. The swamp at this second location also contains an abundance of *R. lingua* and patches of *G. rivale*, whilst an associated ditch contains a large stand of *Scirpus sylvaticus* (Wood Club-rush) (very local in the region) and the local plant *Wahlenbergia hederacea* (Ivy-leaved Bellflower) also occurs on open ground nearby.

These habitats lie in the floodplain of the Ely River north of Llantrisant, in an area which has been very extensively modified by river realignment and the construction of new roads, development platforms and buildings, dating from about 1990 onwards. Landscape bunds planted with native and non-native tree species lie close to both locations, but the topography makes it clear that both sites are actually small remnants of the original floodplain: both are much lower-lying than the surrounding developed areas, and are associated with substantial hedgebanks supporting large mature *Quercus robur* (Pedunculate Oak). Examination of aerial photographs appears to confirm the presence of both ponds in 1990 and at least one of the ponds in 1968, although interpretation of the aerial photos is rather difficult because of the scale of development and change which has occurred in this area.

Given the assumed native range of Tufted Loosestrife and the amount of disturbance which has occurred in the vicinity of the Glamorgan locations it may be that the species is an introduction at these sites, possibly having been brought in amongst soil with the landscape plantings. However, there are a number of interesting considerations involved which could support the contention that the Glamorgan populations might actually be of native origin. For example:

- Stewart *et al.* (1994) state that the native habitats include tall swamp and fen vegetation in the floodplains of rivers, and the margins of lakes and pools where these have become overgrown by emergents, ecological conditions which are well met in the Glamorgan sites.
- The Glamorgan sites lie in relict floodplain remnants of a river system which is well known historically for rare and localised plant species (see Wade *et al.* 1994) and which still exhibits some quite extensive areas of unmodified floodplain of high biodiversity value.
- The presence of other plant species which are rare or local in the region suggests that these are unusual biodiversity locations where unexpected species might be encountered.

- *Lysimachia thyrsiflora* is an inconspicuous species, even when in flower. It is not much favoured in gardens or widely used as a landscaping species, and is therefore extremely unlikely to have been deliberately planted.
- The flowering period is short, in Glamorgan lasting only about 3–4 weeks in June, and the species is readily overlooked when not in flower, appearing very much like a vegetative *Epilobium* spp. or as somewhat stunted *Lythrum salicaria*.
- The Glamorgan populations are growing amongst semi-natural vegetation, well separated from the nearby landscape plantings, and careful searching has not found any sign of the species amongst the latter.

Interestingly, these considerations were paralleled in the recent Irish report of Northridge & Northridge (*loc cit*). *L. thyrsiflora* was apparently found in a semi-natural swamp situation in marshy meadows, well away from any likely sources of introduction and in a location where it would readily have been overlooked in the past. Unfortunately the Irish site was subsequently destroyed by a drainage scheme, although it is possible that the species remains overlooked in similar habitats nearby (Robert Northridge, *pers. comm.*).

Further research is being undertaken in an attempt to elucidate the history of the Glamorgan sites, and it is intended that searches will be made in similar habitats elsewhere in the Ely floodplain in future seasons in the hope of finding hitherto overlooked populations elsewhere. It may also be possible to carry out some cytogenetic work to investigate how closely the Welsh populations are related to the 'native' populations elsewhere in Britain. It would be very useful if other BSBI members could provide habitat details of sites elsewhere for this species, especially where these are presumed or known to be of introduced origin.

The two known Glamorgan locations are being kept confidential for the time being, pending discussions on their future.

I am grateful to Richard Wistow, Julian Woodman, Richard Pryce, Scott Hand and Tim Rich for comments and discussion of this interesting find.

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BEECH (*FAGUS SYLVATICA*) SEEDLINGS

I regularly pass a few beech trees in Harrogate (North Yorkshire) and while beech mast is common in most years I have never particularly noticed many seedlings. This year under beech trees in very different situations, an old tree in the grounds of an old hotel in the town centre and a row of young trees (*c.*40 years old) planted along side a road between an industrial estate and a playing field, there are very large numbers of beech seedlings (6 or 7 per square foot).

Have other members noticed this phenomenon in other parts of the country?

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LIMONIUM BINERVOSUM (ROCK SEA-LAVENDER)

For some years, with much help from colleagues, I have been exploring the whole of the Dorset coast for species of the *Limonium binervosum* aggregate. I have tried to cover all the old sites, but have also walked all the seemingly suitable areas for which there are no records. Successes have included trips to the 19th century breakwaters in Portland Harbour, which are covered with 1000's of plants, and contact with the Portland Rock Climbers Club, who have found many new populations.

In the summer of 2000, Bryan Edwards, the surveyor at Dorset Environmental Records Centre, told me about seeing a *Limonium* 18m down Gad Cliff, on the Army ranges at Tyneham, near Lulworth. Gad Cliff, reaching 135m, is absolutely sheer, with a muddy unstable undercliff below. We contacted Major Mick Burgess, Range Control Officer at Lulworth, who found two enthusiastic volunteers from the Camp who were prepared to abseil down. So on a fine day this August we all drove to the top off the cliff, tied the rope to the Land-Rover, and prepared to watch Sgt J. Hall, assisted by his colleague, go over in the interests of science!

There were several problems. The top 15m of the cliff is very unstable, and any movement on the rope sent rocks large and small crashing down. It seemed easy enough to reach the *Limonium* plants, but much more difficult to regain the top of the cliff, which overhung slightly. The climbing team decided that it would be safer to go all the way to the bottom — the only problem being that we could not see if the 90m of rope actually reached as far as the undercliff below!

Sgt Hall duly went down, collected a voucher specimen, continued out off sight, and left us with some very anxious moments as the guide rope paid out. We radioed him to say that we only had 1m left and heard him reply that his feet were just touching the ground! (and I wondered again if the whole thing was worth it.) It turned out that the last 45m of his descent was in mid-air because there was such a massive overhang.

It took him an hour to scramble along the very steep and slippery undercliff back to where I could show him where to get up. He proudly presented the specimen and kindly said it was all enormous fun and that he wished there were more opportunities to do training like that.

And the specimen? I took it to Peter Sell at Cambridge who confirmed it as *L. dodartiforme*, which is restricted to the coast of Dorset. It must be a British altitude record!!

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MEMORIES ARE MADE OF THIS!

Having just written a review of the new *Bristol Flora*, I was most grateful for the opportunity to dream a bit of my botanical past, and I enjoy writing full of historical allusion with personal anecdotes buried in.

I couldn't find space in the review for George Garlick, one of the Bristol Botanists noted by Professor Willis. I didn't know Mr Garlick had died 2 years ago. I have his Avon Gorge note books (site survey lists, rather) which he gave me. He had done little botany for some years when I traced him and we went for a walk in Leigh Woods trying to find *Gymnocarpium robertianum* (Limestone Fern). He tried to locate the spot under auto pilot ('George' as they called it in the war he joked) but failed. I have a photo of him in the rain there. He was so pleased to be remembered. He did the original BSBI Atlas bashing in the Avon Gorge.

My favourite story is always of the botanist who in the 1910's descended the steep slopes of Leigh Woods looking for *Convallaria majalis* (Lily-of-the-valley) 'with his false teeth removed for safety, chattering unmercifully in his pocket'. One can only feel the sadness of age in J.W. White, who could only report in pencil of how his driver had to take him up the Portway to see *Arabis scabra* (Bristol Rock-cress) in his old age, as in his obituary photo. I have a far better photo of him as an Edwardian whiskered gentleman in a straw boater. And will anyone else but me and Noel Sandwith ever see

White's own annotated copy of the *Bristol Flora*. 'I have White's Flora' said the owner (Mrs Clay, wife of the author of a book on Rock gardens, and no doubt long since gone) when the late Adrian Grenfell and I visited her wild Lizard Orchid in her Nailsea garden. 'Yes, I've got it too, it's very good isn't it' said Adrian, not catching her meaning.

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HAUNT HIJACK

Have you noticed how rapidly your favourite local botanizing haunts are disappearing, becoming less accessible, changing for the worse or being hijacked for another use? Also, that damaging changes often take place with the assistance of 'conservationists' and various funding agencies? For the last ten years I have been following local conservation issues with a holistic approach, *i.e.* not with a bias towards vegetation, and I have become very concerned by what is happening in the name of conservation.

The 'we know best' attitude prevails in many matters of conservation management. Trees are planted where they really should not, ponds are cleaned out and then refilled with foreign aquatics, bird and bat boxes are nailed willy-nilly to trees everywhere irrespective of due consideration, acres of grassland are lawned for butterflies, etc., and if one questions or says anything against, one is castigated. If the job is in the management plan, is carried out under the advice of professionals and there's a grant of funding from English Nature or wherever, it must be the correct thing to do.

I don't rate myself as an expert but I can put a name to most plants and a few other things besides. I know a retired farmer with no certificates or qualifications, capable of dissecting the genitalia from animated full stops and, therefore, confidently capable of naming more than 2000 beetles by scientific name as well as most birds, mammals and plants. The countryside is littered with amateur experts with a vocabulary in their own subject more extensive than some highly paid government officers have in their own language. Why then are such people rated so lowly and their knowledge ignored?

Of recent interest to me is the concept of 'Site of Interest for Nature Conservation' (SINC), a status that confers absolutely no statutory protections, as far as I can tell. Sites so designated by the local planning authority will have slightly more emphasis placed on their wildlife importance if they become threatened by a planning proposal. To be cynical, this means that if the site is endowed with a barn owl or a water vole (seemingly the full definition of wildlife these days) there will be a period of uproar until the applicant agrees to mitigate the loss by planting a few extra trees. However, if the site is endowed with a native species of plant in its only known vice-county station, or with an insect without a common name in English, the site will be afforded a delay in planning decision for the period of time taken to say, 'so what'. Either way, the delay in planning decision will be considerably less than the saga required to justify the site's designation as a SINC in the first place.

Beware, too, that designation of SINC status on land owned by your local authority could mean that the site will wind up being an amenity and picnic site under an access for all policy, resulting in any combination of horrors detrimental to its fauna and flora. If you fail to support the designation of such sites, a favourite bit of waste ground could become a sports stadium or a business park, disused quarries could become landfill sites and disused railway lines could become a crushed chalk highway for off-road vehicles etc. You will have no say in the matter.

Some ecological consultants are neither use nor ornament in matters of plant conservation. I had one state, 'we will recommend mitigating the loss by sowing and planting a better habitat elsewhere'. I have accumulated numerous examples of such nonsense and can now spot the rubbish consultancies by such things as their failure to send a stamped and addressed envelope, those magic words, 'we are conducting a walkover survey', (in January?!) and the absence of the word 'please'. These all add up to giving lip service to consultation without any real regard or respect for local expertise. I would

recommend that any recorder yielding up data in answer to such a request follows up with an examination of the environmental impact assessment at their local planning department. Challenge it word by word. For a botanically sensitive site my new policy is to submit a report of the data directly to the planning department, to our new ecological data centre and, where English Nature is involved, to the Regional Team.

Today, environmental protection seems to mean adaptation of the environment for mankind in its daily pursuits. Unless we become more forceful and vociferous, either as individuals or as a Society, we will continue to lose valued habitat to hijack by more powerful 'causes' and interests than our own. Look how the bird watching fraternity has risen to a seemingly insurmountable power, with statutory hijack of sites under RAMSAR and SpA conventions, etc. Isn't it about time we botanists got 'best value' too? I'm looking forward to reading lively feedback — please oblige!!

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WHAT COLOUR IS A CRANBERRY?

What colour is a Cranberry fruit? If I was asked that some time ago I would have been totally confident that the answer is 'red'. However, as Steve Povey pointed out to me as we squelched across the bog at Shortheath Common in Hampshire, there seem to be at least two distinct colour forms.

One indeed is red (and often white underneath) but another is speckled with brown (see photos p. 39). They occur on separate plants and, at least in Hampshire, intermediates seem very scarce. Based on several years of observation of *Vaccinium oxycoccos* at Shortheath, Steve says he actually recognises four colour forms of the fruits, one speckled with brown and three that I have lumped together here as the 'red' form. He thought he had noticed something new, especially after finding that Stace's book describes the fruit simply as 'red' (Stace 1997). Steve suggested that I enquire whether the same colour forms are found further north, where Cranberry is more frequent. Before putting pen to paper I thought I would read the descriptions in other books, and it was soon clear that Steve's observation was not entirely new.

The text in Keble Martin 1965 simply says 'red', but his illustration shows both forms — although with a touch of artistic licence they are both shown on the same plant, which I don't think actually occurs. Mind you, I found it remarkably difficult to decide where one plant ended and another started! 'CTM' (Clapham, Tutin & Moore 1987) and *The Wild Flower Key* (Rose 1981) both say 'red or brown spotted'. *Flowers of Europe* (Polunin 1969) illustrates the red form but the text says 'red becoming brown'. Presumably the red ones do go brown when they eventually decay, but the red form certainly does not change to the brown form, because it is easy to find immature brown speckled fruits.

In Blamey & Grey Wilson 1989, the berries are described as 'red or brownish' whereas *Collins Pocket Guide to Wildflowers* (McClintock & Fitter 1956) says 'whitish berry, heavily spotted red or brown'. This latter description is close to the truth because the underlying colour is indeed white.

After reading these descriptions I have little doubt that both basic colour forms occur on the northern bogs. But are they as distinct as down here in the south? Also, if so, why should these two colour forms persist separately?

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GIANT *ASTER TRIPOLIUM* IN CO. WATERFORD

Surveying the banks of the River Suir at Mount Congreve in February 2001, my brother and I found several stands of dead stems up to 2m high, taller than us. At this time of year we could not identify them with certainty. The only possible species seemed to be *Aster tripolium* (Sea Aster) but we agreed that it does not grow that tall. It was not until my visit at the end of August that I got my answer: it was Sea Aster. Even the flowers were larger than normal. The stands of aster were growing at scattered intervals along a 100m stretch of the river on the bare estuarine mud, the only spots still free from *Phragmites australis* (Common Reed).

Not one of the books I referred to describes Sea Aster as growing above one metre. For example: Stace (1997) 'to 1m'; Webb, Parnell and Doogue (1996) '20-100cm'; Bentham and Hooker (1912) 'seldom above a foot high'.

There seemed no apparent reason for the aster being twice the normal height, as all other species on this stretch of the river seemed to be of average height.

I would be interested to hear of any other sites for tall Sea Aster.

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THE HABITAT OF *MENTHA PULEGIUM*, BASED ON OBSERVATIONS MADE IN THE NEW FOREST, AUTUMN 2001

There are about 16 known sites for *Mentha pulegium* (Pennyroyal) in the New Forest, and in Autumn 2001 I visited most of these sites. This was only possible because of the generous assistance of Francis Rose, Elizabeth Young, Vera Scott and Geoffrey Field and all those other botanists who have been making counts of this plant's population over the years. I visited the sites in order to count populations and also to look for commonality between the sites.

The sites visited could be split into four types:

- Very short pony grazed grassland.
- Medium length pony/cattle grazed grass in ditches and on the commons in the North of the New Forest.
- Bare margins of seasonal ponds.

Medium length grassland is about 15–20cm tall and *Mentha pulegium* sprawls through it, pushing up occasional flower shoots. It would appear that 2001 was a very good year for this species as in all the populations visited, bar one, plants were flowering.

One situation which was common to several sites was that the plants were on the north side of an east-west road. They all were subject to pony grazing and several also had cattle grazing. Another common factor was that almost all the sites are away from the open forest and close to some sort of grazed green, usually with cottages nearby.

Mentha pulegium is avoided by ponies, who graze by cutting vegetation with their teeth but it can be uprooted by cattle from the longer vegetation because they grasp bundles of vegetation with their tongue and uproot it. These uprooted portions are often discarded by the cattle and can be washed around in the winter, to probably re-establish themselves elsewhere. An observation made by Francis Rose during the very hot summer of 1976, when the entire forest was parched and most of the grass had died, was that the starving ponies would still not touch the *Mentha*.

Mentha pulegium plants do not do well in shaded areas and one newly established site has been presumed lost due to shading. There seems to be an association with disturbed ground when a new site is found. From this it is inferred that a site is established initially by seed germination in disturbed ground where there is minimal competition. Later, when the disturbed ground has been covered by vegetation the species propagates vegetatively by being chopped up by hoofs or grazed and discarded. These portions root freely and are possibly spread by winter rain. If plants get into an isolated small hollow and are surrounded by closely grazed grass then this dispersal method can fail. However they may well be long lived in their isolated hollow, provided that they receive nutrients in the form of dung and are not shaded by scrub. This longevity is further aided by quite an extensive, fleshy, root system, seen when they are uprooted by cattle.

It was suggested by Alex Lockton (*pers. comm.* 2001) that a number of other British sites are remarkably near to Roman Roads. This is not true for the New Forest sites as there are no major Roman Roads in the area. He also mentioned that *Mentha pulegium* was once quite common and that *Gerard's Herbal*, 1597, describes it as 'exceedingly well knowne to all our English Nation'. It has since declined greatly and as species losses are usually associated with habitat loss, what habitat has been lost such that a once common species has been reduced to a handful of sites?

I suggest that the lost habitat is the wide muddy highways of Britain, some of which used the same routes as the Roman roads and some of which may have been routes in use from Neolithic times. These highways were in continual use and must have been a very large habitat churned up in Winter and baked in Summer. People moved along the highways, stopping at night at the Inn and tethering their animals to graze on the land adjacent to the highways and on the local commons and greens, or in the Inn's paddocks. There are a lot of Common and Green place names in the national list of *Mentha pulegium* records.

A traveller might well carry some hay for his animal, and this hay could have spread *Mentha pulegium* seeds. These and small portions of plant could also be transported in the mud adhering to wheels. Thus the highways and any areas beside them would be heavily grazed and probably nutrient rich from dung. Many of these highways were very wide, up to a hundred metres in some parts, as animals, carts and people moved out to avoid the ruts and the rubbish dumped on the highways. They were very untidy compared to the mown village greens of today with dung heaps, fallen trees, abandoned carts and squatters hovels.

Over a long period the highways gradually became better surfaced, they often became narrower when enclosure acts were passed. When the railways came then the activity on the roads reduced as movement of goods by rail became widespread. The verges of the roads were either absorbed or became overgrown with scrub. Many species must have suffered but *Mentha pulegium* suffered particularly badly as the horse grazing along these highways was removed because it depended on the nutrients from the dung and on the disturbed ground for seedling establishment. Also of course there was less seed produced and less fragments to propagate, until it became essentially restricted to almost the only place where the extensive horse grazing and frequent muddy bare ground could be found, the New Forest.

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TREES THAT DON'T KNOW ABOUT WINTER

In *BSBI News* **87**, I was particularly interested in Michael Braithwaite's article about Hazels that behave oddly in winter. Near me, on army land in Long Valley, Aldershot, v.c. 12, is a Pedunculate Oak tree, *Quercus robur*, that is somewhat similar. It produces two crops of new leaves each year. The first crop is at the normal time in spring, and these fall in autumn. New leaves on the second, very sparse, crop are fresh and green in December, but usually get badly damaged by frost before they can mature.

This tree was first recorded by Chris Hall and, as reported in *The Flora of Hampshire* (Brewis *et al.* 1996), Chris noted the same curious behaviour during the period 1984–91. I took the photograph on page 40, *in-situ* on 30th December 1988 — and temporarily added the decoration to make the point! In fact there are also a couple of young saplings close to the main tree that behave the same way, so presumably the trait can be passed on via an acorn.

As also recorded in *The Flora of Hampshire*, there is a similar but ancient tree at Malwood, near the Rufus Stone in the New Forest. A 17th century record between 1650 and 1656 is quoted of 'ye Christmas greene oak, . . . neere ye Castle of Malwood, Hampshire, Kg. J. went to visit and caused it to be paled about'. Does anyone know of other examples of Christmas Green Oaks elsewhere?

I have noticed another curious occurrence for the last three years just outside my office window in Farnborough, Hampshire. Here there is a planted row of young Horse-chestnuts (*Aesculus hippocastanum*). Each year one particular branch of one of these trees comes into leaf a full four weeks before the rest of the tree. This photo (page 40) was taken on 6th April 2001, and it was 5th May before the remaining leaves reached the same stage.

Perhaps someone can explain to me how a leaf bud 'knows' when it is time to open, and how one particular branch can consistently respond in a different way to the rest of the tree.

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OPHRYS APIFERA VAR. *BELGARUM* ETTLINGER AND *CHRYSANTHEMUM SEGETUM* IN ESSEX

David Lang's article in *BSBI News* **88** on Bee Orchid variants reminded me of one I had seen earlier this year but had not yet got round to sorting out. On comparing the photograph (p. 40) I had taken at the time with those published in *News* I was able to identify it as *Ophrys apifera* var. *belgarum* Ettlinger and David Lang subsequently kindly confirmed this. To his knowledge this is a first for Essex and the fourth record for the UK.

I found this variant on 24th June 2001 at Bulmer in North Essex (v.c. 19) amongst 1,000+ bee orchids. They had occurred on set-aside, which the farmer took out of production five to six years ago, as the area had low fertility. He did not sow anything at the time and just let nature take its course, cutting it annually and controlling for Common Ragwort (*Senecio jacobaea*) and Creeping Thistle (*Cirsium arvense*) as necessary.

In past years there had been scattered plants of *Chrysanthemum segetum* (Corn Marigold) in the field adjacent to the set-aside and this year the farmer intentionally did not spray an area of the cereal crop with herbicides. The result was a wonderful display as shown in the photographs (p. 41). As the Corn Marigold was so dense it was possible to harvest the seed which has gone to a native wildflower seed supplier.

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THREE COTYLEDONS AND 3–WHORLED LEAF ARRANGEMENT IN A YOUNG FIELD MAPLE, *ACER CAMPESTRE*

Eating-apple and pear pips, and occasionally other tree seeds, can sometimes produce the appearance of three cotyledons after germination. However these are markedly asymmetrical, one cotyledon appearing to have split and separated. The drawing of the young field maple shows three cotyledons, which had three separate stalks, and an almost symmetrical arrangement, with almost equal sizes. The angles were approximately 110°, 110° and 140°. After three weeks, a bud formed at the base of each cotyledon.

I rescued this Lockeridge seedling from trampling, one of thousands of normal seedlings, expecting the intermediate and mature leaves to grow in opposite *Acer*-type pairs. They did not. Much more interestingly, they continued in perfectly symmetrical whorls with angles of 120°, 120° & 120°. At the time of writing, there has been no reversion to normality. The whorl of the three intermediate (juvenile) maple leaves alternates with the three juvenile leaves. Since the drawing was made, a fourth whorl has started: this is the second whorl of adult-type leaves, alternating with the first whorl of adult-type leaves but corresponding exactly to the three juveniles. All petioles make angles of 120°. This mutant plant initially had at least equal vigour to the other field maple seedlings, and was slightly ahead of most of them.

Opposite leaf pairing is a key feature of the Aceraceae (Heywood 1993, Hickey & King 1988, Mabberley 1997). Sapindaceae-like ancestors of the Aceraceae had an alternate leaf arrangement (Stewart & Rothwell 1993), the *Acer* genus subsequently evolving the characteristic *Acer* double samaras, leaf shapes and leaf arrangement. *If* there is no reversion, and the neat symmetrical whorls continue as the tree grows, I would assume an inherited or meiotic mutation, perhaps in a gamete, unless it is possible for a somatic mutation in the hypocotyl or embryo to cause these effects.

[This note was carried over from the last issue, and the 'the young tree-seedling has since had 3 "near death" experiences and there may be some physiological oddities in this young plant.' Ed.]

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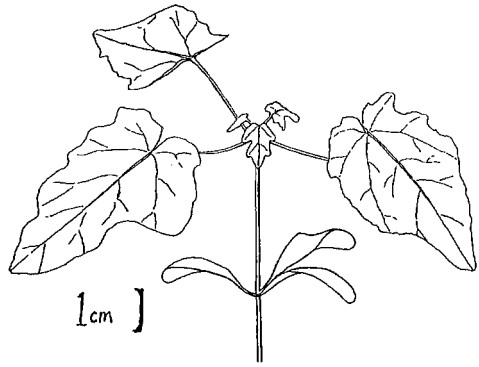

Young *Acer campestre* plant, showing the first 3–whorls. Del. Katy J. Oliver © 2001

JACK OLIVER, High view, Rhyl's Lane, Lockeridge, nr. Marlborough, Wiltshire SN8 4ED

MONTANE WILLOWS IN MID-WEST YORKSHIRE

Not only is Mike Wilcox redetermining most (?all) of our records of *Salix phylicifolia* (Tea-leaved Willow) and transposing them into hybrids with *S. myrsinifolia* (*S.* × *tetrapla*) and other species, but other willows have been finding fame locally as well.

Salix lanata (Woolly Willow) was discovered by the writer on 13.7.2000 in a small field west of Pateley Bridge at an altitude of 380m. This Red Data Book species, supposedly restricted in Britain to a few sites in central Scotland, was a large shrub growing in a shallow arc nearly 8m long × 1-2m wide, on the raised edge of an otherwise marshy field. It was female and apparently sterile, therefore, presumably a single plant or clone. Associated species included *Salix cinerea* (Grey Willow) and *Cirsium heterophyllum* (Melancholy Thistle).

Enquiries locally have so far revealed that this was a sizeable shrub ten years ago. The field has recently changed hands, the previous owner having died in 1999. His widow has moved away but it is not known where. It is known that she had introduced *Iris pseudacorus* (Yellow Iris) and *I. sibirica* (Siberian Iris) but not whether she had also introduced the willow. Might it have come in as a stray seed with the Scots pines in the adjacent plantation? The new owner 'paints birds and things', so, with luck, that bodes well for the future.

Salix herbacea (Dwarf Willow) was recorded in F.A. Lees' *Flora of West Yorkshire* (1888), in addition to its stations on Ingleborough and Whernside, as growing on 'Penyghent, top of.' The Supplement to the flora, edited by CA. Cheetham and W.A. Sledge and published in 1941, states 'the Penyghent station has never been confirmed.' After 112 years Brian Burrow has found two colonies on the Millstone Grit cliffs there.

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PLANT COLONISATION ON GREAT DUN FELL, CUMBRIA

In her response (*BSBI News* **88**: 26) to the original article by one of us (RC) and Linda Robinson (*BSBI News* **87**: 20-24) Penny Anderson expressed disappointment at their failure to discover the history of the site. The authors had in fact said that the person in charge of the radar site was certain that no species were deliberately introduced. Who then should they have asked? Since that response she has replied personally to RC. She said that the then Nature Conservancy Council made no comment, that the origin of the grass seed mix was unknown and that the bulk of the species listed in *News* must have colonised naturally. The lack of comment from the NCC is unbelievable considering that the site is a National Nature Reserve. We disagree strongly with her last point and take the view that most if not all the species were in fact represented in the original seed mix. She says her consultancy was 'asked to restore vegetation to the summit that fitted in with its location within a World Biosphere Reserve, and SSSI. . . .' It seems to us incomprehensible that anyone can imagine that a seed mix of unknown origin and uncertain constitution should be considered appropriate for the summit vegetation of the second highest hill in the Pennines. For many of the species the site is considerably higher than their previous known altitudinal limits not only in Cumbria but in many cases in the British Isles. It is regrettable that information regarding the reseeding was not communicated to the v.c. recorder before the new limits found their way into print.

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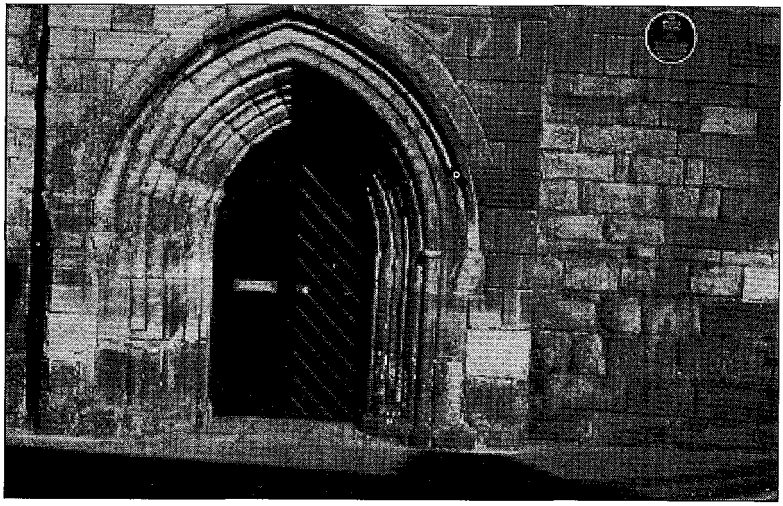
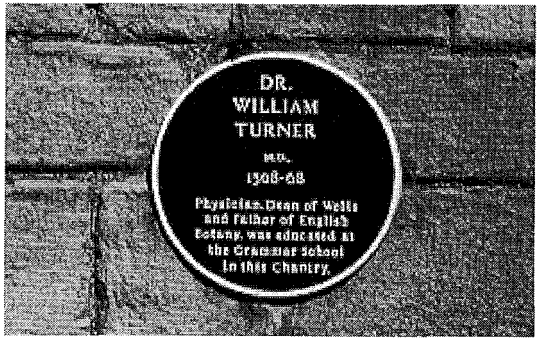
ANOTHER BOTANIST'S PLAQUE

In *BSBI News* **74**: 26 (January 1997), Dorothy Lousley describes a plaque to William Turner in a 'botany corner' of St Olave's Church in the City of London. On a west-facing wall of the Chantery in Morpeth, Northumberland, there is also a plaque to 'The Father of English Botany', the Revd Dr William Turner (1508–1568), commemorating the fact that he went to school there. Turner was author of three books *Libellus de Re Herbaria* (1538), *The names of Herbes* (1548) and a *new Herball* (1551–1568), which together mark the beginning of the science of botany in the British Isles. His early botanical records are referred to in G.A. Swan's *Flora of Northumberland* (1993).



Main door of Morpeth Chantery with plaque at upper right



Plaque commemorating William Turner

Both photos © G.A. Swan, 2001

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ALIENS

A NEW IDENTITY FOR THE ALDERNEY CRANE'S-BILL: *GERANIUM HERRERAE* Knuth

This plant, of assumed South American origin, appeared as an alien in 1938 in Alderney (Channel Islands) but it has never been satisfactorily named. I now intend to include it in a new edition of my book *Hardy Geraniums* (1st edn: Yeo, 1985) with a fresh determination. This note is to inform BSBI members of this and to summarise the plant's known history.

It was first found in Alderney in June 1938 on a railway (collecting number A.K. Jackson & H.K. Airy Shaw 409) (Lousley, 1962). Another collection of it was made from about the same place in 1957 (Lousley, 1962); the collectors were H.J.M. Bowen, D. McClintock and Mrs B.H.S. Russell (Kent, 1959).

Kent says that it was identified as *G. retrorsum* L'Hérit. ex DC. by E.F. Warburg, presumably on the basis of the 1957 material. At about the same time *G. retrorsum* was also reported to have become established on a railway line at Bordon, in Hampshire. However, the Hampshire population was reassigned to *G. microphyllum* J.D. Hooker by C.C. Townsend (1961). Nevertheless, Lousley (1962) argued in favour of the original naming of the Bordon plant, and this led to a further contribution by Townsend (1964). Here, for the first time, it was made clear that the Bordon and the Alderney plants were not identical and it was here that the name *G. submolle* Steudel was first introduced for the Alderney Crane's-bill. The reason was that Townsend had found in the South American covers in the Kew Herbarium a specimen that matched the Alderney plant and was named *G. submolle* Steudel. This was *Werdermann*, Plantae Chilenses, no. 560. Townsend then wrote 'I cannot, however, vouch for the accuracy of this name' and he explains how he was unable to obtain authentic material (he supposed the type—Bertero 294—to be in Turin, his letters to which were unanswered). I have seen Werdermann's specimen at Kew and agree that it is the same as our plant.

In the 1970s Mr David McClintock enlisted the help of the late Dr H. Heine, who looked at the type of *G. submolle* in Paris (**P**: Muséum National d'Histoire Naturelle) and concluded that it was not our plant (letter of 17/10/1979, Heine to McClintock). The letter added that Heine had so far failed to refer our plant to any other taxon. So, in recent years it has been unnamed or referred to as '*G. submolle*' (Stace, 1991; Kent, 1992).

McClintock grew the Alderney plant in his garden in Kent and in 1975 gave plants of it to Cambridge Botanic Garden (accession 1975.0027 McClintock) and it has maintained itself there by seeding ever since.

The Kew Herbarium contains several other South American specimens that match our plant but I am not convinced that the names attached to them really apply. One possibility is *G. core-core* Steudel, another name cited by Stace (1991). However, Mrs B. Halfdan Nielsen, of Copenhagen, who had been working on Andean geraniums, saw dried specimens of our plant in 1995 sent on loan from **CGG** and she considered it to be *G. herrerae* Knuth (1930). There is a specimen in the Kew Herbarium that matches our plant and has been named *G. herrerae* by its collectors and by Halfdan Nielsen (this is *Weberbauer*, Plants of South America, 1925, no. 7479). However, Halfdan Nielsen's determination is not unequivocal, as will be explained later.

The taxonomy of the Andean species of *Geranium* has not been revised since the publication of the Pflanzenreich monograph of the Geraniaceae (Knuth, 1912). At that time the group to which our plant seems to belong, Section Chilensia, already numbered 23 species. This proliferation of often scantily described species (many of them not represented in British Herbaria), combined with the destruction in 1945 of the Berlin herbarium in which Knuth had worked, means that understanding these species is very difficult. Therefore, short of a full revision, which I am in no position to undertake, we have three options:

(1) to describe it as a new species, in the expectation that its name will eventually be reduced to the synonymy of some name already published,
(2) to go on calling it *G. submolle* auct. non Steudel,
(3) accept the name *G. herrerae* Knuth, *Feddes Repertorium* **28(1)–(5)**:1(1930). TYPE: Peru, Prov. Urubamba, Allantaitambo, 3000m (Herrera a. 1924 n.234 in herb Berlin).

Continuing to use *G. submolle* with qualification is really not acceptable. Until now, however, I have had misgivings about Halfdan Nielsen's determination because of the difficult taxonomic situation and the feeling that she probably has not seen any authentic material, and because of discrepancies between our plant and the original description of *G. herrerae*. A review of these discrepancies now suggests to me that option (3) is best, and that there is not a case for adding another name to the literature.

One objection to its being *G. herrerae* is that Knuth described it as an annual. However, he placed it in Section Chilensia which he described as perennial! And indeed, there are no other annuals in Section Chilensia or in the American Continent south of Mexico (other than introductions).

Knuth did not describe the root, and I infer that he did not see it, and that he thought the above-ground growth was what might be expected of an annual (but was really that of a perennial). Other characters of our plant (with differences shown in the description of *G. herrerae* in parentheses) are that basal petioles can be 30cm long (basal leaf 20cm long), plant height at least to 50cm (20–25cm tall), leaf lamina to 6cm wide, though often only 4cm (lamina 3–4cm wide), lobes of leaf-divisions can be toothed (lobes of leaf-divisions not toothed), peduncles to 4cm long (peduncles 8–20mm long), sepals green (sepals 'glaucoid'). None of these differences is fundamental: they could arise from different growing conditions, added to the fact that my data are probably based on far more plants grown in several seasons. The rest of the description fits quite well but there is little that is striking about *G. herrerae*. The best points of agreement are overall size of parts, the extensive but very inconspicuous hair-clothing and especially the petals 'pulchre carminea' (in the Alderney plant with unpigmented veins and a white or translucent base) .

McClintock (1975) reports the finding of the Alderney plant much earlier (T.J. Foggitt on Jersey in 1926) — but all discussion of the problems of this taxon seems to have been based on the Alderney population.

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NAMING DAFFODILS

On finding a daffodil, most field workers would strike through Narci*agg on their recording cards without giving it a second thought. This is a pity, because naming daffodils is much less difficult than is popularly imagined. Part of the problem lies in the fact that our botanical mentors, Stace (1997) and Sell and Murrell (1996), take such a strictly taxonomic attitude towards *Narcsissus,* giving only the closest available Latin names for the naturalised cultivars (typically a subspecies or a hybrid name). But since most of the daffodils we find on roadside banks in villages and waste ground in towns are horticultural outcasts or planted relics, their useful names are their cultivar names like 'Ice Follies' or 'Tete-a-Tete'. These are the names you need if you want to read about a daffodil, or to order bulbs for your garden. Although there are more than 3,000 named cultivars of *Narcissus*, very few of them are vigorous enough, and hence cheap enough, to get themselves thrown out of gardens or mass planted in municipal schemes. The data in Table 1 (p. 31) are the result of a survey of churchyards in Berkshire and South Oxfordshire (v.c. 22), carried out after foot-and-mouth disease had effectively closed down the countryside, leaving churchyards and cemeteries as the only accessible botanizing grounds.

Plant taxonomists and gardeners use different words to describe the parts of a daffodil flower. Gardeners and daffodil enthusiasts refer to the *petals* and the *trumpet* (the correct botanical name for the trumpet is *corona*, while the petals are called either *perianth segments* or *tepals*). You can get a long way towards finding the correct name of a daffodil simply by noting the colours of the petals and the trumpet separately. The following key requires only that you pick one of three colours for each: yellow (Y), orange (O) or white (W). The only difficulty arises with pale yellows; here, they should be treated as whites (but the key is quite forgiving on this point). The petal colour is given first, then the trumpet colour. Thus, WO means white petals and an orange trumpet, and indicates that you are probably looking at *N.* 'Geranium' (see Table 1, where the cultivars are ranked on the basis of their frequency). The horticultural Divisions of daffodils are illustrated in Fig. 1 (p. 30). Divisions 1-3 contain what gardeners consider to be 'proper daffodils', while the remainder are the gardener's 'narcissi'. The first 3 Divisions are separated on the length of the trumpet relative to the petals; the trumpet is as long or longer than the petals in D1, intermediate in D2 and less than 1/3 as long in D3. Start by selecting the first correct line from the A-E list (*i.e.* if your daffodil has rush-like, rather than strap-shaped leaves, then go to Key B whatever the colour of the flowers). Then track down the cultivar name in the appropriate key. There are good colour photographs of most of the cultivars in Brickell (1996).

Double or split cup daffodils without obvious trumpets ..... A
Leaves rush-like, inrolled ..... B
Petals white or pale yellow C
Petals deep yellow or orange ..... D

Key A — Double or split cup daffodils (Fig 1., D4 or D11)

1. Flowers of one colour — 2
1. Flowers two or more colours — 5
2. Petal segments ragged, greenish yellow — 3
2. Petal segments in neat, overlapping tiers, — 4
3. Petal segments narrow, diffuse ('punk hair-do') — **N. 'Rip van Winkle'**
3. Petal segments broader, densely packed (common) — **N. 'Telamonius Plenus'**
4. Flowers 11cm diam. with many layers of pointed segments — **N. 'Golden Ducat'**
4. Flowers 3cm diam. ,fragrant, often 2 per stem — **N. 'Pencrebar'**
5. Petals yellow or pale yellow — 6
5. Petals white — 7
6. Flowers 11cm diam., regular rounded butter yellow petals mixed with orange segments in the centre — **N. 'Tahiti'**
6. Flowers 8.5cm diam., much dissected pale yellow petals mixed with lemon yellow segments in the centre — **N. 'Irene Copeland'**

7. Flowers split (Fig 1, D 11) 8
7. Flowers double, fragrant 9
8. Inner petals frilled, pale yellow fading white **N. 'Cassata'**
8. Inner petals pressed flat against the outer, deep golden yellow **N. 'Belcanto'**
9. Petals single, trumpet double, 5.5cm diam., flowering later **N. 'Cheerfulness'**
9. Petals double, trumpet double, 4cm diam., flowering earlier **N. 'Bridal Crown'**

Key B — Leaves rush-like, narrow and inrolled

1. Flowers single, petals reduced to linear or narrowly triangular segments; see (Fig 1. D10) ***N. bulbocodium***
1. Flowers usually multiple, petals overlapping ***N. jonquilla*** (Fig. 1, D7) 2
2. Trumpets and petals both yellow suffused with white **N. 'Pipit'**
2. Not coloured like this 3
3. Flowers 1 or 2, scented, orange trumpet, primrose yellow petals **N. 'Suzy'**
3. Trumpets and petals both plain yellow 4
4. Stems to 40cm, stiff, with solitary, fragrant flowers 4cm diam. **N. 'Sweetness'**
4. Stems to 20cm with 1 or 2 smaller flowers 3.5cm diam. **N. 'Sundial'**

Key C — Petals white or pale yellow

1. Petals and trumpet both white or pale lemon yellow 2
1. Trumpet yellow or orange (flowers not concolorous) 11
2. Two or more flowers per stem 3
2. One flower per stem 6
3. Sturdy plants with up to 10 nodding, scented creamy white flowers with upright overlapping petals ***N. papyraceus*** most commonly **N. 'Silver Chimes'**
3. Short plants with reflexed petals and 1-3 (-6) flowers 4
4. Dwarf plants with 1-6 nodding cream flowers with strongly reflexed petals (Fig. 1., D5, *Angel's Tears*) **N. triandrus**
4. Larger plants with more milky white flowers and less strongly reflexed petals 5
5. Two milk white flowers, 5cm diam., with narrow, twisted petals **N. 'Thalia'**
5. Two or 3 white flowers 4cm diam., petals broad, overlapping, reflexed **N. 'Ice Wings'**
6. A white D3 daffodil with a short trumpet and a distinctive green 'eye' **N. 'Portrush'**
6. Large all-white or pale yellow D1 daffodils, petals 10cm or more in diam. 7
7. Petals pale yellow 8
7. Petals white 10
8. Trumpet deep or pale yellow 9
8. Trumpet white, pedicel 10-25mm ***N. pseudonarcisus*** subsp. ***moschatus***
9. Trumpet deep yellow, petals paler, often twisted and forward pointing, up to 7cm diam., pedicel 15-25mm ***N. pseudonarcisus*** subsp. ***pseudonarcisus***
9. Trumpet pale yellow, expanded and lobed, pedicel 3-10mm ***N. pseudonarcisus*** subsp. ***pallidiflorus***
10. Creamy white, broad trumpets fading to white **N. 'Mount Hood'**
10. Trumpets very narrow at the base, then broadly flared **N. 'Empress of Ireland'**
11. Trumpet short, multi-coloured, edges often lined with red 12
11. Trumpets orange or yellow 13
12. Stamens of 2 kinds, 3 exserted, 3 inserted, late flowering (May or June) petals upright, broad, overlapping ***N. poeticus***
12. Petals recurved, narrow, overlapping at the base ***N. poeticus*** var. ***recurvus***
12. All 6 stamens protruding, petals very narrow, not overlapping, strongly recurved ***N. poeticus*** subsp. ***radiiflorus***

13. Trumpet orange, 1-6 fragrant flowers **N. 'Geranium'**
13. Trumpet white or yellow 14
14. Multiple flowers per stem 15
14. Single flowers per stem 16
15. Three-8 small (2.5-3.5cm diam.) fragrant flowers ***N. tazetta***
15. Two (-3) fragrant flowers, 4cm diam. ***N. × medioluteus***
16. Plants with reflexed petals (D6) 17
16. Plants with upright petals (D1, D2, D3) 21
17. White petals strongly reflexed 18
17. White petals spreading, only slightly reflexed 19
18. Stems to 20cm, flowers 4cm diam., lemon yellow trumpet **N. 'Jack Snipe'**
18. Stems to 30cm,. flowers 5cm diam., long clear lemon trumpets fading white **N. 'Jenny'**
19. Flowers to 5cm diam., large yellow trumpets, early **N. 'February Silver'**
19. Flowers larger (to 9cm diam.) 20
20. Petals yellow fading white 7.5cm diam., trumpet orange with yellow base **N. 'Beryl'**
20. Petals broad, creamy white 8.5cm diam., clear lemon yellow trumpet **N. 'Dove Wings'**
21. Trumpet as long as the petals (D1) 22
21. Trumpet shorter than the petals (D2 or D3) 23
22. A tall daffodil, flowers 12cm diam., with a long slender yellow trumpet, and strongly overlapping white petals, yellow at the base **N. 'Bravoure'**
22. A sturdy dwarf daffodil, flowers 3cm diam. **N. 'Little Beauty'**
23. Sturdy D2 daffodil with a frilled, lemon yellow trumpet fading to white (common) **N. 'Ice Follies'**
23. Slender D3 daffodil with narrow white petals and a narrow yellow trumpet **N. 'White Lady'**

Key D — Petals yellow or orange

1. Trumpet yellow 2
1. Trumpet white, orange or pale yellow 17
2. Flowers 1 per stem 3
2. Flowers 2 or more per stem (D5, 7, 8, 12) 14
3. Trumpet as long or longer than the petals (bend the petals forward and see if they overlap the end of the trumpet) (D1 and D6) 4
3. Petals shorter than the trumpet (D2) 9
4. Petals broadly overlapping, trumpet not parallel sided (D1) 5
4. Petals narrower, reflexed, trumpet often parallel sided (D6) 10
5. Flowers larger (more than 6cm diam.), hypanthial tube 15-25mm 6
5. Flowers smaller (less than or equal to 6cm diam.), hypanthial tube less than 15mm 7
6. Flowers uniformly deep golden yellow, to 9.5cm diam. ***N. pseudonarcisus*** subsp. ***major*** most commonly **N. 'Dutch Master'**
6. Petals paler than the trumpet, often twisted and forward pointing, up to 7cm diam. ***N. pseudonarcisus*** subsp. ***pseudonarcisus***
7. Flowers deep yellow with slightly reflexed petals, a common dwarf plant **N. 'Tete-a-Tete'**
7. Petals light yellow, upright or forward pointing 8
8. Trumpet 16-25mm, stems short (less than 25cm), winter flowering (11-2) ***N. minor***
8. Trumpet 30-40mm, stem 20-30cm, spring flowering (2-4) ***N. pseudonarcisus*** subsp. ***obvallaris***
9. Flowers concolorous, rich golden yellow **N. 'St. Keverne'**
9. Flowers clear yellow with lighter trumpet (common) **N. 'Carlton'**
10. Species and D6 cultivars with long, slender and distinctly parallel sided trumpets 11
10. Common D6 cultivars with broader, shorter trumpets 13
11. Plant small (stem less than 20cm), flowers delicate, nodding ***N. cyclamineus***
11. Plant larger (stem more than 20cm), flowers robust, not nodding 12
12. Trumpet broadly flared at its mouth, concolorous (uncommon) **N. 'Bartley'**
12. Petals deep yellow, trumpet yellow, less broadly flared (frequent) **N. 'Peeping Tom'**

13. Robust, petals clear yellow, trumpet deeper yellow **N. 'February Gold'**
13. Dwarf, petals deep golden yellow, flowers often multiple **N. 'Tete-a-Tete'**
14. Dwarf plants (< 20cm) 15
14. Larger plants (> 20cm) 16
15. Tiny plants, up to 5 flowers, 2.5cm diam., pale petals and darker trumpets **N. 'Minnow'**
15. Flowers larger (up to 5cm diam.), petals and trumpets deep golden yellow **N. 'Tete-a-Tete'**
16. Slender plants with up to 5 canary yellow flowers, petals narrow, late **N. 'Hawera'**
16. 1-3 soft yellow flowers with broad petals and short, frilled trumpets **N. 'Quince'**
17. Flowers 1 per stem 18
17. Flowers 2 or more per stem (D5, 7, 8, 12) 27
18. Division 6 or 7 YO daffodils 19
18. Division 1 or 2 daffodils 20
19. Petals reflexed (D6), fading to white, trumpet short and narrow (cup-like) **N. 'Beryl'**
19. Flowers 1 or 2 (D7), scented, primrose yellow petals, trumpets broad **N. 'Suzy'**
20. A sulphur yellow D1 daffodil, trumpets fading to white **N. 'Spellbinder'**
20. Trumpet orange 21
21. Fragrant, single flowers with pointed petals *N.* × ***incomparabilis***
21. Flowers not fragrant, petals pointed or not 22
22. Pale butter yellow petals to 11cm diam., and warm orange trumpet, lighter towards the base (the commonest YO cultivar) **N. 'Fortune'**
22. Trumpets deeper orange 23
23. Trumpets fiery orange red or deep orange 24
23. Trumpets orange 25
24. Rounded, smooth, rich golden petals, trumpets widening only slightly to a jagged mouth **N. 'Vulcan'**
24. Trumpet narrow, goblet-shaped **N. 'Ceylon'**
25. Flowers 11cm diam., petals spreading, distinctly pointed (frequent) **N. 'Home Fires'**
25. Flowers less than 10cm diam. (uncommon) 26
26. Flowers 8.5cm diam., goblet-shaped trumpet **N. 'Shining Light'**
26. Flowers 9.5cm diam., widely expanded trumpets **N. 'Ambergate'**
27. Petals spreading, scented (D8) 28
27. Petals reflexed (D6) 29
28. Flowers smaller (3.5cm diam.), with gold petals and tangerine trumpet **N. 'Grand Soleil d'Or'**
28. Flowers larger (5cm diam.), with yellow petals and short red-orange trumpets **N. 'Scarlet Gem'**
29. Small plants with 1-3 nodding flowers (3cm diam.) with narrow, sharply reflexed yellow petals and pale orange or deep gold trumpets **N. 'Jumblie'**
29. Larger plants with single flowers (to 7.5cm diam.) with broad, spreading yellow petals, and long bright reddish-orange trumpets fading in full sun (common) **N. 'Jetfire'**

This key is very much a provisional first step towards recording the distribution and abundance of *Narcissus* cultivars in the British Isles. Some cultivars I have omitted will turn out to be widespread, and some that I have included will turn out to be too rare to merit inclusion in subsequent editions of the key. In any event, I hope you have fun recording daffodils. Please let me know what you find.

Acknowledgements: thanks to Clive Stace for advice on the key, and to Mr M. Harwood, keeper of the National Plant Collection of *Narcissus*, for help with the identification of cultivars.

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NARCISSUS DIVISIONS

Daffodils are separated into 12 divisions, chiefly on the basis of their different flower forms, as shown here. The Division 10 illustration shows the distinctive *N. bulbocodium*. Division 12, the miscellaneous category, is very diverse and therefore not illustrated.

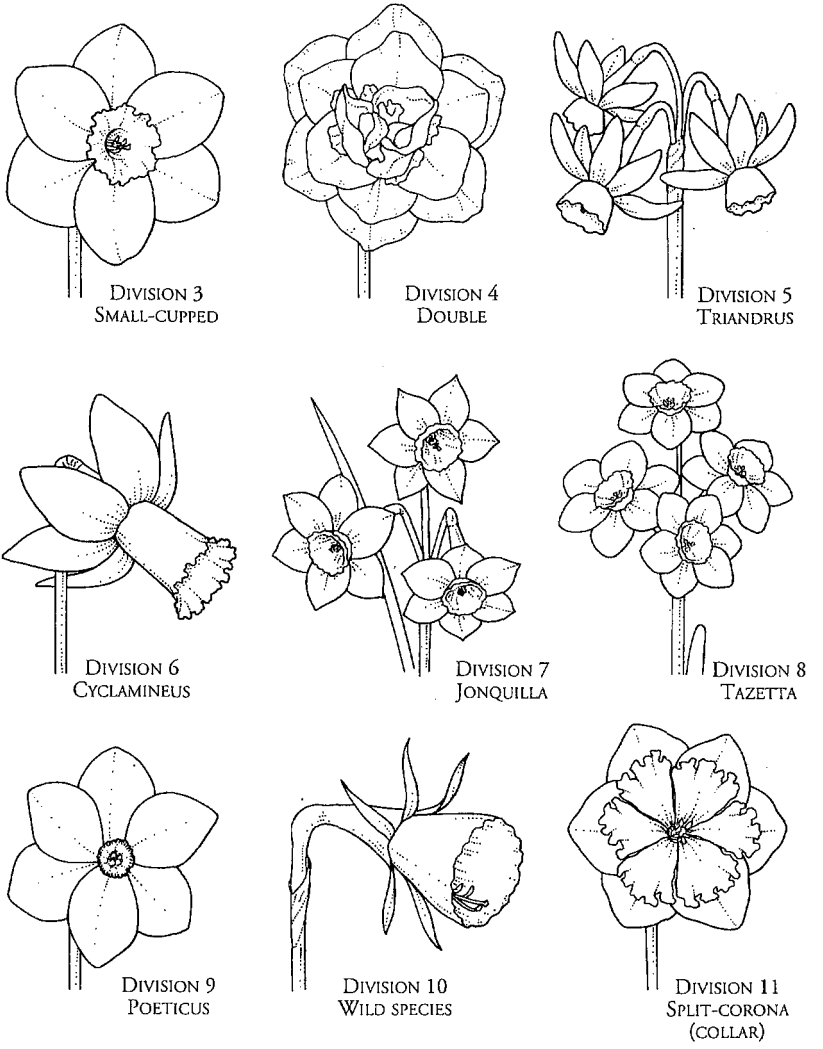

Figure 1. The horticultural Divisions of the genus *Narcissus*. Reproduced with permission from Brickell, C. (1996).

Petals	Trumpet Yellow	Division	Frequency	Trumpet White	Division	Frequency	Trumpet Orange	Division	Frequency
Yellow	Dutch Master	1	91	Spellbinder	1	1	Fortune	2	52
	Tete a Tete	6	68				Jetfire	6	31
	February Gold	6	63				Home Fires	2	18
	Telamonius Plenus	4	42				Jumblie	6	3
	N. p. pseudonarcisus	10	32				Tahiti	4	2
	Peeping Tom	6	14				Suzy	7	1
	Carlton	2	9				Holywood	2	1
	Golden Ducat	4	4				Pinza	2	1
	Bartley	6	3				Grand Soleil d'Or	8	1
	St. Keverne	2	2				Ambergate	2	1
	Kingscourt	1	1				Vulcan	2	1
	King Alfred	1	1						
	Hawera	5	1						
	Baby Moon	7	1						
	Sun Disc	7	1						
	Quail	7	1						
	Sundial	7	1						
	Sweetness	7	1						
White	Ice Follies	2	67	Cassata	11	4	Geranium	8	3
	February Silver	6	26	papyraceus	8	1	Salome	2	1
	Jack Snipe	6	13	Ice Wings	5	1			
	Bravoure	1	11	Thalia	5	1			
	White Lady	5	6	Silver Chimes	8	1	Red-lined		
	Beryl	6	3	*N. triandrus*	10	1	*N. poeticus*	9	26
	Dove Wings	6	3						
	Silver Standard	2	3						
	Minnow	8	1						
	Jenny	6	1						
	Cananliculatus	8	1						
	Portrush	3	1						

Table 1. The cultivars of *Narcissus* found most frequently in a survey of 61 churchyards in v.c. 22 carried out between February and May 2001. The cultivars are separated by the colour of their petals (rows) and trumpets (columns), and ranked by the percentage of churchyards where they were seen.

CONYZA BILBAOANA IN KENT

On 2nd November 2001, whilst botanizing with Peter Heathcote on roadsides and waste places at Dryhill (TQ45) near Sevenoaks I noticed a group of some thirty plants of *Conyza*, some forty or so yards away, with an unfamiliar jizz. On closer inspection they were obviously not *C. canadensis* (Canadian Fleabane) or *C. sumatrensis* (Guernsey Fleabane), both of which I am very familiar with, nor did they match up to *C. bonariensis* (Argentine Fleabane) which I have only seen on a few occasions as a wool alien. On showing a specimen to Eric Clement the following day, he confirmed the identification as *C. bilbaoana*. This is the first record of this plant for Kent and for v.c. 16.

Conyza bilbaoana was brought forward as new to Britain by Paul Stanley in 1996, (*BSBI News* **73**: 47–49) where it is clearly described and illustrated. The Kent plants appeared very bushy with long stems branching from low down on the plant, with the very pale flower heads very loosely spread, giving the appearance of rather long peduncles. Once seen, *C. bilbaoana* is a very distinctive plant and should not be overlooked, and is likely to become very widespread over the next few years if it follows the example of *C. sumatrensis*.

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EUPHORBIA MACULATA IN V.C. 53 (S. LINCS.) AND V.C. 11 (S. HANTS.)

In August 2001, Mr John Lamin sent to me (IW), a specimen of *Euphorbia maculata* (Spotted Spurge) from near Bourne in S. Lincolnshire. Mr Lamin writes that it might have come from via pots from another local nursery, but it was found in open ground on black sedge peat in the nursery plantation of Christmas trees, adjacent to the road through Bourne South Fen (TF1119), just east of Bourne. Two plants were recorded each spreading over 12cm and though subsequently removed, seed had set. EJC has verified the identification, and Mr Lamin says he will search further on the other nursery sites in the vicinity.

This warm-temperate species was also found in April 2001 by Mr Phil Budd in pots of plants at the Brentry Container Unit at Ampfield in S. Hampshire. A voucher piece, now in the possession of the vice-county recorder (**herb. Pete Selby**), was duly confirmed by EJC.

Earlier British records for this species are fully detailed in Clement (1976 & 1977), the earlier reference giving both a good line drawing and a key to the four closely related prostrate species of spurge that have been recorded in Britain.

References:

Clement, E.J. 1976. Prostrate spurges in Britain. *BSBI News* **13**:1 (illus.) & 21.
Clement, E.J. 1977. More about *Euphorbia maculata*. *BSBI News* **15**: 12.

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EUPHORBIA MACULATA SPOTTED

The unexpected botanical find always gives me the greatest pleasure. So it was, on July 15th 2001 after a social event and wending my way back home, with the Spotted Spurge (*Euphorbia maculata*) especially as Rodney Burton, the v.c. recorder for London (Middlesex) subsequently confirmed it as a new record.

Growing in the gardens of Trinity Square, hard by Tower Hill underground station, London (TQ336807), *E. maculata* was growing in quantity in the south east corner. The distribution was

centred on two rampant plants of the Wireplant (*Muehlenbeckia complexa*). It is tempting to suppose that the *Euphorbia* was introduced with the *Muehlenbeckia* as it has, in the past, most often been recorded in the UK as a weed of nurseries (Clement & Foster 1994) (Stace 1997).

A subsequent visit to examine the site more carefully, tho' spoilt by rain, revealed the population to be significant. The plant, being totally prostrate, grows easily into a tangled mass and individual plants were more or less impossible to differentiate. But a conservative estimate made the population to be 100+, with this largely confined to the flower beds. Some 18 plants were found on the asphalt path, particularly where the surface was crumbling, with a solitary plant in the lawn.

When reporting my find to my local Sidcup Natural History Society, and as the members are mainly bird-orientated, I described it as a breeding population, for clearly the plant was well established and had been there for some years.

Having seen the species growing on Manitoulin Island in Ontario, Canada, where Lake Huron freezes in Winter to over 60cm in depth, I have no doubt the seeds (for it is an annual) can overwinter. Hot summers seem to be the necessity and this, with the help of global warming, has been met in recent years. Distribution of the copiously-produced seeds could be by attachment to shoes or tools. A survey of the area near by including the remains of the Roman Wall and those parts of the Tower of London not requiring payment to enter, revealed no further plants.

In its native North America, *E. maculata* is put in the genus *Chamaesyce* Gray. This is an important genus for American botanists with 15 species being so placed by Britton & Brown (1970), whilst in Hawaii no fewer than 22 species are put into this genus by Wagner *et al.* (1999). Linnaeus was happy to put those species so placed in *Chamaesyce* and known to him, in *Euphorbia*; these, together with 3 native European species are now, in Tutin *et al.* (1968), placed in subgenus *Chamaesyce* Rafin.

In the field *Chamaesyce* certainly appears quite distinct insofar as my experience of 11 taxa to date would suggest. The leaves are in pairs and, most distinctively, held in one plane. This applies to both the weedy herbaceous (9) and the shrubby (2) plants; illustrations of other species show the same features. Indeed I understand from Eric Clement that, since he wrote his 'Aliens' (Clement & Foster 1994), more botanists have 'recognised' *Chamaesyce*, no doubt responding to US pressure. So will European botanists follow suit? If so our *Euphorbia peplis* will become *Chamaesyce peplis*!

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MORE ABOUT *CENTAUREA RHENANA* (AND ALLIES) IN MW YORKS.

In *BSBI News* **85**: 45-46 (2000), John Taylor (JT) penned a most interesting article about adventive plants he found introduced with seed mixtures sown alongside a motorway near to his home on the outskirts of Leeds, in Aberford (MW Yorks., v.c. 64). *Centaurea rhenana* Boreau (Panicled Knapweed) was, perhaps, the most exciting find — some 162 plants in total. In 2001 it was still to be seen there, and this provided an opportunity for our new member, Phil Rye, an accomplished artist, and now living in Leeds, to gather part of a plant in late September. His beautiful and diagnostic portrayal appears on our front cover. It shows:

A Habit of plant
B Lower stem leaf
C Section of leaf lobe (upper surface)
D Mid involucral bract
E Flowering head
F Achene (minus caducous pappus)

A formal description may be found in *Flora Europaea* **4**: 278 (1976), but the following more colourful account by JT will, undoubtedly, be helpful to members (see also photos p. 41).

Centaurea rhenana Boreau

Erect perennial with slender branching stock to 1.5m. Stems woody and ridged.

Young growth pubescent and distinctly silver in appearance, maturing to grey/green with erecto-patent hairs. Basal leaves stalked, stem leaves sessile, spirally arranged, oblanceolate in outline, deeply pinnatisect to bipinnatisect, with narrow, linear, acute lobes.

Inflorescence branching. Corolla mauve approx. 2.5–3.0cm diam. Capitula much smaller than in *C. nigra*, 5–7mm across at broadest area of capitulum. Phyllaries acuminate; basal portion green with distinct veins, scarcely pubescent; upper portion pale brown, dark brown apex and margin with (16–20) long, regular teeth radiating at right angles.

Flowers July to September (after *C. nigra*).

C. rhenana is a native of a large part of C & SE Europe, extending from N Italy to C Russia; it is naturalized in Denmark and Sweden. Surprisingly, after a long search, I have only been able to locate two previous records of this plant in the British Isles. It was found by the Revd F.S. Alston in chicken runs in the vicinity of Lincoln (N. Lincs., v.c. 54) in 1917 and *c.*1918, with a voucher in **OXF**. Introduction with Russian cereals was the obvious vector here, and probably equally so in Sweden — *cf.* N. Hylander, *Prima loca plantarum vascularium Sueciae* (1970), p. 27. Although this species is usually short-lived (?biennial), seed-set at Aberford is plentiful, and a permanent establishment here seems quite possible. Voucher material is already preserved in **herb. EJC**.

Also present at Aberford are a number of puzzling *Centaurea* plants that have so far eluded an accurate determination, several of which are undoubtedly hybrids. Definite plants of pure *C. jacea* (Brown Knapweed) were seen in 2000 & 2001, plus clumps of *C. jacea* × *C. nigra*. A single plant of *C. uniflora* Turra subsp. *nervosa* (Willd.) Bonnier & Layens (1st British record) was the highlight of 2001, found by M. Wilcox, B.A. Tregale and Mrs P.P. Abbott. It was photographed by MW and two pressed fragmants are deposited in **herb. EJC**. A record in 2000 for the somewhat similar *C. phrygia* L. remains unconfirmed (specimen inadequate?).

A *Centaurea* specialist is clearly needed to confirm/redet. all of these plants. Surprisingly, no similar collection of alien knapweeds has yet been reported from outside MW Yorks.

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CYMBALARIA HEPATICIFOLIA AS A GARDEN WEED

Probably every reader will know of *Cymbalaria muralis* (Ivy-leaved Toadflax), but its close ally *C. hepaticifolia* (Poir.) Wettst. (Corsican Toadflax) is little known. It has been encountered as a garden weed in Britain since at least 1965, when D. McClintock, in *Wild Flower Mag.* **346**: 27 (1966) and **352**: 26-27 (1968), reported 'the friendly gardeners waging gentle war' on it at Reuthe's Nurseries at Seal (v.c. 16, W. Kent). At the same time, he also tells of it 'peeping out of the tops of dwarf Rhododenrons' in Edinburgh Botanic Gardens (v.c. 83, Midlothian), a locality that Dr P. Macpherson rediscovered in Aug. 1996. I assume it is not deliberately cultivated there, as it does not feature in their 477 page *Catalogue of Plants* (1995), edited by K.S. Walter *et al.* They do list '*Cymbalaria origanifolium*', but I presume that this is a computer error for *Chaenorhinum origanifolium*. Also, in 1967 it was found 'thickly entrenched' filling the interstices of the war memorial at Lairg (v.c. 107, E. Sutherland).

More recent records of it are few. In *BSBI News* **39**: 9 (1985) we read of it overrunning a rockery at Bristol (v.c. ?34); and R.A. Barrett (*pers. comm.*) found it in Aug. 1993 as a flower-bed weed at RHS Gardens, Wisley (v.c. 17, Surrey).

Cymbalaria hepaticifolia del. D.P.J. Smith © 2001

For very many years, with its arrival unrecorded, it has been grown unobtrusively as 5cm tall ground-cover under tall shrubs in front of Jermyn's House at Sir Harold Hillier Gardens and Arboretum, Ampfield (v.c. 11, S. Hants), but in *c.*1995 it was accidentally transported into a distant humus-rich, renovated bed of dwarf conifers. In the friable, peaty compost it romped away out-of-control, swamping almost the entire bed with trailing shoots that also filtered up through and over the 30cm shrubs. Both the Curator Mike Buffin (MB), and the gardeners deemed it a weed, and hence worthy of a record here. A voucher is preserved in their very fine new herbarium (hopefully soon to be recognised as **HILL**).

In order to draw attention to this potential pest, MB very kindly provided live material for our artist, Delf Smith, to draw. His skilful delineation (see page 35) shows:

A Underground stolons (or slender rhizomes)
B Lower portion of aerial stolon
C Middle portion of trailing stem
D Upper portion of plant
E Hair from upper surface of leaf
F Side view of flower
G Front view of flower
H Corolla split open to show stamens
I Sterile fruit (with part of calyx removed)

I have seen material only from the vcc. 11, 16 and 83 localities. They might represent a single clone and are apparently 'abnormal' in several respects. The typical (type) plant, I presume, is the one illustrated on p. 284 of J. Bouchard's *Flore Pratique de la Corse* (3rd ed., 1977). It shows a fertile plant with predominately 3-lobed, glabrous leaves and lilac flowers (from description therein). Our plant is clearly completely sterile, the upper surface of at least some younger leaves sport curiously bent, multiseptate hairs resembling the leg of an insect (Fig. E); the leaves are mostly shallowly 5-lobed; the scentless (to EJC!) flowers appear white in the field (garden), but possess lilac veins on the upper lip and a faint lilac tinge on the hidden parts of the corolla; and the bifid boss at the base of the lower lip is white, not yellow as in typical *C. muralis*. Furthermore, the fragile, white, 1mm diameter, underground stolons (or slender rhizomes, depending on whose definition one uses!) are not mentioned in any literature that I have seen. *The RHS Plant Finder 2000-2001* lists one supplier, only, for *C. hepaticifolia* 'Alba', *viz.* Nicky's Rock Garden Nursery (Honiton, Devon), which I expect is the same taxon. The sterility of the Edinburgh plant was first noticed by Miss K.M. Hollick, back in Aug. 1968.

It is tempting to suggest that we have, here, a hybrid, but I can trace no likely parentage amongst the known nine species. It seems more probable to me that we have some odd number ploidy level of the species that is inherently sterile. I notice that Stace's *New Flora of the British Isles* (ed. 2, 1997: 598) gives 2n=98, whereas *Flora Europaea* **3**: 237 (1972) gives 2n=56. With such vigorous stolons, a lack of seed-set is no serious disadvantage. In its native Corsican habitat, amongst humid, rocky ground by torrents at 1000–2300m, water presumably effects longer-distance dispersal. In contrast, *C. muralis* has 2n=14: this species, at least, is known to be self-fertile, and very fecund too; noteworthily, it has a *forma* with very odd, three-fingered leaves that comes true from seed (*pers. comm.* C.G. Hanson, July 1983) that is called f. *toutonii* (A. Chev.) Cuf. — see *Watsonia* **14(2)**: 182–183 (1982) for full details about this remarkable mutant.

It is interesting to note that in **BM** there are currently 10 sheets of *C. hepaticifolia* collected from native localities; eight of these closely match our alien plant in leaf shape and are apparently sterile. The remaining two sheets have 3-lobed *Hepatica* – like leaves, one of which is clearly setting abundant fertile fruits. Possibly two clear taxa are represented here?

I assume that this plant is primarily grown by gardeners as ground-cover — its sub-fleshy, pretty leaves typically of *c.*3cm diam. are darkish green with the palmate leaf veins broadly picked out in a silver-grey colour, and so recalling the foliage of some variants of *Hedera* and *Cyclamen*. The long display of white snapdragon flowers (from June to August) is an added attraction. A patch can quickly become many meters across in suitable, acidic soil: is such a prostrate giant being overlooked in some more rural situation? As yet, it has scarcely jumped clear of the garden fence.

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SOME NOTES ON *VERBENA BONARIENSIS* L. *SENSU LATO*

I am unaware that the S. American *Verbena bonariensis* (Argentinian Vervain) has made a permanent home for itself anywhere in Britain, but casual records of garden escapes continue to increase in frequency. The first record for the British Isles may be as late as 1949 — see *Proc. Bristol Nat. Soc.* **28(1)**: 22 (1950), but there are now records for at least v.cc. 10, 12, 16–19, 21–22, 25, 30, 34, 37, 58–59, 62–65 & 79. The first record for Dorset (v.c. 9) was only in 1999, and then an unrelated second one rapidly followed in 2000 — see Dr Humphry Bowen's fine *The Flora of Dorset* (2000), p. 188.

Some of the above records are probably referable to closely related taxa, especially so the wool adventive records. Indeed, three such herbarium vouchers in **CGE** have been redetermined by Dr P.F. Yeo as *V. brasiliensis* Vell., the abnormal 'form with amplexicaul leaves' — see *Kew Bull.* **45(1)**: 111 (1990). Others could refer to the recently described *V. Incompleta* P.W. Michael (1996) — see *Telopea* **6**: 181 — or the near forgotten *V. quadrangularis* Vell. Material in my own herbarium is not uniform.

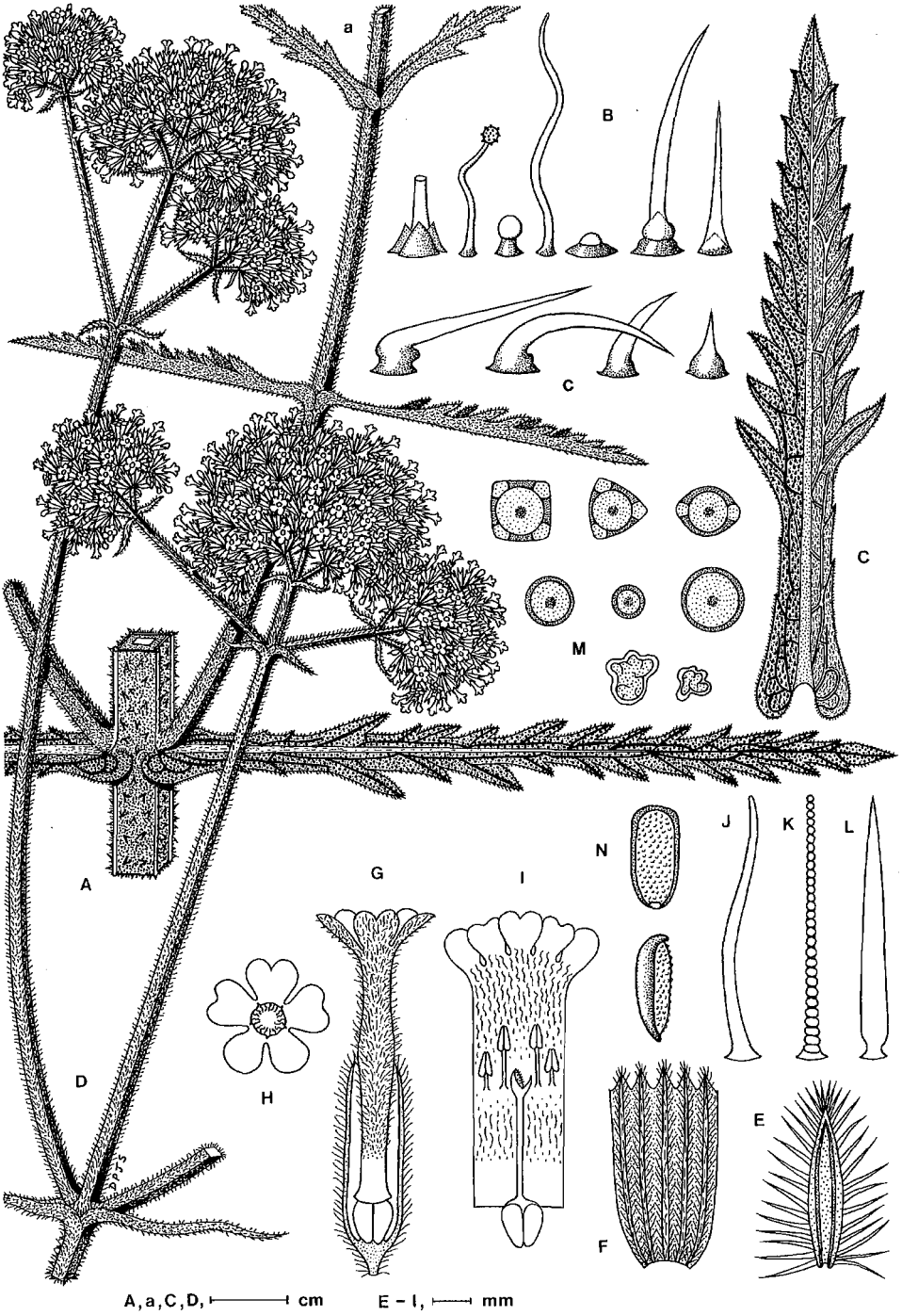
Other recent records for this aggregate appear in *BSBI News* **83**: 44 (2000), and A.A. Butcher found 'lots of plants' on the site of a soil dump at Woolverstone (E. Suffolk, v.c. 25) in Aug. 2000, at map ref. TM18903839, **herb EJC**. Pete Selby also tells me that in Sept. 2001 he found one plant on waste ground, near a supermarket, in Freshwater, SZ342860 (Wight, v.c. 10) — a 1st record, as an escape, for the island (*comm.* Dr C. Pope), although it readily self-sows within gardens there. Back in 1963, R.D. Meikle, in *Garden Flowers* (The Kew Series, Eyre & Spottiswoode), tells us (p. 355) that this species is 'fairly hardy, at least in southern Britain, where it will sometimes establish itself on waste ground.' He continues by saying 'Although rather too gaunt and weedy for the flower-border, it is attractive in out-of-the-way spots, and useful for cutting. It [is a short-lived perennial, but] can be grown as a half-hardy annual, and will flower within a year of being sown'. The *RHS Plant Finder 2000-2001* currently quotes 'more than 30 suppliers', indicating a change in fashion! It features, for example, on the front cover of the current *J.R.H.S. The Garden* **126(11)**, Nov. 2001 as well as on p. 829 (coloured photograph).

First-class line illustrations of the hortal form of *V. bonariensis* are not easy to find in the literature: Delf Smith (DPJS) has risen to the challenge and kindly provided us with the fine accompanying plate (see p. 38). It is drawn solely from the 'weed' that has been self-sowing itself about my own garden, especially enjoying cracks in the concrete driveway, since 1995. The same taxon is present in several local private gardens, as well as in the nearby historic Crescent Garden (in Crescent Road, Alverstoke). It grows stiffly erect, usually 1-stemmed, to some 150cm, and flowers profusely from summer till November.

The drawing shows:

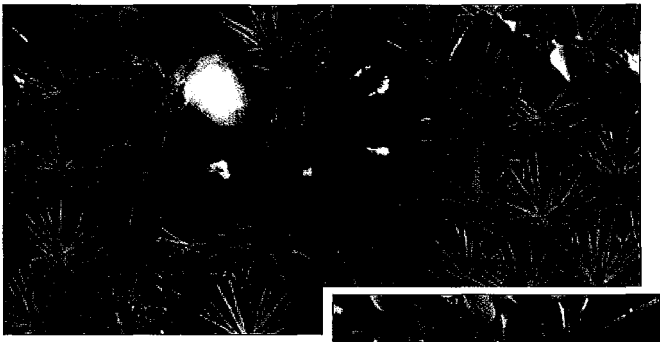
A Middle stem node with an axillary inflorescence branch (a)
B Stem armature
C Middle stem leaf
c Armature on middle stem leaf
D Terminal part of inflorescence
E Bract at base of calyx
F Calyx tube opened out
G Flower (calyx tube drawn in section)
H View of corolla from above
I Corolla tube opened out
J Hair from outside of corolla tube
K Hair from inside of corolla tube above stamens
L Hair from inside of corolla tube below stamens
M Pollen grains
N Nutlet (adaxial and side views)

Two characteristics suggest to me that this taxon *might* be a recently stabilized hybrid that now breeds true, *viz.* the absurdly variable stem indumentum (fig. B) and the weird variation in pollen shapes (fig. M), some 30% being shrivelled and non-functional. Such an origin is a feature of other widespread and successful weeds, *Poa annua* (Annual Meadow-grass) being the best-known example. The corolla is zygomorphic, but one must look very closely to detect this (see fig. H);

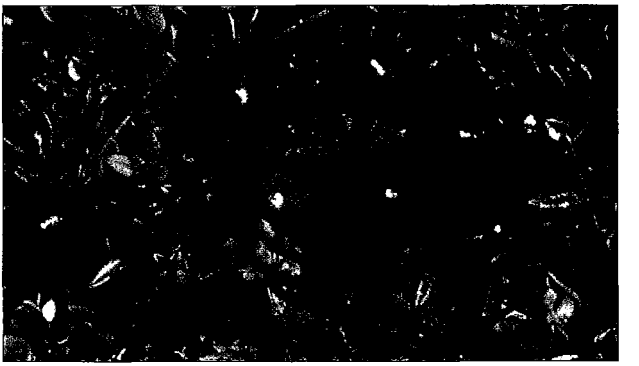


Verbena bonariensis del. D.P.J. Smith © 2001

Lysimachia thyrsiflora in Glamorgan (v.c. 41), both photos © D. Clements, 2001 (see p. 13)

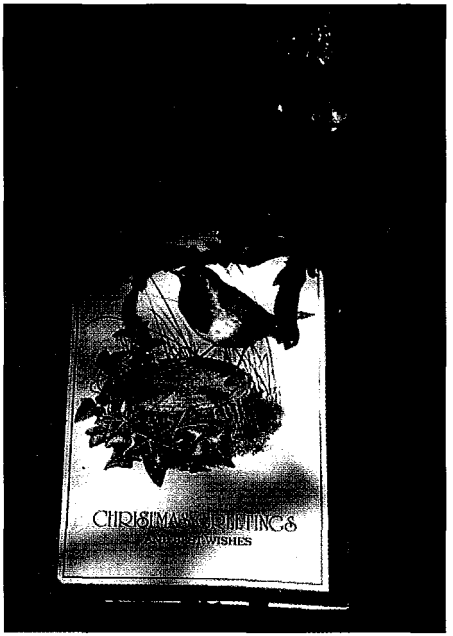


Vaccinium oxycoccos, form with red-flushed berries

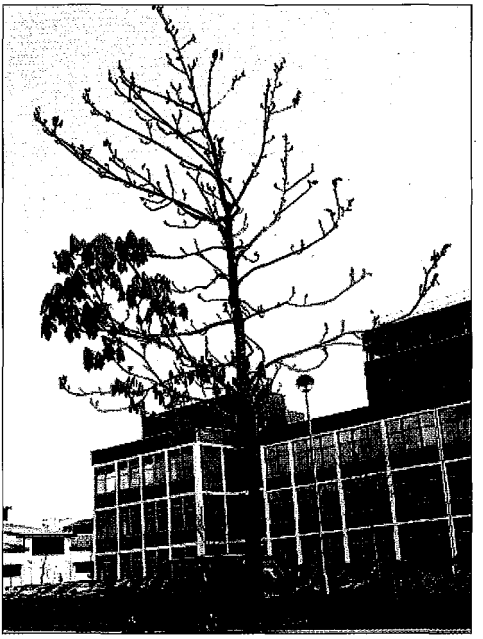


Vaccinium oxycoccos, form with berries speckled with brown

Both photos taken at Shortheath Common in Hampshire © A. R. G. Mundell, 2001 (see p. 17)

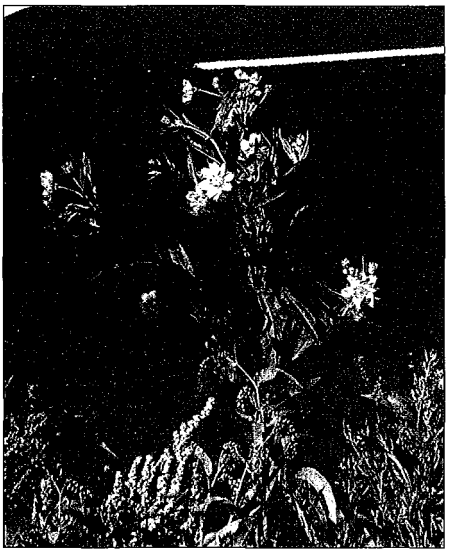


A Christmas Green Oak, photographed *in situ* at Aldershot (v.c. 12), on 30th Dec. 1988, © A.R.G. Mundell, 1988

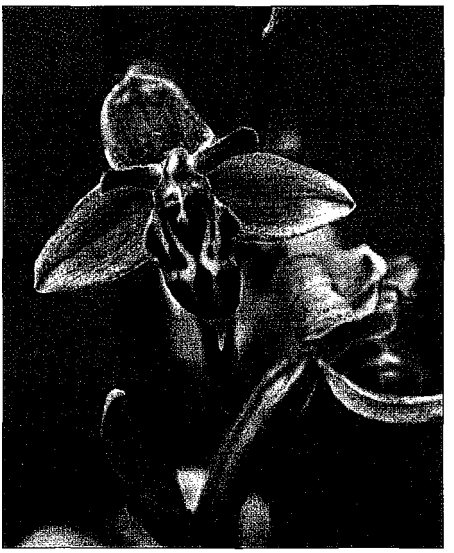


Aesculus hippocastanum, one branch coming into leaf early at Farnborough, Hampshire, © P. Drane, 2001

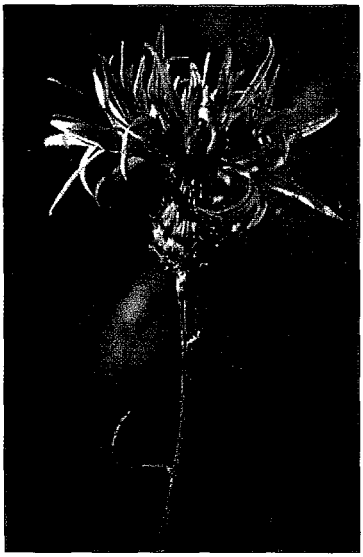
(see p. 20)



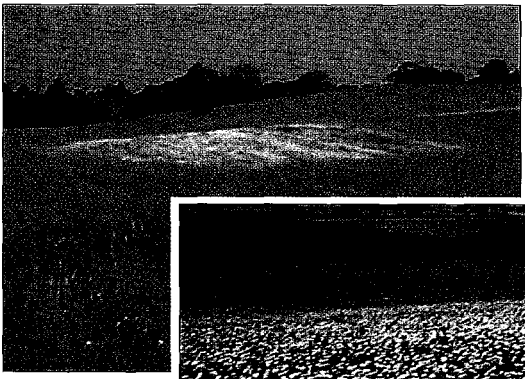
Guizotia abyssinica, Portsmouth (v.c. 11), photo © I.A. Thirlwell, 2001 (see p. 51)



Ophrys apifera var. *belgarum,* Bulmer (v.c. 19), photo © T. Tarpey, 2001 (see p. 20)



Centaurea rhenana at Aberford (v.c. 64), photos © P. Abbot, 2001 (see p. 33)



Chrysanthemum segetum at Bulmer (v.c. 19), photos © T. Tarpey, 2001 (see p. 20)

David Pearman hard at work on Atlas 2000, photo © A. Pearman 2001 (see p. 7)

BSBI members on the trip to Sicily, photographed on Mt. Etna, photo © R. D. Pryce, 2001 (see p. 76)

the lobes are a violet-blue (to my one working eye!) with a reddish coloration on the slender tube. Clive Stace's *New Flora of the British Isles*, ed. 2 (p. 554) gives an apt and accurate description, apart from claiming a familial character of 'stigma 1, capitate.' Fig. I shows a more complicated structure: the solitary style bears an enlarged, bifid terminal portion that consists of a lone receptive stigma with a slightly shorter sterile stylar lobe opposite it — looking as if it might ravish any pollen grain that alights thereon! (Stigmas sensitive to touch are well known in, for example, *Mimulus* species). The harsh indumentum on the upper side of the leaf blade (fig. c) is especially interesting: it demonstrates that our hortal plant is not identical to the one described as *V. bonariensis* (*sensu stricto*) in Australia as being '± villose above, tomentose below', quoting from *Flora of Victoria* **4**: 414 (1999). The same description is used in *Flora Europaea* **3**: 123 (1972), where the plant is accepted as 'naturalized in W. Europe.'

Our garden plant appears to be *V. bonariensis* Rendle, non L., which the Verbenaceae expert, H.N. Moldenke, renamed in 1935 as *V. patagonica* Mold. He had overlooked the earlier homonym *V. patagonica* Speg. (1883), but Meikle (*loc. cit.*) and other gardening books have, sadly, continued to use this illegitimate name.

Clearly, more study in Britain is required on the *V. bonariensis* group: in the meantime vouchers should be gathered to substantiate any record that is claimed.

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ALAS! A LACK! (OF TELECOMICACEAE?)

I greatly appreciated E.C. Nelson's erudite article on the Telecomicaceae (*BSBI News* **87**). Being a relative newcomer to botany, I'm always glad to learn new species: the key is particularly user-friendly in the field and the nomenclature so apt. I'm now delighted to whisper '*Pseudopinus telephoneyensis*' whenever passing a specimen in the car.

I was therefore dismayed to read the proposed nomenclatural revision to 'Poleaceae' (*BSBI News* **88**). I'm sure Storey is as correct in his assertion as the authorities who changed Crucifers to Brassicas and Umbellifers to Apes. We lowly mortals who are trying to learn the correct names of plants must just attempt to re-jig the brain cells (the proper botanical term may be to acquire a less good forgettory).

Nomenclature is surely such an important subject to botanists because of the innate power of names. Names which are easy to remember have such power because they are apt, have helpful associations and give information about the plant(s) in question. Hence:

Cruciferae — family with cruciform = cross-shaped, four-petalled flowers; *versus* Brassicaceae = brassy ones?

Umbelliferae — family with umbels; *versus* Apiaceae = swinging from tree-to-tree-type ones — tropical family?

Telecomicaceae — amusing family, kin of British Telecom; *versus* Poleaceae — family with extreme northerly/southerly world distribution?

In addition to being part of the root of the Telecomicaceae, communication is the purpose of nomenclature. We should name things wisely and well, not merely correctly. E.C. Nelson (*BSBI News* **87**) was looking forward to a cladistic study of the Poleaceae (Telecomicaceae). I see one of the original authorities, H.M. Bowen, is no longer able to contribute to this debate, or any other. I trust this is not the end of *Pseudopinus te!ephoneyensis*, also. Incidentally, what a good name. In dog-latin translation — False pine / of the land or kin of the telephone people.

I hope the new generation of botanists will have the wit and botanical Latin to match their teachers!

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FALLOPIA JAPONICA ON THE ISLE OF ARRAN

Introduction

Fallopia japonica (Japanese Knotweed), a non-indigenous invasive species has become established on the Isle of Arran, Scotland (v.c. 100). It was studied to determine the distribution, rate of spread, its ecology, and possible control methods. Data on the species was collected from field work in 1992 and 1998 and other data sources such as botanical recorders on the island and the Biological Record Centre (BRC) to build up a picture of its distribution on the island.

Origin of the species on Arran

The origin of the species on the island is not clear but it probably originated in gardens almost certainly in the Brodick and Lamlash area. It was first officially recorded on the island in 1926 by Robert McKechnies, a former recorder from 1925 to 1950. The present BSBI recorder, Tony Church took over in 1987 but no previous records were handed over (T. Church, *pers. com.* 1993).

Method of spread

It can be safely assumed that the species was present on the island before 1925. The method of spread was probably from discarded soil from gardens either intentionally by gardeners when it got out of control or by unintentional dumping of soil from gardens containing the rhizomes. In the British Isles, *F. japonica* can only reproduce vegetatively by means of its rhizomes (Beerling 1991). Only a small piece is needed to provide new growth (Brock & Wade 1992). It can be spread also by stream by transport of the rhizomes and pieces of cut stem down stream when the banks are eroded and possibly along beaches by sea water. The species is salt tolerant. (L. Child, *pers. com.* 2000); a future look at local tidal currents / patterns may reveal if there is any correlation between spread and tidal currents.

Recording of the species and its distribution

Recording of the species was sparse until 1987 where there was either an increase in the recording or a dramatic increase in the species.

As the species appeared to look like it belonged to the indigenous flora, it was overlooked until recently when it became a problem. From personal communication with people who live on the island some looked at it as an interesting contribution to the flora or did not note it as anything unusual.

Recordings started in the 1950s but only for presence in 10×10km squares. The oldest distribution map that has been obtained is from 1960 and shows the species present in three of the tetrads in the south-east of the island (From *Atlas of the British Flora*, 1962). By 1976 it had spread to one more tetrad in the north-west (BRC). From a 1988 map obtained from the Biological Records Centre it was seen to be present in seven of the 10×10km squares. From my own research and fieldwork in 1992 it was shown that the species was in six 10×10km squares (some areas may have been over looked) and subsequent research and field work in 1998 revealed its presence in nine 10×10km squares out of the ten on the island. The 1992 and 1998 results along with all other records were also mapped onto 2×2km grid map (tetrads) to give a more detailed idea of the spread. This showed that the species is present in 40 out of 138 squares on the island. Some of the 1998 results were obtained from T. Smith. Some of the records are pre 1992, the earliest being 1985. A total of 118 sites have been recorded to date.

The recording of *F. japonica* on the Isle of Arran did not start officially until 1950 and has been fairly erratic. There was a dramatic increase in recording sites from 1986. This does not indicate there was a sudden increase in the species but an increase in recording. The species was probably over looked and also there may not have been recorders specifically looking for it.

Some of the records are probably repetitive. This was determined by looking at the compilation of the six figure grid references. Where grid references do not match precisely, some are assumed to be the same patch as there is always a degree of human error in recording 6 figure references. The maps demonstrate the chronological spread of the species within the tetrads up to 1998.

Habitat

The main habitats that *F. japonica* occurs in on the island are beach habitats (42%) and riparian (23%). These are only the number of sites recorded and not the total spatial area occupied. 45% of the sites were at 0m (sea level) correlating with the beach records, 13% were at 10m and the highest records (2 sites) were at 150m. Proximity to human habitation (buildings) was also noted and demonstrated a general trend that virtually all of the sites were within 1km of human habitation.

Control

There have been attempts to control the species by the council in 1996 but all sprayed colonies are more or less back to their original state (T. Church, *pers. com.* 1998). Some of the grass verges have also been mown by the council as a method of control.

The main points about control of *F. japonica* on the Isle of Arran are as follows:

a Stricter controls. Alert gardeners to the problems caused by allowing the species to grow out of control. (Plant matter is often removed from gardens and deposited e.g. 'Fly-tipping' on waste / public land from where it spreads.)

b Closer monitoring of *F. japonica* to record its effects on the ecosystem and monitor its spread.

c Co-operation between public and private land owners especially where there are large areas affected that cross boundaries.

Conclusions

From this study it can be seen that *F. japonica* is well established in some areas on the Isle of Arran mainly in riparian and beach habitats and is associated with human habitation.

The method of spread is vegetative through rhizomes and stem pieces in soil or water, both riparian and possibly sea water. The initial sites of introduction are human influenced — humans are the vectors of introduction. Climate change may have an effect on its spread. There are many factors affecting the rate of spread, some of which have been discussed, but there is possibly another unknown factor either promoting or preventing spread. Time is another important factor as there is still the potential for the plant to spread on the island to ideal habitats. It has not yet reached its potential optimum on the island.

Control of the species is in its elemental stages — it all depends on the perception of the problem, where it is and the landowner.

Acknowledgements

I would like to thank the following amongst many for their help and inspiration for this project: John Charter for the initial project, Professor A.J. Willis (University of Sheffield) for his advice and comments, Tony Church and Tony Smith for data and Norma Hayward (Mother) for help with the field work.

This is a summary of an unpublished project.

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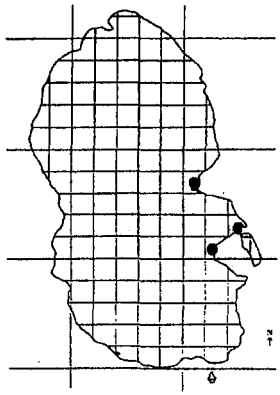

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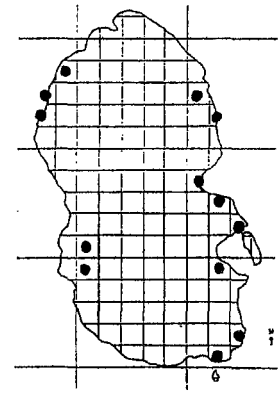

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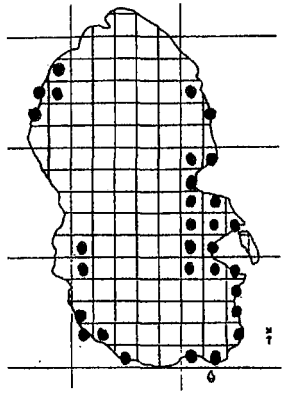

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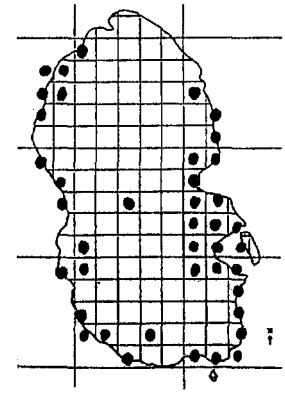


to 1998

Chronological spread of *Fallopia japonica* on the Isle of Arran

THE RATE OF SPREAD OF JAPANESE KNOTWEED ON THE ISLAND OF ARRAN (v.c. 100)

Japanese Knotweed (*Fallopia japonica*) on the island of Arran, (Lat. 55°35' N, Long. 5°15' W, *c.*427 sq. km) has been the subject of recent field studies, Hayward (1993) and Hayward (2001). The climate, physiography and vegetation of the island, and phyto-sociology of a number of plant communities in 1974 have been described by Adam *et al.* (1977).

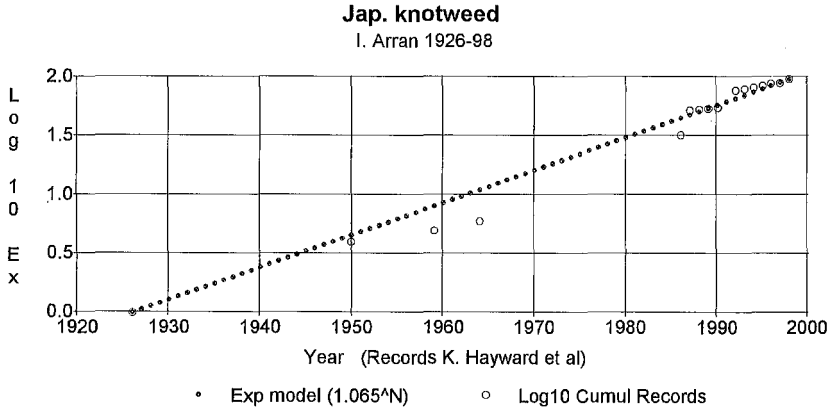
Distribution data were collected during field work on the island in 1992 and 1998, Hayward (2001) and obtained also from other recorders including A.R. Church, formerly BSBI Vice-county Recorder and A.W. Smith both resident on the island, and from Henry Arnold of the Biological Records Centre, C.E.H., Monks Wood. A total of 118 records had accumulated by 2001. The earlier group of six records, 1926, and 1950s–1964 (said to have been made for the first edition of the *Atlas of the British Flora*) determine the slope of the accompanying graph and were as follows:

NS0--3--	Lamlash/Brodick	14.08.1926	R. McKechnies (in diary, Glasgow Nat History Museum; from A.R. Church, *pers. com.*).
NR9--2--	Locality unknown	1956	T.A.W. Davis BRC CEH
NS0--2--	Locality unknown	1956-57	T.A.W. Davis BRC CEH
NS0--3--	Locality unknown	1956	T.A.W. Davis BRC CEH
NS047326	N of Lamlash Bay	09.04.1959	R.K. Brummitt BRC CEH
NR8--4--	Locality unknown	1964	Mrs A.H. Sommerville BRC CEH

Examination of the text and releeves in Adam (1977), pp. 689-699, did not reveal any records of Japanese Knotweed in coastal and lowland communities.

The most recent (2×2km) distribution map of this unusual 'time series' of Japanese Knotweed data is by Hayward (2001). Most of the records seem to be associated with coastal roads or tracks, giving the impression of a coastal, low altitude distribution; frost effects may be a factor limiting its upland spread.

A close fit was found by this author between 96 records from 72 years' recording of the plant on the island of Arran and an unpublished deterministic exponential growth model, after Greig-Smith in Lacey (1957), Greig-Smith (1957) and Greig-Smith in Harper (1977), giving a mean rate of increase in the cumulative total of records of Japanese Knotweed of 6.55% per annum. This figure represents a doubling of total records in 11 years; the rate of increase of 6 to 90 records in 12 years since 1986 was at 7.0% per annum (by linear regression), or a doubling in ten years. The latter figure reflects the recent interest in recording the species, but future changes may affect its rate of spread, including the limiting effects of its own increase. The arithmetic involved here (logarithms) is explained in Blackman (1919), p 356.



This composite figure is representative of differing rates of spread of the plant by human agency, downstream along watercourses and possibly by movements of the plant by marine action, H. McAllister, *pers. comm.* in Beerling , Bailey & Conolly (1994). No enumerations of Japanese Knotweed on Arran are reported, but one reliable observer on Arran thought 200–300 of the plants were seen, but only a third were recorded. The figure quoted above for the annual rate of increase of records could be lower, probably much lower, than the mean annual rate of increase of the total local population of Japanese Knotweed itself, net of losses from all causes.

Harper (1977) p. 525 wrote, 'Only rarely have plant populations been studied during invasions into new territory when the growth rate of the population can be measured in the absence of density stress from its own abundance', and claims Lacey's (1957) data for an [increasing] number of [new] vice-county records [of the annual *Galinsoga* spp.] 'is a very indirect measure for detecting population growth and gives no information about the actual numbers of plants'. However, this is to ignore the very close fit of Grieg-Smith's regression lines, so close that the effects of the Luftwaffe's activities is detected as an increased rate of *Galinsoga quadriradiata* (Shaggy-soldier) recorded in inner cities in the 1940s. Rate of recording of invasive species marches with rate of population growth. Trewick & Wade (1986) too, have investigated the rates of spread of *Impatiens capensis* (Orange Balsam) and *I. glandulifera* (Indian Balsam) by this method. The usefulness of estimating exponential rates of population growth in invasive species in the case of the perennial Japanese Knotweed is clear. A determining factor must be the capacity of such an indestructible clonal species effectively to have a natural death rate of near zero, A.J. Willis *pers. comm.* in Charter (1997a).

A count by the author in Chesterfield in 1998–99 of all riparian area-measured Japanese Knotweed over 1m in diameter suggested, by applying a similar exponential growth model as here, a mean annual rate of *population* increase of about 15%, or a doubling in 5 years, and for a total of 160 records of Japanese Knotweed after 22 years, from the Metropolitan Borough of Rotherham, Vasey (1992), giving a mean annual rate of increase in recording of 25.9% or a doubling in four years.

The age of individual knotweed clumps on Arran is not reported. Measurement of any of the identifiable surviving older recorded clumps (and presumably the largest), would provide further valuable quantitative data — the mean annual rate of areal growth (i.e., growth in area) of Japanese Knotweed by habitat, Charter (1997b).

Observations of radial growth of the network of rootstocks constituting a Japanese Knotweed clump, a little studied stochastic process, were made in South Wales, Beerling (1990). Japanese Knotweed rhizome extensions of 0.5–1.5m have been observed by the author on the Coal Measures in Chesterfield.

Assessing the increasing costs involved in spraying a growing area of Japanese Knotweed, Charter (1997a) involves the computation of an exponential function (the square of the geometric mean of the population radii?) of a function already increasing exponentially — the rate of uncontrolled increase of a Japanese Knotweed population itself. These two basic analyses of Japanese Knotweed populations are essential to the decision-making process by Local Authorities in planning its control. Such operations are in progress in the City of Swansea and in Cornwall, Child & Wade (2000).

The high proportion of the Japanese Knotweed population on Arran reported from beaches by Hayward (unpub.) requires further investigation. What proof is there that the plants can become established above the storm line by wind and wave action, the propagules originating either from outwash from streams, local waste disposal into the sea with subsequent movement by marine action along the shoreline, or as introductions transported by sea from the mainland? Japanese Knotweed has been reported from the Isles of Scilly and in a Flora of islands offshore of S.W. Ireland, A.J. Willis, *pers. comm.* The spread of Japanese Knotweed by sea onto the equable westerly shores and archipelagos of the British Isles would pose formidable problems for the control of this frost-tender plant and the conservation of these areas.

The treatment here of local population growth of Japanese Knotweed in a discrete geographical area as a discontinuous, annual process is a method of empirical quantitative analysis apparently new in the literature on the species. It would be misleading to present this analysis as anything more complex than school arithmetic as applied to such everyday examples of exponential growth as price inflation,

animal population increases or the growth by compound interest of money in a bank, Blackman (1919) and Blackman in Evans (1972). It may be understood in terms of population biology as a 'difference equation', represented by the histogram, and not necessarily by the smooth curve of the 'intrinsic growth rate' to the base '*e*' of the 'differential equation'.

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ALIEN AQUATIC PLANTS IN GARDEN CENTRES

I was delighted to see the recent note in *BSBI News*, not only because it brought some of my concerns about aquatic aliens and aquarists to light, but also because it has stimulated me to put something into print. I have been looking into aquatic plants sold in garden centres for a number of years and think that there are a number of clear problems that could be addressed if the initiative was undertaken by the responsible organisations.

The following are all aquatic species or species which occur on the wet side of marginal and which have been recorded naturalised in the UK (according to Stace 1997, *BSBI News* and the authors unpublished records).

Acorus calamus (Sweet-flag)
A. gramineus (Slender Sweet-flag)
Aponogeton distachyos (Cape-pondweed)
Azolla filiculoides (Water Fern)
Brachiaria eruciformis (a Signal-grass)
Cabomba caroliniana (Carolina Water-shield)
Calla palustris (Bog Arum)
Cotula coronopifolia (Buttonweed)
Crassula helmsii (New Zealand Pigmyweed)
Egeria densa (Large-flowered Waterweed)
Eichhornia crassipes (Water-hyacinth)
Elodea callitrichoides (South American Waterweed)
E. canadensis (Canadian Waterweed)
E. nuttallii (Nuttall's Waterweed)
Hydrocotyle ranunculoides (Floating Pennywort)
Iris spuria (Blue Iris)
Lagarosiphon major (Curly Waterweed)
Lemna minuta (Least Duckweed)
Ludwigia × *muellertii* (a Hampshire-purslane)
Mimulus guttatus (Monkeyflower)
Myriophyllum aquaticum (Parrot's-feathers)
M. heterophyllum (Various-leaved Water-milfoil)
M. verrucosum (Red Water-milfoil)
Nuphar advena (Spatter-dock)
Paspalum dilatatum (Dallis-grass)
P. distichum (Water Finger-grass)
Pontederia cordata (Pickerelweed)
Potamogeton epihydrus (American Pondweed)
Sagittaria engelmanniana (an arrowhead)
S. latifolia (Duck-potato)
S. natans (an arrowhead)
S. rigida (Canadian Arrowhead)
S. subulata (Narrow-leaved Arrowhead)
Vallisneria spiralis (Tapegrass)
Zizania latifolia (Manchurian Wild Rice)

Most, if not all of these, are likely to have entered the country through garden centres.

The single biggest problem with garden centre aquatics at the moment is that they are received labelled and these labels are often incorrect. The main sources of aquatic and wetland plants for garden centres in the UK are a limited number of UK nurseries and the main suppliers in Holland. Over the last five years, I have purchased many plants with a view to growing them on and confirming or refuting the identification. Some of the most significant errors are *Hydrocotyle ranunculoides*, *H. umbellata* and *H. sibthorpioides* labelled as *H. vulgaris* (Marsh Pennywort) and *Sagittaria latifolia* labelled as *S. sagittifolia* (Arrowhead). There is obviously a desperate need for confirmation of the labelling of imported aquatic plants.

A second problem is that the taxonomy and identification of some groups is so poorly known that labels are guaranteed to be inaccurate. Thus, for example the monographs on *Sagittaria* are not useful and have not been adopted by many botanists, with the result that no two regions use the same nomenclature. This is why a record of *S. engelmanniana* from Gloucestershire remains unpublished and the taxonomic status of the plant cannot be confidently explained using available literature. The situation is even more complex when dealing with Batrachian *Ranunculus* species, where there is a vast literature on the taxonomy of the genus but what constitutes a good species is becoming less and less clear. When an aquarist imports a plant labelled *R. aquatilis*, how are they to know what the plant actually is? There is therefore also a need for funded research into aquatic plant taxonomy.

A third problem occurs where plants other than those on the label have colonised pots. For example, I recently visited a garden centre where all the aquatic plant pots included *Crassula helmsii* and similar situations occur with *Lemna minuta* colonising tanks where 'bunched' aquatics are sold. Again, this problem appears to arise with the suppliers, as often as with individual garden centres. Therefore there is a need for botanists to visit garden centres to ensure that such 'freebies' are controlled.

A fourth problem is education, most garden centre staff would be delighted to have advice on which species they should not stock and would welcome label corrections. However, there is no system by which they can obtain this information and no organisation has yet taken it upon themselves to provide this sort of service. This is a service that could easily be established and would easily justify any expenditure involved.

A fifth problem is that of the sale of native taxa of unknown provenance. In addition to the taxa listed by Humphry Bowen, internationally rare or vulnerable species such as *Pilularia globulifera* (Pillwort) are sold in garden centres. One of the concerns raised by sale of these species is the risk of introduction of genetically different forms of native species (as has been much publicised by the *Flora Locale* initiative mainly regarding terrestrial plants). However, a much more significant concern is over the source of material of rare or vulnerable plants. *Pilularia globulifera* is vulnerable throughout its range and it is quite possible that collection of this species for sale may contribute to extinction of local populations.

A number of organisations in the UK, such as the Environment Agency and English Nature are spending vast amounts of money on attempts to control invasive taxa such as *Crassula helmsii* and *Hydrocotyle ranunculoides*. If some initiative was taken to stop the import of potential invasive aliens, this would cost a fraction of the price and have some chance of success. As it is, all that we appear to have achieved with most invasive aquatic aliens is to prove that they are much more capable of tolerating control measures than our native taxa.

In summary, the following actions could dramatically improve the current situation regarding repeated 'escapes' of established aliens and the risk of new alien taxa becoming established in the wild:

- Either visits by qualified botanists to aquarists suppliers to provide guidance on labelling; or a system of checks on imported aquatic plants.
- Financial support for research and publishing guidance on the taxonomy and identification of certain genera of aquatic plants, notably Batrachian *Ranunculus* and *Sagittaria*.
- A system of visits to garden centres to ensure that species are correctly labelled and to ensure suitable control over the risk of colonisation of pots by other taxa.
- Preparation and promulgation of literature on suitable species for cultivation and those species that should never be sold.

These problems may be relatively straightforward to address, however there are some constraints. In particular, there are very few UK botanists who are qualified to carry out checks on labelling. Much labelling is inaccurate, for example, *Callitriche* taxa are generally sold as *C. aquatica* which is not a valid species or *C. palustris* which I have never seen for sale in the UK. However very few botanists can confidently determine *Callitriche* species and they would therefore not be in a position to check this. The same applies to *Azolla*, *Lemna*, *Myriophyllum*, Batrachian *Ranunculus* and *Sagittaria* species. This constraint could be addressed through provision of training by the specialist aquatic botanists in the UK.

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ALIENS AND ROADWORKS IN PORTSMOUTH

During the summer, 2001, one of the main arteries into Portsmouth, S. Hants. (v.c. 11), underwent roadworks to upgrade the surface and verges. Some weeks after completion IRT visited the area and noticed a mass of *Chenopodium* spp. growing along the verge along with some less usual species, including *Amaranthus* spp. and especially *Guizotia abyssinica* (Niger) just coming into flower (see photo p. 40). He contacted EJC to arrange a visit and a more thorough search. The total length of the treated verge was about 500m and on average 2m wide. The bulk of the vegetation consisted of *Chenopodium album* (Fat-hen) or variants thereof, but several goodies were found by careful searching among this abundant weed. The (more-or-less) full list of plants is given below. Those plants prefixed with an asterisk were also listed from a similar site in Reading by Tony Mundell in an earlier *BSBI News*

article (Mundell 2000). The queried species, *Cerinthe* cf. *major* (Greater Honeywort), *Datura* cf. *ferox* (Angels'-trumpets) and *Solanum* cf. *melongena* (Aubergine), had insufficient material developed for a certain identification.

As a part of this work, topsoil of uncertain origin was used on the verges. The presence of a large number of tomato plants (*Lycopersicon esculentum*) indicated the possibility of some of the soil originating from sewage sludge. They looked very edible, however, and, if it weren't for the likelihood of being polluted with particulates from passing traffic, might have made a tasty addition to a lunchtime snack.

The road and verge are next to an area that was reclaimed from Langstone Harbour in the 1960s. It was used as an infill site and eventually landscaped. A number of interesting plants have since been found there, including *Lathyrus aphaca* (Yellow Vetchling), *L. nissolia* (Grass Vetchling), *Rapistrum rugosum* (Bastard Cabbage), *Trifolium squamosum* (Sea Clover) and, most recently, the grass *Cynodon dactylon* (Bermuda-grass). Not far to the north of the site, the uncommon *Melilotus indicus* (Small Melilot) is established, said, in the latest *Flora of Hampshire* (Brewis *et al.* 1996), to be increasing in the Portsmouth area.

**Abutilon theophrasti*, *Achillea millefolium*, *Alcea rosea*, **Amaranthus cruentus*, *A. graecizans*, *A. hybridus*, **A. retroflexus*, *Artemisia vulgaris*, **Atriplex littoralis*, *A. patula*, *A. prostrata*, *Avena fatua*, *A. sativa*, **Borago officinalis*, *Calendula officinalis*, **Cannabis sativa*, *Capsicum annuum*, *Cerinthe* cf. *major*, *Chaenorhinum minus*, *Chenopodium album*, *C. ficifolium*, *C. opulifolium*, *C. polyspermum*, **C. probstii*, *C. rubrum*, *C. strictum*, **Conyza sumatrensis*, **Cucumis melo*, *Datura* cf. *ferox*, **D. stramonium*, **Echinochloa crus-galli*, *Echium plantagineum*, *Erodium cicutarium*, **Eschscholzia californica*, **Euphorbia lathyris*, **Fagopyrum esculentum*, **Guizotia abyssinica*, **Helianthus annuus*, *Hirschfeldia incana*, *Hordeum distichon*, *Lamium album*, **Lobularia maritima*, *Lycopersicon esculentum*, *Malva neglecta*, *M. sylvestris* var. *mauritanica* & var. *sylvestris*, *Mercurialis annua*, *Misopates orontium*, **Nicandra physalodes*, **Nigella damascena*, *Nolana paradoxa*, *Panicum miliaceum*, *Papaver rhoeas*, *Persicaria amphibia*, *P. hydropiper*, *P. lapathifolia*, **Petunia* × *hybrida* (*P. axillaris* × *P. integrifolia*), **Phalaris canariensis*, *Picris echioides*, *Plantago coronopus*, *Polygonum aviculare*, *Rapistrum rugosum*, **Setaria italica*, *Solanum dulcamara*, *S. nigrum*, **S. physalifolium*, *S.* cf. *melongena*, *S. villosum* subsp. *miniatum*, *Stachys palustris*, **Tanacetum parthenium*, *Taraxacum* agg., **Thlaspi arvense*, *Urtica dioica*, *Verbascum thapsus*, *Veronica persica*.

References:

BREWIS, A., BOWMAN, P. & ROSE, F. 1996. *The Flora of Hampshire*. Harley Books. Colchester.
MUNDELL, A. 2000. Aliens Galore! *BSBI News* **83**:43–44

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YET MORE *PERSICARIA CAPITATA*

Without wishing to infer that this attractive plant is commonly associated with Public Houses, I recently discovered a similar site to that described in Bedfordshire last year (*BSBI News* **83**: 39–40).

After emerging from a birthday lunch at 'The Thatchers' just north of Bishop's Stortford, I became aware that the ground along the entire west and south sides of the building was carpeted with hundreds of flowering specimens of *Persicaria capitata* forming dense mats.

The public house is well known for its splendid hanging baskets and although this year's displays involved Petunias and Geraniums it is clear that seeds of the *Persicaria* had fallen in a previous year.

Since drafting this note I have been told of a similar location near Adnams Wine Cellar shop at Southwold (C. Pogson, *pers. comm.*). Please let me know if you are aware of yet more Pub locations and I will publish them.

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NOTICES (NON BSBI)

ARKive — CALLING ALL PLANT PHOTOGRAPHERS

ARKive is a non-profit making initiative of The Wildscreen Trust. The project aims to create the world's first digital library of endangered species. ARKive will make the most of the latest digital technology to preserve films and photographs of endangered species for future generations. The contents of ARKive will be accessible on-line as an educational and scientific resource to help raise public awareness about the value of biodiversity and the need to conserve it.

Content

ARKive is working with film and picture libraries, production companies, conservation organisations, as well as individual collectors. ARKive will only act as a custodian of the material, therefore the copyright remains with the donor. On the Internet all donated material will be protected with robust visible watermarks, clearly marked with its donors details and at a resolution only suitable for educational use, not commercial. ARKive supporters include the BBC, ABC Australia, National Geographic, Oxford Scientific Films, the Bruce Coleman Collection and the Frank Lane Picture Agency.

Along with individual Species Holdings, ARKive will also contain:

- a library of full length films and TV programmes and videos deemed of scientific and historical importance
- a collection of specialist books and journals about wildlife film making, photography and history of wildlife radio and TV
- filmed interviews with pioneering wildlife filmmakers and major contributors
- an underlying database detailing location and copyright details of all known collections of natural history images and recordings.

Funding

The Heritage Lottery Fund awarded the project £1.6million to construct the British Chapter. This will include approximately 1000 species (endangered as well as common) and will act as a model for further chapters. Hewlett Packard also donated $2 million of technical development. Researching the British Chapter began in June 2001. At the same time additional funding of £0.5 million was awarded from the New Opportunities Fund to include 500 of the world's critically endangered species.

ARKive is developing partnerships with overseas institutions that will create associated chapters, so far, the Smithsonian Institution, Monterey Bay Aquarium Research Institute, WWF Brussels and ABC have all expressed interest. Support for the project has been shown by organisations including the WWF, UNEP—WCMC, English Nature, Flora and Fauna International, RSPB and IUCN along with such highly regarded individuals as Professor E.O. Wilson, Tom Lovejoy and Sir David Attenborough.

'Over the past few decades a vast treasury of wildlife images has been steadily accumulating yet no-one has known it's full extent or its gaps and no-one has had a comprehensive way of getting access to it. ARKive will put that right. It will become an invaluable tool for all concerned with the well-being of the natural world.' — Sir David Attenborough.

The co-operation of media donors allowing their property to be digitally recorded is critical to ARKive's success. If you have any photographs or film that you think ARKive would be interested in then please contact:

POLLY BEARD, The Wildscreen Trust, Anchor Road, Bristol, BS1 5TT. Tel: 0117 9157 153
E-mail: polly.beard@wildscreen.org.uk

REQUESTS

JOHN RAY'S *SYNOPSIS OF BRITISH PLANTS*, ED. 2, 1696

I am working on a Catalogue of Cambridgeshire Flora Records since 1538 and I am most anxious to see the above book with the copious notes in the margins for many localities of the rarer plants in Cambridgeshire. According to Canon Raven's article on *The Early Scientists of Christ's College, III John Covel* (published in *Christ's College Magazine* No **154**, Easter term 1942 (reprinted in No 217 in 1992) this was in Canon Raven's library. It was sold with the rest of his library within the last 20 years.

GIGI CROMPTON, 103 Commercial End, Swaffham Bulbeck, Cambridge, CB5 0ND.
e-mail: gigi.crompton@Virgin.net

FALKLAND ISLANDS FLORA — POSSIBILITIES FOR RESEARCH LINKS

Falklands Conservation is the largest non-governmental environmental organisation operating in the Falkland Islands and is currently developing an active botanical research programme. However, both expertise and resources currently limit the Falkland Islands in their efforts to enhance the understanding of their flora. As a consequence Falklands Conservation is keen to build links with individuals from institutions in Britain and elsewhere. In particular, the Falklands flora has many species (see below) that may be of interest to individuals conducting phylogenetic studies. Falklands Conservation has already been able to support studies involving *Littorella*, *Arachnitis* and Orchidaceae.

Some native genera and species of potential interest to studies involving European flora

Agrostis
Anagallis
Apium
Armeria maritima
Aster
Blechnum
Botrychium
Caltha (sect. *Psychrophila*)
Cardamine
Carex curta
Carex microglochin
Cerastium arvense
Chenopodium
Crassula
Cystopteris fragilis
Deschampsia flexuosa
Draba
Drosera
Eleocharis
Empetrum
Erigeron
Euphrasia
Galium
Gentianella
Hieracium
Hierochloe
Huperzia
Hydrocotyle
Hymenophyllum
Isolepis cernua
Limosella
Luzula
Lycopodium
Montia fontana
Myriophyllum
Ophioglossum
Oxalis
Poa
Polygonum maritimum
Primula
Ranunculus
Schoenoplectus
Senecio
Spergularia marina
Stellaria
Viola

Whilst Falklands Conservation is not in a position to authorise the export of plant material, the organisation is well placed locally to support requests and to collect material. Individuals (from recognised institutions only please) who may be interested in including Falkland Islands species in their studies can contact Falklands Conservation at the address below. Please outline the project and the reason for including Falkland Islands material as this will help the local decision making process. It should also be

recognised that any provision of material is on the understanding that copies of any publications and reports resulting from such studies will be forwarded to the Islands to help build up the local knowledge base.

DAVID BROUGHTON, Falklands Conservation, PO Box 26, Stanley, Falkland Islands;
Email: conservation@horizon.co.fk

BOOK NOTES

Those that will not be reviewed in *Watsonia* are marked with an asterisk. Unattributed comments in square brackets are mine.

* *Handbook of North European Garden Plants: with keys to Families and Genera*. J. Cullen. Pp. vii + 640. Cambridge University Press. 2000. Price (Hardback) £75 (ISBN 0–521–65183–2); (Paperback) £29.95 (ISBN 0–521–00411–x)

[This contains all the families and genera in the *European Garden Flora*, recently completed, with keys to family and genera level only. Each family and genus is scientifically described with details of the number of species in the wild, the number in cultivation and brief details of wild distribution. Illustrations (largely from Hickey & King *100 Families of Flowering Plants*) show diagnostic features of most families, and aid interpretation of the short glossary.

This book may be of interest to non-horticultural botanists, trying to put a name to unfamiliar garden plants, but since it, perforce, goes only to genus at the best, can only be of limited use.

James Cullen was the Chief Editor of *The European Garden Flora* for 24 years.]

Darwin's Mentor: John Steven Henslow, 1796–1891. S.M. Walters and E.A. Stow. Pp. xx + 338. Cambridge University Press. 2001. Price £40 (ISBN 0–521–59146–5)

The Flora of County Cavan. P.A. Reilly. Pp. 177. National Botanic Gardens, Glasnevin (Occasional Papers No. 13). 2001. Pbk. Price IR£12 (15.20 Euros) or UK£11 (17 Euros) to include postage. (ISSN 0792–0422). Irish cheques to be made payable to 'National Botanic Gardens', UK cheques to 'Dr M. Jebb' and both to be sent to him at Glasnevin, Dublin 9. There will be a hardback version too.

Flora Nordica Vol. 2: Chenopodiaceae — Fumariaceae. B. Jonsell (editor in chief). Pp. xv + 430. The Bergius Foundation, the Royal Swedish Academy of Sciences, Stockholm. 2001. Price *c.*£55. (ISBN 91 7190 037 3)

Biological Collectors and Biodiversity. B.S. Rushton, P. Hackney and C.R. Tyrie (eds). Pp. x + 326. Westbury Publishing, Oatley, W. Yorks (Linnean Society Occasional Publications **3**, 2001). 2001. Price £35. (ISBN 1–84103–005–8)

[An edited volume arising from papers presented at a joint symposium between the Linnean Society and the Royal Horticultural Society, held in Belfast in 1986]

* *A Photographic guide to the trees of Britain and Europe*. K. Rushworth. Collins Wildlife Trust Guides, Harpur Collins. 1999. (Other details unknown)

[Arthur Chater writes to me: 'that although an absurdly chunky, glossy-looking object, the text is marvellous, and the descriptions probably the best available. It has already unsolved several problems for me (though it isn't good on cultivars) and has a great deal of interesting discussion. Peter Sell alerted me to it.']

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THE FLORA OF DORSET — 1

The comments from Ted Pratt and Honour Prentice are well made, although I do feel that a local Flora must make an attempt to differentiate between native and alien records, and in this respect both the *Flora of Dorset* and the recent *Flora of Bristol* have been poor.

But the real local concern over the Dorset Flora would have to be over the maps. They do contain some errors — dubious records or dots in the wrong place, but I guess all maps will. The problem is that maps purporting to plot as current, post 1984 records, in fact contain certain records so marked dating back to 1977. Considering that the fieldwork, which was intensive, was from 1990 onwards, these maps give a 'current' picture for the rarer species which is at variance with reality, and this limits their use.

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THE FLORA OF DORSET — 2

The review of Humphry Bowen's (2000) *The Flora of Dorset* in the latest issue of *Watsonia* (Chatters 2001) has stimulated me to make a response. Not with an alternative review, but with a few undisciplined reflections.

First, I must say that I am hardly able to evaluate *The Flora of Dorset* with detachment. I was one of the many people who made a (in my case, modest) contribution to Bowen's floristic data. My roots are in Dorset. I cut my botanical teeth on the local flora and became interested in conservation biology and the effects of habitat fragmentation through my acquaintance with the heathlands of north-east Dorset. The north-eastern Dorset heaths also taught me that cryptogams are a fascinating and ecologically-revealing part of the flora. Of course I am delighted by *The Flora of Dorset*!

There are two features of Bowen's flora that I find particularly impressive — and that I had hoped to see praised in a review. Most importantly, it is enormously satisfactory to find a Flora that covers bryophytes and lichens, algae and fungi as well as vascular plants. I am also pleased that alien species receive proper coverage. Among these aliens are taxa that will prove to be ecological rogues as well as those whose future spread may be related to environmental change. Alien species' distributions need to be documented in Floras and I cannot agree with Chatters that 'the emphasis' on aliens and casuals 'complicates interpretation' in *The Flora of Dorset*.

The review regrets that vice-county floras are now used not only by gentle plant lovers but also by those 'whose interests may not be primarily botanical' (nice euphemism!). Chatters also implies that inconsistencies or omissions in the *Flora* may have unfortunate consequences if the book falls into the wrong hands. The review ends by expressing concern that County Floras, in general, will need another format if they are to play a role in informing the scientists or civil servants who are engaged in the process of decision-making and whose decisions will affect the future of our flora.

These regrets and concerns may be legitimate. But can we really expect a Flora to be all things to all people? Before reading Chatter's review, I must confess that I had given little thought to the different ways in which floras may be used or abused. I have, however, always been deeply impressed by those botanists (both amateur and professional) whose passion for plants inspires them to devote a substantial portion of their free time to writing County Floras. Each new County Flora is a personal offering to the botanical community: the result of a labour of love and, often, considerable expense. Surely it is unreasonable to expect that Flora-writers should design their works as tools for non-botanical decision-makers? County Floras are not commissioned works of reference, they are personal attempts to catalogue and present information about the plants of an area that the author knows intimately. And, in any case, the status and distributions of species are not static. We need to insist that conservation, planning and management decisions are based on the latest information from local biological data bases — rather than on Floras which, by their nature, are already out of date by the time that they are published. Instead of asking Flora-writers to shoulder the moral responsibility for the

future of their local plant species and habitats, we should be arguing for adequate levels of financial support for regional biological data centres, such as the excellent Dorset Environmental Records Centre.

The authors of County Floras come from widely diverse professional and private backgrounds: they have different skills, tastes and interests. After allowing for the central constraint that a Flora should represent an up-to-date and systematically-correct catalogue of plant species within a particular region, there must be as many ways of writing a Flora as there are ways of using a Flora. The individual character of *The Flora of Dorset* is a reflection of Humphry Bowen's broad botanical interests and his particular network of Dorset experts. My copy of the *Flora* is still lying open on the table and it will be a while before it reaches the bookshelf. And, because I live in Sweden, there is little risk that it will fall into the wrong hands.

References:

Bowen, H.J.M. 2000. *The Flora of Dorset*. Pisces Publications, Newbury.
Chatters, C. 2001. Review of *The Flora of Dorset* by H.J.M. Bowen. *Watsonia* **23**: 594-595.

HONOR C. PRENTICE, Department of Systematic Botany, Lund University, Ö. Vallgatan 14-20, S-223 61 Lund, Sweden.

OBITUARY NOTES

Sadly this month (on the day before our Annual Exhibition Meeting) we heard that David McClintock* had died. David will have been known to very many members; he was a distinguished personality in the botanical world, with interests and involvement in many fields of botany and horticulture. Frequently at BSBI meetings, David was a past-President and an Honorary member — and a generation of field botanists began fieldwork using the *Pocket Guide to Wild Flowers* written by David and his friend Richard Fitter. A thanksgiving service for David will be held at St Stephens with St Johns Westminster, Rochester Row, on Wednesday 13th March 2002 at 2.30pm. After the service, refreshments will be available in the RHS Council room for all his many friends and colleagues.

As *BSBI News* **88**, September 2001 went to print, we heard of the death, in New Zealand, of Ted Bangerter*, a past Hon. General Secretary of BSBI and British flora enthusiast, who worked at the British Museum (Natural History) in the Botany Department.

Since September we have heard that Andrew Dudman* died earlier this year. Andrew was a Cumbrian botanist who took on the *Taraxacum* database after the death of Chris Howarth. John Richards tells me that the *Taraxacum* herbarium is safely with him at the University of Newcastle. When visiting Summerfield Books recently I saw that Andrew's bookshelves now line the walls of the Summerfield 'British Room' in which our BSBI publications for sale there are housed and displayed.

Sadly we also report the deaths of Breda Burt*, Vice-county Recorder for East Sussex from 1984–1993, and the mastermind of botanical information in the Rye and Rye Harbour area; and of Noreen Sherlock, who with her husband joined BSBI in 1985 and since, they have together been constant attenders at BSBI meetings. We extend our sympathy to Roy Sherlock, and to the families of all the above who will be sadly missed. There will be Obituaries in *Watsonia* for those marked *

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REPORTS OF FIELD MEETINGS — 2001

Reports of Field Meetings (with the exception of Reports of Irish Meetings written by Alan Hill) are edited by, and should be sent to: Dr Alan Showler, 12 Wedgwood Drive, Hughenden Valley, High Wycombe, Bucks, HP14 4PA, Tel.: 01494 562082.

LOWESTOFT, EAST SUFFOLK (v.c. 25) 12th MAY

In addition to the leader, four members and one guest attended this alternative Field Meeting arranged at short notice as a consequence of the foot-and-mouth emergency. Its primary purpose was to record for the Suffolk tetrad-mapping scheme, due for completion in 2005. Three under-recorded squares were visited, TM5490, TM5492 and TM5494, corresponding roughly to south, central and north Lowestoft. At 20th January 2001, 45, 6 and 120 taxa had been respectively recorded for the tetrads.

After meeting at Lowestoft railway station the party motored north and were immediately rewarded in TM5494 by the discovery of *Trifolium subterraneum* (Subterranean Clover), *T. suffocatum* (Suffocated Clover) and *Festuca brevipila* (Hard Fescue) in short turf between pavement and road. *Poa bulbosa* (Bulbous Meadow-grass) was seen flowering in loose dune nearby, at one of its historically best-known Suffolk sites.

After lunch a brief stop was made in TM5492 where the leader had discovered two plants of *Conyza sumatrensis* (Guernsey Fleabane) on a preliminary survey on 25th April. Many more individuals of this species were found in waste ground near Lowestoft Triangle Market. Up to now only sporadic records have been made in Suffolk, but it would appear that active spread from its southern English strongholds is firmly establishing it in the county. *Oxalis incarnata* (Pale Pink-sorrel) was another alien discovered, naturalised at the foot of a neighbouring wall.

The main part of the afternoon was spent in TM5490, a thin sliver of land abutting the North Sea. *Crambe maritima* (Sea-kale) and *Lathyrus japonicus* subsp. *maritimus* (Sea Pea) were the most interesting beach finds here, while a special detour was made to check on the long naturalised colony of *Salpichroa origanifolia* (Cock's-eggs) near the Lowestoft Laboratory of the Centre for Environment, Fisheries and Agriculture Science (CEFAS). The meeting ended in a formal lawn surrounding flower-beds where the turf was diffused white by countless thousands of *Trifolium subterraneum* plants. The south/central tetrad boundary neatly bisected the lawn, enabling us to record this local clover in all three squares.

It is perhaps worth stressing that there is much of botanical interest in the most unpromising of localities. Under normal circumstances Lowestoft would never have been considered as a venue for a BSBI Field Meeting and yet it provided an absorbing and fruitful day.

ARTHUR COPPING

ROSTREVOR NATIONAL NATURE RESERVE, Co. DOWN (v.c. H38) 13th May

Rostrevor National Nature Reserve is a small area of oak woodland on a steep slope overlooking Carlingford Lough and is managed by the Environment and Heritage Service (EHS). Foot-and-mouth Disease precautions had temporarily closed the reserve and it was not clear that this, the first Irish field meeting of the year, could go ahead until shortly before it took place. A party of eight, including Shaun D'Arcy Burt from the EHS, met on a gloriously sunny day to refresh their memory for botanical names and enjoy the sheer spectacle of a woodland in spring.

Recording began slowly in the car park and between the forest office building and the wood where a small stream runs. Here the path was edged with *Valerianella* agg. (Cornsalad) in full flower and we

also noted sedges at a frustratingly early stage of flowering. Moving into the wood, we ascended a gently sloping path which runs diagonally through it. The oaks were coming into leaf and consequently the woodland floor was hardly shaded. We could see that the major proportion of the floor was carpeted with *Luzula sylvatica* (Great Wood-rush) growing together with unfurling *Dryopteris affinis* (Scaly Male-fern), *Dryopteris dilatata* (Broad Buckler-fern), *Polystichum setiferum* (Soft Shield-fern) and *Ilex aquifolium* (Holly). Further on, next to the path, we came across *Galium odoratum* (Woodruff), *Luzula pilosa* (Hairy Wood-rush), *Allium ursinum* (Ramsons) and *Arum maculatum* (Lords-and-Ladies). There were good numbers of *Oxalis acetosella* (Wood-sorrel) and *Hyacinthoides non-scripta* (Bluebell), but few *Anemone nemorosa* (Wood Anemone) and it was Margaret Marshall who eventually found a patch of these. The path became quite steep and so we were glad to rest at a seat in a clearing called Fiddler's Green. This gave good views of Carlingford Lough in brilliant sunshine. Some of us searched for *Lathraea squamaria* (Toothwort) which had been recorded growing close to Fiddler's Green, but without success. At this point the path becomes level as it turns to cross between the oak wood and a conifer plantation, so the walking became much easier. This path, and the road leading back to the car park, which it joins, led us past many *Viola riviniana* (Common Dog-violet) plants in full flower. Close to the car park we made a new record for the square, *Barbarea verna* (American Winter-cress).

After lunch we had kind permission to enter the Mourne Park estate near Kilkeel, from the owner, Mrs Anley. This holds several areas of mostly broad-leaved plantation, some of which dates from before the 1830s. Few records appear to exist for the estate and so a visit was keenly anticipated. From the south west gate house, we passed mature *Tilia* × *europaea* (*T. platyphyllos* × *T. cordata*) (Lime) and *Acer pseudoplatanus* (Sycamore) trees before crossing over the River White Water bridge where there was dense *Prunus laurocerasus* (Portugal Laurel) and *Tsuga heterophylla* (Western Hemlock-spruce). Soon we were walking among mature *Fagus sylvatica* (Beech) with their leaves almost fully expanded. Here there was sparse ground cover, apart from a few beech seedlings, and only when the trees species became mixed, with *Quercus* spp. (Oak), *Acer pseudoplatanus* (Sycamore), *Fraxinus excelsior* (Ash), *Tilia* × *europaea* (Lime) and *Pinus sylvestris* (Scots Pine) did the flora diversify. *Hyacinthoides non-scripta* and *Chrysosplenium oppositifolium* (Opposite-leaved Golden-saxifrage) were remarkable, forming large drifts in places. Just after crossing back over the White Water by three short bridges, *Equisetum telmateia* (Great Horsetail) was found. Our path then took us between the wood and a grassy field and via the estate house to an area with huge *Castanea sativa* (Sweet Chestnut) and where *Potentilla anglica* (Trailing Tormentil), a new record for the square, was found. Returning to the cars, we took a look at the river and noted *Ranunculus penicillatus* (Stream Water-crowfoot), also a new record for the square.

GRAHAM DAY

LOGGERHEADS TO RHYDYMWYN, FLINTSHIRE (v.c. 51) 26 May

The foot-and-mouth restrictions were lifted just a week before this meeting and in the event 21 members and friends attended (11 from Wales and 10 from England) to enjoy this famous walk in excellent weather.

The path follows the River Alun, a tributary of the Dee, over sections of the North Wales limestone from Loggerheads to Rhydymwyn. The first few hundred metres are in Denbighshire (v.c. 50) and the remaining 5.5km are in Flintshire (v.c. 51).

In the past, numerous mills used the water power of the Alun for milling corn, sawing timber, processing lead ore and for pumping water out of the lead mines. In the 1820's 'leets' (water courses) were built to carry the river-water around the many swallow-holes in the limestone and some of these are well preserved today. The path passes through mixed woodland over a varied terrain by the side of cliffs and rocky outcrops at an average height of about 210m.

Some of the typical calcicoles such as *Sanguisorba minor* (Salad Burnet) and *Helianthemum nummularium* (Common Rock-rose) were coming into flower on the exposed outcrops, *Scabiosa columbaria* (Small Scabious) was seen and *Aquilegia vulgaris* (Columbine) provided the usual colourful but confusing array of probable natives, and undoubted garden escapes. One plant of *Euonymus europaeus* (Spindle), another lover of calcareous soil was seen among a wide range of trees and shrubs. *Cystopteris fragilis* (Brittle Bladder-fern) an uncommon plant in Flintshire was recorded at three sites and *Ceterach officinarum* (Rustyback) was doing well on a mortared garden wall in Rhydymwyn where it has been known for many years, in one of only a handful of localities in Flintshire. Of this fern, Jermy (1978) says . . . 'Although a calcicole, the lack of suitable habitats (in Brit. Is.) is only partly responsible for its restricted distribution which is most likely controlled by a complex of interrelated climatic factors'. Certainly, its numbers increase dramatically as one moves from north-east to north-west Wales. It tends to aestivate during the dry summer periods and grows most prolifically during the mild, wet winter months.

Perhaps the highlight of the meeting was a magnificent colony of *Paris quadrifolia* (Herb-Paris) including many scores of plants, all at their best, with the usual variety of five- and six-leaved plants among those with the typical four — a remarkable sight.

Other plants of interest included *Listera ovata* (Common Twayblade), *Lathraea squamaria* (Toothwort), *Clinopodium vulgare* (Wild Basil) and *Ranunculus auricomus* (Goldilocks Buttercup). A large patch of *Saxifraga* × *urbium* (*S. umbrosa* × *S. spathularis*) (Londonpride) was well established some distance from the nearest garden, and everyone remarked about the abundance of *Allium ursinum* (Ramsons), covering the woodland banks in sheets of white.

On reaching Rhydymwyn and the end of our botanising, we returned to the Visitor Centre of the Country Park at Loggerheads in a group of cars kindly laid on by the local members of the group. My thanks to all those who helped to make this a very enjoyable meeting.

JERMY, A.C. *et al.* ed. 1978. *Atlas of Ferns of the British Isles.*

GORONWY WYNNE

MONASTEREVAN, Co. KILDARE (v.c. H19) and Co. LAOIS (v.c. H14) 9th June

This outing consisted of visits to two sites in County Laois and two in County Kildare.

The first site was Whelahan's Bridge (N5911), an area of sloping damp grassland and canal bank close to the Grand Canal, including patches of waste ground and the old bridge itself. A total of 135 species were noted here. The second Laois site was at Carrick Hill in Portarlington (N5410), the most notable species which was found here was *Melica uniflora* (Wood Melick).

We then moved on to County Kildare, to the canal aqueduct at Monasterevin (N6210), principally to refind *Cystopteris fragilis* (Brittle Bladder-fern), a few plants of which were indeed still present on the aqueduct wall. *Equisetum variegatum* (Variegated Horsetail) was also noted from the canal. The final site was south of Monasterevin, to look at a recently discovered site for *Rosa micrantha* (Small-flowered Sweet-briar), and the most northerly known site for this plant in Ireland.

EVELYN MOORKENS & DECLAN DOOGUE

O'ROURKE'S TABLE, Co. LEITRIM (v.c. H29), & CULLENTRA WOOD, BRICKLIEVE MOUNTAINS & UNSHIN RIVER, Co. SLIGO (v.c. H28) 16th & 17th June

The original plans for this field meeting were to visit areas of herb-rich limestone grassland and limestone heath in a range of limestone hills to the north of Lough Gill in Co. Leitrim. However with

the concern over foot and mouth disease it was deemed wise to avoid land grazed by livestock and so just one of the hills was visited and alternative venues were used which brought the attendees into Co. Sligo.

On the morning of Saturday 16th June, seven members visited Cullentra woodland which fringes the eastern shore of Lough Gill (G7733). Entrance to this wood is via a track that passes through a conifer forest which was recently clear-felled and re-planted by Coillte. It was not intended to spend so much time along the forestry track but a list of flora was compiled including *Plantago maritima* (Sea Plantain) and *Aquilegia vulgaris* (Columbine). Also a fine male Crossbill was observed at close quarters. Once the deciduous woodland was reached the objective to assess the status of *Hymenophyllum tunbrigense* (Tunbridge Filmy-fern) was achieved as it was found in two places by the keen eyes of Robert Northridge. Other observations were not original as this is a proposed candidate Special Area of Conservation and has been surveyed before, but we noted the luxuriance of *Dryopteris aemula* (Hay-scented Buckler-fern) and saw *Euonymus europaeus* (Spindle), *Sorbus aria* agg. (White-beam) and a single spike of *Neottia nidus-avis* (Bird's-nest Orchid) which was found by Alan Hill.

In the afternoon O'Rourke's Table (also called Doonmorgan) was climbed (G8035). The steep path through deciduous woodland opens out to a flat hill top now occupied by heath. Over 50 years ago *Pseudorchis albida* (Small-white Orchid) and *Alchemilla glaucescens* (Small Lady's-mantle) were found here but the habitat has gone through an ecological succession and is no longer suitable for these species. However a nearby area was spotted and we descended the hill by cutting through the woodland to reach some beautiful herb-rich limestone grassland and limestone heath with hazel scrub. Looking back to O'Rourke's Table a tree of *Taxus baccata* (Yew) was noted to be growing out of an inaccessible limestone cliff along with an unidentified *Hieracium* section Vulgata (Hawkweed). The grassland was rich in old flower spikes of *Orchis mascula* (Early-purple Orchid) and also had *Arabis hirsuta* (Hairy Rock-cress), *Saxifraga hypnoides* (Mossy Saxifrage), *Alchemilla glabra* (Smooth Lady's-mantle), *Carex caryophyllea* (Spring-sedge) and we were pleased to find some *Alchemilla glaucescens* within the only area for it in Ireland.

On the next day the Bricklieve Mountains were visited but they were deliberately approached from the south to record the flora of a less visited area (G7610). This small range of Carboniferous Limestone hills is also a proposed candidate Special Area of Conservation and *Pseudorchis albida* was recently found at a site here. On the ascent, the top of a dry-stone wall had both *Aira praecox* (Early Hair-grass) and *A. caryophyllea* (Silver Hair-grass) growing side-by-side which allowed for direct comparison between the related species. Limestone pavement areas offered a wonderful diversity of flora, but the more unusual plant community is found in places where the limestone grassland is turning acid as high rainfall in this geographical area encourages the spread of blanket bog on the top of the plateaux. Here we found a new site for *Pseudorchis albida* (G763107) and also recorded *Rubus saxatilis* (Stone Bramble) and *Melampyrum pratense* (Common Cow-wheat). The Bricklieve Mountains are famous for their megalithic cairns dating from 4000BC which are constructed out of limestone cobbles, and as these are at the highest points they tend to be surrounded by blanket bog. On the cairn visited (G756112) we were shown *Arabis hirsuta* (Hairy Rock-cress) and *Draba incana* (Hoary Whitlowgrass), both in flower.

To finish off the weekend we made a brief visit to a fen on the bank of the Unshin River where it leaves Lough Arrow (G768156) with permission of the owner Mr Christy Tighe. A few years ago *Thelypteris palustris* (Marsh Fern) was discovered here and the site also has several other species of local interest including *Cladium mariscus* (Great Fen-sedge), *Ranunculus lingua* (Greater Spearwort) and exceptionally large specimens of *Osmunda regalis*. These species were all seen but we failed to record *Lathyrus palustris* (Marsh Pea) or *Galium uliginosum* (Fen Bedstraw) which were also recently observed here.

DON C.F. COTTON

SANDWICH BAY, E. KENT (v.c. 15) 17th June

On a cold, windy day fourteen members set out from the Quayside car park in Sandwich for an eight km round walk to enjoy the changing vegetation of this exceptionally rich area of dune grassland and beach. Two golf courses crossed by footpaths take up much of the area which also includes a NNR, a Kent Wildlife Trust reserve and virtually the entire area has SSSI status.

Alongside the River Stour we admired large patches of *Lepidium latifolium* (Dittander), though it was too early for flower, and enjoyed examining the beaked fruits of *Hirschfeldia incana* (Hoary Mustard) which was frequent throughout the day. A footpath leading from the river to the sea across sheep pasture was closed due to foot-and-mouth restrictions, so we took a slightly longer route. Here on the light sandy pathside we found many plants of *Descurainia sophia* (Flixweed) and a wealth of annual clovers. In fact we spent until lunchtime comparing *Trifolium striatum* (Knotted Clover), *T. scabrum* (Rough Clover), *T. suffocatum* (Suffocated Clover) and *T. glomeratum* (Clustered Clover).

After lunch we took a path across the golf course finding *Silene conica* (Sand Catchfly), *Malva neglecta* (Dwarf Mallow), *Oenothera stricta* (Fragrant Evening-primrose) and the first of very many plants of *Himantoglossum hircinum* (Lizard Orchid).

Many typical seaside plants greeted us on our arrival at the beach. *Crithmum maritimum* (Rock Samphire), *Euphorbia paralias* (Sea Spurge) and *Calystegia soldanella* (Sea Bindweed) were seen with colourful *Glaucium flavum* (Yellow Horned-poppy), *Echium vulgare* (Viper's-bugloss), and *Crambe maritima* (Sea Kale). We found some very impressive violet-tinged *Orobanche* plants which appeared to be parasitic on *Eryngium maritimum* (Sea-holly) and would seem to be those described by Mr Eric Philp in *Atlas of the Kent Flora* as *O. amethystea* Thuill. and now included in *O. minor* (Common Broomrape).

In a dune slack between the golf courses was a fine show of *Dactylorhiza praetermissa* (Southern Marsh-orchid) with *Epipactis palustris* (Marsh Helleborine), *Juncus acutus* (Sharp Rush), *Carex distans* (Distant Sedge) and *Ophioglossum vulgatum* (Adder's-tongue Fern). *Medicago polymorpha* (Toothed Medick) was found on a pathside nearby and a little later, *M. minima* (Bur Medick) for comparison.

In the dunes above the beach we enjoyed the sight and smell of a huge patch of flowering *Rosa rugosa* (Japanese Rose) and nearby the clove scent of *Orobanche caryophyllacea* (Bedstraw Broomrape) which was flowering beautifully. A fine colony of *Himantoglossum hircinum* flowering on the edge of the golf course made a nice climax to the day and I have since heard from the Kent Wildlife Trust Warden that more than 4,000 flowering Lizard Orchids were counted in the Sandwich Bay area this year.

SUE BUCKINGHAM

FORMBY, S. LANCASHIRE (v.c. 59) 30th June

(This was an alternative meeting due to foot–and–mouth restrictions and was a coastal walk from Hall Road to Hightown)

Early in the morning we had a very heavy shower and the sky looked menacing but by the time the meeting started it was much brighter, although a strong wind was blowing. There should have been 14 members and friends but only 10 were able to make it. The area consists of fixed dunes with a golf course running alongside. Along the coast is a tipped rubble embankment to prevent erosion. This is also an area where the River Alt joins the Irish Sea. Here are a few plants found in the dune system, namely *Coincya monensis* subsp. *monensis* (Isle of Man Cabbage), *Centaurium erythraea*, *C. littorale* and *C. pulchellum* (Common, Seaside and Lesser Centaury), *Blackstonia perfoliata* (Yellow-wort), *Phleum arenarium* (Sand Cat's-tail), now straw coloured, *Vulpia fasciculata* (Dune Fescue), *Erigeron acer* (Blue Fleabane), getting a special mention as it is one of my very favourites, *Eryngium maritimum* (Sea-holly), not in flower but a great number of plants, *Euphorbia paralias* (Sea Spurge), *Saponaria*

officinalis (Soapwort), *Pastinaca sativa* (Wild Parsnip), growing all over the area, *Thymus polytrichus* (Wild Thyme), at its very best, *Reseda lutea* (Wild Mignonette), *Echium vulgare* (Viper's Bugloss), *Rosa pimpinellifolia* (Burnet Rose), *Lythrum salicaria* (Purple-loosestrife) growing in a Natterjack Toad scrape, *Dactylorhiza incarnata* (Early Marsh-orchid) and *Epipactis palustris* (Marsh Helleborine). Alongside the golf course there was *Geranium sanguineum* (Bloody Crane's-bill), *Ophrys apifera* (Bee Orchid) and a very good showing on the edge of the dunes of *Anacamptis pyramidalis* (Pyramidal Orchid) and the beautiful *Calystegia soldanella* (Sea Bindweed).

We walked along the shore to see the remains of a post-glacial forest and enjoyed the plants growing there; *Glaucium flavum* (Yellow Horned-poppy), *Crambe maritima* (Sea-kale), growing very happily on artificial shingle in two areas and quite glorious specimens, *Beta vulgaris* (Sea Beet), *Crithmum maritimum* (Rock Samphire), not in flower, *Glaux maritima* (Sea-milkwort), *Honckenya peploides* (Sea Sandwort), *Catapodium marinum* (Sea Fern-grass), *Puccinellia maritima* (Common Saltmarsh-grass) and *Salsola kali* (Prickly Saltwort). Nearing the end of our walk *Orobanche minor* (Common Broomrape) was well spotted by Susan Taylor. I feel very fortunate to live in such a beautiful area. Anyone interested in the Sefton coast would find a book entitled *The Sands of Time* by Dr Phil Smith absorbing reading.

PAT LOCKWOOD

Co. TYRONE (v.c. H36) 30th June & 1st July

Although in doubt to almost the last minute because of the foot-and-mouth restrictions, the BSBI visit to the Baronscourt Estate went ahead as planned on the last Saturday in June, and continued on the Sunday. Baronscourt had not been visited in the immediate run-up to Atlas 2000, so the weekend would hopefully add some new records for the area, and in this we were not disappointed.

The Baronscourt Estate lies in NW Tyrone, a few km SW of the small town of Newtownstewart. The Dukes of Abercorn have been in residence since the 17th century, and the current Duke actively manages the Estate as a well-run commercial enterprise. The inner part of the grounds, around the mansion itself, run to some 6 sq. km, and lie in a valley between the hill of Bessy Bell (420m) to the E and lower hills, rising to 240m, to the W. Three lakes occupy the valley floor. The 'big house' overlooks the middle lake. Landscaped gardens lie near the house, but most of the vista from the house consists of beautiful parkland, with fine specimen trees. Beyond this, again, there is much woodland, mostly planted and managed, and largely coniferous.

On the Saturday, a party of four botanists joined in the exploration of the inner Estate. We started just a couple of hundred metres from the House, where we noticed an interesting-looking patch of damp lawn. Here we recorded several sedges, along with *Juncus tenuis* (Slender Rush), *Anagallis minima* (Chaffweed) and *Veronica peregrina* (American Speedwell). This is only the second recent record for *A. minima* in Tyrone. The *V. peregrina* is of particular interest, because it was at Baronscourt that it was first discovered in Ireland, in 1836!

We then moved to an area near the middle lake (Lough Fanny) which had been developed as a 'wild' garden, featuring mainly rhododendrons and azaleas. It is always difficult to decide in ground like this whether a plant is entirely natural, or accidentally introduced with other plants, or actually planted. We decided that we could record, as 'naturalising', *Symphytum tuberosum* (Tuberous Comfrey) (not otherwise recorded in Tyrone), *Circaea* × *intermedia* (*C. lutetiana* × *C. alpina*) (Upland Enchanter's-nightshade) and *Silene latifolia* (White Campion). By the lake, *Osmunda regalis* (Royal Fern) looked native.

Northwards from here, we next explored the shores of the biggest of the three lakes, Lough Catherine. This proved very interesting, as there was a particularly good mix in the lake-shore vegetation. In general, NW Tyrone has strongly acidic soils, and the run-off into the Baronscourt lakes comes

from peaty ground. Thus the presence of *Osmunda regalis* (Royal Fern) and abundant *Viola palustris* (Marsh Violet) along the shore was to be expected. However, there were also present many plants more associated with base-rich fenland, like *Lycopus europaeus* (Gipsywort), *Lysimachia nummularia* (Creeping-jenny), *Lysimachia vulgaris* (Yellow Loosestrife), *Lythrum salicaria* (Purple-loosestrife) and *Scutellaria galericulata* (Skullcap). We also found a nice group of *Dactylorhiza purpurella* (Northern Marsh-orchid). We remarked on the lack of pondweeds, etc., in the lake itself, possibly because of ongoing dredging operations.

We went through some of the wooded ground lying back from the lake, but this was not so rewarding, as there just wasn't any really natural woodland. After some six hours of botanising, in chilly but mainly dry weather, we decided to call it a day.

On Sunday only one other botanist joined me on a very different day weather-wise, as a warm front overnight had brought in very warm air from the SW. Fortunately, it remained dry, and we set off to climb forest roads to the summit of Bessy Bell. A long trek turned up only two plants of interest: *Potamogeton alpinus* (Red Pondweed) and *Listera cordata* (Lesser Twayblade). The *Potamogeton* was found in a strange setting, in a peaty pool less than 1 sq. m in area and only a few cm deep. *Listera cordata* was growing in its expected habitat, among heather on the summit ridge. It was last recorded on Bessy Bell in 1896.

We ended the day by making a quick visit to the last of the three Baronscourt lakes, Lough Mary. There was much *Juncus tenuis* (Slender Rush) on the approach track, but the lake itself produced nothing of fresh interest.

I. McNeill

BIRR, Co. OFFALY (v.c. H18) 7th July

A party of six assembled in Birr and drove 9km NE to Derryad. This is a remote area of cut-away bog and fen surrounding a chain of six small lakes. A stream connects the lakes and a narrow road traverses the stream. The objective was to botanise the section east of the road which encompasses three of the lakes. *Rubia peregrina* (Wild Madder) mingled with *Ilex aquifolium* (Holly), *Rubus fruticosus* (Bramble) and *Rosa canina* (Dog-rose) in the hedgerows adjoining the site.

It would appear that there had been a fire on the bog in early Spring which had burned an area of about twenty meters scorching *Myrica gale* (Bog Myrtle), *Ulex europaeus* (Gorse) and *Salix* ssp. (Willow) in the vicinity. There was evidence that regrowth was taking place. On the bog *Rhynchospora alba* (White Beak-sedge) and *Narthecium ossifragum* (Bog Asphodel) were seen. *Selaginella selaginoides* (Lesser Clubmoss), *Drosera rotundifolia* (Round-leaved Sundew) and *D. longifolia* (Great Sundew), *Pinguicula vulgare* (Common Butterwort) and the rarer *P. lusitanica* (Pale Butterwort) were also recorded.

The lakes are deep with spongy margins. *Nymphaea alba* (White Water-lily) which covers large sections of the surface of the lakes were in full bloom and *Cladium mariscus* (Great Fen-sedge) with its russet scorch marks on the lower stem leaves was quite an exotic sight. *Carex lasiocarpa* (Slender Sedge), *C. dioica* (Dioecious Sedge), *C. rostrata* (Bottle Sedge) were growing around the edges. The fen had a healthy population of *Epipactis palustris* (Marsh Helleborine). A pleasant day was spent at this interesting site.

Aideen Austin

CORS FOCHNO, CARDIGANSHIRE (v.c. 46) 14th July

Twenty one members met at Ynys-las to be ferried to the north west corner of the Cors Fochno NNR, the meeting having been slightly rearranged because of foot-and-mouth problems. By kind permission of the warden, and helpfully and informatively accompanied, and disinfected, by Justin Lyons, we explored five enclosures mostly added to the NNR in the last ten years. As a result of controlling the grazing, localised mowing and raising of the water table, the fen and mire communities have greatly increased in interest. Highlights included a large colony of *Juncus subnodulosus* (Blunt-flowered Rush), only three other colonies of which are known in the county, all in the Cors Fochno area; *Rhynchospora fusca* (Brown Beak-sedge), which appeared here in 1993 after scrapes and a ditch had been dug, reaching a maximum of 2784 spikes in 1994, and apparently reduced to only one this year; large quantities of *Radiola linoides* (Allseed) among spectacularly dense flowering patches of *Anagallis tenella* (Bog Pimpernel); and dwarf plants of *Ophioglossum vulgatum* (Adder's-tongue), *Osmunda regalis* (Royal Fern) and *Dryopteris carthusiana* (Narrow Buckler-fern). The red, fleshy enlarged shoots of *Andromeda polifolia* (Bog-rosemary) galled by *Exobasidium karstenii* were conspicuous in several areas, and Ray Woods demonstrated a variety of rusts and other plant-associated fungi. Steve Chambers found *Epilobium* × *rivulare* (*E. parviflorum* × *E. palustre*) (a hybrid willowherb), and Roger Maskew *Rumex* × *pratensis* (*R. crispus* × *R. obtusifolius*) (Meadow Dock).

We also went onto the edge of the raised mire, an area that had been slightly disturbed by ditches and perhaps peat cutting in the past. Both *Drosera intermedia* (Oblong-leaved Sundew) and *D. anglica* (Great Sundew) were in hollows here, and Justin showed us another newly found colony of *Rhynchospora fusca* with three spikes. Most of the *Trichophorum cespitosum* (Deergrass), confirmed later by microscopic examination of stem sections, was the hybrid between subsp. *cespitosum* and subsp. *germanicum* (nothosubsp. *foersteri*), forming large, sterile and mostly greyish green tussocks; subsp. *germanicum* was also present, but much less frequent, seeming mostly fertile and forming smaller, brighter green tussocks.

ARTHUR CHATER

CANNOCK CHASE, STAFFORDSHIRE (v.c. 39) 14th –15th July

Foot and mouth disease exclusions for much of the area were lifted less than a week before the meeting, the object of which was to record for a future *Flora of Staffordshire*. Twelve members were joined by three guests from the group collecting data for this venture. Participants worked in five groups, covering large portions of twelve tetrads together with smaller areas of two others.

The richest sites visited on the Saturday were in and near to the Oldacre Valley. The presence of *Thelypteris palustris* (Marsh Fern) was confirmed and *Drosera rotundifolia* (Round-leaved Sundew) and *Eleocharis quinqueflora* (Few-flowered Spike-rush) were refound. On bare mud in and near to a disused quarry adjacent to the car park, used by those exploring this valley, were several plants of *Plagiobothrys scouleri* (White Forget-me-not), new to this and to neighbouring vice-counties. Car thieves were also amongst those taking advantage of being able to return to the many small car parks in the area, but there is little of value in the vehicles of impoverished botanists and the only loss was the glass from one window. Floras and dirty footwear were left untouched. The owner was almost compensated by his spotting several spikes of *Allium vineale* (Wild Onion) within 10m of the scene of the crime, at the head of the Brindley Valley. *Melampyrum pratense* (Common Cow-wheat) is a rapidly dwindling taxon in v.c. 39 with records for only five tetrads as compared with 16 in 1970, but this was increased to six with its discovery on slopes above Sherbrook Valley.

On Sunday, groups moved a little to the west, so that different habitats bordering the Chase were investigated. *Ranunculus sardous* (Hairy Buttercup), last seen in v.c. 39 in 1923, was in a wheat field north of Dunston and *Papaver argemone* (Prickly Poppy) in a corn field east of Bednall. *Potamogeton*

trichoides (Hairlike Pondweed) and *Schoenoplectus tabernaemontani* (Grey Club-rush) adorned the Staffordshire and Worcester canal, near Gailey, with *Ranunculus circinatus* (Fan-leaved Water-crowfoot) in Lower Gailey Reservoir. An area of waste ground/landfill adjacent to a sewage works east of Four Ashes had the large sward of *Dactylorhiza* × *grandis* (the hybrid between *D. fuchsii* × *D. praetermissa* (Common Spotted- and Southern Marsh-orchids) that is sometimes found in damp areas of such sites in Staffordshire. *Epilobium tetragonum* (Square-stalked Willowherb) and *Pastinaca sativa* (Wild Parsnip), both occurring in quantity on drier ground close by, are very much rarer. *Dipsacus pilosus* (Small Teasel) was in woodland, near to the river, at Lower Drayton.

In excess of 2,100 new tetrad records were made for an area that has been little recorded in recent years. *Vaccinium oxycoccos* (Cranberry) was in two tetrads, *Galium uliginosum* (Fen Bedstraw) in three and *Plantago coronopus* (Buck's-horn Plantain) was located in four. An exception to the paucity of other modern records was the list of 89 sites for *Vaccinium* × *intermedium* (*V. vitis-idaea* × *V. myrtillus*) (the hybrid between Cowberry and Bilberry) reported in a survey by Ken Cavalot a couple of years earlier: some of these were encountered during the two days.

JOHN HAWKSFORD

BEN VORLICH (LOCH LOMOND), DUMBARTON (v.c.99) & MEALL NA DIGE, WEST PERTHSHIRE (v.c. 87) 28th & 29th JULY

On the Saturday, the aim was to botanise Ben Vorlich SSSI thoroughly, to renew old records and perhaps even to gather some new ones. To cover this extensive and rough mountain comprehensively the group of 14 split up into three smaller groups lead by Gordon Rothero, Clive Dixon and Jim McIntosh. Whilst one group tackled the steep ground from Loch Sloy Dam directly to the summit, another started at Inveruglas and climbed slightly less steep ground to the south, and the third began their day at Ardlui and made their way to the summit via the small hill lochan and returned by the north-east ridge.

Few notable species were recorded on the lower ground, with the exception of extensive stands of *Carum verticillatum* (Whorled Caraway), along the roadside to Loch Sloy. Within the SSSI, whose lower boundary follows the 1750-foot (533 m) contour, an excellent combined record card resulted despite the relatively poor ground. Some 170 species were recorded, including the following notable species: *Carex saxatilis* (Russet Sedge), *Cerastium alpinum* (Alpine Mouse-ear), *Epilobium alsinifolium* (Chickweed Willowherb), *Poa glauca* (Glaucous Meadow-grass), *Polystichum lonchitis* (Holly-fern), *Sibbaldia procumbens* (Sibbaldia), *Saxifraga nivalis* (Alpine Saxifrage) and *Tofieldia pusilla* (Scottish Asphodel). With the exception of the relatively widespread *Carex saxatilis*, most of these species were restricted to small numbers in a small number of locations around the summit area. A good selection of birds was also seen including Peregrine, Ptarmigan, Raven and Ring Ouzel.

On the Sunday, we were joined by members of Perthshire Society of Natural Science to explore the calcareous schist flora of Meall na Dige, 966m, 3km to the east of Stob Binnein. Shortly after leaving the afforested lower slopes we again split up into smaller groups. Richard Thomas led a group over Stob Creagach, Clive Dixon another group directly to the summit, whilst Lynne Farrell lead a third group to the south-west slopes of Ben More, on the west side of the glen. As the day progressed, the driving drizzle gradually abated and the sun broke out but the continuing gale force wind made hill-walking (never mind recording!) difficult. Despite this, highlights included records of *Botrychium lunaria* (Moonwort), *Cerastium alpinum* (Alpine Mouse-ear), *Draba norvegica* (Rock Whitlowgrass), *Juncus biglumis* (Two-flowered Rush), *J. triglumis* (Three-flowered Rush), *J. castaneus* (Chestnut Rush), *Sagina* × *normaniana* (*S. saginoides* × *S. procumbens*) (Scottish Pearlwort) — subsequently confirmed by Douglas McKean — *Salix lapponum* (Downy Willow), *Saussurea alpina* (Alpine Saw-wort) and *Sibbaldia procumbens* (Sibbaldia) in the vicinity of the summit.

I would like to thank the landowners for granting access permission and all those who attended this field trip, especially the group leaders.

JIM MCINTOSH

LEEDS (v.c. 64) 4th August

Twenty people met in this disease-free zone at the Armley Mills Industrial Museum car park to walk along the Leeds and Liverpool canal. First we looked across the River Aire to see one of the fig trees (*Ficus carica*) which have been established on the river bank since a now defunct power station warmed the waters of the river. Seven species of *Potamogeton* were seen in the canal. It is not easy to see whether the stipules are tubular or overlapping without a microscope. Nevertheless it was just about possible to distinguish between *P. trichoides* (Hairlike Pondweed), *P. berchtoldii* (Small Pondweed) and *P. pusillus* with reasonable certainty. The more attractive Flowering-rush (*Butomus umbellatus*) and Arrowhead (*Sagittaria sagittifolia*) still retained a few flowers. The cherries (*Prunus avium*) beside the towpath were delicious. It was possible, thanks to Vince Jones, to compare *Hieracium vagum* with *H. sabaudum* and further along *Carex otrubae* (False Fox-sedge) and *C. remota* (Remote Sedge) were growing with their offspring *C.* × *pseudoaxillaris*. On nearby waste ground we were greeted by a radiant Sunflower (*Helianthus annuus*). We could then compare Hoary Mustard (*Hirschfeldia incana*) with Black Mustard (*Brassica nigra*). Tall Rocket (*Sisymbrium altissimum*) was there too.

After lunch on the museum's picnic site we moved on, sparing a glance at Kirkstall Abbey *en passant*, to Woodside Quarry, a long disused sandstone quarry, where many garden plants have become established over the years. Mike Wilcox guided us expertly round. His latest find here was *Geranium dalmaticum*, possibly new to Britain in a wild situation. *Corylus maxima* (Filbert), in both green and purple forms, was in fruit. Mike displayed the characters of ten species of *Cotoneaster* and several rose hybrids which had previously been verified. There were native plants there too. The cudweeds (*Filago vulgaris* and *F. minima*) were quite dead! It was quite surprising to see the moorland crowfoot (*Ranunculus omiophyllus*) beside a pool at this low altitude.

A few stalwarts then went on to Aberford to see the eastern European knapweeds which have appeared on the embankments associated with the new M1-A1 link road. *Centaurea rhenana* (Panicled Knapweed), *C. jacea* (Brown Knapweed) and *C.* × *moncktonii* (*C. jacea* × *C. nigra*) (Hybrid Knapweed) were first noticed a couple of years ago. This year we have *C. uniflora* subsp. *nervosa* new to Britain. By now it was after closing time (for the shops, not the pubs) so into the city centre to see *Calamagrostis argentea* which Mike found, new to Britain last year, and this year's find of *Sutera cordata*. Why go abroad for your holidays? Come to sunny Leeds!

PHYL ABBOTT

ARRAN, CLYDE ISLANDS (v.c. 100) 9th–3th August

Arran is the largest of the Clyde Islands and the diversity of its rocks makes it a Mecca for geologists, and is reflected in its scenery and its flora. Eighteen members assembled in Brodick Country Park to begin a 5-day programme of exploration. Although the Arran hills rise to 875m they are not generally known for their alpine species and the group spent most of their time along or near the coast.

The first day started at Merkland Wood, formerly part of Brodick Castle policies, now owned partly by the NTS and partly by the Forestry Commission. Over the years it had become heavily infested with *Rhododendron ponticum* (Rhododendron) — indeed, away from the main paths it was impenetrable and natural regeneration had more or less ceased. A programme of rhododendron

elimination was under way and the group were interested to see what had actually grown in an area cleared 11 years ago. There was a thick covering of woodland plants under the shelter of *Alnus glutinosa* (Alder), *Betula pubescens* (Downy Birch) and *Salix* spp. (Willows), but Tony revealed that in the early stages 1000 *Acer pseudoplatanus* (Sycamore) seedlings and some *Heracleum mantegazzianum* (Giant Hogweed) had been removed, leading to a general discussion as to what was meant by 'natural regeneration'! An adjoining section more recently cleared held an abundance of exotic conifer seedlings, including *Tsuga heterophylla* (Western Hemlock-spruce), *Pinus contorta* (Lodgepole Pine) and *Picea sitchensis* (Sitka Spruce), obviously emanating from adjacent plantations. Some though were from trees originally planted in the policies during the 18th and 19th centuries: these included *Abies alba* (European Silver-fir), *Pinus sylvestris* (Scots Pine) and *Quercus petraea* (Sessile Oak).

Twelve species of ferns were noted, including *Oreopteris limbosperma* (Lemon-scented Fern), *Dryopteris aemula* (Hay-scented Fern) and *Hymenophyllum tunbrigense* (Tunbridge Filmy-fern) the latter colony formerly extended for some 500m but became considerably reduced and fragmented following the rhododendron clearance.

A pond, created from an existing marsh held a number of interesting species, among them *Carex paniculata* (Greater Tussock-sedge), *Equisetum fluviatile* (Water Horsetail), *Ranunculus lingua* (Greater Spearwort) and *Eleocharis palustris* (Common Spike-rush).

The afternoon session took us along the Clauchlands shore on the north side of Lamlash Bay. Here we studied the characteristic zoning of a saltmarsh, beginning at the sea's edge with *Salicornia europaea* (Common Glasswort), *Glaux maritima* (Sea-milkwort), *Spergularia media* (Greater Sea-spurrey), *Aster tripolium* (Sea Aster), *Triglochin maritima* (Sea Arrowgrass), *Juncus gerardii* (Saltmarsh Rush) and *Puccinellia maritima* (Common Saltmarsh-grass): the mid-zone included *Atriplex* spp. (Oraches). *Oenanthe lachenalii* (Parsley Water-dropwort), *Tripleurospermum maritimum* (Sea Mayweed), *Sonchus arvensis* (Perennial Sow-thistle), *Berula erecta* (Narrow-leaved Water-parsnip) — the only Arran site; then into tall herbs such as *Sparganium emersum* (Unbranched Bur-reed), *Oenanthe crocata* (Hemlock Water-dropwort), *Valeriana officinalis* (Common Valerian), *Lythrum salicaria* (Purple-loosestrife) and *Lycopus europaeus* (Gipsywort). The walk continued along the rocky shore to Clauchlands point to see the colony of *Ligusticum scoticum* (Scots Lovage) growing among the boulders.

Friday's excursion was along the west coast starting with beach and dunes at Blackwaterfoot — *Coincya monensis* (Isle of Man Cabbage), *Raphanus raphanistrum* subsp. *maritimus* (Sea Radish), *Cakile maritima* (Sea Rocket). *Rosa pimpinellifolia* (Burnet Rose), *Atriplex laciniata* (Frosted Orache), and *Calystegia soldanella* (Sea Bindweed). An area of saltmarsh revealed *Sagina maritima* (Sea Pearlwort) and then we undertook a traverse of the narrow path along a ledge at the bottom of the vertical Drumadoon cliff (quartz porphyry). In the vicinity of the King's Cave it was appropriate that we should have our first sighting of *Osmunda regalis* (Royal Fern) and we also learnt about the outcrops of a dark glassy rock we were walking over — pitchstone. A sequence of rocky areas and flushes had the members brushing up on the knowledge of bog species. *Parnassia palustris* (Grass-of-Parnassus), *Anagallis tenella* (Bog Pimpernel), *Epilobium parviflorum* (Hoary Willowherb), *Pedicularis palustris* (Marsh Lousewort) didn't cause too much trouble but one or two reference books were brought out to deal with *Schoenus nigricans* (Black Bog-rush), *Blysmus rufus* (Saltmarsh Flat-sedge), *Eleocharis* spp. (Spike-rushes) and *Anagallis minima* (Chaffweed). We eventually reached Machrie pond, the former course of Machrie Water, but now cut off from the sea by a shingle bank. There were at least three *Potamogeton* spp. in the water together with big colonies of *Bolboschoenus maritimus* (Sea Club-rush), *Eleocharis palustris* (Common Spike-rush) and *Myriophyllum alterniflorum* (Alternate-flowered Water-milfoil) and at the opposite more open end of the pond we could see 50 or 60 plants of *Alisma plantago-aquatica* (Water-plantain). Round the edge we found *Potentilla palustris* (Marsh Cinquefoil) and *Salix repens* (Creeping Willow). By now it was 1.30pm but the group decided that after a short visit to the nearby Tea Room they still had the energy for the 5km round trip to the Machrie Moot Standing Stones, an important archaeological site containing a group of stone circles,

and hut circles. They were doubly rewarded by the sight of not one but four Hen Harriers quartering adjacent moorland.

A feature of Arran's South Coast is the large number of dikes (mostly dolerite) intruding through the sandstones and marls and running across the shore well into the sea. There are no less than 230 of them in the 10km between Kildonan and Bennan Head. It is not surprising therefore that the raised beach cliffs, 100m high in places, hold several plant species which occur rarely, if at all, elsewhere in Arran. To gain access to these cliffs we walked across two fields, recently reseeded and carrying numerous agricultural weeds, amongst which we spotted *Galeopsis speciosa* (Large-flowered Hemp-nettle) and *Stachys arvensis* (Field Woundwort), both very rare on the island. *Spergula arvensis* (Corn Spurrey) and *Persicaria maculosa* (Redshank) were there in quantity. At the top of the cliff we passed a grassy bank with many low-growing plants, amongst them *Thymus polytrichus* (Wild Thyme), *Linum catharticum* (Fairy Flax), *Polygala vulgaris* (Common Milkwort) and *Centaurium erythraea* (Common Century). Descending the track to the shore our eyes had to constantly adjust between the vegetation on the cliff above, including *Carlina vulgaris* (Carline Thistle), *Anthyllis vulneraria* (Kidney Vetch) and *Vicia sylvatica* (Wood Vetch), and vegetation at our feet, including *Verbascum thapsus* (Great Mullein), *Arctium minus* (Lesser Burdock), *Agrimonia eupatoria* (Agrimony), *A. procera* (Fragrant Agrimony) and *Pulicaria dysenterica* (Fleabane). At this point Tony tested the group's olfactory skills by asking them to describe the smell of several common plants. Needless to say there was a complete lack of unanimity, well illustrating the problem botanical editors. have in using smells as a diagnostic feature. Both down the cliff and on the shore there was a profusion of Docks: *Rumex obtusifolius* (Broad-leaved Dock), *R. crispus* (Curled Dock), *R. sanguineus* (Wood Dock) and *R. conglomeratus* (Clustered Dock). All possible hybrid combinations were feasible, and three were identified very quickly. *R.* × *pratense*, *R.* × *ruhmeri* and *R.* × *sagorskii*.

Some *Equisetum hyemale* (Rough Horsetail) was seen growing on a ledge by the top of Levencorrach Burn waterfall and the final km back to the main road covered dunes — *Erodium cicutarium* (Common Stork's-bill), Saltmarsh — *Isolepis cernua* (Slender Club-rush), *Bolboschoenus maritimus* (Sea Club-rush) and beach — *Ranunculus sceleratus* (Celery-leaved Buttercup) and *Polygonum oxyspermum* (Ray's Knotgrass). Again there was a quantity of *Atriplex* spp.; *A. laciniata* was easy to detect but the other species, frequent round most of the Arran coastline, were not all mature enough for certain determination. Tony suggested that about 85% of the others were *A. glabriuscula* (Babington's Orache), maybe 10% *A.* × *taschereaui* (Taschereau's Orache), the other 5% being, in declining frequency. *A.* × *gustafssoniana* (Kattegat Orache), *A. littoralis* (Grass-leaved Orache) and, (at inland sites), *A. patula* (Common Orache). He was not convinced he had seen any *A. prostrata* (Spear-leaved Orache) (in spite of the Atlas dots!). The grass tally for this 3km walk was 33 species.

Lunch was taken sitting on a dike watching the seals (and a Peregrine) after which our cars took us a few kilometres west for another section of shore. Below Lenanmhor Farm we inspected a sandstone cliff bearing a splendid colony of *Asplenium marinum* (Sea Spleenwort) and a nearby dike was covered with *Geranium sanguineum* (Bloody Crane's-bill), *Jasione montana* (Sheep's-bit), *Hypericum pulchrum* (Slender St John's-wort) and *Pimpinella saxifraga* (Burnet-saxifrage) which is rare in Arran. As it had now begun to rain we hurried on to our main destination — the *Mertensia maritima* (Oyster-plant) colonies at Torrylinn. At one time up to 1000 plants could have been counted here, but the winter storms in 1987 came close to destroying the colonies and in 1988 the count was just 95. Since then the number has fluctuated, going down to 15 for a couple of years hut now increasing again. On the present occasion only a few young plants were evident on the east of Torrylinn Water and in order to see the fully grown plants (up to 2m across) on the opposite bank the intrepid BSBI members plucked up courage and waded across the 20m wide river! Lynne counted 59 plants in all.

Sunday morning saw us at the north end of the island in quite a different habitat — Glen Catacol, our only venture into wild country. The boggy wasteland was full of interest, with much *Myrica gale* (Bog-myrtle), *Narthecium ossifragum* (Bog Asphodel), *Drosera rotundifolia* (Round-leaved Sundew) and *D. longifolia* (Great Sundew). Quite a number of intermediates were in evidence and we concluded that they were *D.* × *obovata* rather than *D. intermedia*. *Rhynchospora alba* (White Beak-sedge) was frequently spotted showing up well among the greens and greys but we failed to locate any *R. fusca*

(Brown Beak-sedge) discovered by Tony Church in 1998. Moving next up the side of the rocky gully in Glen Diomhan we had a good view of the two endemic Arran Whitebeams, *Sorbus arranensis*, and *S. pseudofennica*.

It seemed a good idea to descend to the glen bottom again to eat our lunch — unfortunately armies of midges had exactly the same idea and some members opted for a somewhat mobile meal break.

After recovering our composure in the nearby Lochranza Tea Room we set out for the Newton shore at the northern tip of the island. The rocky foreshore is mainly schist, as are the cliffs behind, but the intervening grassy raised beach, although level, is riddled with flushes and other boggy patches and small pools. We soon came across *Hypericum elodes* (Marsh St John's-wort), *Pinguicula lusitanica* (Pale Butterwort), *Ranunculus flammula* (Lesser Spearwort), *Eleocharis multicaulis* (Many-stalked Spike-rush), *E. quinqueflora* (Few-flowered Spike-rush), *Potamogeton* spp. (Pondweeds) and *Parnassia palustris* (Grass-of-Parnassus). Lynne once more demonstrated her ability to locate our tiniest species by finding *Anagallis minima* (Chaffweed) growing with *Radiola linoides* (Allseed). Immediately afterwards she gave us a dissertation on Hutton's Unconformity, a section of rock formation on the Newton shore which changed the course of geological theory. I think the members were more impressed by a splendid colony of *Dryopteris aemula* (Hay-scented Buckler-fern) growing among the *Myrica* — there was more on the cliffs. From the Fairy Dell we returned over the track at the top of the cliff, a route intended to give us panoramic views over mountains, sea and lochs but denied by the rain and low cloud. However, we did find *Juncus tenuis* (Slender Rush); this was our tenth Arran rush.

Our final day, Monday, began with a visit to Cnoc-na-Dail Forestry area where the main road passes between the plantations. Contrary to the general impression, the Forestry Commission have, in the past, planted a multitude of different species, either for their large-scale timber operations, or in trial plots, or for amenity purposes. Our plan was to walk round the fringe of the area, never more than 50m from the road, to see how many we could identify; we found 45! In the first category we were particularly interested in *Abies amabilis* (American Red Fir), *Abies forrestii* (Forrest's Fir) from China, and *Thuja plicata* (Western Red-cedar). Two South American Beeches came into the second category, *Nothofagus nervosa* (Rauli) and *N. obliqua* (Roblé), while the most attractive of the ornamentals were *Cotoneaster* × *watereri* (Waterer's Cotoneaster) and the similar *Photinia davidiana* (Stranvaesia), both with clusters of white flowers followed by red berries; *Malus baccata* (Siberian Crab) and an ornamental Whitebeam, *Sorbus aria* 'Decaisneana'. Our tree safari was enlivened by sight of another Peregrine.

Our final excursion was a short walk along the path between Brodick Golf Course and the shore. Here we inspected a large clump of *Fallopia* × *bohemica* (*F. japonica* × *F. sachalinensis*), some *Rumex* × *ruhmeri* (site of the first Scottish record) and the only Arran occurrence of *Artemisia stelleriana* (Hoary Mugwort).

Our thanks are due to the NTS for allowing us to use the Lecture Room in their Countryside Centre for our evening meetings.

TONY SMITH & LYNNE FARRELL

CASTLEMORTON COMMON, WORCESTERSHIRE (v.c. 37) 11th August

Sixteen members met at the south-west corner of Castlemorton Common, the largest of the surviving commons to the east of the Malvern hills. Proceeding northwards along a rough track, we first noted a small patch of *Chamaemelum nobile* (Chamomile) growing in nearby grassland before making a short detour up Swinyards Hill. At a rocky outcrop we looked at some large patches of *Potentilla neumanniana* (Spring Cinquefoil): fortunately a few plants were still in flower. *Helianthemum nummularium* (Common Rock-rose), *Filago minima* (Small Cudweed), *Carex pilulifera* (Pill Sedge) and *Rosa micrantha* (Small-flowered Sweet-briar) were also seen from this site. Shortly after *Rosa obtusifolia* (Round-leaved Dog-rose) was located in a scrubby hedgerow and two common hybrids of the district;

Rosa × *dumetorum* (*R. canina* × *R.obtusifolia*) and *R.* × *verticillacantha* (*R. arvensis* × *R. canina*). Moving easterly onto the lower part of the common we found *Rumex pulcher* (Fiddle Dock), long past flowering, and in a nearby hedge *Rosa rubiginosa* (Sweet-briar) growing alongside *Rhamnus cathartica* (Buckthorn).

Populus nigra subsp. *betulifolia* (Black Poplar) is widespread on the common and immediately after lunch a particularly fine specimen was observed. A large free-standing bush of *Rosa stylosa* (Short-styled Field-rose) was studied closely and was of particular interest to the northern members, and all were fortunate to see an example of the very rare hybrid *Rosa obtusifolia* × *R. stylosa*. *Oenanthe lachenalii* (Parsley Water-dropwort) was found scattered over a large area of grassland and a further large patch of *Chamaemelum nobile* was discovered: this species having benefited from the lack of grazing (following the recent foot-and-mouth restrictions) was flourishing in several places across the common for the first time in many years. Arriving at a small dried up winter pool we searched in vain for *Persicaria minor* (Small Water-pepper). However, whilst looking at some very small specimens of *Centaurium pulchellum* (Lesser Centaury), Wendy McCarthy and Claire Kitchen caught sight of *Anagallis minima* (Chaffweed), a reward indeed, as this was the first v.c. 37 record since the 1830s. *Lythrum portula* (Water-purslane) and *Veronica scutellata* (Marsh Speedwell) were also seen at this spot. After some careful searching on a grassy bank above a stream, two plants of *Bupleurum tenuissimum* (Slender Hare's-ear) were located, very difficult to detect in the long grass: this species has survived at a few Malvern sites since first being discovered in 1834.

On our way back, in a marshy area in the central part of the common, *Apium inundatum* (Lesser Marshwort) was frequent in the wetter parts, and a few plants of both *Isolepis setacea* (Bristle Club-rush) and *Eleocharis quinqueflora* (Few-flowered Spike-rush) were scattered about, but we failed to find *E. uniglumis* (Slender Spike-rush). A few species of *Carex* (Sedge) were recorded, including *C. distans* (Distant Sedge), and Graeme Kay determined one specimen as the hybrid *Carex* × *fulva* (*C. hostiana* × *C. viridula*), later confirmed by Arthur Chater, a new vice-county record. Later the party drove off to the north-east corner of the common to see *Spiranthes spiralis* (Autumn Lady's-tresses) and then to the last destination at Malvern Common to look at a single bush of the rare *Rosa agrestis* (Small-leaved Sweet-briar).

ROGER MASKEW

REPORT OF OVERSEAS FIELD MEETING — 2001

BSBI EXCURSION TO SICILY 17TH – 31ST MAY 2001

All participants met at Heathrow in time to catch the morning flight to Catania changing in Rome. The party included past stalwarts of foreign botanical trips, BSBI officers and vice-county recorders and several with more than just a passing interest in geology. Most had far greater experience and a much greater knowledge of Mediterranean botany then the leader, Richard Pryce! The group comprised Phil Abbot, Paul Bartlett, Olive Chamberlin, John Edelsten, Trevor Evans, Lynne Farrell, Ann Fritchley, Margot Godfrey, Dick and Joan Gutteridge, Graeme Kay, Margaret Lindop, John and Ann Mason, John Presland and Peter and Steph Thomson.

We arrived at Catania Airport in the late afternoon of 17th May and were met by Roberto Caudullo, the local guide. Having been installed in the big green 'Sea Bus', which was to be our main mode of transport for the next two weeks, we transferred to Milazzo in the north-eastern corner of the island in the charge of our driver Angelo, with Etna looming in the haze to the west as we sped along the autostrade. The road construction was amazing, going through several tunnels and emerging immediately onto high bridges over deep valleys. Many roads were beautifully lined with bougainvilleas. Dinner at the hotel included champagne and lemon cake to celebrate the leader's birthday and at the height of the revelry, Roberto told us that we would be embarking on the hydrofoil for Stromboli at 6am the following morning!

After a quick breakfast, we were taken in the coach to the harbour where we were joined by Jane Croft who was to accompany us to Stromboli. We caught the hydrofoil with only seconds to spare and arrived in Stromboli

at 7am. As there are no cars on the island, our luggage was transported by 'Ape', a sort of motorised wheelbarrow!, but *we* had to walk the mile or so to the hotel, botanising on the way, and then into the main square for breakfast. The main part of the day was spent walking and botanising along the narrow main road, which, at the edge of the village, turned into a twisting path that climbed steadily to a cafe at the old observatory: a great reviver, as it was exhaustingly hot. We sat for about two hours watching puffs of smoke arise from the summit every ten minutes or so accompanied by occasional rumbles. Our drinks had attracted layers of volcanic dust before we could finish them! The downward walk was more leisurely and time was spent examining the flora. Roberto pointed out endemics including *Centaurea aeolica* and *Daucus foliosus* and other plants of interest including *Genista tyrrhena*, *Daucus carota* (Wild Carrot) and *Polypodium cambricum* (Welsh Polypody).

At the hotel we were able to recover ready for the walk back to the quay for a boat trip around the island. This was preceded by the usual Sicilian chaos as to which boat we were to board, how many other parties were already on it and the availability of the food! We eventually had our evening-meal on board which comprised (the ubiquitous) pasta, local wine, sesame buns and a sweet wine. The boat stopped for about two hours as we watched the eruptions in the dark. One very good one with a big fountain of fire left glowing lava below for about a minute. Each eruption was greeted by a cheer from those on the boat and a multitude of flashes from the cameras of people who had climbed the mountain for a grandstand view. We walked back to the hotel in the dark at about midnight, stumbling in the light of one or two torches. It was still very hot and we had the added worry of having to get up early to catch the 7am hydrofoil the following morning!

Up early again on 19th May, in time to walk the mile to the quay and catch the hydrofoil back to Milazzo. Due to a shortage of boats, we had the added interest of going via other Aeolian islands and having to change in Lipari where we passed the large pumice quarries which dominate the island. Reunited with the coach, we travelled down the east coast to the Ibleian region to visit the Anapo River Valley Nature Reserve which included limestone cliffs and riparian habitats wooded with *Quercus cerris* (Turkey Oak) and *Salix pedicellata*, which were easily accessible by walking along a former railway line. The coach was air-conditioned and very cool, so getting out into 34°C was a major shock but two old railway tunnels *en route* were welcome cool spots! On the walk we noted over seventy species including *Calendula suffruticosa*, *Selaginella denticulata*, *Pallenis spinosa*, *Scabiosa maritima*, *Rhamnus alaternus* (Mediterranean Buckthorn), *Dianthus rupicola*, *Sedum caeruleum*, *Ampelodesmos mauritanicus*, *Aristolochia sempervirens*, *Carex halleriana* and *Adiantum capillus-veneris* (Maidenhair Fern). Cleopatra butterflies were very attractive as were many lizards; we saw a Hoopoe and Nightingales were singing. At the far end of the valley, another regional endemic, the prostrate nettle, *Urtica rupestris*, was a very aesthetic reward and growing in the damp ground nearby were *Equisetum ramosissimum* (Branched Horsetail), *E. telmateia* (Great Horsetail) and *Lemna minor* (Common Duckweed)! There was also a very fine tree of *Platanus orientalis* (Oriental Plane), a rather rare species in the area. The river here is the only potable one in Sicily, so we drank and filled our water bottles with the cool, clear water.

Back on the coach, we continued to Noto Marina south of Siracusa, nearly getting stuck in one small town. The roads are very narrow, not meant for coaches, and every town and village presented its own problems of passage. The hotel was very big and full of very noisy school children who did not quieten-down until after 2am!

The following day (20th May) we first had to buy provisions for lunch, except that the only shop open on a Sunday was too small to quickly cope with our needs. This, coupled with a fiesta in nearby Noto, and the hundreds of associated coaches, ensured that our progress was very slow. We eventually arrived at the Vendicari Nature Reserve which includes saline lagoons and large areas of saltmarsh, sand dunes, intertidal rock platforms (into which the Romans had excavated salt pans), exposed rock-pavements and machair. It is notified as a Site of International Wetland Importance under the Ramsar Convention. Here we had our first encounter with the Sicily information leaflet phenomenon: the reserves appear to have plenty of leaflets to hand-out but never enough to give one each to coach parties, so they ration them! However, the day turned out to be pleasantly relaxed, as the planned boat trip to Cabo Passero Island, though only about 300m offshore, was cancelled due to rough seas! Hence we spent all day exploring the main part of the reserve. Species of the saltmarsh and saline wetlands included *Limonium syracusanum* (endemic to the region), *L. serotinium*, *Salicornia syracusanum*, *Salicornia glauca*, *Halimione* sp., *Suaeda vera* (Shrubby Sea-blite), *Plantago crassifolia*, *P. coronopus* (Buck's-horn Plantain), *Ruppia spiralis*, *Juncus maritimus* (Sea Rush), *Schoenus nigricans* (Black Bog-rush), *Arundo donax*, *Carex extensa* (Long-bracted Sedge), *C. otrubae* (False Fox-sedge) and *C. acutiformis* (Lesser Pond-sedge). On the exposed rock pavements we noted *Chamaerops humilis*, the only palm native in Europe, *Juniperus oxycedrus* subsp. *macrocarpa*, *Thymelaea hirsuta*, *Hypericum triquetrifolium*, *Echium italicum* (Pale Bugloss), *Delphinium peregrinium* and a plethora of tiny rock-hugging species such as *Sedum hispanicum* (Spanish Stonecrop), *Mesembryanthemum nodiflorum*, *Evax pygmaea*, *Euphorbia peplis* (Purple Spurge) and *Frankenia laevis*

(Sea-heath). *Posidonia oceanica* 'balls' were abundant along the strand-line and in the rock-pools. This species is a marine phanerogam endemic to the Mediterranean.

The next morning, after another disturbed night, we travelled west along the south coast passing kilometre after kilometre of polythene tunnels in which were growing aubergines, tomatoes, melons, etc. But before that, we bought food in Modica, where we had just enough time to view some of the mediaeval architecture including the very impressive church. The heat caused us to pop into bars for gelato[s] (ice-creams) or granita[s] (sorbets) at the least prompting. We lunched among the polytunnels in blistering heat about 0.8km from the sea where some were lucky enough to find *Otanthus maritimus* (Cottonweed) on the beach.

We arrived in Agrigento just in time for our 4pm appointment with a local guide, Claudio, who was to show us around the Valley of Temples, which is actually on a hill top! Some of the ancient Roman temples to Hera, Zeus, Hercules, etc., are remarkably well preserved and they must have been even more spectacular when encased in 'marble'. Claudio was obviously not well used to parties who paid just as much interest to the plants as to the ruins but was very patient! *Acanthus spinosus* (Spiny Bear's-breech) was fittingly growing especially well here, as it was widely used as an architectural decoration by the Romans. After we were dismissed by Claudio we were let loose to explore the newly restored garden originally created by Alex Hardcastle, the British archaeologist who researched much of the Temples site.

We arrived back at the coach before the threatening thunder clouds broke, but got wet unloading into the hotel which was new, in pseudo-Moorish style and very nice.

A 9am start (22nd May) saw us heading north towards the Madonie Mountains Natural Park south of Cefalu, pausing at a very floriferous roadside field and verge, a ten-minute stop which kept us busy for over an hour! With so much travelling over the past few days, people were glad to be able to get out and look at some new plants. There was an abundance of poppies, legumes, mallows, composites, etc., including *Papaver rhoeas* (Common Poppy), *P. hybridum* (Rough Poppy), *Biscutella didyma*, *Vicia villosa* (Fodder Vetch), *Trifolium angustifolium* (Narrow Clover), *T. stellatum* (Starry Clover), *T. tomentosum* (Woolly Clover), *Melilotus indicus* (Small Melilot), *Medicago orbicularis* (Button Medick), *Hedisarum coronarium*, *Lathyrus odoratus* (Sweet Pea), *Scolymus hispanicus* (Golden Thistle), *Orobanche ramosa* (Hemp Broomrape), *Echium plantagineum* (Purple Viper's-bugloss), *E. italicum*, *Linum strictum*, *Malva neglecta* (Dwarf Mallow), *Althaea hirsuta* (Rough Marsh-mallow), *Lavatera cretica* (Smaller Tree-mallow), *Aegilops geniculata*, *Cerinthe major* (Greater Honey-wort), *Centaurea solstitialis* (Yellow Star-thistle), *Gladiolus italicus*, *Anisantha madritensis* (Compact Brome), *Vulpia ciliata* (Bearded Fescue), *Ampelodesmus mauritanicus* and *Cynosurus echinatus* (Rough Dog's-tail).

The Madonie Park is very mountainous and is very varied botanically and very spectacular scenically. The mountains are predominantly made up of a Mesozoic succession of limestones and dolomites but there are also Cenozoic quartz-arenities and brown shales locally. The area is often referred to as the 'Southern Dolomites'. Our first stop was at Polizzi, a village where Roberto gave us a short introductory lecture overlooking Monte Quacella, where he described both the geological setting and botanical highlights. The landscape is varied and still largely unspoilt, with the presence of large woodland areas, including those dominated by *Fagus sylvatica* (Beech), *Quercus ilex* (Evergreen Oak), *Q. suber* (Cork Oak), *Q. pubescens* (Downy Oak) and *Q. petraea* (Sessile Oak). We were also able to buy the day's picnic here together with the obligatory gelatos and granitas.

We continued on to Portella Mandarini where orchids were in abundance. *Orchis papillionacea* (Pink Butterfly-orchid), *O. laxiflora* (Loose-flowered Orchid), *O. quadripunctata* (Four-spotted Orchid), *O. morio* (Green-winged Orchid) *O. tridentata*, *Dactylorhiza fuchsii* (Common Spotted-orchid), *Aceras anthropophorum* (Man Orchid), *Serapias vomeracea* subsp. *vomeracea*, *Ophrys lutea* (Yellow Bee-orchid) and *Himantoglossum hircinum* (Lizard Orchid) were all seen in fine condition, whilst the yellow *Genista cupanii* and the red-tinged *G. aristata* were also very impressive, the former endemic to the Madonie Mountains and the latter to Sicily as a whole. Many other species were seen but we were hampered in our determinations by the lack of comprehensive reference books, as no one book seemed to completely cover the Sicilian Flora. The abundant butterflies included Black-veined White, Spotted Fritillary and several blues. Further along the road we stopped to look at *Paeonia mascula* (Peony), but the plants were already well in fruit. We eventually arrived at the Piano Torre Hotel: a very peaceful place with all facilities, perched high up in the valley above Isnello, with impressive views. Piano seems to denote a flat area in between the hills and also a floor in a hotel as well as meaning quiet!

The cool of the mountains provided a welcome break from the searing heat of the coast a few days before, although our visit to Monte Quacella on the 23rd May, was still too hot! Monte Quacella is a limestone area with a very diverse flora including several endemics *Alyssum nebrodensis*, *Astragacantha nebrodensis*, *Genista cupanii*, *Helianthemum nebrodense*, *Helichrysum nebrodense*, *Jurinea bocconei*, *Linum punctatum* and *Sideritis sicula*. Orchids included most of those seen the previous day but additionally *Cephalanthera damasonium* (White Helleborine), *Neotinea intacta*, *Ophrys fusca*, *O. lacaitae*, *O. tenthredinifera* and *Orchis*

brancifortii. Other species of interest included *Acinos alpinus* subsp. *nebrodenis*, *Asphodeline lutea*, *Carduncellus pinnatum*, *Daphne oleoides*, *Edraianthus graminifolius* subsp. *sicula*, *Euphorbia rigida*, *Evax pygmaea*, *Helianthemum nummularium* (Common Rockrose), *H. cinereum*, *H. oelandicum* (Hoary Rockrose), *H. halimifolium*, *Onosma canescens*, *Ornithogalum comosum*, *Orobanche ramosa*, *Rumex bucephalophorus* (Horned Dock) and *Tragopogon hybridus* (Slender Salsify). Butterflies were again in great abundance and several Alpine Choughs were seen flying around the saw-tooth ridge top.

After lunch, Roberto invited those who wished, to undertake a 2–3km round walk to see some of the remaining endemic *Abies nebrodensis* trees, only twenty-five of which survive, and only here at Monte Quacella. It turned out that he is notorious for underestimating distances: it was a long, very hot slog of at least 8km but rewarding in the end. At a junction in the track, there was even a signpost to the trees! (0.5km it said!). We passed several new (to us) species on the way including *Viola nebrodensis* (a regional endemic), *Arenaria grandiflora* subsp. *grandiflora*, *Aristolochia pallida*, *Armeria nebrodensis*, *Cyclamen hederifolium* (Cyclamen), *C. repandum* (Spring Sowbread), *Limodorum abortivum* and *Ornithogalum montanum*. The promised freshwater spring in the woodland was too sluggish to trust, but we found a good alternative, spouting volumes of cold water, further down.

After breakfast on 24th May, we made a short visit in hot sunshine to Isnello, the small town lower down the valley, for shopping, gelatos, granitas, etc., where several of the group were captivated by the 3m long cucumbers for sale on some vegetable stalls! Excellent free maps were available in the Tourist Information Office but outside, large, menacing, black and yellow flying insects were very active having made their nest under an ornamental planter on the pavement!

Piano Della Battaglietta, a large bowl-shaped sink-hole in the dolomitic limestone, was our next stop. The small areas of wetland vegetation in the bottom included several halophytic species suggesting a relatively high degree of salt-content in the water. With the weather becoming increasingly threatening, with lowering black clouds and rumbles of thunder, many of the party stayed on the coach in anticipation and, predictably, those who did venture out, were caught and soaked by the violent storm which soon struck. Those with newfangled fabric boots had wet feet for the following two days! But it was all worth it as we saw species not present at any other site visited during the fortnight. Species recorded included *Astragalus* cf. *alpinus*, *Cachrys ferulacea*, *Dryopteris submontana* (Rigid Buckler-fern), *Eleocharis palustris* (Common Spike-rush), *Erysimum bonnanianum*, *Euphorbia myrsinites* (Broad-leaved Glaucous-spurge), *Juncus gerardii* (Saltmarsh Rush), *Muscari ramosum*, *Ranunculus lateriflorus*, *Saxifraga granulata* (Meadow Saxifrage) and *Valeriana tuberosa*. On the return to the hotel, a short roadside stop was made near Piano Zucchi where several additional species were seen including broomrapes and *Silene italica* (Italian Catchfly).

Before leaving the Piano Torre Hotel the next morning, a brief look at the nearby beech forest yielded several orchids including *Cephalanthera damasonium*, *Himantoglossum hircinum*, *Neottia nidus-avis* (Bird's-nest Orchid) and *Orchis commutatum* together with *Aetheonima saxatilis*, *Anemone sylvestris* (Snowdrop Anemone), *Astragalus monspeliensis*, *Berberis aetnensis*, *Daphne laureola* (Spurge-laurel) and *Ruscus aculeatus* (Butcher's-broom)

The long transfer to Etna took us first down to Cefalu with an ancient castle perched on a huge rock, then east along the north coast. In one town every shop had rows of very colourful pottery on display, but it was impossible to find a place to park the bus. Vultures were seen circling over the sea. We turned south after a short diversion to avoid a landslide, to travel through the Nebrodi Mountains via Cesaro. The Nebrodi landscape is characterised by woodlands of *Fagus sylvatica*, *Quercus cerris* and *Q. suber*, whilst *Q. ilex* and *Q. pubescens* woodland is rare. However, considerable degradation of the vegetation communities has been caused by excessive grazing, which has favoured the growth of herbaceous vegetation at the expense of the woodland. Indeed, 'wild' black pigs accompanied us during our short lunch stop where several *Himantoglossum hircinum* plants were growing on the roadside. Another short stop was made to examine the riparian *Fagus* woodland of the Torrente Torti II, a verdant stream valley very reminiscent of many in Wales, with *Athyrium filix-femina* (Lady-fern), *Polystichum setiferum* (Soft Shield-fern), *Ilex aquifolium* (Holly) and *Carex remota* (Remote Sedge) frequent on the stream banks! However, more exotic species included *Allium pendulinum* (Italian Garlic), *Cyclamen repandum* and *Primula acaulis*.

We continued on through Randazzo, skirting the northern and eastern slopes of Mount Etna eventually arriving at the Hotel Airone perched high over Zafferana which sprawled over the slopes below. The accommodation was good and the staff friendly and helpful. The local geological map shows all the lava flows with their dates and the hotel is built on the 1792 flow. In the past the lava has overwhelmed parts of Catania which is about 30km from the main craters. The whole mountain is ringed by smaller craters, the result of lesser eruptions,

but it was one of these which caused the devastation of Catania. The walls and woodland in the vicinity of the hotel had lots of interesting plants for evening or morning strolls.

After breakfast on 26th May, we returned to the northern slopes of Etna to Piano Provenzana from where four-wheel drive mini-buses take tourists to view the craters. We, however, botanised on some ancient lava flows and pyroclastic materials, viewed two old vents and even had a few minutes to buy postcards and souvenirs. Roberto told us that it takes about ten years before lichens begin to colonise the new lava, then other plants slowly follow, including *Cerastium tomentosum* var. *aetneum* (a local variety of Snow-in-Summer) which is conspicuous from quite a distance as it forms big white patches, together with *Senecio squalidus* var. *glaber* and *S. squalidus* var. *aetnensis* (local varieties of Oxford Ragwort), *Isatis tinctoria* var. *canescens* (Woad), *Rumex scutatus* f. *aetnensis* (a local variety of French Sorrel) and *Centranthus ruber* (Red Valerian). Other pioneer species like *Astragalacantha sicula* have very long, tough taproots which hold them in the loose larva and also help stabilise the slope. *Viola aethnensis* was a very attractive endemic which forms patches of purple flowers in clearings in the *Pinus nigra* subsp. *laricio* (Corsican Pine) woodland and on roadsides. Other species seen included *Anthemis aetnensis*, *Berberis aetnensis*, *Cephalanthera longifolia* (Narrow-leaved Helleborine), *Juniperus communis* subsp. *hemisphaerica* (a local subsp. of Juniper), *Poa violacea* subsp. *aetnensis*, *Robertia taraxacoides*, *Scleranthus aetnensis* and *Scleranthus perennis* subsp. *vulcanicus* (a local ssp. of Perennial Knawel).

We arrived at Castagno dei 100 Cavalli for our oenogastronomic lunch. The site is a great tourist attraction where a huge *Castanea sativa* (Sweet Chestnut) tree grows, which over the centuries has died in the centre and now appears to be six or more separate trees arranged in a circle. Tradition has it that a princess slept under it with room for her hundred cavaliers and horses to surround her. The lunch was very good comprising a variety of local delicacies and was followed by an opportunity to inspect the local craft and produce stalls set out in the square including honey, sweets, liqueurs and, unexpectedly, free CD ROMs advertising the area's attractions to tourists!

The afternoon was spent at Piano dell'Acqua where the 1991-1993 lava flow had stopped about 1m from a house – a minor tourist attraction! We were immediately accosted by a honey seller and guide, but Roberto was on home ground and held him off! The arrival of another coach load helped! Roberto reminisced that even standing 5m from the lava, it felt as though your clothing was about to burst into flames. The lava surface was very jagged and bubbly and is called a-a lava by the Hawaians as it hurts to walk on it with bare feet. The red-hot lava that flows down through tubes inside the main flow, loses the gases and is much smoother where exposed. The new lava was becoming colonised by lichens including grey *Stereocaulon vesuvianum* and the bright orange *Xanthorina* cf. *parietina* together with the moss *Campylopus introflexus* and a few higher plants such as *Centranthus ruber* and *Rumex scutatus* f. *aetnensis*. The original vegetation which had not been overwhelmed remained luxuriant right up to the edge of the new lava and included *Spartium junceum* (Spanish Broom), *Genista aetnensis* (the endemic Etnean Broom), *Ornithopus compressus* (Yellow Serradella), *Parentucellia viscosa* (Yellow Bartsia), *Campanula dichotoma*, *Paronychia argentea*, *Knautia integrifolia*, *Carlina nebrodensis*, *Trachynia distachya*, *Anisantha tectorum* (Drooping Brome) and *Cynosurus echinatus*. Boundary walls built of lava-bombs and fragments were colonised by ferns including *Ceterach officinarum* (Rustyback), *Asplenium trichomanes* (Maidenhair Spleenwort), *A. adiantum-nigrum* (Black Spleenwort) and *Polypodium cambricum* and also *Geranium robertianum* (Herb-Robert), *G. lucidum* (Shining Crane's-bill), *G. rotundifolium* (Round-leaved Crane's-bill) and *Parietaria judaica* (Pellitory-of-the-wall).

After evening dinner we drove to a spot with a good view up to the north-east side of the crater where, in pitch darkness, from a distance of several kilometres, we could view the glowing molten lava on the slope of the crater. The view was quite spectacular especially through binoculars. Finally we went into Zafferana to sample the nightlife, where the young men and women line up on opposite sides of the town square and eye each other up in ritualised flirting. We went into a bar and ordered hot chocolate which turned out more like warm blancmange but still preferable to a late-night dose of espresso coffee!

First stop on 27th May was to be shown a lava tree at Pietra Cannone. Roberto explained that a tree had been engulfed by the lava but had remained intact long enough for the lava to have solidified around it before the wood was burned away (or destroyed by time). The result is a hollow tube which may even have the impression of the bark on its inner side. On the way to the next site a short roadside stop was made to photograph masses of *Orobanche rapum-genistae* (Greater Broomrape) parasitising the endemic broom. *Rumex pulcher* (Fiddle Dock) was noted, in addition to the other characteristic docks already mentioned, and Lepidoptera included Holly Blue and Forrester Moth.

We had our picnic in the woodland by the Grotta dei ladri in the Piano Delle Donne area which is an old lava tube. Molten lava flowed for some time inside an already solidified lava flow leaving an elongated cave which,

after cooling, had been used in the past variously as a bandit's hide-out and as an icehouse (to store winter ice for summer use). Here we donned hard-hats and Roberto produced an acetylene lamp in order to show us the flow-structures within the cave. The woodland is dominated by the endemic *Betula aetnensis* (Etnean Birch) which has stunningly-beautiful white bark. Other species noted included *Quercus pubescens*, *Juniperus communis* subsp. *hemisphaerica*, *Pinus nigra* subsp. *laricio*, locally abundant *Pteridium aquilinum* (Bracken), *Adenocarpus complicatus* subsp. *commutatus*, *Achillea ligustica* (Southern Yarrow), *Tanacetum siculum*, and *Cephalanthera longifolia*.

The final scheduled stop of the day was to walk up the valley of the Torrente Lavico Sciambro, a seasonal mountain stream, dry in summer after the snows have melted, which has eroded the lava to a smooth surface with pot-holes and other similar fluviatile features. Roberto introduced the site as the 'Bonsai Forest' where numerous mature *Pinus nigra* subsp. *laricio* grew to only a metre or two high in cracks in the rocky substrate. Other species seen included *Erysimum bonnanianum*, *Astragalacantha sicula*, *Chamerion angustifolium* (Rosebay Willowherb), *Scrophularia canina* (French Figwort), *Tanacetum siculum* and *Secale sicula*.

As there was a little time to spare on our return to the hotel, we asked Angelo to drive us further up the slope in order to explore, more fully, the 1792 flow. Here the lava was partially vegetated with broom and the characteristic species we had seen previously but we also recorded *Asphodelus microcarpus*, *Campanula erinus*, *Carlina nebrodensis*, *Clematis flammula* (Virgin's-bower), *Crupina crupinastrum*, *Erodium acaule*, *Galium parisiense* (Wall Bedstraw), *Lupinus angustifolius* (Narrow-leaved Lupin), *Polyspermum tetraphyllum*, *Sedum crassuliflorum*, *S. rubens*, *Silene colorata* and *Verbascum thapsus* (Great Mullein). Walking back to the hotel we entered an area of mature chestnut-dominated woodland established on an older flow. *Rubus ulmifolius* (a bramble), *Hedera helix* (Ivy) and *Pteridium aquilinum* were abundant but locally the ground flora was very rich and included *Aristolochia rotunda* (Smearwort), *Carex distachya*, *Cephalanthera rubra* (Red Helleborine), *Coronilla* cf. *emerus*, *Doronicum orientale*, *Epipactis microphylla*, *Lathyrus* cf. *sylvestris*, *Muscari comosum* (Tassel Hyacinth), *Orchis commutatus*, *Satureja calamintha* and *Silene noctiflora* (Night-flowering Catchfly).

Although we had already stayed on the slopes of Etna for a couple of days, we had still not seen the summit due to a constant veil of cloud and haze. But, at last, on 28th May, the air cleared in time for our excursion to the Valle del Bove, high above the south-eastern slopes of Etna. We were presented with impressive views of the smoking summit *en route* and cries of 'Photo stop!' echoed around the coach. We walked up the track to Schiena Dell'asino and eventually were able to perch on the rim of the huge valley (it consisted of several coalescing caldera collapses) into which much of the lava flows, and has partly filled. The weather was hot but windy and although no new species were seen, good patches of *Viola aetnensis* were present on the trackside and habitat photos of *Cerastium tomentosum* var. *aetneum*, *Anthemis aetnensis*, *Robertia taraxacoides* and *Rumex scutatus* f. *aetnensis* were possible with the lava-filled valley beyond. The opportunity was also taken to take the group photo (see p. 42).

We had a pleasant, though crowded lunch at the high touristic rifugio of Monti Silvestri where a spatter cone, one of many scattered round about, was easily inspected (in company with hundreds of other tourists doing the obligatory circular walk around the small crater). This was a fine place to study the terrible quality of tacky souvenirs including Black Madonas with blue glitter, blow-up Etnas, etc. Since our visit, this spot has been much modified by the July eruption which left its own personal souvenirs! After lunch we returned downhill, the road winding over the 1983 flow, which is still barren with curious pockets of trees that survived and an engulfed house with only the roof visible.

Roberto was searching for an area where *Genista aetnensis* was in full flower but we were a week or so too early to see the slopes covered in yellow blossom. However, an area of wasteland on the lower, south-facing slopes on the outskirts of Nicolosi provided a few obliging bushes which stimulated weary botanists to disembark from the coach. The area proved to be surprisingly species-rich and included several species we had not seen before. Plants recorded included *Chenopodium botrys* (Sticky Goosefoot), *Echium grandiflorum*, *Heliotropium europaeum* (European Turnsole), *Jasione montana* (Sheep's-bit), *Petrorhagia prolifera* (Proliferous Pink), *Sedum tenuifolium*, *Senecio cineraria* var. *ambiguus* (Silver Ragwort), *Senecio squalidus* var. *chrysanthemifolius*, *Silene conica* (Sand Catchfly), *Stipa capensis* (Mediterranean Needle-grass) and *Teucrium flavum* subsp. *flavum*.

Evening dinner saw birthday celebration number two, combining that of Ann Fritchley with that of Lorena, one of the hotel receptionists.

May 29th was a free day when most of the party were taken in the coach to Taomina, a tourist hot-spot on the east coast. Several of the group took taxis up to Castelmola, a small village with a ruined castle above it, which perches high over the town. After the usual granitas we visited the castle with great views to Etna and the coast, then walked along a narrow path, down the cliff-face, back to the town having good views of a Swallowtail

butterfly on the way. There were many tourists and stalls, but Taormina is an attractive old town with narrow streets and many churches and an ancient Greek theatre. At one spot the main street opens up into a square with a huge drop down to the sea on one side.

It had been another very hot day, ending with the celebration of Ann Mason's birthday: celebration number three. Later we walked about 1km down the road from the hotel for more molten lava viewing.

The final day (30th May) began at the Worldwide Fund for Nature's Reserve at Fiume Fiumefreddo. Cold water emerges from under the mountain and has become dammed behind the coastal sand-bar, forming a very luxuriant marshland area. Again, not enough leaflets, but Roberto was able to give a brief introduction by reference to the displays in the interpretative centre. *Cyperus papyrus* subsp. *siculus* (Papyrus) and *Arundo donax* formed dense beds and grew in company with many familiar British plants but which were generally of far greater stature than we were used to: *Apium nodiflorum* (Fool's-water-cress), *Callitriche stagnalis* (Common Water-starwort), *Calystegia sepium* (Hedge Bindweed), *Carex acutiformis*, *C. distans* (Distant Sedge), *C. otrubae*, *Cyperus longus* (Galingale), *Epilobium hirsutum* (Great Willowherb), *Eupatorium cannabinum* (Hemp-agrimony), *Galium aparine* (Cleavers), *Holcus lanatus* (Yorkshire-fog), *Mentha aquatica* (Water Mint), *Pulicaria dysenterica* (Common Fleabane), *Stachys cf. palustris* (Marsh Woundwort), *Urtica dioica* (Common Nettle) and *Veronica anagallis-aquatica* (Blue Water- speedwell). We also saw Turtle Doves, Cetti's Warbler and numerous frogs. From the marsh we walked out on to the beach where pioneer strand-line species included *Papaver rhoeas*, *Medicago marina* (Sea Medick), *Trifolium maritimum* and *Polygonum maritimum* (Sea Knotgrass).

The final treat was an oenogastronomic lunch at an old winery nearby, one of the best meals we had, with plenty of mixed hors d'oeuvre. The sweet was an Arab dish of fresh orange with onion — an acquired taste! Then to the airport via central Catania which is very baroque in parts. The flight back was smooth with a good view of Stromboli as we flew over, and also the Bay of Naples with Vesuvius beyond.

This excursion would never have been possible without the vast amount of time and research put in by Roberto over the preceding twelve months. His own knowledge of Sicily must have been considerably augmented by this botanical study, and his quest for selecting suitable hotels by trying them out beforehand, certainly paid-off! We convey our grateful thanks to him for all his effort. These thanks must also be extended to Kath Cottingham who carried out all the behind-the-scenes administration work, communications and financial details in Britain, without the reward of accompanying the party on the trip.

The Exhibition Meeting in London provided the chance for an informal reunion when RDP exhibited a poster and slides and several of the party were in attendance. Roberto was also able to make a flying visit, arriving from Sicily the evening before, especially to be present.

It is intended to post full lists of species recorded at each site on the BSBI web site in due course.

GRAEME KAY, 4 Geneva Road, Bramhall, Stockport, Cheshire, SK7 3HT
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'EVERYBODY BACK ON THE BUS!'

This BSBI itinerary is an ABC of Sicily,
starting with the Aeolian Isles,
ending at Zafferana after many miles.
On paper a saintly bunch we sound
but Peter, Paul, Johns and Joan are found
in company *permixtum*, *vulgaris*, *sordidum*, *barbata*, *gracilis*, *humilis*, *hirsuta*, *elongata* . . .
Roberto's kilometres like manna expand;
Paul's are measured upwards, to the highest land.
Stromboli shoots up too, flames in the night.
then the boat brings us back to the heat and the light
of Anapo Valley, *Helichrysum*, nightingales,
far from the flora of Scotland or Wales.
After fennel, *Orobanche*, Cleopatras and more
we rest at Club Helios by Ionian shore.

Sunday's oenogastronomic tasting's off — sorry!
So we picnic at windswept Vendicari.
Rough seas cancel our planned boat trip
but Lynne's feet still get their ceremonial dip.
There's *Limonium*, *Posidonia*, *Silene* and tuna
and we return to the Sea Bus later, not sooner.
Hot, hot night, then Modica, a cultural stop,
for Sicilian baroque, and a hidden food shop.
Lunch by the sea is an illusion at most.
We ask for native plants: we get the polytunnel coast!
Tomatoes, aubergines, so much to see,
but Trevor fears we'll all have DVT.*
Vineyards ahead, then temples galore
at Agrigento on the hill; Claudio's lecture at four.
Peristyles and gorgons take our minds off flowers

but *Acanthus* is everywhere, and a garden is ours,
thanks to Alex Hardcastle, to enjoy and explore.
This was his Golden Villa of yore.
Central Sicily next. *Picea* and poppies halt the bus.
This is the kind of botany for us!
Limestone and orchids, *Eryngium*, broomrape,
thyme, butterflies, *Prunella* — a rich landscape.
Cries of 'Let's put names to thistle and clover.'
Richard, beware: Lynne's taking over!
Piano Torre Park Hotel (pasta masters here too).
Next day, on broad hillsides under sky so blue,
Edraianthus, *Jurinea*, a relict *Abies* or three,
then back to Geraldton wax and the shirt/sock tree.
Steph, Peter, Graeme, etc. and Lynne
say 'No' to pork again and again.
Isnello, shoe repairs and Information
opposite the service station.
Roadworks, 'hornets', and an old castle.
We buy fruit in the main square — lots of hassle.
Margot would like one orange, not one kilo.
Olive must only look — no can feel-o.
Take shopping back; Lynne talks John E round
to the right side of the fence, safe and sound.
Up to sheepy Battaglietta, then thunderstorm!
Some of us sit it out (or sleep), all dry and warm,
but others are far gone, and come back soaking.
Angelo cleans the windows and, yes! he's smoking.
The Etna is too, as will be seen . . .
Later, bird's nest, cyclamen, helleborine;
pasta, flower lists and so to bed.
Long transfer to the volcano ahead.

Landslip above the multicoloured sea,
where half-built autostrada strides precariously.
We fail to get diesel, picnic near black pigs,
reach Zafferana Etnea by zags and zigs.
Five nights of comfort on magmatic slopes,
five days of flower-hunting to raise our hopes.
Photographer Phyl, Margaret and her ever-ready pen,
many-pocketed Olive, five book-carrying men,
go off with cameras, earrings, sticks and water.
Three Johns are better than one; best of all is laughter.
We listen to Roberto (such a patient chap),
and Peter dates lava flows from a coloured map,
The green bus has no WC
but Roberto will show us a lava-tree.
Old aches are gone, new ones take their place
as Sicilian sun blesses arm, neck, face.
North by north-east and south we comb the ground,
no lava left unturned; each nightly round
the list grows. Richard's magic screen, like Dr Dee's,
records in detail the things he sees.
No tonic here to put with gin for Dick,
but walling up the bar is a mean trick.
Paul talks of J-curves as we over-indulge
but the risk can't be greater than the pasta-bulge.
Lunch al fresco near the chestnut tree.
Two birthdays for Gemini Anns (no 'e').
Glowing lava. Hot chocolate. Then the view
we've been waiting for — Etna etched on blue.
We've seen it all, can go home snap-happy now.
Farewell, friends old and new, or should I say 'Ciao!'

* DVT: Deep Vein Thrombosis

P.S. Trevor has been asked by the *Encyclopaedia Britannica* to contribute an article on *Ampelodesma mauritanica*.

ANN MASON, Sicily, 17–30 May 2001

STOP PRESS

FRANCIS ROSE AND HIS CONTRIBUTION TO BRITISH BOTANY: 80 BIRTHDAY CONFERENCE

Saturday 15 June 2002: 11.00 a.m. – 4.00 p.m.
Reardon-Smith lecture theatre, National Museum of Wales, Cardiff

Francis Rose was 80 years old in September 2001, and is widely regarded as one of Britain's most outstanding botanists. We are holding a conference to celebrate the enormous breadth of his contribution to British botany and length of time over which he has worked. The conference will take the form of a series of short talks on aspects of his work by those who he has inspired and worked with, trying to cover the range of his interests. The programme is as follows: D. Bellamy: Francis Rose, an appreciation; C.A. Stace: Francis Rose and the vascular flora; P. James: Francis Rose and lichens;

G. Bates: Francis Rose and bryophytes; P. Marren: Francis Rose and local floras; D. Lang: Francis Rose and orchids; (speaker to be confirmed) Francis Rose: The continental connection; O. Gilbert: Francis Rose, lichens and air pollution; (speakers to be confirmed): Francis Rose's contribution to conservation including Plantlife, local authorities, Wildlife Trusts and Statutory Agencies; A. Jackson: Francis Rose and Wealden sandrocks conservation; P. Harding: Francis Rose and parks; D. Streeter: The Francis Rose notebooks project; T. Rich: Francis Rose collections and archive at National Museum of Wales.

All are welcome to join us on the day from 10.30 onwards. The conference will be free, and there is no need to book, simply turn up! Further details are available from me.

TIM RICH, Department of Biodiversity and Systematic Biology, National Museum & Gallery, Cardiff CF10 3NP. Email: tim.rich@nmgw.ac.uk

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