B.S.B.I. NEWS

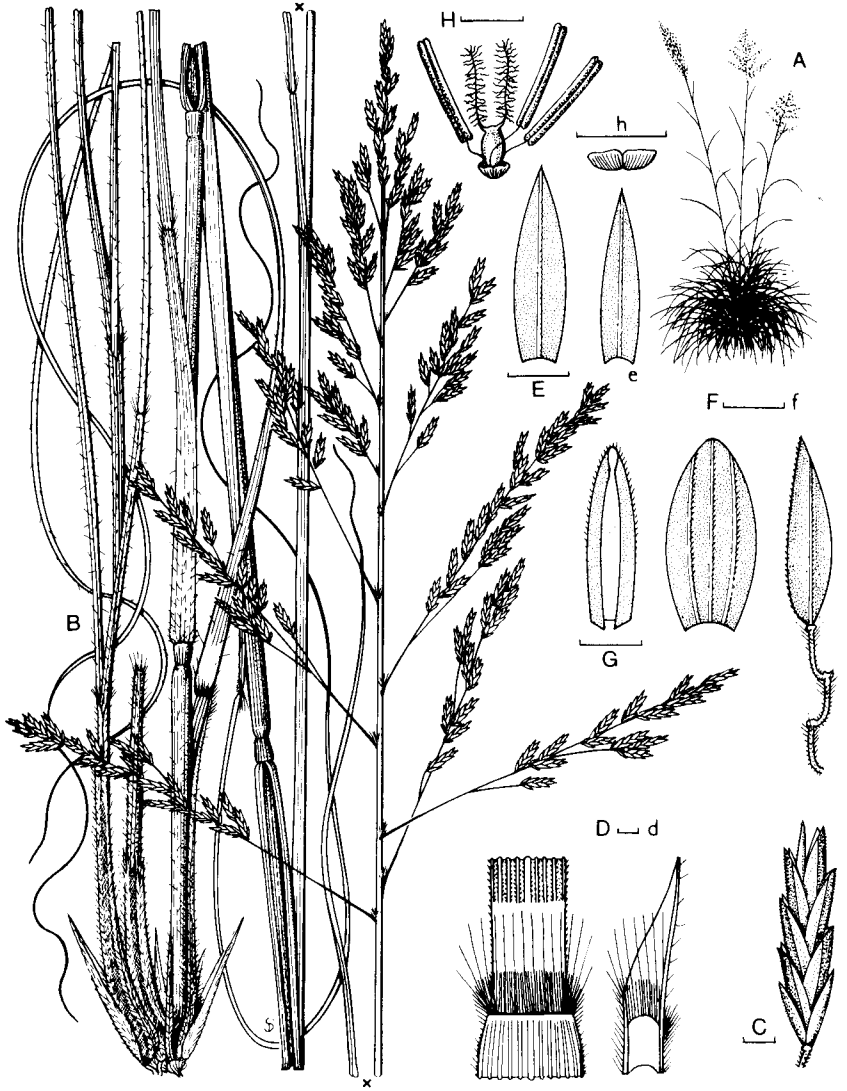
April 1993

Edited by R. Gwynn Ellis

No. 63

Dept. of Botany, National Museum of Wales

Cardiff CF1 3NP



Scale – bars = 1mm

Eragrostis curvula near Southampton del. D.P.J. Smith © 1992 (see page 29)

ADMINISTRATION

HON. GENERAL SECRETARY (General Enquiries) Mrs Mary Briggs, M.B.E.,
9 Arun Prospect, PULBOROUGH, West Sussex RH20 1AL
Tel. 0798-873234

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68 Outwoods Road, LOUGHBOROUGH, Leics. LE11 3LY
Tel. 0509-215598
(Please quote membership number on correspondence concerning membership or subscriptions - your membership number is on the address label of your mailings).

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

CONTRIBUTIONS INTENDED FOR

***BSBI NEWS* 64**

should reach the Editor before

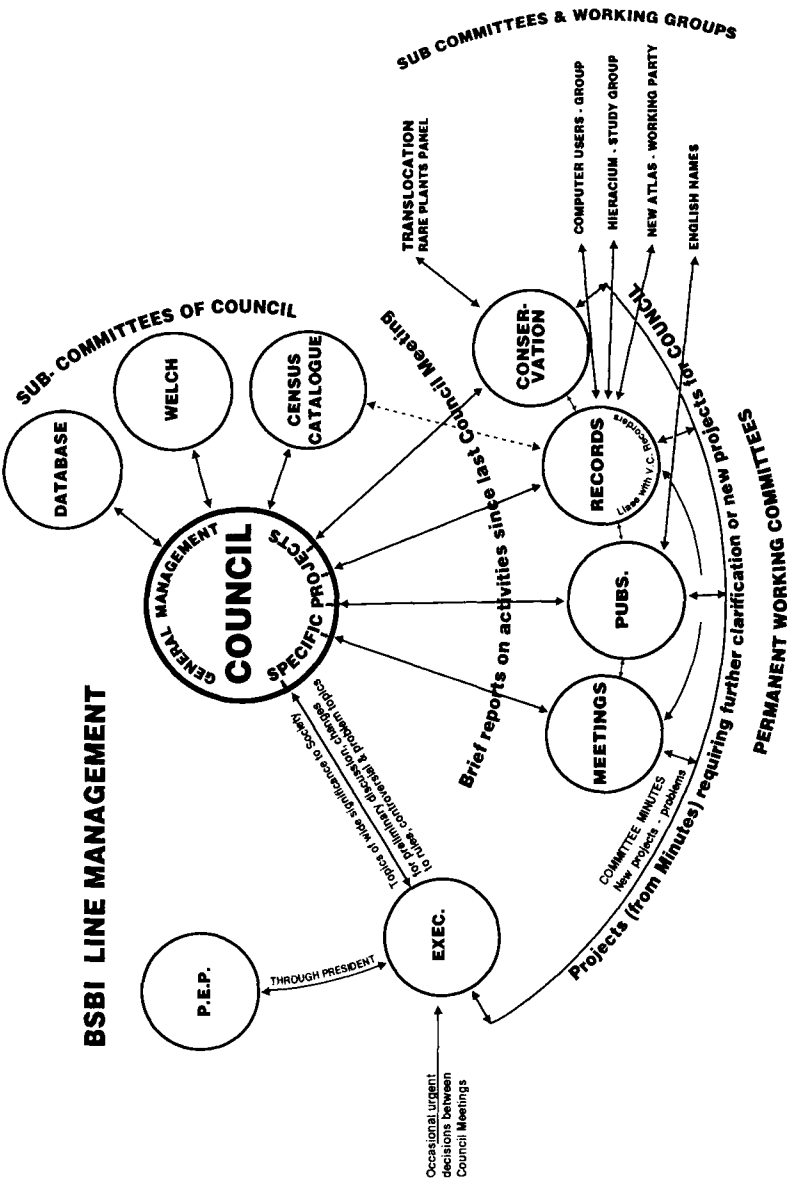
28 JULY 1993

TERMS OF REFERENCE OF EXECUTIVE COMMITTEE
as agreed by Council, 4 November 1992

1. To prepare business for Council: consider policy on general matters and make recommendations to Council for consideration.
2. To co-ordinate liaison between the Permanent Working Committees and promote effective management and communication within the Society.
3. To consider first any amendments to the 'Rules'. Prior discussion should enable items to be brought to Council with either a definitive recommendation or clear alternative recommendations.
4. To discuss long-term objectives. New initiatives would be passed where appropriate to either a Permanent Working Committee or Council with recommendation for action or clear alternatives. Where matters fall within the remit of a Permanent Working Committee the matter would normally, in the first instance, be referred to that committee.
5. To assess new major developments proposed by the Permanent Working Committees and their Sub-committees, particularly those affecting policy. It may ask for regular reports.
6. To take decisions on urgent items which arise between Council meetings, any such action to be reported to Council at the first opportunity.
7. To consider such matters as may be referred by Council and to take action if appropriate.

MARY BRIGGS, Hon. General Secretary

BSBI LINE MANAGEMENT



Line Management diagram devised and written by Mary Briggs, designed and produced by Carl Glanville-Ellis whose help and expertise is gratefully acknowledged.

DIARY

N.B. These dates are supplementary to those in the 1993 Calendar.

1993

APRIL

29-May 2 14th World Orchid Conference & Show, Glasgow (see page 37)

30 Anglian Water Conservation Award Scheme, closing date for 1993 applications (see page 39)

MAY

5 *The Flora of St Petersberg,* lecture at the Linnean Society, London (see page 37)

14 *Conservation and the Herbarium* Conference, Liverpool Museum (see *BSBI News* **62**, page 48)

15-29 Kew Guild Centenary (see *BSBI News* **62** page 47)

24 Excursion to Bulgaria, until June 5 (see *BSBI News* **62** page 47)

JUNE

5-19 Tour of Hungary (see *BSBI News* **62**, page 46)

JULY

24-25 Additional field meeting, Midhurst W. Sussex (see page 5)

AUGUST

7-14 New dates for Water Plants course at Kindrogan Field Centre (see page 5)

SEPTEMBER

3-5 Recorders Conference York (see *BSBI News* **62**, page 7)

24-27 *Plants and People Conference*, Royal Botanic Garden, Edinburgh (see *BSBI News* **62**, page 49)

OCTOBER

16 *Conservation of the Biosphere* meeting, Winchester Guildhall (see *BSBI News* **62**, page 49)

1994

APRIL

14 *Plant and Insect Relationships* Conference, Royal Entomological Society rooms, London (see page 37)

EDITOR

IMPORTANT NOTICES

ANNUAL EXHIBITION MEETING-1993
CHANGE OF VENUE

The Annual Exhibition Meeting on Saturday, November 27 1993, will be held in a new venue - in **READING**, at the Plant Sciences Laboratories, University of Reading, Whiteknights, Reading.

As those members who have attended other very successful BSBI meetings there will already know (plant workshops, AGM, day conferences etc.), the P.S.L. at Reading have excellent facilities which can provide for all the varied activities which we have come to associate with our Exhibition meetings in recent years:- space for exhibits and our books, space for tea and conversation, a lecture theatre for slides and a senior common room for our evening Conversazione buffet. Equally important, or almost more so, the BSBI has been offered a warm welcome for this meeting by Professor John Parker, Professor of Botany, and his colleagues in the School of Plant Sciences.

Additional facilities, which have not been available in London, are ample car parking on site, and an easy bus journey from Reading station. The notice and programme will be sent out as usual in the September mailing, and with this Stephen Jury will be able to send maps, directions from the rail station and details of buses from central London, some of which stop very close by the campus - for those requiring these. Also suggestions for B & B accommodation for those who would like to enjoy the Conversazione and stay overnight. We look forward to this Exhibition 1993 at Reading as a new venture, with the possibility of returning next year to the Natural History Museum, if problems of space in our 'traditional' home can be solved.

MARY BRIGGS, Hon. General Secretary

CHANGES TO FIELD MEETING

The week long study course at Kindrogan Field Centre is on 'Water Plants' and is to be tutored by Sue Bell The date has also been brought forward one week to 7-14 August, 1993. (14-21 August advertised in the Field Meetings Programme in *BSBI Year Book 1993*).

BERNARD H. THOMPSON (Scottish Field Meetings Secretary), Glenlussa, Ford, LOCHGILPHEAD, Argyll PA31 8RH

ADDITIONAL FIELD MEETING

Saturday 24 to Sunday 25th July 1993
Midhurst, West Sussex (v.c. 13)
Leaders: Tim Rich and Paul A. Smith

Assessing tetrad recording: a continuation of the 1992 work
(see Field Meeting Report on page 45)

The joint Sussex Botanical Recording Society/BSBI 1992 meeting at Midhurst, West Sussex to assess tetrad recording provided so many interesting results that we need to run another meeting this year to answer some of the questions raised!

Surprisingly, there was little relationship between the number of species recorded and the number of habitats searched or length of route, and we wish to investigate this and other problems in more detail.

Please meet in the lay-by at Stedham Cross-roads on the A272 two miles west of Midhurst (GR SU/861.219) - the same place as last year - on both days at 10.45 am. Judy Rich again has offered a cream tea on Saturday afternoon!

All are welcome, including both those who contributed last year and those who were unable to attend.

TIM RICH, 37 Hartfield Road, Forest Row, East Sussex

EDITORIAL

This is another large issue of *BSBI News*, but even so some interesting contributions have had to be held over until the next issue; I apologise to the authors and promise that they will be the first in the queue next time. This apparent abundance of items for *News* should not discourage anyone from sending in new contributions, these are always welcome. If you are able to type your note or printout from computer then please do so. It is a tremendous help to be able to scan it directly into the

computer and saves your editor many hours of tedious two-fingered typing! But, if you don't have access to a typewriter or computer, don't be put off from sending in your **legibly** hand-written document. You will almost always get a proof to check, and corrections are easy to make on computer.

Thanks to all those members who wrote in response to my note in the last *BSBI News* about an index to Stace's *New Flora of the British Isles*. Sufficient interest has been shown to make publication a viable proposition and an order form is enclosed with this mailing.

By now all those members who wrote in response to my note in the September issue of *BSBI News* about the setting up of an Alien Study Group should have received a much belated acknowledgement. The first informal meeting will take place at the AGM in Lincoln with a follow-up at the Recorders Conference in York.

It is always sad to mark the death of friends and I am particularly saddened by the recent death of two Honorary members of the BSBI. Irene Vaughan I had the privilege of knowing for over 25 years which, remarkably, covered only the final quarter of her long life. Edgar Wiggins, I had known for a much shorter time but I shall never forget his help, encouragement and mischievous humour when I took over from him as editor of *BSBI News*. May they both rest in peace.

EDITOR

HON. GENERAL SECRETARY'S NOTES

New address for Chris Dony

Chris has moved from the address familiar to so many members, at Stanton Road, Luton. When her home was there with John her late husband, 'volumes' of BSBI correspondence were sent from that address as they were between them President, Hon. Gen. Sec., Meetings Sec., Membership Sec., etc., etc., for many years.

Now Chris is at Friars Lodge
18 Priory Road
DUNSTABLE
LU5 4HR

where she has a pleasant garden view overlooking the Priory, and we send our best wishes for this to be a happy new home for her.

Get Well Soon

We send our best wishes to Vera Gordon who suffered a broken leg on New Year's Day, and since a pulled hamstring. We can well imagine how very restricting this must be for a mountain botanist and Scottish dancer - and hope that there will very soon be recovery to full mobility and Vera's usual sprightly step. Also to Guy Messenger, who, on December 22, 'ruptured the Quadriceps Tendon of his right knee'.

Obituaries

William Condry writing of our most senior member, in the *Guardian's* A Country Diary, recalls that Irene Vaughan (who was 103 when she died) was 'scrambling up mountain cliffs looking for alpines well into her eighties'; and remembering her wok for the protection of the Red Kites in Carmarthenshire, when this was an 'ultra rare bird', writes: 'there must still be people living in remote side valleys in the beautiful country of the Upper Tywi river who remember seeing this small figure on a large white horse disappearing up the tracks towards the hills'. Perhaps, he says, Irene Vaughan as a lone horse rider ever searching for her beloved kites, will pass into local legend'?

Bruce Campbell also was a good friend to the BSBI, often writing complimentary comments about the Society's activities in *The Countryman*. When *BSBI News* **40** was published he sent a card saying 'Congratulations on an exceptionally interesting and amusing *BSBI News*. It has an intimate quality matched by no other newsletter that I receive'.

The editor of that issue of *BSBI News* was of course Edgar Wiggins, or Wiggy as he preferred to be called. Failing eyesight forced him to give up the editorship and it is sad to report that he died just after Christmas. Wiggy edited 28 numbers of *BSBI News*. He particularly promoted the use of plant drawings as illustrations, and followed the tradition, started by Kenneth Beckett, of using a drawing on the front cover. For these, Wiggy sought and encouraged artists who donated their skills to *BSBI News*, giving a significant collection of illustrations through the years. Overall, Wiggy stamped his own brand of humour and communication onto this publication, and furthered the

success and popularity with members which *BSBI News* enjoys today. There will be an obituary in *Watsonia*. We are grateful to Mrs Julia Wiggins for generously sending to the BSBI the memorial funeral donations given by Wiggy's friends.

BSBI members - Images on the screen

In Tomorrow's World, Chris Boon (Secretary of BSBI Publications Committee) featured on research into harmful dust particles in pig houses; a sequence of piglets filmed running in the straw, was followed by Chris, impressively at his computer controls, his finger on the bubble-release switch.

No poppies in Cornwall in 1795?

An unknown writer travelling in Cornwall in 1795 made the emphatic statement 'I did not see any poppies in Cornwall'. His diary was edited by I.D. Spreadbury and published by Kingston Publications, Mevagissey in 1971, *Through Cornwall by Coach 1795*, with acknowledgement to the County Archivist. The only other botanical observations included are in the few lines: 'from Launceston to the Lands-end is a barren country; no fruit trees to be seen, no Mulberry nor Chestnut trees, no Vines nor Jessamines. What oaks there are, are like very small trees, and those half dead. A few trees in very low Vales below the mountains.'

Letter from the Ukraine

Larisa Tolyshera writes to us, hoping for employment as a botanist - not easily found for her? But if any member would like to write to her, she writes in English and also speaks Russian (native) and Ukrainian. I am sure that she would be pleased to have botanical contacts and I can supply her address.

Tailpiece

With Plants & Medicine one of the themes in our programme last year, I thought this letter from Sir Hans Sloane to William Sherard, written from London on December 7 1709, could be taken as sound advice today:

> 'I advise you to what I practice myself never to take physick when I am well and not to make use of any medicines but such as are very well tryed when I am ill. Observation and Experience being the best way to find out these Virtues of Plants.
>
> I am glad you are in health, I wish you may Continue so and Advise you I should be glad to have any opportunity to show you that I am your most obedient & most faithful servant.
>
> (signed) Hans Sloane

MARY BRIGGS

BSBI YEAR BOOK 1993
ADDITIONS, CORRECTIONS & AMENDMENTS
*** = change**

Page 5 Calendar 1993, Add JUNE 5-19 HUNGARY
Page 6 COUNCIL: *Mr P. Thomson
delete Dr T.C.G. Rich
Page 7 Executive Committee, Add: Mrs E.G. Wood
Pages 7 & 9 Publications Committee and *Watsonia* Editorial Board: Dr R.R. Mill
Page 8 Committee for Scotland: *Mr R.J. Pankhurst
Pages 12 & 13 Useful Addresses, Add:

BSBI Database (Leicester)
c/o Professor C.A. Stace, University of Leicester, University Road, Leicester LE1 7RH

Friends of Leicester University Botanic Garden
Contact: Dr R.J. Gornall, University of Leicester, University Road, Leicester LE1 7RH

The Systematics Association
Hon. Sec. Dr G. Larwood, Dept of Geological Sciences, University of Durham, Science Laboratories, South Road, Durham City DH1 3LE

*Royal Society for Nature Conservation
Headquarters: The Green, Witham Park, Waterside South, Lincoln LN5 7JR

*British Ecological Society
Registered office: 26 Blades Court, Deodar Road, Putney, London SW15 2NU

Page 24 Map of field meetings: *1993
(See also Recorders and Recording below)

MARY BRIGGS, Hon. General Secretary

AVAILABILITY OF WATSONIAN VICE COUNTY MAPS
Change to page 25 *BSBI Year Book 1993*

The Dandy, J.E. 1969 *Watsonian Vice Counties of Great Britain* maps are no longer available with booklet in a slip case from BSBI Publications, Oundle, nor flat from BRC by post, as advertised in *BSBI Year Book 1993* in notes for v.c. Recorders on page 25.

However Margaret Perring has purchased stocks of the flat maps from BRC, and with the permission of the Ray Society (the copyright holders) has been able to photocopy the explanatory booklet by J.E. Dandy, and can now supply from Oundle, either:

1) The two maps (North sheet & South sheet) folded, @ £2.00
or 2) the two maps + copy of booklet at £3.00 (both incl. p.& p.)

Our thanks to Margaret for solving this problem of availability of the maps, and she asks us to request those members who sent orders for these in January (when she had none in stock) to contact her again as she can now supply, from 24 Glapthorn Road, Oundle, Peterborough PE8 4JQ

MARY BRIGGS, Hon General Secretary

RECORDERS AND RECORDING

Supplement no. 1 to List of Recorders in 1993 Year Book

We sadly report the death of Sonia Holland, Recorder since 1971 for v.cc 33 & 34, Gloucs. (see also page 9).

Resignations have been received from the following:

v.c.			
	34	Prof. Arthur J. Willis	(1971)
	63	Dr John Hodgson	(1987)
	76	Elizabeth Conacher	(1979)
	86	Jo Babbs & John Evans	(1992)
	90	Adam Ritchie	(1980)
	102	Dr Eric Bignall	(1984)
	108	Dr John Rogers	(1972)

We send sincere thanks to all these Recorders for their work and valued contributions; some of these vice-counties have been in the care of the above Recorders for many years - the years of their appointment are given in brackets.

The following vice-county remains temporarily vacant: 86

We are pleased to welcome the following new v.c. Recorders:-

33 & 34 E. & W. Gloucs. Mr & Mrs Mark and Clare Kitchen, The Cottage, Bevington, BERKELEY, Glos.. GL13 9RB

63 S.W. Yorks. Mr Geoffrey T.D. Wilmore, 53 Frizinghall Road, BRADFORD W. Yorks. BD9 4LA

76 Renfrews. Mr Keith J. Watson, c/o Glasgow Museum & Arts Galleries, Kelvingrove, GLASGOW G3 8AG

90 Angus. Mrs Barbara G. Hogarth, 14 Greystone Road, Invergowrie, DUNDEE DD2 5JQ

102 S. Ebudes Dr Richard L. Gulliver, The School House, Kilchattan, Isle of Colonsay, Argyll PA61 7YR

108 W. Sutherland Mrs Patricia A. Evans, Calltuin, Nedd, Drumbeg, LAIRG, Sutherland IV27 4NN

Change of address:

Nick Stewart, Recorder for 87 W. Perth asks if his post could please be sent to his office address:

Mr N.F. Stewart, National Parks & Wildlife Service, Office of Public Works, 51 St Stephen's Green, DUBLIN 2, Ireland

Supplement no. 1 to Panel of referees and Specialists in 1993 Year Book

PTERIDOPHYTA

Ms J.M. Camus and Dr A. Sleep have resigned as Fern Referees; Josephine as her work is now entirely with tropical south-east Asia, and Anne through illness. We wish Anne a good recovery, send good wishes to Josephine, and thanks to both.

Alison Paul continues as General Fern Referee, and specimens can be sent to her at the Sept. of Botany, N.H.M. London SW7 5BD.

PINACEAE, CUPRESSACEAE, TAXACEAE

General Coniferous Trees

We apologise to Victoria for being out of date; please delete the Burgess Hill address under Hallett, and her entry should read: Mrs Victoria E. Schilling, 2 Church Cottages, Westmeston, HASSOCKS, W. Sussex BN6 8RJ.

Victoria, with Alan Mitchell, is organising the Tree Register of the British Isles (TROBI), for Conifers and Broadleaved Trees, and if any members are interested in helping to measure trees in their area, please contact Victoria at this above address.

ROSACEAE

Rosa: Gordon Graham sends an amendment to his specimen requirements: Rev. G.G. Graham, (senders retain duplicate), fruiting material, carefully selected & preferably fresh.

Tony Primavesi will continue to accept specimens from beginners, as specified.

VICE-COUNTY BOUNDARIES

General: Megan Dowlen's address is: c/o Dept. of Botany, The N.H.M., Cromwell Road, LONDON SW7 5BD

MARY BRIGGS, Hon. General Secretary

SONIA HOLLAND 1913 - 1993

I am sorry to report the death of Sonia Holland on 21st January after a year long struggle against cancer.

Sonia was 80. She was, in addition to being BSBI Recorder for v.c. 33 - E. Glos. and Co-recorder for v.c. 34 - W. Glos., the County Dragonfly recorder!. She had written the Supplement to the Gloucester Flora **and** the County Dragonfly Atlas. Clare and I have lost both friend and mentor and our sympathy goes out to her son Clive.

One bright moment in all this gloom is that Clive is due to become a father again in the summer and his daughter will be called Sonia.

Our Sonia knew and approved of this before she died. We wish Sonia Holland junior a safe arrival into this world.

MARK KITCHEN, The Cottage, Bevington, BERKELEY, Glos. GL13 9RB

RED DATA BOOK PROJECT

The Scarce Plants Atlas is now well on its way to completion, and we are indebted to everyone who contributed to that project, We now turn to Red Data Book plants! And, once more, we will hope to draw on the knowledge and experience of BSBI members, and hope that many people will become involved in the RDB project.

As you will recall, the second, (and current) edition of the *Red Data Book for Vascular Plants* by Frank Perring and Lynne Farrell was published in 1983. This indispensable compendium of information on our rarest plants, will be well-known, and is doubtless in many personal libraries. However, since that time, there have been significant changes in the status of many of the plants described in that volume, and a considerable body of new information has become available. Many BSBI members - vice-county recorders and others - have provided valuable information on rare species during these intervening years, through the monitoring of known sites, the checking of old

localities, searches of new sites, etc. In addition, the Nature Conservancy Council rare plant surveys, which were co-ordinated by Lynne Farrell in the late 1980s (and in which many members were involved) provided a great deal of new information, and further data are becoming available through Species Recovery Programmes and other rare species work which is underway in English Nature, Scottish Natural Heritage and the Countryside Council for Wales. Most people will be aware from personal experience that since the late 1980s, the status of many species has changed. Sadly, many species have declined, though a few have done quite well.

Thus, a good deal of the information in the current Red Data Book is now out-of-date, and a revised edition is much needed. The Joint Nature Conservation Committee, with the support of EN, SNH and the CCW has undertaken to fund the production of a new edition of the RDB, and Martin Wigginton has been seconded from SNH to JNCC in Peterborough for three years to co-ordinate work on, and write much of, the new volume. The project will cover only Britain, not Ireland.

For each RDB species, we will aim to provide rather more information than previously, including summary data on distribution and status, on species biology and ecology, on threats and conservation management. It is hoped to include maps, and drawings and/or photographs to illustrate species and habitats. We aim to have a manuscript ready for publication by about December 1996.

An early consideration has been reviewing the criteria for species selection, since it has been recognised for some time that a fresh look is needed at the definition of rarity. In the past, particular emphasis has been placed on the distributional aspect of rarity - an RDB species having been defined as one occurring in 15 or fewer 10km grid squares in Britain. However, when we consider sizes of populations or numbers of individuals, it is clear that some species occurring in more than that threshold number of squares, should qualify for RDB status. An example is *Pulsatilla vulgaris*, which occurs in 19 10km squares, but many of whose populations now comprise few individuals. So in assessing rarity, and selecting species for inclusion in the RDB, we shall need to take full account of many other factors, including local population size and stability, changes in status, habitat and species vulnerability, threats, and so forth. With this in mind, we are now compiling a revised list of candidate RDB species: it currently stands at c.340, not including apomictic species (which we may not treat fully).

The GB rare plants database is to be held in JNCC, and one task of the project will be to update and maintain it. We are now in the process of assessing the records on the database, and determining priorities for updating. For many localities, our last record dates back to the 1970s - and some before that. However, we feel it is likely that there is more up-to-date local knowledge on particular localities, and we are hoping that BSBI members will be able to help in the updating of records. Vice-county recorders will be sent a printout from our GB database of rare plant information for their area, which will give an indication of which records might need checking. If you have information of any kind on RDB plants - either recent details of species at known localities, or of new localities, or of losses - please make sure the local v.c. recorder has the information.

An initial aim will be to update all pre-1985 records, and to achieve this, we are hoping that, where necessary, as many as possible of the known localities for rare species can be revisited in the next three field seasons. For a number of species, information appears to be particularly in need of updating, and we will hope to target these species first of all. We have not yet fully assessed survey needs, but there will certainly be opportunity for fieldwork in the next three seasons, probably in all three countries. If you would like to become involved in fieldwork, either checking records in your locality, or 'adopting' a particular species, please get in touch with the appropriate country agency contact - Andy Jones, Chris Sydes or Lynne Farrell, whose addresses are given below. Some assistance with travel expenses may be available, but we would encourage people first to consider fieldwork in their own part of the country, if the opportunity is there.

Contacts in Country agencies :

Andy Jones, Countryside Council for Wales, First Floor, Ladywell House, Park Street, Newtown, Powys SY15 1RO

Chris Sydes, Scottish Natural Heritage, 2-5, Anderson Place, Edinburgh EH6 5NP

Lynne Farrell, English Nature, Northminster House, City Road, Peterborough PE1 1UA

Project Co-ordinator :

M.J. Wigginton, Species Conservation Branch, JNCC, Monkstone House, Peterborough PE12 1JY

M.J. WIGGINTON, Species Conservation Branch, JNCC, Monkstone House, PETERBOROUGH PE12 1JY

SPECIES RECOVERY PROGRAMME (SRP)

English Nature's programme on Species Recovery is continuing through 1992 and 1993. We would welcome BSBI members' help particularly with the 5 species listed below. Whilst it is late in the present field season, there is still useful information that could be collated on which to build next year. There is some money available under SRP Grants scheme, and anyone wishing to help with these species should contact either Andrew Deadman (Project Officer) or myself, Lynne Farrell (Plant Ecologist) at Northminster House, Peterborough PE1 1UA, to discuss further details. (These grants are only available for England).

1. *Apium repens* - Creeping Marshwort
   Present status - one extant site in Oxfordshire.
   Previous sites - in Oxfordshire, S.E. Yorks.
   Also sites where the hybrid is thought to exist in Suffolk, Norfolk, E. Yorks, Fife and Kintyre.
   Action required - a) the past history and present management of the extant Oxon. site needs to be collated in order to help identify the conditions required by the species
   b) survey of the present state of the hybrid sites
   c) assessment of the previous sites and whether any are suitable for reinstatement

2. *Dianthus gratianopolitanus* - Cheddar Pink
   Present status - mainly confined to the Cheddar Gorge and thought to be declining with some outlying sites in Somerset, one probably introduced.
   Previous native sites mainly in Somerset.
   Action required a) assess present status of the Gorge populations and outlying ones
   b) ascertain causes of decline
   c) ascertain whether a recovery programme is appropriate

3. *Gentianella anglica* - Early Gentian
   Present status - occurs on the chalk and limestone in S. England and Lincolnshire. It is a nationally scarce endemic species, thought to have declined over the past 5 years. Not many records have been received by Alison Stewart under the Nationally Scarce Plants Project.
   Previous sites known Cornwall, Devon, Dorset, Hants., Wilts., Berks., Oxon., Bucks., Surrey, Sussex, Beds., Herts., and Lincs.
   Action required a) survey of all sites for presence and absence to reassess present status
   b) notes on management of sites to assess present suitability, and possibilities for re-establishment of suitable conditions for the species.

4. *Lactuca salina* - Least Lettuce
   Present status - may be confined to one site in Sussex.
   Previous sites - in Essex, Sussex, Kent, Middlesex, Norfolk, Suffolk, Cambs. and Hunts.
   Action required - a) survey of previous sites, especially in Kent and Essex, to assess present status and suitability for reinstatement of the plant.

5. *Rumex rupestris* - Shore Dock
   Present status - confined to S.W. England and S. Wales; known to be declining.
   Previous sites in Cornwall, Isles of Scilly, Devon, Dorset, Glamorgan, Pembs., Anglesey & Channel Isle.
   Action required a) Present sites to be surveyed and health of populations checked.
   b) Assessment of site management at present and previous sites to identify trampling pressure, damaging factors and suitability for reinstatement.

LYNNE FARRELL, Plant Ecologist English Nature,

TARAXACUM FLORA OF V.C. 35 (MONS.) 1981-1992

The map on page 13 shows the tetrads sampled in this survey. Specimens have been collected from old lanes, relatively unimproved meadows, riversides and rough grassy areas, though some come from dandelion-rich verges. The number of named specimens attributable to collectors is as follows: T.G. Evans 285, M.V. Marsden 40, T. Edmondson 11, A.M. Boucher 10, R. Fraser 10, A. McG. Stirling 8, J. Harper 7, A.E. Wade 6, V. Matthews 4, G. Hutchinson 4, M. Chorley 3, C.C. Haworth 3, W.A. Shoolbred 3, G.C. Druce 2, R. Pankhurst 2.

The vast majority of the records have passed through my hands and have been determined or confirmed by Chris Haworth or John Richards working with Andrew Dudman. The remaining few occur on the list published by Mr Dudman. The 87 microspecies recorded, include two, *T. 'anceps'* and *T. nigridentatum*, which are listed in *An Annotated List of British and Irish Dandelions* dated Jan. 24 1992 and based on a previous list produced by Chris Haworth but incorporating a few amendments resulting from collaboration between John Richards and Pier Oosterveld. These two species are not in Kent's new *List*. There is also a 'British *atactum*' which is not the *T. atactum* of C.I. Sahlin & v. Soest.

I submitted 108 specimens collected in 1992 for identification/confirmation. Some were indeterminate but 51% of my attempts at determination were correct with a number of others very close. A few of the names given were new to me and others have yet to appear in a revised handbook. It is interesting to compare the following list for Monmouthshire with that for North Lancashire given in *BSBI News* **57** (pp. 9-10).

Section ERYTHROSPERMA

T. argutum (3) ST29X, SO20M; *T. brachyglossum* (4) ST28, 38, 49Q, 58D, 59H; *T. fulviforme* (11) ST27, 28, SO22X; *T. glauciniforme* (13) ST49V, SO22X; *T. inopinatum* (14) SO23K; *T. lacistophyllum* (15) ST49Q, 58D; *T. oxoniense* (16) ST29?N,G, 49Q,R, 58D, 59H, SO10N, 20P,S.

Section SPECTABILIA

T. faeroense (35) ST49S, SO50?B, 23K.

Section NAEVOSA

T. europhyllum (39) ST19D,E,P. 29E,G,S; 49N,U,Z, 59E, SO10V, 20R, 23K, 30L,R, 40Y, 50D,E,I, 32M,X; *T. maculosum* (40) SO10V, 22Y; *T. richardsianum* (44) ST48I, 49Y, SO30H.

Section CELTICA

T. bracteatum (55) ST19K, 39A,Y, 49Z, 59H, SO10V, 30N, 50A,I; *T. britannicum* (56) ST29T, 39W, 49R, 59I, SO40Y; *T. cambricum* (58) ST18U, 39V, 28E; *T. celticum* (59) SO30D; *T. duplidentifrons* (60) ST28E,F, 29B,T, 49Q, SO30L, 50I, 21T,Y; *T. excellens* (61) ST49R; *T. gelertii* (64) ST49X, 59K, SO30M; *T. hesperium* (66) ST39J, SO50H, 31S; *T. lancastriense* (69) SO30R, 22X; *T. landmarkii* (70) SO10V, 21W,Y, 23K; *T. nordstedtii* (72) ST19K,U, 48I, 49S, 59G,K, SO10V, 11?, 21X, 22X, 30H, 31D,E 40Y,Z, 50E,; *T. porteri* (78) ST28M; *T. subbracteatum* (80) ST19U, 28M, 29E, 48I, 49Y. SO10V, 30L,P,V, 50A,I; *T. unguilobum* SO10P,V.

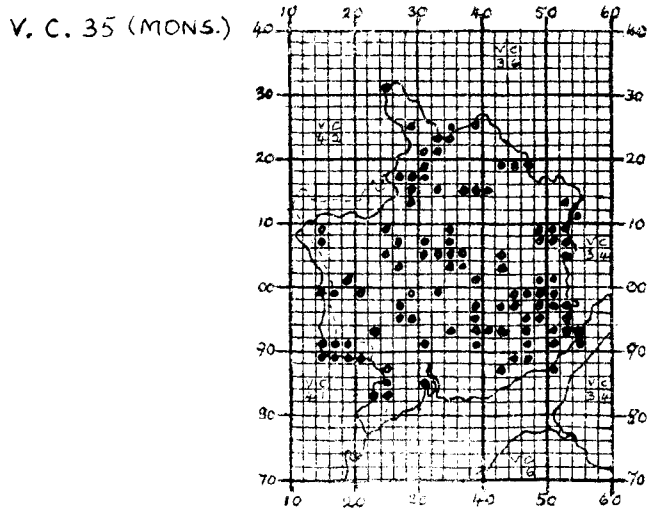
Section HAMATA

T. atactum (84) ST18Z, *T. British atactum* ST59B SO30L; *T. boekmanii* (85) ST18Z, 19U, 39W, 49N,R, SO50I; *T. hamatiforme* (87) ST19U, 59B, SO30L, 31H; *T. hamatulum* (88) ST49S, SO50E; *T. hamatum* (89) ST18Z, 19K,U, 38?, 48U, 49B,S,X,Y, 59B,G,H,K, SO20T, 50E,I; *T. hamiferum* (90) ST18Z, 49R, SO50E, 21Y, 31M, 51G; *T. kernianum* (91) ST18U,Z; *T. lamprophyllum* (92) ST18Z, SO31H; *T. marklundii* (94) SO50A; *T. pseudohamatum* (98) ST18Z, 28E, 39J, 49B,G,R,Y, 59G,H, SO31S, 40H, 41C, 50H,J, 51G; *T. quadrans* (99) ST49R. SO50E,H, 41C; *T. subhamatum* (101) ST19U, 38L, 49S, 59B, SO50E.

Section RUDERALIA

T. acroglossum (103) ST39L; *T. aequilobum* (106) SO31A; *T. aequisectum* (107) SO50I; *T. alatum* (108) ST28K, 59A,H; *T. "anceps"* SO51G; *T. ancistrolobum* (111) ST18Z, 39L, 49N, 59H, SO30R, 50D; *T. angustisquameum* (113) SO50A; *T. aurosulum* (115) SO50D, 31S; *T. cordatum* (121) ST48U, 49B. SO30L, 32F, 40G; *T. corynodes* (122) SO40G; *T. croceiflorum* (123) ST39A,J, 48U, 49G,R,X,Y, 59A,G, SO40G, 41P, 50E,I; *T. dahlstedtii* (126) ST18Z, 58D, SO10P, 30R, 50I; *T. dilaceratum* (129) SO40H; *T. dilatatum* (130) ST59G; *T. ekmani* (131) ST28M, 39L,W, 49Z, 59A,B,G, SO20R, 30M,V, 31S, 32L, 50H,I, 51G,H; *T. exacutum* (132) ST59G; *T. expallidiforme* (133) ST48U, 49Y, 59B,H, SO30L, 41P; *T. exsertum* (135) SO40G; *T. fasciatum* (137) ST39A, 48P, 59A, SO30L, 32A, 50I; *T. hemicyclum* (138) ST59G; *T. huelphersianum* (141) SO40H, 50I; *T. insigne* (143) ST48P,U, 49Q, SO50I; *T. lacerifolium* (146) ST28M, 39A, 49G,N, 59B,K, SO10V, 30R; *T. laeticolor* (149) ST19U, SO30D,L; *T. laticordatum* (150) ST28M, 49P,X, SO31H; *T.*

latisectum (151) SO40H; *T. linguatum* (156) ST19Q, 49N,P, SO30R, 50H; *T. lingulatum* (157) ST18Z, 19Q, 28G, 38C, 48P, 49Q,Z, SO50H, 51G; *T. necessarium* (169) SO30M; *T. nigridentatum* ST59B, SO30L; *T. oblongatum* (172) ST39L, 49Y, SO50H; *T. pallidipes* (179) SO40Z; *T. pannucium* (180) ST59G,H,K, SO30L, 31S, 41P, 22X; *T. pannulatiforme* (181) ST18Z, 48P, 49B,R,X, 59G, SO41P; *T. pannulatum* (182) ST18Z, 49B, SO50H; *T. piceatum* (184) ST18P, 19Q, 39J, 49B, 58D, SO50E; *T. polyodon* (186) ST49P, SO30P; *T. procerisquameum* (198) ST49X, 58D, 59A; *T. rhamphodes* (194) ST18Z, 39A, 49G; *T. sellandii* (197) ST59G; *T. sinuatum* (199) ST18Z, SO50I; *T. stenacrum* (201) ST38C, SO51G; *T. stereodes* (202) SO50I; *T. sublongisuaeum* (208) SO50E; *T. subpraticola* (209) SO50H; *T. trilobatum* (214) ST18Z, 59G; *T. undulatiflorum* (216) ST39L,X, 49B,N,Z, 59A,B,H, SO30M,R, 31X, 32L, 41C, 50H; *T. undulatum* (217) ST49P, SO30P,R,31X; *T. xanthostigma* (220) ST49Y, SO51G.



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THE FLORA OF BUCKINGHAMSHIRE (v.c. 24)

I hope to have the new flora ready to go to the publishers in the winter of 1994/95. If any members have records for the county for inclusion in the flora, I shall be pleased to hear from them.

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REGISTER OF ABERRANT FORMS
AN AMENDMENT

After correspondence with others interested in aberrant forms and due to the subtlety of the computer program designed for the register, I would welcome reports of any aberrations irrespective of its stability (although details of stability would be welcome if known).

I am pleased to report that the Department of Botany, National Museum of Wales would be delighted to receive specimens of any aberrant forms which will be incorporated into its teratological collections.

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NOVEL CONCEPT OF *LUZULA MULTIFLORA* AND *L. CONGESTA*

Last summer, I had the pleasure of accompanying Jan Kirschner and Tim Rich on a *Luzula* hunt in Ireland. Jan is head of taxonomy in the Institute of Botany, Czech Academy of Science, Pruhonice near Prague, and an international expert on *Luzula* sect. *Luzula* as well as an authority on *Taraxacum*.

He proved to be a very stimulating companion in the field, and it soon became clear that his concept of *L. multiflora* and *L. congesta* was somewhat different from the normal British view. Firstly, he regards them as separate species. This follows Nordenskiöld (1951), and Buchanan (1960) as well as Lejeune who described the species. The reasons are stated in Kirschner (1990) and are briefly:

1. a unique combination of morphological features
2. chromosome number and karotype
3. ecological and geographical distribution

Secondly, he finds that the best character for separating them is seed size and points out that *L. congesta* can have stalked heads. Thus most British texts (e.g. *Plant Crib*, Stace, CTM) are misleading. The main differences are set out below (see Kirschner (1990) for full discussion).

Luzula multiflora (Ehrh.) Lej.
: Usually densely caespitose. Anthers as long as, or up to two times as long as the filaments. Styles 0.4-0.8mm long. Seeds oblong-ovoid, 0.9-1.1(-1.2)mm long, usually 0.8mm wide, caruncles 0.4mm long.

Luzula congesta (Thuill.) Lej.
: Densely caespitose, rhizome vertical. Inflorescence congested, but some of the clusters may be pedunculate. Anthers as long as the filaments. Styles 0.5-0.8mm long. Seeds ovoid, 1.2-1.5mm long, 0.9-1.0mm wide, caruncles 0.4-0.6mm long.

It is worth noting that under wet conditions (as often prevail in Ireland!), the caruncles, which are the small white appendages on the seeds, may be swollen and misleading, so it is better to take a few seeds away for dryer appraisal. The seeds should be measured from a dorsal view, the size not including the caruncle.

So, as the momentum towards Atlas 2000 builds, I thought it wise to highlight these changes, so that we can move into line with our continental colleagues, map these species as now described, and make it a truly up-to-date record of our flora. Botany would, after all, be less fun and too easy if nothing ever changed!

References

Nordenskiöld, H. (1951), (1956). Cytotaxonomical studies in the genus *Luzula*, I, II. *Hereditas* **37**: 325-355 and **42**: 7-73.

Buchanan, J. (1960). *Luzula campestris* (L.) DC. *Proc. Linn. Soc. London* **171**: 126-128.

Kirschner, J. (1990). *Luzula multiflora* and allied species (Juncaceae): A nomenclatural study. *Taxon* **39**: 106-114.

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DISTRIBUTION OF WILD ROSES IN v.c. 35 - ADDENDA

My choice of symbols for the county Rose Map (*BSBI News* No. 62 pp. 14-15) has led to confusion. May I attempt to clarify the letters near the bottom of page 14.

Rosa micrantha occurs in ST49V & 59I, all other 'M's' represent *R. mollis*. The S in ST29E represents *R.* × *shoolbredii*. The S in ST19Y represents *R. sherardii*. Please add the following: *R.* × *andegavensis* to ST39S, *R.* × *avrayensis* to SO40G, *R.* × *dumalis* to ST19N, SO20A & K, and *R.* × *dumetorum* to ST38X. Please accept my apologies.

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PRIMULA SCOTICA A CONSERVATION PROBLEM

These notes were prepared (for a broadcast on local radio) as a reply to a rather misleading radio interview by a nurseryman that had been broadcast a few days earlier in May 1992. The interviews were prompted by a stand at the Chelsea Flower Show which featured *Primula scotica*.

1) This plant has a highly specialised habitat which is VERY RARE, confined to a northern 'Maritime Heath'. So far no one has been able to reproduce this exact type of habitat artificially, so the idea that if it became extinct it could be reintroduced from cultivated plants just wouldn't work. Even at Kew Gardens, where it is grown in fully controlled conditions of temperature and lighting, it doesn't look at all like it is in the wild, There have been many attempts, even within Orkney to grow the plant in other places here but none have persisted for very long. It doesn't like warm summers and further south it is rare for it to live more than two years although in the wild plants are known to live at least 25 years.

2) This special type of habitat is being lost at an alarming rate. From about 30 different places in Orkney in which it grew in the last century we are now down to about 15 and most of those sites have been greatly reduced in overall size.

3) The site losses are for a number of reasons: anything which makes grass grow will kill out *Primula scotica*, e.g., slagging or waste from shellfish processing or any sort of manuring,

4) Visitor pressure seems to have lost several sites in Caithness and Sutherland, it no longer grows near Holburn Head Lighthouse which is a popular walk, nor at Farr Bay nor other places near the Bettyhill and Durness car parks.

5) The actual number of plants in any one site varies from time to time. During the 16 years that the Orkney Field Club carried out detailed studies at Yesnaby the population showed a nett loss every year except between 1970 and 1973 when there was a spell of mild winters. Since the study officially finished in 1984 there has again been an increase in actual numbers, obviously allied to the run of mild winters. At the same time the total area of the colony has declined. This recent increase in actual density of plants in various sites seems to have occurred throughout the North while further sites themselves have either been reduced in size or actually lost.

6) On the whole I am not in favour of keeping sites of British Scarce species secret as this may mean their loss through ignorance; if an owner knows he has a scarce plant on his ground and knows that it is illegal for anyone to come on to his land to dig it up, he can challenge them, and report them to the Police.

7) But actually **promoting** *Primula scotica* as a garden plant seems unwise, even stupid, for a number of reasons. Firstly, it is VERY tiny and under cultivation, not only does it have a short life-span but it also gets out of proportion with rather cabbagy tufts of leaves; if for any reason the gardener is unable to save and raise seeds from his own plant he will soon lose it. Only a few gardeners have the patience to rear plants like this from seed anyway.

8) Another snag is that plants which come from very specialised places seem very susceptible to pests and diseases. Have you ever seen a common dandelion exterminated by slugs? Yet I have tried to grow a white dandelion from seed (from commercial sources, I think it is a native of Japan) and so far I cannot get it to flower because slugs seem to have an irresistible taste for it

9) However much a nursery gardener stresses the importance of only growing plants from commercial sources, few gardeners can resist the chance of getting a plant for free. Bringing rare plants home from overseas means running the risk of confiscation and heavy fines at the Customs checks, British rare plants within Britain have no such physical protection and the inevitable result of promoting such a plant at such a prestigious place as the Royal Chelsea Show is bound to result in an increase in plants being dug up, or quantities of seed taken. Although in the wild individual plants can live for a long time, they can only reproduce from seed and we would just need another run of cold winters to decimate our remaining colonies.

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STINGING NETTLES ALONG THE RIVER KENNET

The stinging nettle (*Urtica dioica*) is the most common flowering plant in Wiltshire. It is certainly much the most abundant plant in the drying-out uppermost 13½ miles of the River Kennet (west of Marlborough) along the banks, and to some extent in the channel.

Crawley (1989) describes the nettle as a typical monopolistic plant, excluding other species. This short outline describes how it seems to achieve this dominance over other plants along the Kennet, even in shade. Nettles like nitrates, phosphates, mud, people, cows and agriculture. All these factors are operative in the Kennet Valley and north of Avebury.

1. Above Ground In addition to the protective abundant stings, Kennet nettles grow big, up to 8½ feet (255cms) high. Closely packed stems and large leaves usually exclude light from other plants. The growing season is March to November or even December. This is far longer than the growing season of its main competitors, for instance Rough Meadow-grass (*Poa trivialis*) mainly April-July; Couch (*Elytrigia repens*) mainly June-September; or Creeping Bent (*Agrostis stolonifera*) mainly July-October. Nettles also survive shading by trees better than thistles and docks.

2. Below Ground Wiry roots give rise to extensive tough yellow rhizomes. Some of the latter extend laterally 60cms or more, others form a dense three dimensional network going down 30cms. Couch rhizomes can partially compete with these networks, but only where the nettlebeds are not too dense above ground.

3. Ground Level C.T.M. (1987) refers to (nettle) 'stems creeping and rooting at the nodes' (procumbent stolons). Many of the *medium* height (100cms) and *smaller* upright nettle stems radiate lateral stems 5-50cms long. For one plant with 5 upright stems, I collected a star of 16 radially growing stoloniferous surface stems rooting at all the nodes. These insinuate other plants in summer and autumn, rapidly sending up from each rooting node, new green vertical stems. In winter and early spring, the shoots remain pink or cream, are *frost resistant*, and simply await less cold weather to create new vertical clumps in dense expanding discs around the previous season's parent plants.

4. Other Spread Nettle seedlings abound in the drying-out river mud and on drier areas free from grasses. However the effectiveness of seed is usually surpassed by types of vegetative dispersal including spread to areas dominated by grasses or shaded by trees. Nettle is not a true emergent plant. It's leaves go yellow if its roots are in continuously standing or running water - but nettles love churned up mud with intermittent inundations, exactly the conditions of either winter field edges and hedge sides, or of the Upper Kennet and winter-bournes on agricultural land. The hooves of cows (or other stock) cut off either rhizome or rooting stem (stolon) fragments. These fragments are scattered with clods of earth. Parts of these clods are not continuously under water and the fragments straight away grow into new plants. Submerged bits await further churning and transfer, or drying out, then they too grow into new nettle clumps. There is consequently a round-the-year source of new nettle plants, upstream, downstream, bankside or away from the river.

By the above means, many parts of the uppermost 13½ mile stretch of the River Kennet are in summer & autumn converted to huge, almost continuous, double ribbons (or broad single ribbons when the channel is invaded) of dense stinging nettles. Broken ribbons of riverside nettle growth even survive on pasture treated with selective weedkillers favouring grasses.

References

Crawley, M.J. (1989). Invaders. *Plants Today* **2**(5): pp. 152-158
Clapham, Tutin & Warburg (1987). *Flora of the British Isles*, 3rd ed., Cambridge

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HIGH ALTITUDE BRAMBLES

While driving over the Alston to Middleton-in-Teesdale road in late 1990 I thought I saw bramble plants by the roadside at Harwood in Upper Teesdale, County Durham (v.c. 66). I thought later that they were probably raspberry plants but in May 1992 I was able to confirm that they were indeed brambles and collected flowering material in July. Alan Newton kindly determined the two species

present as *Rubus dasyphyllus* (Rogers) E.Marshall and *R. eboracensis* W.C.R.Watson. They grew on the sides and base of the south facing bank cut into the hillside by the road which must have been widened and straightened some 30-40 years ago. *R. dasyphyllus* was much the commoner and ascended highest to 490m (1607') with the majority of plants of both species occurring between 475-480m (1558-1575').

The plants were small but healthy and were flowering in July. They were sheltered to some extent by *Ulex europaeus* (Gorse) bushes, shrubs of *Rosa* spp. and *Fraxinus* saplings were also present. These brambles would appear to be at their highest known altitude in the British Isles. Wilson in *The Altitudinal Range of British Plants* (1956) gives *R. dasyphyllus* and *R. fissus* Lindley as occurring at 1430' (436m) in the Clun Forest, Shropshire (v.c. 40), and Alan Newton (pers. comm.) has seen *R. sprengelii* Weihe in the Cheshire Pennines with *R. dasyphyllus* in a remnant oakwood on scree with *Rosa canina* at 410m (1345').

These Harwood brambles are relatively recent colonisers of this section of improved road. They are presumably just able to survive at this altitude because of the favourable south facing aspect and the shelter given by the surrounding vegetation. The rainfall for this part of Upper Teesdale is 152cms (60") per year. It will be interesting to see how the plants perform over the years especially in relation to the severity of the winter. Does anyone know of Brambles occurring as high as this elsewhere?

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SCARCE PLANTS PROJECT

Only a brief update on the progress of the Scarce Plants Project this time. All records that had been received were processed by the end of February. The coverage was almost universally excellent and the resulting maps with few exceptions very satisfactory.

Vice-county recorders received 'final' maps and listings in March for their comment, and corrections will be incorporated into the database during the final month of the contract.

Most of the species accounts that will accompany the maps in the publication *Scarce Plants in Britain* have now been received and are being edited. Chris Preston will be preparing the introduction and appendices in the next few months and the final text and maps will be delivered to JNCC in July for them to take forward to publication.

Our thanks must go once again to Margaret Palmer and JNCC for her support and their funding, and especially to all the v.c. recorders for their hard work.

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ALISON STEWART, BRC, ITE Monks Wood, Abbots Ripton, HUNTINGDON, Cambs. PE17 2LS

NOTES AND ARTICLES

A STUDY GROUP FOR THE HISTORY OF THE DISCOVERY OF THE VASCULAR FLORA OF THE BRITISH ISLES

I am particularly interested in this subject. My own concerns lie in the following areas:

1. This rich subject is not given the profile it deserves.
2. Historical references are not always accurate.
3. Credit is not always given where it is due.
4. The reputations of deceased botanists, especially amateurs, can be subject to unjustified criticism.

The objectives of such a Study Group would, of course, be a matter for discussion. Ideas which spring to mind include correspondence between members; perhaps a section in *BSBI News* devoted

to this subject (if the Editor agrees), and, something I would be very keen on, an annual meeting on a regional basis dealing with the subject in that region (not just in England!).

I am also a member of the Society for the History of Natural History. The SHNH covers all branches of natural history, worldwide; its worldwide membership being considerably less than that of the BSBI, I therefore feel that such a Study Group is more appropriate to the BSBI than the SHNH.

In any event, the SHNH would welcome joint meetings, of which the regional annual meeting referred to above might be one. The SHNH is also prepared to give us the benefit of its experience. A notice about this proposed Study Group was included in their January 1993 Newsletter (**46**: 12).

I would give such a Group my full support. Having offered to act as Secretary of the *Dactylorhiza* Study Group (*BSBI News* **62**: 22), I would obviously be pleased if someone else would be willing to act as Secretary of this Study Group.

If you are at all interested, or have any comments, please contact me.

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VARIEGATED YORKSHIRE-FOG

The reports of white flowered forms of various species in recent numbers of *BSBI News* reminds me of an unusual 'colour' variant of *Holcus lanatus* (Yorkshire-fog) I came across a few years ago. It had variegated leaves, which is quite pretty in other grasses but even more so on this occasion due to the red anthocyanin pigment found in *H. lanatus* turning the areas lacking chlorophyll pink! This pink and green plant arose through a somatic mutation in one tiller of 2400 tillers cloned from one genotype which I was growing in a greenhouse at Liverpool University Botanic Gardens. By growing and splitting plants derived from this one tiller I achieved a bench full of variegated plants which I kept for two years. The mutation was stable with no plants regressing to the normal form. I then deserted this variant and do not know its fate. I have never seen other variegated forms in the source population of this plant or anywhere else, nor have I seen it reported. Wild variegated grasses are presumably rare, there being strong selection against loss of photosynthetic area. Has anyone seen such forms of this or other grass species in the wild?

JAMES BULLOCK, 33 Wormald Road, WALLINGFORD, Oxon OX10 9BD

MORE WINTER FLOWERING HOLLY

I was interested in the note by Mrs Pamela Taylor (*BSBI News* **62**) about the late-flowering Holly (*Ilex aquifolium*). We have not much Holly round here (the Limestone part of Derbyshire) but some is grown in gardens. One bush nearby had berries on until at least July 1992, and now has a new crop through this winter. Another bush, presumably a male, did not flower in summer, but did so about Mid October 1992. Several flowers opened just before a spell of exceptionally bitter weather, with temperatures down to 26°F. These shrivelled, but the remaining buds are still on the bush, though whether they will open is a case of wait and see.

So perhaps many Holly bushes have been 'confused'.

GRACE WHEELDON, Plemont, Bank Top, Youlgreave, BAKEWELL, Derbyshire DE45 1WD

MORE FLOWERS OUT OF SEASON

I too noticed holly bushes with red berries along with the flowers last May. I assume it was the mild winter causing birds not to be bothered with them (it is one of the less attractive species to birds, I find).

Another quite unrelated phenomenon (though I wonder whether the September flowering of the holly is due to the same thing) is the autumn flowering of certain shrubs in urban areas. I noticed *Sorbus aucuparia* and *Prunus laurocerasus* especially. I have put this down to the effect of street lights changing the day length - it's supposed to cause birds to sing in the dead of night, too.

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WARBURG MEMORIAL RECIPIENTS

David Evans, who received a grant towards travels in South China with the *In search of the willow pattern* expedition, sent a postcard as they were finishing their surveys and experiments in Gukin, and in the villages along Li Jiang River. He hopes to send more information from the Gukin Botanical Institute, and meanwhile thanks BSBI for the grant, adding 'the trip has been unbelievable'.

A preliminary report from Bill Baker, leader of the *Ganesh '92* Oxford University Expedition to Nepal to study orchid ecology, describes first the initial delays over the complexities of research permits, and the organisation of the trek - after which, the hunt for *Pleione coronaria* the kernel of the research, began in earnest. The trek made a rapid ascent from Trisuli, 8 hours bus ride west of Kathmandu, northwards into the Ganesh Himul - climbing from 500m to 3,500m in 3 days. 'Weather conditions were appalling due to persistent cloud enfolding the pass. However the botany was excellent, yielding many terrestrial orchids, various *Primula* spp. and the first of the famous Himalayan poppies, *Meconopsis paniculata*. Losing their guide through serious illness, the expedition journeyed further north finding the 2 common species of *Pleione*, of which *P. hookeriana* was occasionally in flower. 'Suddenly, a non-flowering clump of an unusual *Pleione* sp. was found growing in deep moss on the underside of a leaning trunk of *Pieris formosana*'. The characters all matched the photographs of *P. coronaria* they had seen at Kew, and indeed it was this very rare species. Later the team scoured the forest for further colonies and discovered 2 reasonably large populations. A very few specimens were collected, by special arrangement, to be grown at Kew. The ecological methods for analysing populations as originally planned proved to be impossible on site - the undergrowth was far too dense, but large amounts of ecological data were collected on the plants' habitats and population numbers. These showed this species to be highly restricted in range and population size, so the tragic recent over-collecting could well have had a significant effect on the security of the species. Further travels included the high massif of the Ganesh, the Buri Gandaki and in Gorkha, and 'many more wonderful plants were found and recorded'. In their final report the ecology of *Pleione coronaria* will be fully described.

MARY BRIGGS, Hon. General Secretary

PLANT TRANSLOCATIONS - FOR

Ron Payne (*BSBI News* **62**, Dec. 1992) expresses a conventional response of botanists (not generally shared by entomologists and other naturalists) to translocation, but I cannot accept that watching the decline of a species to extinction is best described as a 'fascinating study'.

The knee-jerk reaction, that translocation obscures the natural distribution is surely untenable. Is the present distribution of a candidate species 'natural' if it has become extinct in a site due to man's shoddy management? On the other hand I would readily agree with Ron Payne that the parochial incident he describes, enabling an additional species to be ticked off in a particular region (usually artificially contrived) is deplorable. Surely there is a rational approach and hopefully this will have emerged at the BSBI/Linnean Society Conference in March.

The argument hinges on a choice between conserving the distribution or conserving the species; bearing in mind that if we lose the species, we have also lost the distribution. The obsession with geographical distribution is a spin off from tetrad or vice-county recording. Of more interest, I would suggest, is distribution on a much smaller scale, at the level of the plants relationships with

its neighbours. This dispersion is not obfuscated by translocations. Indeed our knowledge may be expanded by the wider range of interactions and situations that are presented by having the species in more sites.

Broadly, if a scarce species is not growing at a site, either conditions are not suitable or the propagules cannot reach the site. Increasingly, as suitable habitats become fragmented by over exploitation of the countryside, it is the latter that is causing concern. If the site is suitable and the species flourishes it is unlikely to spread to other sites (or there would have been no need for the translocation) unless the site was a missing stepping stone between sites too far apart. In this case we will have restored the gene flow which existed prior to the unnatural fragmentation. It follows that, in the interest of preserving genotypes, translocated material should be of local origin.

Translocations should always be thoroughly assessed prior to being effected. There are clearly many sites where there should be no interference and restraint is appropriate in all cases. All translocations must be recorded and there is a well established scheme run from the Chelsea Physic Gardens. In this way we can provide refugia for species in a 'wild' setting rather than a garden.

In summary, we can conserve the existing, human influenced but poorly reported, distribution of rare species. Or we can reduce the risk of extinction by well documented translocations and provide greater opportunities to study a wider range of species.

ROBIN M. WALLS, 16 Leigham Vale Road, SOUTHBOURNE, Bournemouth, Dorset BH6 3LR

PLANT TRANSLOCATIONS - AGAINST?

I should like to consolidate some of the points made by Ron Payne ('Do We Want Translocations?' *BSBI News* **62**, Dec. 1992), as he is certainly not alone in finding the current craze for plant translocation highly questionable.

To my mind, the most serious consequence of these practices lies in the way in which artificially created populations and habitats have come to be accepted by both those that seek to develop the countryside and many of those whose inclination and job it is to protect the countryside (and who should therefore know better), as adequate substitutes for the real thing. Conservationists have worked hard for decades to establish the idea that naturally evolved habitats are irreplaceable and precious and should therefore not be destroyed. Now it seems that this concept is to be undermined.

It seems obvious to me that a plant or plant community is far more than simply an adornment to the British heritage theme park, but is a living document that is intimately associated with the history and geomorphology of its site. The deliberate planting of uncommon species or the seeding of a species-rich 'wildflower' meadow does little more than to create a rather unusual municipal flower-bed, and should never be misrepresented as conservation.

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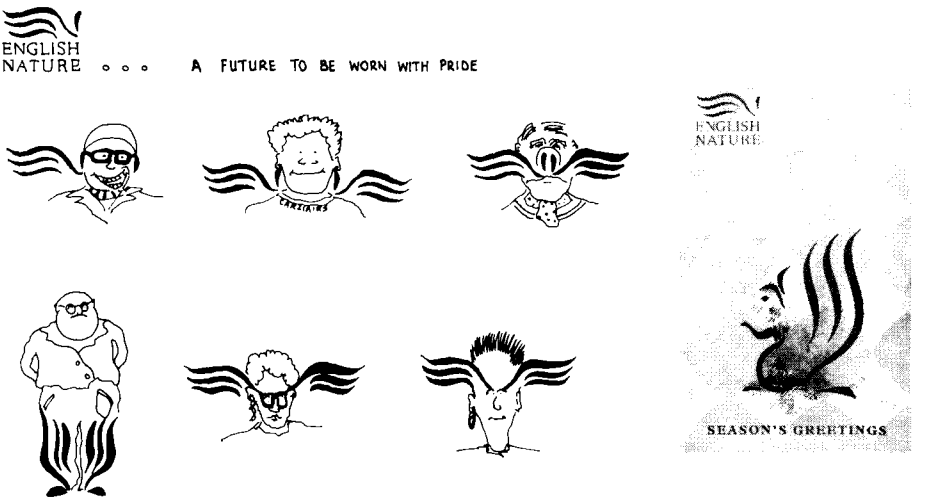
ENGLISH NATURE LOGO

From time to time various explanations of the abstract theme of this logo have been offered but English Nature did put it to dramatic good use in the design of their 1992 Christmas card of a Red Squirrel - linked to their save the red squirrel species recovery programme. Bordered in red-squirrel red, and with the tail (and logo) in russet, the design is very striking and Quantum Media Limited is to be congratulated.

Peter Marren (E.N. and BSBI member) has also used what he calls 'E.N.'s remarkably versatile logo design' with the artist David Carstairs (now in Scottish Natural Heritage), and their suggestions in *Twitcher in the Swamp* published in *British Wildlife* **2**: 4 (1991), are reproduced here with the permission of the author and artist, Andrew Branson of *British Wildlife* and of English Nature.



MARY BRIGGS, Hon. General Secretary

SPEAK-NOT-SO-EASY?

Our wisest scientific brains
Proclaim, insist and call
That earliest published Latin names
Take precedence o'er all.

I humbly bow to this decree,
Charmed by its magic spell.
I only wish each name might be
Pronounceable as well!

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

BOTANY MOUNTAIN, IRELAND: 1690s - 1990s: or, Edward Lhuyd and an Irish myth

The report of the Irish field meeting in County Tipperary, 29-30 June 1991 (*BSBI News* **60** (April 1992)), prompted me to ponder whether the seven intrepid botanists, including 'the real Lady Ro FitzGerald. . .[who] successfully navigated to Killough Hill, near Holycross village' knew they were treading an antique path to an almost mythical place'.

I am reminded that the Welsh antiquarian and naturalist Edward Lhuyd, one-time Keeper of the Ashmolean Museum in Oxford, best known in botanical circles as the discoverer of the Snowdon lily, *Lloydia serotina*, was the first to make this place known.

Lhuyd visited Ireland on at least two occasions. In 1699 he travelled from Dublin to Larne and thence to Scotland, and early in 1700 he returned and worked his way along the west coast from Donegal to Kerry. He had reached Sligo by May, just in time to collect mountain avens (*Dryas octopetala*) on Ben Bulben. Later on the shores of Lough Corrib he saw shrubby cinquefoil

(*Potentilla fruticosa*). In Connemara he gathered a 'very elegant sort of heath with a spike of fair purple flowers like some campanula', Saint Dabeoc's heath (*Daboecia cantabrica*) - women in Connemara wore sprigs of this to prevent 'inconsistency', he wrote.

Edward Lhuyd made one earlier visit to Ireland, about 1687 (the exact dates cannot be discovered). Two days after returning home he wrote to a friend describing 'my Irish pilgrimage' during which he had met the Provost of Trinity College and members of the Dublin Philosophical Society. 'They told me', Lhuyd wrote,

> 'y' ab' 70 miles off, in y^e^ C[ounty] of Tiperari, there was a Small hill y' produced all plants whatsoever that are Natives of Irland. . .'

The Provost offered to give Lhuyd an Irish-speaking guide from the College Garden as well as 'a letter to a Gentleman at y^e^ Hill.' Lhuyd commented that

> 'I was too well acquainted with hils, & also with vulgar traditions, to believe any thing of this Story; however being resolved to goe a good way into y^e^ Countrey, & having no other directions, I thought it best to undertake y^e^ journey. The Hill grew more famous still as I went on in my journey, there being scarce any man or woman but had heard of it, & could tell lyes enough of it; more particularly an Apothecary in Kilkenny told me y' for certain, hysop & garden thyme grew there, & about 26 Sorts of Alpine plants had been found there by one Dr. Fenil an eminent Physician & Botanist. Having searched it all over (for 'twas not soe big as Shotover) I found noe rarer plants y' Tutsan [*Hypericum androsaemum*], columbine [*Aquilegia vulgaris*], Catsfoot [?*Antennaria dioica*], Maidenhair Wallrue [*Asplenium ruta-muraria*], Hartstongue [*Phyllitis scolopendrium*], common Speedwell [*Veronica* sp.] & Such like. Soe much for y^e^ Irish Traditions w^ch^ of all Nation's come the nearest Perhaps to a dream.'

Lhuyd's letter is not at all precise about the location of the Tipperary botanical mountain, but he does suggest it was a relatively small hill.

Remarkably, this not quite mythical place was also recorded by the chronicler Thomas Dinelly, a contemporary of Lhuyd. The curate at Ballyboy told Dinelly about

> 'a mountain in County Limerick so famous for rare herbs there gathered that it is called the Physick Garden of Ireland'.

The fact that Dinelly was told it was in County Limerick is not really of much import.

Botany Mountain makes one other appearance in travellers' journals that I know of - a century afterwards in Arthur Young's famous *A tour in Ireland 1776-1779* (vol. 1, p. 468). Young travelled through County Tipperary via Cashel to Urlingford, and remarked that

> 'The rich sheep pastures, part of the famous Golden Vale, reach between three and four miles from Cashel to the great bog by Botany Hill, noted for producing a greater variety of plants than common.'

Young's Botany Hill can be found on current Ordnance Survey maps, and is clearly Killough Hill, there being no other hill in this area. What's more it is a prominent knoll, albeit dwarfed by the famous cathedral-crowned Rock of Cashel.

And what did the twentieth century folk find there? See *BSBI News* **60**: 55-56! There is no mention of hyssop or thyme or cat's foot. . . Time for another visit?

[Lhuyd's ms letter, quoted above, is in the National Library of Wales, Aberystwyth (Peniarth 427: ff. 450-451)]

CHARLES NELSON, National Botanic Gardens, Glasnevin, DUBLIN 9

BOTANICAL CORRESPONDENCE

With reference to the note on page 32 of the last issue of *BSBI News*, the following information may be of interest.

A Dictionary of English and Folk-names of British Birds, by H. Kirke Swann, gives this explanation:- 'Cawdy Mawdy: The Hooded Crow; also the Curlew. (North Country)'. In view of the connection with the fens, the bird referred to is obviously more likely to be the curlew.

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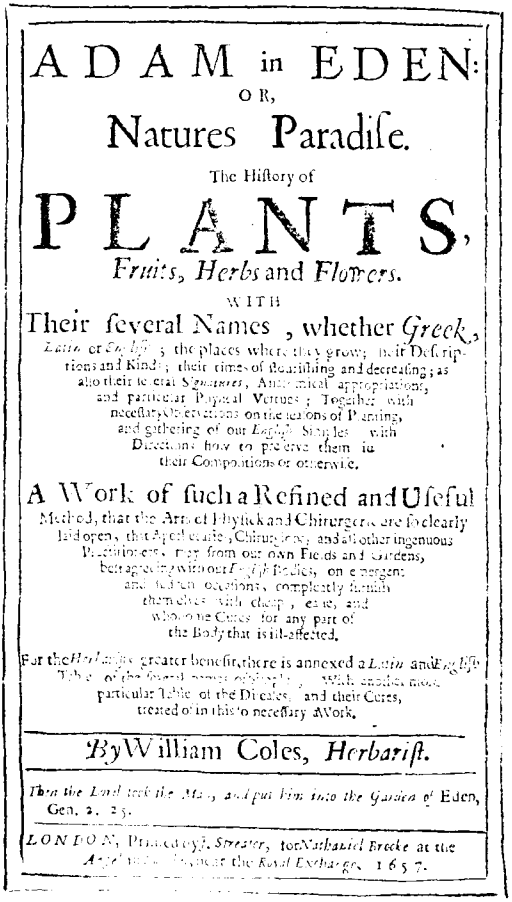
THE ADOPT A BOOK APPEAL

As the 250th anniversary of the birth of Sir Joseph Banks is celebrated, the theme of our 1993 AGM at Lincoln with papers on Banks and visit to the Sir Joseph Banks Conservatory is particularly appropriate. The British Library holds the 16,000 books from the Library of Sir Joseph Banks and is faced with a massive task in the preservation of these. Some 4,000 of them are suffering from age, paper decay and constant use, and can no longer be used for reference or study, but the *Adopt a Book Appeal* enables well-wishers to assist in this work. Complete conservation treatment (deacidification, rebinding in leather and housing in an acid-free box) costs approx. £200, and once conserved, the volume can again form part of the Library and working collection. A donation of this sum enables you to 'adopt a book' (with your name on a bookplate in the conserved book). The frontispiece photocopy (see below) is from one of the books from the Banks collection which has been rescued by your Hon. Gen. Sec. Further details of the Adopt a Book Appeal, from: National Preservation Office, The British Library, Great Russell Street, London WC1 B 3DG, tel. 071-323-7612.

MARY BRIGGS, Hon. General Secretary



ADAM in EDEN:
OR,
Natures Paradiſe.
The Hiſtory of
PLANTS,
Fruits, Herbs and *Flowers.*
WITH
Their ſeveral Names, whether *Greek*, *Latin* or *Engliſh*; the places where they grow; their Deſcriptions and Kinds; their times of flouriſhing and decreating; as alſo their ſeveral *Signatures*, Anatomical appropriations, and particular Phyſical Vertues; Together with neceſſary Obſervations on the ſeaſons of Planting, and gathering of our *Engliſh* Simples; with Directions how to preſerve them in their Compoſitions or otherwiſe.
A Work of ſuch a Refined and Uſeful Method, that the Art of Phyſick and Chirurgerie are clearly laid open, that Apothecaries, Chirurgions, and all other ingenuous Practitioners, may from our own Fields and Gardens, better agree with our *Engliſh* Bodies, on emergent and ſudden occaſions, compleatly furniſh themſelves with cheap, eaſie, and wholſome Cures for any part of the Body that is ill-affected.
For the *Herbaliſts* greater benefit, there is annexed a *Latin* and *Engliſh* Table of the ſeveral names of Simples; With another more particular Table of the Diſeaſes, and their Cures, treated of in this two neceſſary Work.
By William Coles, *Herbariſt.*
Then the Lord took the Man, and put him into the Garden of Eden, Gen. 2. 15.
LONDON, Printed by *J. Streater*, for *Nathaniel Brooke* at the *Angel* in Cornhill, near the *Royal Exchange*. 1657.

SALES FROM THE SIGNET LIBRARY

With reference to Dr Nelson's paper which appeared in *BSBI News* **62**, I was particularly interested to read that he had acquired a copy of W. Wade's *Plantae rariores in Hibernia inventae...* (Dublin 1804), which was 'in the library of The Society of Writers to the Signet. . .'. I am the Librarian of that Library, and have had that privilege for nearly 25 years!

Owing to financial stringency, two series of sales have been held, in 1959-62 and 1978-79. It was in the 1962 sale that Wade's book was auctioned locally; together with nine other volumes (including Smith's *English flora*, 1828-30) the lot fetched £14, almost certainly purchased by a bookseller, possibly Quaritch or Wheldon.

On a small point of fact, the Signet Library is one of several law libraries in Edinburgh and cannot claim to be the law library here; that distinction belongs to our neighbour, the Advocates Library, which effectively is the law 'branch' of the National Library of Scotland.

G.H. BALLANTYNE, Librarian, Signet Library, Parliament Square, EDINBURGH EH1 1RF

THOUGHTS ON MISTLETOE

As a designer concerned by quality of form and colour, mistletoe gains a great deal of my admiration. Few plants combine such an arresting combination of colour and structure, with the bonus of an uncommonly coloured berry. This rather restrained aristocracy is underlined by a biology so singular that entry into horticulture as an item of vulgar trade is out of the question. For these reasons, and for the further virtues of its strictly stenotopic insect faunas, I have been interested to encourage the plant wherever possible.

With some success, I have established mistletoe on cultivated apple trees in this parish by various 'implantation' techniques. Recently however, I was pleased to see mistletoe beginning to increase spontaneously, through the agency of thrushes, but was surprised to see, late in 1991, a young plant here on *Sorbus* 'Joseph Rock'. This is not a common host genus.

More interesting however, was the age of the host tree, no more than 18 years, which caused me to reflect on the optimal age of the host plant for colonisation by mistletoe. Because I have found little on this matter in the literature, I can say only that my view has been that trees beyond peak vigour appear to be preferred.

On the question of *Sorbus* 'Joseph Rock', however, there is a further factor that may have some relevance. When I bought the young standard tree in 1977, I was unaware that a larva of a Leopard Moth was contained in its main stem. Before the adult moth emerged the larva had completely removed the heartwood for a distance of over 4ft, and seriously affected the sapstream on emergence. This had a striking, perhaps seldom observed, effect on the tree. For many years the crown scarcely grew, and little wood was laid down; it was as if the tree was ageing rapidly. Although the tree is now more active the internodes are still unusually short. Could this apparent 'physiological age' in some way aid colonisation by mistletoe?

A sighting of mistletoe on the nominate subspecies of *Prunus domestica* L. at Norton, Worcester (SO/85) on March 3rd 1993, reminds me of another less usual host: *Cotoneaster horizontalis* Decne, Ashton-under-hill, Worcestershire, October 1980.

P.F. WHITEHEAD, Moor Leys, LITTLE COMBERTON, Evesham, Worcs. WR10 3EH

ACKNOWLEDGEMENT PLEASE!

I agree with your correspondent who wrote about the lack of acknowledgement to replies for information.

There are two other important points that I would like to make. Firstly I, and I am sure many others, are frequently asked for information on our local flora and fauna by individuals who are being paid to undertake work which has taken us many years to research. I appreciate that persons outside the area may want some help, but in my view they should let the informant see the results

before the work is published or handed to their employer. Otherwise how do we know that our information has been correctly presented or interpreted? Acknowledgement of the help received should also be made, and as payment, in my experience, is never mentioned, a donation to a charity of the helper's choice should be offered.

My second point is about the lack of replies when one writes for information. I always enclose a S.A.E. and to at least 50% of my letters I do not obtain a reply. This, in spite of writing 'Even if you cannot help please acknowledge this letter'. Are people so poor that they are reduced to stealing a s.a.e.?

What do other members think?

JILL LUCAS, 8 Cambourne Drive, HUDDERSFIELD HD2 2NF

ENGLISH NAMES FOR PRIMULAS

In *BSBI News* **62** (December 1992) Mr Peter C. Horn raises the question of the use of English names for *Primula vulgaris* prior to 'primrose', a name which according to the *Middle English Dictionary* (Ann Arbor) is first recorded as English in the 15th century (see also T. Hunt, *Plant Names of Medieval England*, Cambridge 1989).

Presumably, this lovely flower - 'Merry spring-time's harbinger' (Shakespeare) - has been named in English as long as the English language has existed in the British Isles, but no Old English names have been attested (see P. Bierbaumer, *Der botanische Wortschatz des Altenglischen*, Frankfurt am Main 1975-79). It is possible, as Mr Horn suggests, that 'cowslip', which, like 'oxlip', is of Old English origin, was employed early on for both *Primula veris* and *P. vulgaris*. It is very unlikely that 'oxlip', which denotes a 'taller cowslip', was used for the comparatively unassuming *P. vulgaris*.

In the *Grete Herball* of 1526, which essentially mirrors Middle English plant-name usage (and medieval Latin and French nomenclature), *Primula veris* (under the heading 'De herba paralisi') is named, for example, 'cowslip' and 'paigle' (modern spellings), whereas *P. vulgaris* (under the heading 'De primula veris') is designated as 'primerole' or 'saynt peterworte' (see my book *The English Plant Names in The Grete Herball (1526)*, Stockholm 1984). 'Primerole', which is an earlier English record than 'primrose', probably derives from Old French *primier* ('first') plus the diminutive suffix *ole*, implying 'smallness'.

In Middle English neither 'primerole' nor 'primrose' was limited to *Primula vulgaris*, but it is noteworthy that William Turner (1538, 1548) restricts 'primrose' to *P. vulgaris*, designating (1548) *P. veris* as 'cowslip', 'cowslap' or 'pagle'.

The name 'paigle', which is first attested in the mid-15th century, may be semantically associated with the Old English word *paegle* ('wine vessel' or 'gill'), as alluding to the structure of the flowers (see Rydén 1984, p. 92). On the derivation of 'cowslip', see V.J. Brøndegaard in *Sudhoffs Archiv* **71** (1987) and cf. Rydén 1984, *loc.cit.* (referring to an interpretation suggested by R. Nordhagen).

Panchronic lists of English names for primulas are given in J. Britten & R. Holland, *A Dictionary of English Plant-Names*, London 1878-86, and in G. Grigson, *The Englishman's Flora*, London 1955.

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ALIENS AND ADVENTIVES

ALIENS AND ADVENTIVES NEWS

This is the moment you've all been waiting for. *Silver Birch seedlings are definitely pubescent.* While penning my appeal-for-help note *Placing Your Betulas* (*BSBI News* **62**), there was simultaneously being published the most authoritative morphological and ecological analysis of the

B. pendula/pubescens duo that I have yet encountered (Atkinson, 1992). I am indebted to David Bevan for drawing my attention to it. *B. pendula* seedlings are described therein as bearing cotyledons 'elliptically oblong, glabrous, 3-5mm long, 2-2.5mm wide, on very short petioles (1mm or less). There is much variation in the shape of the first true leaves and no clear difference can be seen between *B. pendula* and *B. pubescens* at this stage. The epicotyl and true leaves are pubescent.' Muller (1978) illustrates a pubescent seedling under *B. pendula* (I had this work all the time and forgot to refer to it). Lubbock (1892) presents scholarly studies on seedlings world-wide which have surely never been matched by anyone before and since. His stage-by-stage paragraphs on Birch germination and juvenile growth are extraordinarily detailed; however, it is uncertain whether the '*B. alba*' of Victorian times refers to *B. pendula* sensu stricto or to our lowland Birches in general, so he still wouldn't have supported Atkinson's discourse or answered my original question with his illustration of a similarly pubescent seedling. I would add that Atkinson's paper focuses entirely on rural populations of *Betula* whereas my article concentrates more on young urban populations, many of which arise from introduced trees, native or otherwise. The taxonomy, ecology and patriotic status of these latter populations remain matters worthy of closer study.

And so from a subject marginally including aliens to our foreigners proper. The Cut-leaved Teasel, *Dipsacus laciniatus*, was another feature from our last A&A News which yielded a most informative response, this time from Robert Kelsey. My thanks to him must also include my apology for having omitted that it was he who originally discovered examples of this giant naturalised on an overgrown railway bank by Charlbury station, v.c. 23 (*BSBI News* **60**). He sent me a fine colour photograph of the colony, together with two 'Country Diary' articles written by W.D. Campbell for *The Guardian*, November 11th, 1992 and January 27th, 1993. These indicate that *D. laciniatus* has occurred in Oxfordshire before and that the author has carried out interesting observations on the relationship between goldfinches and mature *Dipsacus* capitula generally. However, as I believe that he is contributing separately to this issue, I shall not pre-empt his material here. I appreciate Robert Kelsey's return to Charlbury last summer in response to my 'cri de coeur' for a seed packet. By then, the previous year's capitula were empty, but by September I was monitoring my own Parkland Walk colony anyway and gathering the best harvest. Admittedly this seed appeared small and tightly adherent to its husks, so fertility is questionable. Maybe it's OK or maybe a hotter summer is required for successful ripening in a species native to a southern continental climate; time and an eager roof garden will tell. Also in September was collected the specimen which Laura Andrew faithfully drew for the front cover (*BSBI News* **62**) and its jaggedly laciniate lower leaf accurately represents the shapes prevailing at that time. By contrast, the lower leaves I originally observed in June show more regularly deeply pinnatifid outlines and the painting in Blamey and Grey-Wilson (1989) provides a more precise match for those. Such range of seasonal variation might not be apparent without both illustrations to hand.

Finally, I am grateful to Rodney Burton for responding to *Consumer*, my last update on *Conyza sumatrensis* invasion in S.E. England. I quote from his letter: 'In Kent there are records of it as far out as Fawkham and Hartley Green (John R. Palmer), Shoreham (myself) and Westerham Hill (Geoffrey Kitchener and myself, September 29th, 1990, independently and coincidentally). In my experience, the Kent localities are often in woodland damaged by the storms of October 16th, 1987, but John comments that the plant 'seems to be able to colonise more stable habits than *C. canadensis* and is likely to be a more persistent part of the flora.' In Surrey, I have one 1992 record from Wandsworth and several from Richmond; furthest south is a rosette I found in central Kingston in April. In Essex the furthest from London seems to be Rainham Marsh where it was already well established in 1984. It does not seem to have travelled as far west as the Colne yet.' So now it's eyes peeled all ye botanists in central Surrey, N.W. London and between the North Downs and the South Coast, for the species will inevitably continue to spread.

References

Atkinson, M.D. (1992). *Betula pendula* Roth (*B. verrucosa* Ehrh.) and *B. pubescens* Ehrh. Biological Flora of the British Isles, Journal of Ecology No 175, List Br. Vasc. Pl. (1958). No 353 1 & 2.

Blamey, M. & Grey-Wilson, C. (1989). *The Illustrated Flora of Britain and Northern Europe.* Hodder & Stoughton, London.

Lubbock, Sir J. (1892). *A Contribution to our Knowledge of Seedlings*, Vol. 2, Regan Paul *et al.*, Ltd, London.

Muller, F.M. (1978). *Seedlings of the North Western European Lowland.* Dr W. Junk Publishers, The Hague.

THE FONTAINEBLEAU HAWKWEED

In September 1978, I collected a fruiting head from a single *Hieracium* specimen growing along a woodland border by the Foret de Fontainebleau. The plant appeared to present all the general morphology of Section *Subaudum*, with no rosette leaves but numerous cauline leaves from the base of the stem to the inflorescence. However, as my sketch shows, most of these were more or less maculate with rather elongated purplish blotches, mostly confined to the upper half of the leaf. Plants germinated readily from the wild seed and retained this character. In shady positions, their growth is relatively graceful, with blotches rather pale. Other specimens subsequently self-sown in sunnier parts of the garden are stockier, shorter and more heavily marked.

I possess no name for this species and have been happy simply to enjoy having it around for fifteen years. I can find no reference that a maculate member of the *Subauda* has ever been described. My plant is fully fertile, so hybrid origin would seem unlikely. It is an attractive species, easy to naturalise and generous in annual seed production. Any readers interested in sharing it with me are welcome to send a s.a.e. for some of last (or next) autumn's seed harvest.

Middle cauline leaf, del. Brian Wurzell, © 1993

PELLITORY-OF-THE-WOODS

British *Parietaria judaica* is typically a squat, small-leaved, short-petioled, bushy, single-rooted perennial of old walls. Continental *P. officinalis* is typically a tall, large, taper-leaved, long-petioled, rhizomatous perennial of old woods. It has no horticultural merit, but has long been grown in Britain for its medicinal qualities. 'The decoction,' declares Gerald, 'helpeth such as are troubled with an old cough,' and 'with a little honey is good to gargle a sore throat.' Furthermore, 'the juice held awhile in the mouth easeth pains in the teeth; the distilled water of the herb drank with sugar worketh the same effect and cleanseth the skin from spots, freckles, pimples, wheals, sunburn, etc. . . the juice dropped into the ears easeth the noise in them and taketh away the pricking and shooting pains therein.' Mrs Grieve in her *Modern Herbal* summarises its values as 'diuretic, laxative, refrigerant and slightly demulcent. . . a most efficacious remedy for stone in the bladder, gravel, dropsy, stricture and other urinary complaints.' One may well wonder, with its long history and impressive reputation why it is one of the less commonly grown herbs in this country. And although it can attain considerable vegetative vigour, rather like a nettle-bed, I can recall no published record of plants escaped or established in the wild.

I can report two wild colonies of my own observation. On April 6th, 1966, I found several large patches naturalised in the old woods at Warley Place, Brentwood, Essex, now a local nature reserve. And on September 27th, 1992, I found another large patch naturalised under an old hedgerow in the grounds of Friern Hospital (formerly Colney Hatch) in Friern Barnet, Middlesex. Left undisturbed, the species can clearly hold its own for many years in competition with native vegetation.

A CUDWEED AMONGST THE CHICKWEEDS

'You can take them all!' Eh? That was the second shell-shock in ten seconds. She gazed down benevolently, knowing I was impossibly sane but harmless. Consider the facts. It was September. I was strolling towards a Natural History Book Fair. I'd stopped. I'd knelt low to examine what was going on beneath this woman's brickwork. I was smiling back.

'All of them? No, I'm just sampling this one.'

Of course it shouldn't have been there. That was the first shell-shock. I last saw *Gnaphalium purpureum* by a hot Florida roadside 21 years ago. But kindness must prevail at a moment like this. 'In fact, not all weeds are the same', I ventured to confide 'and I've actually never seen this one in England before.' Silence. 'Its seed probably blew over the wall,' I added, gesturing towards the familiar ramparts opposite. Smile. 'It's most unexpected, you know.' Eyes. 'Er. . .'

Then there was the counter-plot. Real high-powered thriller stuff, promise. One metre away grew a specimen of *Conyza sumatrensis*. Behold in one gaze two inter-continentally jet-setting composites, simultaneously sweeping the planet with their respective pappuses. Each is recently new to London. One is American. One is Asian. One flies out of Kew Gardens. The other's about to land there. For the first time in British history they meet, pow, wham, zonk, cheek by jowl, confronting each other on an everyday pavement otherwise fringed with dog-manured *Stellaria media*.

'Yes,' she repeated eagerly, 'you can take them all!'

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ERAGROSTIS CURVULA ESTABLISHED IN S. HANTS (v.c. 11)

The discovery of the South African grass *Eragrostis curvula* (Schrader) Nees, established near Mayflower Park, Southampton, S. Hants., has already been formally published in *Plant Records* in *Watsonia* **19**(2): 153 (1992), but the record seems worthy of more details. It has also been briefly described and figured in C. Stace, *New Flora of the British Isles* (1991), pp. 1077-1079, and is the sole basis for the inclusion of this species in D.H. Kent, *List of Vascular Plants of the British Isles* (1992), p. 325.

Amazingly, the grass was first spotted from a moving car, as the late A.L. Grenfell drove and I (mis-)read the map! The huge panicles, over 3 feet tall, looked vaguely like *Deschampsia caespitosa*: a screech of the brakes followed as puzzlement overtook us, wondering why Tufted Hair-grass should be growing in such an unlikely, ruderal habitat. Only the late date, 9 Sept. 1989, seemed right!

On the shingle ballast of an old railway track alongside the road we found about 50 clumps of an unknown grass, stretching over a distance of about 40 feet. In all, there were about 200 inflorescences, some 15 on the biggest tussocks, whilst tiny plants were barren. The plants were obviously of very varied ages, suggesting spread by seed over some years, perhaps 10 or more. Due to the well-drained, barren terrain, almost no plants were competing - in the immediate vicinity there was *Conyza canadensis* (Canadian Fleabane), but only represented as depauperate seedlings. Nearby was *Poa compressa* (Compressed Meadow-grass), and also saplings of an unidentified *Cotoneaster* sp.

On 4 October 1992, I returned to the site with M.J. Trotman and D.P.J. Smith, and found that weed-killer had apparently been extensively used and the vegetation on the old track had largely been eliminated. But some 20 of the larger clumps still survived, with plentiful inflorescences. Our new member, Delf Smith, collected a little material and from it produced the magnificent drawing adorning the front cover of this issue of *BSBI News*. After careful observation and dissection of many spikelets, he also produced a detailed description which is appended here. Curiously, DPJS could find no ripe grains (seeds) on the specimens taken home, so this part of the description is omitted.

Description of *Eragrostis curvula* (by D.P.J. Smith)

Densely tufted perennial, 30-120cm tall, forming conspicuous tussocks.

Culms erect, stout, 3-5 noded, smooth, shiny, glabrous, slightly compressed, straight or bent up to 45° at lower nodes. Bases of vegetative shoots swollen.

Leaf sheaths strongly ribbed with conspicuous mid-rib, slightly compressed-ovate, split to base, minutely glandular on outer surface. Upper sheaths glabrous with margins overlapping, lower sheaths open to the base. Basal sheaths of vegetative shoots densely hairy with adpressed to spreading hairs to 2mm long, the outermost sheaths forming bladeless scales to 3cm long, narrowly triangular and pointed. Basal sheaths of flowering stems densely to sparsely hairy with spreading hairs to 2mm long.

Ligule a ring of dense hairs to 2mm long, interspaced with straight hairs to 6mm long.

Leaf blades 5-70cm long, 2-4mm wide at the base, strongly ribbed with conspicuous pale mid-rib, flat, becoming tightly inrolled upwards, gradually tapering to fine thread-like curled 10-20cm tips, rough in the upper half or to the base. Upper blade of flowering stem reaching from mid-way to top of panicle.

Panicle 10-30cm high, pyramidal, open, loose, becoming densely contracted. Rachis glabrous, shiny, smooth below, rough in upper part. Panicle branches to 15cm long, solitary, distant, spreading, straight, very slender, fine, glabrous, smooth, shiny below, rough in upper part, bare in lower quarter to a third, with a tuft of hairs to 4mm long at axil with panicle rhachis.

Spikelets 5-8mm long, solitary, closely 5-7 flowered, often with a sterile floret at the apex, linear to narrowly oblong, strongly compressed. Rhachilla rough, often hairy just below florets. Pedicels rough, adpressed to branches and branchlets. Glumes, lemmas, paleas, all dark, grey-black green with pale nerves and keels, and without hyaline margins.

Glumes 2.5-3mm long, slightly unequal, the upper being slightly the larger, narrowly lanceolate to lanceolate when flat, pointed. Dark with 1 conspicuous, pale, minutely rough nerve.

Lemmas 2.5-3mm long, compressed-folded, keeled, narrowly elliptic to narrowly ovate when flat, with a blunt tip. Dark with 3 conspicuous, pale, minutely rough nerves.

Paleas equal to or slightly shorter than the lemmas, hyaline at first becoming dark with the two keels conspicuously pale and minutely rough in their upper half.

Anthers 3, 1.5-2mm long, whitish or coloured bright purple.

Stigmas 2, emerging laterally from top of ovary.

Lodicules truncate, touching, forming a cup-like structure, striate on outer surface.

Key to illustration (see front cover)

A, habit × $\frac{1}{20}$
B, plant × 1
C, spikelet × 5
D, ligule (flat); d, ligule (vertical section) × 3
E, upper glume; e, lower glume × 10
F, lemma (flat); f, lemma (side view) × 10
G, palea × 10
H, pistil × 10; h, lodicules × 15

The inflorescences are probably never produced in Britain before late summer (August-September) but the distinctive narrow 'weeping' leaves are always visible, as are the perennial hardened, silky-hairy basal leaf sheaths which are especially characteristic of this species.

Eragrostis Wolf is a large genus of about 350 species, almost confined to the subtropics and tropics. No less than 51 of them have occurred in Britain, and they have been cleverly keyed out by T.B. Ryves in *Watsonia* **13**: 111-117 (1980).

E. curvula is part of a very variable complex, and currently there is little agreement about the specific limits of it and its allies, e.g., recently *E. lehmanniana* Nees has been treated as a synonym. *E. curvula* sensu stricto is a native of S. Africa, noticeably preferring the wetter parts, i.e. those with 20 inches, or more, of precipitation in a year. Nowadays, it is found in many of the warmer parts of the world, preferring sandy soils, either as a weed or as a deliberate introduction, and known from Australia to USA as 'Weeping Lovegrass'. Some 'strains' (e.g. c.v. 'Consol') make valuable pasture, but others are noxious weeds.

The first record for this species complex in Britain appears to be in 1915, in *Report of the Botanical Exchange Club* **4**: 218 (1916), as *E. chloromelas* Steud., when it was found as a wool alien in Selkirk. *E. curvula* sensu stricto has probably occurred regularly as a wool alien since this date (often as unidentified leaves!); Ryves (1980) regarded it as 'frequent'. It is also very rarely grown as an ornamental grass - see, for example, P. Trehane, *Index Hortensis. Vol. 1* (1989), p. 186. Since the Hampshire plant is only just outside gate number 8 of Southampton Docks, it seems likely

that its origin here was with imported cargo, or even liner traffic, perhaps directly from S. Africa. The 'tropical Africa' origin, as suggested by Stace (1991), seems most unlikely to me! R.P. Bowman tells me that this species is new to S. Hants., but that the annual species *E. tef* (Zucc.) Trotter was recorded from Southampton Western Docks sometime before 1964.

Flora Europaea **5** (1980) does not mention this species complex at all, although casual records from France date back to 1870, again as a wool alien, and documented by A. Thellung, *La Flore Adventice de Montpellier* (1912), pp. 116-118. Apparently, it has never become established there or elsewhere in France. However, Prof. J. Lambinon kindly informs me that it has been discovered, naturalised, in three localities in Spain; see *Bull. Soc. pour l'Echange des Plantes Vasc. de l'Europe et du Bassin Méditerranéen*, **21**: 66-67 (1986). Doubtless, more European localities will be found.

The long-term future establishment of this species in Britain seems much more doubtful, especially as the 'waste ground' where it now persists is vulnerable to future landscaping. Suitable ecological niches elsewhere in Britain are few, although a warming climate could make more spots potentially suitable for this rather aggressive but decorative grass.

I am indebted to Dr T.A. Cope, at RBG, Kew, for confirming the identity of this grass. A voucher specimen has been deposited in **herb. R.P. Bowman**.

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DIPSACUS LACINIATUS

This teasel, the subject of the cover illustration on *BSBI News* **62**, and a reference to John Killick's record of the occurrence of a colony of this plant at Charlbury B.R. station, Oxfordshire in August, 1988, is of especial interest to me since I believe I was responsible for its introduction to this area. In August 1978 I was on one of my usual bird-watching trips to a gravel-pit complex at Stanton Harcourt in the Windrush Valley, Oxfordshire, and, finding nothing of ornithological interest, turned my attention to the flora of a long-established refuse dump infilling one of the worked-out pits. I found over 130 species, with a high proportion of garden species - I brought home bunches of sweet peas and chunks of horse-radish roots, and could have dug sackfulls of potatoes. But, having discovered several plants of a yellow-flowered yarrow new to me, later identified by Ken Burras, of Oxford Botanic Garden, as *Achillea ageratum* from Italy, I was on the alert for possible aliens, for I realised that, since I was familiar with all British species of this genus, this must be one. Then, in the distance I saw an extensive clump of teasels which seemed exceptionally high, and on close examination noted the deeply cut foliage, the paler, pinkish-brown flowers, and the height - some of them were about 12 feet. On getting home I could not find an answer in C.T.W., but in Fitter's *Flowers of Britain and Northern Europe*, there was a brief reference to its habitat in S. Germany. But this species was apparently known as an English resident before, for in his *The English Flower Garden*, 1933 edition, W. Robinson mentions it as a worthy ornament of woodland and hedge-banks. Knowing that the site was shortly to be cleared and levelled, I saved seed as soon as they were available, and sowed some in my garden where I always grow the native species as an attraction to butterflies and goldfinches. The introductions flourished, and eventually obvious hybrids between *D. fullonun* and *D. laciniatus* began to appear.

About four years later I was brought a specimen of a 'weed' from a garden about a quarter of a mile away to identify. It turned out to be the alien teasel. Then, just ten years after the original discovery (1988), on a rare visit to our local railway station, I spotted several plants of 'my' teasel growing amongst a colony of our native species. I alerted the B.R. employee in charge of the station to the rarity of these plants, and was assured that they would not be cut down. As the plants were just on the edge of the platform, visible from stopping trains on this busy line, I mentioned their presence to possible commuting botanists in my weekly 'Country Diary' in *The Guardian* on Aug. 8th, 1988. My neighbour and botanist friend Jo Dunn, with the very co-operative help of the B.R. employee mentioned before (who actually borrowed her secateurs and saved her from trespassing) produced specimen material which was eventually sent to John Killick. I think it significant that the Charlbury Station site, just under a mile away from my garden, already was occupied by a long-established group of our native species, and since, almost inevitably, teasels attract goldfinches, the obvious inference is that my usual teasel-exploiters had discovered the station colony, and somehow transferred the seed of the alien species. But I must stress that, contrary to a commonly held fallacy,

seed-eating birds do not act as seed-vectors, since viable seeds are unlikely to emerge whole after being ground in the gizzard and then digested. What is more likely is that the odd seed might adhere to facial plumage, beak, or foot, and thus be accidentally carried to the next teasel colony.

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TROPAEOLUM MAJUS × *T. PELTOPHORUM*

May I point out that nearly all records of the Common Nasturtium, *Tropaeolum majus* L. are in fact referable to this hybrid, since the green parts are always hairy to some extent, especially under the leaves. All the dozen or so occurrences I've noticed in this area in the autumns of 1991 and 1992 on soil heaps, dumps, etc., were of the hybrid.

This hybrid *Tropaeolum* is rarely established; the only time I have seen it looking really happy was in 1971, on Bryher, Scilly, where I photographed a large amount of a beautifully coloured form spreading over low cliffs.

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PHACELIA TANACETIFOLIA

Records of *Phacelia tanacetifolia* Benth. (Phacelia), are sent in from time to time, mostly from waste ground, at the edges of crop fields or in grass leys, but often as a crop plant in a small area of cultivation.

BSBI News **43** (1986) featured an illustration on the cover - one of Graham Easy's outstanding drawings - and there are a number of references: widely cultivated as a nectar plant for bees in southern Europe (*BSBI News* **37**: 15); in recent years cultivated for bees in Britain also, and recorded as a crop in Hereford and Worcester, Cornwall and in Devon (*BSBI News* **48**: 35), and in W. Sussex in 1992. In the *New Scientist* of 22nd August 1992 Steve Wratton writes on the use of *Phacelia* to encourage hoverflies, which are successful aphid predators - so beneficial to a crop. He describes the sowing of N. American *P. tanacetifolia* 'sometimes known as the oil radish' in crop fields in Hampshire, as the plant is 'highly attractive to many hoverfly species, as well as to bees'. From studies in New Zealand and England it was shown that hoverflies in fields with borders of *Phacelia* lay twice as many eggs per aphid as those in control fields, 'because the adults penetrate to the crop centre in greater numbers after feeding from this nourishing plant'.

MARY BRIGGS, Hon. General Secretary

CORISPERMUM IN BRITAIN

Chris Gibson's account of *Corispermum* in Essex is interesting because the fossil record demonstrates its existence here as recently as 42,000 years ago (Bell F.G., *Phil. Trans. Roy. Soc. Lond.* B. **258**: 347-378). Miss Bell regarded it as a continental warmth-demanding element of the contemporaneous vegetation of Huntingdonshire.

I think there are also other fossil records for the English south-east easier to explain naturally when sea-levels were lower than they now are.

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CONSERVATION NEWS

WILDLIFE & COUNTRYSIDE LINK

Wildlife Link was established in 1980 and Countryside Link in 1982. In January this year they merged. With the new name it is timely to report on an organisation to which the BSBI belongs, but whose work is largely done behind the scenes.

The BSBI is one of over 50 organisations making up the network of UK voluntary bodies that is Wildlife and Countryside Link. It is respected by Government departments statutory agencies and MPs and through regular meetings it seeks to influence environmental policy and legislation. The organisation is chaired by Lord Moran, an independent Peer, and is served by a staff of three. The work is funded by the members, the Department of the Environment and English Nature.

Regular liaison meetings are held with bodies such as the Forestry Commission, the Countryside Commission. the Joint Nature Conservation Committee and English Nature (separate Links cover Wales Scotland and Northern Ireland). Last autumn we met the National Rivers Authority.

Over the last twelve months the main emphasis has been on cetaceans, SSSIs, forestry, agriculture, environmental education and data handling. Most recently the EC Habitats Directive and the opportunities it offers for drafting effective UK legislation is of prime concern. We belong to the specialist group discussing this topic. W&CL is an important forum where conservation organisations can meet to co-ordinate activities at a national level. With the recent merger, which recognises the integrity of the flora, the fauna and their habitats, the organisation will prove even more effective through the '90s.

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CONFERENCE REPORT - PLANTS & MEDICINE

The following notes are abstracts of the papers given at the joint BSBI - Chelsea Physic Garden one day meeting on *Plants & Medicines* held at the Chelsea Physic Garden on Saturday 24 October 1992.

THE DOCTRINE OF SIGNATURES

Medicine, religion and magic have been associated since earliest times as working together to alleviate human suffering. It is likely that the belief grew up slowly. The old vague notion of sympathetic magic - a yellow plant for yellow disease, the power of like to affect like, was formulated into a precise name, The Doctrine of Signatures.

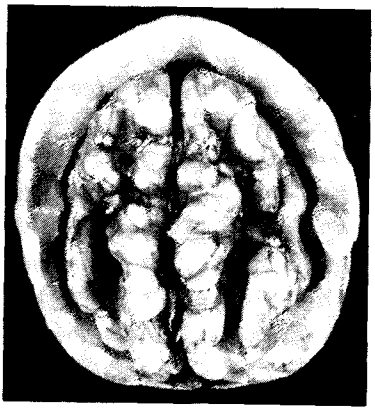
A beneficent Deity had signed plants with an indication of their faculties. There were two chief components:-

1. Nature provided signs and symbols on the plant to indicate the diseases for which the plant was a remedy.
2. Nature provided, in every region, plants to cure the diseases that occurred locally.

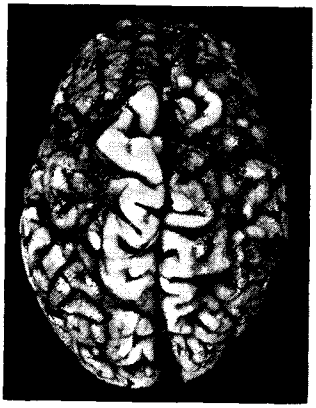
The Doctrine had found wide acceptance in the 16th century, belief in it persisting for about two centuries.

As examples, may be cited Lungwort (*Pulmonaria officinalis*), whose leaves resemble a lung section and the spots indicated that it should be used for treating spots on the lung - a euphemism for pulmonary tuberculosis. Solomon's-seal (*Polygonatum* spp.) had a double signature, the white root with knobbed end suggested a bone, while the scars on the rootstock were reminiscent of the Star of David, hence its name, Solomon's-seal. Both signs indicated that it would help to seal fractures. Walnut (*Juglans regia*) was considered to have the perfect signature of the head. The outer green husk represented the scalp and therefore a good treatment for head wounds. The woody shell

had the signature of the skull bone and the yellow skin covering the kernel that of the membranes, which envelop the brain, thus appropriate therapy for meningitis. The kernel itself has the appearance of brain and therefore useful in resisting poisons, nourishing, and strengthening the brain.



a) Walnut kernel with shell



b) Human brain outwith shell

In the vast majority of cases the plants do not have the property attributed to them under the Doctrine of Signatures.

There are very few examples in which the therapeutic property and the signature agree. Opium Poppy (*Papaver somniferum*) has a seed case reminiscent of a head, indicating that it would be useful for conditions such as headache. Morphine, the active ingredient is indeed excellent for relieving pain. Birthwort (*Aristolochia clematitis*) has a greenish yellow flower contracted into a tube, which opens to a glandular swelling at the base. It has therefore been likened to a womb and birth passage. The plant has had a child birth function from remote antiquity. However in these two cases the therapeutic properties have been known from Neolithic times and the reputation is much more ancient than the inference.

The idea that the cause and the cure for a disease were in juxtaposition was firmly believed by the Rev. Edward Stone. He was sure that the treatment for ague must be found in the damp swampy areas since such regions appeared to give rise to the complaint. He found that willow bark did relieve ague. Willow bark contains salicylates (Salix-willow). Following from this a pharmacological company synthesised Aspirin which does have analgesic and antipyretic properties. However many other plants growing in similar conditions were credited erroneously with the same attributes.

Mankind has, nevertheless, been provided with many efficacious vegetable remedies, the plant kingdom still being responsible for about 25% of medicinal requirements and therapeutic values of plants are yet to be discovered. Such properties are, of course, now evaluated rather more scientifically.

PETER MACPHERSON

MODERN MEDICINES AND PLANTS

Although many of the medicinal drugs which are made into pharmaceuticals are derived synthetically there is still a considerable reliance on plant based medicines. WHO have listed some 20,000 species of higher plant which are used medicinally. Estimates of trading in medicinal plants can be obtained from import figures and in 1980 worldwide imports were valued at around US$551 million, with Germany importing some 28,000 tonnes valued at around US$56 million and Japan some 21,000 tonnes valued at around US$50 million.

Within recent years a number of plant derived medicinal drugs have been introduced into cancer chemotherapy. The mayapple, *Podophyllum peltatum* produces a toxic resin containing podophyllotoxin, a potent cytotoxic agent which binds to microtubules during cell division and

causes metaphase arrest. Chemical modifications of podophyllotoxin and related compounds have resulted in some sugar derivatives including protected glucosides of 4'-desmethylpodophyllotoxin which have a completely different effect on cells. They inhibit the enzyme topoisomerase II and several of them including etoposide are used clinically for the treatment of carcinoma of testes, breast and bronchus.

A recent exciting development in cancer chemotherapy has resulted from research into *Taxus* species. Taxol, a complex diterpene, was isolated from the Pacific yew *Taxus brevifolia* in the early 1960s. Although it was active against experimental cancers in animals it did not find favour as a clinical agent. In the early 1990s taxol was shown to be effective against ovarian cancers in humans and also to have activity against breast, lung and prostate cancers. The National Cancer Institute in the USA and Bristol Myers Squibb are developing taxol as a clinical drug and Rhone-Poulenc-Roher have introduced 'taxotere' which is a semisynthetic analogue of taxol derived from the constituents of *Taxus* needles. Taxol is obtained from the bark and hence trees have to be felled. It takes 2,500 trees to produce 1kg of taxol and it is estimated that some 250kg of taxol would be required annually resulting in the loss of 360,000 trees.

At The School of Pharmacy in London we have a number of research programmes which are directed towards biologically active compounds from plants. This research can be illustrated by reference to three current projects in my laboratories. Malaria is a world-wide problem and resistance of the causative protozoan of human tertiary malignant malaria *Plasmodium falciparum* to chloroquine and other antimalarial drugs and resistance of the vector anopheline mosquitoes to insecticides such as DDT, has resulted in a world-wide epidemic. Protozoa are also responsible for other major tropical diseases such as leishmaniasis, trypanosomiasis, amoebiasis and giardiasis, which cause death and misery to millions of the world's population. Traditional medicines are used throughout the world for the treatment of protozoal diseases and we have investigated the active constituents of a number of plants utilised in China, S.E. Asia, India, Africa, S. and C. America.

The red sap of *Croton lechleri* (Euphorbiaceae), known as 'dragon's blood', is used widely in S. American countries for the treatment of wounds, cancer and inflammation. We have systematically identified the chemical constituents of the sap and have shown that it is very variable in its constituents from country to country. For wound healing the sap acts as a natural dressing forming a skin over the wound and acting as an antiseptic and as an anti-inflammatory agent.

Severe atopic eczema is widespread and often fails to respond to medical treatment. Clinicians at Great Ormond Street Hospital in London have undertaken clinical trials with a Chinese medicinal prescription and have shown that in some patients there is a marked improvement in the course of the disease. We are systematically identifying the chemical constituents of these Chinese herbs and are liaising with clinicians and the pharmaceutical industry.

It is my view that the outlook for the discovery of new medicines from plants is good. Major pharmaceutical companies have active research programmes in which plants are examined for biological activity. Sensitive *in vitro* bioassay screens are now available and it is possible to test thousands of compounds in a short period of time for activity against specific enzymes and drug receptor sites. This improved technology is used in conjunction with sensitive analytical techniques for the separation and identification of active ingredients from higher plants. There are some 250,000 species of higher plants and it is estimated that we have examined less than 10% of them for biologically active compounds. Plants have produced many interesting chemicals which are not readily synthesised and they have a proven reputation for producing useful clinical drugs. Hence I believe that the application of modern technology to plant research will yield new medicinal agents.

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FOLK MEDICINE AND THE DISTRIBUTION OF BRITISH AND IRISH PLANTS

Contrary to the received picture, there are two distinct traditions of herbal medicine in these islands. One is based on written authority and derived in the main from the Greeks and the Romans, the other is more ancient and has been handed down by word of mouth. The former has been the herbalism of the literate classes, mainly in the towns and cities, the latter the herbalism of the largely illiterate country people. The herbals embody the written tradition almost exclusively, typifying the extent to which the pre-existing layer of herbal knowledge has been buried by learned medicine and left to folklorists to disinter.

Whereas the written tradition largely depended on herbal species imported from abroad, the non-written one exploited the native flora, which may consequently have been affected by past herbal usage more widely than hitherto suspected. This may be the explanation of several perplexing present-day distribution patterns. Folk medicine, however, has probably done little or no damage to rarities: it was at the hands of commercial herb-collectors, supplying practitioners of the written tradition, that some of those are known to have seriously suffered.

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[David Allen's contribution is shorter than the others as he plans to use most of his material for a book.' - Ed.]

SOME OFFICIAL DRUGS OF THE EARLY PHARMACOPOEIAS

During the late 15th and early 16th centuries at least sixteen herbals were printed in Britain. These were mainly translations from existing foreign works. They contained an amalgum of astrology and alchemy from which there was a very gradual evolution of the science of Pharmacy, rooted in chemistry and botany.

This can be observed by reference to successive editions of the London *Pharmacopoeia* from 1618-1851. This *Pharmacopoeia* was produced by the College of Physicians and was intended to be a national work of reference.

The Medical Act of 1858 established a Council of Medical Education and Registration for the U.K. and the first *British Pharmacopoeia* (*B.P.*) was produced in 1863 under the Council's direction. This book superceded all other pharmacopoeias in the British Isles. This and subsequent editions set out to define a safe and uniform standard of strength and composition for all prescribed medicines - an objective which is still the basis of modern medicine.

A glance through the early *B.P.*'s shows that plant material was being imported from all corners of the world, and only a relatively small number of monographs relate to British native plants.

Despite, or in some cases because of, rapid advances in Science and technology, many of the plants used in the late 19th century still have relevance in modern medicine.

The alkaloids contained in *Atropa belladonna* and *Hyoscyamus niger* are used in the manufacture of eye-drops, pre-operative injections and travel sickness tablets.

Rose hip syrup made from hips of *Rosa canina* and other species of *Rosa* was a prime source of Vitamin C during the last war.

Colchicine, an alkaloid obtained from the seeds and corms of *Colchicum autumnale* is still used to treat acute attacks of gout.

Opium is the dried latex obtained from the unripe capsules of *Papaver somniferum* and it contains twenty five alkaloids, one of which is Morphine, the most potent pain-killer known to man.

The discovery of a substance in the bark of *Salix alba* (and other species of *Salix*) which could be converted into Aspirin provided a new medicine which is still of inestimable benefit to mankind.

The use of the glycosides of *Digitalis purpurea* and more recently of *Digitalis lanata* in certain types of heart disease is well documented and much work is being done at present on *Tanacetum parthenium* in the hope of producing a new medicine for the treatment of migraine. Feverfew was of course a plant known and used by the monks, and it was listed as a substitute for *Anthemis* (*Chamaemelum*) *nobilis* in the *B.P.*

MARGARET LINDOP

JOSEPH ANDREWS (fl. 1710-62) APOTHECARY BOTANIST

Joseph Andrews 1688-1764 was an apothecary botanist with a keen interest in plants, especially those of the countryside of his time. He collected plants in the London area, then mainly around Sudbury, Suffolk, in the early 18th century.

My interest in Joseph Andrews is based on his herbarium specimens, which are in the Department of Botany at the Natural History Museum, in 11 fascicles - or albums - and the earliest separate collection in the British Herbarium. The fascination of his specimens lies largely in the labels,

neatly written, and for most plants giving a wealth of information on where collected, and showing botanical discernment. For those of us recording now, these are records which are commendable still by the standards of today.

As a young man Joseph was in London, collecting with Mr John Field, Apothecary of the Bell in Newgate Street. His London localities included: Hampstead Heath, the Hackney Marsh River, Southwark - where he found *Lathyrus palustris* (Marsh Pea) and Putney Heath famed for the early herborizings of apothecaries and apprentices - there Andrews collected *Narthecium ossifragum* (Bog Asphodel) and *Juncus squarrosus* (Heath Rush). Twelve specimens are labelled 'I gathered in Chelsey Garden' including *Chelidonium majus* (Greater Celandine), and an early record for *Conyza canadensis* (Canadian Fleabane). The specimen of *Sagittaria sagittifolia* (Arrowhead) Andrews labelled 'I gathered in the Thames, before the Earl of Peterborough's House above the Horse Ferry on the Westminster side' (now the site of I.C.I. Millbank, Lambeth Bridge and Horseferry Road), and nearby, *Trifolium squamosum* (Sea Clover).

From 1721 Joseph Andrews was an apothecary in Sudbury, and many specimens from there are from his garden, often from seeds or plants given by fellow apothecaries and his friend and mentor Dr Samuel Dale, physician of Braintree. These include medicinal plants - a sheet of *Cochlearia* spp. (Scurvygrasses), *Althaea officinalis* (Marsh-mallow, demulcent and emollient) and *Gentiana lutea* (for his bitter tincture?). Most specimens from the Sudbury years are from nearby localities, most with precise habit description (e.g., 'on a little rushie Bogg in Meadow, Bulmur') - often the owner of the land too. One locality is the lime-kiln towards Guestingthorpe which David Allen tells me was owned by his Great grandfather's great-great-grandfather, the lime-burner at that time! From Great Cornard churchyard Andrews collected *Saxifraga granulata* (Meadow Saxifrage) - still a churchyard plant today, and from Cornard Mere (now managed by the Suffolk Wildlife Trust) his plants included *Carex*, *Scirpus* and *Potamogeton* species and *Parnassia palustris* (Grass-of-Parnassus).

On botanical excursions further afield, in 1722 Andrews collected *Papaver somniferum* - which he calls 'Sleepy Poppy' - in great plenty for a mile or two in length 'as I road (*sic*) from Cambridge to Streatham ferry'. On May 27th 1729 he found *Orchis militaris* (Military Orchid), sending it post-haste to Dr Dale saying 'this pretty orchis I found in a little field on the left hand of the Gate that opens on to Water Belchamp Cansey from Bulmur'. The orchid was new to both, and Dale's reply with comments on identification is on the sheet with the plant. But, alas, later Andrews has added: 'the place where I found this orchid is ploughed up and sowen with oats this 9th May 1746 - so I fear it is LOST'.

I wish to thank the Botanical Research Fund for the grant with which I was able to trace almost all the localities around Sundbury mentioned by Joseph Andrews on his labels. The majority of these are within a 7 mile radius of the Sudbury shown on the town map of 1714. He observed this countryside intimately, and he can be pictured walking, or riding, his rounds recording the plants - and delivering his medicines?

It has been very rewarding to follow in the footsteps of one described by his contemporary James Petiver, as 'Mr Andrews an Apothecary [and] a very obliging and curious botanist'.

MARY BRIGGS

NOTICES (BSBI)

IRISH BOTANICAL NEWS

The third issue of *Irish Botanical News* has just been published. It is sent free to all members living in Ireland or vice-county recorders for Ireland not resident in the country. If anyone thinks they qualify for a free copy and haven't received one, could you get in touch with me immediately. Other members can obtain a copy by sending £1.50 to cover printing and postage costs to me at the address below. The first two issues are no longer available.

BRIAN S. RUSHTON, Department of Biological and Biomedical Sciences, University of Ulster, Coleraine, Northern Ireland, BT52 1SA

PLANT AND INSECT RELATIONSHIPS

One day conference
14 April 1994

BSBI and the Royal Entomological Society are having a conference on Insects, Plants and Setaside at the RES rooms, 41 Queen's Gate, London SW7. Those agreeing to speak include Dr Sally Corbet and Terry Wells.

FRANKLYN PERRING, 24 Glapthorn Road, OUNDLE, Peterborough PE8 4JQ

NOTICES (OTHERS)

NATURE PHOTOGRAPHY MAGAZINE

I am planning to establish a new magazine, devoted exclusively to nature photography and focusing on wild plants and their habitats. For this purpose I wish to contact people all over the world who are involved in nature photography, either professionally or as a hobby, and who would be interested in an attempt to publish their work.

I am also trying to locate existing collections of wildflower photographs, for instance belonging to universities or botanical gardens, which could be used for this magazine.

Anyone who is interested in this plan and who would like more information, or who has any suggestions, can contact me at the address below.

FOPPE BROLSMA, Hegdambroek 1726, 6546 VX NIJMEGEN, Netherlands

14TH WORLD ORCHID CONFERENCE AND SHOW

The show will be held at the Scottish Exhibition and Conference Centre, Glasgow and will be open to the public as follows:

Wednesday 28 April 1993	2.00 - 10.00pm
Thursday 29 April and Friday 30 April	12 noon - 10.00pm
Saturday 1 May	10.00am - 10.00pm
Sunday 2 May	12.00 noon - 6.00pm

Entrance Wednesday £5, Thursday-Sunday £4.50. Advance tickets for sale at £4 (including free prize draw) from Glasgow City Council Parks and Recreation Department, 37 High Street, Glasgow G2 (tel. 041-227-5060).

It will include displays of orchids from all over the world, a floral art section, paintings, books, historical exhibits etc. and a sales area.

Further information about conference registration and lecture programme is available from CEP Consultants, 26-28 Albany Street, Edinburgh EH1 3QH. Tel. 031-557-2478.

PATRICK WOODS, Royal Botanic Garden, EDINBURGH EH3 5LR

THE FLORA OF ST PETERSBURG

This is the subject of a lecture at 6.30pm on Wednesday May 5th at the Linnean Society, Burlington House, Piccadilly, London, organised by the London Natural History Society, to which BSBI members are warmly invited. It will be given by Dr Maria Ignatieva, the Russian authority on the

ecology and flora of formal parks and gardens. This opportunity to hear a lecture on this subject in excellent English, illustrated with superb slides, given by a real expert, will be almost unique (she is also to speak to the Sorby N.H.S. in Sheffield on the previous Monday) and is not to be missed.

RODNEY BURTON, Sparepenny Cottage, Sparepenny Lane, EYNSFORD, Kent DA4 0JJ

REQUESTS

FLOWER DEVELOPMENT IN *ANTIRRHINUM MAJUS*

My colleagues and I, at the John Innes Institute, are working on flower development in *Antirrhinum majus*. One of the aspects of this topic that we are currently studying is that of flower symmetry. The wild type *Antirrhinum* flower is zygomorphic or bilaterally symmetrical, whilst the mutant *cycloidea* has radially symmetrical or peloric flowers. This mutant phenotype has been described in many other plant species including *Delphinium*, orchids, *Santapaulia* and *Linaria*. We are interested in obtaining as many different examples as possible for evolutionary comparisons. If anyone has, or knows of, examples of this phenomenon and is prepared to let us have material (seed or plants) to work on, we would be extremely grateful.

ROSEMARY CARPENTER, John Innes Institute, John Innes Centre, Colney Lane, NORWICH NR4 7UH

SCANDIX PECTEN-VENERIS, BEHAVIOUR AND MISBEHAVIOUR

While *Scandix pecten-veneris* has undergone a serious and rapid decline since the 1950s, it is apparent that it is surviving well in some parts of the country, notably Suffolk. I have been studying this species (among other rare weeds) for several years, and would very much like to solve the paradox of its present status in Britain.

I would be very grateful if any BSBI member who has records for this species over the last five years at sites that were not recorded in the BSBI/NCC rare arable weed survey of 1986-1987, could send them to me. I can then gather further information about the farming practices that seem to favour this plant, and formulate some strategies for its conservation.

PHILIP WILSON, 4 Prospect Place, Grove Lane, Redlynch, SALISBURY, Wiltshire SP5 2NT.

CHAMOMILE - *CHAMAEMELUM NOBILE*

Plantlife and the Hampshire Wildlife Trust are jointly supporting a project to assess the status and the conservation requirements of Chamomile. This study has arisen from a spot check using recent County *Floras* which indicates the plant may have declined from being a widespread species to being nationally scarce. The plant appears to have become extinct in many vice-counties and even in its strongholds in the New Forest and the West Country it is less common.

The project is to be undertaken by Heather Winship over the summer. Heather's work will include desk studies and contacting botanists to determine the present distribution of the plant. She will also undertake field work to consider management needs, together with likely reasons for extinction or survival in well recorded populations.

If you are aware of any surviving, or recently extinct, populations of Chamomile your observations will be greatly appreciated. All assistance will be acknowledged and duly credited when the project is written up. We hope that a final report may appear in *BSBI News* or *Watsonia* if appropriate.

CLIVE CHATTERS (Hampshire Wildlife Trust), 71 The Hundred Romsey Hampshire SO51 8BZ
DAVID PEARMAN (Plantlife), The Old Rectory, Frome St Quintin, DORCHESTER, Dorset DT2 0HF

CORRESPONDENTS WANTED

I am writing to you on behalf of some friends of mine, Mr & Mrs Peter Cant, who are residents in the Turkish Republic of Northern Cyprus. They are involved in a number of nature conservation, wildlife and environmental education projects locally, and also with the North Cyprus Environmental Co-ordinating Committee. As you may be aware, there are a number of environmentally related groups established in the north of the island, such as the Environmental Protection Society, North Cyprus Society for the Protection of Animals, North Cyprus Society for the Protection of Birds, the Society for the Protection of Turtles in Northern Cyprus, and a Green Peace movement.

The groups can feel somewhat isolated in the TRNC, and would welcome more contact with groups from outside the country. In particular Peter would very much appreciate any members who may be visiting Northern Cyprus on holiday to make contact with a view to him giving a short talk at a meeting or suchlike. He would also like to establish a network of contacts in the UK and elsewhere. You will be assured an excellent reception/response!

The contact name and address is as follows:

Mr and Mrs Peter Cant, Chairman, North Cyprus Environmental Co-ordinating Committee, PO Box 228, Girne, Mersin 10, Turkey. Tel. and Fax: 010-90-5841-4435

(Girne is the Turkish name for Kyrenia, a popular holiday destination. Kyrenia should **NOT** be used on correspondence.)

KATE HARCOURT-RICHARDS, Environmental Scientist, SRK (U.K.) Ltd, Summit House, 9/10 Windsor Place, CARDIFF CF1 3BX (tel. 0222-235566)

RESEARCH AND TRAVEL GRANTS

ANGLIAN WATER CONSERVATION AWARD SCHEME

This scheme is designed to help voluntary, charitable and educational organisations to develop conservation projects which, without the help of Anglian Water, might not proceed.

Eligible projects include those promoting nature or heritage conservation and which help to increase public awareness of conservation issues within the region served by Anglian Water. Applications to the scheme are invited before 30 April 1993 and awards of £10,000, £5,000 and £3,000 will be made to three projects in order of merit. In addition, this year, for the first time, two Young Persons Awards of £1,000 each will also be given.

Further information and application forms can be obtained by writing to the address below.

BOB PRICE, Director of Quality, Anglian Water Services Ltd., Compass House, Chivers Way, HISTON, Cambridge CB4 4ZY

[There is little time this year to get your applications in but, as this is an annual award, it may be worth getting next years application started! Ed.]

BOOK NOTES

Reviews of the following books will be included in the August 1993 issue of *Watsonia* vol. **19**(3):

Random-access guide to selected British Hawkweeds. J. Bevan, based on a program by C. Legg; illustrated by K.J. Adams. National Museum of Wales & Field Studies Council, Cardiff & Preston Montfort, 1992. Pp. 24 + disk. Price £15 (ISBN 0-7200-0367-9).

The Orchid Book: a guide to the identification of cultivated orchid species. Edited by J. Cullen. Cambridge University Press, Cambridge. 1992. Pp. xxxvi + 529; illustrated. Price £24.95 h/b (ISBN 0-521-41856-9).

Stewart & Corry's Flora of the North-East of Ireland, 3rd ed. Edited by Paul Hackney. Pp. xi + 419; 14 colour & numerous b/w ill. Institute of Irish Studies, the Queen's University, Belfast. 1992 (received 1993). Price £stg. 17.50 (ISBN 0-85389-446-9).

Verbreitungsatlas der Farn- und Blütenpflanzen Kärnten. H. Hartl, G. Kniely, G.H. Leute, H. Niklfeld & M. Perko. Verlag des Naturwissenschaftlicher Verein für Kärnten, Klagenfurt. 1992. Pp. 451; 16 colour plates and c.2450 maps. Price 360 Austrian Shillings (ISBN 3-85328-000-5).

The botanizers. Amateur scientists in nineteenth-century America. E.B. Keeney. Pp. xii + 206 with 11 b/w illustrations. University of North Carolina Press, Chapel Hill & London. 1992. Price $29.95 (ISBN 0-8078-2046-6).

List of Vascular Plants of the British Isles. D.H. Kent. Botanical Society of the British Isles, London. 1992. Pp. xvi + 384. Price £11.50 (ISBN 0-90115-821-6).

Atlas écologique des fougères et plantes alliées: illustration et répartition des Ptéridophytes de France. R. Prelli & M. Boudrie. Pp. 277 with 124 b.w. plates. Éditions Lechevalier, Paris., 1992. Price F.fr. 260 (ISBN 2-225-82527-0).

British Plant Communities, vol. 3. Grasslands and montane communities. Edited by J. Rodwell. Cambridge University Press, Cambridge. 1992. Pp. x + 540, with 36 figures. Price £95 (ISBN 0-521-39166-0).

The following publications have been received recently. Those that will *not* be reviewed in *Watsonia* are marked with an asterisk; unsigned notes are by J.E.

The Concise Oxford Dictionary of Botany. Edited by M. Allaby. Pp. vi + 442. Oxford University Press, Oxford. 1992. Price £18.95 h/b (ISBN 0-19-866163-0); £6.99 p/b (ISBN 0-19-286094-1).

**Upland Britain: a natural history*. M. Atherden. Pp. xv + 224; 16 colour & 40 b/w plates. Manchester University Press, Manchester. 1992. Price £12.95 p/b (ISBN 0-7190-3494-9). [A general introduction to the natural history of Britain's upland areas, with chapters on the physical features, vegetational history, mountain tops, Scottish pinewoods, deciduous woodlands, heather moorlands, wetlands, forestry plantations, grasslands and "boundaries & highways". It concludes with a chapter on conservation and the future and a glossary of plant and animal names. Similar to a "New Naturalist" treatment, this book is a useful summary for environmentalists and ecologists and provides a guide to the relevant literature.]

The vegetation of ultramafic (serpentine) soils. Edited by A.J.M. Baker, J. Proctor & R.D. Reeves. Pp. xx + 509; illustrated with 7 colour and numerous b/w plates. Intercept, Andover. 1993. Price £47.50 h/b (ISBN 0-946707-62-6). ['This book consists of the first comprehensive collection of papers summarizing present knowledge and current research on the plants that are found on serpentine soils' - from publicity leaflet. I must declare an interest as a co-contributor to this volume.]

Green Plants: their origin and diversity. P.R. Bell. Pp. 315; ill. Dioscorides Press & Cambridge University Press, Cambridge. 1992. Price £16.95 p/b (ISBN 0-521-43875-6).

**Plant resistance to herbivores and pathogens: ecology, evolution and genetics*. Ed. R.S. Fritz & E.L. Simms. University of Chicago Press, Chicago & London. 1992. Pp. ix + 590; comprehensive 115-page bibliography. (ISBN 0-226-26553-6 h/b; 0-226-26554-4 p/b.). [Assembles reviews of current research by 20 contributors to provide a comprehensive reference work.]

**Illustrated Encyclopedia of Bible Plants*. F.N. Hepper; foreword by G.T. Prance. Inter Varsity Press, Leicester. 1992. Pp. 192, copiously ill. with col. photos and line drawings. Price £17.95 (ISBN 0-85110-643-9). [The botanical literature is well endowed with books about plants mentioned in the Bible, but this one is notable for its emphasis on the economic aspects. Nigel Hepper combines a deep scholarly knowledge of the flora of the Holy Land with a well-researched series of references to relevant verses from the Bible. Visitors to Israel and Jordan wishing to raise their awareness of the flora and environment of Palestine will find this essential reading.]

**100 Himalayan Flowers*. Photographs by Ashvin Mehta; text by P.V. Bole. Mapin Publishing Pvt. Ltd., Ahmedabad. 1991. Pp. 144; 143 colour plates, 6 maps. Price £22.50 (ISBN 0-944142-55-9). [This lavishly illustrated book was sponsored by an Indian industrial firm in order to stimulate interest in the flora of the Himalayas. Each photograph, some of which are of high quality, is accompanied by a short paragraph describing the plant and its distribution together with other points of interest such as medicinal uses. An appendix, with maps, gives 'some suggested treks for a grand flower-watch in the Himalayas'. It is well worth taking on a Himalayan botanical holiday.]

**Plant Biomechanics: an engineering approach to plant form and function*. K.J. Niklas. University of Chicago Press, Chicago, 1992. Pp. xiii + 607; illustrated. (ISBN 0-226-58630-8 h/b; ISBN 0-226-58641-6 p/b.). [A highly original and scholarly work on a subject which though falling between the mainstream disciplines of botany and engineering has much to contribute to both areas of study. 'The aim of this book is to explore how plants function, grow, reproduce and evolve within the limits set by their physical environment' (from author's Preface). In doing so, it makes a major contribution to the study of plant form, evolution, ecology and systematics.]

**Snowdon's plants since the glaciers: a vegetational history*. H.S. Pardoe & B.A. Thomas. Pp. 32; ill. National Museum of Wales, Cardiff. 1992. Price £3.25 or £3.70 by post (ISBN 0-7200-0365-2). [Prepared to accompany an exhibition in the National Museum of Wales' gallery in Llanberis, this richly illustrated booklet provides a concise summary of our current knowledge of the subject and includes attractive artistic reconstructions of the former vegetation of the rocky peaks, upland grassland and birch woodland of c. 8000-9000 years ago.]

Stearn's dictionary of plant names for gardeners. W.T. Stearn. Cassell, London. 1992. Pp. [viii] + 363. Price £16.99 (ISBN 0-304-34149-5). [Provides more than 6000 definitions of the origin and meaning of botanical names used in gardening and horticulture. This is an extensively revised new edition of A.W. Smith's 'A gardener's book of plant names', first published in 1963, of which a second edition entitled 'A gardener's dictionary of plant names', revised by W.T. Stearn, was published in 1972. A valuable appendix gives a list of 3000 English vernacular names of garden plants with their scientific equivalents.]

**Atlas of Sussex Mosses Liverworts and Lichens*. F. Rose, R.C. Stern, H.W. Matcham & B.J. Coppins. Booth Museum of Natural History, Brighton, 1991. Pp. 135. Price £5 (ISBN 0-948723-15-7). [An in-depth survey of Sussex bryophytes and lichens together with a valuable overview of the vegetation and habitats of Sussex. The atlas is on a 10 × 10 km or tetrad basis depending on distribution.] Celia Jarratt

**Anatomy of flowering plants: an introduction to structure and development*, 2nd edition. P. Rudall. Cambridge University Press, Cambridge. 1992. Pp. ix + 110; ill. Price £11.95 p/b (ISBN 0-521-42154-3). [A revised textbook for students of plant anatomy, emphasising its importance for understanding morphology, physiology and evolutionary relationships. Well illustrated with a range of light and scanning electron micrographs, this complements and updates Esau's *Plant Anatomy*, whose second edition was published in 1965.]

**Checklist of the plants of Perthshire*. R.A.H. Smith, N.F. Stewart, N.W. Taylor & R.E. Thomas. Perthshire Society of Natural Science, Perth, 1992. Pp. xxiv + 69. Price £5 (ISBN 0-951261-2-0). [A comprehensive check-list of v.cc. 87, 88 and 89, together with a six-page gazetteer of the localities mentioned in the check-list. Much of the work was carried out by two of the editors during their employment by the Nature Conservancy Council and its successor. Frequency and status are indicated by letters and symbols; post-1970 records are differentiated from older and doubtful ones. The book is being distributed by B.S.B.I. Publications, not the publishers.]

Flora of North Aberdeenshire. Botanical vice-county 93. D. Welch. Pp. 184. Published by the author, East Fernbank, Woodside Road, Banchory, Kincardineshire. 1993. Price £24 (ISBN 0-9519889-0-5). [This is the first account to cover the whole of v.c. 93, although it includes the former county of Buchan for which Professor Traill published lists at the turn of the century.

Typeset from computer printout in A4 format, this work is intermediate between a check-list and a detailed Flora. It includes critical comments on the rarest species, and symbols showing the surprising number of taxa which have not been confirmed since 1950 and which are known or suspected of being extinct in the area. The book includes eight attractive colour plates.]

JOHN EDMONDSON, Department of Botany, National Museums & Galleries on Merseyside, Liverpool Museum, William Brown St, LIVERPOOL L3 8EN.

A REVIEW OF *BRECK FEN AND FOREST*

If you are a Suffolk man or have known the Breckland you should read *Breck Fen and Forest* by M.G. Rutterford (1992). It is the delightful records of a naturalist whom you may 'join in a walk' and read his chapters in any order. It is the fulfilment of the author's wish to record a little of local history, of characters and customs together with the changes and losses of the landscape, plants and birds of the West Suffolk Breckland. The book also includes chapters of brief accounts of his travels to Snowdonia where he met an 'opposite number' in Evan Roberts, to the Burren in Western Ireland and the Alps.

An index would have been useful and a title page appropriate. As one of his many friends, I knew of his plan to write some years ago. The record shows that Marg, as he was always known, picked up his pen at intervals, logged some thoughts and recorded his observations on a days outing. The form of his short paragraph notes were meant as such but could have been drawn together with no harm to his writing. It is a pity that Marg did not more often give the location of his plant species lists and record the date. Such records as the five acre field of Grape Hyacinth which he showed to William Farran ought to have been located and dated, although it is likely that some of Marg's friends know of this site.

This book also tells us much of the author. His love of nature is unfolded in descriptions of cobwebs on a frosty morning or of the varied markings on stone curlews' eggs. His detailed recordings over many years of the fortunes of the Lizard Orchid on Maidscross Hill shows the deep interest of the naturalist. He was highly observant and to the above record we can add *Teucrium scordium*, *Corynephorus canescens*, *Veronica triphyllos*, and for rescuing the last plant of *Gnaphalium luteo-album*. Marg was known far and wide. People came long distances in the hope of information of Breckland plant species or the great pleasure of even a short time with him in the field. Those who knew him well will share the thoughts which he expressed. . . 'the fen, a paradise for wild duck. . . now drained, the wildfowl gone and with them many of the wild flowers. . . often I have wished that in this country, there could be a reincarnation of the fierce ancient tribes which once roamed the Anglian Kingdom to drive the invaders away'.

Read this book, for if you knew him, you will understand him and if you did not, you will at least gain some appreciation of a great countryman. As Rutterford of Breckland passed on his way, the mallard soared high in formation over the fen, the Scots pines sighed and the little Fingered Speedwell bowed in recognition.

[This review was first published in *Nature in Cambridgeshire* and is repeated (by permission) to reach a wider audience. *Breck Fen and Forest* was privately published by and is available from, Bruce Rutterford, Broom Hill Road, Lakenheath. It is 72 pages long and costs £6.50 including postage. Ed.]

JOHN TRIST, Glovers, 28 High Street, Balsham, CAMBRIDGE CB1 6DJ

WILD ORCHIDS OF SCOTLAND

Wild Orchids of Scotland, written and edited at the Royal Botanic Garden Edinburgh, will be published by HMSO Scotland to coincide with the World Orchid Conference to be held in Glasgow from 24 April to 2 May this year.

The book contains a comprehensive coverage of all Scottish orchid taxa with 28 species accounts accompanied by superb colour photographs which were taken in the wild over three orchid seasons. Also included are sections on orchid biology, orchid habitats and conservation, and orchid photography. The latter describes the necessary equipment and several techniques and 'tricks of the trade' to help orchid enthusiasts take satisfying pictures. The biology section and field key (a provisional version of which appeared in *BSE News* No 56, May 1991) are supplemented with fine line drawings by Mary Bates.

The book will be available in early April from HMSO, as well as from the new Botanics Shop at the West Gate of the Royal Botanic Garden and the shops at each of its three Specialist Gardens (Younger, Logan and Dawyck).

This splendid publication will prove invaluable to orchid lovers and naturalists and should find a place on all bookshelves in Scotland and beyond.

Wild Orchids of Scotland by Brian Allan and Patrick Woods, photography by Sidney Clarke. ISBN 0-11-494246-3. Hardback, 144 pages, *c.*120 colour photographs, £24.95.

ROYAL BOTANIC GARDEN, EDINBURGH EH3 5LR

ENGLISH NAMES OF WILD FLOWERS

We are preparing a third edition of this list recommended by the BSBI, which was first published in 1974. This will not only take into account the most recent nomenclatural advice from the BSBI Database at Leicester, with authorities and synonymy, but will also be expanded to include all the extra taxa with English names in Stace's *New Flora of the British Isles*.

The publication has always had two main aims - to suggest one unambiguous English name for preferred use, and to produce a standardised 'grammar' which would help authors to overcome the vexed problem of punctuation, especially the almost random use of capital letters, hyphens and apostrophes which had prevailed in the past.

If our considerable efforts in preparing the new edition, involving lengthy research and debate, are to be justified this should be reflected in the use of the names by Botanical Society members. In this context we have looked at three local Floras/Checklists published in the last 12 months, two from Scotland and one from Ireland. We were surprised to find that all three have taken little, if any, notice of *English Names* - and that they are so inconsistent both among themselves and within their own covers.

Between the three, *Lotus corniculatus* appears as Common Birdsfoot Trefoil, Lesser Bird's-foot Trefoil and Bird's-foot Trefoil, whereas the recommended name is Common Bird's-foot-trefoil. This demonstrates not only inconsistencies with the name of one of our almost ubiquitous wild flowers but failure to adopt the 'binomial system' used by English Names from the outset. One of the reasons for using this system is that it simplifies indexing - a matter which has become even more pertinent now that Flora-writing is computerised and indexes can be automated. Indeed standardisation of data becomes even more important with the increase in electronic transfers from one computer system to another. Amongst computer users, the promotion of common use and interpretation of terminology, data fields and dictionaries, with logical rules and data relationships are a growing necessity.

The problems of not using the system are clearly shown by one of the authors who states in his introduction 'I do not believe a binomial system [for English names] is appropriate', but then gives the following treatment to plants with 'Water' epithets.

Water Crowfoot (indexed under 'Crowfoot')
Water Plantain(indexed under 'Water')
Water-Speedwell
Water-pepper

Only the last is in the 'recommended' format

We suggest that there are good reasons for adopting a binomial system and for standardising punctuation and using the recommended names. *English Names* exists to help authors avoid having to consider such problems. Although Edn 3 will be more comprehensive and will update the Latin nomenclature the English names already recommended in Edn 2 will, with very few changes, mainly minor, remain unaltered so that, for those who do not possess a copy of *English Names*, now

is the time to buy it. **Edn. 2 is available for the reduced price of only £3 per copy (post paid), while stocks last, from: BSBI Publications, 24 Glapthorn Road. Oundle, Peterborough PE8 4JQ**

STEPHEN JURY, PHILIP OSWALD & FRANKLYN PERRING

NEWS FROM OUNDLE BOOKS

As predicted in *BSBI News* **62** new supplies of Handbooks are now coming through - Sedges and Crucifers are in stock. For those contemplating holidays abroad I have a supply of the paperback edition of *Flowers of SW Europe* for only £9.75 (post paid). Three (more expensive) European Floras which I can also offer are *Les Quatre Flores de France*, *Claves de la Flora Espana* and *Flora des Kanton Bern*. For foreign plants in Britain our editor, Gwynn Ellis, has written a fascinating account of some of our plant invaders, *Aliens in the British Flora*, with 48 pages, colour photographs and maps showing their country of origin and distribution in the British Isles, is available for £3.65 (post paid).

MARGARET PERRING, 24 Glapthorn Road, OUNDLE, Peterborough PE8 4JQ

REPORTS OF FIELD MEETINGS - 1991 & 1992

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

ITALY - 1991

SELVA VAL GARDENA, ITALY. 15th-28th JULY

As hay making progressed steadily higher in the valley, 25 members travelled to Selva, arriving as the mowers were cutting at 1563m, the height of the village which was our base for the following twelve days. The meeting was to study the alpine flora of the western Dolomites, and from Selva rewarding walks to several valleys and heights were varied by short bus excursions to further sites from which we walked back to our hotel; there was also a longer excursion to Passo Pellegrino and Valle dei Monzoni. The 549 species that we recorded from this rich area (which were listed for us by Amanda Waterfield), included Dolomiti specialities such as: *Physoplexis comosa*, *Minuartia cherlerioides* and *Rhizobotrya alpina*. *Saxifraga facchinii*, found by the high level walkers and on Sassolungo (via the 'yellow buckets' chairlift) is described in *Saxifrages of Europe* Webb & Gornall, 1989 as restricted to this small area (25×20km only) in the western Dolomites - we saw both the yellow and the purple tinged flower forms. Discussions over midnight oil on the puzzling dark-headed Rampion were finally resolved in *Flora d'Italia* S. Pignatti, 1982 - i.e. *Phyteuma ovatum*, with linear-lanceolate bracts, and a plant of southern Europe growing at 1000-2300m. (Illustrations in some popular field guides matched our plant with *P. nigrum*, but a note in Pignatti's *Flora* distinguishes the two species by basal leaves and describes *P. nigrum* as a central European species 'eliminated' from the Italian flora.) The *Campanula morettiana* endemic to the area was due to flower on August 15th - so we were officially too early - however diligent search was rewarded by a number of plants in good bud seen by all, while the climbers found just one plant in flower. Small Gentians were puzzling, and our early identification of *Gentiana terglouensis* was doubted on finding this in many localities, until Prof. Erika Pignatti explained that in its two areas, in the Julien Alps of Slovenia near Triglav, *G. terglouensis* is rare and infrequent, whereas in our area it is locally abundant. *G. brachyphylla* and *G. verna* although mostly with true gentian blue flowers, both had violet colour forms - violet *G. verna* frequent on Pordoi Pass, and at Passo Pellegrino a blue-washed white form also. We recorded 13 Gentian species in all. The enchanting very pale pink *Pedicularis* (resembling *P. incarnata* in the field guides) was named as the hybrid *P.* × *bohatschii* Steininger, published by Maurer in E. & S. Pignatti 1962, with characters intermediate between the

parent species *P. elongata* × *P. rostratocapitata*. Most puzzling were the 'little white jobs' on the mountains, and discussions on these were extended by correspondence, throughout the following winter both to and from Trieste. We were finally satisfied that we had recorded: *Arenaria ciliata*; *Minuartia verna* (some with pink anthers), *M. austriaca*, *M. rupestris*, *M. sedoides*, *M. biflora*; *Moehringia ciliata* and *M. muscosa*; also small *Linum catharticum* (just to confuse us!). Ron Payne named grasses for us and reported that the most interesting was perhaps *Helictotrichon praeusta*, which Prof. Sandro Pignatti told us replaces *H. pratense* in northern Italy. A satisfying number of species scarce at home, but in profusion there were seen e.g. *Oxytropis campestris*, *Erigeron alpinus*, *Melampyrum sylvaticum*.

Walking to Vallelunga, *Dianthus superbus* subsp. *alpestris* and *Lilium bulbiferum* subsp. *bulbiferum* were in hay meadows close to the hotel, and further up the valley it was the flowering week for *Gymnadenia odoratissima*. Other species in the valley included *Clematis alpina*, *Horminum pyrenaicum*, *Paedorota bonarota*, *Leontopodium alpinum*, *Daphne cneorum* and *Achillea clavennae*. On higher meadows at Seceda we found *Nigritella nigra* in profusion and *N. miniata*, *Vitaliana primuliflora*, *Primula halleri*, *Anemone baldensis* and *Cystopteris montana*. Some of the group went twice to Pordoi Pass for *Eritrichium nanum*, *Primula minima*, *Soldanella pusilla*, *S. alpina* and *Traunsteinera globosa*, and on the higher paths *Ranunculus glacialis*, *Androsace alpina* and *Geum reptans*. Four intrepid members, led by Paul Bartlett walked back from Pordoi to the hotel over the tops - later to show us awe-inspiring slides of snowslopes and crags. At Sella pass on a day exploring the 'Stone City', we recorded *Androsace hausmannii*, *Potentilla nitida*, *Chamorchis alpina*, and *Salix alpina*, *S. breviserrata* and *S. herbacea*. From the top of the Passo Pellegrino chairlift we walked to the Selle ridge where the rock changes abruptly from limestone on the ascent with *Ranunculus seguieri* and *Doronicum grandiflorum* to the acid rock over the ridge with *Primula glutinosa*. A dramatic violent thunderstorm as we reached the ridge sent us to shelter in the Rifugio, or some in a ruined quarrymen's hut with *Eritrichium nanum* growing on the roof, but as the desired plant photography was impossible a return visit was arranged. On this we encountered a bitter freezing cold wind in which trigger fingers blue with cold matched the blue of the sheets of *Primula glutinosa* which distantly appeared like a haze of blue water. Eating luscious sun-ripened Italian cherries by the snow then seemed truly exotic. On one of the highlight days the Professors Pignatti with eleven students on their nearby field meeting, met us to walk from Passo Gardena to Colfosca. First there was a relevé - a term new to us (but it is in *The Flora and Vegetation of County Durham*, G.G. Graham, 1988): all the species within a roped area were identified - for us a good revision - then a frequency assessment given for each. On the walk we recorded *Asplenium seelosii*, *Silene quadridentata* and *Draba hoppeana* and also the Saxifrages *Saxifraga adscendens*, *S. aizoides*, *S. androsacea*, *S. aspera*, *S. caesia*, *S. depressa*, *S. exarata*, *S. moschata*, *S. oppositifolia*, *S. paniculata*, *S. rotundifolia*, *S. sedoides* and *S. stellaris*. A photograph of the relevé was published in *BSBI News* **59**: 53, 1991, and throughout the holiday this cheerful good-humoured and superbly enthusiastic BSBI group was a joy to be with on a botanical excursion.

MARY BRIGGS

ENGLAND - 1992

MIDHURST, WEST SUSSEX (v.c. 13), 18th - 19th JULY

The purpose of this joint BSBI/Sussex Botanical Recording Society (SBRS) meeting was to assess tetrad recording. 29 botanists with a very typical cross section of abilities met during the weekend to record tetrads using a standardised technique.

Four tetrads (GR SU/8.2 K, L, Q and R) were selected around my home village of Stedham for survey as I *thought* I knew them intimately! To minimise recording bias, botanists worked in pairs, recording for exactly 2.5 hours in each tetrad, and were rotated to different tetrads and paired with a different person for subsequent sessions. The recorders selected their own areas to survey, and marked the routes on a map and filled in details on the special SBRS record cards (produced by Paul Harmes and Alan Knapp) designed to collect information about their recording behaviour.

Despite each group having a map of the tetrads and being aware that the recording was being analysed, two pairs strayed out of their tetrads. It was possible to correct one card, but the other was rejected outright and was not included in the analysis. A grand total of 7,262 records were collected

on 41 cards, of which eight records were obvious errors (0.1% error rate). In all, there were 634 species recorded, with species totals for the tetrads of K=404, L=426, Q=413 and R=428. The mean number of species per card for each tetrad was K=157, L=181, Q=182 and R=189, with individual cards ranging from 69 species to 257; it is little coincidence that this highest score was by T.C.G.R. in his home tetrad, in the company of Mary Briggs, the Vice-county Recorder!

Five species, *Urtica dioica* (Common Nettle), *Dactylis glomerata* (Cock's-foot), *Galium aparine* (Cleavers), *Heracleum sphondylium* (Hogweed) and *Plantago major* (Greater Plantain) were recorded on every card, whilst 159 species (25% of the species) were recorded only once. Approximately, the first card contributed 42% of the species for each tetrad, five cards contributed about 75% of the species, and eight cards about 90% of the species as the law of diminishing returns comes into effect, but every card had some unique species, showing that it is always worth recording. Not every species known to be present in the area was recorded by a long way!

One recording episode provided another striking lesson. As Orpine (*Sedum telephium*) occurred in only one hedge in the area, I made a special trip to record the plant, but the hedgerow had been narrowed and fenced, and the plant had gone. I complained about this sad loss at lunch time only to hear that the plant had just been seen on a woodland edge 20m from my original site. Another recorder, overhearing my delight at the news, visited the site to see the plant for himself later, but failed to find it. A fourth visit to double check proved that the plant was indeed present. To have such an obvious species on the edge of a path overlooked on two of the four visits *made specially to look for it* was very surprising. Failure to find a plant where it had occurred in the past or where it was expected did not mean it was extinct. Populations do change, and botanists are not perfect.

The results are still being analysed, and are providing an enormous insight into recording. It is a pity that such exercises were not carried out before the BSBI Monitoring Scheme was set up (as, for instance, the BTO did for their Breeding Bird Survey), or we would have recorded quite differently. We still have much to learn.

Thank to Judy Rich and Evelyn Jones who provided an excellent cream tea for all on Saturday afternoon.

T.C.G. RICH

ANNUAL EXHIBITION MEETING 1992 - REPORTS

SOME *RUBUS* DISCOVERIES OF 1992

Exhibited were:-

i *R. cordatifolius* (Rogers ex Riddelsd.) D.E.Allen, from Sark.
A little-known species apparently endemic to Guernsey and Sark, this had not been seen on the latter since its original recording there by W. Moyle Rogers in 1897 - and his material (now in **BM**) is too scrappy to have been fully convincing. After intensive searching this July failed to disclose it in the area indicated by him, a small population was eventually discovered in a gorse heath not far away. The Guernsey lectotype was also exhibited.

ii *R. largificus* W.C.R.Watson, new to Ireland
Previously believed endemic to south-east England except for some distant outliers in Cardigan, v.c. 46, this was recognised during the winter as the identity of some specimens collected in 1988 in North Tipperary, v.c. H1O. It grew in abundance in the locality in question.

iii A bramble known for some years in woods on the outskirts of Havant, in the south-east corner of Hampshire, v.c. 11. This has now been confirmed by the Belgian *Rubus* specialist H. Vannerom as identical with a species well-known in the Low Countries which is shortly due to be described. A Dutch specimen of this was exhibited for comparison.

D.E. ALLEN

A NEW TAXONOMIC TREATMENT OF THE BRITISH ELMS

The British elms are one of the most critical genera in the British flora today. They have a long history of taxonomic and nomenclatural difficulties, with few experts agreeing about the correct ranking or even recognition of many of the distinctive variants. More recently, they have been the subject of two major conflicting taxonomic treatments, developed by Melville and Richens respectively, which fail to agree not only on the fine details of classification but on the general principles. In groups with a similar biology, taxonomists have reduced the diversity to an acceptable level of order by describing a large number of microspecies.

In the present study, a total of 59 taxa have been successfully delimited and described using gross morphological characters. The study area was restricted to East Anglia, Leicestershire and Cornwall. The provision of a basic microspecies approach will facilitate further taxonomic and phylogenetic studies on the genus.

J.V. ARMSTRONG

CYTOLOGICAL CATALOGUE OF THE BRITISH & IRISH FLORA

Progress towards compiling a cytological catalogue of the British and Irish vascular flora was described. To date, chromosome counts from more than 6,000 localised populations of 933 native species have been incorporated into the catalogue, with data drawn both from the literature and from our own counts at Leicester. This total accounts for 60% of the native flora (excluding the large apomictic genera *Rubus*, *Hieracium* and *Taraxacum*). Cytological variation within several species has been confirmed, and the case of *Viola riviniana* was used as an example.

J.P. BAILEY & R.J. GORNALL

RANDOM ACCESS GUIDE TO SELECTED BRITISH HAWKWEEDS

The Guide (published by the Department of Botany, National Museum of Wales and the Field Studies Council) consists of an illustrated booklet showing the morphology of the hawkweeds that occur in Britain together with a random-access key program on floppy disc, for use on IBM and BBC compatible microcomputers. The key program was developed by Dr Colin Legg. The exhibit gave potential users the chance to try out the computer program under the guidance of the exhibitor. A simple coding system allows the user to tell the computer about the hawkweed specimen that is being examined. The computer is able to list on the monitor all known species with the observed characteristics. Each species is also given a probability rating and it is then a simple matter to compare the specimen being examined with literature descriptions of the most probable species. When a possible match is found the name can be recorded and the specimen finally checked against specimens at one of the large national collections.

J. BEVAN

COMPARISON OF THE RATES OF NATURALISATION OF THE INVASIVE ALIEN AQUATICS, *CRASSULA HELMSII* AND *MYRIOPHYLLUM AQUATICUM*

Although *M. aquaticum* (Vell. Conc.) Verdc. (*M. brasiliense* Cambess) and *C. helmsii* (T. Kirk) Cockayne, were both first reported within a few years of each other (1950s), they are naturalising at different rates. *C. helmsii* is present in *c.*400 sites, whereas *M. aquaticum* has only reached *c.*70 natural or semi-natural sites, despite planting of both species together in *c.*10 sites. Preliminary analysis of the rapidly continuing dispersion of *C. helmsii* shows that the sporadic primary spread to

new areas is fast changing to local dispersion from existing sites. Viable propagules of *C. helmsii* are much smaller, more tolerant and more numerous than *M. aquaticum* and are therefore more easily dispersed. Environmental tolerances are wider for *C. helmsii* particularly for water level, water chemistry and probably frost tolerance; the latter may be lower for *M. aquaticum* than normally suggested.

F.H. DAWSON

RESOURCES FOR FLORA WRITERS IN THE HERBARIA OF THE NATURAL HISTORY MUSEUM

The vascular plant herbaria contain about 4 million specimens, 0.5 million of which were collected in the British Isles. The libraries hold about 800,000 volumes and receive 20,000 journals each year.

These extensive resources were illustrated by herbarium sheets of early collections, comparative material from other parts of the world and critically determined specimens.

Photocopied pages from annotated floras were also displayed and visitors were invited to visit the herbaria.

C.M. DOWLEN

SPECIES RECOVERY PROGRAMME (SRP)

English Nature's SRP is continuing through 1992 and 1993. BSBI members' help, particularly with the following five species, would be appreciated: *Apium repens*, *Dianthus gratianopolitanus*, *Gentianella anglica*, *Lactuca salina* and *Rumex rupestris*. A list of ways in which members could help was given. These include field survey, collation of historical data, past and present site management notes, and assessment of suitability of sites for possible recovery projects. Some financial assistance is available under English Nature's Grants scheme.

Anyone interested is asked to contact Andrew Deadman or Lynne Farrell at EN, Northminster House, Peterborough PE1 1UA.

L. FARRELL

ALOPECURUS AEQUALIS Sobol. DISCOVERED IN IRELAND

Part of the current commissioned research of the National Parks and Wildlife Service in the Republic of Ireland is a survey of the Red Data Book higher plants. During 1992 this survey concentrated on Co. Cork. One of the v.c.'s in this large county, H5 E. Cork, proved to have many ponds and small lakes with lowered summer water levels. The 'exposed mud' habitat is well represented and historical records exist for species such as *Mentha pulegium* and *Rumex maritimus*. During searches in September and October 4 sites for *Alopecurus aequalis* were found. This grass was unknown in Ireland, but the habitats are ideal, and there is no suggestion of recent introduction. Its very late flowering in this area of relatively high rainfall, the inconspicuous habit in poached mud hollows, and the unfamiliarity of most Irish botanists with the species, may account for its having remained unnoticed. More sites may well be found in Ireland, though the habitat is threatened by drainage, infilling of ponds, and changing grazing regimes preventing stock from trampling pond margins.

R. FITZGERALD

OROBANCHE TAXA OF CYPRUS

The *Orobanche* flora of Cyprus includes both European and Asiatic taxa and nine of these are recorded from the island. Of particular interest to the European visitor is *O. orientalis* Beck, a root parasite of almond trees and possibly introduced with them, *O. aegyptiaca* Pers. a pest of agricultural crops, including potatoes, tomatoes, runner beans and cabbage, and the endemic *O. cypria* Reuter, which parasitises *Pterocephalus*, *Cistus* and *Salvia* spp., and is a very striking plant. A close relationship may exist between *O. cypria*, the recently described *O. baumanniorum* Greuter from Greece, and plants growing on similar hosts from Iraq. Also present in Cyprus, is a plant which parasitises Umbelliferae, especially *Zosima absinthiifolia*, and which has affinities to *O. ramosa* L. but has been tentatively referred to *O. schultzii* Mutel. Preserved specimens and photographs of all these were shown.

M.J.Y. FOLEY

TYPHA ANGUSTIFOLIA L. IN CUMBRIA PLANTS WITH TWIN FEMALE FLOWERING HEADS

A condition in which the female flower heads of *Typha angustifolia* L. exist as two completely separate entities has been noted with varying frequency at its ten extant Cumbrian (v.cc. 69 & 70) localities. In some populations the condition was non-existent or negligible, but in others up to 25% of flowering plants had twin female flower heads. Presumably of genetic origin, it appears to be unrelated to geographical location, altitude, or ecological factors. Extreme variation in the incidence of flowering was also noted at the Cumbrian localities. Information on the subject from elsewhere in the British Isles was welcomed.

M.J.Y. FOLEY & M.S. PORTER

ISOENZYME VARIATION IN *CALLITRICHE*

Isoenzyme polymorphism in stem apices has been studied in two species of *Callitriche* (*C. obtusanqula* Le Gall and *C. staqnalis* Scop.) collected from 21 populations in Dorset and 7 populations in Wales for later comparison with Spanish populations. Ten specific enzyme systems were analysed: ADH, G-6-PDH, GOT, EST, IDH, MDH, ME, PGI, SkDH and SOD. Some variation was found in the SOD patterns and possibly in EST, IDH and ME, but not in the other enzymes systems. As there is little variation in these isoenzymes from the populations investigated, it seems unlikely that there is sufficient genetic variation to use isoenzymes for identification purposes in the genus *Callitriche*.

M. GIL PINILLA

PROGRESS WITH THE BSBI DATABASE (LEICESTER)

The BSBI Database (Leicester) currently contains 10,407 taxon names, 4,177 authority strings and 8,714 bibliographic citations. The names and authorities were sorted and collated using software written by R.J. Pankhurst (RBG, Edinburgh) to produce camera-ready copy for D.H. Kent's *List of vascular plants of the British Isles* (1992).

Current and future projects include: 1) *Bibliographic citations* for the taxon names already in the Database are being checked for accuracy. 2) *English names*. 3,030 of these are now in the Database and are being cross-referenced. 3) *BSBI Abstracts*. It is planned to produce the August

1993 and future issues from the Database, with the contents of previous issues being added gradually. 4) *Vice-comital Census Catalogue*. Data is being gathered on the occurrence in each of the 113 vice-counties of all the 4,273 taxa in Kent's *List*. Occurrence post-1970 or only pre-1970, and status as native, naturalised, alien or casual, will be documented.

R.J. GORNALL & C.A. STACE

PHYSIOLGICAL STRESS IN *DACTYLORHIZA FUCHSII* CAUSED BY DROUGHT

The study site near St Albans consists of partially restored gravel workings with the remains of pits some of which contain water. Floristically the most interesting feature of the site is the presence of several large colonies of *D. fuchsii* and the last few members of a swarm of *D. praetermissa*. In 1991 most of these were flowering well but, by 1992 many were exhibiting severe symptoms. Brown lesions covered the stems and leaves, in other cases the whole plant including the flowering head had shrivelled, and in some cases the plant died before it flowered. Detailed examinations and isolations were carried out, and the conclusion was that the plants were suffering from drought stress caused by the dropping water table. Further studies are continuing and the authors would like to know if similar symptoms have been observed any where else in the UK. Any reports of these symptoms should be sent to the authors at the following address: Environmental Science, University of Hertfordshire, Hatfield AL10 9AB

A.M. HALL, A .McCARTHY & E. MERCER

POLYGONUM MARITIMUM IN EAST SUSSEX (v.c. 14)

In June 1992 a number of plants of *Polygonum maritimum* were found on a Brighton beach (det. Dr J.R. Akeroyd). This was the first record for E. Sussex (v.c. 14) and the first Sussex record since 1868 (W. Borrer).

The plants flowered right through the Summer until November, setting seed. It is thought that there were approx. 14 plants. The site has been designated SNCI (Site of Nature Conservation Interest). However, it is hoped that English Nature will extend an adjacent SSSI to include this site in the near future.

P.A. HARMES & A. SPIERS

HYDROCOTYLE RANUNCULOIDES L.fil. (APIACEAE) AN ALIEN FLOATING PENNYWORT IN ESSEX

The first British record of this North American *Hydrocotyle* with floating leaves was made by M. Heywood in the River Chelmer, Chelmsford, S. Essex (v.c. 18) in 1990. It remained unidentified until the plant was again found in south-east Essex at North Shoebury in a flooded gravel pit (also v.c. 18) by T. Pyner and R.G. Payne. In 1992, *H. ranunculoides* has continued to spread downstream in the River Chelmer and into the Chelmer-Blackwater canal. It is sold in several aquatic nurseries and has the potential to be a future pest species.

M. HEYWOOD, R.G. PAYNE & T. PYNER

POPULATION GENETICS OF TWO SPECIES OF *POTAMOGETON* IN THE BRITISH ISLES

Starch gel electrophoresis of isozymes was used to study hybridisation and genetic variation in the subgenus *Coleogeton* (*Potamogeton*).

Electrophoretic evidence added support to the hypothesis that *P.* × *suecicus* is a hybrid between *P. pectinatus* and *P. filiformis*. It appears to have arisen on more than one occasion.

Genetic variation was observed within and between populations of *P. pectinatus* and *P. filiformis*. Genetic variation was observed between populations of *P.* × *suecicus*.

P.M. HOLLINGSWORTH*, R.J. GORNALL & C.D. PRESTON (*Funded by NERC)

THE TRUTH ABOUT PINEAPPLEWEED?

The first record of pineappleweed (*Matricaria discoidea*) in Britain is usually said to have been at Aber in North Wales in 1871. This record, first published in 1932, is an error based on a specimen collected near Kew Gardens in 1871; it was not found at Aber until 1899, by which time it had become well established around Kew and in several other parts of Britain.

Q. KAY & G. HUTCHINSON

FRAGMENTED RANGES AND UNCERTAIN FUTURES: POPULATION GENETICS, REPRODUCTION AND DISPERSAL IN SCARCE GRASSLAND SPECIES

This Countryside Council for Wales project is centred on a group of plant species that are of conservation importance in a world context.

Priority has been given to a number of threatened grassland or marsh plants, most of which have Oceanic West European distributions and are endemic or near-endemic in Europe. The aims of the project are to describe: (a) the patterns of *genetic variation* in these plant species (mainly by isozyme electrophoresis); and (b) their *breeding systems*, *reproductive biology* and *demography*, especially in relation to genetic erosion and other factors that affect the survival of small isolated populations. From this knowledge it should be possible to provide practical and scientifically based guidelines for rare plant conservation policy.

The species included in the first stage of the project are *Carum verticillatum*, *Chamaemelum nobile*, *Cirsium dissectum* and *Vicia orobus*, with *Carex montana* which has a strongly disjunct distribution, largely oceanic in Britain but centred on central Europe. These localised, rapidly declining species now have fragmented, often highly disjunct ranges and are severely threatened by habitat destruction and change.

Q. KAY & R. JOHN

JAPANESE KNOTWEED JOINT RESEARCH PROJECT - HYBRID SURVEY

The Leicester and Loughborough joint Japanese Knotweed project is interested in plotting the distribution and spread of the hybrid alien *Fallopia* × *bohemica* (*F. japonica* × *F. sachalinensis*). This hybrid exists at two different ploidy levels 2n=44 and 2n=66 depending on whether *F. japonica* var. *japonica* or var. *compacta* was involved in the hybridisation. A current distribution

map was displayed showing the proportions of these different chromosome ploidy levels in the British Isles. Specimens of both the parents and the hybrid and SEM micrographs of relevant parts of the plants were also shown. It is thought that this hybrid is greatly under recorded, since it has been found in almost all areas studied intensively by the researchers. Details of how to distinguish the hybrids were provided on a handout and members were asked to look out for the hybrid in their own local areas and to report it to the project coordinators.

LEICESTER & LOUGHBOROUGH UNIVERSITIES

JOCELYN RUSSELL 1906 - 1992

The exhibit consisted of examples of her numerous drawings - painted and line - notably those during the fighting in N Africa 1942/3, and that of *Rubus arcticus*, her notebooks, her completed Wild Flower Society Diaries and a specimen of *Dichondra micrantha*, which she found new to the British Isles. Her obituary was published in *Watsonia* **18**(3): 201-203 (1993).

D. McCLINTOCK

AT MEY IN AUGUST

At the invitation of Queen Elizabeth the Queen Mother, Patron of the BSBI, 27 members of the Society visited the Castle of Mey on the afternoon of 10th August 1992.

Her Majesty was at the Castle entrance awaiting the party and requested that all be presented. She then lead a tour of the walled garden during which she was presented with a container planted with Gentians on behalf of the Society.

Afternoon tea was then served in the Castle after which the President expressed the appreciation of the party not only for the invitation, but for the manner in which the members had been received. A minibus was then available to take the party to the shore to view Oyster Plants which are of especial interest to the Queen Mother. On return to the forecourt of the Castle the Queen Mother bade good-bye to the members, collectively and in many cases individually.

A.C. & P. MACPHERSON

CARDIOSPERMUM HALICACABUM L. - NEW TO BRITAIN?

In September 1992 Pauline Sitwell found a strange climbing plant growing behind the Prince's Hotel in Sandwich, Kent (v.c. 15). She brought the plant to Michael Mullin who thought he recognised it but considered his identification to be unlikely. Checking it in the Herbaria at Kew and the Natural History Museum confirmed his serendipitous guess as correct and it was identified as *Cardiospermum halicacabum* L. This is a herbaceous genus of the family Sapindaceae and this species probably originated in the New World tropics. As to how it arrived in Kent, it is occasionally grown as a garden curiosity, Balloon Vine, the seeds which are black with a white heart-shaped hilum are used for necklaces, and Maberley says that the leaves are used as a vegetable. Michael Mullin has been unable to trace any other naturalised records.

M. MULLIN & P. SITWELL

THE GUERNSEY BAILIWICK IN 1992

Yet again a goodly number of noteworthy finds have been made during the year. Among them are the following.

Alderney: *Apium nodiflorum* var. *pseudorepens*, New to CI; *Crataegus* cf. *pedicellata*, not yet recorded elsewhere in the CI; *Geranium pusillum*, first vouched record; *Malva sylvestris*, with 'blue' flowers, like 'Primley Blue', New to CI; *Ononis repens* f. *albiflora*, new to the island; *Setaria pumila*, new island record; *Sorghum halepense*, first confirmed record for CI.

Guernsey: *Crataegus persimilis* 'Prunifolia', not yet recorded elsewhere in CI; *Descurainia sophia*, new to the Bailiwick; *Orobanche purpurea*, second record since 1884, in a new locality; *Serapias lingua*, new to British Isles.

Sark: *Lychnis flos-cuculi*, hitherto unknown there; *Mentha* cf. *villoso-nervata*, new island record; *Ranunculus omiophyllus*, first confirmed record for CI.

B. OZANNE

PLANTLIFE HELPS SAVE WILD PLANTS

Plantlife is the leading wild plant charity which works for the protection of wild plants and their habitats in Britain and Europe.

The Plantlife exhibit was a six-panel display board with text featuring several major projects: purchasing meadows; saving peat and peatlands; restoring hedgerows; rescuing plants which are on the brink of extinction; protecting plants from ruthless trade and exploitation; the threat of global warming; production of Red Data Books for the imperilled mosses, liverworts, stoneworts and lichens. The text was overlaid on to a background of eye-catching photographs which illustrated these projects.

Visitors were encouraged to join Plantlife through the exhibition of a range of literature including the current newsletter, Annual Review and membership leaflets.

J. SMART

MAINLY *LASERPITIUM* L.

The thirteen European species of this umbelliferous genus of the mountains were summarised, and illustrated by herbarium sheets, most of which had been collected by the exhibitor.

As a comparatively compact genus of clearly separated species, most of which are substantial and conspicuous, *Laserpitium* is to be recommended as a confidence-builder when coming to terms with the 450 umbellifer species present on the continent. There are, however, 3 or 4 members of the genus which cannot be seen without a special effort, lest it should all seem too easy.

The slowly-growing collection of umbellifer fruits appeared as usual, together with sheets of four obscure *Eryngium* species and some seedlings of two of the rarest *Seseli* species, *S. praecox* Gamisans and *S. vandasii* Hayek, which were in need of good homes.

M.J. SOUTHAM

SCARCE SPECIES IN SCOTLAND; FOREIGN SEED IN WILDFLOWER MIXTURE; FLOWER PAINTINGS

1. Scarce species survey - *Calamagrostis stricta*:
   Comparisons of *Calamagrostis stricta*, and a hybrid *C. stricta* with *C. scotica*. Also a comparison of the *Calamagrostis* from Clearburn Loch v.c. 79, a possible parent of the hybrid *C. stricta* from Alemoer Loch, v.c. 79, with *C. purpurea*.

2. Alien plants that included *Plantago arenaria* that appeared around a forestry car park that was reseeded with a seed mixture for 'Heavy loam and clay'
3. A yellow waterlily reidentified as *Nuphar advena* at Carlingwark Loch v.c. 73 and a NCR, *N. pumila* from a loch in the NW of v.c. 73
4. *Polygonum boreale* appeared in a vegetable patch at New Abbey v.c. 73 in 1991 and 1992.
5. Flower paintings.

O. STEWART

CORIARIA (CORIARIACEAE) - DISTRIBUTION THROUGH VICARIANCE OR DISPERSAL (OR BOTH)?

The genus *Coriaria* (Coriariaceae) has a unique, disjunct, distribution around the world. It inhabits disturbed ground in warm, temperate regions or high altitudes in the tropics. The distribution may have arisen through vicariant events, e.g. continental drift, if the family is ancient, or through dispersal if the family is of more recent origin.

At Leicester we are investigating how this distribution may have arisen, primarily through studying the evolutionary relationships of the different taxa within the genus.

The exhibit showed how quantitative morphological characters with large variation, e.g., leaf length, are being measured and used to construct phylogenetic trees. A sample tree was used to illustrate some of the problems e.g. whether one of the New Zealand species (*C. arborea*), is identical with the Chilean one (*C. ruscifolia*) which is also present in some Pacific islands.

Photographs and specimens collected in Central America, New Zealand and Spain were shown.

P.N. THOMPSON

FLORA OF THE CRETAN AREA

The subject of this exhibit was a survey of the vascular flora of the Cretan area in the South Aegean region, carried out by Nicholas Turland and Lance Chilton. A brief introduction to the geography, flora and vegetation of the area was given. Details of the techniques used in producing distribution maps for most of the *c.*1750 species were provided, together with samples of the finished maps themselves. Line drawings of some of the rarer endemic plants, produced by the botanical artist Margaret Tebbs, were displayed, and habitat photographs of the endemic *Tulipa doerfleri* Gand. were shown, along with a brief discussion of the ecology of this species. The imminent publication of an annotated checklist and atlas covering the flora of the Cretan area was announced.

N.J. TURLAND

MULTIPLE ORIGIN IN *ASPLENIUM ADULTERINUM*

It has been shown that *Asplenium adulterinum* is an allotetraploid species, derived by hybridisation and chromosome doubling from two diploids with very different niche requirements, *Asplenium trichomanes* subsp. *trichomanes* found only on acid rock, and *Asplenium viride* from limestone. The two parental diploids can grow together on serpentine, a magmatic, ultrabasic, heavy-metal containing rock with a high content of magnesium and a very low content of calcium.

Most polyploid species have a wide distribution in comparison with their diploid parents, whereas *Asplenium adulterinum* has a wide but localised distribution in Europe, being restricted to serpentine. This distribution is unlikely to be the result of long-range spore dispersal, but more

probably represents repeated hybridisation events. To test the hypothesis of recurring hybridisation, the most effective technique seems to be the restriction fragment length polymorphism analysis in the chloroplast DNA. Applying this technique and assuming maternal inheritance one can demonstrate which of the possible parental chloroplast genomes is present in the different populations.

J. VOGEL & M. GIBBY

POLYPLOIDY IN *PARNASSIA PALUSTRIS* L.

Parnassia palustris L. is a variable species characterised by two main cytodemes: a diploid (2n=18) and a tetraploid (2n=36). The diploids have a predominantly southerly distribution in the British Isles and the tetraploids a northerly one, showing an imperfect correlation with the Devensian glacial boundary.

Evidence accumulated so far indicates that the tetraploids are autoploid in origin: the karyotype of the tetraploid genome is a doubled-up version of that of the diploid; whilst isozyme studies have revealed that in tetraploid populations heterozygotes segregate, with no indication that any are fixed, and furthermore that unbalanced heterozygotes occur at at least four loci.

J.E. WENTWORTH R & J. GORNALL

FOREIGN *CRATAEGUS*

Herbarium specimens were displayed of planted and naturalised Hawthorns found in the London area in 1992. Their countries of origin ranged through North America, Europe and Asia.

B. WURZELL

ADVERTISEMENTS

HIGHLAND FIELD STUDIES

Brian Brookes has again put together an interesting and varied programme of courses for 1993. Most are specifically botanical and others, though more general have a high botanical content. All will be run as small, friendly groups in a relaxed, informal and enjoyable atmosphere.

Specially recommended to BSBI members are the courses on MOUNTAIN FLOWERS (July 3-10) & WILDFLOWERS OF TAYSIDE (July 17-24), both based at Dunkeld, Perthshire.

The programme also includes:-

Mosses & Liverworts	Dunkeld, Perthshire	April 23-26
Botany in Morvern	Ardtornish, Argyll	June 13-20
Bryophytes	Dunkeld, Perthshire	August 21-28
Mushrooms & toadstools	Ardtornish, Argyll	September 15-22
Autumn in Tayside	Dunkeld, Perthshire	October 10-17

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

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

[My apologies to Brian for missing this out of the last issue. Ed.]

STOP PRESS

ORCHID'S REVENGE!

Spotted near Ansty in Dorset, in response to *BSBI News* **61**: 38 perhaps?

EDITOR [Thanks for the photo David!]

BSBI NEWS INDEX - ANYONE FOR TYPING

Dr George Hutchinson has now completed the preparatory work for indexing *BSBI News* **49 - 60**, but unfortunately there is no one to do the typing. I just do not have the time at present to do this. It occurs to me that there may be several BSBI members who are prepared to give a little of their spare time to help the Society by typing the index to one issue of *News*. This consists of between 30 to 60 pages of manuscript depending on the size of the issue being indexed (most lines, of course, have only a few words on them). All that is needed is straightforward typing of the manuscript as it stands, no sorting or abbreviating, to be completed within three months. The typescript or computer printout will then be scanned into a word processor and I will take it from there. If twelve volunteers can be found to take on one issue each, the Index could be published this year. If not then there is no prospect of it being published even next year! The Society could of course pay to have it typed professionally, but if the typist has no knowledge of Latin names or botanical terms then checking could take almost as long as typing! If you are interested in helping please do write and let me know. If there are more volunteers than parts of the index then so much the better, you could be invited to type a paper or two for *BSBI News* itself.

EDITOR

Contents (continued from inside back cover)

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

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