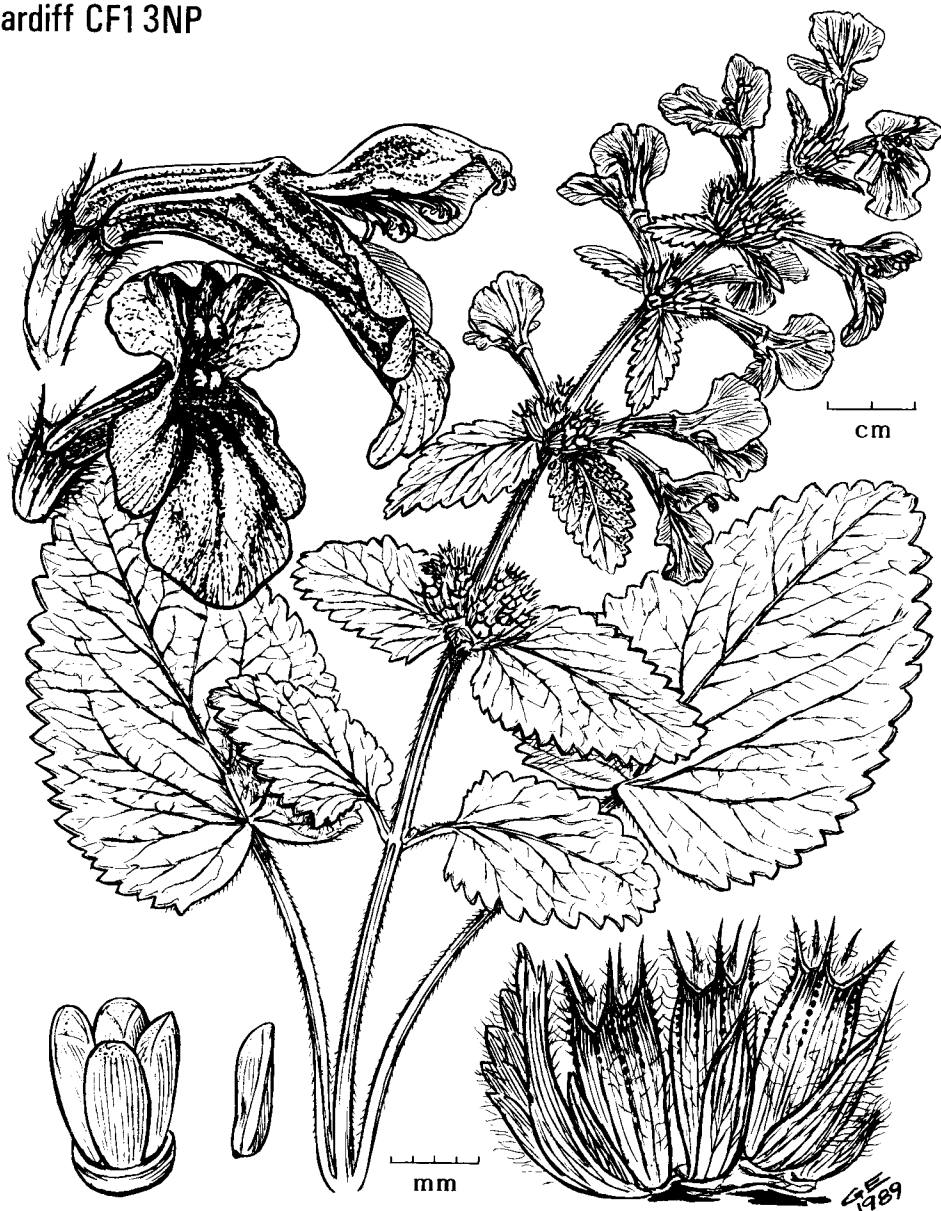


Edited by R. Gwynn Ellis

No. 52

Dept. of Botany, National Museum of Wales

Cardiff CF1 3NP



Stachys grandiflora (Willd.) Benth. del. G.M.S. Easy © 1989

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Mr D.J. McCosh (RECORDS).

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HON. EDITOR BSBI News : Mr R.G. Ellis.

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Miss M.E. Young; Mr A.J. Byfield; Mr B.A. Gale; Dr S.L. Jury; Mr N.F. Stewart;

Dr P.S. Wyse Jackson; Mr C.R. Boon; Mr R.M. Burton; Mrs I.P. Weston.

REPRESENTATIVES ON COUNCIL, Rule 11 : Mr S. Beesley (Ireland); Mr H.J. Noltie

(Scotland); Mrs J.A. Green (Wales).

Representing N.C.C. by invitation : Mrs J. Robertson.

Minuting Secretary in attendance : Miss E.J. Rich.

CONTRIBUTIONS INTENDED FOR

BSBI NEWS 53

should reach the Editor before

5th NOVEMBER 1989

DIARY

N.B. These dates are supplementary to those in the 1989 Calendar.

1989

September

23-24 : Kew Gardens Book Fair (see page 32)

October

31 : Deadline for booking exhibits & slides for Exhibition Meeting

November

- 5 : Deadline for contributions to BSBI News 53
- 25 : Annual Exhibition Meeting
- 30 : Deadline for booking for Catalonia (N.E. Spain) Field Meeting (see page 31)

1990

May

14 : Field Meeting to Catalonia (N.E. Spain) (until May 26) (see page 31)

CORRIGENDA CORNER

A good (or bad, depending on how you look at it) crop of corrigenda this time, which means your editor has spent a longer than usual period wearing 'sackcloth and ashes'.

Apologies to Michael O'Sullivan and David McClintock for wrongly attributing Michael's note on 'Blue-flowered Allium vineale' to David (BSBI News 51: 50, April 1989).

Apologies too, to David Coombe for two errors which crept into the last issue. The first of these necessitates an apology also to Donald Pigott for wrongly giving his name as Piggot on page 31. The second I shall leave to Dr Coombe to describe:

"Your camera-ready copy has a curious knack of typing 'propogation' for 'propagation'. Our Fellow's Secretary and I went to a lot of trouble to get the Exhibition note on Lythrum 100% right [page 46], after the mis-spelling of 'propagation' in BSBI News the previous year in the account of Polygonum maritimum." (BSBI News 49: 43 (Sept. 1988)).

I have slapped the wrists of the 'spelling-checker' and made it promise to try harder.

Dr Coombe's 'sugared-the-pill' by relating one of his faux pas in Journal of Ecology when he 'made a lady author say of bracken "ten-year-old pants are not very fertile"'!

EDITOR

EDITORIAL

Books for sale

Since taking over as editor, I have been asked by several members to include a 'Books for sale' note in BSBI News. This I have been unable to do because it is against the guidelines laid down by the Publications Committee in 1982. The first paragraph of a note 'Guidelines on Advertising in BSBI News' reads:

'The purpose of B.S.B.I. News is to further the interests of members in fostering their study of the British flora, but the commercial interests of individual members should not be catered for.'

In May 1986 the Publications Committee made it clear that it was inappropriate even to include a statement in BSBI News that someone had a collection of local Floras to sell and could be written to by anyone interested.

Broadcasts by Members

Adrian Grenfell tells me that he was interviewed by Nicki Davis on the Radio Gloucestershire chat show 'Sounds Wild' on July 30th. Introduced as the 'Alien Recorder' employed by the BSBI (the "employed" bit quickly denied for the benefit of listening Inland Revenue officers!) he survived a barrage of questions on alien plants - their provenance, occurrence, identification etc. etc. and managed to identify mystery plants from the interviewer's garden.

A longer 'longest leaf' and smaller 'smallest plant'

Jack Oliver writes about his note 'Europe's Longest Leaf' (BSBI News 51: 16, April 1989): 'I've inadvertently claimed too much for the above! The Guinness Book of Records (under a different heading - Ferns) gives a record of 16ft (4.8m) for a Ruislip specimen of bracken - therefore ours superseded. I'd have been better claiming a record for the other item on the same page, the Radiola linoides specimens of 3mm and less in flower and fruit. Here The Guinness Book of Records gives Centunculus (Anagallis) minimus as the smallest (British?) land plant which flowers regularly, circa 10mm high for the smallest specimens (CTM)!'

Monitoring Scheme trains

Trains have been conspicuously absent from recent editorials, so I am especially grateful to Tim Rich for the following note:

'On one Derbyshire Monitoring Scheme card 4 train numbers were added to the back of a species card whilst recording at Upper Padley Railway station. Fortunately these were annotated or we'd have ended up with Carex pendula, C. vulpinoidea, C. punctata and Arctostaphylos alpinus!'

Whilst on the subject of trains and recording, Ann Conolly and I spent a pleasant 2 hours watching a video of a cab-ride on the Cambrian Coast line from Shrewsbury to Aberystwyth. Ann got quite excited looking for trackside populations of Reynoutria japonica and Lamium album!

Funeral plants

A Carmarthenshire colleague has informed me of an old Carmarthen funeral custom that he came across recently which also involves some quite astute botanical observation (at least for Carmarthen!). When a person dies, the neighbouring lawns must be cut, regardless of how short the grass is - to remove the flowers. He was told that the flowers were alright at night because they 'go to sleep', but when the sun is out they open up and look disrespectful to the dead!

Your worst nightmare

This could be the start of a new series if members write in with their nightmares. I'm going to start with John Akeroyd's which he let slip over a pint or two (or three or) in 'the worst pub in the world' in Tintern - that while writing up his PhD thesis he found that it had been previously published - as a Ladybird Book 'Lets look at Rumex crispus', complete with a misty drawing of Tintern Abbey surrounded by Rumex. (Much of John's research was carried out on populations of Rumex crispus at Tintern).

The Archers

I thought it was about time that I informed members of another of my addictions - The Archers, especially as it is becoming quite 'green'. Joe Grundy, the Albert Steptoe of Ambridge farmers has a patch of unimproved damp pasture on his land. He is quite proud of the fact that the NCC are paying him '£60 an acre for growing weeds, that's more than the profit from barley'. He is even offering guided tours of the SSSI, at £1 a head! I can only remember the names of two of the 'weeds': Adder's-tongue and thunder-and-lightening whatever that is; perhaps other Archer addicts can remember more. The new Vicar of Ambridge would undoubtedly have welcomed the BSBI Churchyard survey, he is very concerned over the wild flowers in his churchyard; concern that is not misplaced as one of his Wardens, Tom Forrest, a retired gamekeeper, would prefer to cut the lot down. Future developments are awaited with interest.

EDITOR

HON. GENERAL SECRETARY'S NOTES

CONGRATULATIONS to Dr John Dony MBE, a BSBI member since 1937, past President, past Hon. General Secretary, past Hon. Meetings Secretary of BSBI; Recorder for v.c.c. 20 & 30 for many years and author of several local Floras, who was ninety on August 8th 1989.

... to Dr Stephen Blackmore, who has been appointed as Keeper Designate, Department of Botany, British Museum (Natural History), as John Cannon's retirement is due in April next year.

... to Dr Keith Ferguson, BSBI member since 1961, past Hon. General Secretary, Referee for *Verbascum* & *Salicornia*, and Recorder for v.c. H6, who has been appointed as Deputy Keeper of the Herbarium, Royal Botanic Gardens, Kew. (Both Keith and Stephen work in Palynology so this must be a good year for Pollen rising!?).

... to Dr Frank Perring OBE, BSBI member since 1952, currently a Vice-President and past Hon. Records Secretary, co-editor of the Atlas of the British Flora and its Supplement, and author of many books and papers on the British flora, awarded an Honorary Doctorate by the University of Leicester at Nene College, Northampton in July

... and finally to Liverpool Museum, winners of one of the Museum of the Year awards: The Best Educational Initiative, for their new Natural History Centre (see page 24).

Desert Wild Flowers in War

Many members were delighted to see Mrs Jocelyn Russell, BSBI member since 1950 and past Vice-President, on television in the spring. Jocelyn was describing some of her memories of North Africa as a driver attached to a Special Free French Ambulance Unit when the Eighth Army was fighting there. Intermingled with her adventures were sightings of wild flowers, which she collected, when not growing in a minefield, and painted in spare moments. Some of her very fine flower paintings were shown in the programme.

Winners of British Ecological Society Small Grants:

Dr Jeffrey Bates - to study the epiphytes of the Loch Sunart Woodlands National Nature Reserve.

Christopher Birkinshaw - to study *Damasonium alisma* and *Carex depauperata* in France, with a view to their possible re-introduction to Britain.

Dr Roy Brown - to study and compare the effects of cutting and burning on heather regeneration in the North York Moors National Park.

Richard Park - to survey the unique environment within the Mermaids Hole cave system in Co. Clare, on which no ecological research has yet been done!

Tail piece

May I add a personal note of thanks to the members who sent good wishes for my new home at 9 Arun Prospect, and to those who were worried by the "3 miles of bookshelves". It must be said that the writer of those words, although one who would eschew exaggeration in a botanical record, was rather carried away by the sight of a whole wall of empty bookshelves!. These are now filled and all that is lacking is time to browse through the books - and to enjoy the view; since the move travels have been almost continuous, which, coupled with unpacking, have made it more than usually difficult to fit in all the correspondence. Please accept my thanks now, with apologies if you are one of those still in the pending tray awaiting reply!

MARY BRIGGS, Hon General Secretary

RECORDERS AND RECORDING

Amendment No. 3 to Vice-county Recorders, September 1988

We welcome the following new Recorders in Ireland:-

H10 North Tipperary: Dr David Nash, 35 Nutley Park, Donnybrook, DUBLIN 4

H26 & H27 East & West Mayo: Mr Gerry Sharkey, 2 Spencer St, CASTLEBAR, Co. Mayo

H34 East Donegal: Miss Pauline Hodson, 60 Forest Ave., Kingswood Hts., DUBLIN 24

Our thanks to Donal Synnott, Gerry Sharkey and Tom Curtis for their time as Recorders for these Vice-counties. Gerry has moved from H10 to H26 & H27, and Tom remains as Recorder for H20 & H35.

MARY BRIGGS, Hon. General Secretary

DAVID J. McCOSH, Hon. Secretary, Records Committee

NEWS FROM FLORA EUROPAEA

On 27 June 1989 the manuscript of the second edition of Flora Europaea vol. 1 went to Press. A five-year project to revise the first of five volumes, based at the University of Reading, was undertaken by Dr John Akeroyd with the assistance of the editorial committee and many outside contributors. The project was funded by the Linnean Society of London's Flora Europaea Trust Fund.

The editorial committee has three new members: Dr John Akeroyd, Dr Frank Bisby and Dr Stephen Jury; Professor David Webb has resigned. The committee's new secretary is Dr John Edmondson, replacing Professor David Moore who remains a member of the committee; Mr Arthur Chater, Professor Vernon Heywood and Dr Max Walters continue on the committee, which is chaired by Professor Alan Burges.

The committee has decided to make plans to update further volumes of the Flora, starting with vol. 2 which contains the major families Leguminosae, Rosaceae, Umbelliferae and Euphorbiaceae.

The new address of the Flora Europaea Secretariat is: Liverpool Museum, William Brown St, Liverpool L3 8EN. Tel. 051-207 0001 ext. 209.

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

RESULTS OF ARUM NETWORK SURVEY

Members will recall that the survey aimed to study six polymorphisms of **Arum maculatum** L. throughout the British Isles. These were:

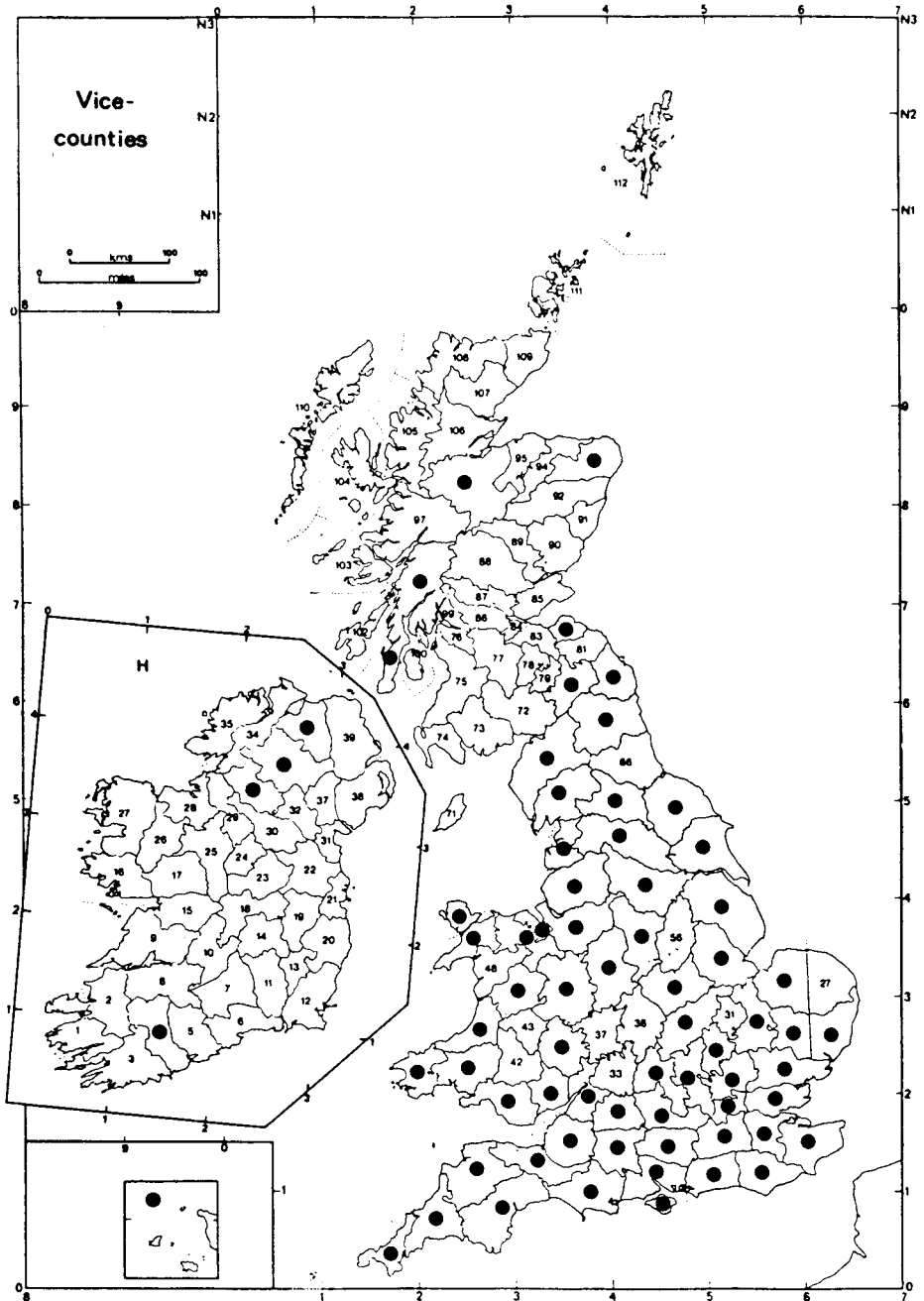
- a) Leaf spotting: presence/absence
- b) Leaf colour: yellow green/light green/dark green
- c) Spathe spotting: presence/absence
- d) Spadix colour: purple/yellow/intermediate
- e) Leaf margin: anthocyanin fringe present/absent
- f) Spathe margin: anthocyanin present/absent

There was a good response from members and 227 returns were received, mostly from England and Wales. From Ireland and Scotland, where members and, in the case of Scotland **Arum**, are less common, returns were few and coverage patchy (see Map page 7).

The survey results were obtained from data on single plants selected at random from populations, supplemented by data on the frequency of distribution within those populations.

For three polymorphisms the results corroborate the findings of C.T. Prime in Lords and Ladies (1960). Both leaf (22.9%) and spathe spotting (21.1%) are relatively uncommon and where they occur the plants involved are a minority (26.3-40%) of the population. The

Recorders and Recording



Map showing Survey coverage by Vice-county

predominant spadix colour is purple (60.4%) and pure yellow (8.4%) is relatively rare.

Members found some difficulty in assessing leaf colour which was found to be widely variable, but the light and dark green categories each accounted for 40-46% of the plants examined.

The anthocyanin fringe on spathe and leaf margins was found to be widely distributed (74.9% & 53.7%) and was also commoner within populations (81.4% & 62.1%). A significant number of populations only contained plants showing one or other polymorphism.

Perhaps the most interesting new information to emerge from the survey has been that on the anthocyanin leaf fringe polymorphism, about which little had previously been known. It clearly occurs throughout most of the survey area, but the width and intensity of pigmentation vary and there seems to be some tendency for it to occur more frequently in the northern vice-counties.

Earlier work in NE Wales (P. Harmes, pers. comm.) indicated that the frequency of this polymorphism increased with increasing altitude and the present survey has extended and corroborated that finding.

There is a strong association between leaf and spathe spotting and between leaf and spathe anthocyanin fringing. The association between leaf spotting and leaf anthocyanin fringing is less strong but still significant.

Members are thanked for all the hard work which they put into the survey and in particular P. Harmes for handling and analysing the returns. As well as offering useful corroboration to earlier investigations, the survey has provided preliminary data showing the presence of anthocyanin in the leaf fringe to be correlated with altitude. Further work will be required to elucidate the causes of this correlation.

DAVID J. McCOSH, (Hon. Sec. Records Committee), 13 Cottesmore Gardens, LONDON W8 5PR

WARNING - WEIL'S DISEASE

Waterplant botanists could find themselves in a situation in which they might contract Weil's disease which can be fatal. However, the good news is that the chance of catching the disease is low and can be made lower still by taking a few simple preventive measures.

Should you be unlucky enough to contract Weil's disease you must obtain diagnosis and treatment quickly. If this is done the outlook can be good.

It is unfortunate that the symptoms of Weil's disease can be confused with those of influenza. Here lies the problem. Patients with influenza-like symptoms may not go to a doctor and even if they do, the medical practitioner may have no good reason to suspect a case of the fairly rare Weil's disease. The Doctor would probably treat the patient as a case of influenza caused by a virus. The outlook for the patient could then be poor, possibly leading to kidney and/or liver failure and even death.

Weil's disease is a bacterial infection caused by leptospirae and is notifiable. Penicillin and other antibiotics can effectively combat the bacterial infection if administered soon enough. In fact the Director of the Leptospirosis Reference Unit is on record as having said that "there is no need for anyone to die from Weil's disease in Great Britain".

The causative bacteria reproduce in rats and leave this animal in its urine. After leaving the rat the bacteria can survive in fresh water or damp conditions, such as wet river banks for about 45 days. Through contact with rats, voles carry the bacteria but to a lesser extent than the rat.

Taking the following precautions could save your life:

- 1) Always cover cuts and abrasions with waterproof plaster. Wear waders/wellingtons or at least footwear when in the water to prevent cuts from hidden objects.
- 2) Try to prevent water from coming into contact with thin mucous membranes such as the eyes.
- 3) Take particular care in stagnant and slow moving water e.g. canals, lakes and lowland streams. (Cases of Weil's disease have been associated with the rivers Lee, Chelmer, Stort and Taff).

4) Think twice about botanizing after periods of high water or flooding. During these times the rat runs are flushed out and a greater number of bacteria are present in the water.

5) Before entering the water or handling waterplants look for signs of rat and water vole activity - especially holes in the waterway bank. Operate upstream of these if it is possible to do so.

6) Wash hands before handling food and wash all body areas that have been in contact with the water.

AND ... should you suffer from any/all of the following symptoms, particularly from 3-19 days after water botanizing, see your doctor immediately.

- 1) Above normal temperature and/or chill feeling.
- 2) Pains in joints and muscles - calf muscle pains are often particularly noticeable.
- 3) A feeling of having an influenza-like illness.

Tell your doctor that you have been in contact with river/stagnant water and mention Weil's disease. (Weil's disease tends still to be associated with sewage workers. A doctor may not link your symptoms with Weil's disease if your usual occupation is office bound!).

Weil's disease can be confirmed by an ELISA blood test. This should be carried out urgently by a local laboratory. The ELISA test takes about 2-3 hours to complete and so your medical practitioner can have the results fairly quickly. If the ELISA test is not available locally, the sample should be sent direct to The Leptospirosis Reference Unit, Public Health Laboratory, County Hospital, Hereford HR1 2ER. If the result is positive it will be available to your doctor in about 24 hours. Through the normal laboratory system blood tests could take 2-3 weeks longer, and serious illness and death might occur because of the time lag and subsequent delay in treatment.

Immunisation against Weil's disease is not possible at the present time.

Finally, do not let Weil's disease put you off water botanizing - the chances of contacting the disease are not very great. The rat population is said to be on the increase due in part to the amount of waste food left around. Please encourage everyone to dispose of waste food properly.

Grateful thanks are due to Dr Chris. Preston for his helpful comments.

DAVID ARCHER, 194 Silverdale Road, Earley, READING RG6 2NB

WHAT TO DO WITH YOUR OBSOLETE MAPS

I have never finally decided whether it was a long established love of maps which led me towards an interest in the distribution patterns of plants, or whether square bashing for the Atlas of the British Flora and for the Flora of Rutland was what led me to become bitten by the Map-collecting Bug. Since I started square bashing in the 1950s, with a collection of Ordnance Survey maps bought solely for use, I have gradually become interested in the maps for their own sakes, and my collection of OS Maps of Great Britain and Ireland now runs into thousands. In 1981 I discovered that a number of like-minded maniacs had formed themselves an association called the 'Charles Close Society for the Study of Ordnance Survey Maps'. This Society now has about 250 members, and among them are not only private collectors, but also students of Cartography, Curators of National Map Libraries and a handful of specialist map-sellers.

If therefore you have, like me, accumulated numbers of OS Maps to further your botanical enthusiasms, but unlike me have reached the conclusion that your residence is not sufficiently elastic to accommodate the ever growing mass of obsolete ones, I may be able to put you in touch with someone who is anxiously hunting for just those maps that you are being put under increasing pressure to get rid of.

It is true of course that there is not much demand for recently out-dated printings of the current 1:50000 series of Great Britain, but good clean copies of the Seventh Series one Inch sheets will usually find a home, and earlier editions can often be sold for quite good prices. The older a map is, the less insistent a map student will be on having it in perfect condition, but the 'trimming off' of the information printed in the margins of a map reduces its value catastrophically, and I would not undertake to find a home for a sheet treated in this way.

There is less demand for OS Maps at scales other than One Inch, but I can put you in touch with dealers who specialise in the larger scales (2.5", 6", 25" and their metric equivalents). I myself would be happy to advise you on the disposal of collections of One Inch and smaller scales, though I don't guarantee to buy them for my own collection without examination of them for myself. Finally, some issues of Scottish and Irish sheets may command a better price than their English or Welsh contemporary issues, simply because fewer were printed and fewer have survived.

If you have OS maps to dispose of and would welcome my advice, please send me details of the approximate numbers of each issue, and their scales and dates, and also whether you would be able to send them for examination, or would require someone to visit you to inspect them. A S.A.E. for my reply would be appreciated. The first OS Maps were published in 1805 and some of the early sheets are now being sold at as much as £50 by map dealers.

GUY MESSENGER, 5 Wheatley Avenue, UPPINGHAM, Rutland, Leicestershire LE15 9SN

VOUCHERS

Recently there have been a number of queries on the subject of voucher specimens and where they are deposited. The subject was discussed by Records Committee and these notes are now given for members' guidance.

i) Voucher specimens are desirable in two situations:

- Either a) to substantiate the occurrence of a taxon in a district where it has not, or has not reliably, been recorded previously. Such taxa need in no sense be regarded as difficult to determine
- or b) to serve as evidence for the correct determination of difficult or critical material.

ii) Vouchers need consist of no more than is necessary for identification. For rare uncritical taxa, a photograph, single leaf or floret may be enough. For critical material a complete plant or at least a carefully selected sample of its features may be required. The latest list of the Society's referees indicated what is required for each genus.

iii) It would be impracticable to lay down where vouchers should be deposited. That is a matter for the individual collector, if necessary after discussion with the expert who determines the material.

iv) Material which is thought worthy of having vouchers kept should be documented on a pink individual record card (IRC) which, apart from the basic details of name, collector, date and place of collection, and determiner, should also note where the voucher has been deposited. This would normally be either in the private herbarium of the collector or, for critical material, determiner, or else in one of the public herbaria.

v) It should be the responsibility of the collector to fill in the IRC and send it on to C.D. Preston at the Biological Records Centre, Monks Wood, Huntingdon PE17 2LS. (For putative new county records, cards should be sent through the VC Recorder). For material requiring refereeing, the IRC, completed except for name, should first be sent with the voucher material (and preferably a note of whether the collector wants the voucher material returned) to a referee who should enter the determination and return to the collector.

Recorders and Recording

vi) The choice of appropriate public herbarium should ideally have regard to the size and relevance of its existing collection, the expected standard of curation and its geographical convenience. For a very small number of critical genera the appropriate location may be one of the major national herbaria.

vii) The future of any individual private herbarium cannot be foreseen and for those containing rare or critical voucher material owners should make arrangements for the herbarium to be passed on to a secure home when they have ceased to be interested or able to look after them.

DAVID J. McCOSH, (Hon. Sec. Records Committee), 13 Cottesmore Gardens, LONDON W8 5PR

MINI HERBARIA

Jack Oliver (BSBI News 51: 16 (1989)) might like to start a pigmy herbarium, of plants of under one inch. Such an idea was thought of many years ago with the late lamented Rex Graham, but it never got into practice. Its advantages are more than the minuscule space it needs, or even showing in this minute size fully developed flowers and fruits.

Talking to Arthur Chater, he thought it would also show that such minute plants belonged to only some families, eg no Boraginaceae? - presumably too, all would be annuals. In addition to pressing samples, curators of this doll's house equipment should also sow seeds from their gatherings to see whether the dwarf habit was solely the result of spartan conditions. Thus such a collection could have more than mere curiosity value.

DAVID McCLINTOCK, Bracken Hill, Platt, Sevenoaks, Kent TN15 8JH

A DRAFT FIELD KEY TO BRITISH STONEWORTS

I am developing a key to stoneworts (Charophyta) using field characters visible with a hand-lens. Although it would be foolhardy to give the impression that stoneworts can be named reliably without a microscope, in many cases it is possible to make some headway using field characters alone. If anyone would like a copy of the latest version I would be happy to supply this for a cost of £1 to cover postage and reproduction.

NICK F. STEWART, Conservation Association of Botanical Societies, 233 Norwood Road, LONDON SE24 9AQ

SERAPIAS PARVIFLORA Parl.

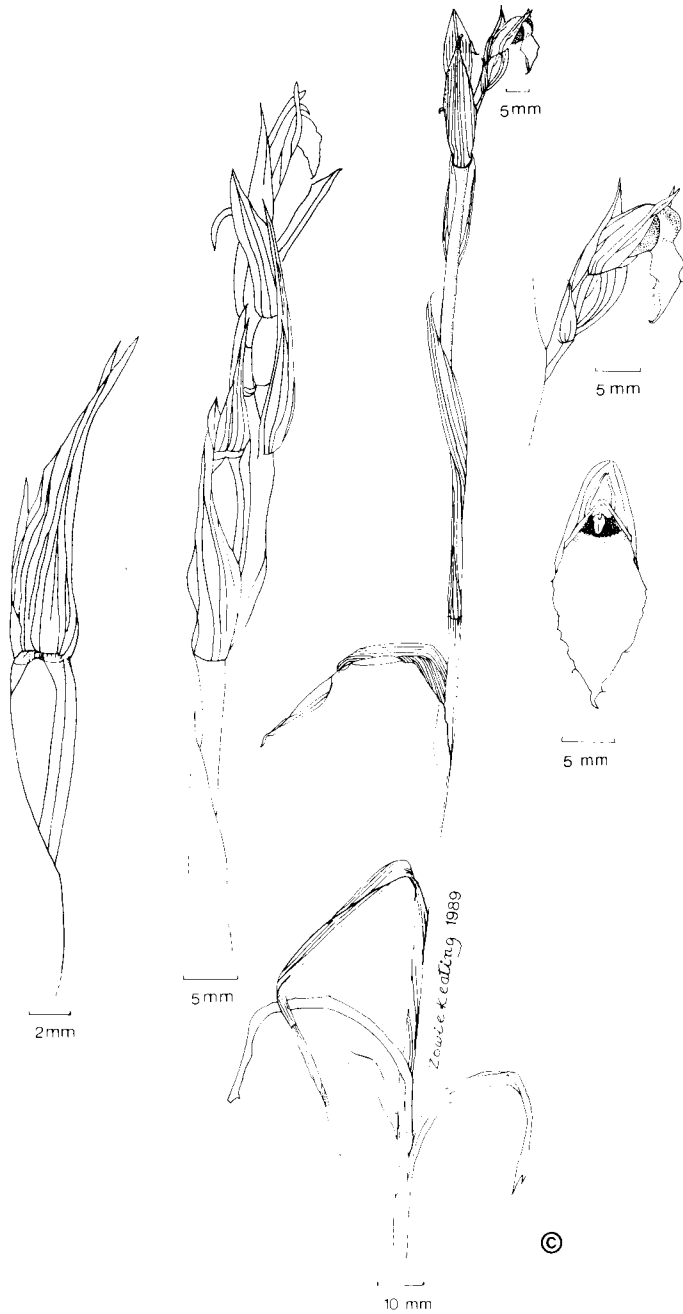
In the spring of 1989, two plants of Serapias parviflora Parl., Small Flowered Tongue Orchid, were discovered at a site in v.c. 2, E. Cornwall. It is understood that this is the first time this species has been recorded from the British Isles; it has however been recorded from Brittany, France (pers. comm. Dr P. Cribb).

Both plants flowered, although one was damaged, and they appeared to be growing naturally in a suitable habitat. Flowering has now finished for this season and the plants have died back.

It would be appreciated if people did not try to visit the site, so as to prevent soil compaction.

Excellent drawings of the best specimen have been made by Zowie Keating (see page 12), photographs taken and detailed records made. Positive identification of the orchid was by Dr P. Cribb.

P. COBBING [address withheld by request]



Serapias parviflora Parl., del. Zowie Keating © 1989

'USER FRIENDLY' MULTI-ACCESS KEY TO THE UMBELLIFERAE SUBFAMILY APIOIDEAE

Members may be interested in a reorganisation of the multi-access key in the BSBI Handbook on Umbellifers. I have excluded *Hydrocotyle*, *Sanicula*, *Astrantia*, and *Eryngium*, 6 species out of 82, which 'don't look like umbellifers' and are easily recognised in the field. I have not taken *Bupleurum* beyond genus identification for similar reasons and to save space. This leaves the Apioidae which make up most of the British Umbellifers and all the confusing 'look-a-likes'.

For clarity, characters associated with the umbel are grouped together and separated from those of the rest of the plant, and their order is rigidly fixed. Meaningful and easily remembered codes are used, for example, I = presence and O = absence of any character (bracteoles, fruit wings etc.); Y = yellow, W - not yellow (white); for fruit, S = short and L = long etc. Since the position of each character is fixed no confusion arises from the use of L for both fruit and leaves, or S for both fruit and stem hairs, or from the repeated use of I and O. In this scheme the 9 characters give a 'pronounceable' binomial address for each taxon which can be found listed in the body of the key. When more than one species 'live' at the same address, additional characters are given which should identify the one being examined. Examples of binomial addresses with single occupants are:

WILOO LUFOSOAN	<i>Scandix pecten-veneris</i>	(BEFIKMORS)
WISII LIFOSIBI	<i>Tordylium maximum</i>	(BDGHKMPQT)
WISOI LUFISOBI	<i>Seseli libanotis</i>	(BEGHJMPRS)
YOSIO LIFOSOBI	<i>Pastinaca sativa</i>	(ADGIKNPRT)

For comparison the corresponding address or formula used in the handbook is the assemblage of letters after each plant name.

At the time of writing, this key has not been independently field tested, but initial reactions of members of the Bradford Botany Group are that it is a lot easier and much 'friendlier' to use than the current key

BRADFORD BOTANY GROUP
MULTI-ACCESS KEY TO THE APIOIDEAE UMBELLIFERS

- Flowers: Y = flowers yellow or greenish-yellow; W = flowers not yellow
- Bracteoles: I = when present; O = when absent, rarely 1-2, or falling early
- Fruit Length: L = long (at least 3x width); S = short (less than 3x width)
- Fruit Wings: I = winged; O = not winged. NB. Fruit must be FULLY RIPE
- Fruit & Ovary: I = with hairs, spines, scales, or papillae; O = without

LOWEST Leaves: LE = simple, entire or toothed; LI = lobed, 1-pinnate or 1-ternate; LU = at least 2-pinnate or 2-ternate

Fibres: FI = fibres present & conspicuous at stem base; FO = fibres absent

Stem Hairs: SI = with deflexed, closely appressed hairs, SO = stem glabrous, or with hairs not deflexed & closely appressed

AN or BI: AN = annual; BI = biennial or perennial (Pe)

YISIO LUFISOBI	<i>Peucedanum officinale</i>
LUFOSOBI Leaf lobes 10-15mm	<i>Silaum silaum</i>
Leaf lobes 40-90mm, bracteoles connate below	<i>Levisticum officinale</i>

YISOO LEFOSOAN/BI	<i>Bupleurum</i> spp
LUFOSOBI Leaf lobes awl-linear-lanceolate	<i>Crithmum maritimum</i>
Lower leaf lobes crenate/serrate, obtuse	<i>Smyrniolus olusatrum</i>
Lower leaf lobes pinnatifid, acute	<i>Petroselinum crispum</i>

YOSIO LIFOSOBI *Pastinaca sativa*

YOSOO LUFOSOAN	<i>Anethum graveolens</i>
LUFOSOBI Leaf lobes filiform	<i>Foeniculum officinale</i>
Leaf lobes not filiform	<i>Smyrniolus</i>
Upper lvs not perfoliate	<i>S. olusatrum</i>
Upper lvs perfoliate	<i>S. perfoliatum</i>

Recorders and Recording

WILOO	LIFOSOBI	.....	Falcaria vulgaris
	LUFOSOAN	.....	Scandix pecten-veneris
	LUFOSOBI	Strongly aromatic, stem hollow	Myrrhis odorata
		Leaf lobes linear to 30cm, serrate	Falcaria vulgaris
		Stem swollen below nodes	Chaerophyllum
		Lvs dark green, fr 5-6mm, Bi	C. temulentum
		Lvs yellowish, fr c.9mm, Pe	C. aureum
WISII	LIFOSIBI	.....	Tordylium maximum
	LIFOSOBI	.....	Heracleum
		Umbel 10-20 rays	H. sphondylium
		Umbel 50-150 rays	H. mantegazzianum
WISIO	LIFOSOBI	Plant glabrous	Ligusticum scoticum
		Leaves glabrous, infl stalks hairy	Peucedanum ostruthium
		Leaves hairy, infl stalks hairy	Heracleum (see above)
	LUFOSOBI	Stem solid	Selinum carvifolia
		Umbels with less than 15 rays	Ligusticum scoticum
		Bracts present, leaf lobes pinnatifid	Peucedanum palustre
		Leaves ternate	Peucedanum ostruthium
		Stems with whitish bloom	Angelica
		Fl white/pink, stem purplish, fr 4-5mm	A. sylvestris
		Fl greenish, stem green, fr c.6mm	A. archangelica
WISOI	LIFOSIAN	Outer petals radiating strongly	Turgenia latifolia
		Outer petals NOT radiating strongly	Torilis
		Umbels subsessile	T. nodosa
		Umbels long stalked, bracts 0-1, fr 4-6mm	T. arvensis
		Umbels long stalked, bracts 4-6, fr 3-3.5mm	T. japonica
	LUFISOBI	.....	Seseli libanotis
	LUFOSIAN	Sepals conspicuous and as long as petals	Caucalis platycarpus
		Sepals not conspicuous and shorter than petals	Torilis (see above)
	LUFOSOAN	.....	Trachyspermum ammi
	LUFOSOBI	.....	Daucus carota
WISOO	LEFOSOAN	.....	Coriandrum sativum
	LIFOSOBI	Bracts 3-fid or pinnatisect	Ammi
		In fruit umbel rays remain slender & spreading	A. majus
		In fruit umbel rays thicken, shorten & become erect	A. visnaga
		Longest bracts less than half length of shortest ray	Sison amomum
		Lowest lvs with more than 20 pairs of lobes	Carum verticillatum
		Stem hollow, petals papillose beneath	Sium latifolium
		Stem hollow, petals smooth beneath	Berula erecta
		Stem solid, petals smooth beneath	Petroselinum segetum
		Lf stalk fistular, part. umbels subglob. in fr	Oenanthe fistulosa
		Most umbels subsessile & leaf opposed	Apium
		Bracts 0-2, stem rooting at lower nodes only	A. nodiflorum
		Bracts 3-7, stem rooting at all nodes	A. repens
		Aquatic with translucent sub. lvs; umbel 1-2(-4) rays	A. inundatum
		Aquatic with translucent sub. lvs; umbel 5-16 rays	Oenanthe
		Fruit 3.5-4.5mm, ovoid	O. aquatica
		Fruit 5-6.5mm, cylindrical	O. fluviatilis
	LUFISOBI	Dioecious; on limestone in S. England	Trinia glauca
		Not dioecious; mountain grassland in the north	Meum athamanticum
	LUFOSOAN	.....	Aethusa cynapium
	LUFOSOBI	Bracts 3-fid or pinnatisect	Ammi (see above)
		St purple spotted, b'teoles on outer part. umbels only	Conium maculatum
		Lf margin & veins hairy; fr width > length	Physospermum cornubiense
		Leaves and stems hairy	Anthriscus
		Stem \pm glab; fr ped thicker than umbel's 3-6 rays	A. caucalis
		Stem pub above nodes; fr ped thinner than umbels's 6-12 rays	

Recorders and Recording

Rays glabrous *A. sylvestris*
 Rays hairy *A. cerefolium*
 In fr style erect, st hollow (umb 6-12 rays; br 0-2) . . .Conopodium majus
 In fr style bent, st solid (umb 9-20 rays; br 5-9) . . *Bunium bulbocastanum*
 Pedicels at least 2x length of fr; stock septate *Cicuta virosa*
 Most pedicels much shorter than fruit *Oenanthe* (see key below)

WOSOO LIFOSOBI Leaves ternate, plant with long rhizomes *Aegopodium podagraria*
 Umbels mostly subsessile & leaf opposed *Apium graveolens*
 Umbels long stalked, plant without rhizomes *Pimpinella*
 Stem hollow, ridged, lower lvs with 3-4 pairs of lobes *P. major*
 Stem solid, terete, lower lvs with 4-7 pairs of lobes . . . *P. saxifraga*
 LUFISOBI *Trinia glauca*
 LUFOSOBI *Carum carvi*
 (or possibly *Pimpinella*)

OENANTHE KEY

Bracts present

Lobes of upper leaves lanceolate to ovata *O. crocata*
 Lobes of upper leaves linear to paddle-shaped
 Root tubers distant; in fr pt. umbel flat, rays/peds thickening . *O. pimpinelloides*
 Root tubers at stem; in fr pt. umbel irreg; rays/peds not thickening . *O. lachenalii*

Bracts absent

Lobes of upper leaves ovate to suborbicular *O. fluviatilis*
 Lobes of upper leaves lanceolate to ovate *O. aquatica*
 Lobes of upper leaves linear to paddle-shaped
 Pinnate part of cauline leaves shorter than hollow petiole *O. fistulosa*
 Pinnate part of cauline leaves longer than solid or flattened petiole
 Rays and pedicels thickening in fruit *O. silaifolia*
 Rays and pedicels NOT thickening in fruit *O. lachenalii*

BRIAN K. BYRNE, 82 Low Ash Drive, SHIPLEY, West Yorkshire BD13 1JH

SCURVY-GRASSES TAKE TO THE ROAD

Since the 1970s, when *Puccinellia distans* (L.) Parl. was first noticed rampaging through the countryside, there have been an ever-increasing number of records of maritime plants from inland roadsides (see Scott, *Watsonia* 15: 381-386 (1985)). Recent sightings suggest that *Cochlearia danica* L. (and to a lesser extent *C. officinalis* L.) is now "doing a *distans*", spreading rapidly along motorways and dual carriageways in various parts of Britain. Interestingly, whilst *Puccinellia distans* is generally found on the outer verges, *Cochlearia danica* seems to occur almost exclusively along central reservations (which can make searching for it a bit of a problem!).

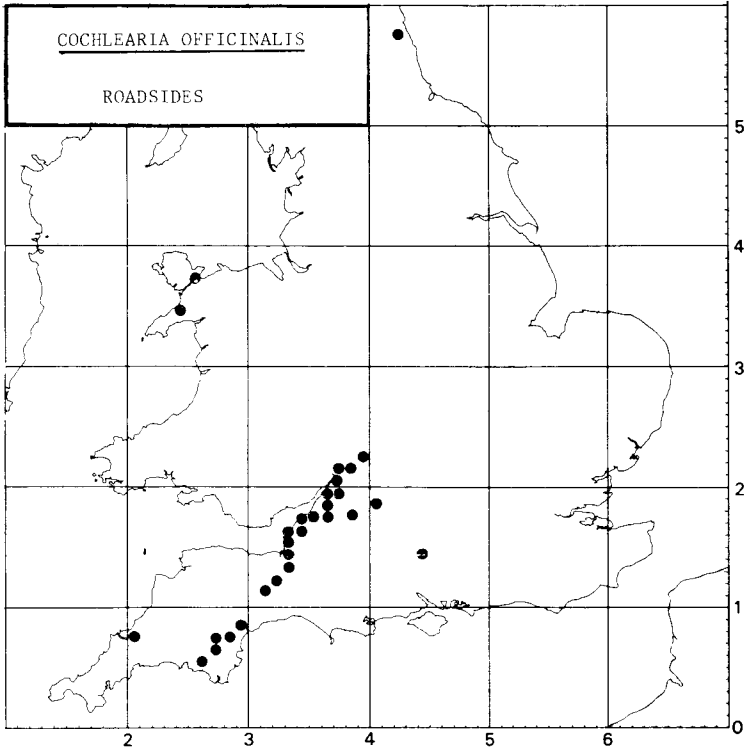
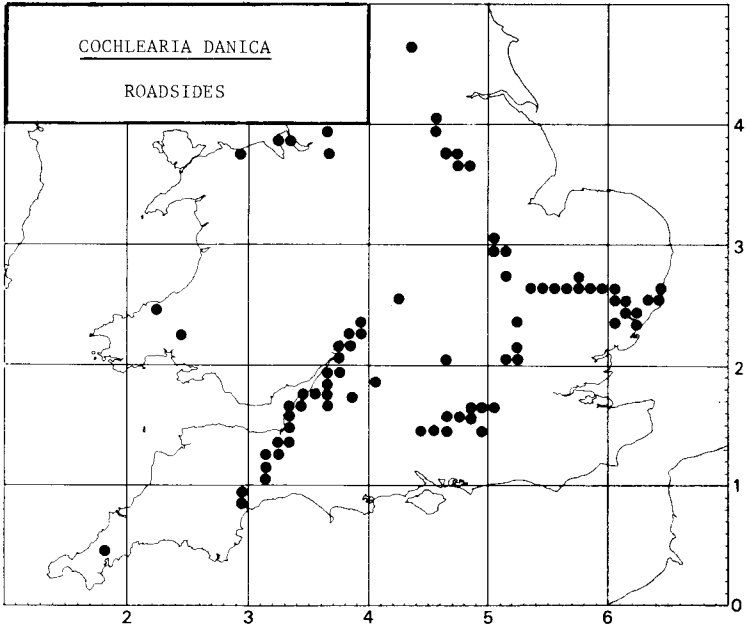
We are currently collating records of *Cochlearia danica* and *C. officinalis* from roadsides where these are likely to be associated with the use of de-icing salt. The Maps on page 16 show 10km squares in which we have so far seen these species, or from which their occurrence has been reported. We would be grateful for any other records; please list all records (excluding those sent in for the Monitoring Scheme), giving 10km square, year(s) and road number (eg. A4, M5 etc.). We are keen to find out for how long these species have been around on particular stretches of road, and would welcome details of cases where their spread has been monitored or documented.

Please send records to Simon Leach at the address below; postage will be refunded.

SIMON LEACH, England Field Unit, Nature Conservancy Council, Northminster House, PETERBOROUGH, Cambs. PE1 1UA

TIM RICH, Biological Records Centre, Monks Wood Experimental Station, Abbots Ripton, HUNTINGDON, Cambs. PE17 2LS

Recorders and Recording



ATLANTIC BRACKEN

In June, the West Dunbartonshire Natural History Society visited the Loch Lomond island of Inchmurrin. I said to Allan Stirling that all the bracken seemed odd. In July, we saw in the Pteridologist that there are now three subspecies of **Pteridium aquilinum** (L.) Kuhn in Britain: **P. aquilinum** subsp. **aquilinum** (Bracken), **P. aquilinum** subsp. **latiusculum** (Und.) Desv. (Northern Bracken), and **P. aquilinum** subsp. **atlanticum** C.N. Page (Atlantic Bracken).

The white-haired or Atlantic subspecies (subsp. **atlanticum**) occurs, so one of the authors of the Pteridologist article told me, on basic damp old pastures along the western seaboard. Inchmurrin is perfect for it, and though the frond we gathered, being very soft, was not in good condition on arrival, I am convinced, having seen Archie Kenneth's (Flora of Kintyre) 'hairy bracken' on the island of Danna in Knapdale, that Inchmurrin has no other bracken. On Danna and the north of Arran below Cock Farm, it grows among patches of another subspecies of Bracken, single plants scattered in a random way.

The white-haired subspecies **atlanticum** (see illustration page 18) is very distinct in a number of characters even from what I take to be hybrids (see below) with a high amount of 'Atlantic blood' which have been found in some places in the west of Scotland. The Atlantic is a different shade of green; being paler, more of an apple green. The texture is also very different, soft, velvety and without the hard polished surface of the hybrid and presumably the commoner subspecies, but I have found nothing in v.c. 99 that I feel is **P. aquilinum** subsp. **aquilinum**!

The silky, glistening white hairs which make subsp. **atlanticum** so eye-catching, are all over the frond and the stem right to the ground, though if you touch the stipe, it becomes bare. On the back of the fronds the hybrids may also be clothed with shining white hairs, but these are often buff or chestnut, and only follow the secondary stems, while in Atlantic Bracken the hairs are much longer and also fill the hollow of the backs of the pinnules and cloth the secondary stems, while in the hybrid, even if it has white hairs on the pinnule stems, the main stems will frequently have quite dark hairs.

The croziers are the most strikingly different. The Atlantic Bracken has a feature I have not found on any other, it is rolled into a shining white ball, somewhat reminiscent of a clenched baby's fist, the crozier of the hybrid though it may have a good amount of white hairs, is shaped in the familiar form, and has cinnamon hairs outlining the future stem backs. Another feature of the Atlantic bracken is the tips of the fronds, which are very late to unroll (Chris Page has found it still not open in September), are also silky-white and look like shining balls along the frond edge. The nearest plant to this is **Polystichum setiferum**, it too has the tips of the pinnae elegantly reflexed, silky, and white.

The hybrid may superficially look like this, but its 'pearls' have russet tints and become green when wet, because it is more pubescent than hairy, it may appear, particularly at the crozier, shining as if it was done in satin stitch with real silk thread, the Atlantic bracken has an almost mealy surface, all these features are more easily seen under electric light, especially the two tones of green.

The 'hybrid' referred to above probably involves subsp. **atlanticum** and another subspecies but its taxonomy has yet to be worked out. On page 98 of the new women's magazine 'ME' for 14 August 1989, there is a coloured photograph which contains, among other subjects, an excellent view of a three-quarter bred bracken; it is very nearly pure subsp. **atlanticum** but the presence of ginger hairs betrays its hybrid ancestry!

Records:

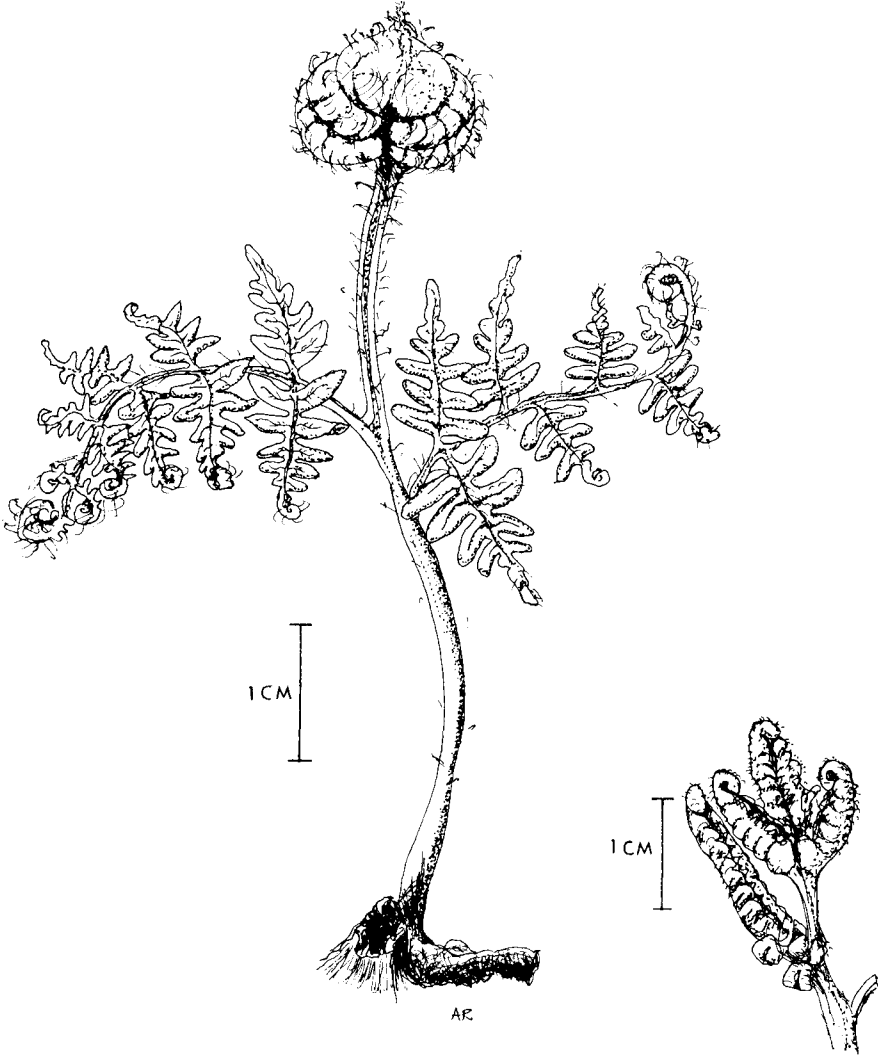
- v.c. 75, Ayr.: Side of A77 south of Turnberry (NS20); Byne Hill, south of Girvan (NX19); side of A77 south of Ardwell (NX19); side of A77 at north end of Kennedy's Pass (NX19); side of A77 south of Bennane Head (NX08); side of B7044 just north of Ballantrae (NX08); roadside at Garnaburn off A765 NE of Colmonell (NX18).
- v.c. 89, East Perth.: roadside opposite Balinluig Island, River Tummel (NN95).
- v.c. 99, Dunbarton.: Wood, Camis Eskan and Garroway Glen (NS38) (both near Helensburgh); woods by Strowanswell Road, near Barwood Hill, both near Dunbarton; Inchmurrin Island, Loch Lomond (NS38).
- v.c. 100, Clyde Isles: Arran, intermittently between Milestone Point (NR94) and Corrie (NS04).

References

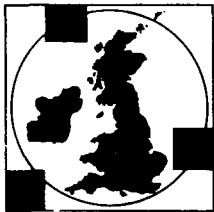
Page, C.N. & Young, Y.C. (1989). Three subspecies of bracken in Britain. Pteridologist 1(6): 265-266

Page, C.N. (1989). Two additional subspecies of Bracken, **Pteridium aquilinum** (L.) Kuhn, in Britain. Watsonia (in press).

ALISON RUTHERFORD, 19 South King Street, HELENSBURGH, Dunbartonshire G84 7PU



Pteridium aquilinum (L.) Kuhn subsp. **atlanticum** C.N. Page (left), and crozier of hybrid (right), del. A. Rutherford © 1989.



B.S.B.I. MONITORING SCHEME

Telephone: (office hours)
Abbots Ripton (04873) 381
(outside office hours)
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Biological Records Centre,
Monks Wood Experimental Station,
Abbots Ripton, Huntingdon,
CAMBRIDGESHIRE PE17 2LS.

PROGRESS

There is little news of the Monitoring Scheme at the moment, other than to tell you how we are getting on at Monks Wood. We finished processing the 1988 records at the end of June, and are now adding them to the 1987 records, sending them out to the VC Recorders to check and shovelling them into the big 'ORACLE' database. Once they are all in, the fun analysing them will really begin.

Coverage has improved slightly with some late records from Ireland, and now there are only four 10km squares for which we have no records at all.

Once again I would like to thank all those who have contributed for their help. We are on target for finishing at Christmas, but the results may raise more questions than they answer.

TIM RICH, Monitoring Scheme Organiser.

FLYING DOWN TO KERRY

Located on the Stoompa - Mangerton plateau, at an average elevation of 600 metres (2,000 feet) above O.D., tetrad W 0/8 A is one of a very few in the Irish section of the Monitoring Scheme which are more than three kilometres (two miles) from the nearest path of any description (excluding sheep tracks). The meteorological records disclose that the area is subjected to more than 3000mm (c. 120 ins) of precipitation annually, spread over more than 225 'wet days' (more than 1mm of rain) and up to a further 60 'rain days' (more than 0.1mm of rain). Not surprisingly, the entire plateau is covered by one of the most extensive upland blanket bogs in the country, and one of the least accessible.

Having grown up in the area, and later spent my research student days cataloguing its vegetation, I was well aware of what these statistics meant in practise - an almost perpetual cloud cap, sometimes extending down to 450 metres (1,500 feet), and liable to creep up suddenly on the fieldworker who defied forecasts and stayed too long. Then, getting down meant resorting to map and compass, hoping eventually to recognise some landmark and probably going far out of one's way to avoid dangerous ground. I also knew it would take me (not being a super-fit fell-runner) about four hours to penetrate to the nearest point of the tetrad from any of the approach roads. W 0/8 A was therefore a tetrad to be reserved for the long fine days of summer.

Well, we all know the rest of the story. As Summer began to squelch into Autumn 1988, and the even wetter than average seasons of '87 and '88 had meant no fewer than five abandoned attempts to reach the tetrad, resignation began to set in. W 0/8 A was going to be the one that got away - and with it the only record for *Empetrum nigrum* in the south-west, such was the distribution of the 10km squares.

The idea began as a joke on the part of my son Martin. 'The only way you will get up there now is by helicopter - why not hitch a lift with Charlie?' (Mr Haughey flies in to his off-shore holiday home by helicopter). Then we began to think, why not find out if it were feasible to fly in, and what it would cost. The Golden Pages were perused, and Celtic Helicopters were contacted. Yes indeed, they frequently flew this kind of mission for the Electricity Board, and yes, it would be horrendously expensive to charter an aircraft on our own. But if an opportunity came for us to share the expense of part of the flight with another party (Killarney was a popular destination), they would contact us. By the end of September, one possible opportunity had been cancelled due to - surprise! - bad weather, and the days were visibly shortening.

Resolve then began to harden - did I want to 'bag' that tetrad, or did I really need to build that alpine house next year? I decided that there was no contest, and asked Celtic Helicopters to put us on standby for the first suitable day. It was a pleasant surprise to discover that the charges related to flying time only, and that we could spend as long as we liked at the site, consistent with getting back to Dublin in daylight. The initial plan, worked out with our pilot Ciaran, was that we should make three landings, one at the

south-east corner of the tetrad, one at the north west, dropping workers at each site, and that both parties would work towards a pick-up point somewhere in the middle. I announced the plan at the Irish AGM of the BSBI in Dublin on October 8th and asked for volunteers. By the end of the weekend, Sylvia Reynolds, Eanna Ni Lamhna, and Daniel Kelly were on standby, and the weather forecasts were beginning to suggest that the trip might be on for the following weekend. Gradually, it narrowed down to Saturday October 15th, with Sylvia and Eanna ready to go, and Daniel on standby in case someone dropped out. The fourth member of the party was to be Martin, official photographer, spotter and coordinator.

In the end the weather nearly defeated us. Fog delayed departure for almost three hours, putting us far behind schedule. Finally the reports improved, and we got clearance to go, provided the trip was still of use to us. As the long range forecasts were heralding a return to broken weather, we decided it was now or never. At noon, we lifted off from Phoenix Park Race Course on the outskirts of Dublin, and shortly after one thirty, having refuelled in Cork, we were approaching the south-eastern corner of the tetrad along the Loo Valley.

The weather hadn't finished. The hills had already developed their customary cloud cap, and we couldn't even see the plateau, let alone the lake which was our objective. Putting Sylvia and Eanna down in mist, on a stretch of mountain which was unknown to them, was clearly out of the question. Breaths were held as we rounded the eastern flank of the range and - relief! The sun was still shining on the northern face, although cloud was spilling over the top of Stoompa and the tetrad was quite obliterated. However, the top of Mangerton was still clear, and I knew that if we could land there, we could make our way, even in cloud, along the rim of the deep corrie known as the 'Horse's Glen' to the south-western corner of the tetrad. The pilot agreed, but gave us a time limit of one and a half hours on the plateau, and arranged a rendezvous further down the mountain in case approaching cloud forced him to pull out before we got back.

We landed in a large erosion pan between the peat hags, and set off in bright sunshine for the rim of the corrie, a few hundred metres away to the north. We would have to follow it for about one and a half kilometres (c. one mile) eastwards to the edge of the tetrad. When the rim turned northwards, we would be in the tetrad. Leaving the helicopter, it occurred to Martin to mark the entrance to 'our' erosion pan with an arrow of stones, so that we could find it more easily if visibility worsened. It was fortunate that he did, for very soon afterwards the cloud swept down, enveloping us in a thick drizzle and reducing visibility to about 6 metres (20 feet). Keeping close to the edge of the corrie, and checking the compass for when it turned north, we found the tetrad without difficulty.

It took about forty minutes to log most of the twenty-plus species which we expected to find - including *Empetrum nigrum*. Sylvia found a patch of *Carex* species which looked interesting, and took a sample for checking against *C. bigelowii* in the herbarium. Eanna found *Huperzia selago*, plentiful on the peat hags. I penetrated for about 6 metres (20 feet) down a stream gully in the corrie rim and added *Saxifraga spathularis* and *S. stellaris* to our list. Martin kept us all in sight and in contact with the corrie rim, essential if we were not to get lost and have difficulty returning to the helicopter.

Then it was time to return to the rendezvous, hoping that the encroaching cloud had not forced the pilot to descend to lower ground. We found the erosion pan with the help of Martin's marker, and retraced our footsteps (literally) towards where we had left the helicopter. At first we thought that it had indeed gone, but suddenly there it was, along with a worried-looking Ciaran. The cloud had closed in so suddenly and so completely that he had been unable to leave, not knowing the terrain. Our relief at finding him still there was tempered when he announced that it looked as if we would all be walking home, or alternatively, spending the night on the mountain.

We waited anxiously for about twenty minutes, munching our hitherto forgotten sandwiches, our wet clothing steaming in the warmth of the helicopter's heaters, the realisation of our predicament sinking in. Then Ciaran decided that he would try to fly out, provided that there was at least one direction with no obstacles. I was able to assure him that the way was absolutely clear to the west, and so we set off. Flying at head height to keep the ground in sight, we beat westwards at a jogging pace for fifteen interminable minutes. Suddenly, the ground began to sink away below us, and a familiar stream came into view. We followed it down through the thinning cloud and broke out into bright afternoon sunshine in the broad valley to the west of Mangerton. The rest of the flight home was a distinct anticlimax.

Was it worth it? Of course it was. The last Kerry tetrad was in the bag, and we had recorded a total of twenty eight species. This amounted to all but two of the thirty I had previously recorded from the vicinity, and included two which were unlikely to have turned up in any of the other squares in the area. Sylvia was able to confirm a few days later

Monitoring Scheme

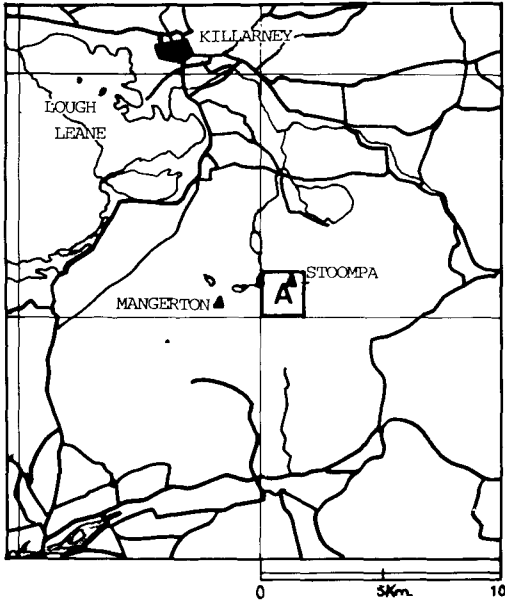
that her specimen was indeed *Carex bigelowii*, not earth-shattering, but nice to see in a locality where it was first noted by Mackay in 1806.

An amusing footnote to the story was that our pilot, Ciaran Haughey, actually has a famous father, whose name had been mentioned in jest at the beginning of the adventure. By chance, we had picked his son's helicopter firm out of the Golden Pages!

E. CAROLINE MHIC DAEID, 'Avondale', Moynalty, KELLS, Co. Meath, Ireland



Boarding the helicopter: photo Martin Mhic Daeid



Maps showing location of tetrad W 0/8 A, and helicopter flight path

NOTES AND ARTICLES

WHY YORKSHIRE FOG?

I have long wondered why that ubiquitous grass *Holcus lanatus* L. is called 'Yorkshire Fog' in Britain. What does 'fog' mean, and why this link with a particular northern county? Why not Somerset Fog, or Lancashire Fog, or, come to that, Scotch Mist?

When was the name first used? Both Agnes Arber, in her classic study *The Gramineae* (1934), and Ian Moore, in *The New Naturalist* volume *Grass and Grasslands* (1966), suggest that Benjamin Stillingfleet (1702-1771) was the pioneer in giving English names to those grasses that did not already possess them. So I was disappointed to find that in Stillingfleet's *Observations on Grasses*, published around 1760, *Holcus lanatus* received the name 'Soft grass', with no mention of Yorkshire or of Fog. In the same period Hudson's *Flora Anglica* (1762) has 'Meadow Soft-grass'.

The first mention of 'Yorkshire Fog' that I have come across is in Anne Pratt's *The British Grasses and Sedges* (1859), where she uses the name Meadow Soft-grass, but adds: '... its brightness disappears as the grass gets older. It then, if abundant, whitens the pasture, so as to deserve its old name of Yorkshire Whites, or even of Yorkshire Fog. It is not unlikely, however, that it owes its latter name to its softness, which led to its comparison with moss, for which fog was an olden name, and by which it is yet called by North country people, who allude to moss in their familiar proverb:

"The ro'ing stone gathers nae fog,"

Margaret Plues, who came from Yorkshire, says in her *British Grasses* (1867):

'... in Yorkshire, it is asserted by Marshall that *Holcus lanatus*, called in the district "Yorkshire Fog", was cultivated alone, and its seeds threshed like corn.'

Whilst William Marshall, in *The Rural Economy of Yorkshire* (1788) certainly does state that *Holcus lanatus* was at that time cultivated, he does not mention the name Yorkshire Fog, but refers throughout to Meadow Soft grass.

The first Flora to use 'Yorkshire Fog' as the English name for *Holcus lanatus* seems to have been J.T.B. Syme's *English Botany*, 3rd edition, 1872. Since that date most (but not all) county and local Floras have used it, though Bentham and Hooker's popular *Flora* did not adopt it until the 1924 7th edition by Rendle.

A further question arises here. Why did this name, which could only have had local currency originally, become standard, replacing 'Soft-grass' and its variants? Was some status conferred on it by the 1872 *English Botany*? Was it adopted because of its picturesqueness? (No other common grass has a 'local' name). We shall probably never know the answer.

As for the word 'Fog' itself, the *Shorter Oxford English Dictionary* gives inter alia the meanings 'the aftermath' and 'the long grass left standing through the winter.' The larger *O.E.D.* suggests a link with Yorkshire by citing an 1822 reference to 'Fog-cheeses' in Yorkshire, such as are made from fog-grass.'

It would be interesting to know if any of our Yorkshire members can throw further light on this foggy subject.

I am grateful to Dr C.M. Lovatt and Mr P.J.M. Nethercott for assistance in tracing some of the early references to this grass.

R.M. PAYNE, Beech Cottage, Orchard End, East Harptree, BRISTOL BS18 6AT

LAMENT FROM ALMERIA

Sitting in the Andalusian sun at the commencement of this piece, my best hope is to turn my loss into a gain for *BSBI News*, Palms, cafés, yesterday's Observer and other visual attractions notwithstanding, I would prefer to be in the mountains, where most of last week was spent.

When Mary reported sick this morning, the last day of our trip, bang went the virtual certainty, no, the probability, well anyway, the distinct possibility of finding *Hohenackeria excscapa* and *Seseli intricatum* on the Sierra de Gador. It is probably a good thing that I am presently sitting on the side of the hotel from which the Sierra is not visible.

I must remember, though, that three days ago I had only a vague idea where to look for those plants, and believed I would have to climb 1000 metres, whereas I have since

discovered a driveable route to 1800 metres and have narrowed the search area down to about 1 sq. km., courtesy a Michelin map purchased yesterday which, unlike the otherwise excellent military sheets, identifies the western peak as Morrón.

Close-season research, of specimens at the British Museum (Natural History) and Kew, and in the writings of Boissier, Hayek and others, has enabled me to track down a number of very obscure umbellifers in recent years, mainly in Greece and Yugoslavia, so this trip to Spain is a reminder that to travel hopefully is better than to arrive.

Hohenackeria exscapa (Steven) Kos-Pol. is a curious, stemless small annual of near-deserts, and seems to have escaped the notice of nearly all botanists who have visited its Spanish stations. It has a wider distribution in arid parts of North Africa and the Caucasus. The few Spanish specimens suggest that it occurs at around 1800 metres, and is absent from the extensive, but lower, semi-desert surrounding Almería.

Seseli intricatum Boiss. Obscure even by the standards prevailing in **Seseli**, this twiggy plant is known only from the limestone cliffs and outcrops of Sierra de Gador, but was absent from all the outcrops that I examined. However, the threat from goats is much less severe than I imagined, as is the threat from afforestation. I am therefore confident that, as with **Seseli tomentosum**, **S. malyi** and **S. vandasil**, adequate research and a sufficiency of time at the location will yield success.

Enough of what remained undiscovered. There were some successes after all. Almería and its environs have few prominent umbellifers, even when compared with the region around Málaga to the west, no doubt due to the lower rainfall. **Eryngium campestre** is abundant almost everywhere and **Thapsia villosa** is frequent, but all else is minimal and scattered. I can vouch that this applies throughout the area, having driven 1100km during the week. However, the general alpine flora at 1800 - 2000m on Sierra Nevada and Sierra de Baza is quite dazzling and both ranges can be crossed on minor but metalled roads, the gap in the road over Sierra de Baza having lately been closed. Let me conclude with some notes on other umbellifers which were seen:

Eryngium ilicifolium Lam. Resembles **E. campestre** in colour but the leaves are very holly-like. Plentiful on parts of Cabo de Gata.

Chaerophyllum hirsutum L. A solitary plant was seen in a wet flush near Bayarcal on the south side of the Sierra Nevada.

Anthriscus caucalis Bieb. Surprised to find a dense colony of perhaps 500 plants growing under a very large rock at 1900 metres on Sierra de Baza.

Bunium alpinum Waldst. & Kit. Very much less frequent than around Málaga, but seen in several damper places at 1800+m. Neither **Bunium pachypodium** or any species of **Conopodium** were found.

Cachrys sicula L. Most of the lowland between the Sierras and the sea is covered with plastic for vegetable-growing, but a modestly elevated area near Almerimar is little used and we saw a substantial colony of **C. sicula** there, in brilliant yellow flower and immature fruit.

Bupleurum gibraltarium Lam. We saw this shrubby plant in five widely-spaced rocky situations. All green growth consists of verticals from a low woody stock, unlike

B. fruticosum.

Apium nodiflorum (L.) Lag. A substantial colony with the **Chaerophyllum hirsutum** above.

Ferula communis L. Scattered groups of modest plants, perhaps 50 individuals seen in all.

Peucedanum hispanicum (Boiss) Endl. in Walpers. Colonies at a succession of damp spots at 2000m on the Sierra Nevada. Broad-leaved and unlike anything else in the area. In mid-June there are fresh radical and ascending leaves with last year's dead flower-stems, which show the umbels to have been many-rayed but of modest size.

Elaeostelinum tenuifolium (Lag.) Lange in Willk. & Lange. Occasional roadside groups, still in rich yellow flower around 15th June.

Torilis elongata (Hoffmans & Link) Cannon. Just two modest colonies seen, but this is not a species readily spotted from a moving car.

Daucus durieua Lange in Willk. & Lange. Seen once, on Sierra de Baza. An unusual, sinuous **Daucus**, readily confused with **Torilis nodosa**.

Pseudorlaya pumila (L.) Grande. There were large quantities of ripe fruit behind a sandy beach at Cabo de Gata although the plants had mostly been shrivelled beyond recognition.

As to the Sierra de Gador, the only additional species which I saw there was **Turgenia latifolia**. It occurred as a relic of very old cultivation, for the harsh slopes once had a human population, as indicated by frequent ruins of rough stone houses. The inhabitants must have been hardy indeed.

If anyone visiting the area lacks knowledge of how to get to the top of the Sierra, I should be glad to help. If they feel like an attempt on *Seseli intricatum* and *Hohenackeria exscapa*, they might also help me.

Postscript

Since arriving back from Spain, my attention has been drawn by Eric Clement to Willkomm's *Supplementum Prodromi Florae Hispanicae* p.196, which links *Hohenackeria polyodon* Cosson & Durieu with 'depressions between gypsum hills'. If this can be extended to *H. exscapa*, then it's back to the moonscape NW of Almeria. Has no botanist ever looked there? Shall I ever get my research watertight?

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

THE NATURAL HISTORY CENTRE, LIVERPOOL MUSEUM: A COMMENT

On Tuesday 11th July, while Richard Foster, the Director of Liverpool Museum, was in London receiving the National Heritage 'Museum of the Year' award for the 'Best Educational Initiative', Tony Soper, the writer and broadcaster, with references to 'closets' and praises for the Museum in being the first in Britain to reveal the contents of their's to the public, ceremoniously sniped the tape and officially opened the Liverpool Museum Natural History Centre.

The Centre is distinctly uncloset-like with two light airy rooms, one with constantly changing exhibits, workbenches and various laboratory and visual-aid equipment, and the other a reference area with Natural History books and 'mini-collections' of geological specimens and common groups of animals and plants. Together these create a Natural History 'glory hole' that invites exploration and offers facilities for 'sussing' out Natural History queries and 'finds'.

I was impressed by the Centre's general approach, offering not so much the 'hands-on' experience in vogue these days, but more a place for investigation, supervised by qualified demonstrators in an informal atmosphere. The exhibits and worksheets are pitched quite low to catch sparks of interest and avoid intimidation, but with the offer of access to the main collections (by arrangement), the Centre successfully caters for all ages and levels of interest, as testified by the 60,000 visitors last year, many of whom were family groups.

It is early days yet for assessing what the Centre can manage to achieve but it has enormous scope. As pointed out by Tony Soper, a policy of actively recruiting data collectors offers wide potential for the centre. Britain is a nation of nature-lovers; a vast army of keen amateurs scour and reconnoitre our countryside throughout the year accumulating a wealth of much-needed field data and potentially valuable records. Their data is rarely conserved, and so, as the study of Biology moves towards a more integrated approach with current technology and data processing equipment offering new scope for the study of the dynamics and inter-relationships within the Natural Sciences, raw data is often a limiting factor. Centres along the lines of that at Liverpool could play an important role in educating the public to the need for and value of accurate records, and in encouraging people to come forward with their data.

The Centre offers a model PR exercise of value to all Museums. In view of the current 'value for money' mentality that threatens curatorial posts and the lay person's generally poor understanding of the value of scientific collections, the reference collections at hand in the Centre provide an excellent introduction to the use of taxonomic collections and their relevance to today's 'green' issues.

Liverpool's Natural History Centre has been open intermittently for two years and already Bristol Museum has followed it's lead, if on a more modest scale. After seeing what Liverpool aims to do, it is surely in the interests of other Museums to take note and appreciate that the casual interest of their inexperienced and often shy visitors, if encouraged and directed, is potentially the experienced enthusiasm of the knowledgeable naturalists of tomorrow. For these are the members of the public who best appreciate and understand the need to protect the national collections.

The Centre is now permanently open Tuesday to Saturday, 1.00 to 4.30pm, Sunday 2.00 to 4.30pm (closed Mondays), and remarkably, in contrast to trends elsewhere, access is FREE to all.

DALE EVANS, Department of Botany, National Museum of Wales, CARDIFF CF1 3NP

AQUATIC PLANTS: OPPORTUNISTS AND SPECIALISTS

This lecture, on 3 March 1989 at the University of Reading, sponsored by the Biological Council, represented a departure from our usual meetings programme. Some 55 members and guests assembled to hear Prof. C.D.K. Cook, from Zurich University Botanic Garden, deliver a lively, stimulating, and wide-ranging illustrated lecture on aquatic plants. He discussed various aspects of their distribution and ecology, with the emphasis on their reproductive biology and invasive potential. Particularly fascinating was a detailed exposition of the dispersal and dehiscence of the fruits of bulrushes (*Typha* spp.), a remarkable mechanism that is not covered in standard texts! After the lecture, Professor Cook was presented with a specially inscribed medal on behalf of the Biological Council. There then followed a buffet supper with wine in the Botany Department, attended by 20 BSBI members and Professor and Mrs Cook, which ended a most enjoyable occasion on a lively and convivial note.

The apparent success of this meeting, on the basis of comments and letters received subsequently, suggests that the Society would benefit from a more active winter programme in future years.

JOHN R. AKEROYD & STEPHEN L. JURY, Department of Botany, Plant Science Laboratories, University of Reading, P.O. Box 221, Whiteknights, READING RG6 2AS

TRIBULUS TERRESTRIS - A NOVEL METHOD OF ALIEN INTRODUCTION?

The report by Adrian Grenfell (*BSBI News* 50, Dec. 1988) of the occurrence of *Tribulus terrestris* L. at Avonmouth Docks reminded me of an incident in I suppose the late 1960s, when, discussing the determination of seeds and fruits from Quaternary deposits with a colleague one evening in the Botany School, Cambridge, we were startled by a yelp of pain from a then Leicester research student (a pollen-analyst) waiting nearby, who was eating a bar of fruit nut chocolate. Extracting a spiny object from the roof of his mouth we straightaway proceeded to identify it with the aid of the Reference Collection of Seeds & Fruits - literally just in front of us - plus a quick confirmatory visit to the Herbarium. It was indeed a fruit of *Tribulus terrestris* L. or *Caltrops* (*Caltrops*) - surely the more apt English name for this fruit, which, whatever way up it lies will pierce bare feet in precisely the same manner as will the fruit of *Trapa natans* (Water Chestnut, *Caltrops*) - and just as painfully.

We assumed the 'origin' to be a contaminant of the 'fruit' component - perhaps from the (eastern) Mediterranean where *Tribulus* abounds; but were the nuts to have been the source and had they been almonds much the same region would be implicated.

What became of the fruit I never knew, but had the injured eater been out-of-doors and not in the presence of two specialist identifiers of seeds and fruits (albeit normally fossil ones!) it would surely have been cast aside - perhaps to germinate in v.c. 29 (Cams.) or maybe v.c. 55 (Leics. & Rutland).

Does this come under the Avonmouth category of introduction in 'animal foodstuffs'? or is this a potential new method for how aliens get into Britain?

ANN CONOLLY, 25 Brocks Hill Drive, OADBY, Leicester LE2 5RE

VIABILITY OF LONG-BURIED SEED - A REPLY

V.A. Johnstone (*BSBI News* 51, April '89), noting the germination of long-buried seeds following the storm of October 1987, asks some questions about the behaviour of seeds in the soil. Perhaps I can provide some (but not all) of the answers. Firstly buried seeds are not prevented from germinating by high concentrations of carbon dioxide in the soil. Certainly soil atmosphere has some power to inhibit germination, so that seeds buried at some depth do not germinate as well as those near the surface, especially if the soil is wet. However the inhibitor is not carbon dioxide, but seems to be some gaseous metabolite produced by the seeds themselves. The nature of this metabolite is unknown.

This inhibitory effect of soil atmosphere, however, only seems to occur at depths well

below those from which seedlings could successfully emerge. Nearer the soil surface other things prevent germination; usually a lack of one or more of the following germination stimuli: light, alternating temperatures, and nitrate ions, roughly in that order of importance. Often two or even three of these stimuli are required simultaneously in order to cause maximum germination.

In answer to Mr Johnstone's specific questions:

1. No, an increase in light cannot prompt germination of seeds already on the soil surface. Brief periods of very low intensity light are normally sufficient to stimulate germination. On the other hand, a change in light quality may promote germination. Light filtered through leaves is relatively enriched in far-red light, which inhibits germination.
2. I suspect germination of buried seeds will only have occurred where uprooted trees have disturbed the soil. Most old seeds in the soil are buried at some depth and would not be able to penetrate the soil and litter without soil disturbance. Nor would they receive the stimuli needed to promote germination without soil disturbance. Most long-lived seeds are small, and can therefore penetrate only very shallow layers of soil when they germinate.
3. Which species are involved? May I endorse Mr Johnstone's request here that people recount their experiences in the pages of BSBI News? The extreme longevity of many seeds in the soil is well known, e.g. **Verbascum**, **Digitalis**, **Hypericum**, **Calluna**, **Juncus** etc. However, our knowledge in this area is very incomplete and it was news to me that **Atropa** seed is long-lived.

K. THOMPSON, Department of Biological Sciences, Polytechnic South West, Drake Circus, PLYMOUTH, Devon PL4 8AA

[Mr Johnstone's request for lists of species has not fallen on deaf ears as the following contributions testify. Ed.]

VIABILITY OF LONG-BURIED SEED IN ALDERNEY

I have followed the various notes on this subject with interest because it follows very closely my own observations here in Alderney. In the last 12 months or so, various 'States' projects have resulted in large quantities of soil and spoil being spread here.

1. About 14 months ago a large heap of quarry spoil, mostly soil with small pieces of sandstone, and dating from Victorian times, was removed to make way for the extension to a States housing scheme. Much of this was spread in an old worked-out sand-pit, at Platte Saline, about 50 yards from the sea, which had been partially back-filled many years before. (This was the exact habitat of our small colony of **Silene conica**, which appears to have been extinguished). In October, apart from a small quantity of **Sinapis arvensis**, and a lot of **Hirschfeldia incana** (which is a very common 'weed' at this spot), 7 fine plants of **Datura stramonium**, a solid bank of **Nicandra physalodes** about 30m x 2m, with plants about 1m high, 2 plants of **Solanum tuberosum**, and a dozen plants of **Chrysanthemum segetum** appeared, these were all flowering in October, continued until Christmas, and set masses of seed. The **Chrysanthemum segetum** continued in flower throughout the winter, and is still flowering.
2. In the early part of this year more spoil from this same site was removed and tipped into our one and only dune slack at Braye Bay. This has produced a differing crop of plants this spring, the most noticeable being **Reseda luteola** in some quantity, most plants 40-60cm. A few each of **Papaver rhoeas**, **Oenothera erythrosepala**, and the usual range of Cruciferae, **Anagallis arvensis**, etc. The Solanaceae have not so far appeared here, but 2 plants of **Reseda luteola**, 2 of **Verbascum thapsus**, and a single plant of **Cyperus longus** have recently appeared on the tipped soil at the sand-pit site. **Reseda luteola** is not frequent in the island, and usually only 1 or 2 plants are found together. A further eruption of this same plant has occurred in a small elm thicket where the dead elms (all about 15-20cm diameter trunks), were felled last summer. This is at present a mass of **Papaver somniferum**, all of the same purple colour, **Mercurialis annua**, **Digitalis purpurea** including 2 white specimens, various

Chenopodium spp., a few brassicas, and a quantity of large plants of **Reseda**, the largest 1.9m high and 1.1m across.

- 3. A couple of months ago huge quantities of soil and turf coming from a scheme to widen our airport runway were tipped on another part of the old sand pit site which had not previously been back-filled. The airport was built 50 years ago on some of the best agricultural land, and the resulting crop will be interesting to note. The soil here was tipped at the rim of the quarry and has now been bulldozed over to leave a North facing 45 degree slope. I will report on this in due course, if anything interesting appears.

I feel that the various Cruciferae are probably a fresh colonization from nearby, but the Solanaceae, **Reseda luteola** and **Chrysanthemum segetum**, are nowhere to be found within about a mile of the places where they have appeared, and the last reported sighting of **Nicandra physalodes** in the island was in 1969.

BRIAN BONNARD, The Twins, Le Petit Val, ALDERNEY, Channel Islands

GERMINATION OF LONG-BURIED SEED OF FUMARIA VAILLANTII IN HERTS.

The October 1987 storm caused comparatively little damage in v.c. 20, Herts., but one wood which was affected was Fox Covert, beside Therfield Heath. This is a beech plantation about 100 years old, having been a mixed plantation with Scots Pine, apparently onto chalk grassland immediately adjacent to the Heath. The soil is extremely thin, mainly rendzina.

Several beeches were blown down, and, a year and a half later, a particular feature of the root boles in disturbed chalk are frequent plants of **Fumaria vaillantii** Lois., and some **Fumaria densiflora** DC. The former is particularly rare now on the chalk in Herts., although it formerly occurred on 'fields above Therfield Heath' in the 1880s. As this site has certainly not been disturbed during the past century, and as, in the 1830s, even this area may have been grass, it seems possible that this seed may have remained dormant since the time of Napoleonic ploughing, which affected even parts of what is now Therfield Heath itself.

TREVOR JAMES, North Hertfordshire District Council, Museums Services, Natural History Department, Old Fire Station, High Street, BALDOCK, Herts SG7 6AR

GERMINATION OF LONG-BURIED SEED

The observations of V.A. Johnstone and others in BSBI News 50, 51 (Dec. '88, April '89) are one aspect of the phenomenon of 'coppicing plants', which flourish in the years of light after a wood has been felled and before it grows again. This was once a familiar aspect of plant behaviour. The lengthy literature goes back to John Ray's report, before 1660, of what is now called **Chenopodium polyspermum** 'in Kingston wood [Cambs] after it had been new felled'. Simon Benninck, the 15th-century artist, portrays broom and brambles in his beautifully accurate picture of a coppiced linewood. All these are known or presumed to be buried-seed plants.

Germination results from felling and wind-breakage of trees as well as uprooting, and therefore cannot necessarily be caused by soil disturbance. I have seen similar results after the burning of furze in Cornwall and grassland or scrub in Mediterranean countries.

In a coppiced wood, some plants such as raspberry will germinate up to 5m into the uncut wood from the edge of the felled area. I am at a loss to say how such seeds know when to germinate. If light is responsible, how does it reach them? If increased warmth is the cause, why did these seeds not germinate everywhere after the 1976 summer? Or is there a large seed-bank, of which some germinates every year - but unless they have extra light the seedlings are devoured by slugs or **Botrytis** before we notice them?

OLIVER RACKHAM, Corpus Christi College, CAMBRIDGE

GERMINATION OF DORMANT SEED

The notes in BSBI News 50, 51 (Dec. '88, April '89) concerning the viability of dormant seed interested me.

While staying in Devon in 1959, I visited Kent's Cavern, limestone caves near Torquay. The guide drew our attention to some miniature plants growing on the walls, explaining that these had appeared only since electric light had been introduced into the caves thirty years earlier. We were told that the light had gradually stimulated dormant seed into germination. These plants were described simply as 'ferns' and I have since wondered if they are still there, what species they represent, and how they really came to be there.

ELIZABETH J. RICH, 'Jesmond Dene', Five Ashes, MAYFIELD, East Sussex TN20 6JG

GERMINATION OF LONG-BURIED SEED ESPECIALLY HYOSCYAMUS NIGER

Clapham, Tutin & Warburg's Flora of the British Isles (ed. 2) page 670 says of Hyoscyamus niger, 'Native. In sandy places, specially near the sea, elsewhere usually on disturbed ground in farmyards, etc.' Over the last 150 years in the Isle of Man, it has occurred intermittently at various coastal localities:

Glen Maye, 1950; Poyllvaish 1832-4, 1872, 1887; Scarlett, 1959; Castletown, c.1854; Hango Hill, 1952; Brooghs north of Ramsey, 1966, 1977; Ayres, 1945; Ballagarraghyn, Jurby, 1970s & 1980s; St Patrick's Isle, Peel, 1866, 1872, 1878, 1887, 1920, 1930, 1837, 1974.

It also occurred once in an inland garden at Sulby in 1960 and at Rushen Abbey in 1915.

The majority of these records would seem to be little more than a general testimony to the endurance of this plant's seeds in the seed-bank in the soil. This was also demonstrated by the luxuriant growth of Henbane on the spoil heaps from the archaeological excavations at York. This was striking because its seeds were also abundant among those recovered from the excavations, most notably from the Viking levels. Similarly, Hyoscyamus niger appeared as a weed on the soil dumps from the recent St Patrick's Isle Trust excavations c.1985-88. It would seem likely that both these abundant occurrences reflect a perpetuation of a seed-bank which has survived from medieval times, albeit with occasional augmentation when disturbed by building work. The question now arises as to whether the 1915 record from Rushen Abbey was the result of disturbance of its medieval seed bank and I am keeping a close watch on the spoil heaps from the current (1988-89) excavations on that site. I would be interested to know whether anyone else has noticed Henbane on medieval excavations, or is it a particularly Viking phenomenon - did it appear, for example, in Dublin?

LARCH S. GARRAD, The Manx Museum, DOUGLAS, Isle of Man

OF POTS AND POTATIONS: CHEMISTS RECONSTRUCT BRITAIN'S OLDEST ALE

A black scum encrusted on sherds of neolithic pottery has provided enough evidence for chemists at William Grant and Sons distillers to reconstruct Britain's oldest ale. The pottery was discovered during excavations of an early farming settlement on the Hebridean island of Rhum. Analysis of the deposits, by Edinburgh based archeo-botanist Brian Moffat, revealed pollen of cereals, heather and meadowsweet, plus spores of the Royal Fern Osmunda regalis. This mixture of plants was unlikely to have occurred together naturally and suggested to Moffat that the vessel had once contained a fermented drink. If he is right, then this is the earliest record of alcohol production in Scotland.

In the first attempt to recreate the Neolithic ale Grant's chief chemist, George Wilkin, produced a brew from milled oats and heather honey, adding flowers of meadowsweet and a frond or two of Royal Fern. The result was apparently quite disgusting because unpleasant tasting tannins from the fern masked all other flavours. At this stage George

Wilkin might have been tempted just to leave out the fern but Caroline Wickham-Jones, who is leading the excavations on Rhum, insisted that the reconstructed brew should remain true to the archaeological evidence.

Wilkin was forced to rethink the Neolithic recipe and his research led him to examine the production of African honey beer, which remains a very popular brew with an estimated 40,000 tonnes of honey used for this purpose every year. Significantly, African honey beer is generally still brewed in gourds, rather than metal or plastic containers, because the fibrous lining of the gourd absorbs yeast which is transferred from one brew to the next. Perhaps Neolithic Scots added beer soaked fronds of Royal Fern to each fresh brew to facilitate yeast transfer. The leaf-stalks of the fern are certainly fibrous enough to fulfil this function.

In his second attempt Wilkin used some stalks of Royal Fern but left out the leafy part of the frond. He also added some Bog-myrtle which had been found on the site. When fermentation was complete the ale had an alcohol content of 9% (similar to wine) and after having been suitably filtered and chilled it was served up in whisky-sized measures to a gathering of archaeologists and press at the Royal Museum of Scotland. The verdict on Neolithic man's pint: it smelt like mead and tasted more like a home brewed parsnip wine than African honey beer, which is invariably warm and lumpy. The reaction of most of those at the beer tasting was to drain their glasses as quickly as possible in order to have them refilled with one of Grant's better known alcoholic beverages.

IAN EDWARDS. 15.XI.87

[Reprinted from the Botanical Society of Edinburgh's Newsletter BSE News 49: 12-13, Spring 1988, by kind permission of the Editor, Mrs M. Thom, and author Dr I.D. Edwards. Ed.]



BSBI T-SHIRTS

We read with interest that some recorders at the 1987 Glasgow conference were presented with BSBI T-shirts! (BSBI News 47: 16 (1987). when are the rest of us going to be able to acquire them? At least it might distinguish our more general interests from those of the earnest seekers after *Psilocybe semilanceata* in the wet autumn meadows (Lancet 1982. 1. 213). In that article the author recounts the experience of asking a back-packed youngster, crawling over botanically-rich meadowland, if he was by any chance a botanist, and being answered by a look of disbelief and horror! Beer is one thing, liberty caps quite another.

DIANA GRIFFITH, 27 Southway, Totteridge, LONDON N20 8DD

ALIENS AND ADVENTIVES

STACHYS GRANDIFLORA

We are indebted once again to Graham Easy for our cover illustration, this time drawn from material kindly provided by Miss I.F. Gravestock from her garden. **Stachys grandiflora** (Willd.) Benth. (Betonica grandiflora Willd.; B. macrantha C. Koch) was first noted in 1965 as a large clump naturalised on the bank of a stream at Hartley, near Kirkby Stephen, Westmoreland by Miss Gravestock and Miss B. Sydenham. In 1969 the clump was much reduced in size - is it still there? Mat-forming **Stachys grandiflora**, a native of the Caucasus, is known in several colour forms; the Hartley plant is Cv. 'Violacea'. It seems to do well in gardens and is certainly a striking plant for the herbaceous border.

ADRIAN L. GRENFELL, 19 Station Road, Winterbourne Down, BRISTOL BS17 1EP

FENUGREEK IMPURITIES

As a follow-up to Humphry Bowen's note in BSBI News 51: 8 (1989), I would add my experience some years ago of growing on the impurities from a single jar of Sainsbury's fenugreek (from Morocco). It yielded no fewer than 34 species including most of Mr Bowen's, but also the following: **Asperula arvensis**, **Bupleurum subovatum**, **Centaurea diluta**, **Cephalaria syriaca**, **Lathyrus clymenum**, **Lithospermum arvense**, **Scorpiurus muricatus**, **Sida rhombifolia**, **Sorghum halepense**, **Geropogon glaber**, and **Trifolium pannonicum**.

Most of the above have also been grown from wild bird seed which, in the past, has largely been imported from Morocco.

GORDON HANSON, 1 Coltsfoot Road, WARE, Herts. SG12 7NW

DUNBARTONSHIRE'S RAREST ESCAPE?

Visiting a site for **Cardamine raphanifolia** above Helensburgh hoping to get samples for Tim Rich, I was very surprised to see on a bank, some broad foliage which looked like that of an **Aspidistra**. On reaching the plant, I realized it was indeed that familiar pot-plant - not the smaller **Aspidistra lurida** which is found in older Helensburgh houses, but the more robust **A. elatior**, commoner in places selling house-plants. This one was actually rooted down and growing - a poor sickly thing which had once been very well fed, but had become pot-bound and was now ragged and pale. Fearing it would be buried in the next dumping, I rescued it, and with luck in a year or two it will be fit to grace our antique shop.

ALISON RUTHERFORD, 19 South King Street, HELENSBURGH, Dunbartonshire G84 7PU

CRAMBE CORDIFOLIA Steven: ADDITIONS AND CORRECTIONS

After my previous note on this plant in BSBI News 49: 30 (1988), several people wrote to me with further information. J.R. Palmer found the **Crambe** growing on an overgrown roadside near Farnborough, West Kent in 1966. It was determined by D. McClintock and persisted for some years. In August 1969 T.B. Ryves collected it at Sawston Hill near Cambridge, the specimen is in **Herb. T. Rich**. Tim Rich also tells me that H.J.M. Bowen had it from Oxford tip in 1976, the specimen being in RNG. During the Monitoring Scheme in July 1988, H. Matcham and N. Sturt (Sussex Botanical Recording Society) found it at Dell Quay near Fishbourne, West Sussex, the plant was identified by G.H. Forster. The plant continued to do well during 1988 in the Boston Manor site reported in the previous note.

B.R. Fowler, Recorder for v.c. 39, wrote a very interesting letter concerning the Essington Canal plant:

"One plant flowering from 7th June to 6th August 1974 with a second flowering on 20th August. Noticed by Mr F. Gordon Bennett who gave a piece to Mrs S.R. Price, the

South Staffs Naturalists' Society's flower group leader for identification / verification. Presumably she sent it to **B.M.** Waste ground by the Essington Canal is most definitely in v.c. 39 Staffs. The site lies between Grid Refs. 32/931994 - 924986. F.G.B. tells me it persisted for about five years."

I should like to thank all the people who have written to me concerning this interesting plant.

It should be noted that, in the original note, the authority for **Crambe cordifolia** was incorrectly given as 'Steph.', it should have been 'Steven' as given above.

New records:

- v.c. 13, West Sussex
Dell Quay near Fishbourne, H. Matcham & N. Sturt, 1988
- v.c. 16, West Kent
Overgrown roadside near Farnborough, J. Palmer, 1966
- v.c. 23, Oxford
Oxford Tip, H.J.M. Bowen, 1976 (RNG)
- v.c. 29, Cambridge
Sawston Hill near Cambridge, T.B. Ryves, 1969 (**Herb. T. Rich**).

Correction:

- v.c. 39, Staffs
Waste ground by the Essington canal, Wolverhampton, F. Gordon Bennett, 1974 (**BM**)

J. MICHAEL MULLIN, Department of Botany, British Museum (Natural History), Cromwell Road, LONDON SW7 5BD

NOTICES (BSBI)

FIELD MEETING - 1990

ADVANCE NOTICE - CATALONIA, SPAIN

The BSBI plans a 12 day Field Meeting starting Monday 14 May 1990, in Catalonia, Spain. The plan is to spend 5 days at Figueras exploring the Mediterranean coastal, inland, and lower east Pyrenean foothill flora, and 5 days from two other bases exploring the Reserva Nacional de Freser i Setcases and the Reserva Nacional de Cadí. John Topp who knows the area and speaks Spanish, has volunteered to organise with the BSBI. The Field Meeting will be run at low cost staying in 2 star hotels. At 1989 prices food and accommodation cost 25 a day and less than double for two people sharing. In-country transport cost £9 a day. Some may wish to make their own way and other drivers are welcome. The cheapest way to get to Figueras is by coach from Victoria leaving at 10.30 on Saturday and arriving at Figueras at 08.30 on Sunday. The cost was £99 return when John Topp did it in June this year. The journey by rail to Figueras costs more and takes the same time. The cost by air, flight schedules, points of UK departure and Spanish arrival for 1990 are not yet known. In summary, the overall cost will be under £600. The rendezvous is Sunday 13 May at the Hotel TRAVE in Figueras. It will be essential to have an idea of numbers by 30 November. If you are interested please write to John Topp, at the address below, and if you wish further details or have any questions please telephone him. If the dates chosen do not suit, John will be in the area finalising details at least a week earlier and welcomes company. (Likewise on completion of the Field Meeting he will be heading west to explore further the Parque Nacional de Aigues Tortes and Val d'Aran). This is a splendid opportunity to visit beautiful countryside, explore a very rich flora and be deafened by nightingales.

JOHN M.W. TOPP, 20 Lupus Street, LONDON SW1 V 3DZ (tel. 01-834-3079)
MARY BRIGGS, 9 Arun Prospect, PULBOROUGH, West Sussex RH20 1AL

NOTICES (OTHERS)

THE FLORA OF DERBY

During 1988 a detailed biological survey of all the greenspace within the boundary of the City of Derby was conducted by the Derby City Wildlife Project, a local urban nature conservation group. The survey revealed a surprising diversity of flora and fauna, but the botanical results were particularly interesting, and some 605 species of vascular plants were recorded.

The Flora of Derby, by P. Raynes & K. Futter, is a new publication that presents the full botanical results of this recent survey. The booklet summarizes the methods used in the survey, and the types, quality and extent of the habitats that were found in Derby. A full list of all the vascular plants (including horsetails, ferns, and flowering plants) that were recorded is presented, and for each species a code of abundance is given together with the habitat(s) in which it was most commonly found. In addition, the geology of Derby is briefly outlined, distribution maps are presented for the most notable species, and, in a concluding section, the future prospects for wildlife in the City are considered.

The booklet (A5 format) comprises 62 pages of text and lists, 6 maps, 5 tables, 4 colour plates, 11 line-drawings and has a colour cover. Copies of The Flora of Derby can be obtained for £2.00 plus £0.50p postage from the address below.

PETER RAYNES, 4 Petersham Drive, ALVASTON, Derby DE2 0JU.

KEW GARDENS BOOK FAIR, SEPTEMBER 23-24

The first ever book fair to be held in Kew Gardens will take place on September 23-24. The fair will be devoted to Natural History, Gardening, and Botanical Books - again, the first time a book fair has been devoted to this theme.

Twenty-five booksellers, from as far afield as Norfolk, Cornwall, Edinburgh, and Yorkshire, will be exhibiting specialist stock.

The venue will be the Orangery, in the north of the gardens, entry via the usual gates, and the hours will be 10am to 4.30pm each day.

I am the fair manager, and also an ex-Kew student; for any further information please contact me at the address below.

MIKE PARK, 351 Sutton Common Road, SUTTON, Surrey SM3 9HZ (tel. 01-641-7796)

FORTHCOMING MEETINGS OF THE BRITISH BRYOLOGICAL SOCIETY

- 23 - 24 September 1989. Paper-reading meeting and A.G.M., Lincoln.
Full details from the local secretary: Dr M.R.D. Seaward, Postgraduate School of Studies in Environmental Science, The University, Bradford BD7 1DP.
- 24 - 26 November 1989. Workshop meeting, Roehampton Institute south-west London.
Full details from the local secretary: Jennifer Ide, 42 Crown Woods Way, Eltham, London SE29 2NN
- 4 - 11 April 1990. Spring field meeting, Lancaster.
Full details from the local secretary: Martin Wigginton, Nature Conservancy Council, 70 Castlegate, Grantham, Lincolnshire.

As always, BSBI members would be most welcome at these meetings.

PHILIP LIGHTOWLERS, British Antarctic Survey, High Cross, Madingley Road, CAMBRIDGE CB3 0ET

FOREIGN TRAVEL 1990

Frank Perring will be leading a botanical trip to Majorca from 24 April to 1 May, staying at Puerto Pollensa. From 16 June to 7 July he is returning to Manchuria on a 3-week tour which takes in the wonderful reserves at Zhalong, Jingpo, and Changbaishan.

All enquiries to Wildlife Travel, c/o British Wildlife Appeal, 120 Wilton Road, LONDON SW1V 1JZ. Wildlife Travel dedicates its profits to British Wildlife.

FRANK PERRING, 24 Glaphorn Road, OUNDLE, Peterborough PE8 4JQ

EXPEDITION TO CHILE, JANUARY 3 - FEBRUARY 7 1990

The Brathay Exploration Group, led by Christopher Loynes, Lynne Farrell and Judith Cantrell, are planning an expedition to Chile from January 3 to February 7, 1990

Two weeks will be spent at Lagunilla international peace centre, helping with practical projects; and 2 weeks in Torres del Paine National Park (near Punto Arenas) studying the flora and fauna.

Places are available for 5 members, in the age range 16 - 24, with a keen interest in ecology and outside adventure; cost c. £1700. All enquiries to the address below.

LYNNE FARRELL, 41 High Street, HEMINGFORD GREY, Cambs. PE18 9BJ

EXPEDITION TO SPAIN, MARCH & APRIL 1990

I am planning a journey in a 7-seater vehicle to explore the flora of south and east Spain during the whole of March and the first half of April, 1990. The area to be covered will be from Coto de Doñana to Gibraltar, Malaga, Almeria, and inland, in three stages. You are welcome to join all or part of the journey. The first stage will start at Gibraltar the weekend of March 3/4 and cover the area Gibraltar, Tarifa, Cape Trafalgar, Coto de Doñana, within the triangle Gibraltar, Huelva, Sevilla, Gibraltar. See Flowers of South-West Europe (FOSWE) Plant Hunting Region 3. The second stage will also start from Gibraltar on the weekend of March 17/18, and cover the area Gibraltar, Ronda, Antequera, Malaga, Gibraltar, ie. FOSWE Regions 4 & 5. The third stage will start at Almeria or Malaga on April 1, and cover Cabo de Gata, Almeria province, and the Sierras Nevada, Tejada and Almirajara, ie. FOSWE Regions 6, 7 & 10 within the triangle Almeria, Granada, Malaga, Almeria. It is planned to stay usually at 2-star hotels which means all food and accommodation should be less than £30 a day, and share transport costs at £7 a seat a day.

If you are interested and would like to discuss further, please phone 01-834-3079 between 6 and 10pm or write to the address below giving your telephone number.

JOHN M.W. TOPP, 20 Lupus Street, LONDON SW1 V 3DZ

PLANTS OF THE MOUNTAINS

The second poster on a series of botanical topics has been published by the Botany Department of the National Museum of Wales. Painted by our artist, Dale Evans, it depicts 26 flowering plants, 2 ferns and 20 mosses, liverworts or lichens, arranged in a natural mountain setting. It is both an aid to identification and an attractive painting in its own right.

The poster (size 80 x 61cm) is available from: The Department of Botany, National Museum Of Wales, CARDIFF CF1 3NP, price £2.70 incl. p.& p. Please mark your envelope 'POSTER'. A copy of the first poster, Mosses and their habitats, can be purchased at the same time for an extra £2 (incl. of p.& p.).

BARRY THOMAS, Keeper of Botany, National Museum of Wales, CARDIFF CF1 3NP

REQUESTS

CROPS NATURALISED IN BRITAIN

A new research project, jointly funded by the D.T.I. and Industry, has just started at Imperial College, to assess the risks involved in introducing genetically engineered crop plants for general use. We will be investigating both the extent to which different crops escape and establish outside agricultural land, and the possibility of gene transfer from the crop plants to native species.

Two of the crops being used in this study are oilseed rape (***Brassica napus***) and sugar beet (***Beta vulgaris*** subsp. ***vulgaris***). In the early stages of the project, we would be pleased to receive any information on the status of these species in the wild. In particular, we would like to know where, and to what extent, these crops have become naturalised. If you know of such sites, we would be very grateful if you could write to us with the following information:

- 1) Habitat description (broad categories like roadside verge or river bank).
- 2) Was this a large dense colony, or only scattered individuals?
- 3) The number of years you are aware of the species being present at that site.
- 4) If you know it, it would be valuable for us to have the national grid reference of the site.

I should also be interested to hear of any sugar beet (***Beta vulgaris*** subsp. ***vulgaris***) fields in the vicinity of natural populations of sea beet (***Beta vulgaris*** subsp. ***maritima***). If you have detailed quantitative information on established populations of any arable crops, we should like to hear from you.

If you are interested in participating further in this survey, then more detailed questionnaires may be obtained on request from the same address.

ROSEMARY HAILS, Imperial College, Silwood Park, ASCOT, Berks SL5 7PY

BARDSEY ISLAND : LOCATION OF HERBARIUM SPECIMENS

I am compiling an inventory of Herbarium specimens of plants collected on Bardsey Island, SH12, off the Lleyn coast of Caernarvonshire, v.c. 49, and would be grateful for any information as to the location of herbarium specimens. I am aware of those at Bangor (UCNW), at the National Museum of Wales, Cardiff (NMW), and at Leicester (LTR), and have traced a few at the British Museum (Natural History) (BM). I have no positive evidence for specimens at any other major Herbarium, but visitors to Lleyn and especially to Bardsey, come from a wide geographical provenance, so, if anyone happens across any, or knows of visitors who might have given specimens to such herbaria, and can supply information, it would be much appreciated. Any indication of Herbaria it would be profitable to explore would be helpful; indeed, in a wider context, I would be equally grateful to know of any material from mainland Lleyn other than in the Herbaria cited above.

ANN CONOLLY, 25 Brocks Hill Drive, OADBY, Leicester LE2 5RE

CHENOPODIUM ALBUM POPULATIONS WANTED

I am investigating the variation in ***Chenopodium album*** and would be delighted to hear of any large and especially variable populations of this species; also any material that might be ***C. sueticum*** Murr.

MIKE MULLIN, Department of Botany, British Museum (Natural History), Cromwell Road, LONDON SW7 5BD

SALIX PENTANDRA POPULATIONS WANTED

I am investigating the potential of Salix pentandra as a source of nectar and pollen for honey-bees. This species flowers later than most willows and appears to offer prospects of a honey crop, if grown in quantity, in a period traditionally known by beekeepers as the 'June gap'. I would be grateful for details of any large populations of S. pentandra as I wish to establish a living collection that covers the entire flowering period of the species.

S.R. BAILEY, 4 Forrester Avenue, Weston-on-Trent, DERBY DE7 2HX

DE TABLEY'S FLORA OF CHESHIRE (1899)

If anyone has a copy of De Tabley's Flora of Cheshire which they would be willing to sell or otherwise part with to aid and enlighten me when I take over as Recorder for Cheshire, I would be very pleased to hear from them.

GRAEME M. KAY, 4 Geneva Road, Bramhall, STOCKPORT, Cheshire SK7 3HT

REQUEST FOR BOOKS

If any member is willing to part with a copy of any, or all of the following books, for a reasonable sum, I would be most interested to hear from them. I have been searching for them for some time now, with little success!

1. N.D. Simpson (1960), A Bibliographical Index of the British Flora.
2. R. L. Praeger (1901), Irish Topographical Botany.
3. F.H. Perring & S.M. Walters (eds) (1962), Atlas of the British Flora, or, preferably, the later 1976 edition.
4. F.H. Perring (ed.) with P.D. Sell (1968), A Critical Supplement to the Atlas of the British Flora.
5. A.C. Jermy et al. (eds) (1978), Atlas of Ferns of the British Isles.
6. C.A. Stace (ed.) (1975), Hybridization and the Flora of the British Isles.
7. T.G. Tutin et al. (eds) (1972 & 1980), Flora Europaea, vols 3 and 5.

MIKE WYSE JACKSON, School of Botany, Trinity College, DUBLIN 2, Ireland

BOOK NOTES

In the forthcoming part of Watsonia, vol. 18(1), it is hoped to include reviews of the following books:

- Flora of Alderney - a checklist, by B. Bonnard.
- The correspondence of Charles Darwin, vol. 4, 1847-1850, edited by F. Burkhardt & S. Smith.
- The contented botanist [W.H. Harvey], edited by S.C. Ducker.
- Fern names and their meanings, by J.W. Dyce.
- The origins of angiosperms and their biological significance, edited by E.M. Friis, W.G. Chaloner & P.R. Crane.
- Morphology and evolution of vascular plants, by E.M. Gifford and A.S. Foster.
- The names of plants, by D. Gledhill. 2nd edition.
- Atlas der Farn- und Blütenpflanzen der Bundesrepublik Deutschland [Atlas of the Ferns and Flowering Plants of the Federal Republic of Germany], edited by H. Haeupler & P. Schönfelder.
- The carnivorous plants, by Juniper, Roberts and Joel.
- A flora of Wensleydale, by D. Millward.
- Ferns - their habitats in the British and Irish landscape, by C.N. Page.

- The Macmillan guide to British wildflowers, by F. Perring and S.M. Walters. Photographs by A.N. Gagg.
- The Northwest European Pollen Flora, vol. 5, edited by W. Punt, S. Blackmore and G.C.S. Clarke.
- Flowering Plants of the Seychelles, by S.A. Robertson.
- Plant taxonomy and biosystematics, by C.A. Stace. 2nd edition.
- A new Herball, by Rev. W. Turner. Reprint of edition of 1551.
- Biological collections U.K., compiled by B. Williams.

The following books have been received recently. Those which are not to be reviewed in Watsonia are marked with an asterisk. Unsigned notes are by J.E.

- Natural history excursions in Tenerife, by M. & P. Ashmole. 1989. Kidston Mill Press, Peebles, Scotland. Price £7.95.
- The illustrated flora of Britain and northern Europe, with illustrations by M. Blamey; text by C. Grey-Wilson. 1989. Hodder & Stoughton. Price £25.
- *R.M.S. dictionary of light microscopy, compiled by S. Bradbury, P.J. Evennett, H. Haselmann & H. Piller. 1989. Oxford University Press & Royal Microscopical Society. [62-page dictionary of terms, with appendices containing diagrams of ray paths, chromaticity, photometry etc., and a glossary of equivalent terms in English, French and German.]
- *Statistics for biologists, 3rd ed., by R.C. Campbell. 1989. C.U.P. [Textbook for the non-mathematical user.]
- *Hardy orchids, by P. Cribb & C. Bailes. 1989. Christopher Helm. Price £25. [Describes the cultivation of a group of orchids which has been somewhat neglected by gardeners: the truly hardy species originating from Europe, Asia and North America as well as the Donkey-orchids, Diuris, of Australia. Helpful hints for growers, including the "Holman Bog" which is recommended for Slipper orchids.]
- *The voyage of the Beagle, by C. Darwin. 1989. Penguin Classics. [Abridged paperback edition with original chapter headings, some of which point to deleted material, but no index.]
- *Kew Index for 1988, compiled by R.A. Davies & K.M. Lloyd. 1989. Clarendon Press, Oxford. [Foreword by G.T. Prance: "The aims and functions of Index Kewensis are sometimes misunderstood, even by reviewers." Oh dear!]
- *Flora Malesiana, Series 1, Vol. 10(3), edited by W. de Wilde. 1989. W. Junk. Price £59.50. [Contains revisions of Coniferales by D.J. de Laubenfels, Polygalaceae by R. van der Meijden, Cruciferae by B. Jonsell, Magnoliaceae, Linaceae and Ctenolophonaceae by H.P. Nooteboom & (except the first) A.M.N. van Hooren, and Ixonanthaceae by R. Koel. As in a one-day cricket match one detects an increasing scoring rate as the innings proceeds, but doubts whether it is enough to salvage the series.]
- *Woody plants - evolution and distribution since the Tertiary, edited by F. Ehrendorfer. 1989. Springer-Verlag. Price DM310. [Proceedings of a symposium organised by the German Academy of Naturalists "Leopoldina" in Halle/Saale, G.D.R. Papers by 21 authors grouped under four headings: basic principles and examples; history of floras and vegetation types; phylogeny of woody plants; ecogeographical analysis of extant forest floras. Illustrated in b/w and colour.]
- *The French reconnaissance, by F. Horner. 1987. Melbourne University Press. [The French naturalist Baudin's expedition to Australia, 1801-03.]
- *Atlas Florae Europaeae I-III, edited by J. Jalas & J. Suominen. 1988. C.U.P. Price £120 for the set. [A reprint of the first seven parts of the Atlas, as previously reviewed in Watsonia, with the intention of making them more widely available. Further parts are in press, and will continue to be published by the Societas Biologica Fennica Vanamo.]
- *A checklist of the flowering plants and ferns of West Lothian, compiled and edited by J. Muscott. 1989. Botanical Society of Edinburgh. 59 pp. + appendix. [A useful compilation from an under-recorded area, with an appendix of rare and extinct plants which should be a spur to further recording. A gazetteer of place names not on the OS 1:50,000 map would have been helpful.] A.S. Gunn.
- The Flora of Derby, by P. Raynes & K. Futter. 1989. Price £2.00.
- *Primulas of the British Isles, by [A.] J. Richards. 1989. Shire Natural History. Price £1.95. [In the format of the Shire Bee Orchids, Fungi etc., with a welcome infusion of information on reproductive biology.]

- *Growth and reproductive strategies of freshwater phytoplankton, edited by C.D. Sandgren. [Mainly about planktonic algae].
- *Endangered wildlife in Lincolnshire and South Humberside, edited by A.E. Smith. 1988. A Red Data report. Published by, and available from, the Lincs. & S.H. Trust for Nature Conservation, The Manor House, Alford, Lincs. LN13 9DL. Price £2.95. [The first Red Data book for an English county.]
- *The coralline red algae, by W.J. Woelkerling. 1988. O.U.P./B.M.(N.H.). Price £40. [A taxonomic revision of the nongeniculate Corallinales.]

Stop press: a paperback edition of Flora of the British Isles, by C., T. & M. has been promised by C.U.P. for the autumn. I am told it includes Zannichelliaceae and contains other minor corrections.

JOHN EDMONDSON, Botany Dept., Liverpool Museum, William Brown St, LIVERPOOL L3 8EN

NEWS FROM OUNDLE BOOKS

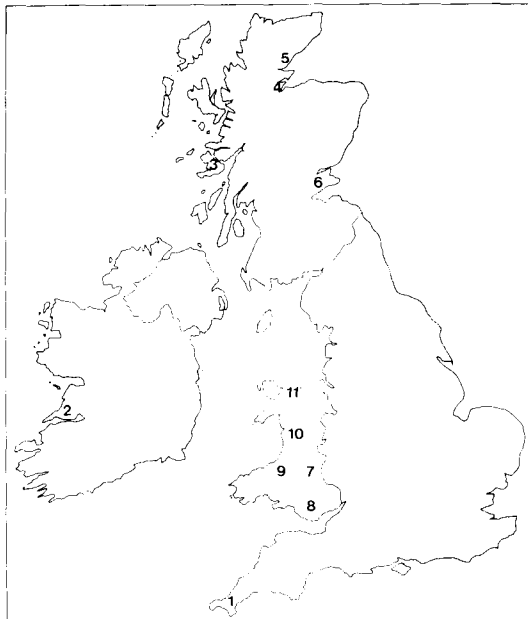
The 1989 Autumn catalogue of books is enclosed with this copy of BSBI News. BSBI Handbook No. 2 (Docks and Knotweeds) is not listed. We hope to have a new edition available in 1991/92. However, I do have a few copies in stock, should any member still want one. I can also send a supplementary book list on request, as by the time you receive the new catalogue there are bound to be deletions, additions and price changes!

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

REPORTS OF FIELD MEETINGS - 1988

Reports of Field Meetings are edited by, and should be sent to, Dr B.S. Rushton, Biology Department, The University of Ulster, COLERAINE, Co. Londonderry, N. Ireland BT52 1SA.

The map shows the approximate locations of the field meetings reported below (except Bulgaria).



BULGARIA

BULGARIA. 30TH MAY - 11TH JUNE

This excursion, organised for the BSBI by Professor E.J. Sheppard through the British-Bulgarian Friendship Society, was very much enjoyed by the 32 participants. Prof Sheppard had arranged an itinerary by which we were able to study and enjoy the flora and the scenery especially in the mountainous regions of south-west Bulgaria, and to see some of the historic sites. Docent dr Ivan Assenov, Head of Department of Botany and Pharmacognosy, Faculty of Pharmacy, Medical Academy, Sofia, who accompanied us throughout the excursion had also helped with the selection of botanical sites to visit; we were very grateful for his valuable assistance with the plant identification, and for his translation of the Flora of Bulgaria in cyrillic script (for many of us it was a new experience to have a local Flora in which we could not even read the Latin names!).

Our route enabled us to visit all five main groups of mountains:- Rila, Rhodope, Pirin, Stara Planina and Sredna Gora - and Vitosha, which was our starting point. South of Sofia and close to that capital city, this large mountain has a range of flora (almost 2000 recorded species) and a variety of habitats. We were able to explore only part of the area from our base in a ski hotel at 1600 m, in our two days there.

Plants seen on the first day in Torfenoto Branishte Botanical Reserve included *Soldanella dimonieii* and *Thlaspi praecox* var. *avalanum* - new to most of us but locally abundant; good stands of *Salix lapponum*, *Pedicularis orthantha* and *Bruckenthalia spiculifolia*, *Viola rupestris* and *V. dacica*, and *Geum coccineum* - of special significance to Dr Assenov as the species studied for his doctorate. On the next day our climb to Cerni Vrah (2290 m) was, in spite of adverse weather, memorable for the large 'chalice' flowers of *Crocus vernus* subsp. *vernus* in hundreds on the higher slopes of Vitosha. In the woods at lower levels, *Scilla bifolia*, *Pulmonaria rubra*, *Tozzia alpina* and *Aquilegia aurea* were seen, the last just coming into flower - and also, appropriately, *Descurainia sophia*. Near the interesting old town of Samokov visited on the next day, a field of a large pale pink campion surprised us when it keyed out as *Silene conica*, but subsp. *subconica* (unlike the subspecies in Britain). Also growing in that hay meadow were *Ajuga genevensis*, *Vicia grandiflora* and many other species. On all our travels in Bulgaria we were continually delighted by colourful displays of many species of wild flowers on roadside verges; *Geranium macrorrhizum*, and others on roadside rocks, and the cornflowers often a haze of blue through the corn.

A day spent at Rila included *Moehringia pendula* and *Fritillaria gussichiae* on the mountain; *Aristolochia pallida*, *Armeria rumelica*, *Polygala major* and *Moenchia mantica* in Rila Meadows and a visit to the most famous Rila Monastery.

On the next day heavy rain, low cloud and mist frustrated our plan for a botanical excursion on Mt Mousalla on our way to Plovdiv, but each roadside stop was rewarding and they produced the small bronze-flowered *Tragopogon balcanicus*, *Salvia verticillata*, *Alyssum murale* and the yellow-flowered *Achillea coarctata*, etc. Another full day followed with a walk in Cervenata Stena Nature Reserve to see the *Haberlea rhodopensis* with many other exciting species such as *Ajuga laxmannii*, *Lathraea rhodopea* and *Nonea pulla*. After visiting the Bachkovsk Monastery, and supplementing our packed lunches from roadside stalls piled high with luscious strawberries and cherries, we went on to Chudnita Mostove where the natural rocks form great archways and bridges of stone. Here we found *Iris reichenbachii* and *Cortusa matthioli*, and on a damp roadside fine specimens of *Dactylorhiza cordigera*.

The next range of mountains were the Balkan Stara Planina (Old Mountains). Here on another rewarding walk the plants included *Jovibarba heuffelii*, *Scabiosa triniifolia*, *Sideritis montana*, *Silene lerchenfeldiana* and *Chamaecytisus albus* (one of five species of *Chamaecytisus* seen on the meeting). We also saw *Rosa x bifera* grown for the Oil of Rose in the Valley of Roses at Katlovo. On the next day en route to Bansko, some *Digitalis lanata* spotted at the roadside - of particular interest to some of the group, as medicinal plants - caused a halt, and we found a sweep of downland reminiscent of the Wiltshire Downs, complete with sheep, a Bulgarian shepherd and a golden oriole, which was both heard and seen. Close study of the turf rewarded those who covered only a little distance with *Crucianella graeca*, *Asyneuma anthericoides*, *Hypericum olympicum* and many other species, while the walker over the ridge found *Himantoglossum hircinum* subsp. *calcaratum*. Our last mountain day was a day of sun and blue skies on Vihren, the highest mountain in the Pirin National Park at 2914 m. There the plants included *Pinus leucodermis*, *Viola rhodopea* and

V. grisebachiana, *Dianthus microlepis*, *Plantago gentianoides* and *Gentiana pyrenaica*; and for the highest climbers *Saxifraga ferdinandi-coburgi* and *Primula minima*. On our way back to Sofia at the end of our travels a roadside stop prompted by steep limestone grassland led to *Edraianthus serbicus* - small compact plants in the short turf and larger plants in the scrub, all in full flower. Associated plants included *Achillea ageratifolia*, *Carex liparocarpos*, *Onosma taurica* and *O. visianii*, *Thymus comptus* and *T. sibthorpii*. At other stops on that day we saw *Stachys germanica*, *Melampyrum arvense* and *Hypericum cerastoides*. The 66 grasses on our tour identified by Ron Payne included the endemic *Bromus moesiacus*, *Briza humilis*, *Sesleria tenerrima* and *Melica transsilvanica*.

These samples are a selection from the impressive list of the plants seen in total; they included a number of Bulgarian endemics and many species new to all the BSBI participants.

Ending the excursion in Sofia, we were entertained by Professor Velcho Velchev at the Botanical Institute, Bulgarian Academy of Sciences. Through an interpreter he told us of the work of the Institute, which encompasses research in all groups of plants, and medical botany, and also conservation, pollution and habitat protection. In reply we told him of the aims and activities of the BSBI.

While on tour we saw churches famous for their icons; the monasteries; Samokov with the Bairakli Djami mosque and the painted fountain; we stayed in modern Plovdiv and went to see the decorated buildings of old Plovdiv and the Roman amphitheatre. Many long light wagons and smaller painted donkey carts bringing in hay and other harvest shared the roads with us on our travels, and in the small rural town of Bansko all the goats were taken in one herd to the mountain to graze, returning in the evening as a 'river of goats' to be claimed by their owners as they passed each gate or doorway on their way down the streets. In Sofia we had time to see the world-famous Alexander Novsky Church, and in the National Museum of Bulgaria the Thracian Gold Treasures (exhibited in 1986 at the British Museum) and the Vratsa Silver; also the Bulgarian alphabet, the earliest known in Europe.

Throughout our visit, Danny our Bulgarian courier cared for us with constant thoughtfulness and competence, and wherever we went we were welcomed with friendliness. We thank all who helped with this meeting, and in particular Prof Shellard and Ivan, 'our botanist'.

MARY BRIGGS

ENGLAND

1. TRURO, W. CORNWALL (v.c. 1). 29th - 31st JULY

This meeting was a natural follow-on of the Plymouth-based one in 1980 under the leadership of E.S. Edees and A. Newton, when the brambles of East Cornwall were considered. This time the area of study was Mid-Cornwall and the West Penwith Moors and the leaders were A. Newton, L.J. Margetts and A. Bull.

Twenty-two members assembled in Truro on the Friday evening when the programme for the week-end was outlined. It was hoped that such brambles as *Rubus daveyi*, *R. rilstonei*, *R. thurstonii*, *R. tresideri* and *R. vigursii*, all bearing the names of Cornish botanists, would be seen as well as *R. carnkiefensis*, endemic to Cornwall, and *R. cornubiensis*, raised to species level by Rilstone. There was much discussion over various brambles, several people having used the long journey into Cornwall to good effect, collecting material on the way. There had been some doubt as to whether the new Brambles of the British Isles by E.S. Edees and A. Newton would be available in time, so the opportune appearance of this helpful book was greatly welcome.

An early start was made on the Saturday as roads were expected to be busy, but the journey proved easier than expected and we were soon at the first site to be explored - Porkellis Moor, near Wendron, in 10/6.3. Porkellis Moor is a rough mosaic of bracken, gorse and willow, with several deep pools and areas rendered barren by surface deposits of arsenical wastes, a good example of the kind of Cornish landscape that is produced as a result of past tin-mining. Yet it is very rich in brambles as two elements of the East Cornwall flora also occur here and we were soon being instructed in the various characters that are used to distinguish one bramble from another, *Rubus cornubiensis* and *R. daveyi* being compared with the more widespread *R. dentatifolius*. 14 different brambles were seen, a good introduction to the meeting, with *Rubus albionis* and *R. prolongatus* in

hedges around a marshy field at the northern end of the moor and the deep-pink flowered *R. orbis*, new to the area much to the delight of the finder, amongst bracken and other brambles by one of the pools. The provisionally named *R. 'metallicus'* was demonstrated, a bramble that produces large, sweet fruit and likes the metamorphic aureoles around the granites.

The next area visited was Woon Gumpus Common, on the West Penwith Moors. It is largely heathland dissected by stony tracks edged in places with bramble-rich Cornish hedges. One of the most common brambles, *Rubus polyanthemus*, was abundant here as were *R. riddelsdellii* and *R. stanneus*, but for many of us *Rubus cinerosiformis* was the most interesting find, especially as it was rather uncertain as to whether we would see it at all. An unusual bramble by one of the wetter paths led to much discussion and was later determined by AN as *Rubus vigursii*. An interesting diversion was the find of bird seed scattered by one of the more stony paths, with sprays of Millet and seeds of Cannabis!

Lanyon Quoit was the final stop for the day. This famous archaeological feature stands in rough grassland invaded by much bramble. Of the eleven *Rubus* spp. seen here, one, *Rubus nemoralis*, was new to West Cornwall and another, the low-growing *R. sprengelii*, was so distinctive in its flowers and leaves that it proved a valuable object lesson in the identification of these plants.

On the Sunday the group assembled in St. Clement Wood just north of Truro. St. Clement Wood is owned by the Forestry Commission and there are several areas planted with conifers, but deciduous woodland remains and brambles are frequent along the broad rides. As the wood was in one of the tetrads selected for the BSBI Monitoring Scheme it had been hoped that a number of brambles would be recorded, but the wood did not prove as interesting as usual, though *Rubus leyanus* was seen and good material of *R. questieri*. The group soon moved on to Wentworth Mine near Ventonimpis. This was Rillstone's country. After much careful consideration it was decided that both *Rubus carnkiefensis* and *R. pydarensis* were here, while *R. wirralensis* was new to Cornwall.

A short stop was made at Cock's Hill at Perranzabuloe for *Rubus tresideri* but this could not be found. Then came the final visit, to Tinker's Castle at Chyverton near Zelah. It was here that a bramble named *Rubus iricus* had been collected in 1907. Material matching this was gathered but a suspicion that the plant was shade-grown *Rubus carnkiefensis* was later confirmed by AN.

The main party then dispersed, but a few members continued on over Monday, visiting the sites of *Rubus scabripes* and *R. vigursii* to the north of Camborne and two of the selected tetrads in East Cornwall. One of these tetrads contained a remnant of grass and scrub heath within an 'improved' area still known as Cardinham Downs. Isolated between an airfield and farm fields was a disused lane that seemed to be a natural SSSI for brambles. 14 species in perfect growth and abundant flower were seen here including Rillstone's *Rubus lamburnensis* (the third record for East Cornwall), with *R. plymensis* and *R. thurstonii*.

A total of 32 species were seen during the course of the meeting and we were fortunate to have fine weather all the time. Thanks are due to the National Trust and the Forestry Commission for permission to collect herbarium material and special thanks to the leaders for their expertise and help

R.J. MURPHY

IRELAND

2. Co. CLARE (v.c. H9). 25th - 26th JUNE

The aim of the meeting was to record in two 10km squares in Co. Clare for the BSBI Monitoring Scheme.

Six members (including the leaders) met in Milltown Malbay on the Saturday. We first recorded plants in the marshy, damp meadows and saltmarsh around Lough Donnell (11/0.7A), a brackish water lake cut off from the sea by a high storm beach. There were extensive stands of *Phragmites australis*. *Oenanthe pimpinelloides*, a species protected by the 1987 Flora Protection Order, was confirmed to be thriving at this new, and now only, station for the species in Ireland.

After lunch, we worked the area round Cleedagh Bridge on Spanish Point (11/0.7J). Maritime species were recorded on a rocky promontory and a surprise was one primrose plant (*Primula vulgaris*) in flower on a steep bank by the sea. Interesting finds included

Scutellaria galericulata and numerous plants of *Ophioglossum vulgatum* in poorly-drained pasture as well as the introduced grass *Gaudinia fragilis* by the road. Only one previous record exists for this in Co. Clare. To include a different habitat, we visited a small area of well-trampled sand dunes just south of Spanish Point (11/0.71), with *Ammophila arenaria*, *Elymus farctus*, *Poa subcaerulea*, very large *Viola tricolor* subsp. *curtisii*, *Asperula cynanchica* and *Diplotaxis muralis*.

On the Sunday, the group was joined by three more members and a stretch of the river Fergus north of Ennis (11/3.7J) was worked. Luxuriant aquatic plants and the emergent flora provoked lengthy discussions as to correct identifications and several hybrids were noted including *Apium* x *moorei* (*A. inundatum* x *A. nodiflorum*), *Glyceria* x *pedicellata* (*G. fluitans* x *G. plicata*), *Senecio* x *ostenfeldii* (*S. aquaticus* x *S. jacobaea*) and *Rorippa* x *anceps* (*R. amphibia* x *R. sylvestris*). *Rorippa sylvestris* and *R. amphibia* were recorded at the time and Philip Grant grew on a plant which flowered and fruited and was confirmed by Tim Rich as *R. palustris*. Several flowering specimens of *Butomus umbellatus* were also found.

In the afternoon, we recorded along the Ardsollus river in tetrad V of the same 10km square (11/3.7V) as access to tetrad W was difficult. This part of the river is tidal and *Leucojum aestivum* grew profusely in one area. *Carex riparia* was common on the bank, and a ditch parallel to the river contained *Potamogeton pectinatus* and *Zannichellia palustris*.

Having completed four cards for the Monitoring Scheme, members dispersed home to Dublin, Galway and Kerry.

SYLVIA REYNOLDS and MICHELINE SHEEHY SKEFFINGTON

SCOTLAND

3. MULL, MID EBUDES (v.c. 103). 8th - 10th JULY

This meeting, primarily organised to record for the Monitoring Scheme, got off to a good start as several members of the team had just been at Knoydart and so were well into the swing of recording. Altogether there were nine members in the group including two local people who proved to be very helpful when it came to understanding the nature of some of the woodland. In spite of wet weather, not unknown in this part of Mull, spirits were high and all enjoyed the weekend.

The party split up into small groups in order to cover the 10km square some parts of which were very remote and had difficult terrain. We were fortunate to have Gordon Rothero who joined us to record Bryophytes but who also recorded for the scheme in some of the most difficult ravines. We were also fortunate in having the help of Lynne Farrell and Ro Scott of NCC.

Alpine species for the Ben More area included *Cardaminopsis petraea*, *Armeria maritima*, *Carex bigelowii*, *Saussurea alpina*, *Thalictrum alpinum* and *Deschampsia alpina*.

Woodland species from the ravine at All na Toll-dhoire in tetrad J included *Circaea* x *intermedia* and *Brachypodium sylvaticum* (both common in most of the native woodland, *Carex remota* (locally frequent) and *Hymenophyllum wilsonii* (locally frequent in shady places).

There was an unusual flush community at Doire Daraich on the north shore of Loch Ba which included *Rosa pimpinellifolia* with *Schoenus nigricans*, *Selaginella selaginoides* and *Galium boreale*.

Teesdalia nudicaulis was found in river shingle at the head of Loch Ba and *Osmunda regalis*, *Botrychium lunaria*, *Thalictrum minus* and *Scutellaria minor* were also found in shingle or rocks at the edge of Loch Ba. *Calamagrostis epigejos* was local in damper areas and *Hypericum androsaemum* was found in wooded areas on the north shore of the loch. *Lobelia dortmanna* is present at places in the loch.

Common plants of wet bogs in the area included *Pinguicula lusitanica*, which was easily seen as it was in flower, *Eleocharis multicaulis*, *Rhynchospora alba* and *Drosera anglica*.

The woodland along the north shore of Loch Ba was in the main a dull wood, although it is a SSSI, the reason being that it had been cleared for many years and used as grazing until it was re-planted with Oak over 100 years ago. The woodland along the south shore was degraded Birch/Hazel woodland although in places the understory was quite rich and interesting. The wood at Scorisdale in tetrad J was much the most interesting woodland within the 10km square.

A. WALKER

4. STRATHPEFFER, E. ROSS (v.c. 106). 23rd - 24th JULY

Our rather small party consisting of Chris Preston, Mary Burnhill and myself set out from Strathpeffer Station in good weather. We made for Loch Kinellan which has been a good **Potamogeton** site in the past with seven species recorded including *P. x zizii*. Although I had heard that the loch had suffered some pollution we were disappointed to find that it was worse than imagined. Despite several attempts no specimens of **Potamogeton** were caught - only **Elodea canadensis**.

A few days before the meeting a rather timely letter arrived from Paul Stanley. He found a single clump of **Calamagrostis** in summer 1986 at Loch Kinellan and it had been identified as a hybrid between **Calamagrostis stricta** and *C. scotica* by Francis Rose. However, after a search on the north side of the loch we failed to locate the plant. Although we had not found anything wonderful it had been a pleasant morning's botanizing.

As Chris Preston was displaying withdrawal symptoms through lack of **Potamogeton** species an 'extra curricula' trip to Loch Eye was felt in order. With a deft cast of the grapple, **Potamogeton rutilus** was soon landed. Unfortunately, my car broke down on the way back but the situation was saved by Simon Aspinall, an RSPB worker who ferried us home. I was thus unable to attend the Sunday meeting and I thank Chris Preston for his account. The party started the second day at Moy Island in the River Conon. Despite its small size this island has a rarity of habitats and 140 species were recorded including **Hypericum humifusum**, a scarce plant this far north. We went on to the south side of the Black Water near Kinnahaird which looked promising on the map but proved less interesting in reality. **Radiola linoides** did, however, grow in quantity on disturbed ground by the river. After lunch we examined the west side of Loch Ussie which just projects into 28/4.5. Seven species of **Potamogeton** were soon found rooted in shallow and beautifully clear water near the margin of the loch but a determined search for *P. x nitens* failed; in Loch Ussie this hybrid apparently prefers to grow outside the Monitoring Scheme square. A **Juncus** hybrid which might or not have been **Juncus alpinoarticulatus** subsp. **nodulosus** was much discussed but not positively identified.

P. LUSBY and C. PRESTON

5. BRORA, E. SUTHERLAND (v.c. 107). 30th - 31st July

Eight enthusiasts attended a productive meeting to map some remote areas for the Monitoring Scheme in v.c. 107, East Sutherland. We picked the most boring parts for the Saturday outing. One party looked at Grumby Rock and other parts of the square 29/7.1A where ferocious midges lurk. A good stretch of river gorge produced **Hieracium reticulatum**, **Gymnocarpium dryopteris** and **Melica nutans** with a few small trees, then it was a walk over wet peatland with **Carex limosa** and *C. pauciflora* as the most interesting species. Tim Rich produced **Potentilla erecta** subsp. **strictissima** - it comes from knowing the Plant Crib from cover to cover. The other party tackled 29/4.1W on the west side of Loch Shin, which was closely guarded by a precarious approach route and an army of horseflies. The gallant troops broke through to an open moor of wet peat alleviated only by two small rocky patches where **Antennaria dioica** could be found. However, **Betula nana** was new to some as was **Arctostaphylos alpinus**.

The evening excursion to Balblair Wood at Golspie showed late flowers of **Moneses uniflora**, **Linnaea borealis** and **Goodyera repens** which were much appreciated.

On Sunday the whole party tackled the river gorge above Balnacoil on the north side of Loch Brora 29/7.1W. The scenery was stupendous with good weather until mid-afternoon. Among shrub-clad cliffs and tumbling waterfalls we covered some 3 kms of gorge to find **Saxifraga stellaris** and *S. aizoides*, superb **Salix phylicifolia**, **Galium boreale**, **Rosa sherardii**, **Hieracium strictiforme**, *H. sparsifolium* and *H. saxorum*. The species count - 195 - was good for the area and the v.c. recorder was most grateful for the response to his call for help.

J.K. BUTLER

6. KINROSS, FIFE (v.c. 85). 13th AUGUST

A group of ten met at Kinross and divided into three parties to cover some of square 37/0.0 for the Monitoring Scheme. The main objective was Glen Queich, the only glen in

Fife and Kinross which may be classified as having a 'highland' character. A good start was made when a few fruiting heads of an orchid proved to be *Platanthera chlorantha* and it was not long before *Rumex alpinus* was seen, a species much at home in Kinross. *Carex laevigata* and *Saxifraga hypnoides* were next of v.c. 85's rare plants followed by *Epilobium alsinifolium* and *Phegopteris connectilis*. A climb to an outcrop of scree confirmed that *Cryptogramma crispa*, first seen in 1981, was holding on in its sole extant site in Fife and Kinross. New species for the Glen were *Elymus caninus* and *Clinopodium vulgare* (along with *Geranium lucidum*, seen on an earlier trip). Nearly 200 species were recorded for the day.

The other two parties visited the Stronachie area in the north of the square, one group recording the Chapel Burn which divides v.c.c. 85 and 88. They were rewarded with *Hieracium dewaril*, *Parnassia palustris*, *Polygonum viviparum* and *Trientalis europaea* and totalled about 160 species. The other group concentrated on the small Stronachie reservoir, at 300m and its exit gully. The former was full of *Myriophyllum spicatum*, *Potamogeton berchtoldii*, *P. natans*, *P. perfoliatus*, and *Ranunculus peltatus*, while the little ravine contained various sedges including *Carex pallescens* and *Cystopteris fragilis*, *Gymnocarpium dryopteris*, *Rubus saxatilis* and *Vaccinium vitis-idaea*.

G.H. BALLANTYNE

WALES

7. LLANELWEDD, RADNORSHIRE (v.c. 43). 11th JUNE

Jointly organised by the Author and Miss Ann Powell, in recent years the Mid Wales field meeting has been blessed with magnificent summer weather. Traditionally it has also marked the end of the summer! The 1988 meeting was no exception. A dozen members examined various habitats around Llanellwedd. The flood plain of the wye above the bridge at Builth, with its rough grassland with old river channels, pools and willow scrub, provided Llanellwedd with its own Everglades look-alike. The pressing need to accommodate cars for the adjacent Royal Welsh Showground led recently to much of it being levelled and grassed over. Discussions with the NCC secured the best areas and *Scirpus sylvaticus*, *Carex vesicaria* and *C. acuta* were still present amongst other wetland plants.

Waste ground around a builders merchant and on the site of the old Builth Wells railway station was examined next. Urban wasteland is an exceedingly scarce habitat in Mid Wales. *Melilotus alba* provided a second county record and the discovery of a few plants of *Geranium pyrenaicum* allowed it to be restored to the Radnor list. *Spergularia rubra* enjoyed life on the old cinders from the former engine shed. The total absence of plants such as *Hordeum murinum* and *Senecio squalidus* caused incredulous head shaking on the part of some visiting English members.

With the kind permission of the quarry manager, the rock outcrops, summer droughted grassland and scrub around the quarries at Llanellwedd were next examined. Sunny rock outcrops supported *Geranium pusillum*, *Moenchia erecta*, *Filago vulgaris*, *F. minima* and *Epilobium lanceolatum* amongst other species, including *Desmazeria rigida* beside quarry roads, which seem to be a recent colonist. As the clouds rolled in to mark the end of the Welsh summer, the party returned to the cars along a rather dull looking road verge. An ever observant member however spotted an enormous colony of *Trifolium dubium*, a plant which had defeated the combined search effort of the native botanists for over 15 years! Altogether a useful and enjoyable day 'on the monitoring'.

R.G. WOODS

8. PORTH, GLAMORGAN (v.c. 41). 3rd JULY

Perhaps the fact that this meeting was held on the day that the deepest July depression since 1956 centred itself over Wales accounted for the fact that only one BSBI member was present (me). Is this a record attendance? Luckily two friends were prepared to brave the rain.

The tetrad chosen for study contained several habitats. Derelict land provided the usual crop of weeds including plentiful *Buddleja davidii*; the less commonly found inland *Erodium cicutarium* and *Spergularia rubra*; also *Artemisia absinthium*, a plant which is widespread in the Rhondda - a relic of cultivation for herbal uses perhaps.

One exposed rock face in a small surface quarry had fine specimens of *Umbilicus rupestris*, not a plant one associates with this area off the limestone. Progressing on through the grass/heather to the top of a hill provided *Filago minima* on exposed colliery waste.

The most productive area was part of a marsh (most of this marsh being outside the survey square!) which contained many new square records including *Equisetum x litorale* and *Achillea ptarmica*. A final visit to part of a cemetery yielded plants such as *Petasites fragrans*, *Sanguisorba officinalis* and *Lysimachia nummularia*. In all 95 new species were added to the tetrad list.

J.P. CURTIS

9. TALGARREG, DYFED (v.c. 46). 17th JULY

Eight members met to record for the Monitoring Scheme in pingo sites in square 22/4.5. The small part of Rhos Llawr-cwrt National Nature Reserve in the square was explored first, and the great variety of habitats provided by the pingo topography included a basic mire with *Dryopteris carthusiana*, a pond with *Potamogeton natans*, wet heath with *Rhynchospora alba* and *Empetrum nigrum* in its most south-westerly site in Wales, and flushes with *Pedicularis palustris* and *Juncus foliosus* (only the third record for the v.c.). After lunch the Rhos Glynrhelyg Dyfed Wildlife Trust Reserve was visited. Fortunately for us it had not been grazed this summer and was spectacularly floriferous. One spike of *Coeloglossum viride* was found on one of the calcareous pingo ramparts, the first record for the v.c. since 1926, along with *Botrychium lunaria*. A third pingo site, the nearby Caeau Ardwyn SSSI, contained an area of dry pasture with the only population of *Parentucellia viscosa* in the v.c., and several aquatics were added to the list from the final pingo visited, the Rhosfryn pond. On the roadside bank where the cars were parked, a good colony of *Trifolium medium*, a rare plant in mid-west Wales, was found.

A.O. CHATER

10. MAESNANT, PURLUMON FAWR, DYFED/POWYS (v.cc. 46/47). 7th AUGUST

14 members met at Nant-y-moch to record three tetrads in square 22/7.8 both for the Monitoring Scheme and for the Montgomeryshire Flora. The party started by investigating and learning *Agrostis vinealis*, an often unrecognised species that proved to be abundant on the dry, acidic sheepwalks. The area as a whole was predictably poor in species. After lunch the party split into three, and the most energetic group found a fine display of *Wahlenbergia hederacea* by the Afon Llechwedd-mawr in tetrad P, as well as *Viola lutea*. The group doing the low-lying part of tetrad U found that it consisted largely of *Molinia caerulea* tussocks but there were rocky outcrops with *Sedum anglicum* and some good flushes with *Narthecium ossifragum*, *Drosera rotundifolia*, *Eriophorum vaginatum* and *E. angustifolium*, and *Carex* species.

The third group tackled tetrad Z and found *Hymenophyllum wilsonii*, *Huperzia selago* and *Phegopteris connectilis* on north-facing rocks, and *Carex demissa* x *C. hostiana* in a flush. Although no rarities were found, useful and probably fairly complete lists were made for at least the Montgomeryshire parts of all three of these rather remote tetrads which might well have remained unvisited but for the stimulus of a field meeting.

A.O. CHATER and M. WAINWRIGHT

11. TAL-Y-CAFN, DENBIGHSHIRE (v.c. 50). 18th SEPTEMBER

Seven people met at Tal-y-cafn in the Conwy valley to record for the BSBI Monitoring Scheme. The area covered included Bodnant Gardens which yielded a number of weed and naturalised species. The tidal river banks had salt marsh species including *Limonium vulgare* and *Scirpus maritimus*. Other species recorded included *Mimulus guttatus* and *Linum bienne*.

JEAN A. GREEN

STOP PRESS

BRITISH FERNS - AN IDEAL INTRODUCTION

A new 25 minute video 'British Ferns' is available from the British Pteridological Society.

The video aims to demonstrate the wide variety of size and form to be found in British ferns and the broad range of habitats they colonize, with attention being drawn to key identification characters for each species.

With over fifty species of ferns, the British Isles has a remarkably varied fern flora. Many of these have distinctive distributions reflecting regional variations in environmental conditions. In particular the cool relatively damp environments of the North and the mild Western fringes of Britain bring together species typical of Atlantic, Arctic and Alpine regions, resulting in a fern flora that is unique to the British Isles.

The video has been filmed by members of the British Pteridological Society, produced by the National Museum of Wales and sponsored by the agrochemical company Schering Agriculture as part of their Green Science programme. It is an introduction for those interested or wishing to learn more about the wide variety of British ferns.

It is available on loan, free of charge, to interested parties. For further details write, enclosing a s.a.e. to : A.R. Busby Esq., Hon. General Secretary, British Pteridological Society, 16 Kirby Corner Road, Canley, Coventry CV4 8GD.

BARRY A. THOMAS, Department of Botany, National Museum of Wales, CARDIFF CF1 3NP

ANNUAL EXHIBITION MEETING - SLIDE SHOW

The slide show has become a popular feature of the Annual Exhibition Meeting at the British Museum (Natural History). In order to ensure that the slides offered are appropriate for this annual gathering would members please bear the following points in mind.

Subject matter: The exhibition deals primarily with studies of the British flora and work done by members of the Society. Slides on such themes, complementing exhibits or illustrating BSBI excursions, will be given preference when the programme is prepared. Slides should illustrate botanical subjects on the whole: other subjects should have a botanical relevance. Even some botanical subjects may be pointless, especially those unnamed specimens that make regular appearances. Mystery plants may be of interest to the exhibitor, but they add little to the knowledge of the audience. A fleeting sight of a plant on the screen (often with no clear indication of scale or size) does not give the best opportunity for an identification. If you have a photograph of a plant that has defied your attempts at giving it a name, it is more likely to be identified by putting a print or slide in Sean Karley's 'Help' exhibit (see page 46).

Quality: The quality of slides shown is very variable. Exhibitors persist in including slides which are obscure, under- or over-exposed, out of focus or simply badly composed in the belief that any picture taken in a remote area such as Outer Mongolia or the summit of Mount Roraima is of interest regardless of what it actually shows. As a general rule, if you have to apologise for the quality of a slide, don't use it!

Tables, figures and maps: Fortunately these do not figure frequently in the slide shows because they are too often unsuitable for showing. Slides made by photographing a page of A4 text are usually illegible beyond the front row of the audience. The best way to deal with such subjects is to re-draw, showing the essential information in a bold, simple diagram that will be clear even to those at the back of the lecture theatre.

It is hoped that these notes will encourage exhibitors to be critical in their selection of slides.

The above notice (with minor differences) first appeared in BSBI News 37: 5 (Sept. 1984), under the name of the then co-ordinator of the slide-show, John Mason. The present co-ordinator is Mrs Elsa Wood and details of how to apply to show slides at the Exhibition Meeting and the appropriate booking forms can be found in the Annual Exhibition Meeting Programme distributed with this mailing. Ed.

ANNUAL EXHIBITION MEETING - 'HELP'

This regular exhibit is designed to give informal assistance with identification of awkward specimens, without embarrassment to either party. They are displayed anonymously and all are invited to make suggestions about their identity (also anonymously if preferred). It is particularly helpful for incomplete specimens such as odd fruits or foliage gathered when the flowers are not available, but all-comers are welcome. Slides and photographs can be displayed.

There is no need to book for this exhibit, just bring your problems along early on the day. Alternatively you can send them in advance to me at the address below.

SEAN KARLEY, 30 Harrowden Road, WELLINGBOROUGH, Northants NN8 3BH.

NATIONAL BOTANIC GARDENS, GLASNEVIN, DUBLIN (DBN)

Miss Maura J.P. Scannell, senior botanist in the herbarium, National Botanic Gardens, Glasnevin, Dublin (DBN), retired on 18 March 1989 on reaching the age limit. She will continue to work on projects, already in progress, on the Irish native flora. Miss Scannell joined the staff of the Natural History Division, National Museum of Ireland, in October 1949 and transferred to the National Botanic Gardens, Glasnevin, in 1970 when the herbarium of the National Museum was relocated (see *Taxon* **19**: 653, 1970).

No other changes in personnel have taken place - Donal M. Synnott is now in charge of the day-by-day work of the herbarium, and continues his research on the Irish flora, especially bryophytes; Dr E. Charles Nelson continues as horticultural taxonomist and has responsibility for the foreign phanerogam section of the herbarium. Loans will continue to be made to recognised institutes, and requests should be made to the address below.

THE DIRECTOR, National Botanic Gardens, Glasnevin, DUBLIN 9, Republic of Ireland

LADY PAMELA FITZGERALD: A POSTSCRIPT

Pamela Chadwell (*BSBI News* **51**: 29, April 1989) has rapped by knuckles for an alleged error in my item on Thames Ditton and the BSBI (*BSBI News* **49**: 22, Sept. 1988). I admit that I failed to mention that Lady Pamela was French, but I still maintain that she went into exile in France in 1798. Following the slaying of her husband, Lord Edward FitzGerald, by British soldiers, Pamela left her adopted country, Ireland, on the orders of the Privy Council.

Why were her remains brought to England for re-burial? It was simply that her relatives in Thames Ditton were fond of her: interestingly, the verger told me that he buried one of her descendants quite recently. The FitzGerald home in Thames Ditton (Boyle Farm) is now the Home of Compassion for the elderly.

To end on a note of levity, Lady Rosemary FitzGerald tells me that apparently Lady Pamela was notorious in Dublin as the first lady in Ireland to wear knickers. This innovative item of female attire was necessitated by the flimsy 'Empire' dresses worn by French ladies at the time. Dubliners have always been cautious in their assessment of new fashions!

JOHN AKEROYD, 4 Seifton Batch, CRAVEN ARMS, Shropshire SY7 9LG

ARCHIE KENNETH 1915-1989

Just as this issue of *BSBI News* was going to press the death of Archie Kenneth was announced. Recorder for v.c. 101, Kintyre and joint author of *The Flora of Kintyre*, Archie will be sadly missed, especially at Scottish meetings. An obituary will appear in a future *Watsonia*, and arrangements for v.c. 101 will be announced later.

EDITOR

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