

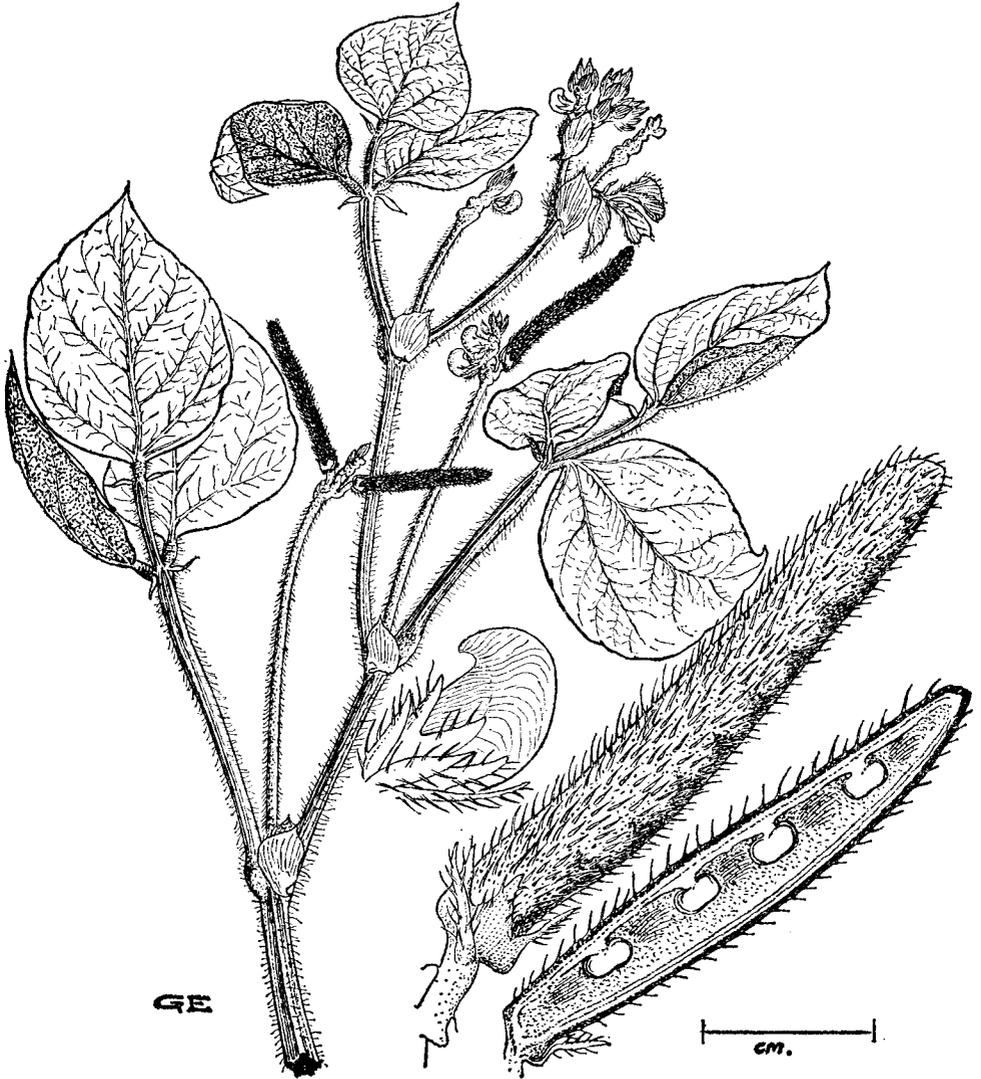
B.S.B.I. NEWS

Edited by EDGAR D. WIGGINS

Cowpasture Farm, Felixstowe, Suffolk IP11 9RD

April 1977

No. 15



Vigna radiata (see page 11)

A PRESIDENT'S FAREWELL

It is a sad occasion for a President to bid farewell; for me it is veritably my "swan song". I little dreamed when I joined the Society in 1939 that I should one day be invited to take such high office and to allay my apprehension I sought the advice of Ted Lousley. He said "You must accept. Don't be nervous about the Presidential Address for it will be an opportunity to put some personal views without fear of being challenged even if inaccurate!" For nearly forty years I enjoyed the friendship of Mr Lousley and profited greatly from his expertise. It was a sad loss to our Society and to all British botanists when he passed away in 1976. The death, too, of Mr Dandy will create gaps which it will be very difficult to fill.

In the short space of two years a relatively unknown amateur botanist can only superficially impinge on the affairs of such a large society but I am very grateful for the help and guidance I have received from all the officers particularly from our Secretary. Correspondence soon revealed, and personal acquaintance only confirmed the unfailing courtesy and geniality of Mary Briggs; her readiness to help a hesitant amateur and her enthusiasm have made my job both easy and enjoyable.

We must all be appalled at the changes wrought in the landscape and to the wildlife of hedges and woodlands but we can find some compensation here for it is in such disturbed habitats that hybrids occur. Now with the publication of *Hybridization and the British Flora* Dr C. A. Stace and his team of helpers have revealed a happy knack of expressing clearly and readily their own work and the work of others blending the heterogeneous mass of research work into an organic whole. With such an authoritative work in their hands botanists are provided with a valuable tool to help them.

From the report of the Secretary of the Conservation Committee it would appear that many of us still pay only lip-service to the claims of conservation. The two posters recently produced have not had the hoped-for sales to members and far more active help will be necessary if we are to continue to enjoy our rich heritage and safeguard our country's plants and their habitats for future generations.

In conclusion, may I take this opportunity to wish our President-Elect, Professor Valentine, every success. May his term of office be as enjoyable as mine has been.

E. L. SWANN

EDITOR'S NOTE

It behoves a newly appointed Editor, producing his first issue, to adopt the currently fashionable posture of the "low profile" if for no better reason, than to present as small a target as possible to the brickbats that may be aimed at him.

In any case it is not for an Editor to impose his ideas on a periodical, but rather to reflect those of his readers and contributors. To assume the mantle of so great a luminary as Ken Beckett is no light responsibility, and this Elisha will endeavour to wear it with dignity and uphold the existing high standards.

To do this he must needs be heavily dependent on the members. The BSBI embraces a very broad spectrum of botanical experience and expertise, from students to savants, and an Editor must see to it that a proper balance is main-

tained. It would be unfortunate if "BSBI News" were to become the monopoly of a small coterie of dedicated specialists. Fortunately there is no sign of this happening at present.

The Society is probably no different from other similar organisations in having a "silent majority" who accept, more or less gratefully, whatever is served up to them. Perhaps they are too modest or consider themselves insufficiently qualified to proffer comments, still less offer contributions. Whatever the reason, nothing is heard from them.

How then is a poor Editor to cater for his readers? How does he discover what they like or want? "BSBI News" is a vehicle for communication from the members, to the members, for the members; all of them—including YOU.

Remember, botanical happenings are occurring somewhere every day. You may be the only one around to observe and record.

It is very noticeable that as the last date for receipt of "copy" for the next issue approaches, the rate at which contributions arrive steps up. This is not to say these offerings are unwelcome; quite the reverse. But there is some virtue in the motto, "DO IT NOW". Not only does this ensure that your observations, bright ideas, withering criticisms, or whatever they are do not get forgotten, it also allows time for the Editor to get in touch with you about any matters concerning your contribution.

And—an afterthought—your handwriting may be legible to you, but will it be to the Editor?

Please note that contributions intended for "BSBI News" 16 should reach me BEFORE 30 JULY, 1977.

SECRETARY'S NOTES

From time to time through the years a motif for the B.S.B.I. has been discussed, and it is now suggested that members might like to have some say in the choice of flower for this emblem. Any member who would like to send the name of the most suitable plant in their opinion, please send this on a postcard, to Mrs M. Briggs, White Cottage, Slinfold, Horsham, W. Sussex RH13 7RG. The cards will not be acknowledged individually but a list of chosen plants will be published in *B.S.B.I. News*, 16.

Letters addressed "Dear Madame Sec." tend to be reports of omission or complaint, so it has been cheering to receive in recent post letters praising two of the 1976 field meetings:- of the Black Poplar meeting at Tewkesbury in April led by Mrs S. C. Holland and Mr E. Milne-Redhead a member wrote "what a splendid meeting, a model of what one should be and I feel we all learned a lot about this fine tree". Another member wrote of "two splendid days" in the remote north-east corner of Cumbria at the meeting led by Dr G. Halliday.

How good to see a letter from Ted Bangerter, a past Hon. Gen. Sec. now in New Zealand, in *B.S.B.I. News* 13, and to hear how he keeps in touch with the Society. Other travelling members include Dr Yolande Heslop-Harrison a present Council member, who this year is with her husband at the University of Massachusetts. When she wrote last Prof. Heslop-Harrison was including the conservation of threatened species among his lecture subjects there.

Congratulations to our member Heather Angel recently awarded the Hood Medal of the Royal Photographic Society for her contribution to the advancement of nature photography through her books, her teaching and her encouragement of other nature photographers. Congratulations also to G. Ll. Lucas, now Deputy Keeper of the Herbarium at Kew.

The exchange of *Vascula* continues, 12 of these have now been donated and have all been taken up by young botanists actively working on grasses, sedges or critical species requiring careful collection.

In welcoming the new Editor to *B.S.B.I. News* we also send again our thanks and appreciation to Ken Beckett the retiring Editor. We wish him well in his future work, including the book on native plants for naturalising which he will be writing for the B.S.B.I. with grant from the Nature Conservancy Council. Gillian Beckett tells us that 400,000 words on future projects have already been allocated to her for typing—no wonder that young Keith, when a baby, was lulled to sleep by the sound of typewriters in that household!

The International Botanical Congress (Edinburgh) Fund can assist young botanists (up to 35 years) with travel expenses to attend international botanical meetings. Applications for the relevant form should be made to the Executive Secretary, The Royal Society, 6 Carlton House Terrace, London SW1Y 5AG, quoting the reference: NB/8/2,BdeV/JMF.

Closing dates for applications are:

15 June 1977 for travel between July 1977 and January 1978.

15 January 1978 for travel between February and June 1978.

Elms Booklet

Members, particularly those planning to join the field meeting in Leicestershire to investigate Elms with Dr R. Melville and Dr C. A. Stace on 20th August, may be interested in *Field recognition of British Elms* by J. Jobling and A. F. Mitchell. It is the H.M.S.O. Forestry Commission Booklet No. 42, available from Forestry Commission, 231 Corstorphine Road, Edinburgh EH12 7AT, £1.00 including postage.

Exhibition "Local Naturalists" in the North-West

This travelling exhibition from the Manchester Museum demonstrates The Artisan Naturalist movement of the 18th and 19th centuries in the North-West. The movement was largely botanical and members living in the area may like to know the dates on which they can view this interesting exhibit, which includes many early local botanists:

Coppice Avenue Library, Sale, Manchester 28th March – 16th May

Hyde Library, Tameside 13th June – 25th July

Oldham Museum and Art Gallery 25th July – 12th September

Sparrow Hill Museum, Rochdale 12th September – 17th October

Symposium on Conservation and Land Management in South Essex

This one-day symposium will be held at Southend-on-Sea, Essex, on Saturday 23rd April, 1977.

Speakers include Dr D. H. Dalby, Dr Oliver Rackham and F. J. Bingley, with representatives of Nature Conservation Council, Save the Village Pond Campaign, and Essex County Council.

For further information, send s.a.e. to the Organising Secretary, 17 Canonsleigh Crescent, Leigh on Sea, Essex.

Regional Secretaries

In 1976 new Hon. Secretaries were elected in Wales and in Ireland:

Hon. Sec. B.S.B.I. Committee for Wales: Mr G. Ellis.

Dept. of Botany, National Museum of Wales, Cardiff CF1 3NP.

Hon. Sec. B.S.B.I. Irish Regional Committee: Miss E. Ni Lamhna.

Irish Biological Records Section, An Foras Forbatha,

St Martin's House, Waterloo Road, Dublin 4.

MARY BRIGGS

NOTICES

TED LOUSLEY MEMORIAL FUND

Members will be interested to know the result of this appeal and how the money has been used. Mrs J. E. Smith, Hon. Treasurer of the Surrey Flora Committee, tells us that the excellent response provided £322. Of this, £123 (including incidentals) was spent on the coloured dust-jacket for the new Flora of Surrey and the remainder, augmented by an anonymous gift, now totals £225 which has been invested in National Savings Certificates and will be held against the time when a Supplement to the Flora becomes necessary.

ALTERED DATES OF MEETINGS

The indoor meeting at

WAKEHURST PLACE, SUSSEX

arranged for Saturday 15th October has now been postponed one week, till

22nd OCTOBER, 1977

commencing at approximately 11 a.m.

A number of members have already indicated their intention to attend, and others wishing to join the party should contact Lynne Farrell, at Monks Wood as soon as possible and certainly no later than 31st August, 1977.

ST ASAPH (Clwyd) FIELD MEETING

This meeting shown in the programme as taking place on 4th June, has been brought forward to

21st MAY, 1977

CAMBRIDGESHIRE (Aliens) MEETING

31st JULY, 1977

The Field Meetings, 1977, Programme (p. 3) shows this meeting commencing at 1.30 hrs. This should read 11.30 hrs, and explains the instruction to bring lunch.

ADVANCE NOTICE

RECORDERS' MEETING

The sixth in this series of meetings for recorders, local flora writers, and any members with interests in field recording, will be held from:

Friday, September 9th to Monday, September 12th

at

Beamish Hall, Stanley, Co. Durham

Accommodation, which will be limited to 60, will be available from 17.00 hours on Friday. The main programme for the Saturday and Sunday will concern the future keeping of records within the society, and the relationship to the Biological Records Centre and Local Records Centres in the future. For those who can stay on there will be a day of field excursions in Weardale on the Monday, led by Rev. G. G. Graham, with special emphasis on Roses.

All county recorders will receive a programme of this meeting in April 1977. Other members who would like details and a programme, please send name and address to:-

Dr F. H. Perring
Biological Records Centre,
Monks Wood Experimental Station,
Abbots Ripton,
Huntingdon, Cambs. PE17 2LS

CONSERVATION COURSE

Mrs Joyce Pope is leading a conservation course (on animals and plants) from the British Museum, August 16th-19th. Excursions will be to Kingley Vale, near Chichester, Sussex, and to Jersey Zoo.

Cost: £30. Details from Mrs J. Pope, B.M. (Nat. Hist.), London SW7 5BD.

THE BIOLOGICAL CURATOR'S GROUP, GEOLOGICAL CURATOR'S GROUP AND SYSTEMATICS ASSOCIATION

The Function of Local Natural History Collections

A conference to be held at the University of Liverpool Halls of Residence, 22/23 September, 1977.

In this country there is a wealth of botanical, zoological and palaeontological material held by varied provincial institutions. The purpose of this meeting is to assess the relevance of such collections to the solution of scientific and environmental problems and to stimulate co-operation nationally. Speakers will include those involved professionally in organising collections and a wide variety of users.

Further details, programme and registration form are available from:

Mr E. F. Greenwood,
Assistant Director (Academic),
Merseyside County Museums,
William Brown Street,
Liverpool L3 8EN.

THE WELSH BULLETIN

Formerly known as The Welsh Region Bulletin, now renamed at the request of the Welsh Region Committee, this duplicated publication contains news of B.S.B.I. events in Wales. Reports of the Annual General Meeting and the field meetings on the next day are usually given in the winter bulletin, together with summaries of the annual lectures, the Secretary's report and programmes for the next A.G.M. and field meetings for the year. The summer bulletin usually contains short articles and reports of Welsh field meetings, but the content of both numbers of the Bulletin may vary from time to time. For those residing outside Wales the price of the Bulletin is 15p per copy, including postage. It is obtainable from the Department of Botany, National Museum of Wales, Cardiff CF1 3NP.

S. G. HARRISON

NEWS FROM MONK'S WOOD

Endangered British Plants

In preparing a Red Data Book of rare and endangered flowering plants and ferns in Great Britain we concentrated on species which had 15 or fewer 10 km square records post-1936 when the *Atlas of the British Flora* was first published.

Fortunately further search and research disclosed that many species, such as *Crepis mollis* and *Carex digitata* were not so rare as the *Atlas* suggested and these species could be dropped from consideration. However it was apparent that another group of plants, especially arable weeds, and plants of wetland habitats have declined to critically low levels during the last 15 years, without our fully appreciating this. Search of our records here and consultation with members of the Records Committee suggested that the following species might now be rarely if ever seen.

- | | |
|----------------------------------|-----------------------------------|
| * <i>Agrostemma githago</i> | <i>Limosella aquatica</i> |
| <i>Ajuga chamaepitys</i> | <i>Melittis melissophyllum</i> |
| * <i>Alopecurus bulbosus</i> | * <i>Mentha pulegium</i> |
| * <i>Bupleurum rotundifolium</i> | <i>Myriophyllum verticillatum</i> |
| * <i>Campanula patula</i> | * <i>Oenothera stricta</i> |
| * <i>Campanula rapunculus</i> | <i>Orchis ustulata</i> |
| * <i>Caucalis platycarpus</i> | <i>Polygonum dumetorum</i> |
| <i>Caucalis latifolia</i> | <i>Polygonum mite</i> |
| * <i>Centaurea calcitrapa</i> | <i>Ranunculus parviflorus</i> |
| <i>Centaurea solstitialis</i> | <i>Rosa agrestis</i> |
| * <i>Chenopodium vulvaria</i> | <i>Rosa elliptica</i> |
| <i>Cuscuta europaea</i> | <i>Scandix pecten-veneris</i> |
| <i>Dianthus armeria</i> | * <i>Sisymbrium irio</i> |
| <i>Euphorbia platyphyllos</i> | <i>Torilis arvensis</i> |
| * <i>Filago apiculata</i> | <i>Turritis glabra</i> |
| * <i>Filago spathulata</i> | <i>Valerianella dentata</i> |
| * <i>Galium tricornutum</i> | * <i>Valerianella rimosa</i> |
| * <i>Gastridium ventricosum</i> | <i>Viola lactea</i> |
| * <i>Lactuca saligna</i> | <i>Wolffia arrhiza</i> |

This list was sent to County Recorders in March 1976. They were asked to send us all sitings of these species known to them since 1960. They responded magnificently and as a result it is possible to select from this list 17 species which on their evidence and that of recently published Floras and other records received by BRC had a claim to be included in the Red Data Book. However it seems possible that members of the B.S.B.I. may have information about these species not yet known to County Recorders. Listed below are the 10 km squares for each of these 17 species from which we have post-1960 records. If you have records from any other squares would you please send details of locality, habitat, date and grid reference to us at BRC, Monks Wood Experimental Station, Huntingdon—and if you see *any* of these species anywhere in 1977 please let us know.

L. FARRELL
F. H. PERRING
February 1977

DECLINING SPECIES (asterisked on the above list)

1. *Agrostemma githago*
(These are the only records we have of this species as an arable weed.)
GB—38/06; 52/56; 62/29; 63/20; Ireland—24/04, 55;
All other records are probably casuals.
2. *Alopecurus bulbosus*
20/98; 22/31; 30/08, 67; 31/48, 58, 59; 41/31; 51/40, 77; Guernsey.
3. *Bupleureum rotundifolium*
20/46, 97; 30/09; 41/16; 43/90; 53/91; 62/28; 63/20;
Are any of these this species?
4. *Campanula patula*
32/13, 27, 34, 36, 38, 44, 72, 73; 41/57, 84, 93, 95; 42/06;
5. *Campanula rapunculus*
27/96; 36/67; 40/19; 41/31, 57; 42/40; 51/25; 52/71, 81;
6. *Caucalis platycarpus*
44/37; 51/18; 52/97; Last record 1962.
7. *Centaurea calcitrapa*
40/48; 41/73; 42/04; 50/59; 51/10, 20, 40, 65, 76; 52/10, 44, 45; 53/83; 62/22; Jersey.
8. *Chenopodium vulvaria*
30/48; 40/89, 99; 41/42, 90; 42/19, 50; 51/07, 08, 10, 17, 27; 52/03, 10, 46; 61/02; Guernsey, Jersey.
9. *Filago apiculata*
41/84, 94; 51/04, 05; 52/72; 53/60, 91; 62/13, 45; 63/02;
10. *Filago spathulata*
41/33, 39, 58; 51/25, 26, 66, 76; 52/30, 44, 56; 63/03;
11. *Galium tricornutum*
31/87; 41/28, 54, 58, 76; 44/43; 51/50; 52/02, 44, 45, 51, 52, 71;
12. *Gastridium ventricosum*
10/83; 21/48; 30/78; 31/42, 57; 40/39; Guernsey, Sark.
13. *Lactuca saligna*
51/77, 78, 91; 61/06;
14. *Mentha pulegium*
10/72; 20/84; 30/78; 32/13; 40/39; 41/77, 92, 93; 43/50; 51/01, 10, 30, 32, 41; Jersey.
15. *Oenothera stricta*
20/97, 98; 21/43; 22/40, 69; 31/25; 40/08, 68; 61/35, 36; Guernsey, Herm, Jersey.
16. *Sisymbrium irio*
20/87, 99; 34/80; 36/43; 51/18, 28, 37, 38, 65; 52/77; 53/58; 61/25, 26, 35;
17. *Valerianella rimosa*
31/51; 41/34, 58; 42/02; 43/40; 51/32, 81; 52/02, 03;

THE BLACK POPLAR SURVEY—A PROGRESS REPORT

Since my account of the Black Poplar Survey in *B.S.B.I. News* No. 9 (March 1975) there are several interesting developments to report. I mentioned Mrs D. Stephenson's finding the species in the Vale of Clwyd. Encouraged by her discovery in North Wales of a species hitherto unknown to occur there, she and her husband, having got their eyes well in, have found *P. nigra* to be frequent in three river valleys, the Conway, the Clwyd and the Dee, to occur in three new vice-counties (49, 50 and 51) and in 15 10-km grid squares! These records included some fine mature trees at least 200 years old.

The Survey having been going some while, I found last year that, scattered over the country, there were a number of records needing confirmation, some for checking identification and others for locating down to a six-figure map reference. So I applied to the World Wildlife Fund for a grant from their fund earmarked for the survey of endangered British species and was lucky to get the help I needed to tour round England and Wales from Devon to South Humberside via Gwent and Clwyd. It proved a highly successful and worthwhile safari covering 1,640 miles and taking 15 days.

As new records keep on coming in, and as some more checking is necessary, the Survey will be remaining active at least until the end of 1977. So please continue to send me records. I need them particularly from Kent, Northamptonshire, Leicestershire and Nottinghamshire, still all blank on the distribution map!

E. MILNE-REDHEAD

A fuller report will appear in "News" 16.

ELODEA NUTTALLII

The field characters of *Elodea nuttallii* (Planch.) St John identified from Amberley Wild Brooks in W. Sussex by Prof. C. D. K. Cook, do not entirely match the key printed in *B.S.B.I. News* 12, pp. 14-16. In correspondence, Prof. Cook agreed that he had also found that "in deep water and in winter the leaves (of *E. nuttallii*) are reflexed, more or less rigid and dark green." Other members may have been puzzled by these characters not corresponding to the key (3B). Also queried was "female flowers without petals" (6B) and Prof. Cook suggests "without showy petals" is a better description here. Characters distinguishing *E. nuttallii* from *Hydrilla* sp. have been described by M. J. P. Scannell and D. A. Webb in *The Irish Naturalists' Journal* 18, (II): 327-331 (1976), and in discussion there seems to be general agreement that the plant described under *Elodea nuttallii* in *Flora of the British Isles*, Clapham, Tutin and Warburg is not *E. nuttallii*.

In many field observations (from one area only) the most obvious characteristic of *E. nuttallii* was variability. The plant varied at different seasons, in different water levels and at different stages of growth. It was not unusual to find plants completely unlike in superficial appearance in adjoining dykes; similarly the new

growth in late summer was so unlike the older lower parts of the plant that if detached, it was difficult to reconcile them as parts of the same plant. In our experience, only the new growth agreed with J. H. Chandler's description (of shallow water specimens?) in *B.S.B.I. News* 12, p. 16. At Amberley, leaves of *new* shoots in late summer were pale green and flaccid, while leaves lower down the stem were dark green, close-whorled, recurved and rigid. The basal leaves were consistently in opposite pairs, distinguishing the plants from *Lagarosiphon* sp. which has spirally arranged leaves.

When *B.S.B.I. News*, 12 went to press Prof. Cook was reluctant for the key to be published. He wrote that *Elodea* and *Hydrilla* were in need of complete revision. But in view of the new records of *E. nuttallii* in Britain then being reported (J. H. Chandler, R. C. Palmer *Watsonia* 10.4) and the consequent opportunity to record the distribution spread, it was felt that the timing was crucial and Prof. Cook did then agree to the publication of the key so that members could be alerted to the new *Elodea*. He had told us that in some European countries *E. nuttallii* had replaced *E. canadensis* in about 10 years, and Dr F. H. Perring already has an interesting series of maps which were displayed at the Annual Exhibition Meeting 1976 [and one published in "New Scientist" 72 (1032): 725 (1976)] showing the advance of *E. nuttallii* in Britain in 1974, '75 and '76. We look forward now to Prof. Cook's revision of these confusing species.

The problem at Amberley Wild Brooks was distinguishing between the two spp. of *Elodea*.* *E. nuttallii* there was noticed first in 1974, but not named until 1975. A flowering specimen was exhibited at the 1975 Exhibition Meeting (*Watsonia* 11, 2) and it was estimated that the plant that year had colonised approx. 50% of the dykes. During the hot summer of 1976 it flowered profusely and continuously from May-October, and spread throughout the Wild Brooks so that by late summer *E. canadensis* was only visible in 2 dykes. We did find that in some at least of the dykes apparently filled with *E. nuttallii*, some *E. canadensis* plants were growing *below* the *E. nuttallii*, demonstrating the suppression of *E. canadensis* and the dominance of *E. nuttallii*? In separating these 2 species of *Elodea* we found that the only consistent characters were shape of leaf tips (acute in *E. nuttallii*) and the width/length proportion of leaves as shown in the single leaf diagrams in *B.S.B.I. News* 12, p. 15 (after Haeupler), and the *size* of the flowers. Both colour and texture of leaves were completely variable in both species, and in the field we could not detect a difference in structure of flowers, but the size of these was constant: *E. nuttallii* 2.5mm, *E. canadensis* 5.0mm, as measured by our President E. L. Swann on his Norfolk specimens and shown by figures in *Flor Neerlandica* 1 (6): 23-26 (1964). Now we anticipate many records of this *Elodea* from new sites in 1977.

I would like to acknowledge thanks to Prof. C. D. K. Cook for determinations and permission to quote his comments, and to thank Mrs C. Esplan, Mr and Mrs S. J. Heyward, Mr and Mrs G. Bishop and Mr E. L. Swann for field observations.

MARY BRIGGS

*Prof. Cook cites *Rhodora* 78 (816): 739-749 (1976) which shows vegetative characters to be unreliable in separating the two species in Massachusetts.

NO COWSLIPS FOR WINE—PLEASE!

The following Press Release has been sent to organisations concerned with the countryside and with wine-making, and we hope our members will make this known as widely as possible:

“The B.S.B.I. is frequently consulted for advice on the conservation aspect of making wines from wild plants. While in general it is felt that using in moderation wild plants known to be common and locally widespread should not harm those species, we would ask that attention should be given to avoiding the use of wild plants that are becoming rare or decreasing. Particularly the B.S.B.I. would urge that *Cowslip flowers* should NOT be used for the making of wine. Cowslips are known to be decreasing in numbers throughout Europe and the quantities used for wine-making could add a serious threat to the survival of this attractive wild flower.”

ADVENTIVE NEWS 7

Compiled by Eric Clement

Bean Sprouts—The Cover Picture

A. C. Leslie reports that his record of plentiful *Glycine max* (Soya Bean) at Cambridge Sewage Works in *News 14*: 13 should be amended to *Vigna* sp. These two plants are similar in leaf and indumentum but *Glycine* has subsessile, drooping pods in the leaf axils. Our cover drawing of the Cambridge plant, beautifully executed by Graham Easy, should encourage others to record this species: its primary source must surely be the increasingly popular “Bean Sprouts” in modern vegetable seed catalogues. It shares with *Hedera* and *Ipomoea* a variable foliage: the leaflets may be very deeply 3-lobed or entire (as in the drawing). Careful study reveals that we have been misnaming the species that occurs in Britain—all our records are of the very closely allied *V. radiata* (L.) Wilczek (*Phaseolus aureus* Roxb.) and none are of *V. mungo* (L.) Hepper, the name we have used to date. The literature is much confused and many plants in national herbaria are wrongly labelled, largely because Black Gram was given the specific name *mungo* instead of Mung Bean (or Green Gram) which is *radiata*. Furthermore, many books wrongly separate them on the shape and colour of the seeds but various cultivars make this quite fallacious—our plants (from the English name!) should have olivaceous seeds, but in fact, those that I have seen, ripened to virtually black. More accurately they may be separated as follows:

Hairs on pod up to c. 1 mm; seeds with almost plane hilum—*V. radiata*.

Hairs on pod c. 2·5 mm; seeds with hilum margin thick, raised and usually cracked—*V. mungo*.

More About *Euphorbia Maculata* L.

Since my note in *B.S.B.I. News* 13: 21 four further records of *E. maculata* in Britain have come to my attention.

1. Weed in rock garden, RBG, Kew (Surrey), July 1917. **K**.
2. Found regularly as a weed around the greenhouses (outside) at RHS Garden, Wisley (Surrey) when K. A. Beckett was a student there. This site is now a lake and apparently no voucher specimen exists.
3. Weed of plant pots in Cefn Farm Garden Centre, Bynea, near Llanelli (Carmarthen), July 1976. R. Pryce, comm. R. G. Ellis. **NMW**. Det. EJC. Mrs H. R. H. Vaughan also brought one of their cacti (plus weed!) to the October Council meeting.
4. Weed of cactus pots, Woodford Garden Centre, Woodford (Cheshire), 1976. G. M. Kay. Hb. EJC.

Mr Q. C. B. Cronk wrote to me from Ascension Island itself informing me that the abundant, prostrate spurge there is *E. prostrata* and not *E. maculata* (but no cactus nursery was explored!). Possibly our weed came to us from nearer home—e.g. the Netherlands? Note the record in *Gorteria* 2(9): 111 (1965) “Eindhoven, in florists, as a weed between cacti, July 1964 (H. Ackerstaff)”—my translation.

Mr and Mrs S. J. Heyward, by kind permission of Holly Gate Nurseries Ltd. at Ashington, have now collected good herbarium specimens for **BM** and **K** (no previous Br specimens existed in **BM**). They remark that the transverse furrows on the minute seeds (0·8 mm) are more prominent (under the microscope!) than our cover drawing showed, and that the young plants are erect at first and not immediately prostrate (but this applies to many “prostrate” plants!). Rosemary Wise’s drawing (front cover *News* 13) certainly compares well with the one in *Selected Weeds of the United States* (U.S. Dept. of Agriculture, 1970)—not the illustration labelled as “*E. maculata* L”. (which is really *E. nutans* Lag.), but the one of *E. supina* Raf. ex Boiss.

The *E. prostrata* record that I quoted in *News* 13, which is fully written up in *Journ. Bot.* 36: 32 (1898), needs rechecking if a voucher can be found (at Birmingham?). I notice in **K** that this name is given to an unlocalized plant “Found as weeds on cultivated ground. Comm. A. T. Rake, Besterne Close, Burley, Hants, 31/7/1911’ which is, in fact, correctly, *E. maculata*. Could this possibly be of Christchurch origin?—Burley is suspiciously close!

Alien Umbelliferae—A Reply

Prof. T. G. Tutin’s note in *B.S.B.I. News* 14: 16 is of considerable interest. In common with many others, I have never seen any one of the six species listed on any rubbish tip or in shoddy; the only wool record for Br (according to notes from Miss M. McCallum Webster, J. E. Lousley and T. B. Ryves) for these species is one for *Caucalis platycarpus* at Galashiels (Selkirk), June 1966, collected by MMcCW, and now at **E**.

In more permanent situations only *Smyrniium perfoliatum* seems to prosper nowadays: e.g. in abundance in North Marine Park, South Shields (Durham) and in various London shrubberies (Kew, Battersea and Chelsea). *Levisticum officinale*, once an escape from cultivation, is now such a rare herb in gardens as to be absent

even from the 4 vols of *RHS Dict. of Gardening* (but it reappears in the *Supplement*), whilst *Laser trilobum*'s claims rests only with the long-persistent planting of it at Cherry Hinton, near Cambridge, where it was recorded from 1867-1910. With changing agricultural practices, particularly cleaner seed, the two *Caucalis* spp. and *Bupleurum rotundifolium* have virtually (or totally) disappeared.

B. lancifolium Hornem. (1813) is, of course, a frequent casual nowadays, probably exclusively from caged-bird (and wild-bird) seed grown in NW Africa and S. Spain. Only the botanical treatment is in doubt! See my note in *B.S.B.I. News* 10: 13, which J. E. Dandy assured me was correct if the two "splits" are not recognized as being separate species. But, unfortunately, I now realize that this is unsound taxonomy as they are minutely, but clearly, separable on several specific characters according to, amongst others, S. Snogerup in *Flora of Turkey* 4: 399. He has determined countless sheets in **K** from Britain and Europe; all but one (from Greece, *Atchley* 1831) are, as Tutin suggests, "*B. intermedium* Poirlet in Lam." This name, however, is clearly nomenclaturally incorrect since Poirlet's original description reads as "*Le bupleurum intermedium*, Lois. Not. 45, est une variété du *B. rotundifolium*, à fleurs d'un jaune-orangé. . . ." He does *not* give it *specific* rank. The earliest *specific* name for this split seems to be the familiar one of *B. subovatum* Link ex Sprengel (1818)—the name we should now again use. D. McClintock in *The Wild Flowers of Guernsey*: 137 (1975) is undoubtedly wrong in plumping for the alternative split. Similarly *CTW* 1st edn. was correct, whereas *CTW* 2 was incorrectly amended. We are, in fact, back again to a treatment similar to de Candolle in his *Prodromus* 4 of 1830!

Snogerup separates them as follows (but beware of poorly developed fruits!):

Fr 2.2-3.1 mm, stylopodium 0.8-1.1 mm [broad]—*B. lancifolium*.

Fr 3.7-4.7 mm, stylopodium 1.2-1.5 mm [broad]—*B. subovatum*.

There is, to my knowledge, no recent record for genuine *B. lancifolium* (but Druce's *Br Plant List*, 1928, includes both taxa, as varieties—possibly in error?)

T. G. Tutin has very kindly confirmed my suggestions on the *Bupleurum* nomenclature.

Our present knowledge of adventives in Br is very scattered. Has anyone the time and inclination to list the alien species in any local or national herbarium?—it would be invaluable to me and others. Identification knowledge is unnecessary for this task; at present we do not know where many voucher specimens are, or whether they exist at all.

Please continue to send in records and problems—criticisms and corrections are equally welcome—I continue to strive after the very elusive botanical truths about aliens. Drawings are coming in encouragingly: as well as larger, detailed illustrations suitable for the cover or a full page, small but accurate sketches of aliens, or critical parts of them, would be equally welcome.

I am indebted to D. H. Kent for checking my draft and for drawing my attention to the *Gorteria* references.

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FURTHER ADVENTIVE NEWS

ORLAYA KOCHII Heywood in Cambs.

In *B.S.B.I. News* No. 14 (1976) Prof. Tutin queried the present status of a number of alien umbellifers which, though well established in our Floras seem less well established in the field. Two of these, *Caucalis platycarpus* L. (1753) and *Turgenia (Caucalis) latifolia* (L.) Hoffm. have occurred in Cambs., but, as Evans (*A Flora of Cambridgeshire*, 1939) indicates, their heyday was the late eighteenth and early nineteenth century, when both were naturalised. The most recent record of the former appears to be that of R. P. Scase from Bourn airfield, 1944-1945. *Turgenia* was last noted in Cambridge by Dr F. H. Perring as a bird-seed alien, in 1963.

Recently, whilst reviewing the herbarium material of these two in **CGE**, Mr P. D. Sell discovered a sheet of what appears to be a new British alien; originally determined as *Caucalis platycarpus*, the specimen is in fact *Orlaya kochii* Heyw. The details are as follows: "poor stony soil, De Vere Hotel building site, Mt Pleasant, Cambridge 26 May 1971 P. J. Matthews". There are no other British specimens in **CGE**, but many European sheets were subsequently found to be incorrectly labelled and this almost certainly applies elsewhere.

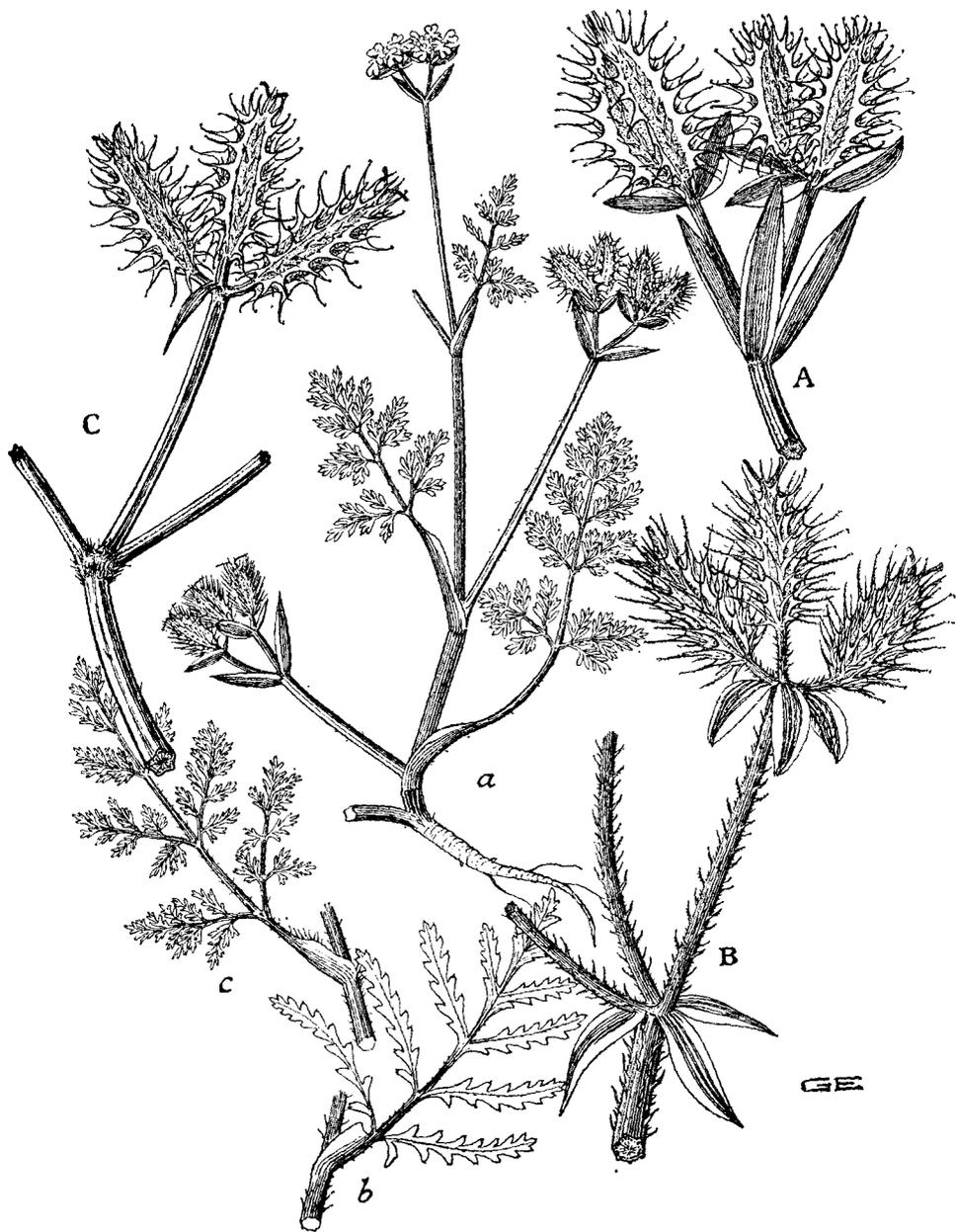
Graham Easy has provided the excellent comparative illustrations of this closely related trio and the following key should help separate them:

1. Stems (at least above) with numerous, long, barbed setae and very numerous, short, smooth setae; leaves 1-pinnate; mericarp spines \pm equal
Turgenia latifolia
1. Stems glabrous or sparsely hairy (especially below); leaves 2-pinnate; mericarp spines markedly unequal 2
2. Bracts lanceolate with broad scarious margins, as long as or exceeding the peduncles; outer florets with markedly unequal petals
Orlaya kochii
(*Caucalis platycarpus* L. 1767 et. auct., non 1753)
2. Bracts absent or 1-2 linear, scarious margin absent or very narrow, much shorter than the peduncles; outer florets with subequal petals
Caucalis platycarpus
(*Caucalis daucoides* L. 1767, non 1753, nom. illegit.)

For clarification of the synonymy, which has been responsible for much of the difficulty in identification in the past, one can do no better than consult Heywood (*Agronomia Lusitanica* 22 (1960): 11-13), where *Orlaya kochii* was first published.

Incidentally, *Smyrniium perfoliatum* which Prof. Tutin also puts in his list of doubtfully naturalised plants, is a long established alien in Surrey; according to Lousley (*Flora of Surrey*, 1976) it is still spreading and he reports it as a weed in Battersea Park since 1939.

A. C. LESLIE



A, a *Orlaya kochii*

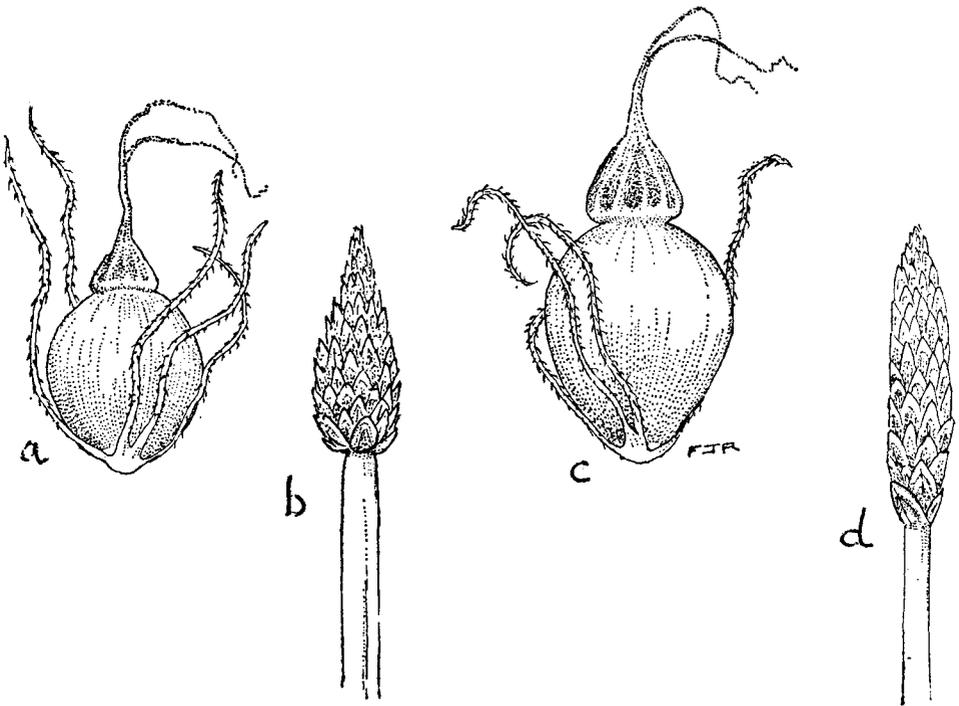
B, b *Turgenia latifolia*

C, c *Caucalis platycarpus*

Eleocharis Austriaca in N. Yorkshire

The last two seasons have seen considerable extensions to the known range of *Eleocharis austriaca* Hayek in the Craven Pennines of North Yorkshire. Although known in Yorkshire since first identified in Britain in 1960 (from specimens collected on the River Wharfe near Buckden in 1947 by N. Y. Sandwith) its few other sites discovered since then are all in the North Pennines on the Irthing and North Tyne Rivers, Kielder Burn, and in South Scotland (Tima Water).

My first acquaintance with the species was in July 1975, in the Buckden locality, on an excursion with the Yorkshire Naturalists Union. I was struck immediately by its unexpectedly distinctive "jizz". The tall straight stems are curiously inflated and brittle, with a circular cross-section (but often with a longitudinal groove down the top quarter or so), and their light green colour contrasts with the usually darker green, narrow, flexible and oval stems of *Eleocharis palustris*. Most of the ripe spikelets are short and broad, and a proportion are usually markedly conical (very few spikelets of *E. palustris* are as broad, and then not pointed). As a final confirmation, C.T.W. characters may be applied. The style-base in ripe fruit is obviously narrow and about a tenth of the bulk of the nut, whereas that of



a, b *Eleocharis austriaca*

c, d *Eleocharis palustris*

E. palustris is swollen and often a quarter of the bulk of the nut (See the excellent description and drawing in Walters, S.M. (1963) *Eleocharis austriaca* Hayek, a species new to the British Isles. *Watsonia*, 5: 329-335).

The value of "getting one's eye in" was amply demonstrated a fortnight later when I found that the extensive patches of spikerush in an "ox-bow" pool by the River Ribble below Settle—a favourite stamping-ground I had visited dozens of times—had every appearance of *E. austriaca*, and my suppositions were kindly confirmed by Dr S. M. Walters. Further searches along the Ribble from Long Preston to Ribblehead revealed a further dozen colonies along twelve miles of river. Most were in ditches, springs and backwaters by the river, but one was in the spring-fed pools of a disused limestone quarry at Ribblehead, where it grew with *Typha latifolia*. Mrs Elisabeth Shorrocks also found two colonies in acidic pools over 400 ft. above the river near Settle. In 1976 the Wharfe was searched, and four more colonies located—some below the original Buckden site and one, amazingly, in a spring-fed pool among old gravel workings below Ilkley. This was at an altitude of only 200 ft., and 25 miles below Buckden, again with *Typha latifolia*.

These finds suggest that the species is still much overlooked, and my purpose in this note is to urge readers to keep a look out for it in 1977. The range of sites now known suggests an unexpected latitude in the plant's requirements, and it will be worth looking anywhere that combines what seem to be common elements in its habitats: a stable gravel substrate with some silt deposition, slow water movement, but some protection from spates, and a very open community in water usually between 1 and 12 in. deep. Suitable sites are therefore in pools, runnels and springs beside upland rivers, but seldom along the exposed banks themselves, except where there are quiet bays. In such places it grows either along or fringing the communities of *Equisetum fluviatile*. I wonder if some reservoir inflows may provide the right sort of habitat, and if other artificial workings are being colonised?

I would be very grateful to receive records from new localities, and undertake to name—or have named—putative specimens. Besides the obvious gap between its two areas of distribution, there seems no reason why *any* hilly or mountainous region in Britain may not support colonies.

F. JEREMY ROBERTS

c/o "Morlais", Llanfair, Harlech, Gwynedd

ADVENTIVES OF NEWPORT (GWENT) RUBBISH TIP 1973-75

A field meeting here is arranged for 24 Sept., 1977

The tip covers many hectares between the River Ebbw and a polluted tributary, on the Level of Mendalgief in V.C. 35 Grid Ref. 31/30-86. A large expanse of waste land being levelled for an extension of Newport Docks lies adjacent to the tip.

The deposited rubbish consists of household and industrial waste, with rubble and soil from the town. The rubbish is spread and covered with a layer of "soil", thus the virgin surface is ripe for colonisation by aliens, which thrive for a season, unless covered by fresh material. In the second season native weeds take over and

the adventives appear in new bare areas, thus the movement that causes the destruction in one part promotes colonisation in another part.

The seeds could come from a number of sources: mixed seed used by bird lovers or flower arrangers, filling from cushions, bedding and soft furniture. The large stocks of imported timber, on the nearby docks site, must also contribute to the variety.

The flora is at its best from July onwards and is dominated by such weeds as *Atriplex patula*, a range of *Chenopodium* spp., many grasses, containing a number of aliens that are re-appearing each year, *Helianthus annuus*, *Calendula*, *Cosmos bipinnatus*, *Antirrhinum*, *Lychnis coronaria* and other garden flowers, *Tripleurospermum* and other mayweeds.

My first visit to the tip was in July 1973 when I enlisted the help of my friend Colin Titcombe so that more ground could be covered. A large patch of tall alien grasses another of *Cannabis sativa* and *Cichorium intybus* plants soon aroused our excitement. Later in the year, several dry specimens of *Cirsium oleraceum* indicated that the plants had flowered earlier.

The grasses have been sent to Dr Hubbard and his comments are in quotes. Among the tall, stout-culmed species were large numbers of *Panicum miliaceum* with drooping loose panicles and seeds fed to cage birds. *Echinochloa crus-galli*, without ligules, but with and without awns, and its variety *breviseta*, "with awnless and very short-awned spikelets on the same plant". *Echinochloa utilis*, a derivative of *E. crus-galli* and grown for its seeds has denser panicles, always awnless and usually purplish or greenish. *Setaria italica*, with its drooping, heavy, green, spike-like panicles are often lodged between the bars of bird cages. "The mature floret (whitish) disarticulates from the rest of the spikelet when the latter is squeezed at the base. It may or may not have short, long, pale or purplish bristles." All have occurred on the tip. Slightly smaller examples were *Setaria viridis* and *Setaria glauca*, which differs from the former by its broader spikelets, shorter upper glume, golden bristles, and transversely wrinkled upper lemma. *Phalaris canariensis* was very frequent. *Agropyron caninum* ("an unusual habitat") has survived three years. *Lolium temulentum*, both awned and awnless, was present with its variety *arvense*, a larger upright plant, with upper glumes far exceeding the length of the spikelets *Lolium rigidum* "an annual with the glume $\frac{3}{4}$ - $\frac{1}{2}$ length of spikelets and with awnless lemmas", *Lolium rigidum* x *L. multiflorum* "an annual with leaf blades rolled in bud, afterwards flat. Glume $\frac{2}{3}$ - $\frac{3}{4}$ length of spikelets, upper lemmas weakly short awned, other lemmas awnless, found in bird seed", and a form of *L. perenne*, known as *ramosum*, with a branched spike, were interspersed with the common form.

In 1974, in addition to those mentioned *Catapodium rigidum* var. *majus* with more and longer branches turned up far from its normal home in the Channel and Scilly Isles and the Mediterranean Region. A single plant of *Ammi majus* with its long fine rays and pinnatifid bracts having linear segments appeared for the only time in the three years. *Mercurialis annua*, uncommon in Gwent, had a scattered distribution, whereas *Lepidium latifolium* formed a "hedge" several metres long. *Chenopodium ficifolium*, *C. rubrum* and *C. polyspermum* were frequent. One plant of *Puccinellia rupestris* flowered 50 metres from the far bank of the polluted stream, where a small patch has existed for the period.

The long hot summer of 1975 followed by rain in late August produced a bumper crop of adventives including *Sorghum halepense* (Johnson's grass) a native of Europe and a pest of arable fields in U.S.A. It is a robust plant up to a metre in height, the purple and white panicle of 3-5 erect branches having purplish 4-5 mm lemmas terminating in 10 mm long bent awns. A solitary *Sorghum bicolor* with leaves up to 30 mm wide and a densely clustered panicle of plump spikelets whose lemmas bear a small purple patch, made its only appearance. Among other grasses seen were several stunted specimens of *Bromus inermis* and a fine example of *Oryzopsis miliacea* the latter presenting a circle of flowering culms arising from a common centre. Its pale, awned spikelets, containing one floret, contrasted with the dark, rough branches. *Triticum durum* (Macaroni wheat) was not uncommon and the 23 cm long awns made it conspicuous.

Miss M. B. Gerrans (B.M.) determined *Ammi majus*. Mr R. D. Meikle *Psoralea americana* and *Atriplex hortensis* "Rubra". Mr E. J. Clement determined or confirmed the identity of other adventives.

Psoralea americana, which in spite of its name is from southern Europe and N. Africa, occurred as a single woody plant 14 cm. high with flowers having white standards and wings but bluish keels. This legume had leaves of three leaflets and axillary flowers that did not set seeds. The *Atriplex hortensis* had shiny, beetroot-red leaves and large, flat, round fruits. My herbarium specimen however has lost the red colour. *Solanum cornutum* is a yellow flowered plant, covered with prominent golden prickles, particularly on the globular fruit, and leaves deeply lobed. A cluster of *Coriandrum sativum* plants on a dry area were restricted in growth to unbranched specimens less than 13 cm. tall. One plant was much branched and displayed flowers with some enlarged whitish petal lobes and small, hairless globular fruits. *Chenopodium strictum*, *C. glaucum*, *C. murale*, *C. rubrum*, *C. polyspermum*, *C. ficifolium*, and *C. album* were, except for the first three, widespread. *Sinapis alba*, distinctive in its fruits which have a hairy seed-bearing portion and a flat seedless beak, and *Erysimum cheiranthoides* with deep yellow flowers and siliqua were crucifers that occurred in small numbers among *Hirschfeldia incana* that has spread in widely from the neighbouring dock area. Composites were frequent; among those not already mentioned were *Chrysanthemum segetum* and *Centaurea diluta*, the latter, a knapweed from Algeria and Morocco with long pale pink ray florets forming a flower like a small *C. scabiosa*, but having very light green involucre bracts. Of interest was an *Artemisia biennis* that did not quite match up with those in E.J.C.'s herbarium. Three more composites were *Bidens tripartita*, *Guizotia abyssinica*, a tall, rather fleshy yellow-flowered plant from Africa, and *Carthamus tinctorius* (safflower) with numerous involucre bracts curling over the large flower bud. The dark green elliptical leaves have small spines on their margins. This hairless plant has not yet flowered and has only disc florets. The yellow flowers of *Citrullus lanatus* produced only small, globular fruits before the cold winds killed off these water melons. Two plants of *Amaranthus retroflexus* were found, with a red and a green form of *Amaranthus caudatus* (love-lies-bleeding). *Datura stramonium* was represented by two plants, whereas many plants of *Nicandra physaloides* (apple of Peru) were to be found. After the white-based blue corolla had done its work the heart-shaped concave sepals form a Chinese lantern around the brown berry, hence the specific name. *Melilotus officinalis*, *M. altissima* were frequent but of *M. indica*, there were two plants only.

Fagopyrum esculentum flowered briefly before it was covered by fresh debris and in late November I found the blue flowers of a single *Hyssopus officinalis* close to two flat cushions of *Galinsoga parviflora*, according to E.J.C. "an odd form, totally devoid of glandular hairs on peduncles, etc."

Though interesting, it is an ephemeral population. Some species may become a part of the British flora but the majority depend on man's activity for their survival. How long can tipping carry on here? Already the land has been raised many metres and new sites are being sought. A large marsh full of native species is being considered, "as it is just useless" in its present condition, and "therefore ideal for reclamation".

T. G. EVANS

WARBURG MEMORIAL FUND WINNER

Mr Jonathan Jones of Trebetherick, Cornwall, was awarded in 1975 a Grant from the Warburg Memorial Fund to assist with the costs of a visit to Central America between his Part I and Part II Botany at Cambridge. His main projects were the collection of seeds for the Seed Bank, Royal Botanic Gardens, Kew at Wakehurst Place, and to gain some practical experience in economic botany for his future work at the Plant Breeding Institute, Cambridge. He also hoped to see the pollination of flowers by humming birds. He has sent us the following account of his travels: -

By plane to Montreal and hitch-hiking through the States to Mexico in about two weeks, I then spent about four months in Mexico, Guatemala, El Salvador, Honduras and Nicaragua. During that time I acquainted myself with only a few of the environments offered by Central America, including desert regions (with a great variety of cacti), tropical evergreen forest, but unfortunately never in full rain forest. I stayed in Guatemala at about 9000 ft. where the climate is like Cornwall in early spring (cool, windy and rainy!) but the flora, of course, was completely different. In the few weeks I was on an island in the Carribean, what particularly fascinated me there was that nearly every flower I saw was white, scented mainly at night and pollinated by large moths. I was also intrigued by the variety of tropical fruits, seeing breadfruit, mango, coconut, guavas and various other fruits whose names I only learnt in Spanish. In the Guatemala highlands people grow cabbages, potatoes and onions, while lower down there are fields of rice, sugar cane and pineapples. This economic botany aspect particularly interested me and my travels enabled me to see how different people used the diverse resources of nature in other lands. I tried *pulque*—a Mexican beer made by fermenting the sap obtained by cutting the spike of an agave when it is just about to flower, and *mezcal*, the distilled spirit from this fermentation. In Guatemala too, by Lake Atitlan I did actually wake up in the morning to look out from my hammock and see humming birds pollinating the long red flowers of the nearby shrubs.

I much appreciated the chance to study economic botany in action, to see the incredible mixture of varieties in a Mexican peasant's field of maize (red/white/purple/waxy/large/small-grained) and to inspect all the different kinds of beans on sale in the market place. It was altogether a very rich experience. I collected 20,000 seeds of three different species requested and sent them off to the Seed

Bank at Wakehurst Place. Also I took a fine set of photographs as a pictorial record of my travels. I am extremely grateful to the B.S.B.I. and the B.B.S. for the money they contributed in order to set me off on my travels. JONATHAN JONES

IDENTIFICATION CHARACTERS IN VERONICA AND RORIPPA

B.S.B.I. News would be performing a useful function by publishing hints on identification which members have found from their own investigations to be reliable, when dealing with taxa which do not remain as constant as the books suggest.

Take *Veronica hederifolia* agg. in which I, as a weed ecologist, am interested. I have no difficulty in separating *V. hederifolia* and *V. sublobata*, which with other European workers I tend to regard as subspecies. But published descriptions may sometimes puzzle even the experienced. Corolla colour, for instance is unreliable; *V. hederifolia* petals, typically bright blue, can be much paler and even white, while *V. sublobata*, pale lilac with darker veins, may sometimes be darker. Anther colour (see P. Benoit, *Watsonia* 8: 399) is more reliable, *V. hederifolia* being blue, and *V. sublobata* whitish. Least useful is leaf lobing; pedicel length is rather better if taken with other characters. Other than chromosome number I find length of stomata on the undersides of mature leaves serves well, *V. hederifolia* ranging 36-43 μm and *V. lobata* 31-34 μm .

These two taxa tend to be separated ecologically rather than geographically North/South as some maintain. *V. lobata*, widespread in Britain, is a common garden weed also found in woodland, on clay or loamy soil. *V. hederifolia* is more local in arable land, roadsides on sandy soil, e.g. bulbfields in Cornwall and Scilly.

Anther orientation of the long stamens in *Rorippa*—introrse in *R. nasturtium-aquaticum* and extrorse in *R. microphylla*—was proposed by H. W. Howard and A. G. Lyon (*Watsonia* I: 288) but not used since. In conjunction with seed sculpturing I have found it quite reliable. Their hybrid has anthers in all directions.

I hope these two examples will stimulate others to contribute their findings. Incidentally, mnemonics are a great help in this connexion. Can anyone suggest a suitable one connecting *Salix cinera*, *S. caprea* and ridges under the bark?

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PLANTS AND YOUNG PEOPLE

This is the substance of a short talk I gave at the B.S.B.I. Exhibition Meeting in November 1976 when it was considered useful to convey the thought in it to "News" readers, and stimulate further ideas.

B.S.B.I. members have a vested interest in plant life and derive both pleasure and stimulation from studying it. Furthermore we are all concerned about the future of our native flora, and the increasing threats to it. Many of us are actively engaged in conservation schemes, but we may have overlooked a key factor in their perpetuation—the interest of young people.

From articles, talks, and conversations, it is clear that they are far keener to study birds than plants. In consequence organisations catering for bird lovers can command greater resources than the comparatively modest means available to bodies devoted to the study of plants. Merely bemoaning these facts gets us nowhere. How might the situation be improved?

Since my talk, I have received comments pointing out that some botanists *have* tried but with little success. There seems to be an initial reluctance to get interested in plants. The reasons for this are many and complex. One is that, until recently, botany was not considered a fit subject for the ablest pupils. It did not match the demands of a technological society. Latterly, the idea that we ignore plants at our peril has gained increasing acceptance.

Animals exert an instinctive appeal, and this can develop into a more sophisticated study. Moreover, it is quite normal to limit study to relatively small groups, e.g. birds, or insects. After the initial interest there follows a “hump” when a sheer effort of will to study further is required. This is easier to overcome if, as not infrequently happens, keen and knowledgeable adults are around. Some people seem to be particularly successful in stimulating young people to an effort. Do these people have a secret magic formula or is it something we all could do if we tried? My own experience suggests an approach worth trying.

Most young people nowadays expect to be told the relevance of what they are asked to do. Given the right guidance there are few things they will not undertake. Don't expect them to assist in some strenuous conservation task unless the reasons for it are made clear. Too often explanations, if given at all, are rather perfunctory, I think, so that interest wanes and further help is not forthcoming. Imaginative briefings bring immediate results, and more importantly, generate long term interest, so amply repaying the extra effort put in.

Understanding how any given habitat functions is not easily acquired but time taken to explain points as they arise is well spent. That habitats are seldom self-contained but influence and are influenced by others nearby and further away, should be stressed.

Despite high travelling costs, I find young people are prepared to visit contrasting habitats. Again, good preparation and guidance are essential if meaningful comparisons are to be made. Here a local botanist—experience with young people not necessary—could make a valuable contribution to a school field course.

Many young people need rather more than just a nature-trail if their studies are to progress. But poorly instructed and badly supervised parties not only do considerable damage to plants, animals and habitats generally, but jeopardise the prospects for future, more worthy groups. Why not institute a “grape vine” between administrators of reserves, museums, etc.? Alternatively insist on being given a reference before permitting a visit.

To conclude, some schools and youth clubs are doing excellent work with plants and young people, but their efforts would be even more productive with the help of local experts.

As B.S.B.I. members, have you considered *your* responsibility in this respect and investigated opportunities in your locality?

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BOOK NOTES

The July part of *Watsonia*, Vol. 11(4), will contain reviews of 16 books, including:

Flora Europaea, Vol. 4, edited by T. G. Tutin *et al.*

Plant Cytogenetics, by D. M. Moore

Botanical Systematics, Vol. 1, edited by V. H. Heywood

The Biology of Plants, Ed. 2, by P. H. Raven, R. F. Evert & H. Curtis

The Chemotaxonomy of Plants, by P. H. Smith

Natural History of the Lizard Peninsula (with Supplement), by F. A. & S. M. Turk

Trees and Bushes of Europe, by O. Polunin

Biogeography and Ecology of the Canary Islands, edited by G. Kunkel

Hedgerow Plants by Molly Hyde

British and Irish Orchids—a Field Guide, by D. M. Turner-Ettlinger

The Northwest European Pollen Flora, Vol. 1, edited by W. Punt

Phytosociology of Upper Teesdale, by M. E. Bradshaw & A. V. Jones

Nature through the Seasons, by R. Adams & M. Hooper

There is something for everybody in this list; for those who observe changes in the vegetation throughout the seasons as well as those who observe changes in the nuclei of meristematic cells or in plant extracts on filter paper.

After the recent *Watsonia* press date, my stock of books awaiting a mention comprises the following, only the first of which will be reviewed in Vol. 11(15), January 1978:

Tree Rings and Climate, by H. C. Fritts; Academic Press (1977). Price £16.00.

Sexual Interactions in Plants, by H. van den Ende; Academic Press (1976). Price £6.80.

A Handbook of the World's Gladioli, compiled by R. Park; The British Gladioli Society (1976). Price 60p (plus 15p postage.)

Biochemistry of Photosynthesis, Ed. 2, by R. P. F. Gregory; Wiley (1977). Price £8.50.

Light and Life, by L. O. Bjorn; Hodder & Stoughton (1977). Prices £3.45 (boards), £1.75 (paperback).

The Specificity and Action of Animal, Bacterial and Plant Toxins, ed. by P. Cuatrecasas; Chapman & Hall (1977). Price £15.00.

N. K. B. ROBSON

REQUESTS

ATRIPLEX SPP., NATIVE AND ALIEN: A CRITICAL SURVEY

I should greatly appreciate the help of anyone interested in collecting information about this genus in Britain.

The data and specimens I require can be put into a regular letter-size envelope.

In return, I will forward the determination.

For further information, write to me at the address below.

P. M. TASCHEREAU
 Department of Botany,
 The University of Manchester,
 Manchester M13 9PL

THE "FLORA OF WARWICKSHIRE" BY J. E. BAGNALL, 1891

An appeal to all members:—

In connection with a research project relating to the above book I am endeavouring to trace extant copies, and if you have a copy(ies) I should be very grateful if you would be kind enough to write to me with the following information: copy number, and, if known, date and source from which acquired, name(s) and dates of any previous owners, and any interesting inscriptions, annotations or other points of interest. In addition if you are aware of the name and address of an owner such information would be most welcome. Information will be acknowledged and postage refunded.

J. M. PRICE ESQ.

10 Bishopton Lane,
Stratford upon Avon, Warwickshire

EPIPACTIS SP.

During the summer of 1976, photographs of the raceme of an *Epipactis* plant were sent to me from somewhere in the North of England—from mixed woodland far from the sea. Examination of these close-up photographs with a x10 lens suggested that the plant was an autogamous species very closely akin to *Epipactis dunensis*.

However, subsequent microscopical examination of the seeds did not support this view. Consequently the possibility of the plant being *Epipactis muelleri* had seriously to be considered; and there were certain vegetative characters of the whole plant which were also suspicious.

Epipactis muelleri does occur in N.E. France and may well have spread to S.E. England and been overlooked. The most likely area would be anywhere S.E. of a line joining the Wash and the Isle of Wight.

The time has now arrived for closer scrutiny of all plants which look like depauperate specimens of *Epipactis helleborine* with green flowers and bifarious leaves. The critical feature will be the *absence of a rostellum*.

If any B.S.B.I. members encounter such plants in late July to middle August in the coming summer, I will be glad if they will dispatch fresh material to me without delay. It is highly unlikely that solitary plants will be found, so it is suggested that the whole plant (with the exception of the lowest two leaves and the root) be gathered by careful cutting with scissors and dispatched as dry as possible in a polythene bag. A cylindrical tube of strong cardboard is advised to obviate damage in the post. Notes on the full height of the plant together with details of the accompanying vegetation and tree-cover and nature of the soil will be helpful. Spirit material and photographs will NOT be acceptable.

As a further aid in identification it should be noted that *E. muelleri* Godfrey is not always depauperate in appearance—specimens up to 85 cm have been recorded. It is a "wiry" plant with slender stems and leaves not quite as broad as might be expected. In this species the inside of the hypochile is reddish in contrast to the dull brown found in *E. helleborine* hence the desirability of having the whole inflorescence rather than individual flowers, and the importance of *not* preserving the plant in spirit.

DR J. T. H. KNIGHT

Rivermead House,

20 Egham Avenue,

Exeter, Devon EX2 4RQ

PLANTAGO CORONOPUS L.—The Buck's-horn Plantain

Might I impose upon the good will of members of B.S.B.I.?

I am at present engaged in a taxonomic survey of this species in Britain and Ireland, and would like to obtain, either this year or next, herbarium specimens and, in particular, seed material. Herbarium specimens should be collected by severing across the base of the rosette; seed material should be collected as the whole inflorescence, including the stalk. When seed collections are made, it would be most helpful if seeds from different plants are kept separate. Site details and date of collection would also be appreciated. Postage will naturally be refunded. Should anyone require further information, I will be only too pleased to supply it.

DR BRIAN RUSHTON
*Department of Biology,
 New University of Ulster,
 Coleraine,
 Northern Ireland BT52 1SA*

FLORA OF THE NORTH-EAST OF IRELAND—New Edition

The Belfast Naturalists' Field Club have commenced working towards a revision of the Flora of the North-East of Ireland, originally prepared by Stewart and Corry and published in 1888. A second edition appeared in 1938, with a Supplement in 1972. A completely up-dated new edition is now planned which will provide a modern account of the vascular plants, bryophytes, marine algae and charophytes of the area concerned. Three counties are involved—Down, Antrim and Londonderry—and because of the large area to be covered and the paucity of field botanists in Northern Ireland, particularly bryologists and algologists, assistance would be most welcome. The projected publication date is 1988—the centenary of the first edition.

Anyone interested in assisting with field work or who has records from North-East Ireland should contact P. Hackney, Ulster Museum, Stranmillis, Belfast BT9 5AB, or the relevant county recorder.

THRELKELD AND THE IRISH FLORA

Dr E. C. Nelson, Dept. of Agriculture and Fisheries, National Botanic Garden, Glasnevin, Dublin, Eire writes:—

I am researching the works of Caleb Threlkeld (1676-1728) who was the author of "the first Irish Flora". I am anxious to trace the whereabouts of copies of his book "Synopsis Stirpium Hibernicarum", also of any letters or biographical information relating to Threlkeld who was born in Keibergh, Cumberland, 13 May 1676, and died in Dublin, 28 April 1728. Kindly send any relevant particulars to me at the above address.

EARLY LIVERPOOL FLORA

I am anxious to trace an annotated copy of William Mavor's *The Lady's and Gentleman's Botanical Pocket-Book* (1800) formerly in the possession of the late A. A. Dallman. The front page is inscribed "B. Swainson from her affectionate father. October 10th, 1816". The owner is thus assumed to be the half-sister of William Swainson (1789-1855) the eminent Liverpool naturalist.

The numerous annotations extend from 1816 to 1854 and must give a fascinating picture of the flora of Liverpool and its neighbourhood at that period. The value of these notes is enhanced by the fact that many were written over 20 years before the publication of the first *Flora of Liverpool* (Hall, 1839).

The book was known to be in Dallman's possession until at least 1949, but was not amongst his belongings that were purchased by this Museum in 1963. I would very much like to see this book and if anyone knows of its whereabouts, I would be pleased if they would contact me, Mrs B. D. Greenwood, Department of Botany, Merseyside County Museum, William Brown Street, Liverpool L3 8EN.

LETTERS

OSMUNDA

53 Wolsey Road,
Moor Park,
Northwood,
Middx. HA6 2ER

Dear Sir,

In "B.S.B.I. News" No. 14 you ask for comment on the points raised by Mrs Kingston in her letter about *Osmunda regalis* in Caithness. I cannot be sure that my comment is quite in the serious vein requested but it may be of some interest to recall the description given by Robert Dick, the barber botanist of Thurso and related in Samuel Smiles' biography of him dated 1878.

"I can yet recollect how happy I was when I found the first *Osmunda*. I was wearied and sore and sick and nearly tired of this world when I caught sight of that glorious Fern, large, radiant and flourishing among the sandstone cliffs of Dunnet. What a beauty! Almost approaching the size of a tree fern."

Dick was frequently in disputation with more academic botanists in Edinburgh and elsewhere who challenged his identification but he has generally been justified since. In one letter he said, inter alia, ". . . *Osmunda regalis*. Eh? Weel, man, were Dr Johnson of Berwick alive he would roar so loud they would hear him at Morven. *Osmunda regalis* has just as good a right to be considered a native as *Calluna vulgaris*. . . ."

The question of variety raised by Mrs Kingston might be solved in relation to Robert Dick's mid-19th century finds by reference to Dick's herbarium which has quite recently been very impressively housed in the Thurso Museum. I don't doubt his specimen of *Osmunda regalis* is available for view there.

I hope these comments may be interesting even if not directly scientific.

Yours sincerely

T. D. Walker

5 Souberie Avenue,
Letchworth, Herts.

TRAMPLING

Dear Mr Kenneth Beckett,

I was very pleased to see in your last issue (September) of the "B.S.B.I. News" the extract from Mrs Crompton's letter re. *Senecio paludosus* in which she refers to the harm caused to plants by trampling the ground around them.

I have often thought that many people are not at all careful where they tread thereby damaging the vegetation unnecessarily.

Some time ago I made up a verse about this—(copy enclosed). I wonder if you would like to put in it the next issue of "B.S.B.I. News"?

I beg to give you, friends most dear,
A gentle note of warning here—
Be careful where your footsteps go,
Plants crushed beneath your feet can't grow.
Where ere your footsteps firmly tread
Little seedlings will be dead
And bigger plants if cracked or bent
Cannot grow as Nature meant.
Do think of this, dear friends, and so
Be careful where your footsteps go.

Yours sincerely,

Harry Meyer

Department of Transport,
c/o B.E.T. Division,
Room 4/42, St Christopher's House,
London SE1 0TE

RESPONSIBILITIES ON EXCURSIONS

Dear Sir,

Dr Rosalind Smith's letter in "News" 14 has omitted to mention that the leader of an excursion has responsibilities to the members of the group.

It is most frustrating to spend one's energy on a fell-side endeavouring to keep up with a constantly receding leader who has sub-consciously assumed that all the members of the party have a mountain goat in their ancestry.

Although leaders of BSBI/CSSF excursions are probably good botanists, they may not all be mountain leaders, and one would not expect them to be. There is a case for a mountain excursion to have a logistic leader to look after the smooth running of the meeting, so as to let the botanist concentrate on the floral aspects.

The meeting must go at the rate of the slowest member. Above all there should be a prepared plan for dealing with any injured member of the party. A minor sprain on a fine summer day can degenerate rapidly to a fatal case of exposure. Hypothermia is dealt with in "Medicine for Mountaineering" by Hultgren and Wilkerson.

Besides knowing their correct use, compass, whistle and torch must be kept in working order.

Having seen one lowland excursion with fragmented leadership I would recommend that the leader wear a distinctive brassard on the first day at least.

The Lake District Mountain Accidents Association publishes and distributes a leaflet entitled "Are YOU going on the Fells?" obtainable (voluntary donations accepted!) from their Publicity Secretary, A. M. Dobson, Pont House, Kentmere, Kendall, Cumbria. All walkers going into the mountains should possess this leaflet. All this is amplified in Alan Blackshaw's "Mountaineering" published by Penguins.

Yours faithfully,
J. C. Samson

Department of Biological Sciences,
University of Aston in Birmingham,
Costa Green,
Birmingham B4 7ET

MAPS

Dear Sir,

In reply to J. G. Simpson ("News" 14 p. 20) concerning urban street maps taken from the National Grid. I use the Birmingham Street-by-Street which includes most of the West Midlands, plus Coventry and Nuneaton which is directly based on the National Grid. There is an entire series covering Bristol and Bath, Edinburgh, Glasgow, Leeds, Liverpool, London, Manchester, Sheffield and Rotherham, Stoke-on-Trent area, Tyneside, and Sunderland. They are published by Geographia Ltd., 63 Fleet Street, London. They provide for very accurate Grid References.

Yours sincerely,
A. R. Busby

CORRECTIONS

CLOSE-UP PHOTOGRAPHS

Dear Sir,

My colleague, Mr J. Coughlin has pointed out three lines containing errors in the middle of my letter on p. 23 of "B.S.B.I. News" 14 (December 1976).

The paragraph in question should read:

Thus for a fixed effective diameter of aperture D

If $A = f$ divided by D

D = f divided by A

therefore $D = f1$ divided by A1

= f2 divided by A2

therefore $A2 = (A1 \text{ divided by } f1) \times f2$

The fault is entirely mine, when I mis-copied my draft into the MS sent to the Editor. However the mis-spelling of "practice" in the penultimate full line of my letter is not mine.

Yours faithfully,
J. G. Samson

c/o Department of Transport,
BET Division, Room 4/42,
St Christopher House,
London SE1 0TE

MAPPING THE PRIMROSE

The Atlas of the British Flora deals with the flora of the British Isles. In the map of *Primula vulgaris* published in the work cited it is shown that the primrose rejoices in Ireland in certain areas, in

Ulster, the whole nine counties, in
 Connemara, from the Maamturks to the sea, and in
 South East Ireland, the territory of Evelyn M. Booth.

It also informs that Cavan is almost devoid of primroses and that large tracts of Laois, Offaly and South Tipperary are without a 10 km record. Botanists however know that the primrose is found throughout the island.

After the publication of the *Atlas*, Irish botanists met and attempted to explain the strange distribution pattern. Several theories were advanced, one that field botanists worked the vegetation when the plant had gone over and had failed to notice the primrose in the late-leaf stage. Workers were encouraged to pay particular attention and to report sightings.

Later, indirectly, the matter resolved itself. An enquiry concerning the distribution of a subspecies of cocksfoot grass led to the finding of c. 200 "lost" cards of the primrose. Through human error, the cards of 1607 (*Primula vulgaris*) had been placed in the computer with 607 (*Dactylis glomerata*). The map resulting, deprived of many records, did not reflect the distribution. A decision was made to print the true map in the 1968 edition. It is the reason why an uncritical species was mapped in the *Critical Supplement*.

Alas, in the *Atlas* reprint of 1975, the original incorrect map is published—with the information as in 1962.

M. SCANNELL
National Botanic Gardens,
Herbarium,
Dublin

ERRATA IN THE 1976 LIST OF MEMBERS Etc.

- p. 3 Argent Edinburg should read EDINBURGH
 p. 5 Brook Brook B.S. should read BROOKES, B.S.
 p. 9 Cubban Dolyddelan should read DOLWYDDELAN
 p. 14 Gilmour St Eligius Road should read St ELIGIUS STREET
 p. 19 Hyde Mrs M. A. should read Mrs E. M.
 Jones Mrs A. K. should read Miss S. W.
 p. 25 Nedbould Nedbould should read NEWBOULD
 p. 31 Scouller 1971 F should read 1971 SCULLER
 Scouller 1968 S should read 1968 F SCULLER
 Scunthorpe 1970 should read 1970 S SCUNTHORPE

PANEL OF REFEREES AND SPECIALISTS

- p. 40 *CYPERACEAE*—the entry after "*Carex*" should read:
Carex: A. O. Chater, Miss S. Hooper (K), A. C. Jermy (B.M.), E. C. Wallace,
 R. W. David (*muricata* groups), mfr., r.

COUNTY RECORDERS

- p. 41 The price of the DANDY, J. E. Watsonian Vice-county maps has been increased as follows:
 Maps folded in case with account of the system £1.50 plus 30p p. & p.
 Maps flat £1 plus p. & p. (out of print at the moment).
- p. 42 v-c 28 Swan should read SWANN
 33 & 34 Responsibility for this area is divided between two Recorders. Prof. A. J. Willis covers North Avon (that part of v-c 34 formerly in Gloucestershire but now in the County of Avon). Mrs S. C. Holland, in addition to v-c 33, is responsible for v-c 34 West of the Severn and for the rest of v-c 34 East of the Severn which is not in Avon.
- 40 Truman should read TRUEMAN
 103 Canon should read CANNON
 Ireland 31 Synott should read SYNNOTT

PUBLICATIONS

Atlas of the British Flora

This is now out of print again but arrangements are being made for a further reprint. Orders should be sent to E.P. Publications, Bradford Road, East Ardesley, Wakefield, Yorkshire. Price £20.00.

As announced in "B.S.B.I. News" No. 14, Messrs E. W. Classey have now resigned as the B.S.B.I. publications agent. As from 1st November 1976 Dr F. H. Perring has been appointed the sole agent for the distribution of all Society publications other than *Watsonia* and *Abstracts*. Orders in future should be sent to Dr F. H. Perring, Oundle Lodge, Oundle, Peterborough PE8 5TN.

OTHER PUBLICATIONS AVAILABLE

Conference Reports

	£
British Flowering Plants & Modern Systematic Methods	2·10
The Study of the Distribution of British Plants	2·10
Species Studies in the British Flora	2·70
Progress in the Study of the British Flora	2·50
A Darwin Centenary	2·50
Local Floras	2·50
The Conservation of the British Flora	2·30
Flora of a Changing Britain (Reprint 1973)	1·70
Plants Wild & Cultivated	2·90
The Oak: its History & Natural History	6·55
European Floristic & Taxonomic Studies	3·80

Miscellaneous Publications

British Herbaria	2·70
Flora of Islay & Jura	1·00
West Norfolk Plants today	1·50
British Sedges	1·55

The Taraxacum Flora of the British Isles	2·30
Bibliography of the British Flora	8·70
Flora of Skye	1·10
Flora of Cambridgeshire	2·00
Flora of Isles of Scilly	5·75
Flora of Surrey (£8·75 until 31st March, 1977)	10·75

Posters

“Please leave wild flowers” (Cowslip)	15p each, 10 or more 10p each
“Save these flowers”	15p each, 10 or more 10p each
“Endangered Plants”	35p each, 10 or more 20p each 500 or more 15p each

All prices quoted include postage as at 1st February, 1977.

Any subsequent increases in postal charges should be allowed for.

Orders and cheques to B.S.B.I. Publications, Oundle Lodge, Oundle, Peterborough PE8 5TN.

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