BSBI NEWS

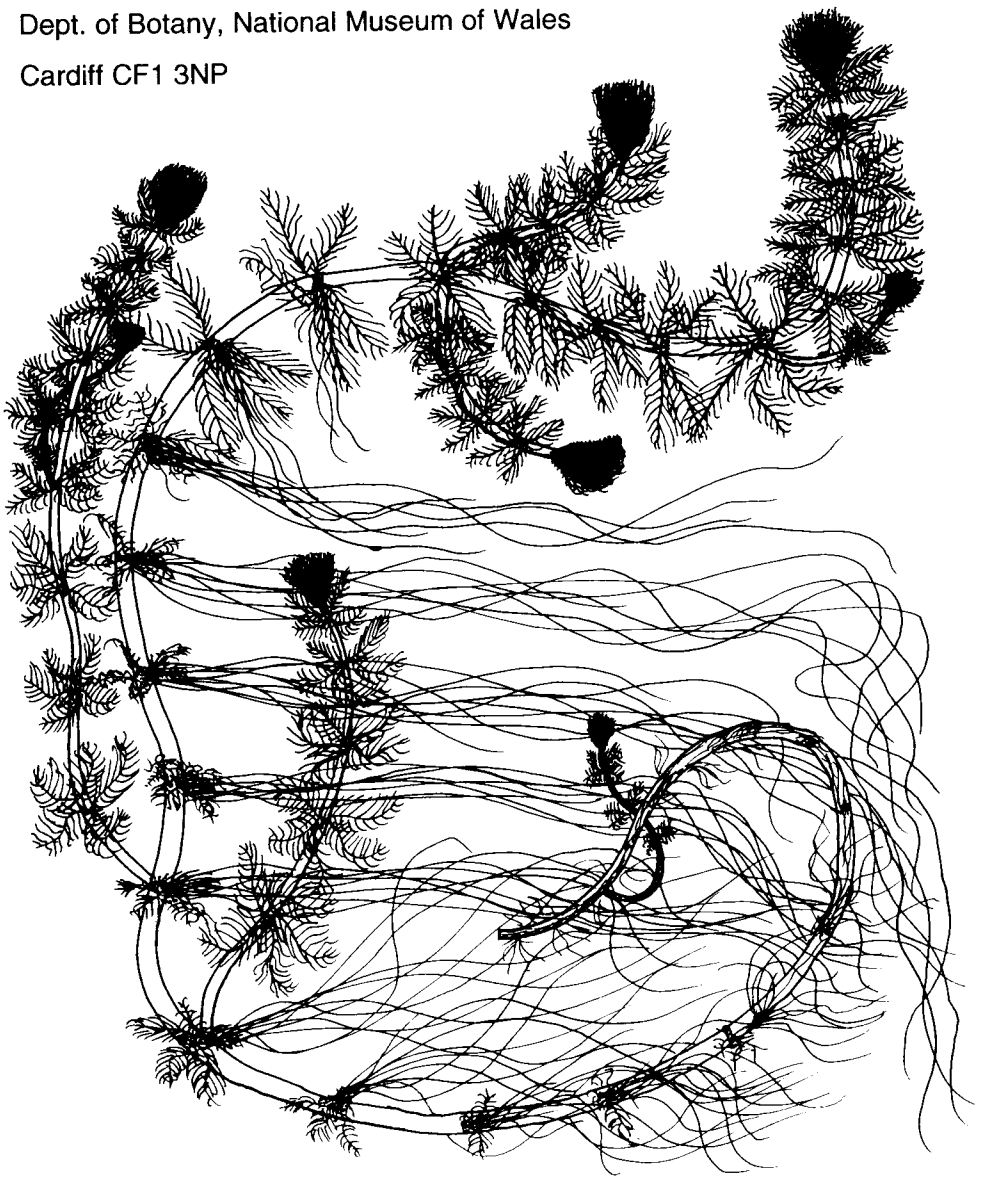
September 1994

Edited by R. Gwynn Ellis

No. 67

Dept. of Botany, National Museum of Wales

Cardiff CF1 3NP



Myriophyllum aquaticum on Walthamstow Marshes. del. Brian Wurzell © 1994 (see p. 51)

ADMINISTRATION

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

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

IMPORTANT NOTICES

ANNUAL GENERAL MEETING 1995

Advance notice is hereby given that the Annual General Meeting of members of the Society will be held in the National Botanic Gardens, Glasnevin, Dublin on **Saturday May 13 1995**.

A full programme will be sent to all members in the 1995 January mailing.

MARY BRIGGS, Hon. General Secretary

From the BSBI Committee for Ireland:-

The next Annual General Meeting in May 1995 will be held in Ireland for the first time in the Society's history as part of the celebrations to mark the bicentenary of the foundation of the National Botanic Gardens at Glasnevin, Dublin. It is hoped that as many members as possible will take the opportunity to come to Ireland and meet the Irish membership.

Members will be welcomed on the Friday evening with a reception at the Botanic Gardens, probably including a tour of the gardens and a talk on their history.

A series of talks around the general topic of the botany of the Irish Sea will occupy most of Saturday, followed by a dinner in the evening. A field excursion in the Dublin area will take place on the Sunday.

PAUL HACKNEY, Hon. Secretary, BSBI Committee for Ireland

CONTRIBUTIONS INTENDED FOR

***BSBI NEWS* 68**

should reach the Editor before

NOVEMBER 5th 1994

COMMENT

FROM OUR PATRON

The following message was received by Mary Briggs in response to a Birthday Card from the Society.

> 'I greatly appreciate your good wishes on my birthday and send my very sincere thanks to all who joined in your kind message.'

ELIZABETH R., PATRON

SCARCE PLANT ATLAS

Perhaps I might add a few words to the flier (or is it flyer?) accompanying this issue of *News*. The *Atlas* consists of a short introduction (16 pages) setting the scene for the project, followed by accounts of the 325 species covered in the form shown on the reverse of the flier.

For 73 of these species this account is supplemented by maps showing the number of tetrads within each 10 km square that the species has been recorded in since 1970. This gives an idea of frequency, lacking of course from a simple presence/absence map and very clearly highlights the security of large populations and the threats of few occurrences. We thought of using sites, or 10 km squares but the results were so little different, and so much clearer by using tetrads.

For 14 species we have produced a series of time-maps which show changing distribution patterns – usually, of course, decline – over a series of four dates.

These maps are followed by two further chapters. The first discusses the various natural habitats in Britain and the changes and threats that have occurred since the last Atlas. Each species is allocated to a particular habitat and maps produced for that habitat showing the frequency of species recorded ever in each 10 km square and recorded post-1970 and the loss between the two. A final chapter discusses changes in our knowledge of the distribution of species since the 1962 Atlas.

Finally there is a really extensive bibliography (13 pages), a gazetteer and an index covering all scarce species, all RDB species and synonyms.

Perhaps this note should have been written by someone else, since my name might suggest special pleading or reveal an inability to stand back! When I saw the first volume of the recent Bryophyte Atlas I knew that new ground was being broken, and this was reinforced by the latest Bird Atlas. I think, and hope, that this *Scarce Plant Atlas* too will shed many new insights onto the substantial group of plants that we feel is in many ways more vital then RDB plants, which have much more specialist and random niches. Certainly it has been a challenge to incorporate the records of over 1100 volunteers and 104 vice-county recorders, and the accounts of 102 authors and the 20 people who commented on them. Our sincere thanks go to all of them – now buy the book!

DAVID PEARMAN, on behalf of Alison Stewart, Chris Preston and himself.

DIARY

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

1994

DECEMBER

14-15 European Lowland Grasslands meeting, Loughborough (see page 59)

1995

FEBRUARY

4 *Botanical Latin* meeting, Reading (see page 58)

9 Joint BSBI/Linnean Society Conference, London (see page 58)

APRIL

16 National Phone Day (see page 59)

JULY

29 IOPB VI International Symposium, Tromsø, Norway (see page 60)

See also pages 68-70 for dates of 1995 Botany Tours at home and overseas

EDITOR

EDITORIAL

Another bumper issue of *News* packed full of interesting information, at least I hope so. There are a few contributions that are longer than usual and I would welcome any observations on whether you like the occasional longer article or not. I would also welcome comments on any aspect of *News*. It is only through that sort of feedback that I can gauge your reaction to changes, or indeed, whether you want change at all. You may notice in this issue that the headers at the top of each page have changed. Page numbers are now given at the outer margin at the top of each page with the remainder of the header at the opposite margin. I hope this will make it easier to find your way around, but if it does not, then please let me know.

You will also notice that *BSBI News* is now accepting paid adverts for overseas tours, books , etc. These appear at the back of *News* and there is a note there about costs and procedure for placing an advert.

Apart from being a bumper issue, there are also quite a number of inserts and these are listed here so that if any are missing you can write to me for a copy. First there is the *Index to BSBI News* vol. 49-60, for which we thank the compiler, George Hutchinson, and all the typists, for their efforts. There is also a notice of the Annual Exhibition Meeting and one for the Scottish Exhibition Meeting; pre-publication offers for *Scarce Plants in Britain*, *The Alien Flora of the British Isles*, *Sedges and their allies in Dorset* and *Welsh Names of Plants*; BSBI Publications catalogue and a Mistletoe Survey record card.

Computer Users Group A small group met in the National Museum of Wales in the spring to discuss software applications which may be suitable for botanical recording. A number were demonstrated and all were thought capable of doing the job but with various degrees of complexity. A future meeting is planned for further evaluation but the main outcome of the meeting was an understanding that so long as information could be readily and easily imported and exported between the different systems, the actual software used was not that critical.

EDITOR

PROFILES

RICHARD GORNALL

Dr Richard Gornall, who teaches and researches in Botany at the University of Leicester, was Receiving Editor of *Watsonia* from 1983 to 1991. During this period he extended the valuable work of his predecessor, Prof. Clive Stace, to enhance the quality and prestige of the Society's journal, both in Britain and Ireland and internationally. At the same time, his research on the family Saxifragaceae and his involvement in a number of BSBI projects have made him an eminent member of our Society, with a reputation that extends far within the botanical community.

Richard's first degree was in Botany at the University of St Andrews in 1975 (where he was an exact contemporary of myself, with whom he shared Dr Peter Gibbs as supervisor of his Honours thesis). As well as obtaining First Class Honours and the class prize, Richard had the distinction of having his BSc. thesis on the status, genetics and ecology of *Ranunculus reptans* in Britain published as a paper in *New Phytologist*. He then spent a year at the University of Birmingham, obtaining an MSc in genetic resource conservation, before moving to Canada, to the University of Vancouver.

Here he studied *Boykinia* and other genera of Saxifragaceae for a PhD. under Professor Bohm. On his return to Britain in 1980, he took up his present post in the herbarium at Leicester, where he continued his research on Saxifragaceae, especially the genus *Saxifraga*. This work was recognised by the award of the Linnean Society of London's Bicentenary Medal. Richard's interest in Saxifragaceae led to collaboration with Prof. David Webb, Emeritus Professor of Systematic Botany at Trinity College, Dublin, and BSBI Honorary member. Together they have published an acclaimed monograph on *European Saxifrages* (1990).

Meanwhile, Richard had become an Editor of *Watsonia*. Working closely with Clive Stace at Leicester, his transition to Receiving Editor in 1983 was smooth and efficient. Richard's fellow editors remember with gratitude his meticulous attention to detail, his efficiency in dealing with authors and matters of editorial policy, and the application of his wide-ranging botanical knowledge and expertise. The Society was privileged to have had an editor whose intellectual skills were combined with the energy and enthusiasm of youth.

Richard has also been involved in the establishment of the BSBI's database at Leicester and in the collaborative project to compile a Chromosomal Atlas of the British and Irish Floras. His involvement in research and teaching at Leicester, alongside that of Clive Stace and other staff members, has helped to make that Department a centre for systematics and the study of the British and Irish floras, and one in which the BSBI both provides an input and receives much benefit. Richard has long served on the Society's Publications Committee and Council, and we can be confident that he will continue to be a most valuable member of the BSBI in the years to come. He is not perhaps the sort of BSBI member whom one would encounter on a field meeting or observe filling in a recording card for a tetrad. Nevertheless he represents most admirably our Society's traditional link with the wider taxonomic and scientific community, one which will continue to serve our Society well.

We therefore endorse most strongly the election of Richard Gornall, one of the country's most distinguished botanists, to Honorary membership of the Botanical Society of the British Isles. Long may we enjoy his able and vigorous contribution to British and Irish systematic botany.

JOHN AKEROYD, 49 Kelvedon Close, KINGSTON-UPON-THAMES, Surrey KT2 5LF

DAVID McCLINTOCK

I cannot remember exactly how or when I first met David McClintock, but he thinks it was through our mutual friend Cyril Pease and it was certainly at least 40 years ago, in the early 1950s, that halcyon age before anybody had thought of the 1960s. Anyway we were soon hard at it working together on the *Pocket Guide to Wild Flowers*, published in 1956, but now out of print for several years. I am glad to say I still occasionally see nostalgic references to the *Pocket Guide*, as one of the best field guides to British wild flowers. To this enterprise David brought his already magisterial and encyclopaedic knowledge of the British vascular flora and its field characters, and to him was largely due such merits as many people have seen in it.

From there David went on to become a major player on the botanical scene, becoming President not only of our own Society but also of the Ray Society and the Kent Field Club; Vice-President of the Linnean Society and the Kent Trust for Nature Conservation as it was then called; Chairman of the Wild Flower Society; and Editorial Secretary of the Linnean Society.

He is also a distinguished gardener and horticulturist, with a special interest in heathers and bamboos, and for many years chaired the Scientific Committee of the Royal Horticultural Society.

Among his many other books have been *Companion to Flowers* and works on the naming of flowers, and the *Flora of the Channel Islands* in which he has always been especially interested. He was also honoured by being allowed to survey the wild plants of the grounds of Buckingham Palace, which he still does.

With all these remarkable services to field botany in Britain, you can seen why I most warmly applaud the Society's decision to make my old friend David McClintock an Honorary Member.

RICHARD FITTER, Drifts, Chinnor Hill, CHINNOR, Oxon OX9 4BS

Dr D.E. Allen was also elected an Honorary Member of the Society at the AGM on 14 May 1994. His nomination was introduced by Prof. W.T. Stearn who will be sending this for publication in *BSBI News* **68**.

EDITOR

HON. GENERAL SECRETARY'S NOTES

Congratulations to:

John Richards, promoted to Reader in Botany at his University of Newcastle-upon-Tyne. Personal Readerships are now exceedingly rare, so this is good news for botany, and for John.

David Cann featured in the Western Morning News for Devon & Cornwall, and the Express and Echo, reporting on his field studies on *Sorbus* spp. – which they linked to the University place since offered to him. His project was supported by a Warburg Award, and David again thanks the BSBI for the grant saying how much it helped him. (See report page 15).

George Peterken, for the award of OBE in the Queen's Birthday Honours for services to woodland conservation.

Kenneth Carlisle (MP for Lincoln), for the award of a Knighthood in the Queen's Birthday Honours, who learnt his botany at night school under Ted Lousley.

Many members reported seeing Clare and Mark Kitchen and Charles Nelson in the Channel 4 *Over the Garden Wall* series; also John Akeroyd in a Countryside programme and our editor in a Welsh language programme on S4C talking (in English) about cannabis! It is good to see familiar faces on the box...

Edgar Milne-Redhead is very pleased that his Black Poplar Project, which began with the BSBI *Populus nigra* L. s.s. survey in 1973, has now achieved nationwide interest. Many articles in the National Press have brought response from all parts of the British Isles, and an Action Group has been set up (see *BSBI News* **66**: 7-8 and this issue page 22).

Edgar comments that after 20 years he finds that he has been after all barking up the **right** tree!

MARY BRIGGS, Hon. General Secretary

THE BSBI MEMBERSHIP SURVEY

Introduction and summary

In autumn 1993, a questionnaire was sent to each of the 2,500 members of BSBI to obtain their views on a wide range of topics relating to the Society and reach a better understanding of the demography of the membership.

Nearly 800 forms were returned, a very good response as surveys go, and this means that the following analysis gives a statistically sound picture of the views of the membership.

One of the aspects that might be of some concern to the Society is the age of the members (see question 11). There are clearly very few young people joining and some additional thought might be given as to how to appeal more strongly to this group, especially in view of the emergence of Plantlife which has, perhaps, a more youthful image.

The 2 to 1 proportion of men is also a factor that the Society might like to consider, though it is less easy from the survey to suggest reasons for this other than the clichéd (but probably still correct) view that males tend to join things more.

In addition to the material contained in this report, members elaborated more fully on their particular interests, abilities and what they expected from the Society. In particular they were invited to mention areas in which they would be willing to help. This aspect of the response is handled separately and hence questions 8 and 9 are not included in the tabulations that follow. The forms have all been kept and further analysis is possible in addition to that already being undertaken.

BSBI Survey Question 1

Which indoor meetings of the Society have you attended in the last 5 years?
Base 784

Exhibition meeting in London	377	44.09%
Exhibition meeting in Edinburgh/Glasgow	89	10.41%
BSBI or BSBI + another organisation conference	106	12.40%
BSBI AGM	135	15.79%
Regional AGM (Ireland/Wales)	60	7.02%
Recorder's Conference/Workshop		88
10.29%		
TOTAL INDOOR MEETING VISITS	855	

Perhaps not surprisingly, almost certainly because of its ease of access and well populated catchment area, London is the most popular venue among those who attended exhibitions.

The rest of the figures speak for themselves, but clearly reflect the number of members living in particular places.

BSBI Survey Question 2

How many field meetings (excluding those connected with AGMs) have you attended in the last 5 years?

10 or more	36	5.59%
6-9	31	4.81%
2-5	180	27.95%
1	104	16.15%
None	293	45.50%
TOTAL	**644**	

Over 50% of those who answered this question have attended field meetings, but 45.5% have not, with the average being one every year or two. Only about 10% of members go to more than one meeting a year.

BSBI Survey Question 3

Please answer yes or no to the following statements

a) **I am satisfied with the field meetings as they are**:	346	39.0%
b) **I would attend more field meetings for any of the following reasons**:-		
If I lived in the British Isles	27	4.94%
They were nearer home	325	41.4%
They were designed more for the beginner	102	13.01%
They were extended to cover the European flora	47	5.99%
They were more for studying particular 'difficult' groups	132	16.84%
They dealt with subjects other than field botany	29	3.70%
TOTAL RESPONDENTS	**784**	

Of those that attend field meetings, the vast majority (89%) are satisfied with meetings as they are. Nearly half the respondents would attend more meetings if they were nearer home. Field meetings that concentrated on 'difficult' groups would be welcomed by 17% of the membership and 13% are interested in those designed for the beginner (perhaps because they are beginners).

BSBI Survey Question 4

How often have you used the referee system for identification in the last 5 years?

10 or more	63	8%
6-9	29	4%
2-5	130	17%
1	87	11%
None	433	55%
Don't know	14	2%
TOTAL	**784**	

55% have not used the referee system, a number that probably overvalues the true use as the less committed members who did not answer the questionnaire would also be less likely to use the referee system. 40% have used the system, but relatively infrequently while less than 10% are dedicated users. A few people did not know whether they had used the system or not, or did not answer the question at all.

BSBI Survey Question 5

Please answer yes or no to each of the following statements about *Watsonia*

	Yes		No	
I read it all because it keeps me in touch with what is going on	328	41.84%	345	44.01%
I read particular sections but not all	495	63.14%	197	25.13%
I find it boring and hardly glance at it	46	5.87%	560	71.43%
I would like to see more articles on the conservation of the British flora	436	55.61%	205	26.15%
I would like to have more articles on critical groups in the British flora	432	55.10%	190	24.23%
I would like its range extended to include the European flora	230	29.34%	384	48.98%
I would like to see more articles on other topics	131	16.71%	340	43.37%

NUMBER OF RESPONDENTS: 784

In general this seems well-liked. The first two figures come to more than 100% because some respondents claim to read both all of the journal **and** some of it. Nevertheless over 90% of the respondents approve of what they get.

Many would like to see more articles on conservation of the British flora and on critical groups in the British flora, but only one third want the European flora included and less than 17% more articles on 'other topics'.

There is no doubt that the publication is regarded as difficult by some and there were several marginal comments like 'I read as much as I can understand'.

BSBI News – members' views: question 6

Please answer yes or no to each of the following statements about *BSBI News*

	Yes	No	Don't Know	Yes	No	Don't Know
I read it all	482	-	2	73%	-	0%
I read particular sections	176	-		27%	-	
I find it boring and hardly glance at it	2	-		0%	-	
I would prefer a glossy magazine	-	531	75	-	80%	11%
a) paid for from an increased subscription	11	-	-	2%	-	-
b) which paid for itself from advertising	48	-	-	7%	-	-
I object to advertising pamphlets with *News*	58	504	97	9%	76%	15%

Total respondents 662

BSBI News is rated very highly: virtually 100% of respondents claim to read *News*, 73% all of it and 27% part of it. Only one third of one percent (0.3%) found it boring and the remaining few did not volunteer an opinion.

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

On the topic of advertising pamphlets as inserts, most respondents (76%) did not object to these being included with *News*, 9% were against and 15% did not express a view. BSBI Survey 1993

BSBI Survey Question 7

Please indicate how much the following other BSBI publications are valued by you personally? 1 = Highly, 2 = Of some importance, 3 = No value, 4 = Don't know

	1	2	3	4
Abstracts	251	375	115	89
Handbooks series	495	137	16	25
List of Vascular Plants	274	262	81	98
English Names	172	296	168	89
Conference Reports	94	385	113	128
Local Floras	357	301	37	44

Total respondents 784

The most highly valued publications are those in the Handbook Series, followed by local floras, the list of vascular plants and abstracts. English Names was less popular and conference reports scored poorly, though many thought they were of **some** importance.

Every publication was considered of no importance by some people, with English Names topping the list followed by Abstracts and Conference Reports. There were many 'don't knows' indicating the large proportion of the membership that is not familiar with one or any of the publications.

BSBI Survey Question 10

Which of the following activities you have enjoyed during the last year

Gardening	609	77.68%
Reading	681	86.86%
Cinema	167	21.30%
Theatre	238	30.36%
Art galleries	273	34.82%
Fine food and wine	276	35.20%
Foreign travel	400	51.02%

BASE 784

The survey shows, perhaps as one would expect, that the activity most indulged in was reading followed by gardening. Then a large gap down to foreign travel enjoyed by only half the membership. Round about a third enjoy theatre, art and good food and wine, but only 21% are enthusiastic cinema-goers.

BSBI Survey Question 11

Gender, Working Status, Age

Male	478	66%
Female	250	34%
Part time	69	9%
Full time	357	49%
Not working/retired	302	41%
Und 18	1	0%
18-24	6	1%
25-34	66	9%
35-44	144	20%
45-54	167	23%
55-64	165	23%
65+	175	24%
DK	4	
BASE	**728**	

The figures show how heavily skewed the Society is towards older people and males (66%). Nearly three quarters of the members are over 45 and a quarter over 65; only 1% are under 25.

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

RECORDERS AND RECORDING

BSBI WINTER MISTLETOE SURVEY 1994-96

It is twenty-five years since the BSBI carried out a survey of the distribution of mistletoe (*Viscum album*) and its hosts in Britain. During this time the decline of apple orchards (a major stronghold) and increasing imports to meet the Christmas market suggest a decline and a change in distribution. To assess these changes a repeat survey is planned for the 1994/5 and 1995/6 winter seasons. All BSBI members are invited to take pert and send in records on the card enclosed with this *News*. In addition we are pleased that Plantlife will be collaborating with us in conducting the survey.

The original survey, carried out in 1969/70, showed that mistletoe was more widespread than previously realised, particularly in the northern counties of England and Scotland. Although scattered, and perhaps originally introduced, over much of its range there was a dense concentration in the west-country counties of Gloucester, Hereford, Somerset and Worcester. This was also the area with the highest number of host species. The survey also showed the predominant importance of apple orchards and trees as the host – three times as many 10 km square records than the next two host species on the list, lime and hawthorn. Full results were published in *Plants Wild & Cultivated* (Perring 1973). Since 1970 many traditional apple orchards in the west country and elsewhere have been grubbed up. This seems likely to have affected both distribution of the species and reduced the amount available for traditional Christmas use. Gathering mistletoe from orchards was once widespread and though a parasite the plant may even have been encouraged as an extra winter crop. Today imports from Europe seem to be the main source of retailers' mistletoe.

The loss of apple trees may have reduced mistletoe frequency as measured by the number of tetrad records. The number of host species, which seems to be related to the density of the mistletoe population, may also have declined. Other possible influences include climate change – the species is restricted northwards by a high temperature requirement (Godwin 1975) and may respond to global warming by extending northwards especially as, being bird sown, it is readily dispersed.

Results from the new survey will be used to assess changes in mistletoe and host distribution. Additional research into traditional and present-day trade and imports should help in assessing whether there is any cause for concern. For example are current cropping levels (in Britain or in Europe) sustainable? Are berries from imported plants being planted to the detriment of local genotypes?

All members and friends are invited to take part in the survey. It will run from autumn 1994 and cover both the 94/95 and 95/96 winters. The best time to look is between December and April when most trees and shrubs are leafless.

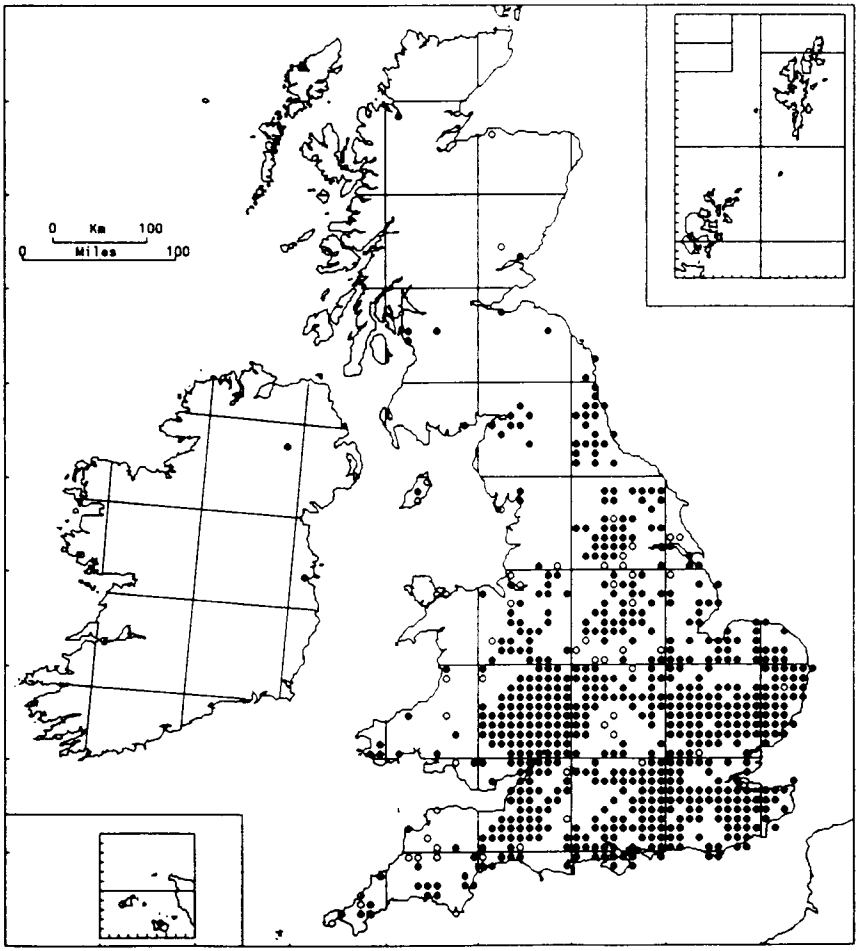
The recording card has self-explanatory instructions on the back. A new card should be used for each 10 km square visited. On each card the tetrad and host species of each mistletoe occurrence should be recorded. You should also record tetrads which you have searched and where no mistletoe is found. The map on p. 12 is a guide to which 10 km squares are worth searching. If you would like to cover additional 10 km squares more cards can be obtained.

Incomplete records from a 10 km square can still be used whilst individual records will be accepted so long as they give tetrad/grid reference and host. A record card for individual records will also be available.

In addition to distribution records any observations or information on mistletoe trade would be very welcome. These should be sent to J. Briggs at the address below, as should the completed record cards. Additional cards can also be obtained from this address (please include SAE).

Viscum album

0920 2223



● 1950 onwards (08-648, Ir-2, Ch.Is-1)

○ before 1950 (08-58, Ir-0, Ch.Is-1)

Biological Records Centre, Monks Wood.

References

Godwin, H. (1975). *History of the British Flora* . Edn 2. Cambridge.
Perring, F.H. (1973). *Mistletoe*. pp 139-145. in *Plants Wild and Cultivated* Ed. P.S. Green. BSBI Conference Report 13.

JONATHAN BRIGGS, 2 Ledgemoor, Watledge, NAILSWORTH, Gloucestershire GL6 0AU
FRANKLYN PERRING, President

OBSERVATIONS ON *CARDAMINE BULBIFERA* AROUND TUNBRIDGE WELLS, W. KENT

The useful article by Showler & Rich (1993) does not emphasise one factor concerning the habitat preferences of *Cardamine bulbifera* that I consider to be crucial. As they note, Trimen (1862) referred to the presence of the species in copses recently cleared of underwood. In fact in many sites on the W. Kent/E. Sussex boundary around Tunbridge Wells, especially its former stronghold in High Woods, Hawkenbury, *C. bulbifera* occurs with *Hyacinthoides non-scripta*, and it shares the latter's intimate relationship with the coppice-cycle, now almost defunct. High Woods were last extensively coppiced in 1960/61, and in 1961 they presented a magnificent carpet patchwork of blue and pink. A contemporary note of mine concerning *C. bulbifera* reads: 'Incredibly abundant over 3 or 4 acres after winter coppicing, in full flower with bluebells in May 1961. C.A.S.'

In successive years, as the *Castanea* coppice grew up, the two spring herbs gradually diminished in abundance until the *C. bulbifera* became reduced to stragglers or small patches along rides, in small clearings or at the wood edges. How long the rhizomes can last in a dormant state is a question worth answering by experiment. Certainly the equally lamented colonies of Pearl-bordered and Small Pearl-bordered Fritillaries in High Woods are lost for ever. I have seen *C. bulbifera* flowers visited by Brimstones, Orange Tips and Green-veined Whites, but not by the Pearl-bordered Fritillaries (the other species of Fritillary flies slightly later). I am sure that the demise of coppicing in the High Weald has been a major factor in the decline of *C. bulbifera* there.

With regard to the localities listed by Showler & Rich, the Tunbridge Wells Common site of K.E. Bull still exists and is *not* the same as the Hungershall Park site, though still in TQ/5.3U.

References:

Showler, A.J. & Rich, T.C.G. (1993). *Cardamine bulbifera* (L.) Crantz (Cruciferae) in the British Isles. *Watsonia* **19**: 231-245.
Trimen, H. (1862). *Dentaria bulbifera* near Horsham, *Phytologist*, n.s. **4**: 224.

CLIVE A. STACE, Cringlee, Claybrooke Road, Ullesthorpe, Leicestershire LE17 5AB

SUBSPECIES

Following guidance on Fieldmeetingship there has been request for a short article explaining simply the subtle taxonomic differences between species, subspecies, hybrids and varieties. Our Society embraces professionals and amateurs, experts and beginners, competents and incompetents. This article is for the amateur, incompetent beginner and is written by one.

The above six categories are a good starting point. How are they to be identified taxonomically? It is, for example, quite wrong to assume that the expert competent professional (e.c.p.) on a field meeting will correctly identify a passing weed. The e.c.p. will not even see it.

Probably the most unhelpful solution is to write a dichotomous key which the e.c.p. will tell you is logically infallible, thus:

1 Professional: can identify species correctly in herbaria; easily disorientated outside herbaria; has microscopic eyes and is colour blind 3

2 Amateur: enjoys the view; spots weeds; wonders what they are 4

3 Expert: knows everything; confuses spades, shovels and handheld terraforming workstations; field identifications very difficult to understand ..... 5 or 6

4 Beginner: knows nothing; instantly recognises spades; often correctly guesses identification in the field from photograph in book ..... 5 or 6

5 Competent: identifies correctly ..... 1 or 2

6 Incompetent: identifies incorrectly ..... 1 or 2

This is called a circular dichotomous key and is of no use to anybody.

It may be more helpful to take a pleonastic specific species such as *Categoria outlandica* with its subspecies *monociliata* (with one hair on its leaf edge), *duociliata* (with two), the hybrid *monociliata* × *duociliata* commonly known as *monosemiduociliata* (with one and a half) and the varieties *monosemiduociliata* var. *sinistra* and *monosemiduociliata* var. *dextra* where the half hair is on the left or right when looking down on the plant which is significant when it is recalled that this is a southern hemisphere species causing much confusion now that it is established in the British Isles; as its monosemiduociliate nature is such that the half hair varies between a quarter and three quarters in length there is popular demand for further subspecies and attendant or associated varieties, a demand reinforced by a recent record where the additional half hair is at the leaf apex, although this latter is clearly a supradecompositus species. The fact that the pleonastically ciliate leaf hairs rarely reach 0.1 mm makes identification in the field slightly difficult.

What is the amateur incompetent beginner botanist to do about this?

The sane and balanced answer is to take up ornithology. Alternatively it would be reasonable to take to drink. These are negative approaches and the positive response is to outStace Stace (to whom nothing but the highest possible respect).

The solution lies with the garden escape.

Proceed to the tropics and select half a dozen species at the northern edge of their range and unknown to the British Isles. Collect seed. Grow seed at home on top of cooker and carefully selecting our one day of summer transplant to the great outdoors directly in front of boiler exhaust where there will be sufficient heat; the British summer will provide sufficient humidity. See a lawyer and make arrangements for your garden to be reduced to meet requirements, lengthening your boiler exhaust by tubular extension as required and until such time as you create a new record for Exshire, vice county zero. Fame is yours and you can forget all about species, subspecies, hybrids and varieties.

If you are detected in your subterfuge by a BSBI spy bear in mind the old nautical Latin tag when the weather is rough: 'O si sic omnia' – 'It's all up.'

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A LIMITED EXERCISE IN PLANT RE-RECORDING
FIELD WORK 1-5 JUNE 1993

INTRODUCTION

Using the paper *The Flora of the Upper Tamar and Neighbouring Districts* by the Rev. Moyle Rogers, from the *Journal of Botany* 1886 Jan.-Jun., it was hoped to re-record *Sorbus devoniensis* and *S. torminalis* in stations where they have not been recorded since 1886. This would provide recent distribution records for each species, in an area containing few recent records for either species. The Upper Tamar is on the western edge of the mainland British range of *S. devoniensis*.

Sorbus devoniensis is a locally occurring apomictic whitebeam, thought to be a hybrid between *S. aria* and *S. torminalis*. It is a member of the *S. latifolia* aggregate, two other species of which are native to Britain, *S. bristoliensis* and *S. subcuneata*, each with a very restricted range (Sell 1989).

The author has been researching the distribution of *S. devoniensis* in the field since 1991, by using locations from the W.P. Hiern herbarium at the Royal Albert Memorial Museum, Exeter. This has increased the number of known locations considerably, especially in the central part of the range.

Its known distribution includes, Mid and North Devon, with three confirmed outlying populations in South Devon; Yelverton (or Roborough) near Plymouth; Teignmouth and Chudleigh; one station in Cornwall (Beardon, in the parish Boyton) and a small area of South East Ireland, around the valleys of the Barrow and Nore. There is an undetermined record for *S. devoniensis* at Hockworthy in north-east Devon.

THE LOCATIONS FROM THE PAPER

Sorbus devoniensis:
1] Between Marhamchurch and Titson in two places,
2] About 0.5 mile from North Tamerton on the Bridgerule road in two or three places,
3] Tetcott; several together in a wooded lane south of the church,

A fourth unspecific record, 'Near Molland railway station' will not be considered here, as it is in north-east Devon, and was originally included as an aside.

Sorbus torminalis:
1] 1 mile out of Stratton on the Holsworthy road,
2] 1 mile out of Holsworthy on the Bideford road,
3] Bridgemoor {Bridgerule} toward Hollaton {Farm},
4] Between Whitestone and Bridgerule in several places.

SUMMARY OF FIELDWORK

The Rev. Moyle Rogers records: 1-5 June 1993

Sorbus devoniensis:
1] Marhamchurch – Not refound
2] North Tamerton - Not refound
3] Tetcott (v.c. 4) – Found 4 June 1993, GR. SX/327.961 New tetrad for the 'Atlas of the Devon Flora'.

Sorbus torminalis:
1] Stratton-Holsworthy (v.c. 2) – Found 3 June 1993, GR. SS/238.054 A 'new' station for tetrad SS/22.04
2] Holsworthy-Bideford – Not refound
3] Bridgemoor – Not refound
4] Whitestone-Bridgerule – Not refound

DISCUSSION

Neither records 2] or 3] for *Sorbus devoniensis*, are mentioned in the *Flora of Devon*, (Martin & Fraser 1939), marked on the map in the *Atlas of the Devon Flora*, (Ivimey-Cook 1984), or on Dr Proctor's 1991 map.

Sorbus devoniensis at Tetcott, record 3], where it was last recorded over a hundred years ago, consists of 2.5m high bushy material, in the hedges of both sides of the track leading down to the Tamar. It was of particular note because it was in flower, (a rare occurrence due to normal hedge management) and therefore, has certainly had the ability to spread out to other sites in the locality, in recent years. Its nearest known station is at Beardon, in the parish of Boyton, which is the only confirmed Cornish station. Originally recorded by J.A. Briggs in 1881 in the *Journal of Botany* (Davey 1909), it was re-recorded by David and Margetts in 1986 (Margetts and Spurgin 1991).

Record No. 1 appears in the *Flora of Cornwall* (Davey 1909), because of the above article. It also appears in *A Review of the Cornish Flora 1980* (Margetts & David 1981), but no corresponding dot appears on Dr Proctor's 2km/sq dot distribution map, dated 18.6.1991. Since a number of people have looked for *S. devoniensis* between Marhamchurch and Titson, record 1] and not found it there, yet have found *S. torminalis*, it seems likely that the Rev. Moyle Rogers misidentified *S. torminalis* for *S. devoniensis*. But his identification of *S. devoniensis* at Tetcott is certainly correct, as is his identification of *S. torminalis* at Stratton. The material he looked at may have been untypical, leading to confusion.

The alternative, is that *S. devoniensis* was present and has since died out and that *S. torminalis* was overlooked, as it is unlikely that *S. torminalis* would have established in this location in the last hundred years, due to the dearth of fruiting plants in the vicinity, and the spread of the species, at this site.

Sorbus torminalis on the Stratton-Holswonhy road, record 1] is an extant station, which forms an extensive stretch of hedge. This is a location where a road improvement could leave the species in a better position for regrowing. It seems that a change in road layout, has left a large grass verge between the once roadside hedge and the road. When I visited the site (June 1993), it was recovering from a severe early summer pruning, but if treated sensitively, it could regrow to form a selection of stems.

The other records were not confirmed by the author; that they were not located, could either be because the author did not adequately search the localities, or because the plants were never actually there (although it is very injurious to a reputation to make up plant records), or sadly, and more likely, because the plants have died out, due to poor hedge management or road improvement. Species that are recorded in hedgerow sites, especially those on a roadside, are vulnerable to poor hedge management and to road widening.

CONCLUSION

From this fieldwork, there is now for each species, one extant station, that was last recorded over a hundred years ago.

Too few people in Britain could identify either of the *Sorbus* species, and those few would have little idea of what to do with their newly acquired information, so it is not too surprising that it took over one hundred years before they were rerecorded at these stations.

CURRENT STATUS

Sorbus devoniensis can be described as a local species, recorded in approximately 87 tetrads in Devon, mainly in the north and west, with one station in Cornwall. In Ireland it is known from the valleys of the Barrow and Nore in the south-east and one site in north-east Ireland.

Many plants from the Lynmouth area of Devon, are said to be examples of the Watersmeet 'No Parking' tree, which until recently was thought to exist as a single specimen (Martin & Fraser 1939, Sell 1989).

Interestingly the distribution of the nationally widespread *S. torminalis*, rarely overlaps that of its hybrid daughter species, *S. devoniensis*. In Devon and surrounding counties *S. torminalis* forms clusters of widely scattered plants around Exeter and Tedburn St Mary, the Tamar Valley, the Bude hinterland and south-west Somerset with only thinly scattered plants in between these clusters and none in the central range of *S. devoniensis*. It seems to prefer heavier clay soils than *S. devoniensis* (Roper 1993, Cann 1994).

For a full treatment of the distribution of *S. torminalis* in the British Isles, see Roper in *Watsonia* **19** pt.4, August 1993.

APPENDIX

After talking with Dr Proctor, it was thought worth trying to find a location for *S. devoniensis* in square SS/28 22 (on the North Devon coast, above the head of the Tamar), which appears in the *Atlas of the Devon Flora*, for which there was no locational information. The other records which follow were all made by the author, between 2nd and 5th June 1993, following a line between Holsworthy and the new parish of Copplestone, but do not necessarily represent new stations.

Sorbus devoniensis
i] Hartland:Brownsham Woods (v.c. 4) – 2 June 1993, GR. SS/286.258
ii] Bradford (v.c. 4) – 5 June 1993, GR. SS/413.045
iii] Black Torrington (v.c. 4) – 5 June 1993, GR. SS/439.041 and GR. SS/441.042
iv] North Lew (v.c. 4) – 5 June 1993, GR. SS/515.033

Sorbus torminalis
i] Marhamchurch (v.c. 2) – 3 June 1993, GR. SS/238.034
ii] Hatherleigh (v.c. 4) – 5 June 1993, GR. SS/528.033
iii] Hatherleigh (v.c. 4) – 5 June 1993, GR. SS/556.029
iv] Sampford Courtenay (v.c. 4) – 5 June 1993, GR. SS/622.011

I have just identified (9 June, 1994) a specimen as *S. torminalis*, that a friend has brought in from her smallholding in Holsworthy. A new 10km square GR. SS/30.00.

ACKNOWLEDGEMENTS

Allison Mills, of Barnstaple Museum, Allison Foskett, of the Geography Department Map Room at the University of Exeter, BSBI vice-county recorders: Rose Murphy (v.c. 2) and Bill Tucker (v.c. 3), and Len Margetts for corrections.

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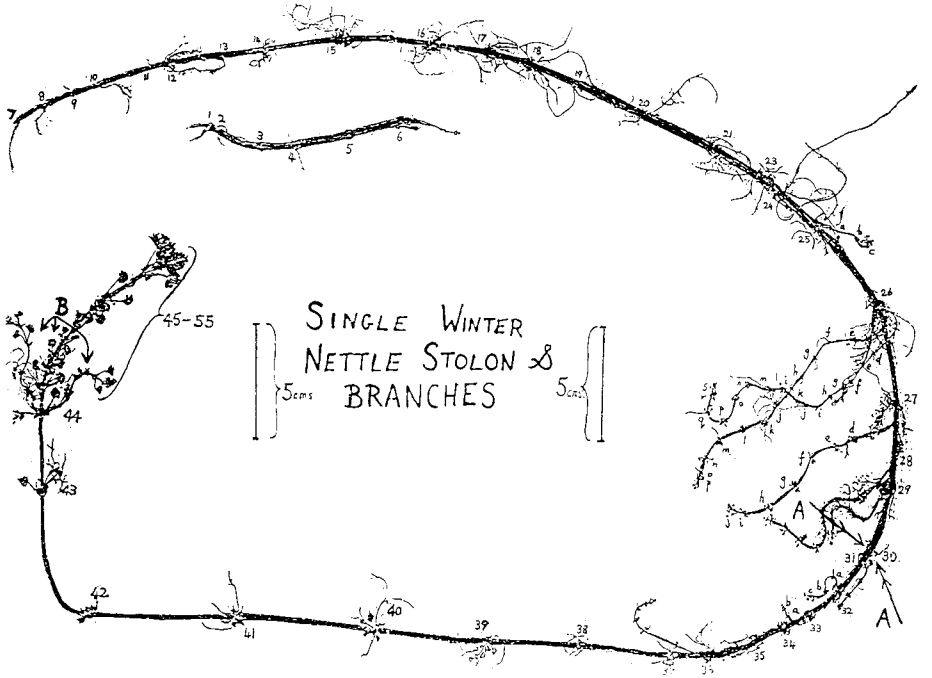
WINTER GROWTH OF NETTLES III

Urtica dioica (Stinging Nettles) are abundant in fields, by roads and alongside rivers in Wiltshire (*BSBI News* **63**: 16 and **64**: 29). CTM (1987) refers to nettle 'stems creeping & rooting at the nodes'. Here is an illustration from one plant with 3 vertical stems, unearthed and replanted in October 1993, but leaving the deep rhizome unbroken. The photocopy below, shows just one of the 9 subsequent stolons rooting near the surface between 6/11/93 and 1/3/94, under thin carpeting, with energy presumably supplies by the tough yellow roots and deep rhizome.

This single stolon measured 122 cm. The mainly Nov./Dec. section had become brown and woody by 1/3/94, and from its first 30 nodes (to point A) there had formed 8 pink and/or cream branch stolons, some of which were more than 10 cm long. These in turn carried, in all, 68 more nodes. The mainly Jan./Feb. growth section (nodes 31-55) was untoughened and pink and cream in colour to node 45 (point B), with some small green vertical shoots beyond this point. The non-woody stolon section carried shorter but more numerous branch stolons than the woody section, 14 in all, but with (coincidentally) the sum of 68 nodes again.

This single winter stolon, plus branches, therefore had formed 55 + 68 + 68, or 191 nodes. Each node can give 2 vertical shoots, so this one stolon had the potential to produce 382 vertical summer shoots, although only 7 short green vertical shoots had formed by March 1st.

The second longest winter stolon was 55 cm long, and carried 20 branch stolons, two of which were themselves rebranched (tertiary branch shoots). If all 9 main stolons were considered, the original August 1993 nettle plant had, on the most conservative estimate, created the potential for a 1994 nettlebed of at least 1000 vertical stems.



Reduced photocopy of single winter Stinging Nettle stolon, nearly 1.25 m long. Nodes 1-30 (A), brown woody Nov./Dec. growth. Nodes 30-44 (B), cream or pink Jan./Feb. growth. Nodes 45-55 carry short green February shoots. a-b, a-c, d-j, d-s, e-p, & B indicate some of the 22 branch stolons.

Martin Cragg-Barber has referred (pers. comm.) to White Dead-nettle (*Lamium album*) behaving similarly to the Stinging Nettle in its winter lateral growth spread. In the *Wiltshire Flora* (1993) this plant too is extremely common, and can often be found as an interrupted understorey beneath Stinging Nettle or Cleavers (*Galium aparine*), ready to take over when farmers control these with Glyphosphate. Measuring winter lateral growth of White Dead-nettle is difficult because the surface stolons (Stace 1991) only tend to form readily when the deep rhizomes are obstructed. Even so, White Dead-nettle, like Stinging Nettle does indeed radiate in winter months from the died-back summer stem; but only in the order of 5-10 cm, and usually by rhizomes rather than the phenomenal metre or more sometimes achieved by Stinging Nettle stolons.

Britain's weather is characterised by false springs, alternating and erratic warm and cold spells and general unpredictability. It is here suggested that we have evolved 'weeds' which use warmer winter snaps. The physiological switchings in the Stinging Nettle between roots, rhizomes, stolons, shoots, and vertical stems, depending on frosts and season, are preparation for its monopolistic summer nettlebeds (Crawley 1989). Such evolutionary adaptations seem as remarkable as (if less obvious than) many of those to be found in tropical rain forests.

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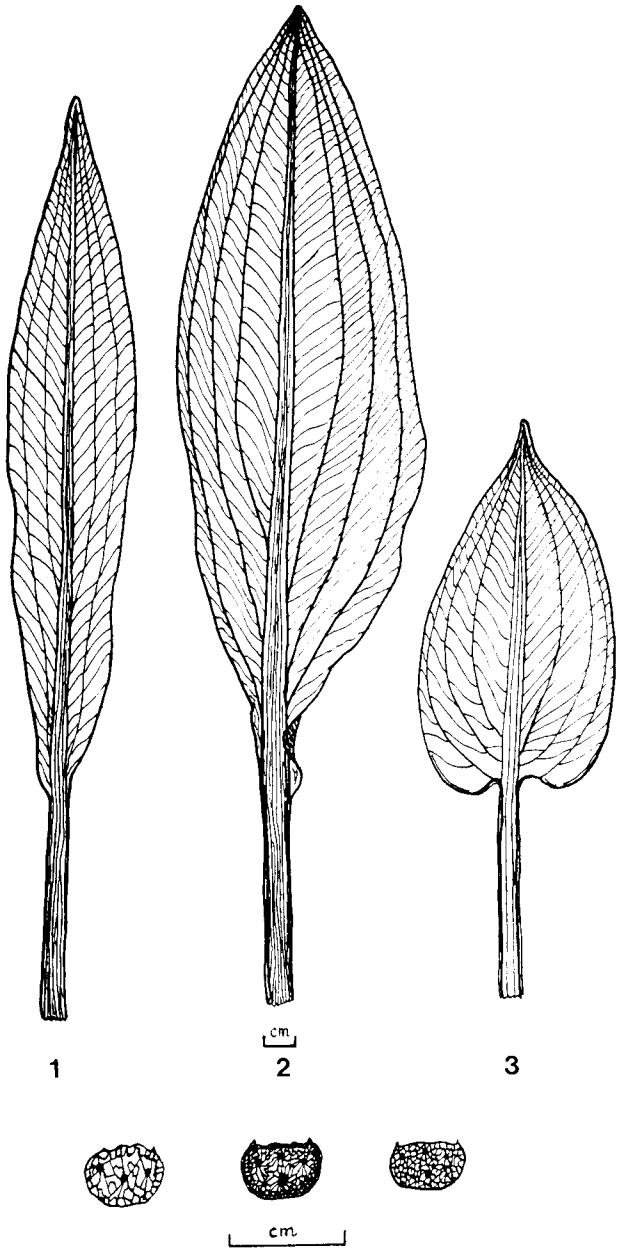
A PUTATIVE HYBRID *ALISMA* ON WALTHAMSTOW MARSHES

Walthamstow Marshes, Essex, were declared an SSSI in August 1985. They comprise East London's only surviving ancient marshland habitat. Between 1960 and 1990 I recorded over 400 distinct taxa of flowering plants, ferns and horsetails from there. In June 1994, its first orchid, *Dactylorhiza fuchsii* (Common Spotted-orchid) was detected by John Nash amongst dense reeds on the South Marsh. In July I found three hybrids new to the Lea Valley Region on the North Marsh. These were *Calystegia pulchra* × *C. sepium* = *C.* × *scandica* (Pink Hedge Bindweed), *Veronica anagallis-aquatica* × *V. catenata* = *V.* × *lackschewitzii* (Intermediate Water-speedwell) and *Alisma lanceolatum* × *A. plantago-aquatica* = *A.* × *rhicnocarpum* (Broad-leaved Water-plantain). Each English name in parenthesis bears a novel and appropriate adjective of my own coinage. The two latter hybrids were able to arise *in situ* because recent excavating of a marginal ditch (for ecological enhancement purposes) had led to a considerable increase in local populations of their parents together with larger areas of virgin mud upon which their progeny could germinate. This note now focuses on the *Alisma* hybrid.

I had seen *Alisma* × *rhicnocarpum* once previously when, on September 22nd, 1986, a single example was identified in the old Basingstoke Canal near Brookwood, Surrey. Stace (1975 & 1991) refers to several British and European records, many of which are named on macroscopic features of intermediacy, but lack cytological confirmation. The same is true of the two plants studied at Walthamstow, and my evidence is here presented. Such putatives are certainly rare; they are also strikingly robust, therefore likely to attract attention. Of their parents, *A. plantago-aquatica* (Water-plantain) is much the commoner species in south-east England, while *A. lanceolatum* (Narrow-leaved Water-plantain) occurs in just a few of the same localities. Their habitat requirements and growth cycles coincide and their typically separate morning and afternoon hours of flowering freely overlap around the middle of a warm summer's day. To my eye, the easiest characters for separating species and hybrids are found in leaf blade and petiole cell morphologies. I summarise as follows:



Leaf blades and petiole sections of *Alisma* del. B. Wurzell © 1994
1. *A. lanceolatum*; 2. *A.* × *rhicnocarpum*; 3. *A. plantago-aquatica*

A. plantago-aquatica

Leaf blade variably ovate-elliptic to ovate, usually 2-3 times as long as broad, its bases equal, abruptly rounded to subcordate, sometimes with wavy edges, and its innermost lateral vein leaving midrib c. way from base to tip.

Petiole in section ± hemispherical, its rounded part scarcely or not angled; cells in upper portion small and regular, the marginal not obviously differing from the central (×10 lens); overall texture therefore firm and resilient between finger-tips.

A. lanceolatum

Leaf blade variably broadly linear to elliptic-lanceolate, usually 3-5 times as long as broad, its bases subequal to unequal, gradually narrowed to cuneate, seldom with wavy edges, and its innermost lateral vein leaving midrib c. way from base to tip.

Petiole in section suborbicular, its rounded part correspondingly less well differentiated with 5-7 obscure angles; cells in upper portion comparatively few, thin walled, the marginal regular, the central larger and irregular with some long-sided ones radiating out in spider's-web patterns; overall texture therefore soft and spongy between finger-tips.

A. × rhicnocarpum

Leaf blade narrowly to broadly ovate, 3-4 times as long as broad, its total surface area often more than twice that of either parent in the vicinity, narrowing to unequal, often conspicuously curled to subauriculate bases, and its innermost lateral vein leaving midrib c. way from base to tip.

Petiole exceptionally long and robust (to>3 cm across at mud level), its upper portion intermediate between parents in sectional outline, cell structure and finger-tip texture.

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HISTORICAL DATA FROM SPECIMENS IN THE HERBARIUM, NATIONAL BOTANIC GARDENS, GLASNEVIN, DUBLIN (DBN), ESPECIALLY ON *CYPRIPEDIUM CALCEOLUS*

Margaret Lindop's note and request (*BSBI News* **66** April 1994) prompts this note about specimens in the herbarium of the National Botanic Gardens, Glasnevin, Dublin (**DBN**). The Glasnevin herbarium has an uncounted number of specimens originating *outside* Ireland, often of considerable historical interest, dating mainly from second and forth quarters of the nineteenth century (1830s-1840s, 1880s-1890s). Unfortunately, D.H. Kent & D.A. Allen's invaluable *British and Irish herbaria* does not credit to **DBN** many collectors active in England, Wales and Scotland, and the other islands of this archipelago, because no comprehensive catalogue of collectors represented in the Irish and British phanerogam sections of the National Botanic Gardens' herbarium has ever been prepared and published. I am hoping to rectify this lamentable gap in data available to botanists anxious to pursue historic records. A list of collectors in the Irish phanerogam section is in draft, and a list of collectors in the British phanerogam section is in preparation.

There are 5 sheets of *Cypripedium calceolus*, including one handsomely embellished by James McNab with some of his water-colours – an account of the 'painted herbarium' of James McNab has been published (E.C. Nelson, 1989. The painted herbarium of James McNab and his other botanical art. *Transactions of the Botanical Society of Edinburgh* **45**: 217-222). This McNab painted specimen has the following annotation:

Cypripedium calceolus From some of the Woods in Craven. This is the only specimen I possess. I have another promised by a Friend in Craven it is now very scarce and the Botanists residing in the above district are unwilling to shew any one the place where it grows they say that London Botanists who were taken to it nearly eradicated it Mr [Roberts] Leyland Halifax.

The annotation is not dated, but the paper is watermarked 1827.

There is a second James McNab specimen, without locality or date. A third specimen, apparently from the McNab family herbarium (for an account see E.C. Nelson, 1991. William Ramsay McNab's herbarium in the National Botanic Gardens, Glasnevin, Dublin (**DBN**) - 1. Its early history and acquisition, *Glasra* **1**(n.s.): 1-7) is annotated thus:

Cypripedium calceolus – The Plant from which this was gathered came originally from the Heths wood near Ingleton Yorkshire but is now growing in the garden of Hipping Hall – 1835.

Finally there are two specimens, apparently gathered by Irish botanists, from the same source. Richard Barrington (father of the better-known Richard M. Barrington) collected *Cypripedium calceolus* on 14 June 1857 in H. Goad's garden, Ulverston. Thomas Chandlee's specimen came from the same garden; the orchid was gathered on 11 June 1884, 27 years later, 'in the lawn at H. Goad's house, Edge End, Ulverstone, Lancashire'. Like the others it is annotated:

Brought originally from Settle Yorkshire. [H. Goad] stated that the botanist who found it – when he had supplied himself and his friends – destroyed the station!!! The vandal.

It is worth noting that while the Lady's-slipper orchid is native in the British Isles, it is not a native plant in Ireland, only in 'the other island', and even then only in England.

E. CHARLES NELSON, National Botanic Gardens, Glasnevin, DUBLIN 9, Ireland

POA INFIRMA IN THE ISLES OF SCILLY

With reference to Ray Takagi-Arigho's paper in *BSBI News* **65**, I can confirm that Early Meadow-grass, *Poa infirma* Kunth, is certainly flourishing in the Isles of Scilly. Although the plant is definitely under-recorded due to its very early appearance and short flowering period, it is spreading its range within the islands.

I have now successfully found it on all the inhabited islands (the uninhabited islands are mostly inaccessible before Easter). It is particularly common on well-trampled pathways, in gardens and on the lawns of public houses and tea gardens! From the distribution of records it seems to follow the path of human feet. The distinctive yellowish, flattened patches of the flowering grass that show up in short turf in March are easily seen, but by April it is easy to be misled by plants of *Poa annua* which can look very similar. Later plants always need careful checking.

Should any botanists be visiting Scilly in the early months of the year, I would encourage them to look out for *Poa infirma* and the other very early Scilly specialities. Better still, please can they send their records to me (see note on help wanted, page 63).

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BSBI BLACK POPLAR SURVEY

It seems that some members consider that this survey of the distribution of Black Poplar in Britain terminated with the publication of my paper in *Watsonia* in 1989. This is not so, my aim being to record all countryside Black Poplars planted by landowners and farmers and all relict native individuals on banks of rivers and streams, the natural habitat of the Water Poplar, as it used to be called. What I do not intend to record are the sites in urban areas where Manchester Poplars and

other Black Poplars of nursery stock of unknown origin, have been planted, as the distribution of these trees is of no scientific value.

More than one author of a county or regional Flora, published since the Survey started in 1973, have not consulted me regarding the status of *Populus nigra* in his or her 'patch'. One author states that *Populus nigra* is mainly introduced and very infrequent, and cites one locality where 'it is likely to be native', yet the BSBI records show it to be unknown in the area covered. The only poplars in the recorded site being *P.* × *canadensis*!

Another recent Flora of a county, where I consider, as a result of the Survey, that the native Black Poplar is still surviving here and there on banks of rivers and streams where nobody would have planted it, states it is an established alien! How a tree that has lost its ability to regenerate from seed in the wild can become an established alien is difficult to understand.

I write this note because I feel members should know that the Survey of our largest native tree is still continuing and recent publicity in the *Daily Telegraph* has resulted in hundreds of records, many of known trees, but many previously unrecorded that I have been able to add to the BSBI's records when the necessary supporting information has been obtained. All confirmed records from the Survey are passed to the Biological Records Centre at Monks Wood on cards prepared by me.

Members sending in records to me should, when possible, give me the following information. Most important is the six-figure map-reference of the site. I also like to know the vice-county, parish, name of actual place where tree is growing, name of river or stream if growing near one, kind of tree, whether standard, pollard, overgrown pollard or coppice, its sex, its habitat and altitude above sea-level.

The Survey will continue when I can no longer manage it, as I have appointed a willing and knowledgeable successor.

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NOTES AND ARTICLES

TECHNIQUES AND PRINCIPLES OF BOTANICAL PHOTOGRAPHY

Since its invention, photography has been an important tool in all branches of science. I specialise in natural history photography, of which botanical photography is a particularly rewarding field. Plants represent a rich range of beautiful subjects, sufficiently unique to demand exact techniques and a specific approach. There are many levels at which the subject can be tackled; *BSBI News* being quite a technical publication, a fairly advanced knowledge of botany has been assumed but the photographic aspects are covered from the basics.

The first consideration to be made is about the camera body itself. Cameras are classified by their film format, 35mm being the size most commonly used although there are 'roll-film' and 'sheet-film' cameras which take larger sizes and 'disc' and 'cartridge' cameras which use smaller film. Most professional photographers accept the 35mm format as offering the best compromise between image quality and ease of use. There are two broad categories into which all 35mm cameras fall – compact and single lens reflex (SLR). Satisfactory results can be achieved with the simpler compact and nowadays there are some quite sophisticated models available. However, with an SLR, what you see through the viewfinder is nearly 100% what you get. With a compact there is more of a difference. This effect, known as parallax error, is accentuated in close-up work, which forms the majority of plant photography. At a more advanced level, SLRs are really the only alternative but, since they are rather bulky, I always keep a small, pocketable compact on me in case I come across an unexpected specimen. Neither the make nor the model of your camera particularly

matter although those best known and higher in the price range are likely to be better – you get what you pay for.

Of more importance than your choice of camera body is your choice of lens – the lens is the image. With a compact you are restricted to the standard option (albeit with a macro mode on some of the better models). However, with SLRs the choice available is much greater. Lenses differ by what is termed their focal length. Fixed focal length lenses are reputed to be of higher quality than zoom lenses which offer a spread of focal lengths although, due to recent advances, the difference is now minimal. I personally prefer zooms for the assistance they provide in placing your subject within the frame. However, zooms are only made for the popular ranges and it is rare to find a zoom for some of the specialist groups of lenses. For plant photography your primary lens should be a macro as it will enable you to photograph at up to life-size reproduction ratios, which is imperative for the smaller species. Macros are invariably fixed focal length lenses and vary from 50mm to 200mm. Macros around 50mm require an extremely close approach to the subject, which is not always possible, but they are compact and offer completely natural perspective. Macros around 200mm permit one to be a fair distance away but are difficult to handle and have a noticeable effect of flattening perspective. I favour a 100mm lens for a good compromise although I do have both a 50mm and a 200mm lens to cover me for all eventualities. A macro will get you down to a reproduction ratio of between ×0.5 and, exceptionally, ×2. However, for some of the smallest flowers and anatomical structures you will need to go further. For example, Common Cornsalad *Valerianella locusta* agg. flowers require around ×5 and for these situations the ultimate solution is a bellows unit. This is a folding tube, rather like an accordion, which fits between the camera body and a lens – a macro, a standard lens or a special bellows lens for optimum quality. You can achieve a continuous range of reproduction ratios up to just over ×6, depending on the lens you use. You can expect to take a long time setting up a shot with a bellows and they are most easily used in studio conditions. As a second lens, a wide-angle (between 20mm and 35mm) is very useful for dramatic shots of plant communities, either an unusual profusion of one species or a smaller group in relation to its habitat. So-called standard lenses (from 35mm to 80mm) are useful for general habitat-shots and telephoto lenses (from 80mm to 300mm and beyond), although useful for plants in physically inaccessible locations, are often prohibitively expensive.

Used in conjunction with the lens, filters give the photographer fine control over the formation of the image. Besides a simple ultra-violet filter, which you can keep on your lenses permanently for protection, filters can be classified into three main groups. First are the colour-compensating (CC) filters, used when lighting conditions are such that they could create an unnatural colour cast on the image, for example the excessive redishness of evening light and the cold blue of winter mornings. Our eyes adapt to these variations but film records them exactly as they are. CC filters alter the image as it passes through them giving a slightly warmer or colder cast. For really critical work, where precise rendering of colours is vital, a colour temperature meter can be used which will calculate the exact filtration needed rather than leave it to the photographer's judgement. I use one to ensure completely natural flower colours. The next group, used almost exclusively with black and white film, consists of the deep colour filters – yellow, orange, red, green and blue. Black and white film responds not to colours but to tones, so two completely different colours may come out identical. Deep colour filters correct this problem by lightening objects of their colour in the image relative to objects of another colour, so differentiating between the two in the final result. The last group contains the special effects filters, very few of which are applicable to botanical photography with the exception of the masks, used to allow two images to be combined on the same frame of film. One final filter of use in botanical photography is the polarising filter This will control reflections from water in the photography of aquatic plants and will also saturate colours when photographing flowers by eliminating scattered, hazy light and unwanted glare.

Light is the medium of photography, and being able to control it is as important as a brush is to a painter. Basically, if your camera has no built-in flash (professional ones usually don't) then buy the best you can afford. They are invaluable for freezing subject movement, enhancing clarity and contrast and for promoting correct colour rendition. However, you must use flash tastefully and with great care in order not to produce a photograph which is obviously artificially lit. Whole books have

been written about the arrangement of lighting in photography; there is room for only a brief treatment here. Nearly all cameras are designed with provision for a flash unit in line with and just above the lens. Ironically, this is about the worst place you can put one. If you have just one flash, then place it, using a cheap extension cord, to one side of the subject by about 45°. If you have two flashes then place the first as above and the second to the other side by about 30° and put a piece of thin white cloth or tissue over the head of the second; this will diffuse the light and allow the second flash to gently fill in any harsh shadows created by the first. If you have a third flash available then you could aim it at the background to prevent it turning out unnaturally dark or you could use it bounced into a special lighting umbrella to brighten the whole scene. If it's a flower you are photographing, use a flash for backlighting to emphasise the translucent quality of the petals or, if your subject is a leaf, use it for sidelighting to pick out texture and form. Specialist flashes are also available, such as ring flashes which fit directly onto the end of a macro lens, thus providing absolutely even frontal light coverage and eliminating unsightly shadows (especially if equipped with modelling lamps). You can use one on its own or in conjunction with any of the flash set-ups described above.

The last items of hardware to be addressed are supports. There are many types available but they all have the same aim – to keep the camera motionless and thus eliminate camera shake. There are a few hand-held supports but the majority of supports are static; plants do not shy away when you are trying to photograph them and so you can take your time setting up just the right support. This is nearly always the tripod. Tripods come in a vast array of different designs; it is important to pick a tripod which offers you the best compromise between stability and weight. You will want as stable a tripod as possible but, if you have to cover a lot of ground without the aid of a vehicle, you will also want to keep weight to a minimum. For low subjects, which often includes plants, a tripod with a reversible centre column is ideal or, if mobility is important, a small 'table-top' tripod or ground spike. With these lower supports, a right-angle viewfinder attachment will save you having to stoop down. Personally, I have one large tripod (2m) in a case slung under my camera bag and a 30cm table tripod folded up in a side pocket but, with so many choices, the main thing is to pick a support that suits your requirements. There are many different makes but the Benbo has long been a favourite of natural history photographers for its sheer versatility – an important consideration in the field. With the same function as a support, is the windbreak. Delicate plants such as meadow flowers will tremble in the slightest breeze, blurring the image. A windbreak made from white tissue paper or (more resilient) cloth, will shield your subject from the breeze and help to reflect light back into shadowed regions. Having gone to all the trouble of setting up your supports, it would be ridiculous to shake your picture up by pressing the camera shutter release button – to overcome this use some form of remote control device, from the cheapest cable release to the more advanced infra-red systems but, since your eye won't be at the viewfinder, cover it with a black cloth to prevent stray light entering, taking care not to obstruct the lens.

The essence of the photographic process is, of course, the film. Nature is colourful. This limits the use of black-and-white film to subjects which have extremely strong pattern or texture or to publications such as *BSBI News* and the newspapers which work mainly in monochrome. With colour, there are two basic types of film – negative (also known as print) and positive (also known as slide, transparency or reversal). Positive films undoubtedly produce better quality images than print films, both in tonal rendition and general portrayal of reality. The key difference between all films is their speed. These go from about ISO (International Standards Organisation) 25/15 to 1600/33, but as the film becomes faster (tends to 1600/33) image resolution is lost and this becomes noticeable above 200/24. It is best to use slower films unless lighting conditions restrict you to faster ones. I use Kodachrome 25 almost exclusively for daylit plants. For darker conditions, such as rainforests, I use Kodachrome 64 or Fujichrome Velvia 50, the advantage of Velvia being that the E6 processing it requires can be performed by a High-street laboratory in a matter of hours compared to at least a week required by Kodak for the unique processing method their Kodachrome needs. Kodak's new Panther 50 will also be well worth trying when it is released on this side of the Atlantic. For night photography when I don't have my full complement of flashes with me I use Kodachrome 200 or Ektachrome 200, the advantage of Ektachrome again being the E6 process.

Negative films worth consideration are Kodacolor Gold II and the new Fujicolor Super G, a recent breakthrough with outstanding resolution. As for black-and-white film, the choice is much more limited and negative film is the usual choice except where slides are required for projection. I use Ilford Pan F Plus 50 by day and Ilford FP4 Plus 125 in darker conditions. However, as everyone perceives colours and tones differently, experiment with lots of films before deciding on a limited number of favourites.

Two variables go to make up a photograph – exposure and focus. Exposure is a product of shutter speed and aperture value. Under any one light condition, each can be varied in indirect proportion to the other but, to produce correct exposure, the product must remain unchanged. Different films have different exposure latitudes, that is to say their tolerance of inaccurate settings. Positive films have very narrow exposure latitudes and, when using them, it is better to err on the side of underexposure as this will produce more striking colours. Focus concerns the area of the photographic image that is sharply recorded, the maximum possible with any one lens under any one pair of exposure settings being known as the depth-of-field. Cameras can be autofocus, manual focus or switchable between the two. Automatic systems are obviously faster but the simpler mechanisms are not always efficient as they are easily confused. However, on the top cameras autofocus is virtually perfected but they will always have the option of manual override. Since plants don't move, manual focusing is always the preferred method because it gives the photographer control over the precise depth-of-field suited to the subject. Focusing is critical when a large aperture (small number) is selected because depth of field is shallow. A small aperture (large number) means a greater depth-of-field and less emphasis on focusing but a slower shutter speed is needed which can cause blurring, created by either camera shake or subject motion. The depth required depends on the exact circumstances and it is useful to have a depth-of-field check button on your camera to help gauge just enough depth whilst still allowing a sufficiently fast shutter speed; some cameras, notably Canon, even have a special mode to assist with this decision. As long as no breeze is involved (see windbreak above) a good shutter speed for plants is around second. This will give you sufficient depth-of-field and is not too demanding for the film. Films are designed to work best at shutter speeds between 1 second and second; past these limits the chemical reaction of the film to the light will alter. This is known as reciprocity failure – failure to obey the above law relating shutter speed and aperture value. The film will effectively change speed and other factors such as colour rendition and density will be distorted. Due to their particularly narrow exposure latitude, transparency films are worst affected. If second does not produce enough depth-of-field then you will have to switch to full manual mode, use a slower shutter speed and, according to your film's instructions open up the aperture and use appropriate filtration. This is a compromise – not a solution, and will hopefully be dealt with by film manufacturers in the near future.

It should be obvious that the usual care taken when handling plants must still be taken when photographing them. However, I have seen many photos with signs of excessive 'gardening'. 'Gardening' is the term used by botanical photographers to describe the method of removing unwanted vegetation from around a subject chosen for a shot. This may involve cutting or tying, the latter being preferred since it causes less long-term damage. It is important to remember that what may be an obstruction to you, the photographer, might be a valuable, if not vital, bit of shade or camouflage for the plant. Unless gardening is performed carefully, the specimen you are recording so diligently for posterity may be dead the next day. Anyone interested in natural history photography must abide by the Nature Photographer's Code of Practice, published by the Nature Group of the Royal Photographic Society. 'The welfare of the subject and its surroundings is more important than the photograph'. As natural history photography becomes increasingly more commercial, I am concerned that there may be a tendency for some to forget this most vital philosophy. Both the public and media generalise and we must not let individuals corrupt the profession as a whole. The best method of photographing plants is without any physical contact with subject or surroundings whatsoever. It is important to ensure that the background chosen is as completely natural as possible; an obviously artificial colour or set-up can ruin a photograph. It can be a simple green backdrop or can give some indication of the plant's habitat. It is also important to consider composition carefully. The main point here is to avoid central placement of the subject; a

good guide to this being the 'law of thirds'. In your head, divide the scene, with lines, into thirds, both horizontally and vertically, and try to place your key subject at one of the four intersections. With a round shape such as a common daisy this method won't work so go ahead and place your subject dead centre but try to include some related aspect of the subject off-centre, for example an unopened flower-head. Part of your compositional technique should include selecting the most appropriate viewpoint; this is usually down at the plant's level. Shooting from above is too ordinary.

So why photograph? I can think of five good reasons. For me, the main reason is the power my camera gives me to raise public awareness of nature, fostering interest in the species with whom we share this planet, to effect a change in people's attitudes. All of this helps to promote conservation efforts. Secondly, photographs provide accurate scientific records of species which may be facing imminent extinction or give proof of newly discovered species or varieties. Third, time-lapse photography can show, frame by frame, in perfect detail, changes too slow for the naked eye to detect, for example the opening of a flower. Fourth, photography is the only method of conducting systematic research, totally without bias, for example a survey of subtle anatomical variations in hawkweeds. Finally, photography can add a fascinating and absorbing new dimension to botany, an interest which we all share whether as a profession or as a hobby.

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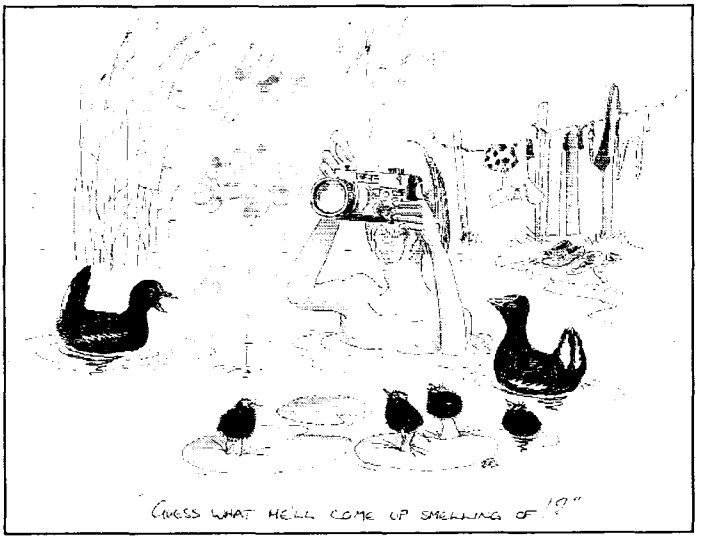
RARE PLANTS ARE SOMETIMES NOT EASY TO PHOTOGRAPH



Frank Penfold recording *Hottonia palustris* in W. Sussex, as seen and drawn by Charlie Coleman, June 1985

FIELD MIRACLES?
(a botanical story)

I have usually botanized in the field alone, which is no pathway to taxonomic expertise, so I now sometimes rely on others to identify specimens. Alone however, one experiences a different, unusual but not to be undervalued, plane of observation; or else perhaps, nature's events are moulded by human solitude. To explain: Over time I have collected anecdotes about strange communications with nature, which may either result from response to personal loneliness, or be in some way miraculous. These usually involve an unexpected, trusting creature introducing itself by close approach. It is rare for non-tactic plants to feature, but here I outline one such memorable occasion.

Since 1969 I have studied a metalliferous variant of *Polycarpaea corymbosa* L. (Caryophyllaceae), endemic to rugged, semi-arid country north-west of Townsville, North Queensland. In 1988 I returned there to extend data. I here extend thanks to the DPI and CSIRO for help they provided, and also to my field companion, Mrs N. Cory of Cairns, who protected me from 'bandicoots' and witnessed the following intriguing botanical discovery.

The 1988 site, the size of a cricket pitch, was south-facing therefore relatively sheltered, but drought had restricted potential sites for investigation. Within that finally selected there were two *Polycarpaea* taxa later officially confirmed as (i) *P. spirostylis* F. Muell. (The Copper Plant); (ii) the object of my study, *P. corymbosa* var. indescr. (Jones Copper Bush); with a third, (iii) *P. corymbosa* var. *corymbosa* (Mineral Weed) close to but outside the grid.

The heat was intense but flies are not such a nuisance in dry conditions. Mrs Cory drafted sketches, in a canvas chair under the shade of a very large straw hat, while I undertook field chores donned in a pair of 'Glad's bags' (only Mrs Cory and the kangaroos could see me) to protect my pommy legs from peeling in the ozone-emancipated sun.

On the final day I stepped back a few feet to survey and celebrate the completion of my task and happened to look down. To my surprise at having overlooked it for a week, squashed underfoot was an unfamiliar *Polycarpaea*. Then, blinkered by specialised field concerns, I viewed it as a one-off hybrid between the two variants within my grid. The official identification however, recognised it as: *P. breviflora* F. Muell. (= *P. brevianthera* Ewart & Davis), which normally expresses an easterly limit far to the west.

It was a very well established, aged specimen with a thick, penetrating taproot. I confess that, for identification and as proof of its existence, I collected it, but immediately regretted my hasty enthusiasm; for I realised it was unusual and possibly of profound significance to my study. Fortunately it was difficult to sample the root from deep in its rock fissure under shallow, gravelly soil; so, most of it remained there, and by now, hopefully has regenerated. That likelihood provided Dr Bob Johnson at Indooroopilly with the means to lighten my apology and ease my mind. My experience may largely reinforce policy *against* collection, but nominal collection did seem essential. If anyone goes searching, be prepared for a hard time! I *can* say where it *was*, but it isn't easy country, even with expensive 4wd. At least a sample may still be seen in Brisbane Herbarium.

I regard that specimen as one parent of the endemic variant: living evidence of past gene flow, from that very, single, casually distributed *P. breviflora*, into *P. corymbosa* var. *corymbosa*. Could it be more than rhetoric to suggest that an eagle migrating eastwards from drought, or a past prospector looking at a nearby small deposit of high grade haematite, might have past transported a disseminule from the far west, to more fully explain this putative, casual establishment?

To summarise at risk of repetition; I believe that the oddly, fortuitously discovered *Polycarpaea* was an actual, direct, individual forebear of the studied populations, being favourably located within their endemic range: *c.*2 km E/W × ½ km N/S. The 1988 drought induced easterly search for a suitable population, sufficiently verdant through shelter for sampling, and this led me towards that specimen. However I still regard the manner of discovery, and the immediate proximity of that individual to my selected site, as miraculous and worthy of this report; that especially in the context of other, strange but real field experiences, and as background to significant ecological findings.

Unfortunately there may be some who complain of 'lack of proof' or 'reason' for something, to whom I reply that my limits of evidence are stretched by much time and concentrated thought.

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Special thanks are extended to Australian supporters: Mrs N. Cory, Mrs L. Dotter, Dr R.W. Johnson, Mr Pat Jones, Dr G.F. Taylor, Dr R.G. Taylor, and the many others who have helped in any way, along the way.

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A PLEASANT AND USEFUL OCCUPATION FOR AGED AND PARTIALLY-SIGHTED BOTANISTS

Since I am now well into 'injury time' (three score years and eighteen!) I have recently become partially-sighted, an infirmity which makes it impossible for me to see clearly enough to identify small, herbaceous plants - a most frustrating condition for a botanist. However, I have lately been persuaded (bullied would be a more accurate word!) by a kind-hearted botanist friend into working for 'TROBI', the Tree Register of the British Isles. The TROBI volunteers (known as 'TAPERS') go round the countryside with tape measures and pieces of string (how long is a piece of string? - often many metres), measuring the heights and girths of huge old trees in parks, gardens, demesnes, woods, etc. and sending the results in to the TROBI headquarters. It has proved a most enjoyable and rewarding occupation and I am grateful to my friend for his initial browbeating! In 1993 I discovered a Weeping Beech in the old municipal cemetery at the bottom of my road which turned out to be a 'Champion' of its kind (*Fagus sylvatica* 'Pendula') for the whole of the British Isles. Now, in 1994, I have located a very rare variety of Weeping Willow in King's Meadow beside the Thames only five minutes walk from Reading's town centre. I have been advised by John White (dendrologist with the Forestry Authority at Westonbirt Arboretum) that this tree is *Salix* × *pendulina* var. *elegantissima*, a hybrid between *S. babylonica* and *S. fragilis*, that it is an extremely rare variety of this cross and is one of a very small known population. In addition to all these distinctions, it is the largest of its kind in the British Isles!

This is the good news – the bad news is that this tree stands directly in the way of a hideous road-widening scheme which was refused planning permission by John Gummer two years ago – but only on a technicality – so that it may, and almost certainly will, raise its ugly head again soon in an amended form. This magnificent tree is, or at any rate should be, sacred. Will the pen prove mightier than the axe? This remains to be seen, but whatever the outcome, we must not allow this beautiful tree to be sacrificed on the altar of a mere mechanical toy – the motor car. If necessary we must prostrate ourselves before it in the path of the bulldozers. Tree worship may be a pagan rite but a revival of this ancient custom seems to have become urgently called for in the last half of the 20th century if any of our finest trees and forests are to be saved from destruction in the name of (so-called) 'progress'.

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REPORT ON *POTAMOGETON* FIELD WORK IN SWEDEN

Potamogeton spp. were sampled in Sweden from the 6th-16th August 1993. Sites visited ranged from Dalarö, Stockholms Län, in the south of Sweden, to Haparanda in the north. In between, *Potamogeton* spp. were collected from 16 localities along the Gulf of Bothnia.

Material collected in the field was brought back to Leicester University and placed into cultivation. Samples were then analysed using horizontal starch gel electrophoresis of isozymes (Wendal & Weeden 1990). Preliminary results have shown considerable genetic differences between populations of British and Swedish species of *Potamogeton* subgenus *Coleogeton*. A comparison of isozyme patterns for *P. pectinatus*, *P. filiformis* and *P. vaginatus* with British plants morphologically intermediate between *P. pectinatus* and *P. filiformis*, has provided strong evidence that these intermediate plants are of hybrid origin between *P. pectinatus* and *P. filiformis* and have been correctly identified as *P.* × *suecicus* Richt. This supports the morphological and anatomical studies of Dandy and Taylor (1946) and Bance (1946) in eliminating *P. vaginatus* from the parentage of these plants.

Following full analysis of isozyme results, and further sampling in the British Isles, it is expected that findings from this trip will be fully written up during 1994.

[This work was supported by an award from the Warburg Memorial Fund. Ed.]

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SUPPLY OF MATERIALS FOR HAY MEADOWS AND OTHER HABITATS

There has been a lot of interest recently in the preservation of hay meadows, and this has led to praiseworthy attempts to establish new ones also.

At Hextable, W. Kent, the local council has laudably created a new hay meadow, but at the time I visited it in 1993, all the abundant colour was provided by three aggressive introduced taxa, in more or less equal quantities.

1) *Onobrychis viciifolia* (Sainfoin)
2) *Lotus corniculatus* var. *sativus* – a large upright form of Birds-foot-trefoil, to 30 cm high, with hollow stems, also I believe a fodder plant.
3) *Trifolium fragiferum* subsp. *bonannii* – another very large fodder form of Strawberry Clover, to 35 cm, and more or less upright. Some flower heads are rather elongated, and it has exserted corollas (persistent when dead), and calyx of 4.5 mm including teeth.

Nearby, pieces of 'native' woodland have been established but it was easy to spot three non-natives straight-away: *Alnus incana* (Grey Alder), *Castanea sativa* (Sweet Chestnut) and *Pyracantha rogersiana* (Asian Firethorn). The latter is increasingly planted, and now widely naturalized instead

of the 'old' *Pyracantha coccinea* (Firethorn); I first noticed it at Aylesford Gravel Pits, E Kent in May 1976 but it is now a frequent escape, in SE England at least.

In the same area a pond had also been partly 'managed' but it was impossible to tell for sure what was planted or not. *Myriophyllum aquaticum* (Parrot's-feathers), probably not; *Alisma lanceolatum* (Narrow-leaved Water-plantain), rare in W Kent but does this get planted? *Ceratophyllum demersum* var. *inerme* (with spines missing at base of fruit) (Rigid Hornwort), not really a showy enough candidate for deliberate introduction like the Marsh-marigold and Bogbean there.

I don't criticise in any way the people supplying the plants for such places; we are all entitled to get back as much as we can of the 45% or so of our incomes which is taken by various taxes! The fault lies in the naivity and inexperience of those in whose hands the disbursement of taxpayers' money resides. We all know of many similar examples.

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DIALECT PLANT-NAMES

Response to my note in *BSBI News* **66** was encouraging with several members expressing interest in dialect names, and some sending me lists of names which they have collected. The following is the start of a list of names which I have received since January 1992.

Adder's food – *Arum maculatum*, lords and ladies: used in W. Somerset, 1914-1939. [Breage, Cornwall, October 1993].

Adder's meat – *Arum maculatum*: from grandparents, born 1856 and 1858. [Cinderford, Gloucestershire, November 1993].

Adder spit – *Stellaria holostea*, greater stitchwort: source as for previous item.

Agas berries – *Crataegus* spp., hawthorn fruit: 'as children we used to eat ripe hawthorn berries ... [called] agas berries.' [Whitchurch, Hampshire, November 1993].

Aglets – *Crataegus* spp., hawthorn fruit: ' local name, presumably peculiar to Cornwall.' [Truro, Cornwall, December 1993].

Arzigarzies – *Crataegus* spp., hawthorn fruit. [Headorn, Kent, January 1993].

Baccy plant – *Tussilago farfara*, coltsfoot: source as for adder' s food, above.

Bacon – *Rosa* spp., wild rose: 'my cousin, now aged 78 ... remembered chewing new wood from the base of wild roses when they first began to shoot and called this bacon.' [Corbridge, Northumberland, February 1993].

Thanks to Mary Chantler, Elsie Olivey, Joan Pascoe, Evelyn Sewell, F.W.P Thorne, and W. Gerald Tremewan for their contributions. I look forward to receiving further names and any comments.

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ENGLISH NAMES OF WILD FLOWERS

It is time to extol the virtues of the humble hyphen as used in the second edition of *English Names of Wild Flowers*. Having seen the smallest member of the dash family become the blackguard of botany, I am rushing to its defence in a plea for clemency.

This much-maligned punctuation mark, which descended from two ticks in the margins of monastic manuscripts, has its uses (6):

(**1**) To avoid ambiguity. Consider the omission of the hyphen in:

Yellow Horned Poppy

(where *Glaucium flavum* has a choice of having yellow horns or being simply a yellow poppy with horns);

Downy Fruited Sedge

(where *Carex tomentosa* has to toss up between having downy fruit (which it has), or suggesting that all other sedges do not have fruit);

Floating Water Plantain

(where *Luronium natans* can grow in water which floats (a pea-green boat perched thereupon) or it can be a plantain growing in water and with stems or leaves which may float);

Brazilian Giant Rhubarb

(where *Gunnera manicata* is the stuff that Brazilian giants are made of or it is, to turn to Stace (8), a perennial herbaceous plant with leaves more than 2 m across and which was introduced from South Brazil).

(**2**) To join nouns (including proper nouns) of equal value representing equally important functions as in:

Abraham-Isaac-Jacob	(*Trachystemon orientalis*)
Butterfly-bush	(*Buddleja davidii*)
Milk-parsley	(*Peucedanum palustre*)

(**3**) To join nouns consisting of two words when they have a qualifier as, for example, in:

Common Evening-primrose	(*Oenothera biennis*)
Floating Club-rush	(*Eleogiton fluitans*)
Greater Water-parsnip	(*Sium latifolium*)

(**4**) With colour combinations:

Dark-red Helleborine	(*Epipactis atrorubens*)

(**5**) In compound adjectives made up of a noun or adjective and a present or past participle:

Long-headed Poppy	(*Papaver dubium*)
Night-flowering Catchfly	(*Silene noctiflora*)
Ternate-leaved Cinquefoil	(*Potentilla norvegica*)

(**6**) To avoid awkward juxtapositions of the same letter(s):

Yellow-wort	(*Blackstonia perfoliata*)
Nettle-leaved Goosefoot	(*Chenopodium murale*)
Small-leaved Lime	(*Tilia cordata*)

and misleading allocations of letters:

Bladder-sedge	(*Carex vesicaria*)
Jersey Sea-lavender	(*Limonium auriculae-ursifolium*)
Red-osier Dogwood	(*Cornus sericea*)

(**7**) To convert two or more separate words into a single one acting as an adjective or a noun or other part of speech (2):

Lords-and-ladies	(*Arum maculatum*)
Lily-of-the-valley	(*Convallaria majalis*)
Good-King-Henry	(*Chenopodium bonus-henricus*)

Apparent inconsistencies can be seen as representative of stages in the etymological evolution of a word. G.V. Carey (*Punctuation*, Cambridge University Press, London, 1957) (6) puts it thus:

> 'Most compounds graduate, so to speak, from separation, through hyphenation, to integration (for instance *tea pot*, *tea-pot*, *teapot*); ...'

So, if this is the case, we have sea beet (*Beta vulgaris* subsp. *maritima*) but sea-kale (*Crambe maritima*), red bistort (*Polygonum amplexicaule*) and red pondweed (*Potamogeton alpinus*) but redshank (*Polygonum persicaria*), pink-sorrel (*Oxalis articulata*) but pinkweed (*Polygonum pensylvanicum*), black poplar (*Populus nigra*) but black-grass (*Alopecurus myosuroides*) and blackthorn (*Prunus spinosa*), wall-rue (*Asplenium ruta-muraria*) but wallflower (*Erysimum cheiri*), and corn marigold (*Chrysanthemum segetum*) but nodding bur-marigold (*Bidens cernua*).

Out of the style manuals, Pitson (6) recommends that as a general principle, words should be joined if possible, rather than hyphened, while Butcher (1) suggests using hyphens only to avoid ambiguity. Carey's concluding sentence to the above extract is '... everyone is entitled to his own opinion on the present status of any one of them [spellings of teapot] ...', which rather suggests a free-for-all and which is what, if my interpretation is correct, ENOWF is designed to avoid.

Omission of hyphens can lead to ambiguity and therefore confusion as has already been demonstrated and omitting them purely because they are 'unsightly' is to serve aesthetics rather than meaning.

Compounding words willy-nilly as the Germans do can result in rather large mouthfuls; unlike Mole one may not be in ecstasies if continually obliged to digest the contents of Ratty's picnic basket:

> 'coldtonguecoldhamcoldbeefpickledgherkinsaladfrenchrollscresssandwidges pottedmeatgingerbeerlemonadesodawater'. (3)

Studentröschen for *Parnassia palustris* (Grass-of-Parnassus) and **Hirtentauschelkraut** for *Capsella bursa-pastoris* might trip off the tongue with some relish but the eye has first to break them into bite-sized pieces before savouring the meaning. Creating the compounds 'Grassofparnassus' and 'Shepherdspurse' would make for a similar delay in comprehension and have us all sounding like snakes.

Hyphens should perhaps be seen as characteristic of English wild flower names rather than as condemnatory. The Japanese and Chinese do not appear to have any hang-ups about hyphens and use them freely: the Japanese **mishima-saiko** for *Bupleurum falcatum* (Sickle-leaved Hare's-ear), **no-ibara** for *Rosa multiflora* (Many-flowered Rose) and the Chinese **szu-lao-chu** for *Equisetum hyemale* (Rough Horsetail), **yeh-hsi-ming-hua** for *Jasminum officinale* (Summer Jasmine), **chiang-nou-ts'ao** and **huang-hua-tii-ting** for the now-not-native-to-Britain *Taraxacum officinale* (Common Dandelion) are but a few examples. Even German has its hyphened words , such as **Wald-Weidenröschen** for *Chamerion angustifolium* (Rosebay Willowherb), **Saat-Wucherblume** for *Chrysanthemum segetum* (Corn Marigold) and **Fussangel-Flockenblume** for *Centaurea calcitrapa* (Red Star-thistle) (7).

Why the furore over hyphenation? Are the hyphens such a hideous eyesore? I have not perceived them as such. As one who is preparing a book, I have found them, as far as ENOWF is concerned, to be a useful guide, not only to the meaning of a word but also to its pronunciation. I have always regarded the book as an invaluable reference tool which removes the fuss and bother of having to choose a vernacular name for a plant.

As regards entries in the vernacular-to-scientific-name index, I have found the inclusion of every feasible permutation, such as in 'Trefoil' see also Birds'-foot-trefoil' to be extremely useful. This, surely, is the stuff of which good indexes are made.

Is the repetition of the initial letter of a vernacular name as in, for example:

White M.	Dark M.
Orange M.	Hoary M.
Great M.	Twiggy M.

for 'Mullein' so unbearably ugly? No more so, I venture to say, than the repetition of the initial letter of a generic name in an entry as, for example:

27. BUPLEURUM ...

5. B. rotundifolium	6. B. subovatum ...
1. B. fruticosum	2. B. falcatum ...
3. B. tenuissimum ...	4. B. baldense (8)

and yet the above is accepted and established practice.

On the question of whether an English name should begin with a capital letter or not I find the recommendation of using capitals in a list and lower case in text to be most helpful. Using capitals in text is akin to running in a hurdle race; one has to haul oneself up over the offending obstacle before returning to the lower level. Capitals, like hurdles, slow one up and make for a spotty appearance on the page.

I think that, as a list of recommended names, ENOWF is excellent. I also think there is scope to include more vernacular names but in the form of a synonymy. In this way all names would be included but there would still, as with scientific nomenclature, be one correct ('recommended') name.

This, however, would alter the essential function of the book which is to serve as a quick list. We need more books like this and obviously there is scope for more different kinds of lists; if I had my way there would be an NOWF book for each country in the world!

Lindley, writing about 'well-known and usual English words, Houndstongue, Loosestrife, Bugloss, Soapwort, Harebell etc.' commented:

> 'If such English names are not universally adopted, it is to be suspected that the circumstance is traceable to the indifference of the public to partial and inconsiderable changes, which are unseen in the ocean of Botanical nomenclature.' (4)

I humbly suggest that we are creating a storm in a punctuation mark and that if we hyphen-twitch too much longer a lot of valuable time will be lost!

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PRONUNCIATION OF ENGLISH PLANT NAMES

There has been plenty of correspondence recently about English plant names, in particular on typographical issues such as hyphenation and capital letters. As far as I know, though, nothing has been said about another matter of particular interest to me, namely their pronunciation.

Each of us, I suppose, acquires the pronunciation of a plant name either by copying someone else or by making an assumption on the basis of its spelling. If one is brought up in a botanically-minded family, as I was, then one acquires pronunciations for a great many plant-names early in life from one's parents, and for the most part these pronunciations are unlikely to change even if they differ from those used by most other people. As a result it is quite possible for variant pronunciations to persist side by side over long periods of time.

Pronunciation is a notoriously sensitive subject. One 'owns' one's pronunciations in rather the way that one 'owns' one's personal appearance. To have doubts cast on their correctness is liable to be perceived as an insult. The whole issue is also bound up with snobbishness, political correctness, and other thoroughly non-botanical matters.

Moreover, it is a difficult subject to discuss precisely in a written document. Linguists have devised specialised tools for this, notably the International Phonetic Alphabet together with an

impressive repertoire of abstruse terminology. To use these tools would be out of place here, for reasons both of typographical inconvenience and the nature of the readership. In what follows I shall muddle through as best I can by use of comparisons with words whose pronunciation is, presumably, not in dispute.

The variations in pronunciation that I am concerned with are not those due to differences in accent or dialect; rather, they cut across those differences. The five possible pronunciations of **clematis**, for example (roughly, with capitals to indicate stress: CLEMMatis, CLEEmatis, cleMATTis, cleMAITis, cleMAHTis) can equally well appear in a Scots accent, a Yorkshire accent, or a Devon one: the actual sounds involved in any one of these pronunciations will vary between the accents, but the distinctions amongst the five forms will carry over quite clearly. (Technically, we are dealing with phonological rather than phonetic distinctions.)

I append here a list of plant names for which I am aware of differences in pronunciation; that is, I have found people pronouncing them differently from how I pronounce them. I have made no attempt at value judgements: I am not claiming that my, or anyone else's pronunciation is 'correct' or 'incorrect', though in some cases it may be possible to advance cogent arguments for claims of this kind; for what it's worth, my own pronunciation is always the one labelled (a). I should be most interested to hear from other members about further instances of variation in the pronunciation of English plant names. The pronunciation of 'Latin' names (as for example, the case of **clematis** discussed above) is a separate issue to which I have also devoted some thought, but which lies beyond the scope of the present article.

Avens
(a) With a long 'a', as in 'Avon'.
(b) With a short 'a', as in 'avenue'.
Borage
(a) Rhyming with 'courage'.
(b) Rhyming with 'porridge'.
Cinquefoil
(a) Three syllables: 'sink-we-foil'.
(b) Two syllables, either 'sink-foil', or Frenchified, 'sank-foil'.
Couch Grass
(a) Rhyming with 'slouch'.
(b) Rhyming with 'pooch'.
Gromwell
(a) The first syllable rhyming with 'crumb'.
(b) Pronounced 'as written', i.e., with the first syllable rhyming with 'from'.
The same variation occurs in the name 'Cromwell'.
Hellebore
(a) The first 'e' long (as in 'healing')
(b) The first 'e' short (as in 'helicopter'). This pronunciation is both commoner and more logical.
Helleborine
(a) Stress on the first syllable ('HELLeborine').
(b) Stress on the second syllable ('hellEBorine'). This is an unusual pronunciation, but I have heard it (and in the mouth of an 'expert', too!).
Lichen
(a) Same as 'liken'
(b) Rhyming with 'kitchen'.
Saxifrage
(a) Rhyming with the English 'age'.
(b) Rhyming with the French 'age'
Trefoil
(a) With a long 'e' as in 'tree'
(b) With a short 'e' as in 'tremble'.

Whorl, Wort

I treat these together (of course they are *components* of plant names rather than complete names in themselves).

(a) With the vowel sound of 'word', 'work', and 'worm'.

(b) With the vowel sound of 'war', 'ward', and 'warm'.

The second pronunciation gives us 'St John's Wart' (any connection with Cromwell, mentioned above?). For me, 'whorled', 'whirled', and 'world' all sound the same; but at least some Scots speakers, I believe, would pronounce them all differently (so my earlier dictum about these variations cutting across accents and dialects needs qualification).

Finally, there are some plant names which I hesitate to say out loud at all, being very unsure how to pronounce them. They include 'Asarabacca', 'Elecampane', 'Knawel', 'Orache', and 'Thorow-wax'

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ENGLISH NAMES ARE SURE TO PLEASE?

Some recent research into firms producing items traced for embroidery with floral designs was a salutary reminder that it is not only botanists and gardeners who want acceptable distinguishing names for plants, and that these may need to be firmly established local ones. Local? On which side of the Atlantic do you live? How long ago did you learn your 'Latin' names? Is Syringa ***Philadelphus***, or ***S. vulgaris***, Lilac?

I was interested to see that the Glasgow designer of 'FAIRISTYTCH' strictly adhered, from 1919 to 1960, to correct Scots usage: Bluebell was *Campanula rotundifolia* and not Wild Hyacinth **Hyacinthoides non-scripta*. Similarly, the Irish firm, 'OLD BLEACH' offered a design featuring Mayflowers *Caltha palustris*, so named in the Gaelic languages because of their association with the Beltane festival of May Eve. I grew up to call *Caltha* 'Kingcups' but now more often use the book name 'Marsh Marigold', although a Gloucestershire-born friend sticks to 'Horse Dobs'. Locally, in the Isle of Man, some form of Manx: 'Bullaght' or 'Bloskins', cognate with the Norn, or Old Norse, 'Blugda', may be heard. Clear to all you Anglophones?

The distinctions should be, even if pedantic, Vernacular and Scientific names. Some of the latter were once the former of course. Can anyone tell me why Sweet Cicely [Myrrh in the Isle of Man where it is believed to bloom on Old Christmas Eve] is scientifically *Myrrhis*. This is not its current Swedish vernacular name which is nearer Canel (Cinnamon in Spanish, I believe)!

Names evolve with time and many vernacular names are 'foreign loan words' well garbled, sometimes deliberately. Many botanists now will happily map in the field with pronounced variations of the recording card abbreviations, 'old' or 'new'. What is **Endns* now?

Oh yes, ornithologists have problems abroad: some N. Americans use scientific names at home because there they may have more species representing a genus, so you should call out *Buteo buteo* not Buzzards! In the Isle of Man, the more scientifically minded talk of *Mustela hibernica*. Natives talk of Weasels, but the little beastie is nearer a stoat, although not identical with the English, or Irish, versions. There are places where you need to split your mammals in Latin!

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FOREIGN WATSONIAS

Watsonia – Australian style?

In Western Australia, lorries advertise our sister journal, or is it something else* ...?
Photo © M. Briggs, 1993

N.B. In this area of Australia *Watsonia* are plants of the Iridaceae family, alien imports from South Africa now well naturalised. These stout-stemmed plants, 2-2.5 m tall, with orange, red, pink, mauve or white flowers are aggressive and very invasive – often spreading rapidly across large areas of land replacing the natural vegetation. Wildflower lovers and good conservationists join in 'Watty-bashing' meetings in areas where the *Watsonia* is a pestiferous weed.

*In fact dairy products, meat and household removals ...

Watsonia – Cretan style?

Watsonia advertisement at Heraklion, Crete. Photo © M. Briggs, 1994

N.B. In Crete, 'Watsonia' we were told, is a firm manufacturing artificial and dried flowers for florists!

MARY BRIGGS, Hon. General Secretary

MARRAM GRASS ESTABLISHED IN THE CENTRE OF KENT

About 12 years ago I noticed a few leaves of a glaucous grass established in natural vegetation on a sandy bank at Wrotham Heath, W. Kent. Although the colony gradually increased in size, it never flowered, but a small piece collected and grown on did finally flower in my garden in 1994, proving to be *Ammophila arenaria* (L.) Link (Marram Grass).

Although Marram is often abundant (and sometimes planted) on sandy coasts, it is very rarely of natural occurrence inland. It has been known, however, to be planted inland on golf courses. In the W. Kent vice-county Marram is hardly known even on the coast, possibly only from Grain.

The Wrotham Heath colony is likely to be bird-sown; introduction from the salting of roads can be ruled out for two reasons; distance of the plants from the main road, and that in its coastal habitats Marram is usually some way from the tide line.

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THE FIELDING-DRUCE HERBARIUM

Following on from the AGM in May when so many members of the Society visited the Plant Sciences Department in Oxford, a short note follows about the Fielding-Druce Herbarium.

Members may be interested to know that the Druce Herbarium contains well over 200,000 specimens collected since 1796 to the present day from all parts of the British Isles. The herbarium contains a very large number of specimens collected by George Claridge Druce himself and a full set of specimens from the Botanical Exchange Club, including those from Ida M. Hayward, H.C. Watson and J.E. Lousley, among numerous others. Druce also acquired a very large collection from Charlotte E. Palmer, the specimens being chiefly from Hampshire and Warwickshire. The herbarium contains a large amount of material collected by Dr E.F. Warburg, including many sheets of *Sorbus*, *Rosa*, *Rubus*, *Euphrasia* and *Betula* species. In more recent years, Mr Richard Palmer has contributed a large number of excellent specimens, many of these collected in Oxfordshire, but also from the Shetland Islands, Sussex, Cornwall and elsewhere. About 1500 specimens have been contributed by Dr Humphry Bowen from all parts of the country, though about half of these were collected in Oxfordshire and Berkshire. There are also many collections from Ireland and the Channel Islands. A sizeable collection of British bryophytes and hepatics is also held in the Fielding-Druce Herbarium and this includes many specimens presented by Mrs Jean Paton collected for the *Bryophyte Flora of South Hants* and the *Bryophyte Flora of Cornwall*. The Fielding Herbarium is a worldwide collection containing European specimens other than British dating between 1796 and 1992.

Members of the Society and specialists are welcome to visit the Herbarium from Monday to Friday by prior arrangement. Please contact the Herbarium Manager, Serena Marner, by letter or phone. Loans can be made to other herbaria by application to the Acting Curator, Dr Q.C.B. Cronk.

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LATE FLOWERING HOLLIES

Following on from the comment by M.J. D'Oyly suggesting that the berries of some holly trees might be chemically unattractive to frugivorous birds and thus retained while other trees are

stripped, may I draw your attention to comments by Barbara and David Snow in their book *Birds and Berries* (1988, Poyser, Berkhamsted)? They comment that many holly trees are defended by mistle thrushes, singly or in pairs, preventing other birds from feeding on the fruits through the winter. This can last into the following spring and summer, when such defence stops and other birds can avail themselves of the berries.

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HOLLY BERRIES

I was interested by M.J. D'Oyly's letter in *BSBI News* **66**, and his question why birds do not eat the berries on some holly bushes.

For many years I have watched the manner in which the berries were stripped from holly trees in my own and neighbouring gardens. Redwings and fieldfares ate most of the fruit, but other thrushes and blackbirds also took part in the feast. The berries in the top part of each tree were eaten first, and then the birds would work downwards until none were left, moving on to another tree and repeating the process.

Certain trees would be left entirely untouched. The berries were indistinguishable in texture, colour and ripeness from those which were devoured so avidly, yet they seemed to have no appeal to the birds. It might be a week or several months before these trees were revisited and the berries eaten. There was no consistency from year to year in the order in which the trees were stripped.

Barbara and David Snow, in their book *Birds and Berries*, note that mistle thrushes will defend a holly tree against all comers, thus preserving their own food supply, leaving the berries untouched. When alternative food is abundant this defence ceases, and the holly trees are stripped. Alternatively, in severe weather the influx of redwings and fieldfares may simply overwhelm the defenders.

Palatability is almost certainly a factor – the fruit must be fully ripe to be attractive to the birds. Not all trees ripen at exactly the same time. It is important to remember that holly berries are poisonous to man, containing a tannin, the bitter principle ilicine, theobromine and other bitters. These are irritant to the stomach, violently emetic and purgative. No cases of poisoning involving animals have been recorded. The reason why holly, in common with many other toxic and violently irritant fruits, can be eaten with impunity by birds is not properly understood.

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RED DATA BOOK PROJECT

More than half the allotted time for this project has now elapsed, and just one year and five months remain. At the moment, the project seems on target to meet various deadlines, but how rapidly they approach! May I again express grateful thanks to everyone who has assisted the project, in

providing records of rare plants, updating and amending our database record, in offering to write species accounts, and more generally in giving freely of time and expertise.

Species accounts

There has been a great response to the invitation to 'adopt a species'. More than 80 authors have offered to write accounts, so that now rather few species remain for adoption (see list below). We would be delighted to hear from anyone prepared to tackle any of those remaining. Many thanks to authors who have completed their accounts: thus far, 26 have been received (12 are from Lynne). I know several authors are undertaking some fieldwork on their adopted species before writing up, and I look forward to receiving further accounts as soon as possible after the end of the field season.

RDB Records

New records have been received from a number of sources, including vice-county Recorders and other BSBI members, from Plantlife, and from the country agencies. Thanks to all who have communicated records, or amended existing records. But there are still plenty of gaps to fill, so please continue to send records. Recent population data would be particularly welcome.

Two recent BSBI field meetings aimed at recording RDB species have been very useful in different ways. The Lizard meeting provided a valuable update of *Juncus capitatus*. By contrast, around Malham, a search for *Polygala amarella* failed to reveal it in most of the sites where it had been recorded in the past, which has lead us to think it might now be much rarer in that area, (or perhaps mis-identified in the past in one or two places?).

JNCC has again been able to support a number of small projects this year, including a survey of *Carex ornithopoda* in Cumbria, *Lotus angustissimus* in Devon, and a number of montane RDB species in the Braemar district, all of whose records needed updating.

LIST OF TAXA FOR 'ADOPTION'

Anthyllis vulneraria subsp. *corbieri*
Calamagrostis scotica V
Carex filiformis
Carex norvegica
Centaurium scilloides
Cerastium nigrescens
Crepis foetida E
Cytisus scoparius subsp. *maritima*
Dactylorhiza incarnata subsp. *cruenta*
Dianthus gratianopolitanus V
Echium plantagineum V
Epipactis youngiana
Euphorbia hyberna
Festuca longifolia
Genista tinctoria subsp. *littoralis*
Hypochaeris maculata
Maianthemum bifolium
Muscari atlanticum V
Neotinea maculata E
Orobanche caryophyllacea E
Oxytropis campestris
Phleum phleoides
Pilosella peleteriana subsp. *peleteriana*
Pilosella peleteriana subsp. *subpeleteriana* V
Pilosella peleteriana subsp. *tenuiscapa*
Poa flexuosa
Potentilla fruticosa
Ranunculus ophioglossifolius E
Romulea columnae V
Rorippa islandica (shorter account)
Rosa agrestis
Rumex aquaticus
Saxifraga rivularis
Scirpoides holoschoenus
Scirpus triqueter E
Taraxacum spp. (account for the genus or sections)
Valerianella eriocarpa

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OXFORD AND DRUCE

The theme of the recent AGM in Oxford was George Claridge Druce. Frank Perring's Presidential Address, so vividly recalling Druce's boyhood and Northamptonshire days, among many other matters, will, of course, appear in *Watsonia*. However, other speakers gave the meeting a specifically Oxford flavour by following Druce to his pharmacy in the High and it is a pleasure to see David Allen's talk published in *BSBI News*. Happily we were able to include in the programme an informal memoir from Professor P.W. Richards who recalled the encouragement Druce had given him as a schoolboy through correspondence, and how he later met the grand old man at a rendezvous in the field. The meeting also prompted Harvey Dunkley to set down his recollections and these are included here. I thank Anne Marie Townsend of the Department of Plant Sciences library and Serena Marner, Herbarium Manager of the Fielding-Druce Herbarium for organising a display of Druceana from the Druce archives and herbarium. Meanwhile, in Oxford, we have just rearranged the Druce herbarium according to Kent's 'List', which is mercifully very different from Druce's 'British Plant List'.

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DRUCE IN OXFORD

Druce arrived in Oxford in 1879 – symbolically one year after he joined the Botanical Exchange Club. He was then on the threshold of 30.

The chemist's shop that he proceeded to buy in the High Street, number 118, was to remain his place of business for the next quarter of a century, until his retirement at the comparatively early age of 55. It was to continue to bear his name for many years after that, even as late as 1939, seven years after his death, for 'Druce's' had become by then an Oxford institution.

Druce was immediately at ease with the University's undergraduates (as indeed he famously was with all young people, even to the end of his days) and went out of his way to help them – where necessary, with tact and discretion. His papers contain letters from anxious fathers, themselves one-time customers of his a generation earlier, asking him to give the same crucial service to their newly-arrived freshman sons. Druce's 'purple specials', it is said, were long held in high regard as a cure for the inevitable hangover that followed a 'bump supper' [Bump suppers are a long-standing Oxbridge tradition, when a competition between the colleges to see whose boat can achieve the greater number of bumps of its rivals is followed that evening by an especially bibulous feast]. He had an easy charm and a practised solicitousness. Moreover, through his botanical work, he came to be recognised as an auxiliary adornment to the scholarly life of the city, a figure to be pointed out to newcomers, part of that wider penumbra of local distinction for which non-University Oxford began to become renowned at that period. In addition, he was long prominent in local politics: elected to the City Council in 1892, he became successively Sheriff and, in 1900, Mayor. He was still an Alderman at the time of his death. The fact that he was an ardent freemason must have helped as well.

Despite these multifarious activities he never allowed himself to be distracted from his business. Nor did he dissipate his earnings in any undue extravagance or the indulgence of expensive tastes: rather, they were for the most part invested, either in marketable securities (his papers contain dividend counterfoils which suggest that he was quite adventurous in that respect) or – as was usual among self-made businessmen in those days – in building up collections. For Druce was not just a lifelong, voracious collector of botanical specimens (he had 200,000 of those in his herbarium in the end): he also amassed a large and valuable library, including many early herbals and a copy of the magnificent *Flora Graeca*; he acquired well-chosen furniture and silver, of both of which he became quite a connoisseur; and – very much in keeping with his chief botanical

proclivities – he was a dedicated philatelist, with albums containing many rare early colonials and about a hundred 'penny blacks'. As he never married, his domestic expenses were always modest and his main external outlay, especially latterly, was on travel. Ever the small businessman, he had early learned to be careful with his money and that was a habit he never threw off. That did not prevent him from many quiet acts of generosity, for which he was to earn lasting thanks and loyalty, acts which extended even to substantial loans of money. That he could be looked to by any friend in temporary financial difficulty was known even in botanical circles. Among his papers there is a letter from Riddelsdell touching him for a badly-needed hundred pounds (in the event, though, it proved not to be required, for that very embarrassed cleric managed to obtain a bank overdraft instead). Loans of any size were reputedly made by him on strictly business terms and, if not repaid by the end of the period specified, called in. He doubtless made enemies, no less than friends, by this side activity.

Probably not long after settling in Oxford he acquired the house that was to remain his home for the rest of his life and latterly serve the Botanical Exchange Club as the nearest thing it had to a headquarters. This was Yardley Lodge, on the corner of Crick Road, a building larger than any of its neighbours (and still standing today, albeit converted into flats). Here, after the death of his mother, he was looked after by a cousin, with the splendid name of Mrs Juggins, who doubled up as housekeeper and cook. After he acquired a car, around the year 1910, her husband joined the *ménage* as his chauffeur.

At this point I can't resist drawing on the vivid reminiscences which a young protégé of Druce in the early 1920s, Tom Churchill, eventually to become a Major-General, contributed to Palmer and Scott's recent *Flora of Shetland* – but which, sadly, were too lengthy to be used. I am indebted to Richard Palmer for providing me with a copy.

Druce 'had a wonderful car', General Churchill recalls: 'an open Overland, with splendid brass lamps in front. Juggins had orders never to exceed 25 miles an hour, because up to that speed Dr Druce could recognise plants at the side of the road'.

The house [he goes on] 'had a large drawing room and a dining room on the ground floor, as well as a conservatory. The furniture was of mahogany.... On the first floor was his study, and also his bedroom, and on the top floor was his billiards room, with a full-sized table. He much enjoyed this game, at which he was very proficient, in spite of his small reach. Juggins used to play with him... but Druce was **not** a very good loser.'

'In the middle of his study was his large square desk, with a bookcase standing on it containing four shelves. Beside the desk were cupboards with drawers which contained his herbarium, as also did the drawers in the back of his desk. The room was lined with bookshelves and cupboards, and the large bow window enclosed to form a deep working surface. On this stood his microscope, and it was here that he mounted his plants and examined sheets from other herbaria that were sent to him. His desk was always covered in letters, papers and journals, and the confusion was formidable. But he knew where everything was... '

'He was most impatient of time-consuming routine processes, and letter-writing fell into this category, with the result that any manuscript of his was practically illegible. It explained also why he always wore elastic-sided boots, and a black made-up tie. He said it was ridiculous to waste valuable time performing repetitive daily chores'.

Nevertheless 'he was never too busy to talk to visitors', delighting to break off from his otherwise seemingly non-stop work to show a new piece of Georgian or Queen Anne silver that he had bought or a rare botanical book. 'He had the power of communicating his own enthusiasms in a very engaging way, and his sense of humour and of the ridiculous was always very near to the surface'.

Although not strictly an Oxford reminiscence, General Churchill's description of Druce in the field deserves to be added as a tailpiece to this:

> 'I can see him now, tramping through peat bogs, his amazingly springy gait, in which he kicked his heels sideways as he lifted them, bearing him along fast, his head turning from side to side. Stopping suddenly to investigate a plant, bending to turn it over in his two hands, then to pick a leaf or a flower; and then I can see him straighten his back and bend backwards slightly, pull

> his pince-nez from his waistcoat pocket and balance them on his nose..., while he examined the plant minutely. If it was something he wanted, down he would go again and pick a good specimen, ...then swing his vasculum from his back to under his arm, open the catch, raise the lid, push in the plant, refasten the catch, and away he would go again, shrugging the vasculum onto his back as he went. He seldom carried a stick, though he sometimes took an umbrella. [And] he **never** carried a watch, priding himself on being able to guess the time with considerable accuracy'.

General Churchill's description of Druce picking 'a good specimen' will be received with some wryness by anyone who has ever had cause to examine Druce's herbarium. For his specimens are, much more often than not, miserable scraps, often ones from different localities crammed on to the same sheet, the annotation commonly extending to no more than a bare place-name, not even a year. It is all of a piece with that fast-moving pace, that impatience with time-consuming routines that General Churchill remarks upon. Druce was always in too much of a hurry, certainly too much to master any of the major critical groups. The only one of those in which he had any competence, and that only very limited, was *Rubus*. The account of that genus in his *Flora of Oxfordshire* was substantially his own work and he was later to be responsible for discriminating a new species, *Rubus bercheriensis* (named after Berkshire, the county in which it occurs in greatest plenty).

That first edition of the *Flora of Oxfordshire*, published in 1886, only seven years after his arrival in the city, established his botanical reputation, both locally and nationally. It also brought him an honorary M.A. from the University. In the course of the fieldwork for it he had discovered a grass new to science, *Bromus interruptus* (though it was not to be described for another seven years), and what at the time was supposed to be a new pondweed as well, which Fryer named *Potamogeton drucei* in his honour (but which, much later, was to turn out to be a long-known Continental species, *P. nodosus*).

Having polished off Oxfordshire, he promptly turned southwards to Berkshire. The *Flora* of that took a good deal longer, eleven years in all; but when it finally appeared, its enviable spaciousness more than made up for the delay: Druce had really spread himself, with an airy disregard for the short cuts and compression to which buyers and users of such works had traditionally become accustomed. Moreover, it was published by the ultra-prestigious Clarendon Press and, on the pretext that Berkshire was the 'Royal County', it was dedicated to Queen Victoria, by her special permission. In a final, very Drucean touch, the preface was written as from the foot of Ben Lawers.

This book displayed Druce at his best and – as many of his contemporaries would have claimed – also at his worst. In both ways this was the product of his exposure to Oxford's rich resources of botanical books and collections.

The bad result was a new obsession with nomenclature. In only the previous year, in a paper in the *Annals of Scottish Natural History*, he had severely criticised the latest edition of the *London Catalogue* for its use of names which could be shown to be incorrect if the rule of priority was interpreted strictly. He now consolidated that position in his Flora by carrying the argument to its logical conclusion, reinforcing so much unfamiliar novelty by carefully citing the publication reference after the author of every taxon, adding numerous synonyms for good measure. Name changers have always been unpopular, and in Druce's case there was the extra dimension that he had gained a reputation for showing-off. The leading botanists were more or less united in feeling that he needed sitting on – and very firmly at that. Unfortunately for them, he was someone who was not at all easy to squash. And he was to persist with his nomenclatural fiddling for the rest of his life, still insisting on using in his *British Plant List* of 1928 specific combinations which every other authority had forsworn or discarded long ago by then.

This irritating foible arose in part from his special interest in the botanists and botanical writings of the past. To that extent it was the obverse of an activity that was otherwise greatly to his credit. Indeed, his work on the collections and records of his predecessors could be claimed as one of his most important contributions to British botany.

Before him, only one other amateur botanist had paid an equivalent amount of attention to this aspect of the study. This was the Rev. W.W. Newbould, a very shy and self-effacing man who

preferred to burrow away in old books and manuscripts on behalf of his Flora-writing friends rather than publish the fruits of his researches in his own capacity. His chief memorial is the long and splendid historical introduction to Trimen and Dyer's path-breaking *Flora of Middlesex*, a model closely copied by Druce for his no less long and valuable introduction to his Berkshire Flora.

Newbould would dearly have liked to take up residence in Oxford and spend his days sorting out and studying the various early herbaria that the University was known to have accumulated. Unfortunately, though, these were housed at that time in a dust-choked garret, to which the only access was by a long and rickety ladder. A nervous man, Newbould was not up to the necessary gymnastics, and the task of reclaiming that lost store of knowledge for scholarship consequently was still waiting to be attempted when Druce arrived to make his home in Oxford. It was an obvious one with which to occupy his leisure during the winter months (for his fieldwork never extended to the cryptograms) and, gladly given the run of the place by successive Professors of Botany, he soon set about things with his customary energy and, alas, haste. In her definitive account of the Department's herbaria Mrs H.N. Clokie remarks that 'unfortunately much of his work was marred by too great a hurry and inattention to detail', shifting many specimens, for example, that should never have been taken from their existing resting-places. Nevertheless the huge amount of preliminary sorting that he accomplished over a period of many years has been, in Mrs Clokie's words, 'of inestimable value to succeeding curators and assistants'. In 1895 the position he had come to occupy in this connection received official recognition, with the conferment on him of the title of Special Curator of the Fielding Herbarium. Twelve years later he crowned these labours by co-authoring with the then Professor, Sydney Vines, a substantial volume on the now-resuscitated Dillenian Herbaria. In addition, he was solely responsible for a compendious *Account of the Herbarium of the University of Oxford*, published in two parts with a wide interval in between, in 1897 and 1919 respectively. It was credibly said that it was by way of a 'thank-you' for all that he had done for Oxford botany, in particular through this means, that he was recommended for the Fellowship of the Royal Society, that supreme accolade which he was awarded near the end of his life, in 1927. Probably that was devised in compensation for the honorary doctorate that the University had failed to bestow on him – to the lasting outrage of his friends. He did in fact gain an Oxford DSc, but that was by examination – and in its own way much more impressive, considering his humble beginnings and extensive self-education. Honorary doctorates, after all, are doled out to all manner of unscholarly folk. But an honorary doctorate, and from **Oxford**, was what his admirers felt he should have had – and that it fell to St Andrews to repair the omission somehow only rubbed that in. Of that St Andrews LL.D, indeed, Druce himself remarked to an old friend at the time that he valued it more even than a knighthood.

Two years before his retirement Druce had stepped into the shoes of the immensely long-serving and diligent Charles Bailey as Honorary Secretary of the Botanical Exchange Club, a body for which he had done much already, most notably by shouldering the arduous duty of Distributor on no less than four occasions. I have written at length on that distinctly chequered experience, and it would be superfluous to repeat that account here. Suffice it to say that he ran the Club much as he had run his shop: with untiring energy and much assiduous courting of custom, but entirely autonomously, with no delegation and the least amount of consulting that he could get away with. Members' subscriptions were even paid into his own private bank account. He had been his own master much too long to take kindly to having to consult, much less to being overruled. The late John Chapple, who was employed in Druce's closing years as his librarian and general assistant, described him to me as very dogmatic and opinionated, not a good listener, and unwilling to take advice from anyone. Not exactly committee material!

Yet had it not been for Druce, the BEC would have remained the tiny, static little body that most of its then members would have preferred it to be, an agency for the exchange of herbarium specimens which would surely have faded away when collecting passed out of fashion. Instead, by fair means and foul, Druce rapidly built it up into a much more broadly-based, truly national society – albeit a rather weird one, quite undemocratic and without a constitution. By the time of his death it had grown too substantial to be ignored and so served as the base on which the later-emerging BSBI was to be established. This Society thus owes him much.

It might, however, have owed him very much more still. For when he died, in 1932, and it was revealed that he had left a sum which in today's value would amount to roughly two million, not very surprisingly – given that it was so largely his creation and had been the main focus of his activity for so many years – the BEC expected to be one of the major beneficiaries. Much to its dismay, however, once numerous small legacies had been paid, all the money proved to have been left either to Oxford University or to the Society for the Promotion of Nature Reserves (with which Druce had been associated from its earliest days). There was just one possible mitigating factor: Druce had also left his house, herbarium and library to the University on the express condition that they be kept together in order to serve as an institute of systematic botany. As everyone knew, though, that particular branch of botany was by that time in very low water in British universities in general, and the fond hope was nursed that Oxford would feel obliged to turn down the gift, that no other institution would want such a white elephant either, and that it would therefore, *faute de mieux*, be presented to the BEC. That hope, alas, was disappointed: the University accepted the gift – though it has to be said that it did so only grudgingly and for many years afterwards made next to no effort to see that the new facility was utilised. As Chapple remarked to me, Druce would have been outraged had he known how his benefaction was treated. Yardley Lodge was left in limbo, barely visited, barely used (though Sir John Burnett tells me he did at least exploit the garden for genetic experiments with maize). The one consolation was that Druce had also requested that it should continue to be allowed to serve as the BEC's headquarters, and as the will also laid down that Chapple was to be kept on as Curator, the BEC acquired in effect an Executive Secretary – and a very efficient and able one at that. All the same, that was a very far cry from what might have been ...

The story of Druce and Oxford has one final, very intriguing twist. Druce, as you would expect, was a squirrel in the matter of his personal papers: he hoarded just about everything, partly out of inertia, partly from the instincts of an inveterate collector, partly with a biography of himself ultimately in view (for he was to leave a sum in his will expressly to that end). On his death that huge personal archive remained in Yardley Lodge – and remained there undisturbed until the house was eventually given up by the University shortly after the Second World War. It then had to be given house-room in the Botany School (as the Department of Plant Sciences was then known), where it was deposited in an utterly chaotic jumble. The only person to appreciate its potential value was the post-war cataloguer of the Fielding Herbarium, Mrs Clokie. She carried out some preliminary tidying and sorting, with the aid of Richard Palmer, but was unable to accomplish more before leaving Oxford to live in Middlesex.

There, one day, she was visited by a sudden, overwhelming conviction that something terrible was taking place at the Botany School, of great importance to her personally. Without a moment's hesitation she rushed off and caught the next train to Oxford and arrived to find the Druce papers piled up on the School lawn and about to be set fire to – on the orders of Professor Darlington, who had condemned them as unwanted rubbish. Thanks to her immediate protestations, they were parcelled up again and restored to the care of the Library, where, thankfully, they still remain, occupying some 30 or more box-files. Had it not been for that extraordinary ESP-like experience, the BSBI would have lost for ever a key part of its history. I like to think that it was Druce himself, provoked beyond endurance, who temporarily returned to this world to send that saving message.

DAVID E. ALLEN, Lesney Cottage, Middle Road, WINCHESTER, Hampshire SO22 5EJ

SOME PERSONAL RECOLLECTIONS OF Dr GEORGE CLARIDGE DRUCE

I first met Dr Claridge Druce when, together with Dr Ormerod, the Ministry of Health medical officer for Oxford City, and Dr Henderson, a Fellow of Exeter College, he organised (and presumably financially supported) a library for schoolboys, known as the Bivouac Club. This was in the 1920s long before officially sponsored Youth Clubs. It was run on a sound and well-defined pattern, and was open from 4.00 p.m. to 7.00 p.m. five days a week during the winter.

The clubhouse was a sort of chalet in an alley behind the Ashmolean, with a wood fire burning and luxurious vast padded basket chairs. For draughts, chess, halma, ludo and other quiet games a long table stretched the length of the room. This was cleared at 5.00 p.m. and teas served for ten different boys chosen by rota each week. The club closed down for the summer, and opened again with the new term in September when 'nature study' and collecting had dried up. In 1922 Druce arranged a summer competition for us, to collect and paint 20 specimens of the local flora. This I won, not through any botanical ability, but because I coveted above all things the first prize: a bloodthirsty 'collecting' knife and a box of watercolours. Also, I had a cycle, and so could roam further afield than the other competitors.

An unexpected facet in Druce's make up was a natural ability to be instantly at ease with young people. This contrasted with the attitude of the other two adults, who were equally kindly and generous. Dr Henderson had a hint of academic aloofness, and Dr Ormerod a sort of professional heartiness. Druce was then an old man, in a stiff starched upright collar, a dark, and usually dusty, old-fashioned suit, but he went down like a bomb with us all.

Apart from the Bivouac Club and its various seasonal collecting mania, I was a 'runner' for Dr Claridge Druce and Sir Oliver Lodge at the British Association Meeting here in 1926. We 16 year old boys were each attached to various assorted scientists as interdepartmental messengers. This entailed listening to interminable lectures. I sat through Sir Oliver Lodge on 'Ether and Reality' which meant nothing to me then, nor does it now over 60 years later. Dr Claridge Druce had produced the account of the local flora for the Association hand-book, still a valuable guide for the visiting botanist.

In the old City of Oxford Technical School in Church Street, forerunner of the Brookes University, Dr Druce ran a two-year course on Botany and Materia Medica, mainly for apprentice chemists. He made this fascinating. The charge for the hire of a compound microscope was £3.00 – an essential for Druce, who always insisted on drawing from the microscope instead of copying from a textbook. The significance of this he would illustrate by drawing a snail on the chalkboard. He would copy this, and then make a copy of the copy of the copy of the copy until the final result showed no resemblance to the original. A simple lesson perhaps, but one which has lasted for over half a century!

In 1928 I became involved in an International Voluntary Service clearing up after extensive flood damage in Liechtenstein. Druce who was then very old – he died four years later, lent me his copy of the flora of Vorarlberg und Liechtenstein and an introduction to the author who was living at Feldkirk just over the Austrian border a few miles from Vaduz where the workcamp was. Remembering the weapon from the painting competition, he gave me his pocket knife, saying that students in Austria were forbidden to carry pointed knives which were classed as weapons of offence. Both knives are now in the collection of Druce memorabilia at Oxford. It seems ironic that he, the most peaceful of men, should have given knives as mementoes.

Around this larger than life character a mountain of anecdote both true and fictional, has accumulated. Some depict Druce the astute business man, some the conscientious magistrate and respected father of the City Council. There is General Churchill's story about swimming across Scottish lochs to obscure islets checking the flora for Druce. Fifty years later there is the legend of the General's visit to the Oxford Department of Botany in order to attempt to trace the oil-painting of Druce – his schoolboy hero – which had disappeared from the Druce herbarium. It was suspected that Professor Darlington, who was no admirer of systematists, had thrown it out. A quick-witted member of the staff assured the General that the missing portrait was away being cleaned, and the General promised to return in a fortnight and examine it. The whole department was then mobilised to conduct an intensive search of the building. In due course it was discovered hidden, face to the wall, in the broom-cupboard of the gent's toilet. It is now cleaned and restored to its original place of honour with other famous botanists of the past.

HARVEY DUNKLEY, c/o Department of Plant Sciences University of Oxford, South Parks Road, OXFORD OX1 3RB

CONSERVATION NEWS

NEWS FROM THE CONSERVATION COMMITTEE

A proposed merger of English Nature with the Countryside Commission and the possible privatisation of the Forestry Commission are just two of the issues addressed by Conservation Committee in the last few months.

The Department of the Environment solicited our views on the proposed merger: our response was a cautious welcome. We noted that it should not be seen as an opportunity to cut spending on the environment.

The Friends of the New Forest Action Group asked us to look into the role and future of the Forestry Commission, as a government review was known to be in progress. A quick investigation found that there are some grounds for concern, most notably the conservation of non-SSSI sites of importance. Relevant habitats include northern broad-leaved woodland and relevant species Maiden Pink (*Dianthus deltoides*), Herb-Paris (*Paris quadrifolia*) and Small-leaved lime (*Tilia cordata*).

Dealing with policy issues is only part of our job: we are also able to take up threatened sites and lobby for their protection. In the past this has included successful intervention to improve the management of a species-rich meadow and an unsuccessful attempt to get the boundaries of an SSSI extended to include a threatened site for Divided Sedge (*Carex divisa*). Any members who know of a site which is threatened and who feel that we could usefully supplement and reinforce local action, should get in touch.

VICKY MORGAN, Secretary, Conservation Committee, 2 Flaxen Walk, Warboys, HUNTINGDON, Cambs. PE17 2TR

THE SCOTTISH RARE PLANTS PROJECT

This is a new initiative for plant conservation in Scotland based on a partnership between the Royal Botanic Garden Edinburgh and Scottish Natural Heritage. The project aims to protect the rarest species of flowering plants, ferns, bryophytes and lichens by monitoring their status and, where necessary, initiating recovery programmes and stimulating public interest in the conservation of our flora and its habitats.

A large number of plants fall within the remit of the project, including all those listed in Schedule 8 of the Wildlife and Countryside Act and in the Red Data Book. Priority is being given to those species under immediate threat, and those where reliable information is lacking. These include the Northern Yellow-cress (*Rorippa islandica*), the delicate One-flowered Wintergreen (*Moneses uniflora*), Sticky Catchfly (*Lychnis viscaria*) and the Close-headed Alpine sedge (*Carex norvegica*).

The monitoring work, which builds on valuable earlier surveys, involves investigation in the field of the current status of our rarest species. This will provide an objective measure of changes in their populations and highlight which plants are in serious decline. The results will be used to advise land users and land managers on habitat management for rare plants and to identify areas where more detailed ecological research is required. Besides survey and sustained monitoring, positive conservation measures are being undertaken. Seed is being collected both for long term cold storage in a seed bank, thus ensuring against any total extinctions, and for cultivation at Edinburgh in support of ecological studies and the education programme. A long-term objective is to instigate recovery programmes to restore depicted populations. This will involve experimental habitat restoration, with possible reintroduction of selected plants to former sites.

The Scottish Rare Plant Project was launched in 1991. Project Officer, Phil Lusby is giving priority to those species under immediate threat, and those where reliable information is lacking. The Project has recently been boosted by a grant of £47,000 from the Headley Trust.

RARE SCOTTISH PLANT RESTORED TO HOLYROOD PARK EDINBURGH

The Royal Botanic Garden Edinburgh (RBGE) started a 'reinforcement programme' in May 1994 for a rare plant, the Sticky Catchfly (*Lychnis viscaria*). Its presence in Holyrood Park, Edinburgh, where it was discovered in 1670 – the earliest known British colony – has been reduced to just three clumps and it is in danger of extinction.

RBGE aims to reinforce the Holyrood population as part of its Scottish Rare Plant Project. Around 20 *Lychnis*, carefully propagated at the Garden from seed collected from Holyrood in 1993, have been planted at a specially selected site in the Park. Further plants will be established in the autumn. The work has been carried out in collaboration with Historic Scotland, which looks after Holyrood Park and with support from Scottish Natural Heritage.

The Holyrood population is the last known to remain in Edinburgh and has been seriously depleted in recent years by fires. Other populations on Castle Rock, Blackford Hill and Dundas Hill have been lost through quarrying and collecting. The plant is also threatened outside Edinburgh: of two populations in the Borders, one appears to have been lost and the other reduced due to scrub encroachment. In Fife, one of two known populations has recently been lost in the same way.

Visitors to RBGE at Inverleith can discover 28 of Scotland's rare plants, including the Sticky Catchfly, by following a new Trail – the Scottish Rare Plant Trail leaflet is available from the Botanics Shop and a carefully chosen route, with interpretive plant labels and accompanying literature, which give information about distribution, habitat and threats, guides visitors around the Trail – a window on the world of Scotland's special flora.

For further information, please contact:

JACKIE ROBERTS (Press Officer) or PHIL LUSBY (Scottish Rare Plant Project), 20A Inverleith Row, EDINBURGH EH3 5LR.
Tel. 0131 552 7171 Ext. 455 (JR) Ext. 274 (SRPP). Fax 0131 552 0382

SUFFOLK PLANTS UNDER THREAT

As a member of BSBI, WFS and especially Suffolk Wildlife Trust, I would like to make a plea for all those interested in wildflowers to refrain from visiting the few remaining sites for *Alyssum alyssoides* (Small Alison) and *Scleranthus perennis* subsp. *prostrata* (Perennial Knawel) in Suffolk, and/or from telling others where they are.

All are on private land with no direct public access, and any unauthorised entry is putting at risk the present excellent relations the Trust has with the large estates involved. In 1994 police were called out by a landowner on at least one occasion and turf had been flattened and gardened, and plants marked with sticks, presumably for the benefit of subsequent visitors.

For the survival of both species, it is essential that the long term study projects being carried out by Suffolk Wildlife Trust can continue uninterrupted. The *Scleranthus* is now included in the species recovery programme for the next three years and extensive studies on it are being carried out in Breckland. Such work will hopefully lead to the discovery of the exact needs of each species, so increasing their chances of survival long term.

If **you** abuse them, we will **all** lose them.

PETER LAWSON, Suffolk Wildlife Trust, Brooke House, The Green, ASHBOCKING, Nr. Ipswich, Suffolk IP6 9JY

RESEARCH GRANTS

SPECIES RECOVERY PROGRAMME: GRANTS SCHEME

English Nature will consider grant applications for projects supporting English Nature's Species Recovery Programme at any time.

SPECIES RECOVERY PROGRAMME

The Species Recovery Programme, which was launched by English Nature in April 1991, aims to achieve long-term self sustained survival in the wild of the species of plants and animals currently under threat of extinction. The essential partnership between the statutory conservation agencies, government and nongovernmental organisations in preparing and implementing species recovery programmes to meet objectives to conserve biodiversity is highlighted in the voluntary conservation sector's 'Biodiversity Challenge' plan for action published at the end of last year. More recently the Government publication 'Biodiversity – The UK Action Plan' includes English Nature's Species Recovery Programme in its objectives with a target of adding five new species each year. English Nature's Corporate Plan for 1995-98 identifies the Species Recovery Programme as a continuing priority.

We would therefore welcome applications from organisations or individuals for a contribution towards work on threatened species in one or more of the following categories:-

Assess current status of threatened species.
Prepare species recovery plans.
Manage sites to achieve species recovery objectives.
Monitor species populations following initiation of a recovery programme.

A maximum contribution of 50% of the costs is the usual basis of initial grant-aid. Management and monitoring projects will be considered on the basis of a decreasing contribution over three years (i.e. 50% 40% 30%). For this Grants Scheme we will consider projects not only on species protected by Schedules 5 & 8 of the Wildlife and Countryside Act 1981 but also species regarded as endangered or vulnerable in the British Red Data Books (i.e. RDB 1&2 species), and additionally those species included in Annex IV of the EC Habitats and Species Directive.

An application form and explanatory leaflet may be obtained from Roger Mitchell at the address below.

If you are successful in obtaining a grant to work on a species of animal or plant protected by Schedules 5 or 8 of the Wildlife and Countryside Act 1981, you will need to hold a licence to allow you to carry out your intended work. To apply for a licence, or renew an existing licence, you should obtain an application form from English Nature's Licensing Office at the address below.

I look forward to your application for grant-aid to contribute to Species Recovery in England. There is no deadline as such but please ensure that you apply well before you propose to initiate your project. Please also note that grants cannot be made retrospectively, i.e. for work already started before the receipt of a grant offer. I shall be happy to discuss any project ideas informally, or comment on an outline proposal.

ROGER MITCHELL, Manager, Species Recovery Programme, English Nature, Northminster House, Peterborough PE1 1UA. Tel. (01733) 340345 Fax (01733) 68834

ALIENS

ALIEN RECORDS

It has been decided to resurrect the *Alien Records* section of *BSBI News* for a trial period to see what the response will be. This first list has been compiled by John Palmer but both he and I would prefer it to be a place of publication for noteworthy alien records from all over the country that do not qualify for inclusion in Plant Notes in *Watsonia*. Please send your records to me (**not** John) at the address on the front cover.

Acer cappadocicum Gled. Darley Park, Derbys.: seedlings by side of disused stone carriageway, 17/7/86, J.R. Palmer (det. E.J.Clement)

Allium sp. Can I point out that some of our rarest Wild Leeks also occur as garden escapes? In W. Kent, *A. ampeloprasum* L. (as var. *ampeloprasum*) was on the roadside of a cul-de-sac containing garages at S. Darenth in 1993, and *A. sphaerocephalon* L. used to be in a remote part of Stone Marshes. J, R. Palmer.

Amaryllis belladonna L. (Belladonna Lily) on chalky waste ground near Greenhithe station, W. Kent since 1992, J.R. Palmer. Flowers well (is var. *pallida*).

Aster acris L. Dunes at Fairhaven, Lancs. (v.c. 60) in natural vegetation, 24/6/88, J.R. Palmer. Not in flower but small portion collected and grown on. (Hardly a garden-worthy species ?).

Astilbe × *arendsii* Arends (Pink False-Goats-Beard). Roadside, Plym Bridge, Devon, 1/7/66 J.R. Palmer. 3 spikes, difficult to see in the trees (det. D. McClintock as *A.* × *rosea*).

Hyacinthus orientalis subsp. *chionophyllus* naturalised around the long-ruined Ingress Abbey, W. Kent, 25/3/92, J.R. Palmer. Many garden forms are this subsp., with lobes more or less equal to the tube.

Ipomoea purpurea (L.) Roth var. *tricolor* (Morning Glory). Many seedlings on walls and paved public area, Greenhithe, W. Kent, 23/8/91, J.R. Palmer; and all subsequent years, but variable in quantity; more in hot summers. (Flowers striped red, white and blue).

Kolkwitzia amabilis Graebn. (Beauty Bush) – 1 seedling (20 cm tall) on sloping top of very old wall near the cathedral, Rochester E. Kent, 25/10/81, J.R. Palmer. Gradually becoming commoner in gardens and therefore worth looking out for as an escape.

Myrtus luma Mol. Seedlings on roadside outside La Porte Hotel, outskirts of St Peter Port, Guernsey, 20/6/71, J.R. Palmer. Thousands of seedlings in Abbey Wood, Tresco, Scilly, 8/5/71, J.R. Palmer. This beautiful evergreen tree, with its cinnamon coloured bark, and smelling of bay rum, is hardy only in the mildest parts of the British Isles. Grown on for a time in my garden together with seedlings of other Myrtaceae collected in the SW such as *M. ugni* Mol. and various species of *Leptospermum*. After a severe winter however, only *M. communis* L. survived!

Narcissus cyclamineus × *N. pseudonarcissus* On uncultivated ground about 200 yards from (but not part of), a nursery at S. Darenth, W. Kent for some years. J.R. Palmer, 19/2/92. These hybrids have narrow trumpets only slightly wider at the mouth, and perianth segments spreading or only slightly reflexed. (Other taxa present there include *N. triandrus* var. *cernuus*, *N. pseudonarcissus* subsp. *nobilis*, etc.).

Passiflora caerulea (Passion Flower) pavement weed, Swanscombe, W. Kent, 27/8/93, J.R. Palmer.

Primula bulleyana Abundantly naturalised down a stream out of a nursery and round a forest pool, Rothiemurcus Forest, Easterness v.c. 96, Aug. 1961, J.R. Palmer. As Collins *Guide to Border Plants* (by Frances Perry) says, '... a good species to naturalise .... The seedlings will appear in their dozens and soon make a fine colony.'

Trifolium incarnatum L. subsp. *incarnatum* (Crimson Clover) Hextable, W. Kent 25/5/94, J.R. Palmer, in artificially created meadow grassland, probably for several years (see page 30).

EDITOR

MYRIOPHYLLUM AQUATICUM ESTABLISHED ON WALTHAMSTOW MARSHES

This has been a season of surprising discoveries on Walthamstow Marshes, Essex (v.c. 19), the very site where I consider myself botanically born and bred. Another article (p.19) refers to its new hybrids of native or half alien origin. The present account deals with a pure South American alien.

Myriophyllum aquaticum (dubbed Parrot's-feather in Stace, 1991) represents a rather recent chapter in Great Britain's long history of invading exotic waterweeds. It is also one of our most conspicuous by virtue of vivid coloration and exuberant aerial growth. I have seen this tenacious perennial naturalise itself in several parts of London and the Home Counties, notwithstanding that its origin in tropical Brazil might presuppose frost-tenderness. For example, it has smothered an artificial shallow pond at the Middlesex Filter Beds, Lea Bridge Road, London Borough of Hackney from 1991 to the present day. I also saw it, in the company of David Bevan (and with a stout clump of *Sagittaria latifolia*!) well on the way to smothering a remote Ashdown Forest pond, Sussex, in August 1986, but have no further information on its development there. 'Smothering' is the operative word. Eye-catchingly attractive though it may be, it possesses many attributes of a major aggressor. Either in the interests of science or as a vegetarian alternative to cock-fighting, you may like to plant your bare garden pond one half with this, one half with *Crassula helmsii* (New Zealand Pigmyweed), and place bets on the winner.

Indeed the two species share awesome capability to create impenetrable green sward over open mud and open water alike. Mat-like on mud, the stems of *M. aquaticum* creep, root strongly at lower leafy nodes, and produce densely foliated, ascending, terminal shoots. Raft-like on water, they adopt two morphologies. Floating, they continue to spread widely, root loosely at lower leafy nodes, and produce densely foliated, ascending, terminal shoots. Submerged, they spread, sink widely under their own weight and produce extremely long (later re-shortened) root bunches at all nodes, these retaining only the withered remains of their former aerial leaves. This transition between floating and submerged morphologies is abrupt, from 1-2 cm above water to 1-2 cm below. Our front cover illustration indicates the change of form on a principal stem at the point where dying leaves combine with a sudden eruption of long aquatic roots. It should be borne in mind that the fresh specimen drawn for this purpose was manipulated into such position as to enable the depiction of a wide range of vegetative and flowering features within a confined space. In nature these stem curves would not occur, and so each lateral shoot shows a degree of leaf development relative to its own water level.

The bright lime-green coloration of the leaves provides another instantly recognisable feature, unmatched by any British native occupying a similar habitat. The leaf segments are pectinately and subpinnately divided and usually paired at the leaf-tips. The great majority of leaves are disposed around their stems in whorls of five. A few of the upper whorls double as bracts, their axils producing a single tiny flower in each. This flower comprises a calyx of four upright, keeled sepals c. 1 mm long which in turn enclose four delicate, feathery white stigmas. Only female plants are recorded in this country to date (Stace 1991), so they depend on vegetative propagation alone.

The epithet 'aquaticum' ill describes a plant of predominantly subaquatic to subterrestrial adaptation, especially since it fails to photosynthesise in the deeper water regularly exploited by our three native *Myriophyllum* species (Water-milfoils). Its further progress in the British Isles should be carefully monitored.

References

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

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

COTULA CORONOPIFOLIA IS NATIVE TO NEW ZEALAND

John Timson (1994) wonders whether *Cotula coronopifolia* L. is a native to New Zealand and South Africa. It was first collected in New Zealand by Joseph Banks and Daniel Solander in 1769 during Captain James Cook's first voyage of discovery in the south seas. As it was present in New Zealand before the advent of Europeans it is regarded as a native species.

Incidentally its common name in New Zealand is usually Bachelor's Buttons (sometimes Buttonweed). Soldier's Buttons, quoted by Timson from Hilgendorf (1948) nowadays refers to *Cotula australis* (Sprengel) Hook.f. which Hilgendorf called Australian Soldier's Buttons. This latter species is often found on disturbed sites and has been regarded by some people (e.g. Allan 1961) as being introduced, but since Hooker (1852) noted it as common, Webb, Sykes & Garnock-Jones (1988) comment that 'its distribution is not inconsistent with it being indigenous here'.

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Allan, H.H. (1961). *Flora of New Zealand* Vol.1, p.680. Wellington
Hilgendorf, F.W. (1948). *Weeds of New Zealand*, (4th edn), p.185
Hooker, J.D. (1852). *Flora Novae-Zealandiae*, Vol. 1, p.128. London.
Timson, J. (1994). A buttonweed by any other name . . . *BSBI News* **65**: 40.
Webb, C.J., Sykes, W.R. & Garnock-Jones, P.J. (1988). *Flora of New Zealand*, Vol. 4, p.168. Wellington.

JOHN TAYLOR, Goat Island Road, LEIGH, New Zealand

ASIAN IMMIGRANTS AND ASIAN ALIENS

When people move house they often take their favourite garden plants with them. When such a move is into Britain from abroad it can have interesting implications for the introduction of alien plants. Some while ago I met an Asian by the name of Kuljeet who had made just such a move from the Punjab. She is very fond of her garden and grows a number of culinary herbs, the seeds of which she had brought with her when she moved.

A conspicuous plant in her garden was *Trigonella foenum-graecum* (Fenugreek) which is apparently universally known in India as methi (pronounced meti). This is, of course, a very distinctive plant, well known as a curry ingredient and one which we would expect to find in any Asian garden.

Of interest however was another legume, obviously a species of *Trigonella*, but with orange-yellow flowers and clusters of short curved pods. Upon making enquiry I was informed that this too was methi, pressing for a little more information it was admitted that this was a different variety which was grown in India. It brought to mind a plant which I had encountered on hillsides in Rhodes, which was *T. balansae*. Recourse to Ali (1977) *Flora of Pakistan* **100**: Papilionaceae, which happened to be on the shelf, revealed a description of a similar plant, *T. corniculata*, although there was no reference to any cultivation. Carlstrom's Survey of the Flora of Rodhos etc., (Lund, 1987) comments that *T. corniculata* is often difficult to distinguish from *T. balansae* and records both from the island. It is left to Meikle (*Flora of Cyprus*, **1**: 402), as usual, to make the penetrating observation that *T. balansae* should probably be regarded as a subspecies of *T. corniculata*.

Only Polunin (Flowers of Greece & Balkans) makes mention of *T. corniculata* as being cultivated in the Mediterranean region. This naturally raises the question as to which taxon is cultivated in the British Isles, which is unknown at present.

Also in cultivation were *Lepidium sativum* (Garden Cress) and a range of Umbellifers. *Momordica charantia* (Kerela) a cucurbit with a rather warty fruit is widely available in Britain as a

vegetable ingredient of curry. It is likely to join the other cucurbitaceous seedlings occasionally found on rubbish tips during warm summers and can be easily distinguished by its heavily sculptured seed coat. The use of Kerela as a vegetable recently caused some excitement in connection with its strong hypoglycaemic effect, which it was feared, could potentiate the action of drugs such as chlorpropamide, used in the control of diabetes.

Garden plants are not the only plants brought over here from Asia, however. Research over the last ten years or so has brought to light an extensive practice of traditional Asian medicine in the UK. These systems, known as Ayurvedic medicine in India, or Unani-Tibb in Pakistan, have much in common and make use of a wide variety of herbal ingredients, most of which are imported directly from Asia. Some of the traditional healers, called Hakims, have even set up shops in cities like Bradford, which have a large Asian immigrant population. Large cloth sacks of dried roots, leaves, fruits and seeds occupied the store room in one of these shops. One wonders how such items were imported with the present strict medicines and CITES legislation. It seems several loopholes exist. One is to label everything 'herbal medicine' or 'food supplement', such nebulous titles apparently enable anything to get through. That is probably how jars of medicines containing opium and *Cannabis sativa* (used in Asia as a herbal remedy) arrive here. This also raises concern over conservation as many of the herbs are collected from the wild. A 25kg sack of *Colchicum* corms or terrestrial orchid tubers must make a dent in the wild population. But what has all of this to do with the introduction of alien plants ?

Many of the imported herbal ingredients are fruits or seeds and some of them are likely to occur as casuals, especially in areas with large Asian communities, along roadsides, in gardens, on waste ground and rubbish tips. So far I have catalogued the use of over 320 species in Asian medicines in Britain, at least 80 of which are imported as seeds. Seed samples of *Plantago ovata*, *Alcea* sp., *Cassia fistula* and *Abrus precatorius* from a hakim were all viable and germinated readily. And one expects that the *Amaranthus*, *Portulaca oleracea* (Purslane) and many of the Solanaceae, Asteraceae and Fabaceae seeds would be viable too. All of which adds up to quite a potential for alien plant introductions!

The leguminous climber *Abrus precatorius* (Ganja, Kauncha beej, Rati), has become notorious in connection with cases of poisoning attributed to its use, and indeed the seeds have been known to cause death when eaten. There are several colour morphs, the most frequently encountered has a bright scarlet testa with a small black area around the hilum, a rarer form has all creamy yellow seeds. These are widely available in Britain amongst the hakims who prescribe them as an oral contraceptive and an apparently effective one at that. It is claimed that the effect of ingesting a course of three specially prepared seeds in three days may last for up to three months or longer depending on previous frequency of use. This rather drastic contraceptive is most frequently used in Britain among Mirripurri Asian women. Hakims regard the creamy yellow seeds as less serious in their side effects than the red and black seeds. Paradoxically, in India the seed is used both as an abortifacient and a tonic for pregnant women, of course it is also used there as a contraceptive.

It has come as something of a surprise for many to learn of the extent to which Asian medicine is now practised in this country; one wonders what surprises in the form of alien plants still await discovery from this source.

JULIAN M. SHAW, Dept. of Pharmaceutical Sciences, University of Nottingham, NOTTINGHAM NG7 2RD

CARDAMINE CORYMBOSA IN LEICESTERSHIRE

This spring (March 1994) I noticed in my garden a small crucifer that was instantly recognisable as *Cardamine corymbosa* Hook.f. to anyone who has read recent issues of *BSBI News*. It is growing between bricks in an area outside our rear french windows, along with such common plants as

Sagina procumbens and *Cardamine hirsuta*. I assume it was brought here as a contaminant, though with what I have no idea, for I rarely buy plants from nurseries.

In addition to the characters given by Mr M. Braithwaite (*BSBI News* **58**: 38-39, 1991), all flowers that I examined had six stamens, in contrast to the usual four of *C. hirsuta*. The plants had 3-7 leaflets. The flowers are much more conspicuous than those of *C. hirsuta*, mainly because they open wider, with almost patent petal-limbs. The best single diagnostic measurement of the flowers is the petal width: 2-2.8mm wide in *C. corymbosa* and 1.2-1.8mm wide in *C. hirsuta* (both referring to plants in my garden, and the latter measurement covering *C. flexuosa* as well). The width of 0.9-2.2mm given by Rich (*Crucifers of Great Britain and Ireland*: 136, 1991) for *C. hirsuta* must represent an extreme and rare upper limit. The petals of *C. corymbosa* are also longer in relation to the sepals (c. 2.5-3 times as long, as opposed to c. 2-2.5 times as long in *C. hirsuta*). In neither species are the petals 'not clawed' as stated in the Crucifer handbook; the claw is short but distinct and greenish in both.

CLIVE A. STACE, Cringlee, Claybrooke Road, Ullesthorpe, Leicestershire LE17 5AB

SYMPHORICARPOS ORBICULATUS Moench (CORALBERRY)

This patch-forming shrub is under-recorded or ignored in the wild, for example it has been naturalised on Dartford Heath, W. Kent for at least 10 years, to mention just one locality. It is certainly by no means the rarest naturalised Snowberry.

The commoner *S.* × *chenaultii* Rehd. is also established on Dartford Heath, with fruits larger, and red only on one side, white on the other; because of its hybrid origin.

S. orbiculatus is the only Snowberry with completely pink fruits, and the description of *S. chenaultii* in Stace (p. 778) seems to be of *S. orbiculatus* (see also *BSBI News* **32**: 20).

JOHN R. PALMER, 19 Water Mill Way, South Darenth, DARTFORD, Kent DA4 9BB

ALIEN SHRUBS AND TREES IN A CHILTERN TETRAD

The naturalised shrubs, especially *Cotoneaster*, of parts of the Hampshire and Kentish chalk have become well known as a result of recent field meetings. Those of the chalk elsewhere are less well known, so it may be of interest to list the naturalised shrubs of the Chiltern tetrads with which I am most familiar: grid square 41/74.98 and its immediate neighbours, all on the chalk or clay-with-flints and on the Oxon/Bucks border.

Cotoneaster bullatus (Hollyberry Cotoneaster): one in scrub on the Stone Ground on Oakley Hill and another in scrub in the adjacent Crowell Scrubs.

Cotoneaster dielsianus (Diel's Cotoneaster) det. J.R. Palmer: one or more in a cotoneaster thicket in Chinnor cement works.

Cotoneaster horizontalis (Wall Cotoneaster): one on Oakley Hill N. R.

Cotoneaster simonsii (Himalayan Cotoneaster): one or more in a cotoneaster thicket in Chinnor cement works; one by the main footpath on Stepping Hill in Chinnor Hill N.R.; two more in scrub higher up fell victim to scrub-clearing work parties some years ago.

Cotoneaster × *watereri* (Waterer's Cotoneaster): single shrubs on the edge of the former railway line in Chinnor village and on bridleway CH 38 in Chinnor Hill N.R. disappeared during scrub clearance some time ago; one in Crowell Scrubs apparently perished during a hard winter.

Juglans regia (Walnut): one tree by the Upper Icknield Way in Crowell.
Mahonia aquifolium (Oregon Grape): in hedge opposite demolished house, Ickneild Way, Chinnor, since 1950s; and by footpath outside garden, Chinnor Hill, since 1960s, but recently 'tidied away'; one stunted plant on old railway track by Chinnor cement works, 1994.
Prunus cerasus (Dwarf Cherry): one mature tree formerly on the edge of Crowell Wood.
Prunus incisa (Fuji Cherry): at least 20 on the clay-with-flints on the Stone Ground on Oakley Hill and in Crowell Scrubs.
Prunus laurocerasus (Cherry Laurel): all on clay-with-flints, several on the Stone Ground on Oakley Hill; one in E corner of Crowellhill Wood; one small, road verge near Crowell Hill Farm entrance.
Quercus ilex (Evergreen Oak): several originating from the row of mature trees where the B4009 passes Shirburn Castle, on the Aston Rowant NNR on the col between Bald and Shirburn Hills, also on Kingston Hill.
Ribes sanguineus (Flowering Currant): one in E corner of Crowellhill Wood, close to Gipsy's Corner.
Spiraea × *pseudosalicifolia* (Hybrid Bridewort): One among tall vegetation at Gipsy's Corner.
Symphoricarpos rivularis (Snowberry): large thicket, Chinnor Hill NR, originated from neighbouring garden, since 1965.
In addition I know of numerous Apples (*Malus domestica*), Red Currants (*Ribes rubrum*), and Gooseberries (*R. uva-crispa*), including one large bush unusually sited in the middle of a grass field in Bledlow village, together with at least one each of Pear (*Pyrus communis*) on Hempton Plain, Chinnor Hill N.R., and Plum (*Prunus domestica*), on the old railway track at Crowell crossing.

RICHARD FITTER, Drifts, Chinnor Hill, CHINNOR, Oxon OX9 4BS

ALIEN STUDY GROUP

I must apologise to those who wrote in response to my note in the last issue and may not yet have received a reply or a copy of *Aliens*. I will get round to this in the very near future.

I am hoping to produce another issue of *Aliens* before the end of the year and would welcome contributions from anyone (not just members of the group) who has something to say about invasive aliens. I am becoming increasingly interested in Variegated Yellow Archangel (see note on page 71), which seems to be spreading rapidly in many parts of the country. There must be other aliens that have caught someone's eye. If so why not write a short note to bring it to the attention of others. I look forward to hearing from you.

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

CHENOPODIUM CAPITATUM IN SOUTHERN ENGLAND

I have been following with interest the recent correspondence regarding *Chenopodium capitatum* (Strawberry-blite) (*BSBI News* **65**: 43-44; **66**: 36-37). In particular, the comment that '...floras of southern England has yielded only two records ... neither within the last twenty years'. Whether Bedfordshire is considered as a southern county I would not know, but John and I were shown *C. capitatum* in v.c. 30 in 1980 by Mrs Robinson at her farm at West End, Stevington. It was

growing in her carrot patch, and only the carrots, in her well stocked kitchen garden. There were only a few plants, the largest being 15 cm or so high. They did not appear again, as far as I know. We presumed they must have been introduced with that particular batch of carrot seed. There is a specimen in **LTN**. We also found *Chenopodium glaucum* (Oak-leaved Goosefoot) in one place in Bedfordshire in considerable quantity in a market garden field, subject to periodic flooding, at Shefford, from 1979 to1988, when we last looked at the site. It was so well established that it is probably still there.

Reference

Dony, J.G & C.M. (1986). Further notes on the Flora of Bedfordshire. *Watsonia* **16**: 163-172.

CHRIS DONY, Friars Lodge, 18 Priory Road, DUNSTABLE, Beds LU5 4HR

COCHLEARIA GLASTIFOLIA NATURALISED AT NOTTINGHAM

To those familiar with the native *Cochlearia* species (Scurvygrasses), this species will likely appear an oddity, at least in height if nothing else (see illustration page 57).

A tall white flowered crucifer has been known for around twenty years from a small area of the campus of Nottingham University. It has become naturalised after originally being cultivated for phytochemical studies (*BSBI News* **65**: 42, 1994). Tim Rich kindly confirmed its identity and wrote that there are only three or four records for it from the British Isles. It is a native of Italy and the Iberian peninsula, where according to *Flora Europaea* **1**: 314, it is a robust annual. Robust is certainly an appropriate description as the annual stems easily reach 1.5 m and its vigorous growth competes successfully with surrounding vegetation. Herbarium material has been retained by T. Rich and is also in **herb. JMHS.**

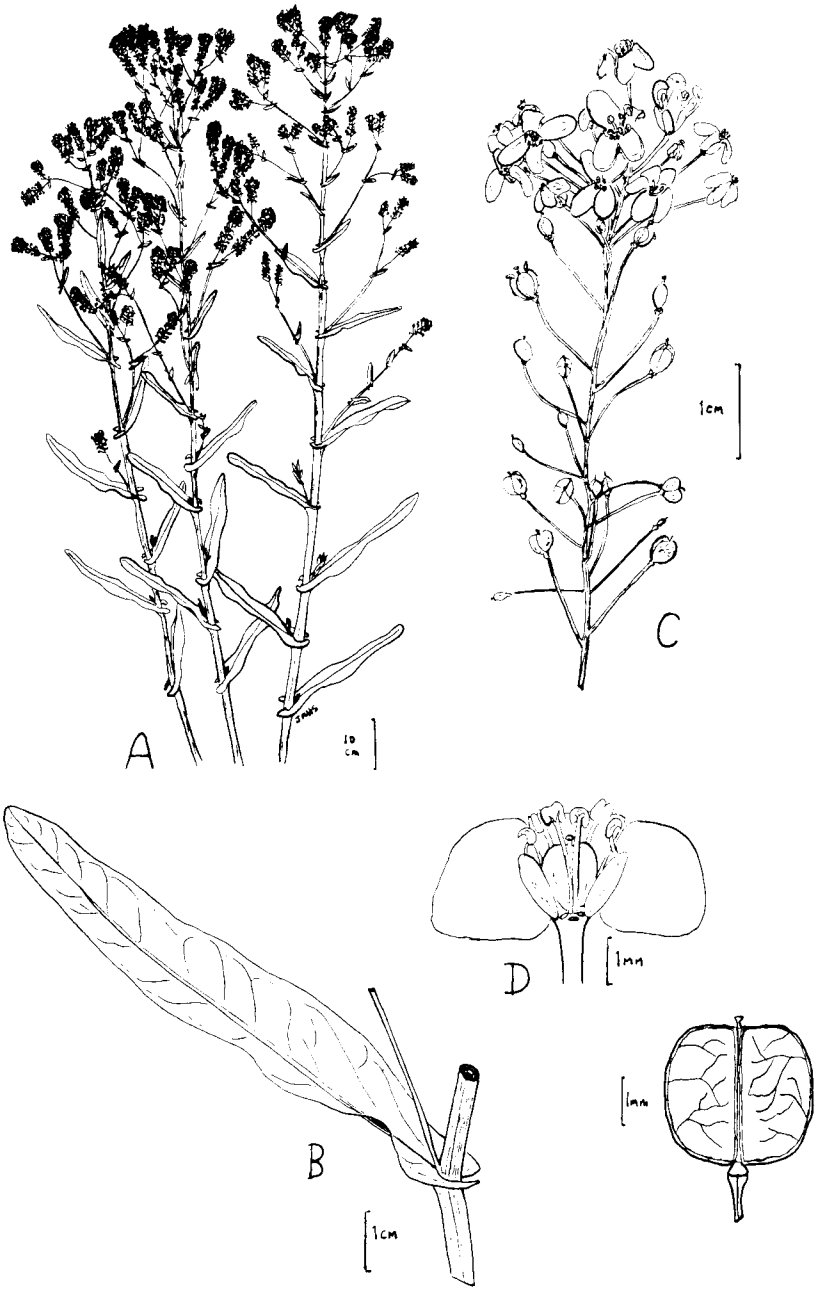
There are a number of differences between our material and the description given in *Flora Europaea*. The Nottingham plants are weakly perennial and may persist for three or four years. Also their height exceeds the 'up to 100 cm' mark; possibly the local environment and fertile soil in which they grow encourage this.

A prolific quantity of seed is set in favourable years, which germinates in the autumn and slowly develops over winter, producing flowering size rosettes of spathulate leaves the following spring. Anthesis commences in late May or June. The white petaled flowers are slightly scented but do not appear to attract any pollinators; our plants appear to be self-compatible. Most flowers produce a small subspherical fruit, with an average content of 5½ seeds (138 fruits counted). Near the apex of each inflorescence branch the fruits are small containing (0-)1-2 seeds, but the majority of fruits attain c. 3 mm in diameter and contain (3-)5-7(-9) seeds. There are between 13 and 30 fruits produced on each ultimate branch of the inflorescence, producing an average of 20.4 fruits per ultimate branch. This gives an estimate of about 4500 seeds from each main stem.

Germination tested in a cool greenhouse during early spring using overwintered seed resulted in 72% germination for seed left in the fruits on the plants outside over winter and 80% germination from seed harvested in the autumn and stored at room temperature. Establishment and survival seem better from autumn germinating seed than from that sown in the spring.

In view of the apparent hardiness and vigour of these plants, it is difficult to account for their rarity in the British Isles compared to other crucifers such as *Sisymbrium* species. Possibly the season of introduction, severity of the winter weather, probable need for a well drained substrate and place of origin of the introduction are among the critical factors involved.

JULIAN M.H. SHAW, Dept. of Pharmaceutical Sciences, University of Nottingham, NOTTINGHAM NG7 2RD



Cochlearia glastifolia L.. A, habit; B, cauline leaf; C, an ultimate inflorescence branch; D, single flower with one sepal and two petals removed; E, fruit.

NOTICES (BSBI)

WILD FLOWER PLANTS AND SEEDS

For some years the BSBI has collaborated with other conservation organisations in the production of a leaflet on growing wild flowers from seed. A new edition has just been prepared which takes account of the increasing interest in buying wild flowers, as well as seed, for creating wildlife habitats.

The leaflet explains the dangers of uncontrolled use of wild flower seed or plants in the wild, gives guidance on their use and lists 18 suppliers whose seeds or plants are raised from native British stock.

Copies are available if you send an A5 stamped and self-addressed envelope to:

BSBI, Green Acre, Wood Lane, OUNDLE, Peterborough PE8 5TP.

BOTANICAL LATIN

It is proposed to hold a meeting on botanical Latin at the University of Reading on Saturday, 4 February 1995. Professor W.T. Stearn and Philip Oswald will be amongst those speaking. Professor Stearn is well known for his classic book *Botanical Latin* (now in its fourth edition) and now for *Stearn's Dictionary of Plant Names for Gardeners*. Less well known is the fact that Philip Oswald, a classics scholar, is at present preparing a new edition of Gilbert-Carter's *Glossary of the British Flora*. Mr Gordon Rowley will speak on the antics of botanists in relation to plant names and Latin. There will be a charge of £12.50 for attending, but this will include lunch. You are asked to put the date in your diary; a booking form will be issued later, together with further particulars.

STEPHEN L. JURY, Dept. of Botany, School of Plant Sciences, University of Reading, Whiteknights, PO Box 221, READING RG6 2AS

PRESENT PROGRESS AND FUTURE PROSPECTS IN STUDYING THE TAXONOMY AND DISTRIBUTION OF THE FLORA OF NW EUROPE

Joint BSBI/Linnean Society Conference

Thursday, 9 February, 1995

This one-day conference, to be held in the rooms of the Linnean Society, Burlington House, Piccadilly, London, has been arranged to bring together contributors from France/Belgium, Holland, Germany, Scandinavia and Ireland to join with others from Great Britain. It will coincide with the publication of our *Scarce Species Atlas* (in October 1994) and with a new *Atlas* project to be officially launched in 1995. In Holland a new 1 km Atlas is now in progress whilst the new *Atlas* for Belgium and Northern France, being produced by the Institut Floristique Franco-Belge, is well advanced.

We hope that closer collaboration between countries with similar floras will enable us to prepare co-ordinated strategies for the conservation of our rare and threatened species which are so

often the same throughout the area and give opportunities to discuss collaboration in the preparation of publications particularly of monographs of certain groups in what is largely a common flora.

All BSBI members are welcome to attend

For further details and a Registration Form please write to:

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

NOTICES (NON BSBI)

NATIONAL PHONE DAY

16 April 1995

In an attempt to ensure that the UK has enough dialling codes to last well into the next century, UK area codes are changing on 16 April 1995 (PHONE DAY). With a few exceptions (see below) **1** will be inserted after the initial **0** for UK area codes. For example, the code for Cardiff **0222** will become **01222** and for Manchester **061** will become **0161**. For international calls the code from the UK will change from **010** to **00**.

The exceptions are:

Bristol 0272 xxxxxx becomes **0117 9**xx xxxx
Leeds 0532 xxxxxx becomes **0113 2**xx xxxx
Leicester 0533 xxxxxx becomes **0116 2**xx xxx
Nottingham 0602 xxxxxx becomes **0115 9**xx xxxx
Sheffield 0742 xxxxxx becomes **0114 2**xx xxxx

Freefone **0800** and Lo-call **0345** numbers, premium numbers (such as **0891**, **0839**, **0881** and **0898**) and mobile phone numbers all remain unchanged

As from 1 August 1994 until 'PHONE DAY' there will be a 'full parallel running' period when both new and existing area codes can be used. BT have asked that whenever possible the new codes should be used to enable us to be conversant with the new system before the changeover date of 16 April 1995.

To comply with this all UK area codes in *BSBI News* have been changed to conform with the new system.

EDITOR

EUROPEAN LOWLAND WET GRASSLANDS: THEIR ECOLOGY, MANAGEMENT AND RESTORATION

14-15 December 1994

A meeting with the above title has been arranged by the International Centre of Landscape Ecology (ICOLE), Dept. of Geography, Loughborough University Loughborough Leicestershire

Details of this and future meetings can be obtained from:

GILL GILES, ICOLE, Department of Geography, Loughborough University, LOUGHBOROUGH, LE11 3TU. Tel. 01509 223030, Fax 01509 260753.

FLORA BRITANNICA

The latest edition of *Woodbine*, the newsletter of the *Flora Britannica* project is now available from the address below. The project is going extremely well and we thank the BSBI, and its members, for help in promoting it.

JOHN NEWTON, Flora Britannica Co-ordinator, Common Ground, 41 Shelton Street, LONDON WC2H 9HJ. Tel. 0171 379 3109

THE SOUTH WEXFORD COAST

A small booklet to celebrate in words and pictures the natural riches of *The South Wexford Coast*, by Jim Hurley, has just been published. It can be obtained for IR£1.55 from the address below.

SWC Promotions, Grange, Kilmore, Co. Wexford, Ireland

INTERNATIONAL ORGANIZATION OF PLANT BIOSYSTEMATISTS

VI INTERNATIONAL SYMPOSIUM

Variation and Evolution in Arctic and Alpine Plants

July 29 - August 2, 1995

University of Tromsø, Tromsø, NORWAY

If any member would like to receive more information about the above Symposium or the IOPB, they should write to the address below.

VI IOPB SYMPOSIUM, c/o Bergius Foundation, Box 50017, S-10405 Stockholm, Sweden

THE UK SYSTEMATICS FORUM

The UK Systematics Forum – an important new initiative funded by the Office of Science and Technology – is currently setting up a

DIRECTORY OF UK SYSTEMATIC EXPERTISE & CURRENT RESEARCH

and invites any person in the UK active in systematic biology research to be included in this important database.

The UK Systematics Forum serves as an important opportunity to raise the profile of systematics. It's role is to promote co-ordination and communication amongst institutions with major biological and palaeontological collections as well as the wider systematic community, and to develop priorities for systematic work. The creation of this Directory, just one of the activities being undertaken to achieve this aim, is considered to be an important first step in strengthening the discipline of systematics. The information collated in this directory will be made available to

interested parties and used as a tool to inform governmental policy makers of the current situation in systematic research – a role made possible by the Forum's links with OST.

Anybody in the UK currently involved in systematic research – the science of describing, naming and classifying all organisms – **whether at an amateur or professional level, biological or palaeontological**, is strongly urged to contact the Forum for inclusion in this important information source.

For more information please contact:

E. WATSON, The UK Systematics Forum, FREEPOST (LON 91), c/o The Natural History Museum, Cromwell Road, LONDON SW7 5YZ. Tel: 0171 938 9522. Fax: 0171 938 9531. E-mail: ew@nhm.ac.uk

OFFERS

ANCIENT BOTANY BOOKS

In the interests of space saving, my wife and I are throwing out the following ancient botany books. It would be easy to sling them on the bonfire, but just in case there is a BSBI member to whom they would be of 'historical' interest, here is a list:-

Practical Botany, by F.O. Bower, MacMillan, 1891.
First Stage Botany (The Organised Science Series), Albert J. Ewart, University Tutorial Press, 1905.
Handbook of the British Flora, by George Bentham (Revised by Sir J.D. Hooker), Lovell Reeve and Co, 1908.
A Textbook of Botany for Students, by W.L. Boys-Smith, Allman & Son, 1922.
A Students' Text-Book of Botany, Sydney H. Vines, Swan Sonnenschein & Co, 1902.
Hayward's Botanist's Pocket-Book, 18th Edition, revised by G. Claridge Druce, G. Bell and Sons, 1926.
The Student's Flora of the British Isles, Sir J.D. Hooker, MacMillan, 1884.

These are available, at no cost, to anyone who might be interested – all we want is the space! Obviously, we would not wish to be out of pocket on postage, and hopefully, the recipient (if any) could collect from our house in Staines.

J.H.D. HOOPER, 34 Richmond Road, STAINES, Middx, TW18 2AB. Tel. 01784–454849

REQUESTS

BLUE BELL OR BLUEBELL

Several members have already responded to my suggestion (*BSBI News* **66**: 41) that we have a display of pub signs which depict our emblem – the bluebell – at the Exhibition Meeting(s) next November – but there must be many more.

I was astonished to find eight listed in my local phone book either under Blue Bell or Bluebell and intend to work my way round photographing them during the autumn – one at a time!

Please send the results to me or bring them with you to the Exhibition Meetings. For the record it would be interesting to know whether the name is one word or two, and whether the sign has blue bells on both sides, a blue bell on one side and a bluebell on the other (as at Helpstone and Glinton in my area), or a bluebell on both sides. Of course notes on the quality of the beer would also be welcome. Then we could compile a list of BSBI pubs – **B**luebell **S**igns **B**eer **I**nformation.

A special prize to anyone who recruits the landlord of a Bluebell pub as a member.

FRANKLYN PERRING, President

SEEDS WANTED

I am a research professor of Medical Botany at the Medicine & Homeopathy School of the National Polytechnic Institute at Mexico City, and am currently working on phytochemistry and plant propagation projects, for which I require seeds of the following species:

Bryonia alba L.
Conium maculatum L.
Hyoscyamus niger L.
Solanum dulcamara L.
Rhododendron ferrugineum L.
Cicuta virosa L.
Hamamelis virginica

If any member has seeds of any of these species available, I would be very pleased to receive them.

At our school we have a herbarium containing medicinal plants used in various therapies, and also a small botanic garden located on the campus. If you have a *List of Seeds* available, we would very much like to receive a copy.

Thank you in advance for your kind help and collaboration.

JOSÉ WAIZEL B., Escuela Nacional de Medicina y Homeopatía, I.P.N., Secc. de Est. de Posgrado e Investigacion, Calle Guillermo Massieu H. # 239, Fracc. San Jose de la Escalera, Ticoman, 07320, D.F., MEXICO

H.D.B. DILLWYN

There are two important plant records for County Mayo attributed to one H.D.B. Dillwyn, but there is apparently no other notice of this botanist in standard sources – he/she is not included in R.G.C. Desmond's *Dictionary of British and Irish botanists...* (1994), nor in D.H. Kent & D.E. Allen's *British and Irish herbaria* (1984).

Dillwyn reported – or perhaps collected – *Daboecia cantabrica* (St Dabeoc's Heath) from Curraun (West Mayo), and *Saxifraga hirculus* (Marsh Saxifrage) west of Ballycastle (North Mayo). St Dabeoc's Heath has not been found on Curraun this century, and the Marsh Saxifrage is a very rare species known in Mayo only from one iron-rich flush.

H.D.B. Dillwyn's records were printed in the second edition of *Cybele Hibernica*, edited by N. Colgan and R.W. Scully and published in 1898. But who was H.D.B. Dillwyn and where are his/her herbarium specimens? As the Mayo records were not published in earlier works, I assume he/she flourished in the 1890s.

E. CHARLES NELSON, National Botanic Gardens, Glasnevin, DUBLIN 9, Ireland

BARBARA BRIGGS, F.Z.S. – A REQUEST FOR INFORMATION

Barbara Briggs was author of *Our Friendly Trees* (1929), *Some Other Friendly Trees* (1934), *Trees of Britain, their form and character* (1936), illustrated with her own drawings and paintings. Also of eleven other books, seven with text by E. Helme, (1926-1929), with titles such as *Farm Friends*, *Zoo Friends*, *Friends of Field and Forest*, etc. All published by the Lutterworth Press, either under that imprint or under their earlier imprint, the Religious Tract Society. The text seems to be aimed at secondary school children.

She was elected a Fellow of the Zoological Society in 1925, and according to the Secretary her address in 1929 was Beechfield, Sandal, Wakefield, but she had moved to Victoria BC, Canada by 1939. Nothing else seems to be known about her. Ray Desmond informs me that he did not come across her name in any of the literature scanned for the new edition of his Dictionary. Yet her books were sufficiently well known to be awarded as school prizes in the 1930s. My wife was given one for botany in 1934 and would like to know more about the author's work in this country before she moved to Canada. Has any member any information ?

B.E. SMYTHIES, Field Cottage, Church Hill, Merstham, REDHILL, Surrey RH1 3BL

REQUEST FOR RECORDS AND SAMPLES OF TWO AQUATIC ALIENS: *LEMNA MINUTA* AND *ELODEA NUTTALLII*

Base line distribution maps of invasive species are very important, not only can they be used to indicate the rate of invasion but they may also reveal the types of habitat at risk. The actual distributions of *Lemna minuta* Kunth. (Least Duckweed) (*L. minuscula* Herter nom. illeg.) and *Elodea nuttallii* (Planchon) H. St John (Nuttal's Waterweed) in Britain are probably largely unrecorded and this may be due to the identification problems with both species. There has been a previous request by Rachel Janes, of Liverpool University (*BSBI News* **60**), for information regarding *Lemna minuta* but this unfortunately elicited a rather poor response and I would like to ask again for reports of this species and for *Elodea nuttallii*. I would also appreciate any background information concerning the sites of occurrence of each species.

I am happy to answer queries over identification problems, both aliens can be difficult to identify in the field, and I would particularly welcome any samples being sent to me at the address below. I have found, in the past that aquatic plants survive transport remarkably well if wrapped in a dampened sealed polythene bag.

JOHN BRAMLEY, Ecology Research Group, Canterbury Christ Church College, CANTERBURY, Kent CT1 1QU. Tel. (01227) 767700 ext 239. Fax. (01227) 470442.

REVISED *FLORA OF THE ISLES OF SCILLY* : HELP WANTED

After a slow start since taking over as v.c. Recorder for Scilly from Clare Harvey, I am now working towards producing an updated *Flora*. Since the excellent *Flora* published by J.E. Lousley in 1971, which has been my 'bible' for years, there have been many changes to plants and habitats of the Scillies.

With the assistance of my husband, Adrian Colston, I have been entering plant records on the 'RECORDER' database and hope to produce a revision to the *Flora* in a couple of years time.

Many BSBI members visit the Isles of Scilly, and some have generously sent their records to me. If anyone has plant records I may not have seen, or are planning a holiday in Scilly in the near future please could they contact me.

We have designed a recording card which we can supply to anyone who is interested.

ROSEMARY PARSLOW, 48 Main Street, Woodnewton, PETERBOROUGH PE8 5EB

FUNGI AND METEORS

I am presently engaged in looking at the connections in folklore and legend between various types of fungi and meteors, having been prompted to start following an article by Dr Martin Beech, a meteor scientist at the University of Western Ontario, Canada, in the International Meteor Organisation (IMO) journal *WGN* last year (vol.21, no.4, pp.200-202).

In his paper, Dr Beech commented on links between the brilliant yellow-orange *Tremella mesenterica* plus the various fungi capable of appearing in 'Fairy Rings' (e.g. the Field Mushroom – *Agaricus campestris* – etc.) and meteors. It is notable that 'Fairy Rings' are at their commonest from late summer to early winter in the northern hemisphere (though *T. mesenterica* occurs throughout the year), a time which has coincided neatly with the year's highest levels of meteor activity for the same hemisphere for at least several centuries. Dr Beech has also recently come up with further associations from Native American folklore on similar lines.

However, despite considerable research effort, no reference to the 'Earth stars' (*Geastrum*), arguably the best candidates for a link between earthly and heavenly events in meteor/fungi folklore, has yet been discovered. We would be very interested in knowing whether any BSBI members have come across such material, or anything of a similar nature, during their own researches.

ALASTAIR McBEATH, IMO Vice-President, 25 West Park, MORPETH, Northumberland, NE61 2JP. Tel. (01670) 503379.

BOOK NOTES

Reviews of the following books will be included in the February 1995 issue of *Watsonia* vol. **20**(3):

Exkursionsflora von Österreich. W. Adler, K. Oswald & R. Fischer; edited by M. Fischer. Pp. 1180; 510 figs. Eugen Ulmer, Stuttgart & Vienna. 1994. Price DM 78 (ISBN 3-8001-3461-6).

Illustrated Flora of Mallorca. E. Beckett. Pp. 223; 96 col. plates & an ill. glossary. Editorial Moll, Palma de Mallorca. 1993. Price Pta. 5500 (ISBN 84-273-0714-4).

The art of botanical illustration. W. Blunt & W.T. Stearn. New edition, revised and enlarged. Pp. 368; ill. with col. & b/w plates and line drawings. Antique Collectors' Club, Woodbridge. 1994. Price £29.95 (ISBN 1-85149-177-5).

Dictionary of British & Irish Botanists & Horticulturists, new edition. R. Desmond, assisted by C. Ellwood. Pp. xl + 825. Taylor & Francis and the Natural History Museum, London. 1994. Price £120 (ISBN 0-85066-843-3).

Field guide to the wild flowers of Great Britain and N. Europe. R. Gibbons & P. Davies. Pp. 330; many col. ill. Crowood Press, Marlborough. 1994. Price £9.99 (ISBN 1-85223-784-8), and *Field Guide to Trees of Britain, Europe and North America*. A. Cleave. Pp. 320; ill. The Crowood Press, Marlborough. 1994. Price £10.99 (ISBN 1-85223-801-1).

Index of Garden Plants. M. Griffiths. Pp. lxi + 1234; 16 figs. Macmillan, London. 1994. Price £35 (ISBN 0-333-59149-6).

Index Kewensis on CD-ROM. Compiled by Royal Botanic Gardens, Kew. One compact disk and spiral-bound manual. Oxford University Press, Oxford. 1993. Price £995 (+ VAT in U.K.) (ISBN 0-19-268003-X); additional manuals £7.50 (ISBN 0-19-268004-8).

Trees of Ireland, native and naturalised. E.C. Nelson & W.F. Walsh. Pp. vii + 247; 30 colour plates, many b/w ill. Lilliput Press, Dublin. 1993. Price IR£35 h/b (ISBN 1-874675-24-4), IR£17.99 p/b (ISBN 1-874675-25-2) and *Irish Trees and Shrubs.* P. Wyse Jackson. Pp. 72, with 32 col. plates. Appletree Press, Belfast. 1994. Price £3.99 (ISBN 0-86281-420-0).

Sedges and their allies in Dorset: an atlas of the distribution of the family Cyperaceae in Dorset. D.A. Pearman. Pp. 108; c. 90 maps. Dorset Environmental Records Centre, Dorchester. 1994. Price £5 (ISBN 0-9511394-4-4).

Wild and garden plants. S.M. Walters. Pp. 200; 39 col. & 51 b/w illustrations; New Naturalist series no. 80. Harper Collins, London. 1993. Price £27.50 h/b (ISBN 0-0021-9376-0).

Flora of the Christchurch Area. F. Woodhead. Pp. 120; 10 figures and 16 colour plates; soft cover with illustrations. Published by the author, 28 Hungerford Road, Bournemouth, BH8 0EH. 1994. Price £7.95, or £9 incl. p. & p. (ISBN 0-9522857-0-3).

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.

**Seeds of Destruction? Non-native wildflower seed and British floral biodiversity.* J. Akeroyd. Pp. 20; ill. Plantlife, London. 1994. Price unknown; no ISBN. [This booklet was commissioned by English Nature in order to draw attention to concerns that the increasing use of wildflower seed of Continental origin may compromise the naturally occurring genetical variation of indigenous species. The rapidity of replacement of native by more aggressive non-native variants, and the lack of reliable documentation on the provenance of seed sources exploited by the suppliers of wildflower seeds, threatens to disturb the ecological balance of native plant communities. The report ends with a list of "non-native wild flowers to watch", including those which act as indicators of the use of non-native wild flower seed mixtures.]

Greek wild flowers and plant lore in ancient Greece. H. Baumann; translated & augmented by W.T. & E.R. Stearn. Pp. 252; 482 illustrations, most in colour. The Herbert Press, London. 1993. Price £16.95 (ISBN 1-871569-57-5).

**History of the Australian vegetation: Cretaceous to Recent.* Edited by R.S. Hill. Pp. x + 433; ill. Cambridge University Press, Cambridge. 1994. Price £65 (ISBN 0-521-40197-6). [Following hard on the heels of the second edition of R.H. Groves' *Australian Vegetation*, which was published by C.U.P. a week earlier, these accounts of the remarkable history of Australian vegetation reach back to Aptian times when the continent was still joined to Antarctica, and araucarians and podocarps were important elements in the vegetation. The book's 23 authors, all but two of whom currently live in Australia, have prepared a series of convincing reconstructions of the flora using both pollen and macrofossil evidence.]

**Wildlife revival in Cornish hedges: history, traditions and practical guidance.* R. Menneer. Pp. 80; 8 pages of col. ill. Dyllansow Truran, Redruth, & Institute of Cornish Studies, Pool. 1994. Price £4.99 (ISBN 1-85022-080-8). [This book serves both as an account of the distinctive features of Cornish hedges and a manual for their intelligent maintenance. With a biographical note on the author by Stella Turk of the Cornish Biological Records Unit and two pages of general references, the book also contains six appendices. These include lists of plants found in two miles of hedge at Sancreed between 1970 and 1993 and in fields adjoining this hedge in 1993, as well as lists of records of butterflies and moths associated with hedges in Cornwall.]

**Atlas der Brombeeren von Niedersachsen und Bremen* [Atlas of the Brambles of Lower Saxony and Bremen]. A. Pedersen & H.E. Weber. Pp. 202, many dot distribution maps, 8 summary maps, 8 pp. of colour photographs. Niedersächsisches Landesamt für Ökologie, Hannover. 1994. Price DM 25 + DM 3,50 postage; available from N.L.Ö. Naturschutz, Scharnhorststraße 1, 30175 Hannover, Germany (ISBN 3-922321-64-X). [This is an exemplary account of the distribution of *Rubus* microspecies in one of Germany's more northerly regions, covering an

area extending from the East Friesian islands across the plains of lower Saxony (including the famous heathlands of Lüneburg) to the hills around Osnabrück and Göttingen and the western flank of the Harz mountains. The distribution maps are based on the "central European" system of mapping units representing 2.5 minutes of latitude and 3 minutes of longitude. Each map is accompanied by a short text on the ecology and phytosociology of the species, its distribution within the region, and its external distribution, with occasional references to specific locations where there are rare and disjunct occurrences. The thoroughness of the survey, which incorporates data from Weber's 1985 maps of the Osnabrück area and Martensen et al.'s 1983 coverage of the coastal zone from Hamburg to Wilhelmshaven, can be judged from the map of *Rubus plicatus*, where very few mapping units within its area of lowland distribution are blank.]

The common ground of wild and cultivated plants. Edited by A.R. Perry & R.G. Ellis. BSBI Conference Report no. 22. Pp. x + 166; ill. National Museum of Wales, Cardiff. 1994. Price £27.50 (ISBN 0-7200-0408-X).

**Flora of Madeira*. Edited by J.R. Press & M.J. Short, assisted by N.J. Turland. Pp. xvii + 574; 57 plates, 10 figures. H.M.S.O., London. 1994. Price £35 (ISBN 0-11-310017-5). [A concise account of the pteridophyta and spermatophyta of the islands of Madeira and Porto Santo, together with the Deserta and Salvage archipelagos, it contains keys, descriptions, phenology, habitat and distributional summaries and, for each species, a statement of endemism within the islands of the Maderian group or in Macaronesia as a whole. The book ends with separate indexes to scientific and Portuguese names; as all 212 illustrations (including many endemic species) are grouped together towards the end of the book, it would have been helpful if page references to these could have been included in the Index. The introductory material is rather sparse, with only a rudimentary bibliography and almost no information on the history of plant exploration in the area. The book's 17 authors have provided a singular service to taxonomy by updating the treatment of the Madeiran native flora, rich in endemic species, in line with modern taxonomic treatments, and the other interesting aspect of the book is the emphasis given to introduced plants, both those arriving intentionally and as escapes from cultivation.]

Wild Plants of the Phoenix Park. P.A. Reilly, with contributions by D.L. Kelly, D.M. Synnott & J. McCullen. National Botanic Gardens, Glasnevin & The Phoenix Park, Office of Public Works, Dublin. 1993. Price IR£7.50 (ISBN 0-7076-0331-5). Reprinted from the journal "Glasra".

Flora of Glamorgan. A.E. Wade, Q.O.N. Kay, R.G. Ellis et al. Pp. viii + 383 + 85 un-numbered pp. of maps (1019 maps). H.M.S.O., London. 1993. Price £29.95 (ISBN 0-11-310046-9).

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

THE COMMON GROUND OF WILD AND CULTIVATED PLANTS
BSBI Conference Report No. 22

This book was published in July and copies sent to all subscribers. If you did subscribe but have not yet received a copy please let me know. Copies are available from The National Museum of Wales or BSBI Publications for £27.50 including p.& p.

Due to an unfortunate oversight on the part of the editors, part of Table 3 of Alan Silverside's paper on *Mimulus* was omitted. A corrigenda sheet is being produced which will be sent to all subscribers and purchasers of the book. The editors would like to apologise to Alan for this blunder.

GWYNN ELLIS, Dept of Botany, National Museum of Wales, Cathays Park, CARDIFF CF1 3NP

FLORA OF THE OUTER HEBRIDES

A reprint of the *Flora of the Outer Hebrides*, by R.J. Pankhurst and J.M. Mullin is now available. This includes the indexes which were missed from the first printing, and a few minor errors have been corrected. It has a new front cover with a fine photograph of *Dactylorhiza incarnata* subsp. *coccinea* by Sid Clarke and is available from the bookshop at the Natural History Museum, London or from any HMSO bookshop e.g. Lothian Road, Edinburgh, price £22.95.

EDITOR

FLORA OF THE CHRISTCHURCH AREA

This Flora, which covers the Christchurch to Bournemouth area, and north to Ashley Heath, is now available. The last Flora concentrating on this locality was written in 1900, when the area was much less built up than today.

A full introduction, which stresses the threats to the remaining open areas, is followed by a detailed species by species account of every plant recorded by the author over the last 12 years. These accounts are complemented by over 650 distribution maps based on a 1 km grid. Lists of extinctions, species not refound and other records complete this up-to-date account of this rapidly changing part of Dorset.

The Flora is a 120 page A4 paperback book with 4 pages of colour photographs plus maps and line drawings, and a full colour illustrated cover. Price £7.95 plus £1.75 p&p from the address below or from Oundle Books.

FELICITY WOODHEAD, 28 Hungerford Road, BOURNEMOUTH, BH8 0EH

REPORTS OF FIELD MEETINGS – 1993

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

PEMBREY FOREST AND TYWYN BURROWS, CARMARTHENSHIRE (v.c. 44). 13th JUNE

The field meeting formed part of the Carmarthenshire Flora weekend based along the coast at Ferryside. After what was reported on the radio as 'Wales cleans up after the storm of the Century' eight members journeyed by car along the coast to meet our navigator through the forest, Ian Morgan. On the way members from outside the county were impressed by the low thickets of *Hirschfeldia incana* (Hoary Mustard) in full flower on disturbed ground along the roadside, a feature now of many such habitats in South Wales. The characters of the species were demonstrated on arrival in the car-park where we were greeted by members of the Dyfed Invertebrate Group who also had a meeting at Tywyn Burrows that day.

There were glimpses of *Robinia pseudoacacia* (False-acacia) alongside the zigzagging forest roads, surprisingly dry and dusty after the heavy rains. The party parked in a clearing and headed towards the south end of what is known as the 'Bee-orchid Ride' (GR. SN/369.035). There was much to see on the way with swards of pink-flowered *Anagallis tenella* (Bog Pimpernel) to admire. *Equisetum variegatum* (Variegated Horsetail) and *Eleocharis palustris* (Common Spike-rush) were of particular interest along the wet trackway, the latter genus being a major talking point during the meeting as other species were found later. The rest of the morning was spent walking northwards up

the east side of the Bee-orchid Ride which runs parallel to the beach behind the high dunes. Amazing stands of *Anacamptis pyramidalis* (Pyramidal Orchid) greeted us, growing with *Viola tricolor* subsp. *curtisii* (Wild Pansy), *Euphorbia portlandica* (Portland Spurge) and *Erigeron acer* (Blue Fleabane) on grassed-over sandy hummocks. *Euphrasia confusa* × *E. tetraquetra*, a hybrid eyebright of many coastal areas of South Wales, was noted with occasional *Euphrasia nemorosa* and *Ophioglossum vulgatum* (Adder's-tongue). The north end of the ride featured non-flowering *Pyrola rotundifolia* subsp. *maritima* (Round-leaved Wintergreen), *Ophrys apifera* (Bee Orchid) and *Carex viridula* subsp. *viridula* (Small-fruited Yellow-sedge). Wet dune-slacks first appeared after crossing into the Ministry of Defence range, with *Dactylorhiza praetermissa* (Southern Marsh-orchid) the dominant orchid. Attempts to turn some plants into hybrids were unsuccessful. Non-flowering *Epipactis palustris* (Marsh Helleborine) could be spotted by careful observation through the dense *Carex nigra* (Common Sedge). The party had lunch next to a solitary *Juncus acutus* (Sharp Rush), first recorded for the estuary by John Ray on his 1662 visit.

Ruby-red heads of *Dactylorhiza incarnata* subsp. *coccinea* (Early Marsh-orchid) stood out in the wetter slacks where Marsh Fritillary butterflies (*Eurodryas aurinia*) and the Hairy Dragonfly (*Brachytron pratense*) were spotted occasionally in the heat of the midday sun. A bare sandy area further on (GR. SN/365.051) had *Cerastium diffusum* (Sea Mouse-ear) and in the adjoining slacks *Listera ovata* (Common Twayblade) and *Ranunculus baudotii* (Brackish Water-crowfoot). It was only possible to venture a short distance eastwards due to waterlogged trackways. *Eleocharis quinqueflora* (Few-flowered Spike-rush) and *E. uniglumis* (Slender Spike-rush) were found here with *Sisyrinchium montanum* (American Blue-eyed-grass).

The party concentrated on the seaward side of the Bee-orchid Ride on the return journey. Here several tall plants of *Ophrys apifera* (Bee Orchid) were found uneaten near entrances to rabbit-warrens in the dunes. Further south a large population of both *Botrychium lunaria* (Moonwort) and *Ophioglossum vulgatum* (Adder's-tongue) were found away from the main trackway. The afternoon had become warm and humid so the party was encouraged to turn right to the beach over the dunes relying on a steep sandy footpath. *Cynoglossum officinale* (Hound's-tongue) guarded the route to the beach where cool sea breezes were much appreciated with the thoughts of the Caribbean and South America directly over the horizon and drift-seeds along this 12 km beach. Tall shrubs of *Cotoneaster simonsii* (Himalayan Cotoneaster) were spotted shortly after the start of the journey back through the forest.

Our thanks to Ian Morgan for leading us and to the Commanding Officer, R.A.F. Pembrey Sands Air-to-ground Firing Range, for permission to visit Tywyn Burrows.

G. HUTCHINSON

ADVERTISEMENTS

STOP PRESS

LAMIASTRUM GALEOBDOLON subsp. *ARGENTATUM*

I am currently conducting some research on this very aggressive garden escape or throw-out in the hope that some chinks in its armour might be found to slow down its invasion of the British and Irish countryside.

I would welcome records (and/or specimens, fresh or dried, if fresh first class post please) of the plant found growing outside of cultivation anywhere in the British Isles. I would also be grateful if members could provide answers to the following questions: Does it set good seed in your area? Does it flower at the same time as native Yellow Archangel or earlier or later? What sort of habitats is it found in? Does it spread by seed or is mainly vegetative? When did you first notice it 'in the wild', etc. Any other observations on this plant would also be appreciated.

All postal costs involved in sending specimens will of course be refunded.

GWYNN ELLIS, Dept. of Botany, National Museum of Wales, Cathays Park, CARDIFF CF1 3NP

PHOTOGRAPHS OF BSBI MEETINGS AND MEMBERS

The Meetings Committee is asking members to take photographs or slides at BSBI Meetings, this season or next, especially of the leaders and participants., with a view to their being shown at either a special meeting or at the Annual Exhibition Meeting.

AILSA BURNS, Hon. Secretary, Meetings Committee

The Editor Gwynn Ellis can be contacted by phone on 01222-397951 ext. 218 (NMW) or 01222-496042 (home). Articles can now be Faxed to the Editor on 01222-239829 or 01222-373219. Offers and special terms apply only to members of the Society and copies are not available on an exchange basis. **BSBI News** (ISSN 0309-930X) is published by the Botanical Society of the British Isles.
Enquiries concerning the Society's activities and membership should be addressed to: The Hon. General Secretary, c/o Dept. of Botany, The Natural History Museum, Cromwell Road, London SW7 5BD

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