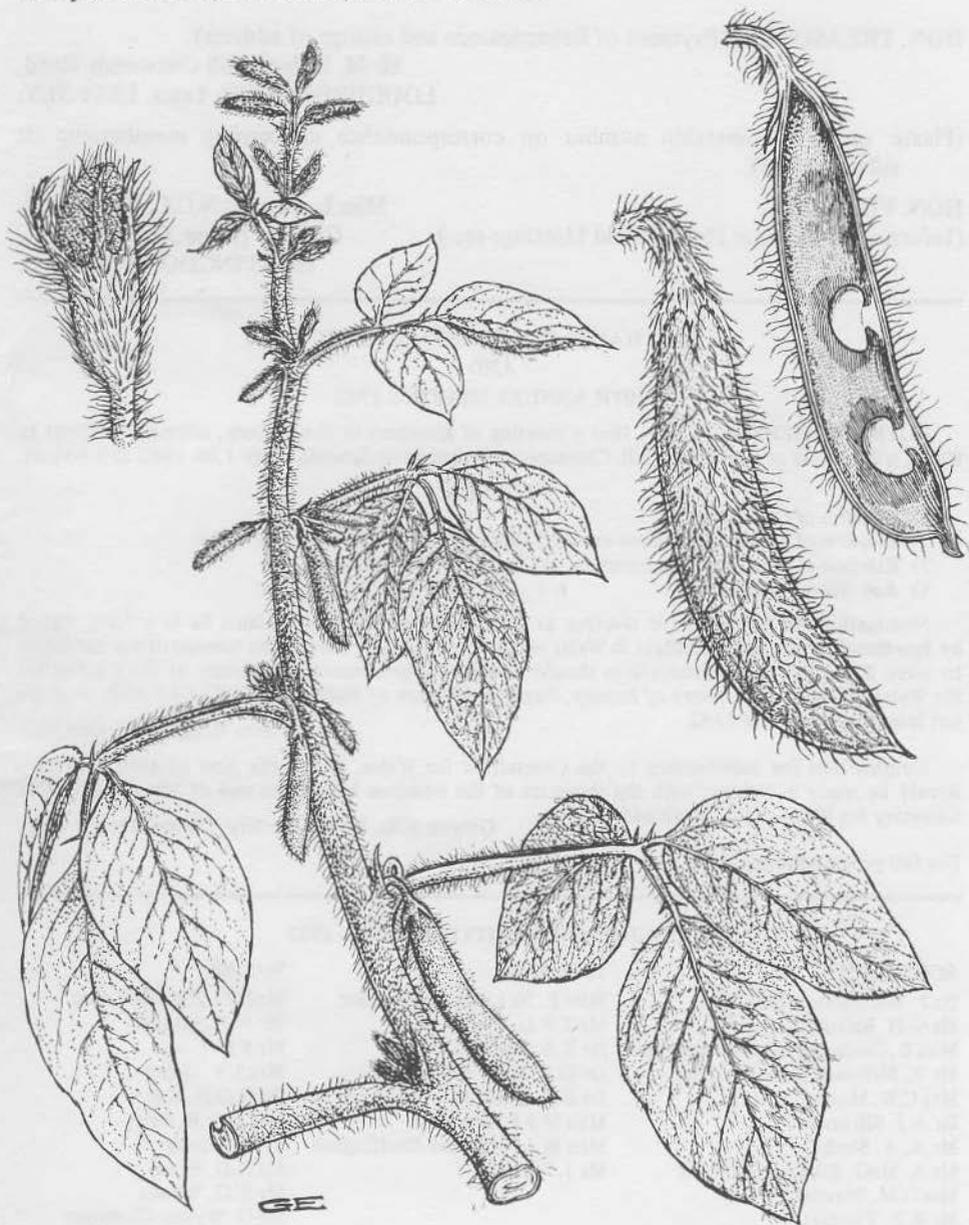


Edited by EDGAR D. WIGGINS

Cowpasture Farm, Felixstowe, Suffolk IP11 9RD



Glycine max (Soya Bean)

del. G.M.S. Easy © 1977

ADMINISTRATION

HON. GEN. SEC. (General Enquiries)

Mrs M. Briggs, White Cottage
Slinfold, HORSHAM, West Sussex RH13 7RG.

HON. TREASURER. (Payment of Subscriptions and change of address).

Mr M. Walpole, 68 Outwoods Road,
LOUGHBOROUGH, Leics. LE11 3LY.

(Please quote membership number on correspondence concerning membership or subscriptions).

HON. FIELD SEC.

(Information on Rare Plants, Field Meetings etc.)

Miss L. Farrell, N.C.C. P.O. Box 6,
Godwin House, George Street,
HUNTINGDON PE18 6BU.

BSBI WALES, QUADRENNIAL MEETING

AND

20TH ANNUAL MEETING 1982

NOTICE IS HEREBY GIVEN that a meeting of Members of the Society, normally resident in Wales, will be held at Glynllifon Hall, Caernarvon, Gwynedd on *Saturday July 17th 1982* at 3.30 p.m.

AGENDA

- 1) Election of Chairman.
- 2) Election of a member to serve on BSBI Council as Representative for Wales.
- 3) Election of Hon. Sec. and members of Committee for Wales.
- 4) Any other business.

Nominations of members for election as Representative to Council must be in writing, signed by two members normally resident in Wales and accompanied by the written consent of the candidate to serve if elected. Such nominations should be sent to the Honorary Secretary of the Committee for Wales, *Mr R.G. Ellis, Dep't of Botany, National Museum of Wales, CARDIFF CF1 3NP*, to arrive not later than *May 21st 1982*.

Mary Briggs, Hon. Gen. Sec.

Nominations for membership to the Committee for Wales, or for the post of Hon. Secretary should be made in writing, with the signature of the nominee before the end of May, to the Hon. Secretary for Wales at the above address.

Gwynn Ellis, Hon. Secretary, Committee for Wales

For full programme see p. 6.

REGIONAL COMMITTEES 1981 - 1982

SCOTLAND

Dr P. Macpherson *Hon. Sec.*
Mr G.H. Ballantyne
Miss E. Conacher *Hon. Meeting Sec.*
Mr R. McBeath *Hon. Field Sec.*
Mrs C.W. Murray
Dr A.J. Silverside
Mr A. A. Slack
Mr A. McG. Stirling *Chairman*
Mrs O.M. Stewart
Mr R.E. Thomas
NCC Observer Dr R.A.H. Smith
BSE Observer Mr D. McKean

IRELAND

Miss E. Ni Lamhna *Hon. Sec.*
Mr T.F.G. Curtis
Dr R.S. Forbes
Dr D.L. Kelly *Chairman*
Dr B.S. Rushton
Miss M.J.P. Scannell
Miss M.J.P. Sheehy-Skeffington
Mr J. White

WALES

Mr R.G. Ellis *Hon. Sec.*
Mr N.H. Brown
Mr S.B. Evans
Mrs J.A. Green
Dr Q.O.N. Kay
Mrs M.E.R. Perry
Mr M. Porter
Mr R.D. Pryce
Mr R.G. Woods
Mr G. Wynne *Chairman*
NCC Observer Mr R. Mead

HON. GEN. SECRETARY'S NOTES

Subscriptions – again

On the Agenda for the AGM you will see the recommendation for a subscription increase. Recently when looking up a plant record for a member in *B.E.C. Report* Vol VI Part 1, I noted the Report of G. Claridge Druce, the Secretary and Treasurer at that time, for 1920. The 3-line balance sheet then totalled £162 : 7 : 11d. Dr Druce reported "A necessary increase of the price of the subscription, caused by the heavy increase in the cost of printing, paper and postage, has had to be made. As it is, the subscription barely covers the cost of production. . . . The increase in the subscription (from 5/- to 10/-) – much as I disliked and tried to avoid it – has been readily accepted by our members – *so inured are we to sacrifice.*" History repeating ?

David Allen in his paper "The Women Members of the Botanical Society of London 1836 – 1856," *The British Journal for the History of Science* 13 No. 45 (1980), describing one widowed lady who did not pursue her botanical interests, suggests that these "did not have the effect of enmeshing her in a net of scholarly relationships", a phrase which well describes the lucky amateur members of this Society who have the opportunity to become so enmeshed.

During the past year archive copies of the Society's journals have been bound, from the first Volume of *Botanical Society and Exchange Club Reports*, 1864, to the current volume of *Watsonia. Proceedings* and *BSBI News* 1 – 16 have been bound also, and we particularly thank **George Matthews** of B.M. Dept. of Botany who checked each volume for us for binding; an onerous task for the early numbers as there were many loose papers and not all were complete. We would also like to thank those members who helped to fill the gaps of missing desiderata lists before 1900.

Churchyard conservation

Apologies for a misleading transposition as printed in *BSBI News* 29 p. 24. In "Recommended booklets and leaflets" G.M.A. Barker, *Wildlife Conservation in the Care of Churches and Churchyards* is available from Oundle Lodge at 40p p & p incl. (not £2.40, which was the price of *The Churchyards Handbook*. See also Supplementary list from Oundle Lodge in this issue p. 31). In recommending the Conservation booklet it is hoped that it could be useful to Recorders in the survey to explain the need for churchyard conservation to those responsible for the care and management of the churchyard; possibly a copy could be given to the pastor in charge? A leaflet which could be useful for this purpose is *The Living Village* in which a paragraph and illustrations for: 1. Churches and Churchyards 2. Village Greens, Common land and Village ponds 3. Houses and gardens, briefly explains the value with conservation suggestions for each. *The Living Village* is available at 50p for 10 copies from the Community Council for Nottinghamshire, Link House, 110 Mansfield Road, Nottingham NG1 3HL.

Plant Import Regulations

Any travellers abroad needing to check on these should study a leaflet with this title which is available from:

Ministry of Agriculture, Fisheries and Food, Plant Health Administrative Unit, Eagle House, 90-96 Cannon Street, London EC4N 6HT. or Department of Agriculture and Fisheries for Scotland, Chesser House, 500 Gorgie Road, Edinburgh EH11 3AW. See also *BSBI News* 17 p. 8.

Memorial Windows

An appeal has been launched to raise £2,500 for a memorial window to William Curtis in the parish church of St. Mary, Battersea. Famous as the author of *Flora Londinensis* written from 1777, and in 1781 the first number of the Botanical Magazine, which continues today, William Curtis also founded several botanical gardens around London. If any member would like to contribute, these should be sent to: The William Curtis Memorial Fund, c/o C.W. Curtis Green, Red House Farm, Baddingham, Woodbridge, Suffolk IP12 8LL.

Mrs. Irene Vaughan, Honorary Member of this Society, gave a Memorial Window in memory of her husband Taff, Captain H.R.H. Vaughan, R.N., who died in 1978. The window which is placed in Our Lady's Catholic Church, Llandovery, shows the risen Christ and includes also a scene with background of native oak, which still flourishes in the Vale of Towy where the Vaughans first lived. Standing in a field of Welsh daffodils is St. Paulin, the monk tutor of St. David, and overhead is a red kite, in the conservation of which Captain Vaughan took a great interest. The window was designed and made by Joseph Nuttgens.

Congratulations

We send our warm congratulations and very good wishes to **Fred Fincher**, Recorder for v.c. 37, who during 1981 celebrated his eightieth birthday. A tribute to Mr Fincher in the *Transactions of the Worcestershire Naturalists' Club* (new series Vol 1 pt 1 1979/80), recalls that he was present at the Centenary meeting of the Club in 1947, that they have enjoyed his Vice-Presidency over several decades, and that Fred is regarded as one who "epitomizes the traditions of our historic club".

Our good wishes go too, to **Eric Philp** (Recorder for v.c.'s 15 & 16), Keeper of Natural History at Maidstone Museum, where the Natural History Section re-opens on 5th June, some five years after the disastrous fire which closed it down. Eric tells us that to get the section ready he has had to "pull out the stops"; any spare time has been devoted to the preparation of '*Atlas of the Flora of Kent*' for the printers. (see also p.7).

We congratulate **David McClintock** on the award made to him by the Royal Horticultural Society, of a Veitch Memorial Gold Medal as one of "those who have helped in the advancement and improvement of the science and practice of horticulture".

Congratulations also to **Mrs. Barbara Everard** who was recently awarded her eighth R.H.S. Gold Medal — in all she has won 29 R.H.S. Medals — Silvers, Silvergilds and Golds — and a Winston Churchill Memorial Trust Fellowship Silver Medal also, for her flower paintings. Barbara's recent paintings have been of threatened wild plants around the world to promote their conservation, with sponsorship to Singapore, Sabah and Malaysia; also paintings of alpine plants in Switzerland.

The wall chart *Vanishing Flowers of the World* autographed by Barbara Everard is available from: Mrs. B. Everard, Firfield Cottage, 12 School Lane, Lower Bourne, Farnham, Surrey GU10 3PF, at £1.00 + 30p p & p, and all profits go to plant conservation.

Our admiration goes to two enthusiastic members who attended the Exhibition Meeting by travelling from Yorkshire and back by overnight coach, two nights running.

Two vascula, one kindly donated by Ian Fitch, and from Richard Pankhurst, one belonging to his late father, are now in the 'pool'. Deserving recipients please apply to the Hon. Gen. Sec. (address on p. 2)

Our thanks to **Tim Sands** of RSNC for helpfully clarifying the points relevant to plants from the 128 pages of the *Wildlife and Countryside Act 1981 BSBI News* 29 p.17. The small schedule mentioned "an offence to plant or otherwise grow in the wild" includes two flowering plants Giant Hogweed *Heracleum mantegazzianum* and Japanese Knotweed *Polygonum cuspidatum*; and two seaweeds *Microcystis pyrifera* Giant Kelp and *Sargassum muticum* Japweed. We apologise for "Phyllodoce caerulea", misprinted Phyllodice in the list of Protected Plants *BSBI News* 29 p. 16, and for the omission of the second 'l' from the English name of one of the pinks which should be 'childling'. A report in *Habitat* led me to the *New Scientist*, 23 July 1981 which featured the discovery of Prof. John Milburn, University of New England, Armidale, N.S.W. Australia, that drought-stricken plants made clicks – audible when a miniature microphone is placed against the plant stems. The Professor suggests that the sounds caused by vibration of the phloem tubes, could be a useful drought-resistance measure for plant-breeders.

Nature cure

"An Onlooker's Notebook" in the *Pharmaceutical Journal* December 19-26 1981, comments on the use of wooden cups carved from the wood of trees with medicinal properties. Cups of *Quassia amara* are best known, but "Onlooker" reminds us that the therapeutic cups made from Holly and Ivy are not unusual, and quotes from *Choice notes from notes and queries* (1859). "It was said by the inhabitants of the Forest of Bere, East Hants, that new milk drunk out of a cup made out of the variegated holly is a cure for the whooping cough". And "Drinking cups made from the wood of the common ivy, and used by children affected by this complaint for taking therefrom all they require to drink, is current in the county of Salop as an infallible remedy".

Professor Dr Ljeuke Godicl, a member in Maribor, Yugoslavia, who spoke on the Protection of Rare Plants in Nature Reserves and National Parks in her country at the Biological Aspects of Rare Plant Conservation Conference, has found that her paper has brought comment and requests for copies from around the world. Ljeuke tells us that she had not expected such an interest for Yugoslavia and its Nature Reserves, and it is good to hear that the Report of this Conference, run jointly by BSBI and the Linnean Society of London, is making an impact in distant parts.

In Denmark the first Danish Folk High School to focus on nature and environment was started in August 1981. **Jens Holmegard** of Naturhojskolen, Rodkilde, 4780 Stege, writes that they intend to be "what in England is known as a field study centre for amateurs and scientists". Any member planning to visit Denmark this year might consider Danish field studies?

R.I.P.

With regret we report the death in December of **Mrs. Joan Swanborough**, Recorder for v.c. 7, and also of her husband Ronald who died within 24 hours of losing his wife. During the four years that Joan was an enthusiastic Recorder, she generously shared her considerable local knowledge of plants with many members and correspondents, not all of whom knew that she was courageously fighting a serious illness at the time. She will be missed by many members who were her friends; at least a dozen members attended the double funeral.

We also regret to report that **Mr L.F. Stearn**, compiler and editor of *Supplement to the Flora of Wiltshire* 1975 (and Mrs Swanborough's predecessor as Recorder for v.c. 7) also died at the end of last year.

Mary Briggs

BSBI NEWS 31
Closing date for contributions
is
24th JULY, 1982

NOTICES

BSBI (official) Notices

AGM EXCURSIONS - 15 - 16 May 1982

Sat 15 May - Chelsea Physic Gdn. (Thanks to Committee of Management), nearest tube station, Sloane Sq. Members welcome 2 - 4.30 p.m. (tea 3.45 p.m.). "London Walk" will lead to, or start from the West Gate of the Gdn, 66 Royal Hospital Road. A map showing the route from Burlington House to Chelsea Physic Gdn will be available at AGM.

Sun 16 May - Visits to burial grounds. Three groups will assemble at 11 a.m. as follows:

Group 1 - Kensal Green, thence to Highgate

Group 2 - Tower Hamlets - Newham (east of the City)

Group 3 - Merton - Southwark (south of the River)

Group Leaders plus local naturalists will meet members as above and take them to two cemeteries and at least one parish churchyard. Objectives: to record vascular plants and lichens, to describe habitats and assess natural history and conservation value of the sites, using the BSBI network research project forms.

Prior application essential, to obtain further details.

Those attending AGM, should bring form on AGM notice with them. Those not attending AGM, complete the form and send with S.A.E. as indicated.

Joanna Martin

BSBI WALES 20TH ANNUAL MEETING 17 MAY 1982

PROGRAMME

- 10.00 a.m. Visit to site(s) of interest near Glynllifon Hall.
- 1.00 p.m. Lunch.
- 1.30 p.m. Meeting of Committee for Wales
- 2.30 p.m. "Flora of the Lleyn Peninsula" Miss A.P. Conolly.
- 3.30 p.m. Quadrennial Meeting and 20th A.M. (Wales).
- 4.00 p.m. Tea.
- 4.30 p.m. "Arctic-alpine species in Northern Snowdonia: their relationship to the environment" Prof. R.E. Hughes.
- 7.00 p.m. Dinner.
- 8.00 p.m. Exhibition and Discussion.

Members are invited to bring colour slides or any interesting botanical exhibit.

July 18th Field meeting to Fens of the Lleyn Peninsula

Members not resident in Wales and guests, are welcome to join this weekend meeting.

Accommodation is available at Glynllifon Hall at approx. £8.00 per night including meals. Further details can be obtained from the Secretary to the Committee for Wales, Mr R.G. Ellis, Dep't of Botany, National Museum of Wales, Cardiff, CF1 3NP. Please apply before *June 1st 1982*.

PLANTS IN FOLKLORE - Advance Notice

Conference at Sussex University Fri - Sun, April 8 - 10, 1983

Short contributions from BSBI members invited.

Further details coming from Meetings Committee, Autumn 1982.

WESTMEATH FIELD MEETINGS 1982

Though in its second year, work on the flora of Co. Westmeath has only touched the E. & W. borders and the Irish Regional Branch is organising a series of seven meetings in an intensive campaign to record on 5 km squares the relatively little known E. and S.E. parts of the county. Climax of the campaign will be on AUGUST 13 – 17 and an urgent appeal to BSBI members in Britain to assist in mapping is now being made. We need a big response to get this project completed. For further details, write to: FLORA OF WESTMEATH, c/o National Botanic Gardens, Glasnevin, DUBLIN 9.

Field meeting, S.E. Cornwall, September 11 – 12

The plan is to spend one day exploring cliffs, coves and raised beaches between Fowey and Looe, and one in woods and moorlands bordering the Tamar valley. Among Cornish specialities that we hope to see are *Lobelia urens*, *Polygonum maritimum*, *Lotus angustissimus*, *Carex punctata*, *Hypericum undulatum*, *Physospermum cornubiense*, *Euphrasia vigursii*.

The centre and rendezvous for the weekend will be the Royal Talbot Hotel at Lostwithiel, a charming small town. The hotel offers single rooms at £9 per night and double rooms at £18. There are also guest houses in the town, or accommodation may be found at Liskeard (12 miles away), Fowey (8 miles away), or Looe (17 miles away). As the holiday season in Cornwall lasts into September, those planning to attend are urged to book early and in any case before 1 August. Reservations at Lostwithiel or Liskeard, which are inland, are likely to be easier than at Fowey or Looe on the coast.

The leaders hope that the party may meet at the Royal Talbot in the evening of Friday 10th September in order to plan the two days' botanising.

R.W. David & L.J. Margetts

Other (non-BSBI) notices

Maidstone Museum

Through the generosity of Dr C. West, this Museum has recently acquired his fine collection of *British hawkweeds*. This collection has been incorporated into the herbarium here and will be available for consultation by BSBI members after the Natural History Section re-opens on 5th June 1982. The Museum will be open daily, except Sundays and Bank Holidays, 10 a.m. – 6 p.m. (5 p.m. winter), admission is free. Anyone wishing to use the herbarium or the botanical library is asked to telephone Maidstone 54497 beforehand to ensure staff being available.

Fritillaries and Military Orchids in Suffolk

Suffolk T.N.C. announce that these two reserves will be open for only ONE DAY each this year. The dates are: Framsdon (Fritillaries), Sunday 2nd May; Rex Graham (Military Orchids), Sunday 6th June. For further details send S.A.E. to Mr T. Pares, Suffolk TNC, County Hall, Ipswich.

WILD FLOWERS OF THE PEAK DISTRICT 14 – 18 June 1982

A course with field visits to the high moors, the low moors, gritstone oak woodlands, and limestone dales. For further details, apply with S.A.E. to: The Warden, Losehill Hall Study Centre, Peak National Park, CASTLETON, SHEFFIELD.

LINNEAN SOCIETY OF LONDON
Regional Meeting at University of Bristol

25 – 27 June 1982

THE ROLE OF THE LOCAL NATURALIST IN CONSERVING
OUR THREATENED PLANTS

Programme to include: Monitoring and Recording, Rescue operations, Historic records and population fluctuations, Garden conservation, Seed Banks etc.

Residential accommodation available. Further details from:

DR D. GLEDHILL, BOTANY DEPT, THE UNIVERSITY, BRISTOL BS8 1UG.

London Accommodation – for students

Campbell House, University College London offers accommodation from late June to late September in Georgian houses reconstructed for student housing, near Euston Station. Details from the Domestic Bursar, Campbell House, Taunton Street, London WC1H 0BX.

Similar accommodation is offered at Lightfoot Hall, Chelsea College, University of London, details from: The Domestic Bursar, Lightfoot Hall, King's Road, Chelsea, SW.

FIELD WORK

The Field Studies Council in its 1982 programme includes a number of courses catering for botanists both general, and those with special interests. It is difficult to classify this miscellany in a short article, so here is a selection. Beginning with those who want to explore a locality noting its botany in passing, these are run from the centre nearest the area in question viz **Pembrokeshire Coast** (7 courses) by Orierton or Dale Fort, the **Yorkshire Dales** (9 courses) from Malham Tarn, **Shropshire and Welsh Border** (including 2 for cyclists) from Preston Montford, with others doing **Somerset, Dartmoor and S. Devon**.

At the other extreme the specialists can enjoy a week with Frank Perring on **Sedges** etc. in July at Preston Montford, or with Dr Martha Newton on **Mosses & Liverworts** at the same centre in September. Other less popular groups are catered for by **Lichens near London**, and a more advanced one at Orierton in early August, **Fern** weekend at Preston Montford and Drapers both in Sept. with **Seaweeds** at Dale Fort and a more advanced course at Orierton both in August. **Grasses, Rushes, Sedges** feature at two or three centres and a course entitled **The Identification and Ecology of Lower Plants** at Malham Tarn and intended for those who already have some knowledge in the field sounds interesting. There appears to be only two chances for **Orchid** specialists, both at Juniper Hall in June, while for those of a more practical turn of mind there are: **Botany with a purpose** (Drapers, June), **Medicinal Plants** (Leonard Wills, June), **Wild plants and their uses** at the same centre and **Plants and their uses** (Flatford Mill, Sept.).

Tree lovers should find something to their liking from: **Surrey Woodlands** – their Origins and Ecology (Juniper Hall, late May), **The World of Trees** (Malham Tarn, mid June), **The Oak** (Drapers) and **History from Hedges and Woods** (Leonard Wills) both at the end of August, plus **Trees, their identification and appreciation** (Juniper Hall, late Aug.), **Native and Introduced Trees** (Leonard Wills, mid Sept.) and finally **Trees and Country Crafts** (Leonard Wills, late Sept.).

Gardeners, being also botanists, will enjoy **Famous Gardens of Surrey and Sussex** (Juniper Hall, Aug.), **Gardens of the (Welsh) Borderland** (Preston Montford, Aug.) and **Houses and Gardens of N. Wales** (Drapers, June). A variety of courses cover, botanical illustration, plant drawing, flower photography, at several centres.

For details of all or any of the courses, apply to the FSC Information Office, Preston Montford, SHREWSBURY SY4 1HW.

The Scottish FS Association have some attractive courses in which BSBI members figure prominently as tutors at the Kindrogan Field Centre. These include: A.C. Jermy (**Sedges and their allies** – a strenuous course), Dr A.J. Richards (**Dandelions** – a BSBI course), J. Grant Roger (**Mountain Flowers**), Roger Banks (**Illustrating Mountain Flowers**), Dr B.O. Hooper (**Plant Communities**), and **Lichens** with F.H. Brightman and Dr P. Topham. For further information, send S.A.E. to: THE WARDEN, Kindrogan Field Centre, Enochdhu, BAIRGOWRIE, Perthshire, PH10 7PG.

A HEREFORDSHIRE CHURCHYARD

With the initiation of the survey of plants in churchyards members may be interested to hear of a small churchyard at Dulas, near Ewyas Harold at the lower end of the Golden Valley in Herefordshire, which is managed as a traditional meadow and in which 86 species of flowering plants and ferns have been recorded. The grasses and abundant meadow flowers are allowed to grow and seed before being cut in early August with the result that Cowslip (*Primula veris*), Primrose (*P. vulgaris*), Wild daffodil (*Narcissus pseudo-narcissus*) and Early purple orchid (*Orchis mascula*) adorn it in the spring. Yellow rattle (*Rhinanthus minor*), Common spotted orchid (*Dactylorhiza fuchsii*), Greater butterfly orchid (*Platanthera chlorantha*), Twayblade (*Listera ovata*) and Adder's tongue (*Ophioglossum vulgatum*) are present in summer, whilst Meadow saffron (*Colchicum autumnale*) comes into its own in the autumn after the "hay" is taken..

A few narrow paths are mown so that graves may be attended to and the plants seen without being trodden on. The church is attached to Dulas Court, now in the possession of the Musicians Benevolent Society, and until 1831 it stood on the lawn in front of the house. It was then moved and re-erected in its present position in the meadow opposite the Court on the other side of the road. The piece of meadow enclosed by the churchyard appears to be in its original state and the present management may well have been practised since the move, giving, presumably, an accurate insight into the original character of the local meadows.

It is uncertain whether this management was a deliberate policy, or whether it was merely the easiest (and cheapest?) method of caring for the churchyard. Whatever the reason, let us hope that it will continue and that other parishes with similarly interesting flora in their churchyards may follow Dulas' example, even if it is only possible to set aside a small area for the benefit of wildlife.

I am grateful to Mrs M. Sutton, of Dulas Court, for information and David Parker for plant records.

PETER and STEPHANIE THOMSON, Hall Pool, Marden, HEREFORD HR1 3EN.

BSBI MEMBERS LEADING BOTANICAL PARTIES ABROAD IN 1982

In addition to the information given in *BSBI News* 29, p. 30, we now give the following:

Jill Coombs (Botanical illustrator, RBG, Kew) Spain, Berdun Painting Sch. 14 June – 2 weeks.

Dr John & Mrs Ann Mason (NCC, Huntingdon) Dolomites, Val Gardena 28 June – 15 days.

Dr Philip Cribb (Snr. Botanist at RBG, Kew; RHS Orchid Comm) INDONESIA (Java & Bali) and SINGAPORE 20 Nov. – 2 weeks.

" Orchids of ST. LUCIA 2 May – 8 days.

Mary Briggs (Hon. Gen. Sec. BSBI) CANADA (Alberta & Brit. Columbia) 26 July – 16 days.
(This replaces Mrs Briggs' tour to Davos, Switzerland)

Members desiring further information about these tours should apply to:
Cox & Kings Travel Ltd., 46 Marshall Street, London W1V 2PA (01 734 8291).

ALIENS and ADVENTIVES

ADVENTIVE NEWS 22

compiled by Eric J. Clement

SISYMBRIUM SPP IN BRITAIN

Graham Easy sent to me, without a caption, the magnificent drawing reproduced here. I had no trouble in naming, unerringly, all the species depicted. All the diagnostics are clearly and accurately shown, and, indeed, almost all may be named by using only the subtle differences in leaf segmentation that are so difficult to put into words. The key in *CTW* should now become much more meaningful: all are keyed out there, with the exception of *S. runcinatum*. In this sp the fls (and frs) are typically one per leaf-axil: the very similar *S. polyceratium* typically has a fasciculate inflorescence, with 1-3 fls per node. Note the style difference, too, shown on the drawing. Like *S. officinale*, both of these species may have glabrous or hairy siliquae on different plants (R. Maire, 1977). A selection of ten spp are depicted: species A - G can all be easily seen in Br (if you know where to look!), but for H - J I have received no correct records over the last decade. GMSE largely drew from pressed specimens in CGE, supplemented by his own herbarium and by fresh, 1981 material, where possible. The main sources were as follows.

- A. *S. officinale*: Cambridge, 1981.
- B. *S. irio*: Swansea (Glams), 1848, and a J.E. Lousley spec., 1947.
- C. *S. loeselii*: Linton (Cambs), recent specimens, and Cambridge Sewage Farm, 1981.
- D. *S. volgensis*: Cult. specimens, fresh, from C.G. Hanson, ex Bootle, Liverpool, 1977. Note the far-spreading rhizome!
- E. *S. strictissimum*: Kew Green (Surrey), 1873. And, it is still (1981) abundant there, along the base of the N. wall of St Ann's Churchyard, spreading by seed and rhizomes.
- F. *S. altissimum*: Recent specimens from Cambs in Hb. GMSE, and Cambridge SF. 1981.
- G. *S. orientale*: Ditto.
- H. *S. austriacum*: Hartlepool (Durham), 1852, and fresh, cult. specimens in Cambs Univ. Bot. Gdn.
- I. *S. runcinatum*: Chirnside (Berwick), 1961. See *BSBI News* 29, p. 12.
- J. *S. polyceratium*: Bury St Edmunds (S. Suffolk), c. 1836, and introduced to Sedbury (W. Glos) where it became a garden weed, 1916-29.

In *Watsonia* 12:311-14 (1979) I predicted that *S. volgensis* would be found in further sites in Br. Three such localities, all conf. EJC, have now come to light (see below). The "Malden" site (p. 311) I copied from JEL's *Flora of Surrey*: it should have read "Lower Morden". In 1980 I visited the map ref., 51/232.666, where, in 1958, Dr D.P. Young considered it as "seems established": the tip is now some 15 feet high, and I failed to refind the colony (but *Hirschfeldia incana* seemed to be happily established in its place). Dr A. Hansen points out that in Denmark it has been confused with *S. strictissimum* - see *URT* 79:3:86 (1979) for a 1947 colony that was re-found and re-det. in 1977. The new Br records are:

E. Norfolk: Caistor St Edmunds, Norwich, June 1978. P.G. Lawson. 1st Norfolk record, but it is obviously an old colony, being more than 30 ft long. The site is a road-verge, with nothing but arable fields and hedges within sight. A railway cutting lies a few hundred yards away. E.T. Daniels reported that no alien plants were associated with it, apart from *Bromus diandrus*. Introduction by farming activities seems likely?

Cheviot: Alnwick, FR 46/197.125, Oct 1979. Prof. G.A. Swan. First found here by R.S.G. Thompson, prior to 1971, and det. R.D. Meikle. Rubble now covers much space of the colony, which lies in a loading-bay by the side of the disused railway track just E. of the old station.



Sisymbrium spp. del. G.M.S. Easy © 1981

A *S. officinalis*

D *S. volgense*

G *S. orientale*

B *S. irio*

E *S. strictissimum*

H *S. austriacum*

C *S. loeselii*

F *S. altissimum*

I *S. runcinatum*

J *S. polyceratium*

W. Suffolk: Hadleigh, GR TM/033.419, May 1980. M.A. Hyde *et al.* Extensive patches on the embankment of the disused railway line, nearly in Hadleigh itself. Seen on a local naturalist society meeting, Mrs J. Harris having known it here for many years, but not its name! Also present were *Bromus diandrus* and large quantities of Sainfoin.

Should I dub it the Railway Rocket? (The Volga Rocket would raise eyebrows, as well as confusion!).

MIXED BAG

Corydalis cheilanthifolia Hemsl.: Wall of St James's Close, Winchester (S. Hants), May 1981. Mrs A.H. Stidston, comm. Lady A. Brewis. Hb. EJC. A pale-yellow flowered perennial from C. China, with fern-like (*Cheilanthus*-like) foliage. 1st Br record, although gardeners know of it as "only too eager to scatter its seeds far and wide. . . . pleasant habit of self-seeding into tiny cracks, crannies and crevices where little else would grow". See *The Plantsman* 2(3):129-131 (1980) for an account of this genus, but beware of the coloured plate there labelled "*C. solida*": it should, presumably, be captioned *C. wilsonii*.

Corydalis ochroleuca Koch: On walls, Ashmore (Dorset), May 1981. Miss M. Blower, comm. Dr H.J.M. Bowen. RNG. Known from here since at least 1970, when J.R. Palmer reported it. HJMB tells me also of its presence at Upton Fort (Dorset) and Kennington (Berks). B. Wurzell has seen it just once: "convincing examples of self-sown plants" on a garden wall at Keston (W. Kent), 1971. There is a 1965 (or thereabouts) record from Ipswich — still there? — presumably, as always, on a wall.

Disphyma crassifolium (L.) L. Bolus: Well established on wet, sheltered cliffs at Cooden (E. Sussex), winter 1980-81. K.E. Bull. "I first saw this species, in quantity, at Tresco Harbour (Isles of Scilly) some 10 years ago." There are also large colonies naturalized on sea-cliffs in W. Cornwall, at places like Lizard Point and Praa Sands; yet the first record for vc 1 was as recent as 1968, on walls at Porthleven (comm. L.J. Margetts). No other vc's sport this mesemb?

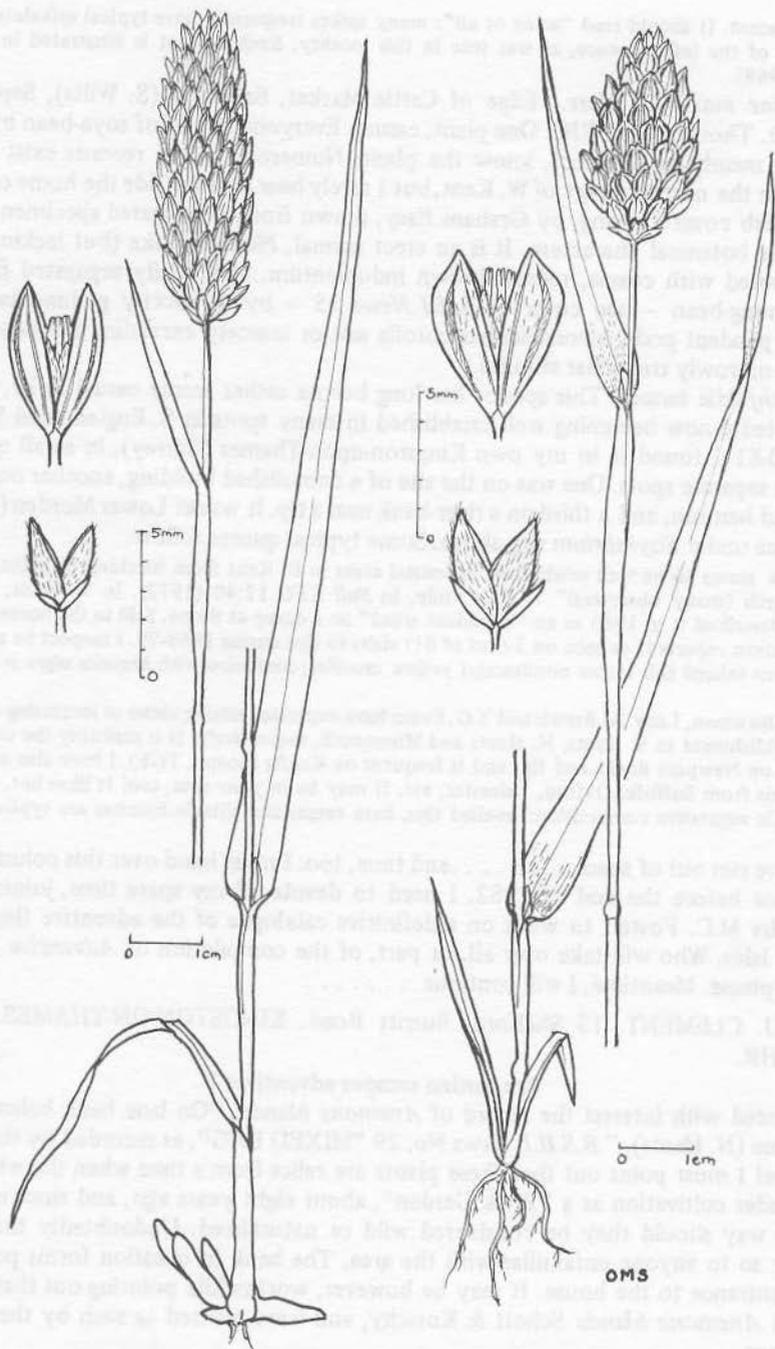
Phalaris aquatica L.: Dartford Marshes (W. Kent), Sept 1981. J.R. Palmer. Originally introduced here in 1979 for pheasant food; it now covers half an acre of pasture and is visible from a distance because it is disliked by cattle compared with other grasses in the area.

This grass, featured in *BSBI News* 27, p. 15, is similarly sown, in arable strips, in many vc's, and is likely to persist as a weed for long afterwards. It was, e.g. near Kings Sutton (Northants), 1980, E. McCullough (comm. S.L.M. Karley, as "*P. minor*") and at Higham (W. Suffolk), Sept 1981, Mrs E.M. Hyde. Dr H.J.M. Bowen also recorded it, in 1979, from Sutton's nurseries, Reading (Berks).

Hubbard's *Grasses* (1968) illustrates the very rare *P. minor*. To prevent further mis-dets, Olga Stewart has kindly drawn for us this much commoner newcomer, contrasting it with *P. canariensis*. The drawing is largely based on her own gathering of *P. aquatica* (*P. tuberosa*) from river shingle, Galashiels (Roxburghs), Sept 1969, where it was a wool alien. Note the fat, rhizomatous rootstock, great height (up to 4 ft tall), cylindrical panicle, glumes with very narrow, serrulate wings (x 20 lens) and the two sterile lemmas, one of which is minute or absent.

Phalaris paradoxa L.: Common, as a weed, in cornfield over a quarter acre at Calne (N. Wilts), 1980-81, and at nearby Compton Bassett (N. Wilts), 1981. R.T. Henly, comm. and det. K.M. Goodway. Conf. Kew. "Threatening to be a persistent cornfield weed". This record greatly surprised me, as this is normally a distinctly scarce and fleeting invader. But Dr A.C. Leslie points out a precedent: in *J. Bot.* 13:141 (1873), J. Hursey reports this species being at Swanage (Dorset) annually since 1847 and still abundant in cereal crops in 1872.

Both the type and var. *praemorsa* were present. Hubbard's *Grasses*, p. 273, is incorrect in demanding that the glumes of "all" the sterile spikelets are always deformed and club-shaped in this, quite,



Phalaris aquatica (Left)

P. canariensis (Right)

del. Mrs. O.M. Stewart © 1981

fertile, variant. It should read "some or all": many spikes frequently have typical spikelets towards the apex of the inflorescence, as was true in this locality. Such a plant is illustrated in *Fl. Iraq* 9:367 (1968).

Glycine max (L.) Merr.: Edge of Cattle Market, Salisbury (S. Wilts), Sept 1981. Mrs M.D. Thomas. Det. EJC. One plant, casual. Everyone knows of soya-bean by name, but few members, I suspect, know the plant. Numerous recent records exist for this legume in the northern part of W. Kent, but I rarely hear of it outside the home counties. Our superb cover drawing, by Graham Easy, drawn from a cultivated specimen, clearly shows its botanical characters. It is an erect annual, *Phaseolus*-like (but lacking bright fls), covered with coarse, reddish-brown indumentum. It is easily separated from the allied mung-bean — see cover of *BSBI News* 15 — by its shortly pedunculate, few-seeded, pendent pods, inconspicuous corolla not or scarcely exceeding the calyx teeth, and the narrowly triangular stipules.

Hirschfeldia incana: This species has long been a rather scarce casual in Br, but it is undoubtedly now becoming well established in many spots in S. England and S. Wales. In 1980-81 I found it in my own Kingston-upon-Thames (Surrey), in small quantity, in three separate spots. One was on the site of a demolished building, another on the site of an old hen-run, and a third on a river-bank near a tip. It was at Lower Morden (Surrey), too — see under *Sisymbrium* spp above. Some typical quotes follow.

"Now seems to be well established in coastal areas in E. Kent from Birchington right round to Dymchurch (many observers)" — E.G. Philp, in *Bull KFC* 17:40 (1972). In W. Kent, too, J.R. Palmer described it in 1980 as an "abundant weed" on a dump at Stone. Still in the home counties, C.G. Hanson reports it as seen on 5 (out of 81) visits to tips during 1969-79. I suspect he and others have often missed this rather nondescript yellow crucifer; confusion with *Brassica nigra* is especially easy!

R.P. Bowman, Lady A. Brewis and T.G. Evans have expressed similar views of increasing frequency and establishment in S. Hants, N. Hants and Monmouth, respectively. It is probably the commonest crucifer on Newport docks and tip, and is frequent on Kenfig (comm. TGE). I have also seen recent specimens from Suffolk, Oxford, Leicester, etc. It may be in *your* area, too! It likes hot, dry spots, with little vegetative competition: levelled tips, bare verges and shingle beaches are typical habitats for it.

I have run out of spaceand time, too. I must hand over this column to my successor before the end of 1982. I need to devote all my spare time, joining forces with Mrs M.C. Foster, to work on a definitive catalogue of the adventive flora of the British Isles. Who will take over all, or part, of the compilation of *Adventive News*? — offers, please. Meantime, I will continue

ERIC J. CLEMENT, 13 Shelford, Burritt Road, KINGSTON-ON-THAMES, Surrey, KT1 3HR.

Are garden escapes adventives ?

I noted with interest the record of *Anemone blanda*, "On lane bank below garden, Selborne (N. Hants)," *B.S.B.I. News* No. 29 "MIXED BAG", as recorded by the LNHS.

I feel I must point out that these plants are relics from a time when the whole bank was under cultivation as a "Rock Garden", about eight years ago, and since neglected. In no way should they be considered wild or naturalized. Undoubtedly they would appear so to anyone unfamiliar with the area. The bank in question forms part of the drive entrance to the house. It may be however, worthwhile pointing out that they are indeed *Anemone blanda* Schott & Kotschy, and were planted as such by the previous occupant.

Not I believe (unfortunately) a first British record ?

S.M. POVEY, Dorton Cottage, Selborne, ALTON, Hants GU34 3JN.

BOTANICAL ILLUSTRATION BY XEROX

I write in response to the article on "Drawing from a Herbarium Specimen" by Rosemary Wise *BSBI News* Dec. 1981 p. 19.

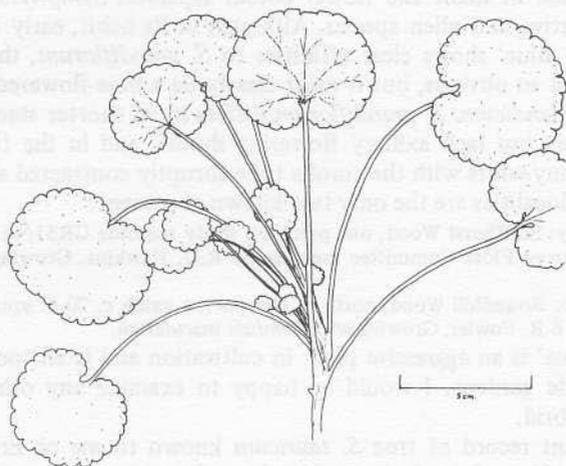
Mrs Wise suggests tracing leaves directly from herbarium specimens, but I wonder whether it has occurred to other botanists faced with preparing accurate drawings of plants to xerox the actual specimen either entire or a part of it?

Some time ago I had the task of producing a representation of a cultivar of *Saxifraga hirsuta* which occurs naturalised in parts of N. Ireland and, having no artistic ability, I used a xerox taken from a good quality herbarium specimen instead of from the living plant. From the xerox it is a simple matter to take a tracing, filling in any missing details.

Caution has to be exercised in xeroxing the herbarium specimen of course, as this entails turning it face down on to the platen of the photocopier. Bulky specimens, or excessively fragile ones will be unsuitable for this technique, but the thinner specimens which lie close to the mounting paper should give no trouble.

For information I enclose a copy of my drawing. The flower details were not elaborated as the leaf characters were the main point of the illustration, which is far superior I may add to any freehand copying that I could do!

PAUL HACKNEY, Ulster Museum, Botanic Gardens, BELFAST BT9 5AB.



Paul Hackney's contribution was shown to Rosemary Wise who adds the following comments:

Photocopying herbarium specimens can be useful in several ways. For instance when collecting plants with which one is not too familiar, a photocopy of a specimen is far easier to handle than a heavy book. Photographs and sometimes photocopies are now being sent out by some herbaria e.g. Kew, in place of lending valuable specimens, especially type specimens.

When it comes to drawing from them I would have thought too much detail is lost. Photocopying machines vary considerably but I have yet to find one which will reproduce every minute hair, texture variation etc. which is essential when producing a botanically accurate drawing.

But of course this all depends on the complexity required. I agree that a photocopied herbarium sheet can be an excellent aid to judging proportions, exact leaf shape, etc.

ROSEMARY WISE, Forest Herbarium, OXFORD.

A NEW ALIEN *SYMPHYTUM*

In January 1980, Mr Bryan Fowler sent for confirmation a plant of what was believed to be *Symphytum tauricum*, established in a Shropshire woodland. When this flowered in cultivation in the early spring of 1981 it was clearly not that species and was finally matched with a garden hybrid of *S. grandiflorum* DC. (here regarded as including *S. ibericum* Stev.) to which Graham Thomas, in *Plants for Ground Cover* (Dent, 1970), had given the cultivar name 'Hidcote Blue'. This new British alien has been ably illustrated by Peter Barnes in the accompanying figure and a description follows:

Non-flowering shoots strongly decumbent, vigorous; leaves with lamina up to 19 x 10 cm, ovate-oblong, acute above, \pm truncate below, slightly bullate and roughly hairy; petiole long, decurrent as a raised line, but stem not winged. Flowering stems up to 3 ft, erect at first, later decumbent branched above and usually with one or more well-developed, later-flowering axillary shoots; very rough with numerous, rigid, swollen-based hairs throughout and shorter, slender, but rigid hairs especially above; lower leaves petiolate, uppermost \pm sessile.

Calyx divided to c. 2/3, accrescent in fruit; calyx teeth linear lanceolate, obtuse. Corolla (18-) 20-22 x 10-13 mm, red in bud (RHS Colour Chart, Red 47A, becoming Red 47C/D), whilst at anthesis the tubular basal part of the corolla is Blue 101B (sometimes very pale) and the expanded apical 'bell' is white; corolla tube gradually narrowed to the base. Corolla scales c. 7-8 mm long, included, not or just exceeding the stamens, with conical teeth densest near the apex. Some apparently fertile seed is set.

Commences flowering in March and continues throughout most of the summer (until July) with a peak in April-May.

The combination of habit and flower colour separates *Symphytum* 'Hidcote Blue' from all other native and alien species. Although in its habit, early flowering and red buds *S.* 'Hidcote Blue' shows clear affinities to *S. grandiflorum*, the identity of the other parent is not so obvious, but it must clearly be a blue-flowered taxon — perhaps a form of *S. x uplandicum*. *S. grandiflorum* differs in its shorter stems, which may be forked at the apex but lack axillary flowering shoots, and in the flowers at anthesis being wholly creamy-white with the corolla tube abruptly contracted at the base.

The following localities are the only two known at present:

v.c. 17 Surrey; Staffhurst Wood, one patch on shady roadside GR51/413.487 31 May 1981. Shown to Surrey Flora Committee meeting by R.D. Hawkins. Growing with other garden outcasts.

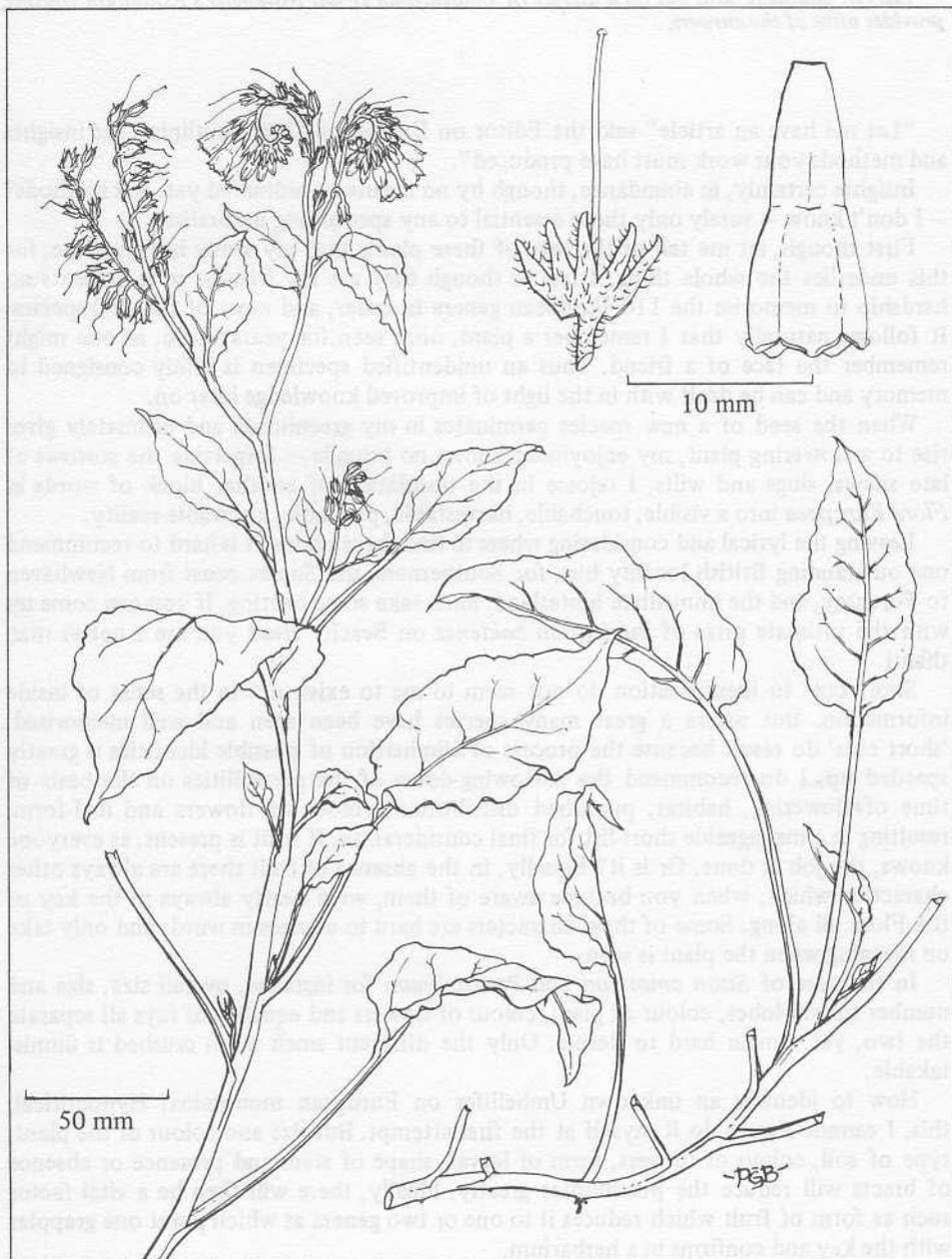
v.c. 40 Salop; Roundhill Wood, north of Newport, a patch c. 20 ft square. GR 33/712.222 Spring 1979. B.R. Fowler. Growing with *Lamium maculatum*.

S. 'Hidcote Blue' is an aggressive plant in cultivation and is all too likely to become established outside gardens. I would be happy to examine any other candidates for records of this hybrid.

The only extant record of true *S. tauricum* known to me or Eric Clement is the population at Swaffham Prior in Cambridgeshire. Can anyone else produce the genuine article?

A.C. LESLIE, Monksilver, 72 Boxgrove Road, Guildford, SURREY GU1 1UD.

Symphytum 'Hidcote Blue'



UMBELLIFERAE

Encountering an enthusiast in one of the more "difficult" plant groups makes one curious to know how he got that way.

What stimulated him in the first place? How did he get started? What sustains his enthusiasm? And what satisfaction has it brought him?

Mervyn Southam, who put on a display of Umbelliferae at last November's Exhibition Meeting, provides some of the answers.

"Let me have an article" said the Editor on Exhibition Day, "outlining the insights and methods your work must have produced".

Insights certainly, in abundance, though by no means co-ordinated yet. But methods? – I don't know – surely only those essential to any specialising naturalist.

First though, let me tell of the love of these plants that my study has given me, for this underlies the whole thing. I feel as though they are my friends, so it presents no hardship to memorise the 110 European genera in order, and most of the 450 species. It follows naturally that I remember a plant, once seen, for years ahead, as one might remember the face of a friend. Thus an unidentified specimen is safely consigned to memory and can be dealt with in the light of improved knowledge later on.

When the seed of a new species germinates in my greenhouse and ultimately gives rise to a flowering plant, my enjoyment knows no bounds – forgetting the sorrows of late snows, slugs and wilts, I rejoice in the translation of another block of words in *Flora Europaea* into a visible, touchable, harvestable, pressable, knowable reality.

Leaving the lyrical and considering where to find these plants, it is hard to recommend one outstanding British locality but, for Southerners, the Sussex coast from Newhaven to Pevensey, and the immediate hinterland, must take some beating. If you can come up with the ultimate prize of *Bupleurum baldense* on Beachy Head you are a better man than I.

Short cuts to identification do not seem to me to exist, not in the sense of inside information. But where a great many species have been seen and well memorised, 'short cuts' do result because the process of elimination of possible identities is greatly speeded up. I do recommend the narrowing-down of the possibilities on the basis of time of flowering, habitat, published distribution, colour of flowers and leaf-form, resulting in a manageable short-list for final consideration. If fruit is present, as everyone knows, the job is done. Or is it? Equally, in the absence of fruit there are always other characters which, when you become aware of them, were nearly always in the key of the Flora all along. Some of these characters are hard to express in words and only take on meaning when the plant is seen.

In the case of *Sison amomum* and *Petroselinum* for instance, overall size, size and number of leaf-lobes, colour of plant, colour of flowers and equality of rays all separate the two, yet remain hard to define. Only the different smell when crushed is unmistakable.

How to identify an unknown Umbellifer on European mountains? Hypocritical, this, I cannot always do it myself at the first attempt. But size and colour of the plant, type of soil, colour of flowers, form of leaves, shape of stem and presence or absence of bracts will reduce the possibilities greatly. Ideally, there will then be a vital factor such as form of fruit which reduces it to one or two genera at which point one grapples with the key and confirms in a herbarium.

It is in growing the plants that this negative approach of elimination is replaced by a positive acquisition of techniques. These are better demonstrated than written about, but a few *general* rules might be:-

- 1) Sow in autumn
- 2) Use calcareous soil
- 3) Consider the native climate
- 4) Use pots, slugs eat umbels
- 5) Keep accurate records
- 6) Get to know the plant and thus become aware of its needs

Am I puzzled by the existing classification? Yes, both within some genera and in some sequences of genera. But it will be a long time before I know enough to produce a credible overall alternative and it seems impudent to tamper with bits and pieces. In the meantime I always have an abundance of growing plants, pressed specimens and copious notes available for discussion with anyone who cares to write to me or to visit me in this Home Counties hotbed of Umbelliferae. And I am always more than willing to identify anything but bare skeletons.

M. SOUTHAM, 3 Orchard Park, Holmer Green, HIGH WYCOMBE, HP15 6QY.

Conservation of Irish *Limonium*

With reference to the notes in *B.S.B.I. News* No. 27, p. 8 and No. 28, p. 11, we should like to point out that in our view neither *Limonium transwallianum* nor *L. paradoxum* occur in Ireland, but the plants so-called are misidentifications of as yet undescribed taxa. We have both of them in cultivation at the University of Leicester Botanic Garden and at Birbeck College, University of London, and intend to publish new names for them in due course.

With regard to the latter, surely the asterisk in *B.S.B.I. News* No. 27, p. 8 is given in error ("not uncommon in Ireland") – to our knowledge *L. paradoxum* in Ireland has been recorded from one locality only. On page 6 of the same issue it is suggested, in fact, that it might be extinct in Ireland ("as far as we know, the cliff on which it once grew has collapsed into the sea!"). Whether or not one of its former colonies has collapsed into the sea, we wish to assure Irish conservationists that it still grows in the Malin Head region of Co. Donegal, or at least did so when (and immediately after!) M.J.I. visited it in July 1980 (before the Act came into force).

The above does highlight two points in relation to new conservation laws, and might provide food for thought by conservationists:

1. Until work had been done on these plants – work which necessitated taking some cuttings (not roots) – it was not known what exactly was being conserved nor how important it was to conserve them.

2. Since being taken into cultivation the Malin Head population has become much less vulnerable to extinction. We shall soon be in a position to supply seed to other botanic gardens and, if necessary, for restocking in the wild.

M.J. INGROUILLE & C.A. STACE, Dep't of Botany, University Road, LEICESTER, LE1 7RH.

NETWORK RESEARCH

RAISING WILD SERVICE TREES

from Patrick Roper, Organizer, BSBI Wild Service Tree Survey

In the useful and interesting note on growing the Wild Service Tree from seed in *BSBI News* 29, p. 5, no mention is made of the fact that germination, as with many Rosaceous trees and shrubs, does not normally take place until the second spring, i.e. seed remains dormant in the ground through two winters.

Many people, including myself, have raised trees from seed simply by sowing in ordinary John Innes Seed Compost as soon as the fruit is soft so that the seed can be easily extracted (frosting or refrigeration helps soften the fruit). Then leaving the pots out of doors through two winters, taking precautions if need be against mice and birds. I have found this technique works with many species of *Sorbus*, *Malus*, *Crataegus* and other Rosaceous trees. Occasionally the odd seed will germinate in the first spring, most appear in the second spring (if they are going to appear at all) and some do not burgeon forth until the third or even fourth spring. There are exceptions to this: seed of *Sorbus domestica* and *Pyrus cordata* has for instance, germinated entirely in the first spring with me.

So far as viability of Wild Service seed is concerned, I have found that, on the whole, seed sets well in South East England (and in all probability elsewhere in England and Wales). As the *BSBI News* article points out insects do sometimes attack the seed but, assuming it is sound when gathered, I believe it is important to separate it from the fruit as soon as this has turned soft and to sow it straight away. I say this because in my experience, seed that is kept around for any length of time, whether in or out of the fruit will often fail to germinate.

One final cautionary word: the first few true leaves on Wild Service seedlings do not have the typical maple-like shape — they look more like Hawthorn, or even Birch leaves. This makes it particularly important to label pots or boxes clearly, especially if several different varieties of tree or shrub are being grown.

The Wild Service is easy to transplant and, in good soil, will grow fairly rapidly. If you are lucky enough to raise a good crop from seed it is worth lining them out so that you can select the best autumn colourers. Some turn superb flame or scarlet shades while others go a more modest yellow or brown. Any spares you have will normally be eagerly sought by friends and conservation organizations.

PATRICK ROPER, South View, Sedlescombe, BATTLE, E. Sussex.

PS. Since the above was printed the author has received further information which he hopes to collate and publish in BSBI News 31. Meanwhile any reader with data to contribute is invited to contact Dr Roper.

BRACKEN DISEASE — An Appeal for Information

Bracken, considered by many as the most noxious weed in Britain, not only invades large tracts of potentially valuable pasture but its fronds are highly toxic to livestock.

Its network of tough rhizomes bearing large numbers of buds give it a high capacity for regeneration and hence great resistance to control methods. Mechanical and chemical treatments can be successful but seldom cost-effective. Funded by the Agric. Res. Council, we are developing at Strathclyde, alongside herbicidal studies, the use of plant pathogens of bracken as agents of biological control or "mycoherbicides". Bracken, unfortunately, has few natural enemies, but there is a small number of fungi which can cause disease under certain circumstances.

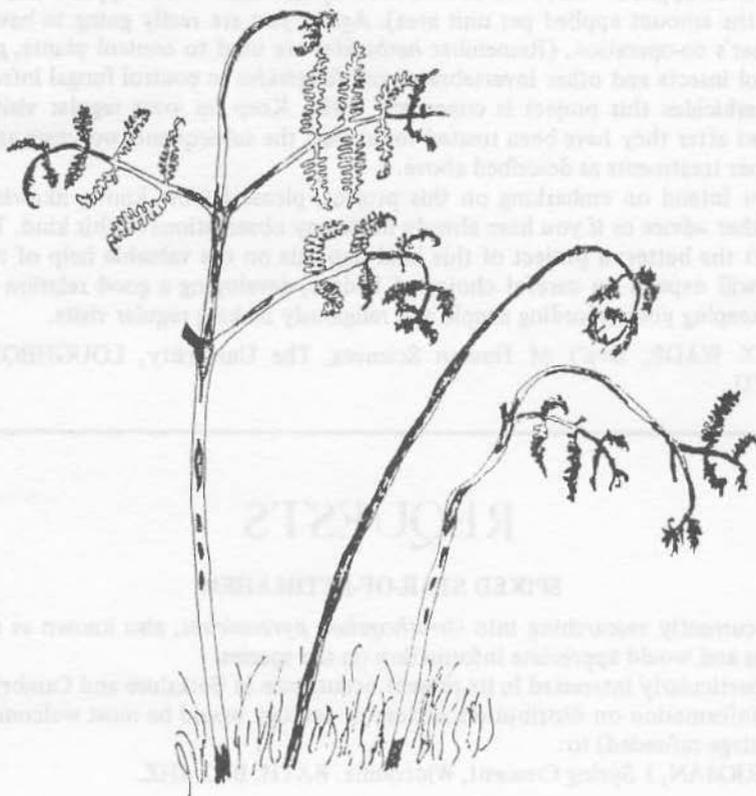
One of these is *Ceratobasidium anceps* which causes a **pinnule blight** of fronds in situations of high humidity and shade such as woodland. The symptoms are a fairly rapid browning of pinnae which become covered with felt-like growth of the fungus. Late in the year this produces numbers of sclerotia, up to 3 mm in diameter, at first white but gradually blackening as they mature. Pinnule blight has been reported from a few localities in Scotland (Milngavie, Banff, Kilmun and Ballachulish) as well as Graal in Germany and Hillsborough in N. Ireland.

The second disease, known as **curl-tip**, is likely to be more valuable since it is found on open hillsides where bracken control is most desirable. Several fungi may be involved with a species of *Phoma* of primary importance. Affected stands appear "thinned" and the most distinctive symptom is the presence of brown or black sunken lesions, mostly on the upper half of the frond on the main axis and on laterals. The pinnae may be killed back, often unilaterally, giving a lop-sided appearance. The tip of the frond is often brown and curled. Most conspicuous from July to October, and widespread in Scotland, little is known of its existence elsewhere. However, a recent sample sent to us from Llandrindod Wells suggests that it may also be common in England and Wales.

The author is eager to obtain more precise information on the exact location of sites where the disease has been observed, and urgently requests reports from readers in the coming season. The following data would be of particular value:-

1. map reference
2. aspect of the diseased site
3. approximate extent of disease
4. elevation
5. brief description of terrain.

Samples bearing curl-tip lesions or blighted pinnae should be sent (postage refunded if requested) to: DR M.N. BURGE, Biology Dep't, Strathclyde University, GLASGOW G1 1XW.



Curl-tip

HEDGEROWS AND HERBICIDES

BSBI Conservation Committee seeks assistance

Many farmers use herbicides to control weeds growing in their fields, be they grass or arable. Fears have been expressed that these sprays can be carelessly applied or drift into hedgerows and their associated herbaceous borders, reducing the diversity of flowering plants.

Herbicides falling on hedgerows will almost certainly have an immediate effect on many if not all of the plants growing there. The important observation though is the recovery of the hedge and its border over the next two or three years: some, none, or all of the plants may reappear in subsequent seasons. The BSBI Conservation Committee is keen to collect information on this problem and seeks the co-operation of members.

How can you help? Choose some hedgerows, two or three would be adequate, which you know will receive herbicide treatment. This knowledge could be based on past experience or through contacting the farmer: remember he does not want to waste herbicide on hedges and might be as concerned about its effect on wildlife, as you or I. Try to visit the hedgerow a number of times before the fields are sprayed (once every other month would be a good target). Make sure you record all the species present for (a) the hedge & (b) the border of the field to be sprayed, and note their abundance using rare (r), occasional (o), frequent (f), abundant (a) and very abundant (va). Also note the dates of your visits and record the date the field was treated and the name of the herbicide applied – or, even better, the way in which it was applied and the dose (that is, the amount applied per unit area). Again, you are really going to have to seek the farmer's co-operation. (Remember *herbicides* are used to control plants, *pesticides* to control insects and other invertebrates and *fungicides* to control fungal infections: it is the **herbicides** this project is concerned with). Keep up your regular visits to the hedgerows after they have been treated for at least the subsequent two years and record any further treatments as described above.

If you intend on embarking on this project, please let me know; likewise if you wish further advice or if you have already made any observations of this kind. The more who start the better: a project of this kind depends on the valuable help of members. Success will depend on a careful choice of hedges, developing a good relation with the farmer, keeping your recording simple and religiously making regular visits.

DR MAX WADE, Dep't of Human Sciences, The University, LOUGHBOROUGH, LE11 3TU.

REQUESTS

SPIKED STAR-OF-BETHLEHEM

I am currently researching into *Ornithogalum pyrenaicum*, also known as the Bath Asparagus and would appreciate information on the species.

I am particularly interested in its present occurrence in Berkshire and Cambridgeshire but any information on distribution, history or ecology would be most welcome. Please send (postage refunded) to:

R.J. WORKMAN, 1 Spring Crescent, Widcombe, BATH, BA2 4HZ.

BRITISH AND IRISH HERBARIA

The preparation of the revised index to the location of British and Irish herbaria is now well in hand, and data has been accumulated on herbaria from over 350 institutions, chiefly university botany departments and museums. Information is still, however, urgently requested in respect of:-

1. Herbaria formed by schools, colleges and natural history societies.
2. Vice county herbaria made by County Recordors and others.
3. Private herbaria.

The data requested are: (1) Christian and surnames of collectors. (2) Years of birth and death (if known) for deceased collectors, or floreat dates. (3) Approximate number of sheets. (4) Any specialisation, e.g. vice county or other area, genera or group.

Finally, I have been unable to trace herbaria made by the following, and if any member knows of the present whereabouts of any of their collections I should be obliged for details:

Frank Wilfred ADAMS, fl. 1950 – 1960

Eric Bernard BASDEN, fl. 1930 – 1965

Gerald Mark BROWN, d. 1970

Ambrose E.A. DUNSTAN, fl. 1950 – 1960

Mrs Florence M. ELDER, d. 1964 (?compiled a herb.)

C.E. MARKS, fl. 1930 – 1965

Peter Marshall NEWAY, fl. 1950 – 1965

Any information should be sent to: D.H. KENT, 75 Adelaide Road, West Ealing, LONDON W13 9ED.

DORSET OR CILIATE HEATH

We are puzzled about how and when Dorset Heath became the universal name for *Erica ciliaris* – it had seemed it always was called this. (That it was not named after the county in which it was first found is no doubt because *E. vagans* was known as Cornish Heath before ever *E. ciliaris* was reported from Britain).

But in all the botanical books I have looked at, it is Ciliated Heath, or words to that effect, for 120 years after its discovery. Even the 8th edition of the Wild Flower Diary in 1950 used “Ciliated Heather”, and the Ross-Craig Drawings as late as 1963 have only “Ciliate-leaved Heath”.

It seems to have been Prof Good's *Handbook of the Dorset Flora* of 1948 that started botanists using the name of this county – “Ciliated or Dorset Heath” he wrote; and indeed he has written to me “It looks as if I may have been the first to put it into print. I cannot now recall the circumstances, but I feel pretty sure that I must have had some good reason for giving it as an alternative name”. The first edition of CTW called it plain Dorset Heath in 1952.

Horticulturists, however, had anticipated this by half a century. Robinson's famous *English Flower Garden* used Latin names only to start with, but in the 6th edition of 1898 “Dorset Heath” is added and there it has stayed ever since.

Were botanists all that far behind gardeners and why? Was it indeed Robinson who pioneered the now recognised name? Who can add to this record?

D. McCLINTOCK, Bracken Hill, Platt, SEVENOAKS, Kent, TN15 8JH.

THE HOST PLANTS OF *CUSCUTA EUROPAEA*

Sonia Holland's interesting letter (*BSBI News* 29, p. 24-5,) with the descriptions of this Dodder "profusely in dense globular clusters festooning a drab nettle" or "hanging in tresses" from trees, gives a remarkable picture to one who has seen the plant only sparsely twining nettle stems in W. Sussex and Surrey. However, Sonia mentions the aspect which to me seems to be most fascinating viz "*Urtica dioica* was the primary host," i.e. why is it that seeds of *C. europaea* almost always germinate around plants of *U. dioica* (or *Humulus lupulina*) growing near water? Bernard Verdcourt writing in *Watsonia* 1 p. 291 lists 25 hosts for *C. europaea* plus one around which the Dodder was entwined but without penetration. In the *Biological Flora* 1948 Mr Verdcourt wrote that "in pot experiments seedlings were found to establish equally well on a wide range of plants, but it has invariably been observed in the field by the writer that nettle and hop are first attacked, and that the parasite spreads from them to other spp. Since nettle and hop are related taxonomically there is presumably some biochemical basis for the observed preference". In only two localities from 102 recorded was nettle definitely known to be absent and in both these hop was present. The intriguing probability of a biochemical attraction to nettles for the germinating seed was referred to the Seed Bank at Wakehurst Place, where a germination rate of only 43% under experimental conditions suggested low viability. For further information on this we need more work in field conditions, and as Mr Verdcourt says in *Watsonia* it would be interesting to have host preference data from throughout the plant's range?

Mary Briggs

WILDLIFE AND COUNTRYSIDE ACT 1981

Publicity

Following the passing of the new Act (see *News* 29, p 16-17) a new leaflet on the law protecting Wild Plants, in a series 'Wildlife and the Law', will be published in April by CoEnCo in co-operation with the BSBI and RSNC with the financial support of the Nature Conservancy Council.

NCC have also supported a new edition of the BSBI's *Code of Conduct for the Conservation of Wild Plants* (the 'Fritillary' leaflet) and a second poster depicting the 42 additional threatened species which are now scheduled. It is hoped that '*These Endangered Plants 2*' will stimulate sales of the original BSBI poster which is still available.

How to Order

Wildlife and the Law: 1 Wild Plants. Free (with s.a.e) from BSBI, CoEnCo and RSNC.

Code of Conduct. Free (with s.a.e 10 or more actual postage) from BSBI;

These Endangered Plants 1 & 2 (Posters)

No. 1 - (21 species) 50p)

No. 2 - (42 species) £1.00) incl. postage folded from BSBI only.

Both together £1.25)

Addresses

BSBI : Oundle Lodge, Oundle, Peterborough, PE8 5TN.

CoEnCo : c/o Zoological Gardens, Regent's Park, London NW1 4RY.

RSNC : The Green, Nettleham, Lincoln LN2 2NR.

SILENE PRATENSIS (= *S. Alba*)

Further to my request in *BSBI News* 27, I would still be grateful for seed collections from this species in the British Isles — NB. this is the familiar White Campion, despite its name! I am especially interested in populations from the chalk or chalk/clay transition in S. England, but want samples from as many British localities as possible.

Please collect seeds from as many female plants as possible and put them into a paper bag or envelope with details of the locality, habitat, the number of individuals sampled and the approximate size of the population. Send (postage refunded) to:
DR H.C. PRENTICE, Biology Department, Building 44, The University, SOUTHAMPTON SO9 5NH.

LETTERS

SPIKELET BRISTLES OF *SETARIA*

Last autumn I was sent material of the rare casual grass, *Setaria verticillata* (L.) Beauv., by Mr E.T. Daniels from a roadside at Trowse Newton near Norwich and asked to comment on the abnormal number of bristles, four to six, below each spikelet. Somewhat smaller in height than the normal plant, 20 cm as against 2-7.5 dm; blades to 10 cm; panicles to 4.5 cm and bristles up to 7 mm. Some seedling plants present. Reference books consulted included American, British and French and showed divergence of opinion about the number of bristles ranging from solitary or in pairs, single, two, and usually one per spikelet. How account, therefore, for as many as six? The answer is given in the preface to the genus in Hitchcock's *Manual of the Grasses in the United States*, 1950, as "Bristles below each spikelet 1-3, or, by the abortion of the spikelets, 4 or 6". The spikelets in the Norwich plant did not appear to be changed in any way and it would be interesting to find the causal agent for this abnormality.

E.L. SWANN, 282 Woolton Road, KING'S LYNN, PE30 3BJ.

INVOLUNTARY TRANSPORT OF PLANTS AND ANIMALS TO EUROPE

Judging from reports published occasionally in journals, such as the *Irish Naturalists' Journal*, and from personal contacts, there seems to be a keen, if fleeting interest in the long-distance transportation (by means of wind and ocean currents) of plants and animals to the British Isles. These occasional "events" hold substantial interest for biogeographers. While I am personally interested in long-distance transport of plant disseminules, especially the so-called drift-seeds of tropical origin which are washed ashore on beaches, I am aware of other work being carried out on trans-oceanic transport of molluscs and other sedentary marine animals, and of the recording of American bird species.

I would like to hear from members of the B.S.B.I. interested in this general subject, who would be prepared to participate in an informal one-day meeting in Ireland, perhaps in the autumn of 1982. No plans have been made, but if a sufficient number of people indicate their willingness to speak and/or attend, I would be willing to organise a suitable venue. I am particularly keen to hear from ornithologists and entomologists, and from anyone working in oceanography and meteorology who would be prepared to provide biologists with the physical background to these phenomena.

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

DID THE REV. C.A. JOHNS USE A VASCULUM ?

The contribution by Miss Ursula Duncan in *BSBI News* 28 p. 7 prompted the largest amount of correspondence we have had on any subject. Since several of the writers repeat the same information we have made a compilation by quoting something from most of them.

We begin with the contribution from Mr D.E. Allen, Official Historian of the Society who writes:

The "book" which Dr Ursula Duncan asks about (*BSBI News* 28, p. 7) has been the subject of debate in the Society's literature on a previous occasion. In *Proceedings* in July 1958 (Vol 3, p. 41) Dr H.G. Baker ventured to suggest that the illustration in Johns' *A Week at the Lizard* (1839) – the "amusing sketch of an elderly gentleman. . . . perched half-way up an impossible cliff", to which Dr Duncan refers – depicts Johns wearing "a vasculum of thoroughly familiar shape". But in the next number of *Proceedings* (p. 146, footnote) I was able to scotch this, quite conclusively, by quoting Johns' description of his total equipment on the outing pictured: "a walking-stick, a folio book for drying specimens in, a packet of sandwiches, and a small flask of brandy".

The field portfolio has always coexisted with the vasculum and antedated it by a lengthy period. Tournefort, Petiver and Linnaeus (at any rate on his Lapland journey) are among those known to have collected straight into papers. The metal vasculum was in use – in England – by 1704, but Linnaeus only learned of it relatively late in his career, apparently from Dillenius. But long before that, in the 1540's, the French botanist Pierre Belon was putting his specimens into a bag: that and the basket (favoured by herb-gatherers) were clearly the vasculum's ancestors.

The moral of Johns' renowned misadventure on the cliffs at the Lizard is that the vasculum is to be preferred to the portfolio whenever botanising is likely to call for some gymnastics. But rather than go rock-climbing with either, the really sensible will take a bag.

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

to which our correspondents have added:

Mr C.R. Boon (7 Duck End Lane, Maulden, Bedford) writing within a few weeks of the 150th anniversary of the Rev. C.A. Johns' adventure which took place on 24 August 1831, also correctly identifies the context and adds that the botanist's full description of his climb to safety is well worth reading. Mr Boon further tells us that in *Flowers of the Field* the caption to the sketch gives the location as Gue Graze whereas in *A Week at the Lizard* he states in a footnote, "I made my perilous ascent between Kynance and the Rill" which is south of Gue Graze.

Copies of the various editions of *A Week at the Lizard* seem to be much read, from the number of precise page references given by our correspondents, and much prized, to judge from but two comments: B.W. Ribbons was given his copy of the 2nd (or 3rd?) edition, along with P.J. Wanstall, by Miss Tiddy a retired teacher in St. Agnes when they were botanizing there in 1948. And Edgar Milne-Redhead treasures his little (4¼" x 5½") edition acquired, second hand, by his father in 1898 for 1/6d. He says the incident which is the subject of the illustration as described in Chapter 3 of the book under the heading "A botanical adventure" in which Johns writes "the above narration I committed to writing the day after my adventure and I believe it to be the reverse of an exaggerated account", and concludes the chapter with "A word of advice to climbers".

As to the illustration itself Dr David Coombe of Christ's College, Cambridge, in an authoritative reply to Miss Duncan, refers to an article he wrote on the editions of *A Week at the Lizard* and explains that it appeared in the first edition in 1845 and in all subsequent editions. In third editions of 1874 (4 years before his death) Dr Coombe tells us that Johns wrote that on 8 August 1873 he unexpectedly lighted on the exact spot where I made my perilous ascent He says this was 42 years after the adventure, i.e. 1831 as stated above. As Johns was born in 1811 he could not very well have been "an elderly gentleman" at the time.

Other quotations record: "a few specimens of tree mallow I secured and laid out in my book to dry", and also describes how the book impeded his movements.

The illustration is signed by B. Foster and J.W. Whimper from which Dr Coombe considers that the former made the drawing, and the latter did the engraving. Emily Stackhouse drew some or all of the botanical illustrations.

The Editor wishes to thank all those who sent contributions to this interesting correspondence, extracts from which have made up this symposium.

NO DINOSAURS FOR CHEDDAR !

A proposal to establish a 'Prehistoric Wildlife Park' at the top of Jacob's Ladder in Cheddar Gorge was turned down last March by Sedgemoor District Council. The company appealed against the decision, and in October last a public hearing was held at Cheddar. The BSBI, through its Conservation Committee, was one of the objectors to the proposal, and was represented at the hearing. The Secretary of State dismissed the appeal.

It is heartening to know that a case against this kind of commercial exploitation in an A.O.N.B. and S.S.S.I. can be the objectors. The D.O.E. Inspector stigmatised the plan as 'an incongruous intrusion of commercial development in a comparatively unspoilt area'.

FLORENCE GRAVESTOCK, 8 Cranleigh Gdns., Stoke Bishop, BRISTOL BS9 1HD.

LEAF RETENTION BY OAKS

A comment on the note 'Oak and Ivy' by James Cross *BSBI News* 28 p. 20, although not answering his question on ivy, may be of interest concerning leaf retention in oaks. A member some years back queried a *Quercus petraea* near her home on which brown leaves persisted far into the winter. K.A. Longman and M.P. Coutts in 'Physiology of the Oak Tree' in their paper given at the BSBI Oak Symposium and published in the Conference Report *The British Oak* 1974 p. 202 write: 'An unusual feature of many oak trees is the retention during the winter of dead brown leaves, the abscission layer often not completing until Spring. Common names for *Q. petraea* (Wintereiche, Chene d'hiver) indicate its special tendency in this respect'.

Mary Briggs

COLOUR PHOTOGRAPHY

I read with interest your comment on Colour Photography on page 7 of *BSBI News* 29. As a painter who looks at plants at different times of the year, the changes in shade are a constant source of uncertainty and delight. I am free to try and reproduce what I see as the typical colour. But when I turn to coloured photographs in books or my son's collection of coloured slides one thing is very apparent. The purple-violet range does not come out faithfully on colour film. The true blues and reds are all right but the moment the mixture is there colour change results. I have never yet seen a coloured photograph of the Military Orchid that was anything like the plants I have seen. Admittedly I have seen very few but they were all at the violet end of the purple range whereas all the plates in books are at the magenta end of the purple spectrum. This seems true also with my son's slides. I think this is true even after making allowance for the eye of the beholder, which I agree is a powerful factor.

J.G. BISHOP, 8 Michael Drive, Wellington Road, BIRMINGHAM B15 2EL.

ALIEN PLANTS AT CAMBRIDGE SEWAGE FARM

Though maintaining a regular watch on bird migration in this locality since 1950, I was unaware of its rich alien plant population. Tomato (*Lycopersicum esculentum*), Red Goosefoot (*Chenopodium rubrum*) and Redshank (*Polygonum persicaria*) were, as now, the most conspicuous species on the sludge beds and flooded sewage tanks were innumerable waders, gulls and ducks congregated. Alien plants were certainly present; Dr A.C. Leslie discovered a specimen of *Setaria verticillata* (now in CGE collected there in 1955). At that time my interest in botany was limited and my knowledge of aliens non-existent, thus the presence of such species went undetected by me until 1970.

It was then that the sewage disposal works underwent "modernisation" at enormous cost.

The old system was simple enough; after a simple separation much of the solid matter was diverted to sludge beds, while the liquid was fed into a filter bed system and on to the surrounding 150 acres of embanked fields. These fields were used in rotation, as arable land one year and as sewage tanks the next. The new system obviously had to deal with a far higher volume of effluent, and filter beds have replaced the sewage tank complex, the liquid now being pumped straight into the River Cam after treatment. The sludge beds have given way to an impressive mechanised plant which was hoped to provide garden compost as an end product and in so doing would produce enough natural gas to supply all the energy requirements of the works. Though the gas production seems to have been successful, the composting equipment has never managed to make a product free from harmful chemicals!

Thus the changeover to the new system of sewage treatment immediately produced problems. Solid matter was piled on the disused open tanks and mysterious heaps of seeds and rubbish appeared on the south-western corner of the area. These proved to be the floating surface material that had been skimmed off, then carted here from the filter bed area. Large flocks of finches especially greenfinches, were attracted here by the abundance of seeds.

The autumn of 1970 saw the first crop of alien plants on these heaps. Along with the commoner species were *Ambrosia artemisiifolia*, *Berteroa incana*, *Cuscuta campestris* and *Datura stramonium*. Mid-way through the construction of a new sprinkler system the problems of storing the solids must have become a major worry, the seed heaps and raised areas of sewage had become the major feature of the southern portion of the farm by 1976. The display of aliens was often spectacular, marred somewhat by the stench from the more recently added deposits and the roving bands of rats which were often in groups of 30-40. The completion of the new works has not resulted in the anticipated loss of smell or the disappearance of heaps of sewage waste and flooded tanks. Small numbers of waders, gulls and ducks still frequent the last remaining mud and open water and alien plants occur here and there as loads of sludge and seeds are carted to various corners of the "farm".

The present state of the place can only be described as a mess, even in botanical terms! The open tanks, each one or two hectares in area, have mostly been abandoned, some given over to agriculture, with little apparent success.

If allowed to remain undisturbed these "seed heaps" have a typical life cycle, even those a little more than a few metres in extent. The first flush of green growth is usually a mat of tomato seedlings and amongst the other less conspicuous species patches of short-lived grape, *Vitis vinifera*, and a scattering of the larger gourds, marrows (*Cucurbita pepo*) water melons (*Citrullus lanatus*) and sunflowers (*Helianthus annuus*). Grasses,

including Canary Grass (*Phalaris canariensis*), "cabbage" (*Brassica napus*, *B. oleracea* and *B. juncea*) soon shoot above the seedling swarm along with the more frequent bird seed aliens *Cannabis sativum*, *Coriandrum sativum*, *Anethum graveolens* (*Peucedanum graveolens*), *Chenopodium hybridum*, *Guizotia abyssinica*, *Lolium temulentum*, *Linum usitatissimum*, and *Melilotus* sp.

It is usually at this tantalising stage that the heaps dry out and only the more resistant species e.g. brassicas, sunflowers, marrows and melons survive. On occasions flood-water from later deposited sewage enables some of the less hardy species to survive, but here again it is usually the most vigorous growers that swamp the more interesting species. Toward the end of the season, when a succession of plants has flourished and withered, some of the rarer species may appear. By this time the material has weathered into a more stable soil as yet not colonised by the natural vegetation except for those plants already established e.g. *Sisymbrium altissimum*, *Rorippa sylvestris* and *Rumex palustris*. At such late dates the frosts terminate prematurely many a potential rarity.

The plant population at Cambridge is probably very similar to most of the larger sewage farms in the country; certainly lists from Ryemeads sewage farm in N. Essex kindly provided by Mr C.G. Hanson, show a marked similarity even in the occurrence of rarer species.

Without being indelicate, the origins of some of the more ubiquitous plants amongst the sewage may be guessed at. Tomatoes, Grapes, Blackcurrants (*Ribes nigrum*), Blackberries (*Rubus procerus*) and Raspberries (*R. idaeus*) obviously derive from seeds which passed intact through the human digestive tract. Quite why strawberries do not feature more significantly is something of a mystery. Citrines (*citrus* sp.), plums (*Prunus*) and apples (*Malus domestica*), marrows and melons must be the result of culinary waste being flushed down domestic sink units. Bird-seed presumably enters when householders clean out their bird cages, while other aliens may be associated with the wide range of eastern diets being catered for in kitchens in the Cambridge area – resulting in the presence of *Vigna radiata*, *Sesamum indicum*, *Cichorium* sp. etc.

A list of the more interesting species that have occurred on this site during the last 12 years, arranged in order of frequency is available on receipt of a S.A.E. from:

GRAHAM EASY, 11 Landbeach Road, Milton CAMBRIDGE CB4 4DA.

BSBI NEWS 31
Closing date for contributions
is
24th JULY, 1982

BOOK NOTES

In the July part of *Watsonia*, Vol. 14(2), it is hoped to include reviews of the following books:

The Flora of Somerset, by R.G.B. Roe.

Wallace's Line and Plate Tectonics, edited by T.C. Whitmore.

Chance, Change and Challenge. Vol. 2: The Evolving Biosphere, edited by P.L. Forey. *Phylogenetics*, by E.O. Wiley.

The Natural History of Britain and Ireland, by Heather Angel *et al.*

Evolution and Pollution, by A.D. Bradshaw and T. McNeilly.

Conservation and Evolution, by O.H. Frankel and M.E. Soule.

The Shaping of Cambridge Botany, by S.M. Walters.

Pests, Diseases and Disorders of Garden Plants, by K.M. Harris and S.T. Buczacki.

Bible Plants at Kew, by F.N. Hepper.

The Evolution of Plants and Flowers, by B. Thomas.

Wild Flowers and Other Plants of the Peak District, by Penny Anderson and D. Shimwell.

The Northwest European Pollen Flora, III, ed. by W. Punt and G.C.S. Clarke.

An Integrated System of Classification of Flowering Plants, by A. Cronquist.

Wild Flowers: their Habitats in Britain and Northern Europe, edited by G. Halliday and A. Malloch.

Palaeobotany: an Introduction to Fossil Plant Biology, by T.N. Taylor.

Plant Hunting in Nepal, by R. Lancaster.

Index Holmiensis, V, edited by H. Tralau.

The Archives of the Peat Bogs, by Sir H. Godwin.

The Biology of Mosses, by D.H.S. Richardson.

The Biological Aspects of Rare Plant Conservation, ed. by H. Synge.

Mushrooms and Toadstools, by D.N. Pegler.

Fotoatlas der Alpenblumen, by W. Lippert.

Register of Natural Science Collections in North-West England, by E.G. Hancock and C.W. Pettitt.

The following books have been received recently. Those that will NOT be reviewed in *Watsonia* are marked with an asterisk:

**The Biology of Plants*, ed. 3, by P.H. Raven, R. Evert and Helena Curtis. Worth Publishers, Inc., New York. 1981. Price US \$19.95.

This is still one of the best general text books on plant biology that I know. It is profusely illustrated and has been brought right up to date in this third edition.

On the Examination of a Hybrid Digitalis, by J.S. Henslow (1831), facsimile edition.

The Flora of Foula, by J.P. Barkham, S. Gear, D.L. Hawksworth and K.G. Messenger.

The Trees of Britain and Northern Europe, by A. Mitchell.

British Mosses and Liverworts, ed. 3, by E.V. Watson.

**Transport Systems in Plants*, by J. Moorby. Longman, Harlow, Essex. 1981. Price £6.95.

**Chloroplast Metabolism*, by B. Halliwell. Clarendon Press, Oxford. 1981. Price £20.00.

**Fossils* (Hamlyn colour guides), by R. Prokop. Hamlyn, London. 1981. Price £2.95.

This introduction to the study of fossils deals only with animals.

A Review of the Cornish Flora, 1980, by L.G. Margetts and R.W. David.

**Palaeobiology of Angiosperm Origins*, by N.F. Hughes. Cambridge University Press. 1982 (paperback edition). Price £9.95.

For review, see *Watsonia* 11:269 (1977).

Revision der Sektion Corylifolii (Gattung Rubus, Rosaceae) in Skandinavien und im nordlichen Mitteleuropa, by H.E. Weber.

Pollen Identification for Beekeepers, by R. Sawyer.

**Vegetace CSSR, A11* (Paleogeobotanische Rekonstruktion der Vegetationsentwicklung im Becken Trebonska panev wahrend des Spatglazials und Holozans), by V. Jankovska.

Revolutionary Botany. 'Thalassiophyta' and other essays of A.H. Church, edited by D.J. Mabberley.

A Seventeenth Century Flora of Cumbria. William Nicolson's Catalogue of Plants, 1690, edited by E. Jean Whittaker.

The late Dr Cecil Prime's well-known account of the wild *Arum* species of the British Isles and their relatives, *Lords and Ladies*, which appeared originally in 1960 as a New Naturalist Special Volume, has been reprinted by his widow, Frances, and dedicated to his memory. The work has been out of print for some time, a review will be published in *Watsonia*. Copies can be obtained from Mrs Frances Prime, 5 Applegarth Court, Wymondham, Norfolk NR18 0BY, or from Oundle Lodge, £9.50 + 60p postage.

N.K.B. ROBSON, Botany Department, British Museum (Nat. Hist.), London SW7 5BD.

B.S.B.I. PUBLICATIONS — Supplementary List — January 1982

(all prices include postage)

Conference Report No. 17 The Biological Aspects of Rare Plant Conservation Ed. Hugh Synge 1981 £30.00

LOCAL FLORAS

- 1 *A Review of the Cornish Flora*. L.J. Margetts & R.W. David 1981 £10.75
20 *Flora of Hertfordshire*. J.G. Dony 1967 (slightly damaged copies) £3.00
68 *A New Flora of Alnwick District*. R. Thompson 1980. 140 pages, 1 map. £2.20
90 *Flora of Angus*. H.A.P. Ingram et al., 1981. Please note price is £7.25 (not £6.00)
112 *The Flora of Foula*. J.P. Barkham, S. Gear, D.L. Hawksworth and K.G. Messenger. 1981. 71 pages, 16 figs., 22 tables, 2 maps. History of Vegetation, Communities, distribution, bryophytes, algae, fungi & lichens. £3.00

OTHER BOTANICAL BOOKS

- A Guide to Birdwatching in Mallorca*. Eddie Watkinson. 56 pages, 22 maps, also an invaluable guide to botanical visitors. £2.00
Wildlife Conservation in the Care of Churches & Churchyards. G.M.A. Barker, 1972. 20 pages. (not £2.40 as in B.S.B.I. News No. 29). 0.40p
On the Examination of a Hybrid Digitalis. J.S. Henslow 1831. Reprint 1981. Introduction by V.H. Heywood. 25 pages, 1 col. plate, 3 black & white plates. Hybrid Hybrid between *D. lutea* & *D. purpurea* £2.50
Lords and Ladies C.T. Prime 1960. Reprint 1981. £10.10

DELETIONS. The following are not available at present.

Atlas of the British Flora.

British Red Data Books 1 — Vascular plants (2nd ed. at press — May/June) c. c. £6.50

The Botanist in Ireland.

PRICE INCREASES

Conference Reports No. 1 now £4.25, No. 2 £4.25, No. 4 £5.25, No. 5 £5.25, No. 8 £5.25.

The only special offer now available is numbers 13 & 15 together for £2.50.

All the above are available (cash with order) from: **OUNDLE LODGE, OUNDLE, PETERBOROUGH PE8 5TN.** (NB. Phone No. is now (0832) 72428/73388.

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